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DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

49 CFR Parts 107, 171, 172, 173, 175, 176, 177, 178, 179 and 180

[Docket No. PHMSA-2013-0225 (HM-218H)]

RIN 2137-AF04

Hazardous Materials: Miscellaneous Amendments (RRR)

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

ACTION: Notice of Proposed Rulemaking (NPRM).

SUMMARY: PHMSA proposes to make miscellaneous amendments to the Hazardous Materials Regulations to update and clarify certain regulatory requirements. These proposed amendments are designed to promote safer transportation practices, address petitions for rulemaking, respond to National Transportation Safety Board (NTSB) Safety Recommendations, facilitate international commerce, make editorial corrections, and simplify the regulations. The proposed provisions in this rulemaking include, but are not limited to, removing the packing group (PG) II designation for certain organic peroxides, self-reactive substances and explosives, incorporating requirements for trailers of manifolded acetylene cylinders, and providing requirements to allow for shipments of damaged wet electric batteries. In addition, this rulemaking proposes to revise the requirements for the packaging of nitric acid, testing of pressure relief devices on cargo tanks, and shipments of black or smokeless powder for small arms.

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

ADDRESSES: You may submit comments by any of the following methods:

- Federal Rulemaking Portal: http://www.regulations.gov. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: Dockets Management System; U.S. Department of Transportation, Dockets Operations, M-30, Ground Floor, Room W12-140, 1200 New Jersey Avenue, S.E., Washington, DC 20590-0001.
- Hand Delivery: To U.S. Department of Transportation, Dockets Operations, M-30, Ground Floor, Room W12-140, 1200 New Jersey Avenue, S.E., Washington, DC, 20590-0001, between 9:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays.

Instructions: Include the agency name and docket number PHMSA-2013-0225 (HM-218H) or rule identification number (RIN 2137-AF04) for this rulemaking at the beginning of your comment. Note that all comments received will be posted without change to http://www.regulations.gov including any personal information provided. If sent by mail, comments must be submitted in duplicate. Persons wishing to receive confirmation of receipt of their comments must include a self-addressed stamped postcard.

Privacy Act: Anyone is able to search the electronic form of any written communications and comments received into any of our dockets by the name of the individual submitting the document (or signing the document, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement at http://www.dot.gov/privacy.

Docket: You may view the public docket through the Internet at http://www.regulations.gov or in person at the Docket Operations office at the above address (See ADDRESSES).

FOR FURTHER INFORMATION CONTACT: Neal Suchak or Aaron Wiener, Standards and Rulemaking Division, (202) 366-8553, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue, S.E., Washington, DC 20590-0001.

SUPPLEMENTARY INFORMATION:

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I. Background

The purpose of this NPRM is to update and clarify the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) based on PHMSA's own initiatives. The proposed changes were identified through an extensive review of the HMR and letters of

interpretation issued to the public. In addition, this NPRM proposes regulatory requirements that respond to seven petitions for rulemaking and addresses two NTSB Safety Recommendations. To this end, PHMSA is proposing to revise, clarify, and ease certain regulatory requirements.

A. Petitions for Rulemaking

The following table provides a brief summary of the petitions addressed in this NPRM and affected sections. These petitions are included in the docket for this proceeding:

Petition	Petitioner	Summary
P-1590	**Dangerous Goods Advisory Council (DGAC)**	Remove the PG II designation for certain organic peroxides, self-reactive substances and explosives in the § 172.101 Hazardous Materials Table (HMT).
P-1591	**Air Products and Chemicals, Inc.**	Amend the marking requirements for poisonous by inhalation shipments transported in accordance with the International Maritime Dangerous Goods (IMDG) Code or Transport Canada's Transport of Dangerous Goods (TDG) Regulations (§ 171.23).
P-1597	**DGAC**	Require that emergency response telephone numbers be displayed on shipping papers numerically (§ 172.604).
P-1601	**United Parcel Service (UPS)**	Amend the packaging instructions for certain shipments of nitric acid by requiring intermediate packaging for glass inner packagings (§ 173.158).
P-1604	**National Propane Gas Association (NPGA)**	Extend the pressure test and internal visual inspection test period to ten years for certain MC 331 cargo tanks in dedicated propane delivery service (§ 180.407).
P-1605	**Compressed Gas Association (CGA)**	Incorporate by reference in § 171.7 CGA Pamphlet G-1.6, Standard for Mobile Acetylene Trailer Systems, Seventh Edition (§§ 171.7 and 173.301).
P-1609	**Truck Trailer Manufacturers Association (TTMA)**	Clarify the requirements applicable to the testing of pressure relief devices for cargo tank motor vehicles (§ 180.407).

B. NTSB Safety Recommendations

The following table provides a brief summary of the NTSB recommendations addressed in this NPRM and affected sections. These recommendations are included in the docket for this proceeding:

Recommendation	Summary
H-09-01	Modify 49 CFR § 173.301 to clearly require (1) that cylinders be securely mounted on mobile acetylene trailers and other trailers with manifolded cylinders to reduce the likelihood of cylinders being ejected during an accident and (2) that the cylinder valves, piping, and fittings be protected from multidirectional impact forces that are likely to occur during highway accidents, including rollovers.
H-09-02	Require fail-safe equipment that ensures that operators of mobile acetylene trailers can perform unloading procedures only correctly and in sequence.

C. Amendments Based on PHMSA Review

In addition to addressing the petitions for rulemaking and the NTSB recommendations listed above, this rulemaking proposes the following amendments that were identified through our retrospective review of the 49 CFR. We summarize the changes as follows:

- Revise § 107.402(d)(2) to replace the term "citizen" with the term "resident."

- Revise § 107.402(e) to require that a lighter certification agency submits a statement that the agency is independent of and not owned by a lighter manufacturer, distributor, import or export company, or proprietorship.

- Revise § 107.402(f) to require portable tank and multi-element gas container (MEGC) certification agencies to submit a statement indicating that the agency is independent of and not owned by a portable tank or MEGC manufacturer, owner, or distributor.

- Revise § 107.807 to require a cylinder inspection agency to be independent of and not owned by a cylinder manufacturer, owner, or distributor.

- Remove the entry for CGA Pamphlet C-1.1 in Table 1 to § 171.7.
- Incorporate by reference updated versions of the American Association of Railroads (AAR) Manual of Standards and Recommended Practices, Section C-III, Specifications for Tank Cars, Specification M-1002 in § 171.7.
- Revise the § 172.101 table to add Special Provision B120 to Column (7) for the entry "Calcium nitrate, UN1454."
- Revise the entry for "Propellant, solid, UN0501" to remove vessel stowage provision 24E from Column (10B) of the HMT.
- Revise the PG II HMT entry for "UN2920, Corrosive liquids, flammable, n.o.s.," to for consistency with the UN Model Regulations, IMDG Code, and the ICAO TI such that this entry is eligible for the limited quantity exceptions.
- Revise the PG II HMT entry for "UN3085, Oxidizing solid, corrosive, n.o.s." for consistency with the UN Model Regulations, IMDG Code and the ICAO TI such that this entry is eligible for the limited quantity exceptions.
- Revise the HMT entries for "Trinitrophenol (picric acid), wetted, <u>with not less than 10 percent water by mass,</u> UN3364" and "Trinitrophenol, wetted <u>with not</u>

less than 30 percent water, by mass, UN1344" to harmonize the HMR with the UN Model Regulations, IMDG Code, and the ICAO TI to clarify that the 500 gram limit per package does not apply to UN1344 but does apply to UN3364.

- Revise Special Provision 136, assigned to the proper shipping name "UN3363, Dangerous goods in machinery or apparatus," in § 172.102 to include reference to Subpart G of Part 173.
- Remove reference to obsolete Special Provision 18 for the HMT entry "UN1044, Fire extinguishers" and in § 180.209(j) and provide correct cross reference to § 173.309.
- Correct a reference in § 172.201 to exceptions for the requirement to provide an emergency response telephone number on a shipping paper.
- Revise §§ 172.301(f), 172.326(d) and 172.328(e) to include the clarification that the NOT-ODORIZED or NON-ODORIZED marking may appear on packagings used for both unodorized and odorized liquefied petroleum gas (LPG), and remove the effective date of October 1, 2006 or "after September 30, 2006," if it appears in these paragraphs, as the effective date has passed.
- Amend § 172.406(d) by clearly authorizing the use of labels described in Subpart E with a dotted or solid line outer border on a surface background of contrasting color.
- Update a mailing address in § 172.407(d)(4)(ii).
- Clarify the marking size requirements for an intermediate bulk container (IBC) that is labeled instead of placarded by replacing the bulk package marking

reference in § 172.514(c) with the non-bulk marking reference, specifically, § 172.301(a)(1).

- Revise § 173.4a(a) to clarify that articles (including aerosols) are not eligible for excepted quantity reclassification under § 173.4a, although some are eligible to be shipped as small quantities by highway and rail in § 173.4.
- Revise § 173.21(e) to prohibit transportation or offering for transportation materials in the same transport vehicle (e.g., a trailer, a rail car) with another material, that could cause a dangerous evolution of heat, flammable or poisonous gases or vapors, or produce corrosive materials if mixed.
- Clarify that the requirements provided in paragraph § 173.24a(c)(1)(iv) do not apply to limited quantities packaged in accordance with § 173.27(f)(2).
- Clarify the quantity limits for mixed contents packages prepared in accordance with § 173.27(f)(2).
- Clarify the requirements applicable to bulk transportation of combustible liquids by adding new subparagraph § 173.150(f)(3)(xi) stating that the registration requirements in Subpart G of Part 107 are applicable and revising §§ 173.150(f)(3)(ix) and 173.150(f)(3)(x) for punctuation applicable to a listing of requirements.
- Add a new paragraph (j) in § 173.159 to allow shippers to prepare for transport and offer into transportation damaged wet electric storage batteries.
- Revise § 173.166(e)(6) to add the words “or cargo vessel.”

- Revise §§ 173.170 and 173.171 by changing the term motor vehicle to transport vehicle to allow for motor vehicles comprised of more than one cargo-carrying body to carry 100 pounds of black or smokeless powder reclassed as Division 4.1 in each cargo-carrying body instead of 100 pounds total in the motor vehicle.
- Revise § 173.199(a)(4) by removing the reference to the steel rod impact test in § 178.609(h).
- Clarify the Packing Method table for organic peroxide materials in § 173.225.
- Amend the bulk packaging section reference in Column (8C) of the HMT from § 173.240 to § 173.216 for the entries "Asbestos, NA2212," "Blue asbestos (Crocidolite) or Brown asbestos (amosite, mysorite) UN2212," and "White asbestos (chrysotile, actinolite, anthophyllite, tremolite), UN2590." In addition, we are proposing to revise paragraph (c)(1) in § 173.216 by authorizing the use of bulk packages prescribed in § 173.240.
- Add a new paragraph (d)(5) to § 173.304a, a new paragraph (h) to § 173.314 and revise § 173.315(b)(1) to require odorization of liquefied petroleum gas when contained in cylinders and rail cars.
- Amend § 173.306(k) to clarify that aerosols shipped for recycling or disposal by motor vehicle containing a limited quantity are afforded the applicable exceptions provided for ORM-D materials granted under §§ 173.306(i) and 173.156(b).
- Create a new paragraph (d) in § 175.1 stating that the HMR do not apply to dedicated air ambulance, firefighting, or search and rescue operations.

- Correct § 175.8 by adding the appropriate 14 CFR, Part 125 citations.
- Clarify exceptions for passengers, crewmembers, and air operators in paragraphs (a)(18), (a)(22), and (a)(24) of § 175.10 for the carriage of hazardous materials aboard a passenger aircraft.
- Clarify § 175.75(e)(2) by replacing the word "located" with "certificated."
- Clarify § 176.30(a)(4) by replacing the word "packaging" with "package."
- Clarify that the loading restrictions in § 177.835(c)(1) through (4) are applicable to § 177.848(e).
- Revise § 178.65(i)(1) to correctly reference the manufacturer's report requirements in § 178.35(g).
- Clarify § 178.337-17(a) to eliminate confusion of the name plate and specification plate requirements.
- Correct an editorial error in the formula in § 178.345-3(c)(1).
- Include provisions consistent with the non-bulk packaging and IBC approval provisions for Large Packagings in § 178.955.
- Clarify the requirements for Federal Railroad Administration (FRA) approval of tank car designs in § 179.13.
- Revise § 180.401 to replace the term "person" with "hazmat employee or hazmat employer" to clarify that Subpart E of Part 180 does not only apply to persons offering or transporting hazardous materials.

II. Incorporation By Reference Discussion Under 1 CFR Part 51

The American Association of Railroads (AAR) Manual of Standards and Recommended Practices, Section C-III, Specifications for Tank Cars, Specification M-1002 and the Compressed Gas Association (CGA) pamphlet G-1.6, Standard for Mobile Acetylene Trailer Systems, Seventh Edition (G-1.6, 2011) are available for interested parties to purchase in either print or electronic versions through the parent organization websites. The price charged for these standards to interested parties helps to cover the cost of developing, maintaining, hosting, and accessing these standards. The specific standards are discussed in greater detail in the following analysis.

III. Petitions for Rulemaking and National Transportation Safety Board Recommendations

A. Amendments to the HMR for organic peroxides, self-reactive substances and explosives (P-1590)

In P-1590, DGAC requests that PHMSA amend the HMR by removing the PG II designation in Column (5) of the § 172.101 HMT for all organic peroxides (Division 5.2), self-reactive substances (Division 4.1), and explosives (Class 1). DGAC states that under both the HMR and international regulations, organic peroxides, self-reactive substances and explosives are not assigned a packing group. Despite the absence of regulatory language for determining a packing group assignment for these materials, proper shipping names for these materials listed in the HMT are assigned a default PG II. DGAC asserts that the presence of a PG assignment for these entries is a constant source of confusion which leads to frustration of shipments. DGAC further indicates that frustration typically occurs when shipping papers are inspected by carrier staff and enforcement personnel along the transport chain with respect to the § 172.202(a)(4) requirement to include the "packing

group in Roman numerals, as designated for the hazardous material in Column (5) of the §172.101 table."

DGAC notes that while § 172.202(a)(4) also excepts organic peroxides, self-reactive substances and explosives from the requirement to provide a PG as part of the required description, a great deal of confusion is created given that, irrespective of this exception, PGs are provided for these materials in the § 172.101 HMT. DGAC also states that the HMR are inconsistent with international regulations as a PG is not indicated for these materials in the hazardous materials tables in the ICAO TI, IMDG Code, and the UN Model Regulations. In addition, those regulations restrict the provision of a PG in the transport document basic description to materials where a PG has been assigned in accordance with classification requirements. With no PG indicated for these substances in the respective lists, it is inappropriate to provide a PG in the hazardous materials description on a shipping paper under international regulations. Consequently, provision of a PG for domestic transportation would constitute a violation of international regulations for international transportation.

DGAC states that removing the PG for these materials from the HMT would impose no additional costs and would result in a net savings since many unnecessary delays in hazardous material shipments would be avoided. DGAC did not provide a specific figure for the anticipated net savings.

DGAC also states that the packaging provisions in Part 173 for these materials indicate the level of performance required. Therefore, although certain packagings must meet PG II performance levels, they do not indicate a degree of danger or the variation to PG I or PG III packagings.

In response to DGAC's petition, PHMSA agreed that it merited a rulemaking change. We recognize that when the PG does not relate to the degree of hazard of the material based on classification criteria but rather is broadly assigned to an entire group of materials for purposes of applying regulatory requirements, there is limited value in requiring an indication of the PG on a shipping paper. Therefore PHMSA is proposing to remove the PG II designation from Column (5) of the HMT for organic peroxides (Division 5.2), self-reactive substances (Division 4.1), and explosives (Class 1). PHMSA seeks comment on the safety implications of such a change as well as the net benefit such a change (i.e., decrease in the number of frustrated shipments) would provide.

B. Marking Requirements for Poison by Inhalation Materials (P-1591)

In P-1591, Air Products and Chemicals, Inc., requests that PHMSA amend the marking requirements for poison inhalation hazard (PIH) materials that are shipped in accordance with the IMDG Code or TDG Regulations. Specifically, the petitioner requests that PHMSA modify §§ 171.23(b)(10)(iv)(A) and 171.23(b)(10)(iv)(B) to remove the phrase "regardless of the total quantity contained in the transport vehicle or freight container" in both paragraphs to align Part 171, Subpart C requirements for use of international regulations with the poisonous hazardous material marking requirements in § 172.313(c), which offers exceptions based on Hazard Zone, quantity, and number of distinct materials.

Specifically, subpart C of Part 171 specifies requirements for shipments offered for transportation or transported in the United States under international regulations. For PIH material, subparagraphs (A) and (B) of § 171.23(b)(10)(iv) require that "the transport vehicle or freight container must be marked with the identification numbers for the

hazardous material, regardless of the total quantity contained in the transport vehicle or freight container, in the manner specified in § 172.313(c) of this subchapter and placarded as required by subpart F of part 172 of this subchapter." The petitioner states that the phrase "regardless of the total quantity contained in the transport vehicle or freight container" gives the appearance that the identification number marking requirement is applicable to any quantity. However, the remainder of the sentence states that the marking must be "in the manner specified in in § 172.313(c) of this subchapter," which indicates an entirely different requirement.

Section 172.313(c) specifies marking requirements for non-bulk packages of PIH material contained in transport vehicles or freight containers subject to certain provisions and limitations. Section § 172.313(c)(2) states, "the transport vehicle or freight container is loaded at one facility with 1,000 kg (2,205 pounds) or more aggregate gross weight of the material in non-bulk packages marked with the same proper shipping name and identification number" meaning that unless this criteria is met, marking the identification number on the transport vehicle or freight container is not required. The petitioner indicates the inconsistency of §§ 171.23(b)(10)(iv)(A), 171.23(b)(10)(iv)(B) and 172.313(c) is a source of confusion.

The petitioner also identifies a potential discrepancy when transporting internationally to or from the United States in accordance with § 171.23. The requirement to mark all quantities of PIH material is more restrictive and costly than the current marking requirements for the same materials when transported domestically under the HMR in accordance with § 172.313(c). The petitioner points out that under both the IMDG and TDG there are no additional marking requirements for transport units carrying

PIH materials in non-bulk packages similar to the provisions found in § 172.313(c). Therefore, for quantities of PIH materials in non-bulk packages (less than 1,000 kg per UN number) all three regulations are not aligned.

The petitioner states they have had numerous shipments of PIH materials frustrated because of this confusing requirement, and that the additional marking causes economic hardship and transit delays due to additional labor necessary to apply the extra UN identification numbers at the port. The petitioner did not provide a specific cost figure for these frustrated shipments or anticipated net savings of a regulatory change.

In response to Air Products' petition, PHMSA agreed that it merited a rulemaking change. The intent of the requirements in § 171.23(b)(10)(iv) is to provide hazard communication for international shipments of PIH materials transiting the United States under either the IMDG Code or TDG equivalent to those established in the HMR, not to impose more restrictive requirements. The removal of the phrase referring to a "total quantity" will reduce potential confusion due to differences in inspection interpretations and will reduce handling costs and transit time while maintaining an acceptable level of hazard communication for PIH materials. Therefore, PHMSA is proposing to amend §§ 171.23(b)(10)(iv)(A) and 171.23(b)(10)(iv)(B) by removing the phrase "regardless of the total quantity contained in the transport vehicle or freight container" from each subparagraph. PHMSA seeks comment on the safety implications of such a change as well as the net benefit such a change (i.e., decrease in the number of frustrated shipments) would provide.

C. Emergency Response Telephone Number (P-1597)

In P-1597, DGAC requests that PHMSA amend the emergency response telephone number requirements to prohibit the use of alphanumeric telephone numbers and only permit numeric telephone numbers. Currently, the HMR do not limit the telephone numbers to be numeric under § 172.604(a). DGAC states that historically telephone faces associated integers with letters (e.g., 2^{ABC}), but this is no longer the case in all instances of phones. As a result, emergency response telephone numbers presented alphanumerically could cause delays in acquiring emergency response information as the first responder would have to first convert letters to numbers. These delays are undesirable in time sensitive emergency response situations.

DGAC further points out that PHMSA issued a letter of interpretation (Ref. No. 04-0032) confirming that alphanumeric presentation of an emergency response telephone number was acceptable but expressed concern in the delays it may cause.

In response to DGAC's petition, PHMSA agreed that it merited a rulemaking change. We agree that the continued use of alphanumeric telephone numbers could cause unnecessary delays in emergency response situations, therefore, PHMSA is proposing to revise § 172.604(a) to require a numeric format for the presentation of emergency response telephone numbers in association with a shipping paper. Additionally, we request specific comment on the cost implications of this proposed revision.

D. Packaging Requirements for Nitric Acid (P-1601)

In P-1601, the United Parcel Service (UPS) requests that PHMSA revise the packaging requirements for ground shipments of nitric acid. Its petition was based on four loading and sorting operation incidents which occurred over a six-month period. The incidents did not result in any casualties, but varying degrees of property damage were

assessed in each situation. UPS notes that each incident involved the same packaging configuration – glass inner packagings within fiberboard outer packagings. In each case, a breach of one or more inner packagings caused leakage, resulting in fumes, followed by the initiation of a fire involving the fiberboard outer packaging material. UPS believes that the packaging requirements of the HMR applicable to ground shipments of nitric acid do not adequately address the hazards present.

As provided in § 173.158, packaging for ground shipments of nitric acid prescribe either outer packaging that is not reactive to contents, or a combination packaging that includes non-reactive intermediate packaging and absorbent material. However, for concentrations of less than 90% nitric acid, the HMR permit the use of glass inner packagings of less than 2.5 L placed inside UN Specification 4G, 4C1, 4C2, 4D or 4F outer packagings. This latter configuration is associated with the four incidents referenced by UPS in its petition for rulemaking.

UPS proposes that PHMSA change § 173.158(e) to enhance the packaging requirements applicable to nitric acid in concentrations less than 90%. Under the proposal in P-1601, when in wooden or fiberboard outer packaging, glass inner packagings used in the configuration prescribed in § 173.158(e) would be required to be packed in tightly-closed, non-reactive intermediate packagings and cushioned with a non-reactive absorbent material. UPS feels that the addition of this intermediate packaging would properly address the hazards present in this concentration of nitric acid and would have prevented the above incidents from occurring.

The UPS petition identified an increase in the number of fires caused by spilled nitric acid reacting with fiberboard packaging. In this NPRM, PHMSA is considering a

performance standard for packaging and handling the product that would prevent breakages and spills involving nitric acid. Based on the number of incidents noted in the petition for rulemaking and the cost incurred, in response to UPS's petition, PHMSA agreed that it merited consideration of a rulemaking change. Therefore, PHMSA is proposing to require in § 173.158(e) that when nitric acid, in concentrations less than 90%, is placed in glass inner packagings to be packaged in wooden or fiberboard outer packaging, the glass inner packagings must be packed in tightly-closed, non-reactive intermediate packagings and cushioned with a non-reactive absorbent material. PHMSA is seeking comment on whether or not this proposed packaging should be applied to other similar materials as well as cost burdens from the increase in packaging requirements.

E. Pressure Test and Internal Visual Inspection Requirements for MC 331 Cargo Tanks (P-1604)

In P-1604, the National Propane Gas Association (NPGA) requests PHMSA modify the pressure test and visual inspection test requirements applicable to certain MC 331 specification cargo tanks in dedicated propane delivery service , commonly known as bobtails, found in § 180.407(c) . Currently, the HMR require periodic pressure testing and visual inspection every five years to remain in service. NPGA petitions PHMSA to extend the requalification period for certain MC 331 cargo tanks from five years to ten years and provides a technical case for this change.

NPGA states in its petition that the five-year requalification period for bobtails is a burden to the propane industry. It states that these cargo tanks must be taken out of service for a period of up to a week and that water is introduced into the tank during the requalification process, which can be detrimental to the tank and product contained in the

tank. Before a tank can be returned to service, it must be completely free of any water. NPGA states that this removal from service hinders a propane company's operations.

In 2001, NPGA conducted a survey to determine whether companies that performed the five-year hydrostatic test requirement had experienced any failures. None of the 203 survey respondents reported a hydrotest failure for tanks of less than 3,500 gallons water capacity. Based on the results of this survey, the NPGA sponsored a study by a non-profit research and development organization (the Battelle Memorial Institute) to determine whether a change to the requalification period would be technically feasible. Battelle developed crack growth models to estimate the time to failure of a tank that has undergone several pressure cycles. They also analyzed effects on the MC 331 cargo tank under the delivery service load conditions to determine the estimated life of the tank.

Based on the results of this study, the NPGA and Battelle recommend that PHMSA modify the requalification period from five years to ten years for MC 331 cargo tanks that: (1) are used in dedicated propane service; (2) have a water capacity less than 3,500 gallons; and (3) are constructed of: non-quenched and tempered (NQT) SA-612 steel and NQT SA-202 or SA-455 steels, provided the materials have full-size equivalent (FSE) Charpy-V notch energy test data that demonstrates 75% shear-area ductility at 32 °F with an average of three or more samples greater than 15 ft-lb FSE, and with none less than 10 ft-lb FSE. A copy of this study is in the docket for this rulemaking.

After considering the NPGA survey results, which cite no reported incidents, and the study commissioned by the NPGA, PHMSA determined that the petition merited consideration of a rulemaking change. NPGA notes there is a strong safety record amongst its members regarding this issue and the cost savings to the industry would be significant

(a specific benefit was not provided by the NPGA). Therefore, PHMSA is proposing to revise the pressure test and internal visual inspection requirements found in § 180.407(c) for certain MC 331 Specification cargo tanks from a five-year requalification period to a ten-year period. PHMSA seeks comment on the safety implications of such a change as well as the net benefit such a change (i.e., decrease in time out of service) would provide.

F. Mobile Acetylene Trailer Systems (P-1605) and NTSB Safety Recommendations H-09-01 and H-09-02

In P-1605, the CGA requests that PHMSA amend the HMR to incorporate a reference to CGA pamphlet G-1.6, Standard for Mobile Acetylene Trailer Systems, Seventh Edition (G-1.6, 2011). This standard provides minimum requirements necessary for the design, construction, and operation of mobile acetylene trailer systems, which consist of acetylene cylinders mounted and manifolded for the purposes of charging, transporting, and discharging acetylene. It also covers ground-mounted auxiliary equipment used with mobile acetylene trailers such as piping, meters, regulators, flash arrestors, and fire protection equipment.

This petition coincides with two NTSB recommendations (H-09-01 and H-09-02) issued to PHMSA based on incidents involving mobile acetylene trailers.[1] In response to CGA's petition and its appropriateness to addressing the NTSB recommendations, PHMSA determined that it warranted consideration of a rulemaking change. Further detailed discussion of this issue can be found in the Section-by-Section review for § 173.301.

G. Pressure Relief Devices for Cargo Tanks (P-1609)

[1] http://phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Files/NTSB%20Files/H_09_1_2_Original.pdf

In P-1609, the Truck Trailer Manufacturers Association (TTMA) requests that PHMSA amend the § 180.407 requirements applicable to pressure relief devices (PRDs). Specifically, TTMA requests that PHMSA revise the HMR to more clearly establish the set pressure of a PRD for each of the DOT specification cargo tank motor vehicles. TTMA states that the wording of §§ 180.407(d)(3) and 180.407(g)(1)(ii), applicable to the testing requirements for PRDs, creates issues for persons performing the testing of a PRD.

TTMA points out two specific issues with these paragraphs. The first is the term "set-to-discharge." On April 9, 2009 PHMSA published a final rule (Docket No. PHMSA-2006-25910 (HM-218E); 74 FR 16135; effective May 11, 2009), where in an attempt to harmonize with international standards, PHMSA removed the phrase "set-to-discharge," and "start-to-discharge" was substituted in its place. TTMA explains that this is an issue because the discharge pressure referenced is used to figure the minimum pressure at which the PRD should reseat. By changing the wording from "set" to "start," the reseating pressure changed from a design requirement, to one based on what a given vent actually does under test. Therefore, instead of testing a PRD knowing its reseating requirements, testers must perform the test of a given PRD and calculate the reseating pressure of that particular PRD and retest from that pressure. Essentially, testers of PRDs could test identical products at different pressures because the reseat pressure is no longer a fixed design requirement. This creates inconsistencies between the reseating pressures of comparable PRDs authorized for identical hazardous materials service. TTMA states that this compromises safety, instead of promoting it.

The second issue TTMA points out in its petition is in regards to the term "the required set pressure." This term is problematic in relation to the continuing operation of

existing cargo tanks made to older specifications in § 180.405(c). As the codes for the older specifications of cargo tanks are no longer published, determining "the required set pressure" is problematic. This is an issue for current specifications of cargo tanks as well. There are pressure allowances during the retesting of pressure relief devices of no more than 110% of the required set pressure (§ 180.407(d)(3)) and the same 10% allowance for DOT 400 series cargo tanks (§ 178.345-10(d)) creates confusion for current specification cargo tanks. TTMA believes this will create an unsafe condition for tanks, as a PRD is no longer functioning as designed by the manufacturer. The PRD may actually open at higher pressures (near a cargo tank's test pressure) as opposed to the appropriate lower design pressure.

TTMA petitions that PHMSA revise the HMR for testing of PRDs by replacing the current requirements found in §§ 180.407(d)(3) and 180.407(g)(1)(ii) with a reference to a new paragraph, § 180.407(j) which would detail the PRD test requirements. TTMA believes this change will eliminate confusion for testers by clarifying the requirements for opening and reseating pressures when beginning the tests. This will also enhance the enforcement of these requirements by creating consistency in the testing requirements for cargo tank PRDs of the same design.

PHMSA determined that TTMA's petition merited consideration of a rulemaking change based on the need for consistent and clear testing requirements for PRDs on DOT specification cargo tanks. Therefore, PHMSA is revising §§ 180.407(d)(3) and 180.407(g)(1) to reference a new section § 180.407(j), which will outline the testing requirements applicable to PRDs.

IV. Section-by-Section Review

Part 107

Section 107.402

This section sets forth the application requirements for designation as a certification agency to issue certificates and certifications for packagings designed, manufactured, tested, or maintained in conformance with the HMR and standards set forth in the UN Model Regulations. This section also sets forth the application requirements for designation as a certification agency to issue certificates and certifications for lighters, portable tanks, multi-element gas containers, and Division 1.4G consumer fireworks.

PHMSA is proposing to revise § 107.402(d)(1)(i) to indicate that a fireworks certification agency applicant must be a U.S. resident, or for a non-U.S. resident, must have a designated U.S. agent representative as specified in § 105.40. The criteria for fireworks certification agencies were added to the HMR in Docket No. PHMSA-2010-0320 (78 FR 42457) (HM-257). PHMSA intended for § 107.402(d)(1)(i) to correspond with the requirements of § 105.40, which specifies designated agents for non-residents; however, the term "citizen" was inadvertently substituted for "resident." PHMSA is proposing to revise § 107.402(d)(1)(i) by replacing the term "citizen" with the term "resident."

PHMSA is also proposing to revise § 107.402(e) to require that a lighter certification agency submit a statement to the Associate Administrator that the agency is independent of and not owned by a lighter manufacturer, distributor, import or export company, or proprietorship. Further, we propose to revise § 107.402(f) to require that a portable tank and MEGC certification agency submit a statement to the Associate

Administrator indicating that the agency is independent of and not owned by a portable tank or MEGC manufacturer, owner, or distributor. This language was included in § 107.402 and pertained to all certification agencies, but was removed inadvertently as a result of changes made to the HMR in Docket No. PHMSA-2010-0320 (78 FR 42457) (HM-257).

Section 107.807

This section sets forth the requirements for authorizing chemical analyses and tests for non-domestic manufacturers of DOT specification or special permit cylinders. To maintain consistency with requirements of other independent inspection agencies, PHMSA is proposing to revise § 107.807 to require that the agency submit a statement indicating that the inspection agency is independent of and not owned by a cylinder manufacturer, owner, or distributor.

Part 171

Section 171.7

The National Technology Transfer and Advancement Act of 1995 (15 USC § 272) directs agencies to use voluntary consensus standards in lieu of government-unique standards except where inconsistent with law or otherwise impractical. Section 171.7 lists all standards incorporated by reference into the HMR and informational materials not requiring incorporation by reference. The informational materials not requiring incorporation by reference are noted throughout the HMR and provide best practices and additional safety measures that while not mandatory, may enhance safety and compliance. Table 1 to § 171.7 lists informational materials that are not incorporated by reference. In a final rule published on January 28, 2008 (Docket No. 05–21812 (HM–218D); 73 FR 4699,

effective October 1, 2008), PHMSA added in Table 1 (formerly paragraph (b) of the section) an entry for the Compressed Gas Association (CGA) publication, CGA C–1.1, Personnel Training and Certification Guidelines for Cylinder Requalification by the Volumetric Expansion Method. Following the publication of the final rule (HM-218D), PHMSA received an appeal from Hydro-Test Products, Inc. (PHMSA–2005 21812–0025) asking us to either remove the reference to CGA C–1.1 or add examples of other training materials that may be used. Hydro-Test noted that referencing only the CGA publication in the HMR could suggest that other training materials are not acceptable. PHMSA added CGA C–1.1 as an example of guidance material that may be used to assist requalifiers in creating their cylinder training procedures and recordkeeping requirements. The publication is not a standalone tool for training persons on how to perform requalification of cylinders using the volumetric expansion test method. To alleviate confusion for cylinder requalifiers, PHMSA intended to remove the reference to CGA C-1.1 in §§ 171.7 and 180.205 in a previous editorial final rule published on October 1, 2008 (Docket No. PHMSA–2008–0227 (HM–244A); 73 FR 57001, effective October 1, 2008). However, PHMSA removed reference to the document only in § 180.205(g)(6) and inadvertently failed to remove the reference in § 171.7. PHMSA is proposing to amend Table 1 to § 171.7 to remove the entry for CGA C–1.1 to align the regulatory text with previous rulemaking actions.

Additionally, § 171.7 incorporates by reference the American Association of Railroad's (AAR's) Manual of Standards and Recommended Practices, Section C-III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), October 2000 edition for various tank car design, manufacture, inspection and testing, and

qualification regulations set forth in Parts 173, 179, and 180 of the HMR. As currently incorporated by reference, all sections refer to the October 2000 edition of this document.

AAR frequently updates the AAR Specifications for Tank Cars. While the AAR updates this document, PHMSA has not received a petition for rulemaking to revise the HMR to reflect more current versions of the AAR Specifications for Tank Cars.

In this proposed rule, we are proposing to update the incorporation by reference for this document to include revisions published by the AAR in the 2007 edition of the AAR Specifications for Tank Cars and certain subsequent amendments. PHMSA is also proposing to revise § 179.24(a)(2) to remove the reference to the December 2000 edition of this document and instead replace it with a generic reference to the AAR Specifications for Tank Cars. Additionally, we are proposing to revise § 180.503 to replace the reference to the "AAR Tank Car Manual" with "AAR Specifications for Tank Cars" for consistency with references to this document elsewhere in the HMR. The FRA reviewed the 2007 standard and the subsequent amendments and determined not to incorporate the 2007 standard in its totality. Under this proposed rule, each chapter and appendix of the AAR Specifications for Tank Cars will be listed in § 171.7 with an effective date to account for the most recent AAR amendments supported by FRA. In cases where FRA does not support amendments made to the AAR Specifications for Tank Cars due to safety concerns a prior effective date for that specific chapter or appendix will be referenced, and in some cases, specific sections of the chapter or appendix will be specifically not included. Upon adoption into the HMR, entities subject to compliance with the HMR must comply with the version of the chapters and appendices referred to in § 171.7 and effective on the date specified therein. AAR publications such as this are available through the AAR as a

benefit of membership. We anticipate that affected entities already have access to the AAR Specifications for Tank Cars we are proposing to incorporate. Other interested parties may purchase these standards from the AAR for $390.00. Moving forward, FRA will continue to evaluate amendments made to the AAR Specifications for Tank Cars and will update the effective dates for referenced chapters or appendices of the tank car manual, as appropriate, when such amendments are supported by FRA.

Lastly, as described in Section IIF for petition for rulemaking P-1605 and further discussed in the Section-by-Section review for § 173.30, PHMSA proposes to amend the HMR to incorporate a reference to CGA pamphlet G-1.6, Standard for Mobile Acetylene Trailer Systems, Seventh Edition (G-1.6, 2011). Interested parties may purchase a copy of this standard from the CGA starting at $37.00.

Section 171.22

In a May 3, 2007 final rule (Docket No. PHMSA-2005-23141 (HM-215F); 72 FR 25162), the importer responsibility requirements were transitioned from § 171.12(a) to § 171.22. When transitioning the requirement that a person importing a hazardous material into the United States must provide the shipper and forwarding agent with information required under the HMR, the shipper notification was inadvertently omitted. As a result, only the forwarding agent is presently required to be provided with information as to the requirements of the HMR applicable to the particular shipment. In this NPRM, PHMSA is proposing to reinstate text in § 171.22(f) that was inadvertently removed during the transition by requiring both the foreign shipper and forwarding agent at the place of entry to be provided with the requirements of the HMR applicable to the particular shipment.

Part 172

Section 172.101

This section contains the HMT and explanatory text for each of the columns in the table. In this NPRM, PHMSA is proposing a number of revisions to the § 172.101 HMT, including the special provisions listed in Column (7) of the table and specified in § 172.102, to clarify the regulations and correct inadvertent errors. Proposed changes to the § 172.101 HMT will appear as an "add," "remove," or "revise," and include changes to the following table entries: "Calcium nitrate, UN1454," "Corrosive liquids, flammable, n.o.s., UN2920," "Fire extinguishers, UN1044," "Oxidizing solid, corrosive, n.o.s., UN3085," "Propellant solid, UN0501," "Trinitrophenol (picric acid), wetted, with not less than 10 percent water by mass, UN3364," and "Trinitrophenol, wetted with not less than 30 percent water, by mass, UN1344."

The entry for "Calcium nitrate, UN1454" is being revised to reflect a change that was intended to be made when PHMSA published a final rule on January 7, 2013 (Docket No. PHMSA-2012-0027 (HM-215L); 78 FR 987). Special Provision B120 was inadvertently not assigned to the entry for "Calcium nitrate, UN1454" when several HMT other entries were revised to include Special Provision B120. Special Provision B120 indicates that the material, when offered in conformance with the applicable requirements of Part 178 and general packaging requirements in Part 173, may be offered for transportation in a flexible bulk container. PHMSA is proposing to revise the HMT to add Special Provision B120 to Column (7) for the entry "Calcium nitrate, UN1454."

The entry for "Corrosive liquids, flammable, n.o.s., UN2920" is being revised to harmonize the HMR with the UN Model Regulations, IMDG Code, and the ICAO TI. The UN Model Regulations, IMDG Code, and ICAO TI provide limited quantity

exceptions for the PG II entry. Therefore, PHMSA is proposing to revise the entry for "Corrosive liquids, flammable, n.o.s., UN2920, PG II" to remove the word "None" from Column (8A) of the HMT and add "154." This change will be consistent with similar PG II materials that are also provided the limited quantity exception.

The entry for "Fire extinguishers, UN1044" is being revised to eliminate reference to a Special Provision 18 which is no longer in the HMR. Special Provision 18 was removed from § 172.102(c)(1) in a January 7, 2013 final rule (Docket No. PHMSA-2009-0126 (HM-215K); 78 FR 1101) and combined into revised § 173.309(a). We did not make a conforming amendment to remove Special Provision 18 from this entry in the HMT, thus, in this NPRM, we are proposing to revise the entry for "Fire extinguishers, UN1044" by deleting the special provision.

The entry for "Oxidizing solid, corrosive, n.o.s., UN3085" is being revised to harmonize with the UN Model Regulations, IMDG Code, and the ICAO TI. The UN Model Regulations, IMDG Code, and ICAO TI provide limited quantity exceptions for the PG II entry. Therefore, PHMSA is proposing to revise the entry for "Oxidizing solid, corrosive, n.o.s., UN3085, PG II" to remove the word "None" from Column (8A) of the HMT and add "152."

The entry for "Propellant, solid, UN0501' is being revised to eliminate a reference to a requirement that is no longer is in the HMR. Column (10B) of this entry lists vessel stowage provision 24E. Vessel stowage provision 24E was removed from § 176.84(c)(2) when the Research and Special Programs Administration (RSPA), PHMSA's predecessor, published a final rule on June 21, 2001 (Docket No. RSPA–2000–7702 (HM–215D); 66 FR 33316, effective October 1, 2001) that revised the table of provisions applicable to

vessel transportation of Class 1 (explosive) materials. As this provision is no longer in the HMR, PHMSA is proposing to revise the entry for "Propellant, solid, UN0501" to remove vessel stowage provision 24E from Column (10B) of the HMT.

The HMT entries for "Trinitrophenol (picric acid), wetted, with not less than 10 percent water by mass, UN3364" and "Trinitrophenol, wetted with not less than 30 percent water, by mass, UN1344," are being revised to harmonize the HMR with the UN Model Regulations, IMDG Code, and the ICAO TI. Presently, Special Provision 162 is applied to UN3364 (not less than 10 percent water) and Special Provision 23 is applied to UN1344 (not less than 30 percent water). Special Provision 162 outlines a provision for transport of the material as a Division 4.1. The material must be packed such that at no time during transport will the percentage of diluent fall below the percentage that is stated in the shipping description. Special Provision 23 is similar in that it also outlines this provision but includes an additional condition that quantities of not more than 500 grams per package with not less than 10 percent water by mass may also be classed in Division 4.1, provided a negative test result is obtained when tested in accordance with test series 6(c) of the UN Manual of Tests and Criteria.

The special provisions are assigned in the reverse manner to the trinitrophenol entries in the UN Model Regulations, IMDG Code, and the ICAO TI. Special Provision 23 is applied to UN3364 with the lower minimum diluent percent of water while the 500 gram limit per package for 10% diluent does not apply to UN1344 with the larger minimum diluent percentage of water (i.e., 30%). Thus the special provision was inadvertently incorrectly assigned in the HMR. For the entry "Trinitrophenol (picric acid), wetted, with not less than 10 percent water by mass, UN3364," we propose to replace

Special Provision 162 in Column (7) of the HMT with Special Provision 23. Conversely, for the entry "Trinitrophenol, wetted, with not less than 30 percent water, by mass, UN1344," we propose to replace Special Provision 23 from Column (7) of the HMT with Special Provision 162.

Section 172.102

This section outlines special provisions that are listed in Column (7) of the § 172.101 HMT. Special Provision 136 is listed for the entry "Dangerous Goods in Machinery or Dangerous Goods in Apparatus, UN3363." PHMSA received a request for a letter of interpretation (Ref. No. 12-0037) which sought confirmation that a material classified as a Class 2 gas that has packaging exceptions listed in Column (8A) of the HMT may be described as "Dangerous Goods in Apparatus, UN3363." The requestor pointed out that the provisions in Special Provision 136 are inconsistent. Special Provision 136 states that except when approved by the Associate Administrator, machinery or apparatus may only contain hazardous materials for which exceptions are referenced in Column (8) of the HMT and are provided in Part 173, Subpart D of Subchapter C. Subpart D of Part 173 contains the definitions, classification, packing group assignments and exceptions for hazardous materials other than Class 1 and Class 7. However, preparation, packaging and exceptions for Class 2 gases are located in Subpart G of Part 173. This should be indicated in Special Provision 136 to eliminate confusion that gases prepared in accordance with Subpart G of Part 173 would not be eligible to be described as "Dangerous Goods in Apparatus, UN3363." It was not PHMSA's intention to exclude Class 2 gases from using this proper shipping name, therefore, PHMSA is proposing to revise Special Provision 136 in § 172.102 to include reference to subpart G of part 173.

Section 172.201

This section prescribes the requirements for the preparation and retention of shipping papers. Paragraph (d) of this section states the requirements for shipping papers to contain an emergency response telephone number. This paragraph states that except as provided in § 172.604(c), a shipping paper must contain an emergency response telephone number. The reference in this paragraph to § 172.604(c) is inaccurate. The requirements in § 172.604 applicable to emergency response telephone numbers were changed when PHMSA published a final rule on October 19, 2009 (Docket No. PHMSA-2006-26322 (HM-206F); 74 FR 53413, effective November 18, 2009). This rulemaking action moved the exceptions to the requirement to provide an emergency response telephone number to a new paragraph (d). PHMSA is proposing a conforming revision to § 172.201(d) to accurately reference the exception from the emergency response telephone number requirement found in § 172.604(d).

Sections 172.301, 172.326, 172.328, and 172.330

These sections prescribe marking requirements for non-bulk packagings, portable tanks, cargo tanks, tank cars and multi-unit tank car tanks. Each of these sections contains a paragraph (§§ 172.301(f), 172.326(d), 172.328(e), and 172.330(c)) prescribing requirements for legible marking of packages containing unodorized LPG with NON-ODORIZED or NOT-ODORIZED. PHMSA received a request for a letter of interpretation (Ref. No. 06-0235) requesting clarification that the NON-ODORIZED or NOT-ODORIZED mark may also appear on a package containing odorized LPG. In the letter, we noted that PHMSA addressed this issue in part in a final rule published by its predecessor agency, RSPA, on November 4, 2004 (RSPA–03–15327 (HM–206B); 69 FR

64462, effective October 1, 2006). Final rule HM-206B changed the hazard communication requirements applicable to certain packages containing unodorized LPG, including the requirement to mark with NON-ODORIZED or NOT-ODORIZED. Specifically, it also clarified that the NON-ODORIZED or NOT-ODORIZED marking may appear on a tank car or multi-unit tank car tanks used for both unodorized and odorized LPG. This was implemented to address the concerns expressed by a commenter to the rule about the logistics of tracking, inspecting, and stenciling tank cars to ensure proper marking. However, this clarification was not extended to cylinders, cargo tanks and portable tanks containing LPG in that final rule. We further noted in the response letter that we intended to revisit this issue in a future rulemaking to extend this clarification to other packaging types that are filled with unodorized or odorized LPG.

We see no compelling argument not to extend this allowance further to other packaging types, thus, PHMSA is proposing to revise §§ 172.301(f), 172.326(d) and 172.328(e) to include the clarification that the marking may appear on these packagings used for both unodorized and odorized LPG, and remove the effective date of October 1, 2006 that appears in these paragraphs, as the effective date has long passed. PHMSA is also removing the effective date referenced in paragraph § 172.330(c).

Section 172.406

This section specifies the placement of labels on a package. Paragraph (d) of this section prescribes requirements that labels be printed or affixed to a background of contrasting color, or must have a dotted or solid line outer border. Further, § 172.407(b)(2) provides that the dotted line border on each label shown in §§ 172.411 through 172.448 is not part of the label specification, except when used as an alternative for the solid line

outer border to meet the requirements of § 172.406(d). Based on this language, it appears that labels with a dotted or solid line outer border are permitted only if the surface of the package is not a contrasting color.

In this rulemaking, we are proposing to amend § 172.406(d) by expressly authorizing the use of labels described in Part 172, Subpart E with a dotted or solid line outer border on a surface background of contrasting color. There is no reduction in hazard communication and this revision will provide cost savings to shippers by eliminating the need to acquire and store two types of labels (one with a border and the other without) depending on the surface color of the package.

Section 172.407

This section contains label specifications. Paragraph (d) of this section contains color specifications for labels including a requirement for color tolerances according to color charts referenced in Appendix A to Part 172 of the HMR. Paragraph (d)(4)(ii) states that the color charts are on display at the Office of Hazardous Materials Safety, Office of Hazardous Materials Standards, Room 8422, Nassif Building, 400 Seventh Street, SW. Washington DC 20590-0001. This address does not reflect the current address of the Office. PHMSA is amending the address in § 172.407(d)(4)(ii) to read Standards and Rulemaking Division, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001.

Section 172.514

This section prescribes the placarding requirements and exceptions for a bulk packaging containing a hazardous material. In paragraph (c)(4), an exception is provided

for an IBC that is labeled in accordance with Part 172, Subpart E instead of placarded. IBCs that are labeled instead of placarded are authorized to display the proper shipping name and UN identification number in accordance with the bulk package marking size requirements of § 172.302(b)(2) in place of the UN number on an orange panel, placard or white square-on-point. Section 172.302(b)(2) requires that for IBCs, markings have a width of at least 4.0 mm (0.16 inch) and a height of at least 25 mm (one inch). This is inconsistent with the UN Model Regulations, IMDG Code, and ICAO TI that all require a height of 12 mm (0.47 inch). The international size requirement is equivalent to the non-bulk marking size requirement provided in § 172.301(a)(1). In addition, the reference to the bulk packaging marking requirements of § 172.302(b)(2) in § 172.514(c)(4) conflicts with § 172.336(d) identification number marking requirements which states "[w]hen a bulk packaging is labeled instead of placarded in accordance with § 172.514(c) of this subchapter, identification number markings may be displayed on the package in accordance with the marking requirements of § 172.301(a)(1) of this subchapter."

In this rulemaking, we are proposing to clarify that the marking size requirement, for both the proper shipping name and identification number, is at least 12 mm (0.47 inch) for an IBC that is labeled instead of placarded. PHMSA proposes replacing the bulk package marking reference in § 172.514(c) with the non-bulk marking reference, specifically, § 172.301(a)(1). The reduced minimum marking size will alleviate the existing discrepancy between § 172.514(c)(4) and § 172.336(d) and decrease frustration of shipments by harmonizing with international regulations thus ensuring IBC's marked in accordance with these regulations are consistent with the HMR.

Part 173

Section 173.4a

This section prescribes the requirements for excepted quantities of hazardous materials. The excepted quantities provisions were added to the HMR when PHMSA published a final rule on January 14, 2009 (Docket Nos. PHMSA–2007–0065 (HM–224D) and PHMSA–2008–0005 (HM–215J); 74 FR 2254, effective February 13, 2009) in an effort to harmonize with international standards. Excepted quantities provisions in § 173.4a are intended to be consistent with the existing exception in the ICAO TI. Paragraph (a) reads "[e]xcepted quantities of materials other than articles transported in accordance with this section are not subject to any additional requirements of this subchapter except for…" This language is unclear as to whether articles (including aerosols) may use the excepted quantities provisions. PHMSA is revising this paragraph to clarify that articles (including aerosols) are not eligible for excepted quantity reclassification under § 173.4a, although some aerosols are eligible to be shipped as small quantities by highway and rail in § 173.4. This will eliminate confusion as to the status of articles (including aerosols) in the context of this exception, while providing consistent language structure with part 3, chapter 5, section 5.1 of the ICAO TI.

Section 173.21

This section outlines forbidden materials and packages. Paragraph (e) of this section forbids transport of a material in the same packaging, freight container, or overpack with another material, that if mixed would likely cause a dangerous evolution of heat, flammable or poisonous gases or vapors, or produce corrosive materials. While this prohibition prevents incidents from occurring within a freight container, overpack or the same container, there is no prohibition on this type within a transport vehicle (e.g., a truck

with single trailer). A transport vehicle is defined in § 171.8 as a cargo-carrying vehicle such as an automobile, van, tractor, truck, semitrailer, tank car or rail car used for the transportation of cargo by any mode. Each cargo-carrying body is a separate transport vehicle. Allowing materials within a single cargo-carrying body (e.g., a trailer, a rail car, etc.) that, if mixed, could cause a dangerous evolution of heat, flammable or poisonous gases or vapors, or create corrosive materials poses a significant safety risk. This method of transportation is forbidden within a freight container, packaging, or overpack, and while a transport vehicle is slightly different than a packaging or overpack, it is similar to a freight container.

PHMSA received a request for a letter of interpretation (Ref. No. 13-0111) describing a potentially dangerous situation. In the letter, the requestor described a scenario whereby a company offers for transportation "UN1908, Chlorite Solution, Class 8, Packing Group (PG) II;" "UN1791, Hypochlorite Solutions, Class 8, PG III;" and "UN1789, Hydrochloric Acid Solution, Class 8, PG II" in separate intermediate bulk containers (IBCs) in the same transport vehicle. While there are no formal segregation requirements per § 177.848 of the HMR, data accompanying the letter indicated that in the event of commingling, these materials would create chlorine dioxide gas. "Chlorine dioxide (not hydrate)" is forbidden for transportation per the § 172.101 HMT. Thus, the transportation of these materials in the same transport vehicle would create a situation where the mixing of the materials would produce a poisonous gas and highly corrosive material, which happens to also be forbidden from transport; yet, under the current construct of § 173.21, there is no prohibition against this transport scenario.

The concern is that a single cargo-carrying body, such as a trailer or rail car, does not provide a level of safety equivalent to if these materials were intended to be in the same freight container, yet it is permitted in the HMR. Additionally, the loading and unloading requirements for Class 8 materials in § 177.839 or part 174 do not address the loading of chlorite solutions and hypochloric acid in the same transport vehicle.

Prohibiting the transportation or offering for transportation of materials in the same transport vehicle (e.g., a trailer, a rail car) with another material which is likely to cause a dangerous evolution of heat, flammable or poisonous gases or vapors, or produce corrosive materials upon mixing would address the safety risk referenced in the letter of interpretation Ref. No. 13-0111, for both rail and highway transport. This change would afford these modes of transportation the same level of safety seen in intermodal transportation and the forbidden materials restrictions for freight containers. Therefore, PHMSA is proposing to revise § 173.21(e) to include the term transport vehicle.

Section 173.24a

Section 173.24a prescribes additional general requirements for non-bulk packages. Paragraph (c)(1)(iv) provides the quantity limits for mixed contents packages (when multiple hazardous materials are packed within the same package) transported by aircraft. In this rulemaking, we are proposing to clarify that the requirements provided in paragraph (c)(1)(iv) do not apply to limited quantity materials packaged in accordance with § 173.27(f)(2). This change is proposed for clarification purposes only. Misapplication of § 173.24a(c)(1)(iv) would be duplicative and, in certain cases, would place unintended restrictions on the net quantity of hazardous materials per package.

Section 173.27

This section prescribes general requirements for the transportation of hazardous material by aircraft. Paragraph (f)(2) contains the provisions for limited quantities but does not expressly address limited quantity packages of mixed contents. PHMSA received a request for a letter of interpretation (Ref. No. 13-0094) to clarify, for transportation by aircraft, the applicable section to reference. Specifically, the requester asked whether Table 3 in § 173.27(f)(3), or the general provisions in § 173.24a(c)(1)(iv) should be used when determining the maximum net quantity of each inner and outer packaging for limited quantity packages of mixed contents. In response, we stated that as provided in § 173.27(f)(2), when a limited quantity of a hazardous material is packaged in a combination packaging and is intended for transportation aboard an aircraft, the inner and outer packagings must conform to the quantity limitations set forth in Table 3. Table 3 provides the maximum net quantity of each inner and outer packaging for materials authorized for transportation as a limited quantity by aircraft. For mixed contents of limited quantities by air, the shipper must comply with the maximum authorized net quantity of each outer package (column 4 of 5 in Table 3) and ensure that the total net quantity does not exceed the lowest permitted maximum net quantity per package as shown by hazard class or division for the hazardous materials in the mixed contents package.

In this rulemaking, we are proposing to revise § 173.27(f)(2)(i) to clarify that the maximum net quantity for limited quantity packages of mixed contents must conform to the quantity limitations provided in § 173.27(f)(3), Table 3.

Section 173.150

This section provides exceptions for Class 3 (flammable and combustible liquid) hazardous materials. The requirements for combustible liquids in bulk packagings are

found in §§ 173.150(f)(3). Although placarding under Subpart F of Part 172 is specified as a requirement in § 173.150(f)(3)(iv), registration requirements of § 107.601 are not included among the subject requirements. Given that § 173.150(f)(3) provides a list of subject requirements for combustible liquids in bulk packaging, PHMSA is revising this section by adding a new subparagraph § 173.150(f)(3)(xi) stating that the registration requirements in Subpart G of Part 107 are also applicable, for bulk packagings only. PHMSA is also revising §§ 173.150(f)(3)(ix) and 173.150(f)(3)(x) for punctuation applicable to the listing of requirements.

Section 173.159

This section prescribes requirements applicable to the transportation of electric storage batteries containing electrolyte acid or alkaline corrosive battery fluid (i.e., wet batteries). This section outlines packaging requirements, exceptions for highway or rail transport, and tests which batteries must be capable of withstanding to be considered as non-spillable. However, there are no requirements or instructions for shippers of damaged or leaking wet batteries to prepare these items for transport. PHMSA received a request for a letter of interpretation (Ref. No. 06-0031) to clarify whether a shipper of a damaged wet battery may utilize the exception from full regulation provided in § 173.159(e). In response, we stated that a damaged battery may be shipped in accordance with § 173.159(e) provided: (1) it has been drained of battery fluid to eliminate the potential for leakage during transportation; (2) it is repaired and/or packaged in such a manner that leakage of battery fluid is not likely to occur under conditions normally incident to

transportation; or (3) the damaged or leaking battery is transported under the provisions of § 173.3(c).

PHMSA is proposing to create a new paragraph (j) in § 173.159 to address the need for provisions that allow shippers to prepare for transport and offer into transportation damaged wet electric storage batteries. This paragraph will permit the transportation, by highway or rail, of damaged wet electric storage batteries under the conditions outlined in the letter of interpretation. In addition to the conditions listed in paragraph (j), damaged wet electric storage batteries must also meet all other applicable requirements of § 173.159.

Section 173.166

This section prescribes requirements applicable to the transportation of air bag inflators, air bag modules, and seat-belt pretensioners. In a final rule (Docket No. PHMSA-2010-0201 (HM-254)) published on July 30, 2013 (78 FR 45880), PHMSA revised the requirements applicable to these materials. Among the changes made was the adoption of Special Permit DOT SP-12332 into the HMR, This special permit excepted Class 9 air bag inflators, air bag modules, or seat-belt pretensioners assigned to UN3268 from the requirement to provide the EX number (i.e., the approval number) on the shipping paper.

Under § 173.166, paragraph (e)(6) authorizes packaging alternatives for air bag inflators, air bag modules, and seat-belt pretensioners that have been removed from, or were intended to be used in, a motor vehicle; and those devices meet the requirements for use in the United States and are being transported to recycling or waste disposal facilities.

When adopted in HM-254, a provision in § 173.166 (e)(6) stated "for domestic transportation by highway" thereby limiting the use of this exception to ground transport, yet DOT SP-12332 specifically permitted transport by "cargo vessel" as an authorized mode of transportation. For greater consistency with the special permit language adopted in HM-254, PHMSA is revising paragraph (e)(6) to add the words "or cargo vessel."

Sections 173.170 and 173.171

These sections prescribe exceptions for the transportation of black powder for small arms classed as a Division 1.1 explosive and smokeless powder for small arms classed as a Division 1.3 explosive. These exceptions permit these materials to be reclassed as Division 4.1 flammable solid material for domestic transportation. In both sections, the total quantity of black or smokeless powder for small arms is limited to 45.4 kg (100 pounds) net mass in a motor vehicle (other modes are authorized as well). PHMSA believes the exception should be updated to account for modern highway transportation. Currently, the HMR defines motor vehicle in § 171.8 to include a vehicle, machine, tractor, trailer, or semitrailer, or any combination thereof. The use of the term motor vehicle in this exception limits a carrier with multiple trailers to 100 pounds total of black or smokeless powder, reclassed as Division 4.1. Carriers who commonly transport double or triple trailer loads by highway may find it difficult to ensure that each trailer contains an amount of black or smokeless powder, reclassed as Division 4.1 that would keep the total quantity in all trailers under 100 pounds.

PHMSA believes the term motor vehicle should be replaced with transport vehicle in the context of this exception and we believe doing so will not decrease the level of safety for the transport of these materials. The term transport vehicle is defined in § 171.8

as a cargo-carrying vehicle such as an automobile, van, tractor, truck, semitrailer, tank car or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (a trailer, a rail car, etc.) is a separate transport vehicle. Changing the term motor vehicle to transport vehicle would reflect a consistency in the ability to use exceptions for black or smokeless powder with the other modes, such as rail and vessel, whereby each rail car or freight container is permitted to have 100 pounds total. Thus, PHMSA proposes to revise §§ 173.170 and 173.171 to replace the term "motor vehicle" with "transport vehicle." Additionally, PHMSA is requesting specific comment from stakeholders on this issue and any data they have relating to noted incidents involving transporting black or smokeless powder for small arms reclassed as Division 4.1 by motor vehicle.

Section 173.199

This section prescribes the packaging requirements for Category B infectious substances. Paragraph (a)(4) of this section requires that the packaging be capable of successfully passing the drop test in § 178.609(d) and the steel rod impact test in § 178.609(h) at a drop height of at least 1.2 meters (3.9 feet).

PHMSA received a request for a letter of interpretation regarding the test requirements in § 173.199(a)(4) (Ref. No. 07-0018). The request pointed out that in the preamble to the final rule published on June 2, 2006 under Docket Number PHMSA-2004-16895 (HM-226A) [71 FR 32244], we state that Category B packagings must be capable of passing a drop test, but need not be capable of passing a puncture or other performance test. The requester asked if the regulatory text requiring the steel rod impact test for this packaging was an error.

As we clarified in our response, PHMSA did not intend to require the steel rod impact test in § 178.609(h) for a packaging used to transport a Category B infectious substance. Therefore, in this rulemaking, we are proposing to revise the provisions in § 173.199(a)(4) by removing the reference to the steel rod impact test in § 178.609(h).

Section 173.216

This section establishes the transportation requirements for blue, brown, or white asbestos. Paragraph (c) of this section provides packaging requirements for asbestos including both "non-bulk" and "bulk" packaging options.

PHMSA received a request for a letter of interpretation regarding the applicability of bulk and non-bulk packaging instructions for asbestos (Ref. No. 11-0169). The letter expressed confusion regarding whether § 173.216 should apply to both "bulk" and "non-bulk" packages of asbestos, because as the requester noted in the letter, in the § 172.101 HMT, the entry for "Asbestos," NA2212 refers to packaging instructions specified in § 173.216 for non-bulk packaging requirements, and § 173.240 for bulk packaging requirements. It was also noted in the letter that some of the packaging options specified in § 173.216 are considered bulk packagings.

PHMSA acknowledged that some of the packaging options provided in § 173.216(c) meet the bulk packaging definition specified in § 171.8 and, therefore, would be considered a bulk packaging for transportation purposes. In this rulemaking, we are proposing to amend the bulk packaging section reference in Column (8C) of the HMT from "240" to "216" for the table entries associated with the following identification numbers: NA2212, UN2212, and UN2590. In addition, we are proposing to revise paragraph (c)(1) in § 173.216 by authorizing the use of bulk packages prescribed in

§ 173.240. These proposed amendments will: (1) eliminate the confusion pertaining to bulk packaging specifications contained in a section referenced in the authorized non-bulk Column (8B) of HMT; and (2) allow for the continued use of bulk packages in § 173.240, while also providing examples of specific bulk packagings authorized for asbestos such as hopper-type rail cars and hopper-type motor vehicles currently found in § 173.216(c)(1).

Section 173.225

This section contains the packaging requirements and other provisions applicable to the transportation of organic peroxides. Paragraph (d) of this section contains the Packing Method table, which provides packagings authorized for organic peroxides and the maximum quantity permitted in each package or packaging. The table is missing information and PHMSA is proposing to revise the table to add a reference to note 1 for OP2, which states that if two values are given, the first applies to the maximum net mass per inner packaging and the second to the maximum net mass of the complete package. Additionally, PHMSA is proposing to revise the maximum quantity for solids and combination packagings (liquid and solid) for OP4. This quantity should read as "5/25" kg instead of only "5."

Section 173.301

This section applies to general requirements for shipment of compressed gases and other hazardous materials in cylinders, UN pressure receptacles and spherical pressure vessels. Paragraph (g) of this section describes the requirements to manifold cylinders in transportation. A manifold system is a single pipe or chamber connected to a group of cylinders, which allows for a single point of loading and unloading.

Incidents investigated by the NTSB have highlighted potential risks when transporting manifolded acetylene trailers.[2] These incidents included overturned vehicles and two unloading releases. As a result of the impact caused by ejection of the cylinders from the vehicle during overturn incidents, cylinders have shown signs of broken valves, burst heads, burst walls, as well as bulging and denting of the walls. The impact resulting from the ejection of the cylinders from the vehicle also can cause the valves to break, which may ignite the acetylene. The NTSB's investigation also concluded that the unloading sequence is occasionally done out of order from what is specified in the standard operating procedures and this can be a contributing factor to incidents.

These recent incidents involving manifolded acetylene trailers have caused the National Transportation Safety Board (NTSB) to issue two Safety Recommendations (H-09-01 and H-09-02) to PHMSA.[3] The NTSB investigations resulted in the issuance of the following Safety Recommendations:

> H-09-01: Modify 49 CFR 173.301 to clearly require (1) that cylinders be securely mounted on mobile acetylene trailers and other trailers with manifolded cylinders to reduce the likelihood of cylinders being ejected during an accident and (2) that the cylinder valves, piping, and fittings be protected from multidirectional impact forces that are likely to occur during highway accidents, including rollovers.
>
> H-09-02: Require fail-safe equipment that ensures that operators of mobile acetylene trailers can perform unloading procedures only correctly and in sequence.

Given the results of the NTSB investigations and the associated safety risks of mobile acetylene trailer overturns and unloading operations, PHMSA proposes to incorporate by reference in § 171.7 of the HMR the CGA pamphlet G-1.6-2001, Standard for Mobile Acetylene Trailer Systems (7th ed.). CGA G-1.6 would serve to address the

[2] https://www.ntsb.gov/doclib/safetystudies/SIR0901.pdf
[3] http://phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Files/NTSB%20Files/H_09_1_2_Original.pdf

NTSB Safety Recommendations specific to mobile acetylene trailers. This pamphlet was updated with input from PHMSA and the industry to address cylinder securement under accident conditions, valve protection from multidirectional impact forces and unloading fail-safe procedures specific to mobile acetylene trailers.

Specifically, PHMSA proposes to incorporate the CGA pamphlet into § 171.7, and revise § 173.301(g)(1)(iii) to indicate that mobile acetylene trailers must be maintained, operated and transported in accordance with CGA Pamphlet G-1.6. In addition, PHMSA seeks specific comment on the inclusion of CGA Technical Bulletin (TB) TB-25 to address structural integrity requirements. PHMSA is also proposing to revise § 177.840, by adding paragraph (a)(3) to state that cylinders containing acetylene and manifolded as part of a mobile acetylene trailer system must be transported in accordance with § 173.301(g) to ensure that this requirement is addressed in the carriage by highway portion of the HMR. PHMSA seeks comment on the number of entities affected by this proposal, if any. Finally, PHMSA seeks comment on safety implications of such a change as well as the net benefit such a change (i.e., decrease in the number of frustrated shipments) would provide.

Sections 173.304a(d)(5), 173.314(h) and 173.315(b)(1)

Section 173.304a establishes additional requirements for the shipment of LPG in specification cylinders. Section 173.314 establishes requirements for compressed gases in tank cars and multi-unit tank cars and § 173.315 establishes requirements for compressed gases in cargo tanks and portable tanks. PHMSA is aware of several incidents possibly attributed to either the under-odorization or odorant fade of LPG. Most notable of these incidents is one that happened in Norfolk, MA on July 30, 2010 where an explosion occurred at a residential condominium complex that was under construction. Emergency

responders from 21 cities/towns deployed personnel to the accident site. The accident resulted in seven injuries and one fatality.

The subsequent investigation raised questions as to whether there was a sufficient level of odorant in the LPG contained in the on-site storage tanks. In accordance with Federal and State laws and regulations, LPG intended for use by non-industrial entities is generally required to be odorized, or stenched, to enable the detection of any unintended release or leak of the gas. LPG is highly flammable and dangerous to inhale in large quantities. The added odorant is a safety precaution that helps warn those in the area that a release of gas has occurred. In the Norfolk incident, there appeared to be no warning, i.e. there was no noticeable evidence of odorant that would indicate the on-site LPG storage tank was leaking prior to the explosion. PHMSA has consulted with stakeholders from industry, fire fighter associations, and other regulatory agencies in order to better understand the root cause of incidents like the one in Norfolk. Although additional research may be necessary in order to come to more definitive conclusions, PHMSA has identified the following situations in which the risks of under-odorization or odorant fade are more likely to occur:

Injection Process: On December 13, 2012, PHMSA met with representatives from the National Propane Gas Association (NPGA) to gain a better understanding of the LPG odorization process. During this meeting, representatives from the NPGA stated that the most common method for the odorization of LPG is through an automated system. However, the NPGA also noted there are situations where the odorization process is manually performed. Preliminary investigations into the Norfolk, MA incident suggest that the lack of sufficient odorization rendered the LPG undetectable when the on-site

storage tank began to leak. In situations where the injection process is not fully automated, the potential for human error may increase the possibility of under-odorization. We believe that the insufficient level of odorant in the LPG contained in the on-site storage tank involved in the Norfolk, MA incident was likely a major contributing factor in limiting the ability of on-site personnel to readily detect the leak.

New Tanks or Freshly Cleaned Tanks: During our meetings with various stakeholders, several indicated that a phenomenon known as "odor fade" may be a problem when new or recently cleaned tanks are used. New or recently cleaned tanks may absorb the odorant into the metal shell of these tanks leading to an "odorant fade," and thus limiting the effectiveness of the remaining odorant in the LPG.

Odorization Standards: The odorization of LPG is addressed by Federal and state laws and regulations, as well as generally accepted industry standards and practices. When offered and transported in commerce, the HMR specifies that all LPG in cargo and portable tanks be effectively odorized using either 1.0 pound of ethyl mercaptan, 1.0 pound of thiopane, or 1.4 pounds of amyl mercaptan per 10,000 gallons of LPG, in the event of an unintended release or leak to indicate the presence of gas. The HMR do not, however, require LPG to be odorized if odorization would be harmful in the use or further processing of the LPG, or if odorization will serve no useful purpose as a warning agent in such use or further processing. Essentially, this exception applies to LPG being transported to industrial end-users.

Although the HMR requires odorization of LPG in cargo tanks and portable tanks, there are no such parallel requirements in the HMR for rail tank car tanks and cylinders. Therefore, in this NPRM, we are proposing to add new §§ 173.304a(d)(5) and 173.314(h)

consistent with the revised text in § 173.315(b)(1) to address the odorization of LPG in cylinders and rail tank car tanks, respectively. We are also proposing to revise § 173.315(b)(1) to add a performance standard to address the issues of "under odorization" and "odor fade."

Section 173.306

This section provides exceptions from the HMR for compressed gases, including aerosols, when transported in limited quantities. In a final rule published May 14, 2010, under PHMSA-2009-0289 (HM-233A) [75 FR 27205], PHMSA added a new paragraph (k) to § 173.306 adopting provisions from DOT-SP 12842. These provisions authorized an increase in gross weight per package for the purpose of packaging discarded empty, partially used, and full aerosol containers to be transported to a recycling or disposal facility.

PHMSA received a request for a letter of interpretation (Ref. No. 12-0004) seeking confirmation that aerosols shipped for disposal or recycling in compliance with § 173.306(k) are permitted the same exceptions (i.e., the marking and labeling requirements of Part 172 Subparts D and E respectively, and shipping paper requirements, unless it is a hazardous waste or hazardous substance, of 172 Subpart C) granted under §§ 173.306(i) and 173.156(b) without being reclassified as an ORM-D material. The requester also pointed out that under DOT-SP 12842, aerosols shipped for disposal or recycling were excepted from the marking, labeling and shipping paper requirements, unless they were considered a hazardous waste or hazardous substance, without being reclassified as an ORM-D material.

PHMSA stated that the intention of HM-233A was to adopt DOT-SP 12842 into the HMR as was designed. Therefore, in this rulemaking, we propose to amend § 173.306(k) by clarifying that aerosols shipped for recycling or disposal by motor vehicle, containing a limited quantity under the specific conditions provided in § 173.306(k), are afforded the applicable exceptions provided for ORM-D materials granted under §§ 173.306(i) and 173.156(b). The letter provides that, consistent with § 173.306(i), packages containing aerosols meeting the limited quantity requirements of § 173.306(k) must be marked in accordance with § 172.315(b). In addition, the letter also clarifies that the language "INSIDE CONTAINERS COMPLY WITH PRESCRIBED REGULATIONS" is required for shipments of aerosols shipped for disposal or recycling in compliance with paragraphs (a)(3), (a)(5), or (b)(1) of § 173.306.

Part 175

Section 175.1

This section describes the purpose, scope and applicability of Part 175 to air operations, specifically, the transportation of hazardous materials in commerce by air. Exceptions for certain aircraft operations are listed in § 175.9(b). Paragraph (b)(4) of § 175.9 excepts hazardous materials carried and used during dedicated air ambulance, firefighting, or search and rescue operations. To clarify that these operations are not subject to the HMR when in compliance with applicable Federal Aviation Regulations (FAR; 14 CFR) and any additional FAA requirements, PHMSA proposes to create a new paragraph (d) in § 175.1 stating that the HMR does not apply to dedicated air ambulance, firefighting, or search and rescue operations. This will eliminate any confusion that these air operations would otherwise be subject to requirements in the HMR (e.g., passenger

notification requirements). PHMSA also proposes to remove § 175.9(b)(4) for consistency.

As with other conditional exceptions to the HMR, non-compliance with the FAR could subject operators to enforcement under the HMR. PHMSA does not anticipate any adverse safety consequences with this proposed revision due to the existing training requirements in the FAR on the proper handling and stowage of hazardous materials carried onboard aircraft.

The FAA and PHMSA recognize that certain operators do not solely utilize their aircraft for purposes under § 175.9(b)(4). Normal transport operations (i.e., the transport of either passengers or cargo not required for performance of, or associated with, the specialized emergency function) would continue to be subject to the HMR. However, staging operations and other operations related to dedicated air ambulance, firefighting, or search and rescue operations are intended to be excepted from the HMR when in compliance with the FAR. We note the following definitions in FAA Order 8900.1(Vol. 3, Chapter 14, Section 1, 3-529(C)):

1) Firefighting. This term includes the drop of fire retardants, water, and smoke jumpers. It also includes the transport of firefighters and equipment to a fire or to a base camp from which they would be dispersed to conduct the firefighting activities.

2) Search and Rescue. Search and rescue is a term of art meaning aircraft operations that are flown to locate people who cannot be located from the ground. The term includes operations where the aircraft is indispensable to the search, or is the only feasible means of reaching the victim. Victims would be considered to be "associated with" the search and rescue operation. The term "search and rescue" does not include routine medical evacuation of persons due to traffic accidents and other similar incidents

Air ambulance operators are required by the FAR to utilize either Operational Specification (OpSpec) A021 ((Helicopter Emergency Medical Services (HEMS)

Operations) or A024 (Air Ambulance Operations-Airplane) and must obtain and adhere to the appropriate OpSpec to be excepted from the HMR.

Section 175.8

This section provides exceptions from certain regulations for air carrier operator equipment and items of replacement. Paragraph (b)(1) provides that oxygen, or any hazardous material used for the generation of oxygen, for medical use by a passenger, which is furnished by the aircraft operator in accordance with certain 14 CFR requirements is not subject to the requirements of the HMR. The provisions of 14 CFR, § 125.219, Oxygen for medical use by passengers, was inadvertently left out of paragraph (b)(1). In this rulemaking, we are proposing to correct the paragraph by adding the appropriate 14 CFR, Part 125 citation.

Section 175.10

This section provides exceptions for passengers, crewmembers, and air operators. Paragraph (a) of this section lists a number of hazardous materials that are permitted for carriage by passengers or crewmembers provided the requirements of §§ 171.15 and 171.16 and the conditions of this section are met. PHMSA is proposing revisions to some of these provisions to promote clarity.

In paragraph (a)(6), hair curlers (curling irons) containing a hydrocarbon gas such as butane and carried in carry-on or checked baggage, are excepted from the requirements of the HMR. Gas refills for such curlers are not permitted in carry-on or checked baggage. In this NPRM, PHMSA proposes to prohibit such hair curlers in checked baggage. We believe the risk posed by flammable gases in an inaccessible compartment on a passenger-

carrying aircraft is obvious. Flammable gases will burn if mixed with an appropriate amount of air and confined burning of a flammable gas can lead to detonation. As a result, we remain concerned with the flammability hazard posed by butane and other flammable gases and the ability of such gases to propagate or contribute to a fire in the cargo compartment of an aircraft. This concern is particularly relevant to carriage in checked baggage where damage to the curling iron and the subsequent release of a flammable gas may occur if the baggage is mishandled or the article itself is compromised.

Because of the risks posed by flammable gas, a number of safety requirements apply to cargo shipments of flammable gas on passenger-carrying aircraft. Most Division 2.1 flammable gas substances and articles are generally forbidden from transportation as cargo aboard passenger-carrying aircraft and prohibiting the carriage of butane-powered curling irons in checked baggage is consistent with this provision. In the area of aviation safety, where the high volume of travel and the catastrophic consequences of failure lead to a very low tolerance for risk, we firmly believe the known risks of flammable gas are sufficient basis for our decision. We solicit public comment on any impact our proposed action may impose upon passengers, crew members, and air operators.

In paragraph (a)(22) of this section, non-infectious specimens transported in accordance with § 173.4b(b) (de minimus quantities) are permitted for carriage by passengers or crewmembers. PHMSA is clarifying this exception to include the phrase "in preservative solutions" to clarify the intended use of this exception. Non-infectious substances would not otherwise be subject to the HMR if they did not otherwise meet the definition of any other hazard classes. This clarification will signal that the exception

refers to specimens in solutions that may contain preservatives that are hazardous materials such as formaldehyde and alcohol solutions.

Additionally PHMSA is revising paragraph (a)(24) of this section, which refers to small cartridges of carbon dioxide or other suitable gas of Division 2.2. The exception states that small cartridges fitted into devices with no more than four small cylinders are permitted. This is inconsistent with the ICAO TI, which permits cartridges for other devices indicating that spares are permitted. As § 175.10(a)(24) currently reads, there is no mention of spare cartridges. The HMR currently permits up to four small cartridges and therefore, PHMSA is proposing to revise this paragraph to state that small cartridges fitted into or securely packed with devices with no more than four small cylinders of carbon dioxide or other suitable gas in Division 2.2 are permitted for carriage by passengers or crewmembers. This change will harmonize with international standards to clarify that spares are permitted in addition to the cartridges already fitted into the device, provided they are securely packed with the devices for intended use.

Section 175.75

This section describes the quantity limitations and cargo locations for carriage by aircraft. Paragraph (e)(2) excepts packages of hazardous materials transported aboard a cargo aircraft, when other means of transportation are impracticable or not available, in accordance with procedures approved in writing by the FAA Regional or Field Security Office in the region where the operator is located from the requirements of paragraphs (c) and (d) of § 175.75. PHMSA is revising this paragraph by removing the word "located" and adding the word "certificated" in its place. The words "or Field Security" are also removed. This amendment will ensure operators interact with the Hazardous Materials

Division Manager (HMDM) who has already reviewed and recommended for approval the certificate's HazMat-related manual(s) required under 14 CFR 14 CFR § 121.135. The HMDM (or designee) will already have an understanding of the certificate's operations and, as needed, will interact with the local resources and/or the operator's certificate management team to assess the impracticability or lack of availability of other cargo operations – as well as what alternative procedures should be prescribed.

Part 176

Section 176.30

This section prescribes the information required on dangerous cargo manifests for vessel transport. Paragraph (a)(4) requires "the number and description of packages (barrels, drums, cylinders, boxes, etc.) and gross weight for each type of packaging." In this rulemaking, we are proposing to replace the word "packaging" with "package" as the term "packaging" refers to the means of containment and not the completed package.

Part 177

Section 177.848

This section addresses segregation requirements for hazardous materials transported by motor carrier. PHMSA received a request for a letter of interpretation (Ref. No. 09-0268) requesting clarification whether "UN0042, Boosters, 1.1D, PG II" and "UN1942, Ammonium nitrate, 5.1, PG III" can be transported in the same vehicle. The requester noted seemingly conflicting requirements in §§ 177.835 and 177.848 applicable to the segregation of ammonium nitrate fertilizer and explosive materials.

Section 177.848(e) provides instructions for using the segregation table in

§ 177.848(d). Presently, under § 177.848(e)(5) assignment of note "A" authorizes ammonium nitrate (UN1942) and ammonium nitrate fertilizer to be loaded or stored with Division 1.1 (explosive) or Division 1.5 materials. However, § 177.835(c) provides that Division 1.1 or 1.2 (explosive) materials may not be loaded into or carried on any vehicle or a combination of vehicles under certain conditions outlined in paragraphs (c)(1) through (c)(4). PHMSA clarified in the letter that a Division 1.1 or 1.2 explosive may not be loaded into or carried on any vehicle or a combination of vehicles that does not conform to §§ 177.835(c)(1) through (4), regardless of the note "A" exception for UN1942 in § 177.848(e)(5). In this rulemaking, we are proposing to clarify that the loading restrictions in § 177.835(c)(1) through (4) are applicable to § 177.848(e).

Part 178

Section 178.65

This section applies to the manufacture of DOT Specification 39 non-reusable (non-refillable) cylinders. Paragraph (i) of this section describes the required markings for DOT 39 cylinders. The reference to § 178.35(h) in § 178.65(i)(1) is incorrect, as § 178.35(h) was removed under a final rule published July 20, 2011 (Docket No. PHMSA–2009–0151 (HM–218F). The final rule consolidated the inspector's report requirements found in § 178.35(g) into paragraph (c)(4) of that section, moved the manufacturer's report retention requirements into paragraph (g) and removed paragraph (h). PHMSA is proposing to revise § 178.65(i)(1) to correctly reference the manufacturer's report requirements in § 178.35(g).

Section 178.337-17

This section prescribes the marking requirements applicable to MC 331 cargo tank motor vehicles. Paragraph (a) of this section outlines general requirements for marking of MC 331 cargo tank motor vehicles. PHMSA received a request for a letter of interpretation to clarify the applicability of these markings in § 178.337-17(a) (Ref. No. 04-0206). The request pointed out an incorrect use of the term cargo tank as it applies to the requirement for specification plates found in paragraph (a), which states that:

> "Each cargo tank certified after October 1, 2004 must have a corrosion-resistant metal name plate (ASME Plate) and specification plate permanently attached to the cargo tank by brazing, welding or other suitable means on the left side near the front, in a place accessible for inspection."

In response, we stated that an MC 331 cargo tank must have a metal name plate (also referred to as an ASME plate) permanently attached to the cargo tank. In addition, an MC 331 cargo tank motor vehicle certified after October 1, 2004, must have a specification plate that includes the information specified in § 178.337-17(c). PHMSA is proposing to clarify § 178.337-17(a) to eliminate confusion of the name plate and specification plate requirements.

Section 178.345-3

This section prescribes general requirements for the structural integrity of specification cargo tanks. Paragraph (c)(1) of this section addresses stress in the cargo tank shell resulting from normal operating loadings. PHMSA published a final rule on October 2, 2013 (Docket No. PHMSA-2013-0158 (HM-244F); 78 FR 60745; effective October 1, 2013) intending to correct the formula presented in paragraph (c)(1) for the figure "S_S2" to read "SS^2." This correction correctly adjusted the standard "2" in the term

to be a superscript "^{2}," but inadvertently adjusted the second "S" from a subscript "$_S$" to a standard "S." This is incorrect and PHMSA is proposing to revise this portion of the formula in § 178.345-3(c)(1) to read "S_S^2."

Section 178.955

This section prescribes the design and testing criteria for Large Packagings. Presently, if a manufacturer of a Large Packaging wishes to construct a Large Packaging that differs from a listed specification there is no Associate Administrator approval provision outlined in the HMR. However, the HMR allude to the need for an approval in the Large Packaging marking requirements in § 178.910(a)(1)(ii). The HMR has approval provisions in Part 178 for manufacturers of both non-bulk packagings and IBCs when constructing packagings that differ from listed specifications. In this rulemaking, we are proposing to include provisions consistent with the non-bulk packaging and IBC approval provisions for Large Packagings in § 178.955. Such Large Packagings must be shown to be equally effective, and testing methods used must be equivalent. This change will resolve the issue with § 178.910(a)(1)(ii) and would be consistent with the UN Model Regulations and the IMDG Code, which provide approval provisions for non-bulk packagings, IBCs, and Large Packagings.

Part 179

Section 179.13

This section includes limitations on rail tank car capacity and gross weight. With certain exceptions, this section generally limits the gross weight on rail of tank cars to 263,000 pounds. This section has been revised numerous times over the last several years. In 2009, PHMSA added paragraph (b) to this section authorizing tank cars designed to

transport poisonous-by-inhalation (PIH) materials and built with certain mandated safety improvements (tank cars meeting the specifications of § 173.244(a)(2) or (3) or § 173.314(c) or (d)) to have a gross weight on rail of up to 286,000 pounds provided any weight increase was not used to increase product capacity. 74 FR 1770 (Jan. 13, 2009). Subsequently, in an effort to incorporate several widely used special permits providing relief from the gross weight limitations of § 179.13, PHMSA revised the section to provide FRA the authority to approve the operation of tank cars containing materials other than PIH materials at gross weights of up to 286,000 pounds. 75 FR 27205 (May 14, 2010). FRA published notice of its approvals under this section on January 25, 2011. 76 FR 4250.

In 2011, noting that the agency's stated intent in the 2010 rule was to incorporate into the HMR existing special permits related to tank car gross weight for tank cars carrying both non-PIH materials and PIH materials by giving FRA authority to approve tank car weights up to 286,000 pounds for both types of tank cars, PHMSA proposed to revise § 179.13 to correct the omission of PIH material tank cars from FRA's approval authority. See 76 FR 51324, 51331. However, when adopted as a final rule, the regulatory language did not correct this inadvertent omission. See 77 FR 37962, 37985 (HM-218B) (June 25, 2012). Instead, in the final HM-218B rule, § 179.13 was revised to provide that tank cars designed to transport PIH materials and built with the mandated safety improvements set forth in § 173.244(a)(2) or (3) or § 173.314(c) or (d)) "may have a gross weight on rail of up to 286,000 pounds upon approval by the Associate Administrator for Railroad Safety, FRA." As clearly demonstrated by the 2009 and 2010 rules, it was not the intent of either PHMSA or FRA to require FRA approval of tank cars built to the enhanced standards of § 173.244(a)(2) or (3) or § 173.314(c) or (d) for those cars to operate at a

gross rail load of 286,000 pounds. Accordingly, in this rule PHMSA is proposing to revise § 179.13 to correct this error and (1) make it clear that tank cars built to the enhanced standards of § 173.244(a)(2) or (3) or § 173.314(c) or (d) do not need FRA approval to operate at gross rail loads of up to 286,000 pounds; and (2) to provide for FRA approval of tank cars containing PIH materials that do not meet the enhanced standards to operate at gross rail loads of up to 286,000 pounds.

Part 180

Section 180.209

This section prescribes requalification requirements for DOT specification cylinders. Paragraph (j) contains a reference to an obsolete special provision. In a January 7, 2013 final rule (78 FR 1101), we removed and relocated regulatory text from § 172.102(c)(1) Special Provision 18 to § 173.309(a), which prescribes the conditions when specification cylinders may be described, offered, and transported in commerce as fire extinguishers. In relocating the text, we did not update this section to reflect the change. In this rulemaking, we are proposing to correct this inconsistency by replacing the reference to § 172.102(c)(1) Special Provision 18 with § 173.309(a).

Section 180.401

This section provides the applicability of the requirements of Subpart E of Part 180. It states that Subpart E prescribes requirements, in addition to those contained in Parts 107, 171, 172, 173 and 178 of this subchapter, applicable to any person responsible for the continuing qualification, maintenance or periodic testing of a cargo tank.

The term "person," as defined in § 171.8, means an individual, corporation, company, association, firm, partnership, society, joint stock company; or a government,

Indian tribe, or authority of a government or tribe offering a hazardous material for transportation in commerce or transporting a hazardous material to support a commercial enterprise. This term does not include the United States Postal Service or, for purposes of 49 U.S.C. 5123 and 5124, a Department, agency, or instrumentality of the government.

The intent of § 180.401 is to require a person involved with continuing qualification, maintenance or periodic testing of a cargo tank to comply with the requirements of Subpart E, even if they are not offering a hazardous material for transportation in commerce or transporting a hazardous material to support a commercial enterprise. In this rulemaking, we are proposing to revise the term "person" to "hazardous materials employee or hazardous materials employer." This will clarify that Subpart E of Part 180 not only applies to persons offering hazardous materials for transportation or transporting a hazardous material, but also those involved with qualification, maintenance or periodic testing.

V. Regulatory Analyses and Notices

A. Statutory/Legal Authority for This Rulemaking

This NPRM is published under authority of Federal hazardous materials transportation law (Federal hazmat law; 49 USC 5101 et seq.). Section 5103(b) of Federal hazardous materials law authorizes the Secretary of Transportation to prescribe regulations for the safe transportation, including security, of hazardous materials in intrastate, interstate, and foreign commerce. If adopted as proposed, this NPRM would make miscellaneous amendments to the HMR, correct errors in the § 172.101 HMT and corresponding special provisions, and respond to NTSB Safety Recommendations related to the safe transportation of manifolded acetylene cylinders.

Additionally, this NPRM will respond to petitions for rulemaking related to the allowable format for emergency telephone numbers on shipping papers, relax the pressure test interval for certain cargo tanks in dedicated propane service, enhance the safe packaging for nitric acid, clarify the testing requirements for specification cargo tank pressure relief devices, harmonize the hazard communication requirements for poisonous by inhalation materials transported by vessel and eliminate a potentially confusing packing group designation for certain organic peroxides, self-reactive materials and explosives. These amendments clarify regulatory requirements and, where appropriate, decrease the regulatory burden without compromising the safe transportation of hazardous materials in commerce.

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

This proposed rule is not considered a significant regulatory action under section 3(f) and was not reviewed by the Office of Management and Budget (OMB). The proposed rule is not considered a significant rule under the Regulatory Policies and Procedures order issued by the Department of Transportation [44 FR 11034].

In this notice of proposed rulemaking, we propose to amend miscellaneous provisions in the HMR to clarify the provisions and to relax overly burdensome requirements. PHMSA anticipates the proposals contained in this rule will have economic benefits to the regulated community. This NPRM is designed to increase the clarity of the HMR, thereby increasing voluntary compliance while reducing compliance costs.

Executive Order 13563 is supplemental to and reaffirms the principles, structures, and definitions governing regulatory review that were established in Executive Order

12866 Regulatory Planning and Review of September 30, 1993. In addition, Executive Order 13563 specifically requires agencies to: (1) involve the public in the regulatory process; (2) promote simplification and harmonization through interagency coordination; (3) identify and consider regulatory approaches that reduce burden and maintain flexibility; (4) ensure the objectivity of any scientific or technological information used to support regulatory action; and (5) consider how to best promote retrospective analysis to modify, streamline, expand, or repeal existing rules that are outmoded, ineffective, insufficient, or excessively burdensome.

In this NPRM, PHMSA has involved the public in the regulatory process in a variety of ways. Specifically, PHMSA is addressing issues and errors that were identified for future rulemaking in letters of interpretation and through other correspondence with PHMSA stakeholders who bring editorial errors in the HMR to our attention. In addition, PHMSA has responded to seven petitions for rulemaking and two NTSB Safety Recommendations. PHMSA is asking for public comments based on the proposals in this NPRM. Upon receipt of public comment, PHMSA will address all substantive comments in the next rulemaking action under this docket number.

The proposed amendments in the NPRM promote simplification and harmonization through interagency coordination. In this NPRM, PHMSA is proposing to revise 49 CFR Part 175, in a collaborative effort with the Federal Aviation Administration (FAA), to clarify the applicability of the HMR to certain aircraft operators, clarify exceptions for passengers and crewmembers, correct inaccurate references to the 14 CFR, as well as make minor editorial corrections applicable to air operations to improve overall clarity. There are minimal additional costs associated with these proposals, however increased clarity

will result in net benefits. Additionally, by updating references to the AAR Tank Car Manual in § 171.7, PHMSA worked collaboratively with FRA, promoting interagency coordination.

This NPRM also promotes harmonization with international standards, such as the IMDG Code, Canada's TDG requirements and the ICAO TI. These efforts include:

- Harmonizing hazard communication for poisonous-by-inhalation materials with the IMDG Code and TDG regulations;
- Removing the packing group II designation for certain organic peroxides, self-reactive substances and explosives to be consistent with the UN Recommendations, IMDG Code and ICAO TI and thus, facilitate international transport;
- Harmonizing entries in the HMT with the above listed international standards;
- Revising the passenger exceptions applicable to small cartridges containing Division 2.2 gas with the ICAO TI; and
- Harmonizing the excepted quantities requirements to mirror language employed in the ICAO TI as they apply to articles.

These revisions to the § 172.101 HMT will eliminate errors in the § 172.101 HMT, reduce ambiguity, harmonize the HMR with international regulations, and improve clarity. Although these revisions are minor, they are expected to produce a safety benefit derived from the increased clarity and accuracy of the text in the § 172.101 HMT.

This NPRM permits flexibility in achieving compliance when transporting damaged wet electric storage batteries. This NPRM also extends the requalification interval for certain MC 331 cargo tanks in dedicated propane service from five years to ten

years for a pressure test and internal visual inspection, therefore, fostering greater regulatory flexibility without compromising transportation safety. PHMSA is also clarifying the regulations to provide flexibility in the ability to use the NOT-ODORIZED or NON-ODORIZED marking on cargo tanks, cylinders and portable tanks containing odorized or unodorized LPG. Additionally, by allowing 100 pounds of black or smokeless powder for small arms reclassed as Division 4.1 in each transport vehicle, instead of each motor vehicle, the regulated community can reduce the number of motor vehicles needed to transport these goods.

Where PHMSA identified potential costs to stakeholders, specific comment was requested to clarify such costs. We request specific comment on potential cost impacts of the proposals in § 172.604 and § 173.158(e).

A majority of the amendments in this rulemaking are simple clarifications and do not require significant scientific or technological information. However, when necessary in this NPRM, PHMSA used scientific or technological information to support its regulatory action. Specifically, such data was considered when structuring alternatives on how to best deal with issues regarding the testing of pressure relief devices for cargo tank motor vehicles and extending the pressure test and internal visual inspection test interval from five to ten years for certain MC 331 cargo tanks in dedicated propane delivery service. This information was used in the evaluation of alternative proposals and ultimately this information determined how best to promote retrospective analysis to modify and streamline existing requirements that are outmoded, ineffective, insufficient, or excessively burdensome.

C. Executive Order 13132

This proposed rule was analyzed in accordance with the principles and criteria contained in Executive Order 13132 ("Federalism"). This proposed rule would preempt state, local and Indian tribe requirements but does not propose 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.

The Federal hazardous material transportation law, 49 USC 5125(b)(1), contains an express preemption provision (49 USC 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 proposed rule concerns the classification, packaging, and handling of hazardous materials, among other covered subjects. If adopted, this rule would preempt

any state, local, or Indian tribe requirements concerning these subjects unless the non-Federal requirements are "substantively the same" (see 49 CFR 107.202(d) as the Federal requirements.)

Federal hazardous materials transportation law provides at 49 USC 5125(b)(2) that if PHMSA issues a regulation concerning any of the covered subjects, PHMSA 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 two 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 proposed rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13175 ("Consultation and Coordination with Indian Tribal Governments"). Because this proposed 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 USC 601 et seq.) 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 proposed rule would clarify provisions based on PHMSA's initiatives and correspondence with the regulated community. The proposed changes are generally intended to provide

relief to shippers, carriers, and packaging manufacturers, including small entities, by easing overly burdensome requirements with no reduction in safety.

Consideration of alternative proposals for small businesses. 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 impact of this proposed rule is not expected to be significant. The proposed changes are generally intended to provide relief to shippers, carriers, and packaging manufactures and testers, including small entities. This relief will provide marginal positive economic benefits to shippers, carriers, and packaging manufactures and testers, including small entities. These benefits are not at a level that can be considered economically significant; therefore, this proposed rule will not have a significant economic impact on a substantial number of small entities.

This proposed rule has been developed in accordance with Executive Order 13272 ("Proper Consideration of Small Entities in Agency Rulemaking") and DOT's procedures and policies to promote compliance with the Regulatory Flexibility Act to ensure that potential impacts of draft rules on small entities are properly considered.

F. Paperwork Reduction Act

PHMSA currently has an approved information collection under Office of Management and Budget (OMB) Control Number 2137-0557, entitled "Approvals for Hazardous Materials." This proposed rule does not propose any changes that would affect the burden for this or any other information collection.

Prior to the publication of a final rule entitled "Hazardous Materials: Revisions to Fireworks Regulation" under Docket No. PHMSA-2010-0320 (HM-257) published in the Federal Register on July, 6 2013 [78 FR 42457], the HMR contained a requirement that all certification agencies provide a statement that it would perform its functions independent of the owners and manufacturers of the packagings in its field. The burden for this requirement was accounted for under OMB Control Number 2137-0557. However, the HM-257 final rule inadvertently removed this language from the HMR. Therefore, in this NPRM, PHMSA is proposing to reinsert the language for certification agencies to confirm that they are independent and not owned by a company in its field. For ease of the reader, this language is being proposed to be inserted as follows:

- PHMSA is proposing to revise § 107.402(f) to require that a portable tank and MEGC certification agency submit a statement indicating that the agency is independent of and not owned by a portable tank or MEGC manufacturer, owner, or distributor as part of the Portable tank and MECG Certification Agency application.
- PHMSA is proposing to revise § 107.402(e) to require that a lighter certification agency submit a statement that the agency is independent of and not owned by a lighter manufacturer, distributor, import or export company, or proprietorship as part of the Lighter Certification Agency application.
- PHMSA is proposing to revise § 107.807 to require that person who seeks to manufacture DOT specification cylinders and special permit cylinders, or perform chemical analysis and tests of those cylinders outside the United States submits a

statement, as part of the application, indicating that the inspection agency is independent of and not owned by a cylinder manufacturer, owner, or distributor.

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 April and October of each year. The RIN number contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

H. Unfunded Mandates Reform Act

This proposed rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of $141,300,000 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 of 1969, 42 U.S.C. §§ 4321-4375, requires that federal agencies analyze proposed actions to determine whether the action will have a significant impact on the human environment. The Council on Environmental Quality (CEQ) regulations require federal agencies to conduct an environmental review considering (1) the need for the proposed action, (2) alternatives to the proposed action, (3) probable environmental impacts of the proposed action and alternatives, and (4) the agencies and persons consulted during the consideration process (40 C.F.R. § 1508.9(b)).

This NPRM would amend the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) by making miscellaneous revisions to update and clarify certain regulatory

requirements, responds to seven petitions for rulemaking submitted to PHMSA by various stakeholders, and addresses two NTSB recommendations. These amendments are intended to promote safety, regulatory relief, and clarity. The proposed changes were identified through an internal review of the HMR as well as in response to communications with various stakeholders affected by the HMR, through letters of interpretation and editorial issues being brought to our attention. These proposed minor changes will clarify the HMR and enhance safety, while offering 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 the NTSB and remove regulatory ambiguity identified by the regulated community; 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 safe and secure transportation of hazardous materials in commerce.

Description of Action:

Docket No. PHMSA-2013-0225 (HM-218H), NPRM

Transportation of hazardous materials in commerce is subject to requirements in the HMR, issued under authority of Federal hazardous materials transportation law,

codified at 49 USC 5001 et seq. To facilitate the safe and efficient transportation of hazardous materials in international commerce, the HMR provide that both domestic and international shipments of hazardous materials may be offered for transportation and transported under provisions of the international regulations.

In proposing this rulemaking, PHMSA is considering the following alternatives:

Alternative 1: No Action

If PHMSA chose this alternative, it 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 or NTSB Safety Recommendations. 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 NPRM, applying to transportation of hazardous materials by various modes (highway, rail, vessel and aircraft). The proposed amendments encompassed in this alternative are more fully addressed in the preamble and regulatory text sections. However, they generally include the following changes to the HMR, grouped below for ease of discussion:

Incorporation by Reference and use of International Standards:

- Remove the entry for CGA Publication C-1.1 in Table 1 to § 171.7.
- Incorporate by reference in § 171.7 CGA Publication G-1.6, Standard for Mobile Acetylene Trailer Systems, Seventh Edition (responds to petition P-1605 and two NTSB Safety Recommendations, H-09-01 and H-09-02).

- Incorporate by reference in § 171.7 AAR Manual of Standards and Recommended Practices, Section C-III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars).
- Amend the marking requirements for poisonous by inhalation shipments transported in accordance with the IMDG Code or TDG Regulations (responds to petition for rulemaking P-1591).

§ 172.101 Hazardous Materials Table and § 172.102 Special Provisions:

- Remove the packing group II designation for certain organic peroxides, self-reactive substances and explosives (responds to petition for rulemaking P-1590).
- Revise the § 172.101 table to add Special Provision B120 to column 7 for the entry "Calcium nitrate, UN1454."
- Revise the entry for "Propellant, solid, UN0501" to remove vessel stowage provision 24E from column 10B of the HMT.
- Revise the packing group II HMT entry for UN 2920, Corrosive liquids, flammable, n.o.s., to harmonize the HMR with the UN Model Regulations, IMDG Code and the ICAO TI by adding a reference to § 173.154 to column 8A of the HMT.
- Revise the entry for "Oxidizing solid, corrosive, n.o.s., UN 3085, PG II" to harmonize the HMR with the UN Model Regulations, the IMDG Code and the ICAO TI by adding a reference to § 173.152 to column 8A of the HMT.
- Revise the HMT entries for "Trinitrophenol (picric acid), wetted, with not less

than 10 percent water by mass, UN 3364" and "Trinitrophenol, wetted with not less than 30 percent water, by mass, UN 1344" to harmonize the HMR with the UN Model Regulations, IMDG Code, and the ICAO TI to clarify that the 500 gram limit per package does not apply to UN 1344 but does apply to UN 3364.

- Revise Special Provision 136, for Dangerous goods in machinery or apparatus, in § 172.102 to include reference to subpart G of part 173.
- Remove reference to obsolete Special Provision 18 for the HMT entry "UN 1044, Fire extinguishers" and in § 180.209(j).

Hazard Communication (Marking, Labeling, Placarding, Emergency Response):

- Correct a reference in § 172.201 to exceptions for the requirement to provide an emergency response telephone number on a shipping paper.
- Revise §§ 172.301(f), 172.326(d) and 172.328(e) to include the clarification that the NOT-ODORIZED or NON-ODORIZED marking may appear on packagings used for both unodorized and odorized LPG, and remove the effective date of October 1, 2006 if it appears these paragraphs, as the effective date has passed.
- Amend § 172.406(d) by expressly authorizing the use of labels described in subpart E with a dotted or solid line outer border on a surface background of contrasting color.
- Amend the address in § 172.407(d)(4)(ii) to read Standards and Rulemaking Division, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building, 1200 New Jersey Avenue, SE.,

Washington, DC 20590-0001.

- Clarify the marking size requirements for an IBC that is labeled instead of placarded by replacing the bulk package marking reference in § 172.514(c) with the non-bulk marking reference, § 172.301(a)(1).
- Require that emergency response telephone numbers be displayed on shipping papers numerically (responds to petition for rulemaking P-1597).

Shipper Requirements:

- Revise § 173.4a(a) to clarify that articles (including aerosols) are not eligible for excepted quantity reclassification under § 173.4a, although some are eligible to be shipped as small quantities by highway and rail in § 173.4.
- Revise § 173.21(e) to include the prohibition of transporting or offering for transport materials in the same transport vehicle (e.g. trailer, rail car) with another material, the mixing of which is likely to cause a dangerous evolution of heat, flammable or poisonous gases or vapors, or to produce corrosive materials.
- Clarify that the requirements provided in paragraph § 173.24a(c)(1)(iv) do not apply to limited quantities packaged in accordance with § 173.27(f)(2).
- Clarify the quantity limits for mixed contents packages prepared in accordance with § 173.27(f)(2).
- Clarify the requirements applicable to bulk transportation of combustible liquids by adding § 173.150(f)(3)(xi) stating that the registration requirements in subpart G of part 107 is applicable and revising §§ 173.150(f)(3)(ix) and

173.150(f)(3)(x) for punctuation applicable to a listing of requirements.

- Require that certain shipments of nitric acid utilizing glass inner packagings be contained in intermediate packaging (responds to petition for rulemaking P-1601).
- Add a new paragraph (j) in § 173.159 to address the need for provisions that allow shippers to prepare for transport and offer into transportation damaged wet electric storage batteries.
- Revise § 173.166(e)(6) to add the words "or cargo vessel."
- Revise §§ 173.170 and 173.171 by changing the term motor vehicle to transport vehicle to allow for motor vehicles comprised of more than one cargo-carrying body to carry 100 pounds of black or smokeless powder reclassed as Division 4.1 in each cargo-carrying body instead of 100 lbs total in the motor vehicle.
- Revise the provisions in § 173.199(a)(4) by removing the reference to the steel rod impact test in § 178.609(h).
- Amend the bulk packaging section reference in Column (8C) of the HMT from § 173.240 to § 173.216 for the entries NA2212, UN2212, and UN2590. In addition, we are proposing to revise paragraph (c)(1) in § 173.216 by authorizing the use of bulk packages prescribed in § 173.240.
- Amend § 173.306(k) to clarify that aerosols shipped for recycling or disposal by motor vehicle containing a limited quantity are afforded the applicable exceptions provided for ORM-D materials granted under §§ 173.306(i) and 173.156(b).

Modal Requirements (Air, Vessel, and Highway):

- Create a new paragraph (d) in § 175.1, stating that this subchapter does not apply to dedicated air ambulance, firefighting, or search and rescue operations.
- Correct § 175.8 by adding the appropriate 14 CFR, Part 125 citations.
- Clarifying exceptions for passengers, crewmembers, and air operators in paragraphs (a)(18), (a)(22), and (a)(24) of § 175.10.
- Clarify § 175.75(e)(2) by replacing the word "located" with "certificated."
- Clarify § 176.30(a)(4) by replacing the word "packaging" with "package."
- Clarify that the loading restrictions in § 177.835(c)(1) through (4) area applicable to § 177.848(e).

Packaging design and requalification:

- Revise § 178.65(i)(1) to correctly reference the manufacturer's report requirements in § 178.35(g).
- Clarify § 178.337-17(a) to eliminate confusion of the name plate and specification plate requirements.
- Correct an inadvertent editorial error in the formula in § 178.345-3(c)(1).
- Include provisions consistent with the non-bulk packaging and IBC approval provisions for Large Packagings in § 178.955.
- Clarify the applicability to subpart E in § 180.401 by revising the term "person" to "hazmat employee or hazmat employer."
- Extend the pressure test and internal visual inspection test interval to ten years for certain MC 331 cargo tanks in dedicated propane delivery service (responds to petition for rulemaking P-1604).

- Clarify the requirements applicable to the testing of pressure relief devices for cargo tank motor vehicles (responds to petition for rulemaking P-1609).

Probable Environmental Impacts of the Alternatives:

Background:

Hazardous materials are substances that may pose a threat to public safety or the environment during transportation because of their physical, chemical, or nuclear properties. The hazardous materials regulatory system is a risk management system that is prevention-oriented and focused on reducing the probability and quantity of a hazardous material release. Hazardous materials are categorized by hazard analysis and experience into hazard classes and packing groups. The regulations require each shipper to classify a material in accordance with these hazard classes and packing groups. The process of classifying a hazardous material is itself a form of hazard analysis. Further, the regulations require the shipper to communicate a material's hazards through use of the hazard class, packing group, and proper shipping name on the shipping paper and the use of labels on packages and placards on transport vehicles. Thus, the shipping paper, labels, and placards communicate the most significant findings of the shipper's hazard analysis. A hazardous material is assigned to one of three packing groups based upon its degree of hazard, from a high hazard, Packing Group I to a low hazard, Packing Group III material. The quality, damage resistance, and performance standards of the packaging in each packing group are appropriate for the hazards of the material transported.

Under the HMR, hazardous materials are transported by aircraft, vessel, rail, and highway. The potential for environmental damage or contamination exists when packages of hazardous materials are involved in accidents or en route incidents resulting from cargo

shifts, valve failures, package failures, loading, unloading, collisions, handling problems, or deliberate sabotage. The release of hazardous materials can cause the loss of ecological resources (e.g. wildlife habitats) and the contamination of air, aquatic environments, and soil. Contamination of soil can lead to the contamination of ground water. Compliance with the HMR substantially reduces the possibility of accidental release of hazardous materials.

When developing potential regulatory requirements, PHMSA evaluates those requirements to consider 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 potential impact of a proposed regulation in a defined area. We have determined that most of the regulatory changes proposed in this rulemaking are editorial in nature. As such, these amendments have no impact on the risk of release and resulting environmental impact, human safety, longevity of the packaging, and none of these amendments would be carried out in a defined geographic area. General possible environmental benefits, and detriments, are discussed below.

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, this option would not address outstanding petitions for rulemaking, NTSB Safety Recommendations or consider amendments based on PHMSA's own initiatives intended to update, clarify, or provide relief from certain existing regulatory requirements. 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.

Additionally, the Preferred Alternative encompasses enhanced and clarified regulatory requirements, which would result in increased compliance and fewer environmental and safety incidents. Not adopting the proposed environmental and safety requirements in the NPRM under the No Action Alternative would result in a lost opportunity for reducing environmental and safety-related incidents.

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:

If PHMSA selects the provisions as proposed in this NPRM, we believe that safety and environmental risks would be reduced and that protections to human health and environmental resources would be increased.

Enhanced environmental protection will also be achieved through more targeted and effective training. This proposed set of amendments will eliminate inconsistent hazardous materials regulations, which hamper compliance training efforts. By maintaining consistency between these international regulations and the HMR, shippers and carriers are able to train their hazardous materials employees in a single set of requirements for classification, packaging, hazard communication, handling, and stowage, thereby minimizing the possibility of improperly preparing and transporting a shipment of hazardous materials because of differences between domestic and international regulations. This proposed set of amendments will create more streamlined hazardous regulations, resulting in compliance training efforts which facilitate the regulated community's ability

to comply with the HMR. Potential environmental impacts of each proposed group of amendments in Alternative 2 (selected for NPRM) are discussed individually below. .

Incorporation by Reference and use of International Standards:

PHMSA believes that this proposed set of amendments, which will increase standardization and consistency of regulations, will result in greater protection of human health and the environment. Consistency between US and international regulations enhances the safety and environmental protection of international hazardous materials transportation through better understanding of the regulations, an increased level of industry compliance, the smooth flow of hazardous materials from origin to destination, and consistent emergency response in the event of a hazardous materials incident. Incorporation of the CGA Publication G-1.6, Standard for Mobile Acetylene Trailer Systems, will mitigate acetylene release and enhance environmental protection during overturn incidents and unloading. Incorporation of AAR Manual of Standards and Recommended Practices, Section C-III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars) and certain subsequent amendments will update the previously incorporated 2000 edition ensuring increased safety through compliance with revised tank car standards.

Current greenhouse gas emissions would be unaffected under this proposed set of amendments.

§ 172.101 Hazardous Materials Table and § 172.102 Special Provisions:

PHMSA believes that this proposed set of amendments, which will increase standardization and consistency of regulations, will result in greater protection of human health and the environment. Consistency between US and international regulations

enhances the safety and environmental protection of international hazardous materials transportation through better understanding of the regulations, an increased level of industry compliance, the smooth flow of hazardous materials from their points of origin to their points of destination, and consistent emergency response in the event of a hazardous materials incident. New and revised entries to the HMT reflect emerging technologies, and a need to better describe or differentiate between existing entries. These proposed changes mirror changes in the Dangerous Goods list of The 18th Revised Edition of the UN Model Regulations, the 2013-2014 ICAO TI and the 37-14 amendments to the IMDG Code. It is extremely important for the domestic HMR to mirror the UN Model Regulations, the ICAO TI, and the IMDG Code with respect to the entries in the HMT to ensure consistent naming conventions across modes and international borders.

The packing group assignment reflects a degree of danger associated with a particular material and identifies appropriate packaging. However, assignment of a packing group is not appropriate in all cases (e.g. explosives, gases, radioactive material). In such cases the packing group does not indicate a degree of danger and the packaging requirements for those materials are specified in the appropriate section in part 173. The proposed change to eliminate a packing group designation for materials classified as explosives and organic peroxides specifically listed in the HMT provides a level of consistency, without diminishing environmental protection and safety.

Current greenhouse gas emissions would be unaffected under this proposed set of amendments.

Hazard Communication (Marking, Labeling, Placarding, Emergency Response):

PHMSA believes that this proposed set of amendments, which will provide for enhanced hazard communication (hazcom), will result in greater protection of human health and the environment. The proposed changes communicate the nature of various specialized packaging configurations to package handlers and emergency responders. The proposed amendments would ensure that hazard markings are visible, universally recognizable, and that they contain all information needed by emergency responders, thus resulting in fewer incidents with impacts to the environment and safety.

Similar to the above sets of amendments, PHMSA believes that this proposed set of amendments, which will increase standardization and consistency of regulations, will result in greater protection of human health and the environment. Consistency between US and international regulations enhances the safety and environmental protection of international hazardous materials transportation through better understanding of the regulations, an increased level of industry compliance, the smooth flow of hazardous materials from their points of origin to their points of destination, and consistent emergency response in the event of a hazardous materials incident.

Current greenhouse gas emissions would be unaffected under this proposed set of amendments.

Shipper Requirements:

PHMSA believes that this proposed amendment, which will revise, clarify and enhance current regulations, will result in greater protection of human health and the environment. Compliance with the HMR will be facilitated for shippers and transporters of hazardous materials through regulations which are easier to understand and more streamlined. Additionally, the revisions include emphasis being placed in areas requiring

more attention.

Specific to this set of amendments, improving the packaging requirements applicable to glass packages of nitric acid reduces the occurrences of fires caused by broken inner containers and enhances human health and environmental protection. PHMSA believes that the additional intermediate packaging required by this particular amendment will add another layer of protection in preventing breakage, leakage and fires. Additionally, this particular amendment creates a more streamlined and efficient HMR through incorporation of a petition for rulemaking, P-1601. A more streamlined and efficient HMR allows both regulators and the regulated community to target limited resources at the most pressing hazmat compliance issues.

Current greenhouse gas emissions would be unaffected under this proposed set of amendments.

Modal Requirements (Air, Vessel, and Highway):

PHMSA believes that this proposed amendment, which will revise, clarify and enhance current regulations, will result in greater protection of human health and the environment. Compliance with the HMR will be facilitated for air, vessel and highway shippers and transporters of hazardous materials through regulations which are easier to understand and more streamlined. Additionally, the revisions include emphasis being placed in areas requiring more attention.

Current greenhouse gas emissions would be unaffected under this proposed set of amendments.

Packaging design and requalification:

PHMSA believes that this proposed amendment, which will revise, clarify and enhance current regulations, will result in greater protection of human health and the environment. Compliance with the HMR will be facilitated for shippers and transporters of hazardous materials through regulations which are easier to understand and more streamlined. Additionally, the revisions include emphasis being placed in areas requiring more attention.

Specific to this set of amendments, decreasing the required frequency for pressure testing and visual inspection of certain cargo tanks in dedicated propane service by extending the requalification period from five years to ten years will ease the burden on regulators and the regulated community. This test, which requires significant equipment down-time and man-hours to perform, has been shown to achieve no additional safety or environmental protection when performed at a five- versus a ten-year interval. Pressure testing requires a significant amount of water usage. Decreasing the testing frequency by half will result in significant volumes of water being conserved. Additionally, this particular amendment creates a more streamlined and efficient HMR through incorporation of a petition for rulemaking, P-1609. A more streamlined and efficient HMR allows both regulators and the regulated community to target limited resources at the most pressing hazmat compliance issues.

Current greenhouse gas emissions would be unaffected under these amendments.

Agencies Consulted

This NPRM 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 is seeking comment on the environmental assessment

contained in this NPRM. In addition, PHMSA specifically coordinated with the following Federal Agencies and modal partners:

- Department of Justice
- Environmental Protection Agency
- Health and Human Services
- Occupational Safety and Health Administration
- Federal Aviation Administration
- Federal Motor Carrier Safety Administration
- Federal Railroad Administration
- United States Coast Guard

Conclusion

PHMSA proposes to make miscellaneous amendments to the HMR based on comments from the regulated community, NTSB recommendations, and PHMSA's own rulemaking initiatives. The proposed amendments 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 proposed clarifications of regulatory requirements, if adopted, will foster a greater level of compliance with the HMR and thus, diminished levels of hazardous materials transportation incidents affecting the health and safety of the environment. Therefore, the net environmental impact of this proposal will be positive.

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.). You may review DOT's complete Privacy Act Statement at http://www.dot.gov/privacy.

K. International Trade Analysis

The Trade Agreements Act of 1979 (Public Law 96-39), as amended by the Uruguay Round Agreements Act (Public Law 103-465), prohibits Federal agencies from establishing any standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Pursuant to these Acts, establishing standards is not considered an unnecessary obstacle to the foreign commerce of the United States, so long as the standards have a legitimate domestic objective, such as the protection of safety, and do not operate in a manner that excludes 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 notes the purpose is to ensure the safety of the American public, and has assessed the effects of this rule to ensure that it does not exclude imports that meet this objective. As a result, this proposed rule is not considered as creating an unnecessary obstacle to foreign commerce.

List of Subjects

49 CFR Part 107

Administrative practice and procedure, Hazardous materials transportation, Penalties, Reporting and recordkeeping requirements.

49 CFR Part 171

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

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, Packaging and containers, Radioactive materials, Reporting and recordkeeping requirements, Uranium.

49 CFR Part 175

Air carriers, Hazardous materials transportation, Radioactive materials, Reporting and recordkeeping requirements.

49 CFR Part 176

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

49 CFR Part 177

Hazardous materials transportation, Loading and Unloading, Segregation and Separation.

49 CFR Part 178

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

49 CFR Part 179

Hazardous materials transportation, Railroad safety, 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 propose to amend 49 CFR Chapter I as follows:

PART 107—HAZARDOUS MATERIALS PROGRAM PROCEDURES

1. The authority citation for part 107 continues to read as follows:

Authority: 49 U.S.C. 5101-5128, 44701; 101 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, 1.96 and 1.97.

2. In § 107.402, revise paragraphs (d)(1)(i), (e), and (f) to read as follows:

§ 107.402 Application for designation as a certification agency.

* * * * *

(d***

(1) ***

(i) Be a U.S. resident, or for a non-U.S. resident, have a designated U.S. agent representative as specified in § 105.40 of this subchapter;

* * * * *

(e) Lighter Certification Agency**.** Prior to examining and testing lighters (UN1057) for compliance with the requirements of § 173.308 of this chapter a person must submit an application to, and be approved by, the Associate Administrator to act as a

lighter certification agency. In addition to paragraph (b) of this section, the application must include the following information:

(1) The name and address of each facility where lighters are examined and tested;

(2) A detailed description of the applicant's qualifications and ability to examine and test lighters and certification that the requirements specified by § 173.308 of this chapter have been met; and

(3) A statement that the agency is independent of and not owned by a lighter manufacturer, distributor, import or export company, or proprietorship.

(f) Portable tank and MEGC Certification Agencies. Prior to inspecting portable tanks or multi-element gas containers (MEGCs) for compliance with the requirements of § 180.605(k) of this chapter, performing periodic testing, inspection and repair of portable tanks specified in § 180.352 of this chapter, and approval of MEGCs specified in § 178.74 of this chapter, a person must submit an application to, and be approved by, the Associate Administrator to act as a certification agency. In addition to paragraph (b) of this section, the application must provide the following information:

(1) A name and address of each facility where the portable tank or MEGC is examined and tested;

(2) A detailed description of the applicant's qualifications and ability to examine and test portable tanks or MEGCs and certify that the requirements specified by § 178.273 of this chapter, specifications for UN portable tanks, or § 178.74 of this chapter for the approval of MEGCs have been met; and

(3) A statement indicating that the agency is independent of and not owned by a portable tank or MEGC manufacturer, owner, or distributor.

3. In § 107.807, revise paragraph (b)(3) to read as follows:

§ 107.807 Approval of non-domestic chemical analyses and tests.

* * * * *

(b) * * *

(3) The name of the independent inspection agency to be used to certify the analyses and tests and a statement indicating that this inspection agency is independent of and not owned by a cylinder manufacturer, owner, or distributor; and

* * * * *

PART 171--GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

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

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

5. In § 171.7:

a. Revise paragraph (k);

b. Redesignate paragraphs (n)(13) through (21) as (n)(14) through (22) and add new paragraph (n)(13); and

c. In paragraph (dd)(2)(ii), Table 1 to 49 CFR 171.7 – Materials Not Incorporated by Reference, entry for "Compressed Gas Association, Inc., 4221 Walney Road, 5th Floor, Chantilly, Virginia 20151" and the associated entry for document "CGA C-1.1, Personnel Training and Certification Guidelines for Cylinder Requalification By the Volumetric Expansion Method, 2004, First Edition" are removed.

The revisions read as follows:

§ 171.7 Reference material.

* * * * *

(k) Association of American Railroads, American Railroads Building, 50 F Street NW., Washington DC, 20001: telephone (877) 999-8824, https://www.aarpublications.com/

(1) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Chapter 1, October 2013; into §§ 179.7, 179.24, 180.503, and 180.517.

(2) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Chapter 2, April 2010; into §§ 179.7 and 180.503.

(3) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Chapter 3, October, 2007; into §§ 179.7 and 180.503.

(4) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Chapter 5, October, 2007; into §§ 179.7, 179.16 and 180.503.

(5) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Chapter 6, July 2012; into §§ 179.7, 179.400-6, and 180.503.

(6) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Appendix A, October 2013; into §§ 173.314, 179.7, 179.15, 179.300-15, 179.300-17, 179.400-20, and 180.503.

(7) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Appendix B, January 2014; into §§ 179.7 and 180.503.

(8) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Appendix C, October 2007; into §§ 179.7, 179.22, 179.220-26, 179.400-25, and 180.503.

(9) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Appendix D, except for Sections 2.0, 4.1, 4.2, 4.3, and 4.4, October 2013; into §§ 179.7, 180.503, and 180.509.

(10) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Appendix E, April 2010; into §§ 173.31, 179.7, 179.20, 179.100-12, 179.100-14, 179.101-1, 179.103-5, 179.200-9, 179-200-13, 179.200-17, 179.220-14, 179.220-18, and 180.503.

(11) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Appendix L, October 2013; into §§ 179.7 and 180.503.

(12) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Appendix M, July 2012; into §§ 179.7, 179.200-7, 179.201-6, 179.220-6, 179.220-7, 179.400-5, 179.400-8, 180.503, and 180.515.

(13) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Appendix R, October 2007; into §§ 179.6, 179.7, and 180.503.

(14) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Appendix T, October 2007; into §§ 179.7 and 180.503.

(15) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Appendix U, October 2013; into §§ 179.7 and 180.503.

(16) AAR Manual of Standards and Recommended Practices, Section C—III, Specifications for Tank Cars, Specification M-1002 (AAR Specifications for Tank Cars), Appendix W, October 2007; into §§ 179.7, 179.100-9, 179.100-10, 179.100-13, 179.100-18, 179.102-1, 179.102-4, 179.102-17, 179.200-10, 179.200-11, 179.200-22, 179.220-10, 179.220-11, 179.300-9, 179.300-10, 179.400-5, 179.400-11, 179.400-12, 179.400-15, 179.400-18, and 180.503.

(17) AAR Manual of Standards and Recommended Practices, Section I, Specially Equipped Freight Car and Intermodal Equipment, 1988, into § 174.55; 174.63.

(18) AAR Specifications for Design, Fabrication and Construction of Freight Cars, Volume 1, 1988, into § 179.16.

(19) AAR Standard 286; AAR Manual of Standards and Recommended Practices, Section C, Car Construction Fundamentals and Details, Standard S-286, Free/Unrestricted Interchange for 286,000 lb Gross Rail Load Cars (Adopted 2002; Revised: 2003, 2005, 2006), into § 179.13.

* * * * *

(n) * * *

(13) CGA Pamphlet G-1.6 Standard for Mobile Acetylene Trailer Systems, 2011, into § 173.301.

(14) CGA Pamphlet G-2.2, Guideline Method for Determining Minimum of 0.2% Water in Anhydrous Ammonia, 1985, Second Edition, Reaffirmed 1997, into §173.315.

(15) CGA Pamphlet G-4.1, Cleaning Equipment for Oxygen Service, 1985, into §178.338-15.

(16) CGA Pamphlet P-20, Standard for the Classification of Toxic Gas Mixtures, 1995, into §173.115.

(17) CGA Pamphlet P-20, Standard for the Classification of Toxic Gas Mixtures, 2003, Third Edition, into §173.115.

(18) CGA S-1.1, Pressure Relief Device Standards—Part 1—Cylinders for Compressed Gases, (with the exception of paragraph 9.1.1.1), Twelfth Edition, 2005, into §173.301, 173.304a 178.75.

(19) CGA Pamphlet S-1.2, Safety Relief Device Standards Part 2—Cargo and Portable Tanks for Compressed Gases, 1980, into §173.315; 173.318; 178.276; 178.277.

(20) CGA S-7, Method for Selecting Pressure Relief Devices for Compressed Gas Mixtures in Cylinders, 2005, into §173.301.

(21) CGA Technical Bulletin TB-2, Guidelines for Inspection and Repair of MC-330 and MC-331 Cargo Tanks, 1980, into §180.407; 180.413.

(22) CGA Technical Bulletin TB-25, Design Considerations for Tube Trailers, 2008 Edition, into §173.301.

* * * * *

6. In § 171.22, paragraph (f)(1) is revised to read as follows:

§ 171.22 Authorization and conditions for the use of international standards and regulations.

* * * * *

(f) Complete information and certification. (1) Except for shipments into the United States from Canada conforming to § 171.12, each person importing a hazardous material into the United States must provide the shipper and the forwarding agent at the place of entry into the United States timely and complete written information as to the requirements of this subchapter applicable to the particular shipment.

* * * * *

7. In § 171.23, paragraphs (b)(10)(iv)(A) and (B) are revised to read follows:

§ 171.23 Requirements for specific materials and packagings transported under the ICAO Technical Instructions, IMDG Code, Transport Canada TDG Regulations, or the IAEA Regulations.

* * * * *

(b) * * *

(10) * * *

(iv) * * *

(A) For a package transported in accordance with the IMDG Code in a closed transport vehicle or freight container, a label or placard conforming to the IMDG Code specifications for a “Class 2.3” or “Class 6.1” label or placard may be substituted for the

POISON GAS or POISON INHALATION HAZARD label or placard, as appropriate. The transport vehicle or freight container must be marked with the identification numbers for the hazardous material in the manner specified in § 172.313(c) of this subchapter and placarded as required by subpart F of part 172 of this subchapter.

(B) For a package transported in accordance with the Transport Canada TDG Regulations in a closed transport vehicle or freight container, a label or placard conforming to the TDG Regulations specifications for a "Class 2.3" or "Class 6.1" label or placard may be substituted for the POISON GAS or POISON INHALATION HAZARD label or placard, as appropriate. The transport vehicle or freight container must be marked with the identification numbers for the hazardous material in the manner specified in § 172.313(c) of this subchapter and placarded as required by subpart F of part 172 of this subchapter. While in transportation in the United States, the transport vehicle or freight container may also be placarded in accordance with the appropriate TDG Regulations in addition to being placarded with the POISON GAS or POISON INHALATION HAZARD placards.

* * * * *

PART 172--HAZARDOUS MATERIALS TABLE, SPECIAL PROVISIONS, HAZARDOUS MATERIALS COMMUNICATIONS, EMERGENCY RESPONSE INFORMATION, AND TRAINING REQUIREMENTS

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

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

9. In § 172.101, the Hazardous Materials Table is amended by revising entries under "[REVISE]" in the appropriate alphabetical sequence to read as follows:

§ 172.101 Purpose and use of hazardous materials table.

* * * * *

§ 172.101 HAZARDOUS MATERIALS TABLE

Hazardous materials descriptions and proper shipping names	Hazard class or division	Identification Numbers	PG	Label Codes	Special Provisions (§ 172.102)	(8) Packaging (§ 173.***)			(9) Quantity limitations (see §§ 173.27 and 175.	
						Exceptions	Non-bulk	Bulk	Passenger aircraft/rail	Cargo aircraft on
(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)
		*		*		*		*		
SE]										
		*		*		*		*		
inflators, or Air bag modules, or Seat-belt pretensioners.	1.4G	UN0503		1.4G	161, A200	None	62	None	Forbidden	7
*		*		*		*		*		*
ium nitrate-fuel oil mixture containing only prilled ium nitrate and fuel oil	1.5D	NA0331		1.5D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
ium nitrate, with more than 0.2 percent combustible ces, including any organic substance calculated as carbon, to usion of any other added substance	1.1D	UN0222		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
ium perchlorate	1.1D	UN0402		1.1D	107	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
ium picrate, dry or wetted with less than 10 percent water,	1.1D	UN0004		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
ition, illuminating with or without burster, expelling charge elling charge	1.2G	UN0171		1.2G			62	62	Forbidden	Forbid
ition, illuminating with or without burster, expelling charge elling charge	1.3G	UN0254		1.3G			62	62	Forbidden	Forbid
ition, illuminating with or without burster, expelling charge elling charge	1.4G	UN0297		1.4G			62	62	Forbidden	7
ition, incendiary liquid or gel, with burster, expelling charge elling charge	1.3J	UN0247		1.3J			62	None	Forbidden	Forbid
*		*		*		*		*		*
ition, incendiary, white phosphorus, with burster, expelling or propelling charge	1.2H	UN0243		1.2H			62	62	Forbidden	Forbid
ition, incendiary, white phosphorus, with burster, expelling or propelling charge	1.3H	UN0244		1.3H			62	62	Forbidden	Forbid
ition, incendiary with or without burster, expelling charge, elling charge	1.2G	UN0009		1.2G			62	62	Forbidden	Forbid
ition, incendiary with or without burster, expelling charge, elling charge	1.3G	UN0010		1.3G			62	62	Forbidden	Forbid
ition, incendiary with or without burster, expelling charge or ng charge	1.4G	UN0300		1.4G			62	62	Forbidden	7
ition, practice	1.4G	UN0362		1.4G			62	62	Forbidden	7
ition, practice	1.3G	UN0488		1.3G			62	62	Forbidden	Forbid

ition, proof	1.4G	UN0363		1.4G			62	62	Forbidden	7
*		*		*		*		*		*
ition smoke, white phosphorus with burster, expelling or propelling charge	1.2H	UN0245		1.2H			62	62	Forbidden	Forbid
ition, smoke, white phosphorus with burster, expelling or propelling charge	1.3H	UN0246		1.3H			62	62	Forbidden	Forbid
ition, smoke with or without burster, expelling charge or ng charge	1.2G	UN0015		1.2G			62	62	Forbidden	Forbid
ition, smoke with or without burster, expelling charge or ng charge	1.3G	UN0016		1.3G			62	62	Forbidden	Forbid
ition, smoke with or without burster, expelling charge or ng charge	1.4G	UN0303		1.4G			62	62	Forbidden	7
*		*		*		*		*		*
ition, tear-producing with burster, expelling charge or ng charge	1.2G	UN0018		1.2G, 8, 6.1			62	62	Forbidden	Forbid
ition, tear-producing with burster, expelling charge or ng charge	1.3G	UN0019		1.3G, 8, 6.1			62	62	Forbidden	Forbid
ition, tear-producing with burster, expelling charge or ng charge	1.4G	UN0301		1.4G, 8, 6.1			62	62	Forbidden	7
*		*		*		*		*		*
ition, toxic with burster, expelling charge, or propelling	1.2K	UN0020		1.2K, 6.1			62	None	Forbidden	Forbid
ition, toxic with burster, expelling charge, or propelling	1.3K	UN0021		1.3K, 6.1			62	None	Forbidden	Forbid
*		*		*		*		*		*
, explosive, extremely insensitive or Articles, EEI	1.6N	UN0486		1.6N		None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.4S	UN0349		1.4S	101	None	62	None	25 kg	10
, explosive, n.o.s.	1.4B	UN0350		1.4B	101	None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.4C	UN0351		1.4C	101	None	62	None	Forbidden	7
, explosive, n.o.s.	1.4D	UN0352		1.4D	101	None	62	None	Forbidden	7
, explosive, n.o.s.	1.4G	UN0353		1.4G	101	None	62	None	Forbidden	7
, explosive, n.o.s.	1.1L	UN0354		1.1L	101	None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.2L	UN0355		1.2L	101	None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.3L	UN0356		1.3L	101	None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.1C	UN0462		1.1C	101	None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.1D	UN0463		1.1D	101	None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.1E	UN0464		1.1E	101	None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.1F	UN0465		1.1F	101	None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.2C	UN0466		1.2C	101	None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.2D	UN0467		1.2D	101	None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.2E	UN0468		1.2E	101	None	62	None	Forbidden	Forbid

, explosive, n.o.s.	1.2F	UN0469		1.2F	101	None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.3C	UN0470		1.3C	101	None	62	None	Forbidden	Forbid
, explosive, n.o.s.	1.4E	UN0471		1.4E	101	None	62	None	Forbidden	7
, explosive, n.o.s.	1.4F	UN0472		1.4F	101	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
, pyrophoric	1.2L	UN0380		1.2L		None	62	None	Forbidden	Forbid
, pyrotechnic for technical purposes	1.1G	UN0428		1.1G		None	62	None	Forbidden	Forbid
, pyrotechnic for technical purposes	1.2G	UN0429		1.2G		None	62	None	Forbidden	Forbid
, pyrotechnic for technical purposes	1.3G	UN0430		1.3G		None	62	None	Forbidden	Forbid
, pyrotechnic for technical purposes	1.4G	UN0431		1.4G		None	62	None	Forbidden	7
, pyrotechnic for technical purposes	1.4S	UN0432		1.4S		None	62	None	25 kg	10
s	9	NA2212	III	9	156, IB8, IP2, IP4	155	216	216	200 kg	20
*		*		*		*		*		*
azide, dry or wetted with less than 50 percent water, by mass	1.1A	UN0224		1.1A, 6.1	111, 117	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
owder, compressed or Gunpowder, compressed or Black , in pellets or Gunpowder, in pellets	1.1D	UN0028		1.1D		None	62	None	Forbidden	Forbid
owder or Gunpowder, granular or as a meal	1.1D	UN0027		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
bestos (Crocidolite) or Brown asbestos (amosite, mysorite)	9	UN2212	II	9	156, IB8, IP2, IP4, T3, TP33	155	216	216	200 kg	20
photo-flash	1.1F	UN0037		1.1F			62	None	Forbidden	Forbid
photo-flash	1.1D	UN0038		1.1D			62	62	Forbidden	Forbid
photo-flash	1.2G	UN0039		1.2G			62	62	Forbidden	Forbid
photo-flash	1.3G	UN0299		1.3G			62	62	Forbidden	Forbid
*		*		*		*		*		*
with bursting charge	1.1F	UN0033		1.1F			62	None	Forbidden	Forbid
with bursting charge	1.1D	UN0034		1.1D			62	62	Forbidden	Forbid
with bursting charge	1.2D	UN0035		1.2D			62	62	Forbidden	Forbid
with bursting charge	1.2F	UN0291		1.2F			62	None	Forbidden	Forbid
with flammable liquid, with bursting charge	1.1J	UN0399		1.1J			62	None	Forbidden	Forbid
with flammable liquid, with bursting charge	1.2J	UN0400		1.2J			62	None	Forbidden	Forbid
s with detonator	1.1B	UN0225		1.1B		None	62	None	Forbidden	Forbid

s with detonator	1.2B	UN0268		1.2B		None	62	None	Forbidden	Forbid
s, without detonator	1.1D	UN0042		1.1D		None	62	None	Forbidden	Forbid
s, without detonator	1.2D	UN0283		1.2D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
s, explosive	1.1D	UN0043		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
n nitrate	5.1	UN1454	III	5.1	34, B120, IB8, IP3, T1, TP33	152	213	240	25 kg	10
*		*		*		*		*		*
ges, flash	1.1G	UN0049		1.1G		None	62	None	Forbidden	Forbid
ges, flash	1.3G	UN0050		1.3G		None	62	None	Forbidden	7
ges for weapons, blank	1.1C	UN0326		1.1C		None	62	None	Forbidden	Forbid
ges for weapons, blank	1.2C	UN0413		1.2C		None	62	None	Forbidden	Forbid
ges for weapons, blank or Cartridges, small arms, blank or ges for tools, blank	1.4S	UN0014		None		63	62	None	25 kg	10
ges for weapons, blank or Cartridges, small arms, blank	1.3C	UN0327		1.3C		None	62	None	Forbidden	Forbid
ges for weapons, blank or Cartridges, small arms, blank	1.4C	UN0338		1.4C		None	62	None	Forbidden	7
ges for weapons, inert projectile	1.2C	UN0328		1.2C		None	62	62	Forbidden	Forbid
ges for weapons, inert projectile or Cartridges, small arms	1.4S	UN0012		None		63	62	None	25 kg	10
ges for weapons, inert projectile or Cartridges, small arms	1.4C	UN0339		1.4C		None	62	None	Forbidden	7
ges for weapons, inert projectile or Cartridges, small arms	1.3C	UN0417		1.3C		None	62	None	Forbidden	Forbid
ges for weapons, with bursting charge	1.1F	UN0005		1.1F		None	62	None	Forbidden	Forbid
ges for weapons, with bursting charge	1.1E	UN0006		1.1E		None	62	62	Forbidden	Forbid
ges for weapons, with bursting charge	1.2F	UN0007		1.2F		None	62	None	Forbidden	Forbid
ges for weapons, with bursting charge	1.2E	UN0321		1.2E		None	62	62	Forbidden	Forbid
ges for weapons, with bursting charge	1.4F	UN0348		1.4F		None	62	None	Forbidden	Forbid
ges for weapons, with bursting charge	1.4E	UN0412		1.4E		None	62	62	Forbidden	7
ges, oil well	1.3C	UN0277		1.3C		None	62	62	Forbidden	Forbid
ges, oil well	1.4C	UN0278		1.4C		None	62	62	Forbidden	7
ges, power device	1.3C	UN0275		1.3C		None	62	62	Forbidden	7
ges, power device	1.4C	UN0276		1.4C	110	None	62	62	Forbidden	7
ges, power device	1.4S	UN0323		1.4S	110, 347	63	62	62	25 kg	10
ges, power device	1.2C	UN0381		1.2C		None	62	62	Forbidden	Forbid

*		*		*		*		*		*
ges, signal	1.3G	UN0054		1.3G		None	62	None	Forbidden	7
ges, signal	1.4G	UN0312		1.4G		None	62	None	Forbidden	7
ges, signal	1.4S	UN0405		1.4S		None	62	None	25 kg	10
*		*		*		*		*		*
artridge, empty with primer	1.4S	UN0055		1.4S	50	63	62	None	25 kg	10
artridges, empty with primer	1.4C	UN0379		1.4C	50	None	62	None	Forbidden	7
ombustible, empty, without primer	1.4C	UN0446		1.4C		None	62	None	Forbidden	7
ombustible, empty, without primer	1.3C	UN0447		1.3C		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
, bursting, plastics bonded	1.1D	UN0457		1.1D		None	62	None	Forbidden	Forbid
, bursting, plastics bonded	1.2D	UN0458		1.2D		None	62	None	Forbidden	Forbid
, bursting, plastics bonded	1.4D	UN0459		1.4D		None	62	None	Forbidden	7
, bursting, plastics bonded	1.4S	UN0460		1.4S	347	None	62	None	25 kg	10
, demolition	1.1D	UN0048		1.1D		None	62	62	Forbidden	Forbid
, depth	1.1D	UN0056		1.1D		None	62	62	Forbidden	Forbid
*		*		*		*		*		*
, explosive, commercial without detonator	1.1D	UN0442		1.1D		None	62	None	Forbidden	Forbid
, explosive, commercial without detonator	1.2D	UN0443		1.2D		None	62	None	Forbidden	Forbid
, explosive, commercial without detonator	1.4D	UN0444		1.4D		None	62	None	Forbidden	7
, explosive, commercial without detonator	1.4S	UN0445		1.4S	347	None	62	None	25 kg	10
, propelling	1.1C	UN0271		1.1C		None	62	None	Forbidden	Forbid
, propelling	1.3C	UN0272		1.3C		None	62	None	Forbidden	Forbid
, propelling	1.2C	UN0415		1.2C		None	62	None	Forbidden	Forbid
, propelling	1.4C	UN0491		1.4C		None	62	None	Forbidden	7
, propelling, for cannon	1.3C	UN0242		1.3C		None	62	None	Forbidden	Forbid
, propelling, for cannon	1.1C	UN0279		1.1C		None	62	None	Forbidden	Forbid
, propelling, for cannon	1.2C	UN0414		1.2C		None	62	None	Forbidden	Forbid
, shaped, flexible, linear	1.4D	UN0237		1.4D		None	62	None	Forbidden	7
, shaped, flexible, linear	1.1D	UN0288		1.1D		None	62	None	Forbidden	Forbid
, shaped, without detonator	1.1D	UN0059		1.1D		None	62	None	Forbidden	Forbid

s, shaped, without detonator	1.2D	UN0439		1.2D		None	62	None	Forbidden	Forbid
s, shaped, without detonator	1.4D	UN0440		1.4D		None	62	None	Forbidden	7
s, shaped, without detonator	1.4S	UN0441		1.4S	347	None	62	None	25 kg	10
s, supplementary explosive	1.1D	UN0060		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
nents, explosive train, n.o.s.	1.2B	UN0382		1.2B	101	None	62	None	Forbidden	Forbid
nents, explosive train, n.o.s.	1.4B	UN0383		1.4B	101	None	62	None	Forbidden	7
nents, explosive train, n.o.s.	1.4S	UN0384		1.4S	101	None	62	None	25 kg	10
nents, explosive train, n.o.s.	1.1B	UN0461		1.1B	101	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
ances, water-activated, with burster, expelling charge or ng charge	1.2L	UN0248		1.2L		None	62	None	Forbidden	Forbid
ances, water-activated, with burster, expelling charge or ng charge	1.3L	UN0249		1.3L		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
etonating, flexible	1.1D	UN0065		1.1D	102	63(a)	62	None	Forbidden	Forbid
etonating, flexible	1.4D	UN0289		1.4D		None	62	None	Forbidden	7
tonating or Fuse detonating metal clad	1.2D	UN0102		1.2D		None	62	None	Forbidden	Forbid
etonating or Fuse, detonating metal clad	1.1D	UN0290		1.1D		None	62	None	Forbidden	Forbid
etonating, mild effect or Fuse, detonating, mild effect metal	1.4D	UN0104		1.4D		None	62	None	Forbidden	7
niter	1.4G	UN0066		1.4G		None	62	None	Forbidden	7
*		*		*		*		*		*
ve liquids, flammable, n.o.s.	8	UN2920	I	8, 3	A6, B10, T14, TP2, TP27	None	201	243	0.5 L	2
			II	8,3	B2, IB2, T11, TP2, TP27	154	202	243	1 L	3
*		*		*		*		*		*
cable, explosive	1.4S	UN0070		1.4S		None	62	62	25 kg	10
*		*		*		*		*		*
tramethylenetetranitramine, desensitized or Octogen, tized or HMX, desensitized	1.1D	UN0484		1.1D		None	62	None	Forbidden	Forbid
tramethylenetetranitramine, wetted or HMX, wetted or n, wetted with not less than 15 percent water, by mass	1.1D	UN0226		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
imethylenetrinitramine, desensitized or Cyclonite, tized or Hexogen, desensitized or RDX, desensitized	1.1D	UN0483		1.1D		None	62	None	Forbidden	Forbid
imethylenetrinitramine, wetted or Cyclonite, wetted or n, wetted or RDX, wetted with not less than 15 percent water s	1.1D	UN0072		1.1D		None	62	None	Forbidden	Forbid

*		*		*		*		*		*
ating metal salts of aromatic nitroderivatives, n.o.s.	1.3C	UN0132		1.3C		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
or assemblies, non-electric for blasting	1.1B	UN0360		1.1B		None	62	None	Forbidden	Forbid
or assemblies, non-electric, for blasting	1.4B	UN0361		1.4B	103	63(f), 63(g)	62	None	Forbidden	7
or assemblies, non-electric, for blasting	1.4S	UN0500		1.4S	347	63(f), 63(g)	62	None	25 kg	10
ors, electric, for blasting	1.1B	UN0030		1.1B		63(f), 63(g)	62	None	Forbidden	Forbid
ors, electric, for blasting	1.4B	UN0255		1.4B	103	63(f), 63(g)	62	None	Forbidden	7
ors, electric for blasting	1.4S	UN0456		1.4S	347	63(f), 63(g)	62	None	25 kg	10
ors for ammunition	1.1B	UN0073		1.1B		None	62	None	Forbidden	Forbid
ors for ammunition	1.2B	UN0364		1.2B		None	62	None	Forbidden	Forbid
ors for ammunition	1.4B	UN0365		1.4B	103	None	62	None	Forbidden	7
ors for ammunition	1.4S	UN0366		1.4S	347	None	62	None	25 kg	10
ors, non-electric, for blasting	1.1B	UN0029		1.1B		None	62	None	Forbidden	Forbid
ors, non-electric, for blasting	1.4B	UN0267		1.4B	103	63(f), 63(g)	62	None	Forbidden	7
ors, non-electric, for blasting	1.4S	UN0455		1.4S	347	63(f), 63(g)	62	None	25 kg	10
*		*		*		*		*		*
nitrophenol, wetted with not less than 40 percent water or of alcohol and water, by mass	1.1A	UN0074		1.1A	111, 117	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
eneglycol dinitrate, desensitized with not less than 25 percent atile water-insoluble phlegmatizer, by mass	1.1D	UN0075		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
glycoluril or Dingu	1.1D	UN0489		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
phenol, dry or wetted with less than 15 percent water, by	1.1D	UN0076		1.1D, 6.1		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
phenolates alkali metals, dry or wetted with less than 15 water, by mass	1.3C	UN0077		1.3C, 6.1		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
resorcinol, dry or wetted with less than 15 percent water, by	1.1D	UN0078		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
sobenzene	1.3C	UN0406		1.3C		None	62	None	Forbidden	Forbid
*		*		*		*		*		*

l sulfide, dry or wetted with less than 10 percent water, by	1.1D	UN0401		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
ve, blasting, type A	1.1D	UN0081		1.1D		None	62	None	Forbidden	Forbid
ve, blasting, type B	1.1D	UN0082		1.1D		None	62	None	Forbidden	Forbid
ve, blasting, type B or Agent blasting, Type B	1.5D	UN0331		1.5D	105, 106	None	62	None	Forbidden	Forbid
ve, blasting, type C	1.1D	UN0083		1.1D	123	None	62	None	Forbidden	Forbid
ve, blasting, type D	1.1D	UN0084		1.1D		None	62	None	Forbidden	Forbid
ve, blasting, type E	1.1D	UN0241		1.1D		None	62	None	Forbidden	Forbid
ve, blasting, type E or Agent blasting, Type E	1.5D	UN0332		1.5D	105, 106	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
inguishers containing compressed or liquefied gas	2.2	UN1044		2.2	110	309	309	None	75 kg	150
*		*		*		*		*		*
ks	1.1G	UN0333		1.1G	108	None	62	None	Forbidden	Forbid
ks	1.2G	UN0334		1.2G	108	None	62	None	Forbidden	Forbid
ks	1.3G	UN0335		1.3G	108	None	62	None	Forbidden	Forbid
ks	1.4G	UN0336		1.4G	108	None	62	None	Forbidden	75
ks	1.4S	UN0337		1.4S	108	None	62	None	25 kg	100
*		*		*		*		*		*
aerial	1.3G	UN0093		1.3G		None	62	None	Forbidden	75
aerial	1.4G	UN0403		1.4G		None	62	None	Forbidden	75
aerial	1.4S	UN0404		1.4S		None	62	None	25 kg	100
aerial	1.1G	UN0420		1.1G		None	62	None	Forbidden	Forbid
aerial	1.2G	UN0421		1.2G		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
surface	1.3G	UN0092		1.3G		None	62	None	Forbidden	75
surface	1.1G	UN0418		1.1G		None	62	None	Forbidden	Forbid
surface	1.2G	UN0419		1.2G		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
owder	1.1G	UN0094		1.1G		None	62	None	Forbidden	Forbid
owder	1.3G	UN0305		1.3G		None	62	None	Forbidden	Forbid
*		*		*		*		*		*

ng devices, explosive, without detonators for oil wells	1.1D	UN0099		1.1D		None	62	62	Forbidden	Forbid
*		*		*		*		*		*
niter tubular metal clad	1.4G	UN0103		1.4G		None	62	None	Forbidden	7
on-detonating instantaneous or quickmatch	1.3G	UN0101		1.3G		None	62	None	Forbidden	Forbid
fety	1.4S	UN0105		1.4S		None	62	None	25 kg	10
*		*		*		*		*		*
detonating	1.1B	UN0106		1.1B		None	62	None	Forbidden	Forbid
detonating	1.2B	UN0107		1.2B		None	62	None	Forbidden	Forbid
detonating	1.4B	UN0257		1.4B	116	None	62	None	Forbidden	7
detonating	1.4S	UN0367		1.4S	116	None	62	None	25 kg	10
detonating, with protective features	1.1D	UN0408		1.1D		None	62	None	Forbidden	Forbid
detonating, with protective features	1.2D	UN0409		1.2D		None	62	None	Forbidden	Forbid
detonating, with protective features	1.4D	UN0410		1.4D	116	None	62	None	Forbidden	7
gniting	1.3G	UN0316		1.3G		None	62	None	Forbidden	Forbid
gniting	1.4G	UN0317		1.4G		None	62	None	Forbidden	7
gniting	1.4S	UN0368		1.4S		None	62	None	25 kg	10
*		*		*		*		*		*
es, hand or rifle, with bursting charge	1.1D	UN0284		1.1D			62	None	Forbidden	Forbid
es, hand or rifle, with bursting charge	1.2D	UN0285		1.2D			62	None	Forbidden	Forbidd
es, hand or rifle, with bursting charge	1.1F	UN0292		1.1F			62	None	Forbidden	Forbid
es, hand or rifle, with bursting charge	1.2F	UN0293		1.2F			62	None	Forbidden	Forbid
*		*		*		*		*		
es, practice, hand or rifle	1.4S	UN0110		1.4S			62	None	25 kg	10
es, practice, hand or rifle	1.3G	UN0318		1.3G			62	None	Forbidden	Forbidd
es, practice, hand or rifle	1.2G	UN0372		1.2G			62	None	Forbidden	Forbid
es practice, hand or rifle	1.4G	UN0452		1.4G			62	None	Forbidden	7
*		*		*		*		*		*
nitrosaminoguanylidene hydrazine, wetted with not less than ent water, by mass	1.1A	UN0113		1.1A	111, 117	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
nitrosaminoguanyltetrazene, wetted or Tetrazene, wetted t less than 30 percent water or mixture of alcohol and water, s	1.1A	UN0114		1.1A	111, 117	None	62	None	Forbidden	Forbid

*		*		*		*		*		*
rodiphenylamine or Dipicrylamine or Hexyl	1.1D	UN0079		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
rostilbene	1.1D	UN0392		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
e, or Hexotol dry or wetted with less than 15 percent water,	1.1D	UN0118		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
nal	1.1D	UN0393		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
	1.1G	UN0121		1.1G		None	62	None	Forbidden	Forbid
	1.2G	UN0314		1.2G		None	62	None	Forbidden	Forbid
	1.3G	UN0315		1.3G		None	62	None	Forbidden	Forbid
	1.4G	UN0325		1.4G		None	62	None	Forbidden	7
	1.4S	UN0454		1.4S		None	62	None	25 kg	10
*		*		*		*		*		*
orating guns, charged oil well, with detonator	1.1D	NA0124		1.1D	55, 56	None	62	None	Forbidden	Forbid
orating guns, charged oil well, with detonator	1.4D	NA0494		1.4D	55, 56	None	62	None	Forbidden	Forbid
orating guns, charged, oil well, without detonator	1.4D	UN0494		1.4D	55, 114	None	62	None	Forbidden	30
orating guns, charged oil well, without detonator	1.1D	UN0124		1.1D	55	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
ide, wetted with not less than 20 percent water or mixture of and water, by mass	1.1A	UN0129		1.1A	111, 117	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
yphnate, wetted or Lead trinitroresorcinate, wetted with not n 20 percent water or mixture of alcohol and water, by mass	1.1A	UN0130		1.1A	111, 117	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
s, fuse	1.4S	UN0131		1.4S		None	62	None	25 kg	10
*		*		*		*		*		*
ol hexanitrate, wetted or Nitromannite, wetted with not less percent water, or mixture of alcohol and water, by mass	1.1D	UN0133		1.1D	121	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
aptotetrazol-1-acetic acid	1.4C	UN0448		1.4C		None	62	None	Forbidden	7
*		*		*		*		*		*
y fulminate, wetted with not less than 20 percent water, or of alcohol and water, by mass	1.1A	UN0135		1.1A	111, 117	None	62	None	Forbidden	Forbid

*		*		*		*		*		*
vith bursting charge	1.1F	UN0136		1.1F			62	None	Forbidden	Forbid
vith bursting charge	1.1D	UN0137		1.1D			62	62	Forbidden	Forbid
vith bursting charge	1.2D	UN0138		1.2D			62	62	Forbidden	Forbid
vith bursting charge	1.2F	UN0294		1.2F			62	None	Forbidden	Forbid
*		*		*		*		*		*
ocket motor	1.4C	NA0276		1.4C	51	None	62	None	Forbidden	7
ocket motor	1.4S	NA0323		1.4S	51	None	62	None	25 kg	10
*		*		*		*		*		*
ea	1.1D	UN0147		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
enzotriazol	1.1D	UN0385		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
llulose, dry or wetted with less than 25 percent water (or), by mass	1.1D	UN0340		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
llulose, plasticized with not less than 18 percent plasticizing ce, by mass	1.3C	UN0343		1.3C		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
llulose, unmodified or plasticized with less than 18 percent zing substance, by mass	1.1D	UN0341		1.1D		None	62	None	Forbidden	Forbid
llulose, wetted with not less than 25 percent alcohol, by mass	1.3C	UN0342		1.3C		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
ycerin, desensitized with not less than 40 percent non-volatile soluble phlegmatizer, by mass	1.1D	UN0143		1.1D, 6.1	125	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
ycerin, solution in alcohol, with more than 1 percent but not an 10 percent nitroglycerin	1.1D	UN0144		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
anidine or Picrite, dry or wetted with less than 20 percent y mass	1.1D	UN0282		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
rch, dry or wetted with less than 20 percent water, by mass	1.1D	UN0146		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
azolone or NTO	1.1D	UN0490		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
or Octol, dry or wetted with less than 15 percent water, by	1.1D	UN0266		1.1D		None	62	None	Forbidden	Forbid

*		*		*		*		*		*
peroxide type B, liquid	5.2	UN3101		5.2, 1	53	152	225	None	Forbidden	Forbid
peroxide type B, liquid, temperature controlled	5.2	UN3111		5.2, 1	53	None	225	None	Forbidden	Forbid
peroxide type B, solid	5.2	UN3102		5.2, 1	53	152	225	None	Forbidden	Forbid
peroxide type B, solid, temperature controlled	5.2	UN3112		5.2, 1	53	None	225	None	Forbidden	Forbid
peroxide type C, liquid	5.2	UN3103		5.2		152	225	None	5 L	
peroxide type C, liquid, temperature controlled	5.2	UN3113		5.2		None	225	None	Forbidden	Forbid
peroxide type C, solid	5.2	UN3104		5.2		152	225	None	5 kg	1
peroxide type C, solid, temperature controlled	5.2	UN3114		5.2		None	225	None	Forbidden	Forbid
peroxide type D, liquid	5.2	UN3105		5.2		152	225	None	5 L	
peroxide type D, liquid, temperature controlled	5.2	UN3115		5.2		None	225	None	Forbidden	Forbid
peroxide type D, solid	5.2	UN3106		5.2		152	225	None	5 kg	1
peroxide type D, solid, temperature controlled	5.2	UN3116		5.2		None	225	None	Forbidden	Forbid
peroxide type E, liquid	5.2	UN3107		5.2		152	225	None	10 L	
peroxide type E, liquid, temperature controlled	5.2	UN3117		5.2		None	225	None	Forbidden	Forbid
peroxide type E, solid	5.2	UN3108		5.2		152	225	None	10 kg	2
peroxide type E, solid, temperature controlled	5.2	UN3118		5.2		None	225	None	Forbidden	Forbid
peroxide type F, liquid	5.2	UN3109		5.2	IP5	152	225	225	10 L	
peroxide type F, liquid, temperature controlled	5.2	UN3119		5.2	IP5	None	225	225	Forbidden	Forbid
peroxide type F, solid	5.2	UN3110		5.2	TP33	152	225	225	10 kg	2
peroxide type F, solid, temperature controlled	5.2	UN3120		5.2	TP33	None	225	225	Forbidden	Forbid
*		*		*		*		*		*
ng solid, corrosive, n.o.s.	5.1	UN3085	I	5.1, 8	62	None	211	242	1 kg	1
			II	5.1, 8	62, IB6, IP2, T3, TP33	152	212	242	5 kg	2
			III	5.1, 8	62, IB8, IP3, T1, TP33	152	213	240	25 kg	10
*		*		*		*		*		*
ythrite tetranitrate or Pentaerythritol tetranitrate or PETN, t less than 7 percent wax by mass	1.1D	UN0411		1.1D	120	None	62	None	Forbidden	Forbid
ythrite tetranitrate, wetted or Pentaerythritol tetranitrate, or PETN, wetted with not less than 25 percent water, by r Pentaerythrite tetranitrate, or Pentaerythritol tetranitrate or desensitized with not less than 15 percent phlegmatizer by	1.1D	UN0150		1.1D	121	None	62	None	Forbidden	Forbid
*		*		*		*		*		*

e, dry or wetted with less than 15 percent water, by mass	1.1D	UN0151		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
cake, wetted or Powder paste, wetted with not less than 17 alcohol by mass	1.1C	UN0433		1.1C		None	62	None	Forbidden	Forbid
cake, wetted or Powder paste, wetted with not less than 25 water, by mass	1.3C	UN0159		1.3C		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
, smokeless	1.1C	UN0160		1.1C		None	62	None	Forbidden	Forbid
, smokeless	1.3C	UN0161		1.3C		None	62	None	Forbidden	Forbid
, smokeless	1.4C	UN0509		1.4C		None	62	None	Forbidden	7
*		*		*		*		*		*
, cap type	1.4S	UN0044		None		None	62	None	25 kg	10
, cap type	1.1B	UN0377		1.1B		None	62	None	Forbidden	Forbid
, cap type	1.4B	UN0378		1.4B		None	62	None	Forbidden	7
*		*		*		*		*		*
, tubular	1.3G	UN0319		1.3G		None	62	None	Forbidden	Forbid
, tubular	1.4G	UN0320		1.4G		None	62	None	Forbidden	7
, tubular	1.4S	UN0376		None		None	62	None	25 kg	10
*		*		*		*		*		*
les, inert with tracer	1.4S	UN0345		1.4S			62	62	25 kg	10
les, inert, with tracer	1.3G	UN0424		1.3G			62	62	Forbidden	Forbid
les, inert, with tracer	1.4G	UN0425		1.4G			62	62	Forbidden	7
les, with burster or expelling charge	1.2D	UN0346		1.2D			62	62	Forbidden	Forbid
les, with burster or expelling charge	1.4D	UN0347		1.4D			62	62	Forbidden	7
les, with burster or expelling charge	1.2F	UN0426		1.2F			62	None	Forbidden	Forbid
les, with burster or expelling charge	1.4F	UN0427		1.4F			62	None	Forbidden	Forbid
les, with burster or expelling charge	1.2G	UN0434		1.2G			62	62	Forbidden	Forbid
les, with burster or expelling charge	1.4G	UN0435		1.4G			62	62	Forbidden	7
les, with bursting charge	1.1F	UN0167		1.1F			62	None	Forbidden	Forbid
les, with bursting charge	1.1D	UN0168		1.1D			62	62	Forbidden	Forbid
les, with bursting charge	1.2D	UN0169		1.2D			62	62	Forbidden	Forbid
les, with bursting charge	1.2F	UN0324		1.2F			62	None	Forbidden	Forbid
les, with bursting charge	1.4D	UN0344		1.4D			62	62	Forbidden	7
*		*		*		*		*		*
ant, liquid	1.3C	UN0495		1.3C	37	None	62	None	Forbidden	Forbid
ant, liquid	1.1C	UN0497		1.1C	37	None	62	None	Forbidden	Forbid
ant, solid	1.1C	UN0498		1.1C		None	62	None	Forbidden	Forbid
ant, solid	1.3C	UN0499		1.3C		None	62	None	Forbidden	Forbid
ant, solid	1.4C	UN0501		1.4C		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
d HMX mixtures, wetted with not less than 15 percent water s or RDX and HMX mixtures, desensitized with not less than ent phlegmatizer by mass	1.1D	UN0391		1.1D		None	62	None	Forbidden	Forbid

*		*		*		*		*		*
devices, explosive	1.4S	UN0173		1.4S		None	62	62	25 kg	10
*		*		*		*		*		*
explosive	1.4S	UN0174		1.4S		None	62	62	25 kg	10
*		*		*		*		*		*
motors	1.3C	UN0186		1.3C	109	None	62	62	Forbidden	22
motors	1.1C	UN0280		1.1C	109	None	62	62	Forbidden	Forbid
motors	1.2C	UN0281		1.2C	109	None	62	62	Forbidden	Forbid
motors, liquid fueled	1.2J	UN0395		1.2J	109	None	62	None	Forbidden	Forbid
motors, liquid fueled	1.3J	UN0396		1.3J	109	None	62	None	Forbidden	Forbid
motors with hypergolic liquids with or without an expelling	1.3L	UN0250		1.3L	109	None	62	None	Forbidden	Forbid
motors with hypergolic liquids with or without an expelling	1.2L	UN0322		1.2L	109	None	62	None	Forbidden	Forbid
, line-throwing	1.2G	UN0238		1.2G		None	62	None	Forbidden	Forbid
, line-throwing	1.3G	UN0240		1.3G		None	62	None	Forbidden	7
, line-throwing	1.4G	UN0453		1.4G		None	62	None	Forbidden	7
, liquid fueled with bursting charge	1.1J	UN0397		1.1J		None	62	None	Forbidden	Forbid
, liquid fueled with bursting charge	1.2J	UN0398		1.2J		None	62	None	Forbidden	Forbid
, with bursting charge	1.1F	UN0180		1.1F		None	62	None	Forbidden	Forbid
, with bursting charge	1.1E	UN0181		1.1E		None	62	62	Forbidden	Forbid
, with bursting charge	1.2E	UN0182		1.2E		None	62	62	Forbidden	Forbid
, with bursting charge	1.2F	UN0295		1.2F		None	62	None	Forbidden	Forbid
, with expelling charge	1.2C	UN0436		1.2C		None	62	62	Forbidden	Forbid
, with expelling charge	1.3C	UN0437		1.3C		None	62	62	Forbidden	Forbid
, with expelling charge	1.4C	UN0438		1.4C		None	62	62	Forbidden	7
, with inert head	1.3C	UN0183		1.3C		None	62	62	Forbidden	Forbid
*		*		*		*		*		*
ctive liquid type B	4.1	UN3221		4.1	53	151	224	None	Forbidden	Forbid
ctive liquid type B, temperature controlled	4.1	UN3231		4.1	53	None	224	None	Forbidden	Forbid
ctive liquid type C	4.1	UN3223		4.1		151	224	None	5 L	
ctive liquid type C, temperature controlled	4.1	UN3233		4.1		None	224	None	Forbidden	Forbid
ctive liquid type D	4.1	UN3225		4.1		151	224	None	5 L	
ctive liquid type D, temperature controlled	4.1	UN3235		4.1		None	224	None	Forbidden	Forbid
ctive liquid type E	4.1	UN3227		4.1		151	224	None	10 L	2
ctive liquid type E, temperature controlled	4.1	UN3237		4.1		None	224	None	Forbidden	Forbid
ctive liquid type F	4.1	UN3229		4.1		151	224	None	10 L	2
ctive liquid type F, temperature controlled	4.1	UN3239		4.1		None	224	None	Forbidden	Forbid
ctive solid type B	4.1	UN3222		4.1	53	151	224	None	Forbidden	Forbid
ctive solid type B, temperature controlled	4.1	UN3232		4.1	53	None	224	None	Forbidden	Forbid
ctive solid type C	4.1	UN3224		4.1		None	224	None	5 kg	1
ctive solid type C, temperature controlled	4.1	UN3234		4.1		None	224	None	Forbidden	Forbid

ctive solid type D	4.1	UN3226		4.1		151	224	None	5 kg	1
ctive solid type D, temperature controlled	4.1	UN3236		4.1		None	224	None	Forbidden	Forbi
ctive solid type E	4.1	UN3228		4.1		151	224	None	10 kg	2
ctive solid type E, temperature controlled	4.1	UN3238		4.1		None	224	None	Forbidden	Forbi
ctive solid type F	4.1	UN3230		4.1		151	224	None	10 kg	2
ctive solid type F, temperature controlled	4.1	UN3240		4.1		None	224	None	Forbidden	Forbi
*		*		*		*		*		*
levices, hand	1.4G	UN0191		1.4G		None	62	None	Forbidden	7
levices, hand	1.4S	UN0373		1.4S		None	62	None	25 kg	10
distress, ship	1.1G	UN0194		1.1G		None	62	None	Forbidden	Forbi
distress, ship	1.3G	UN0195		1.3G		None	62	None	Forbidden	7
*		*		*		*		*		*
railway track, explosive	1.1G	UN0192		1.1G		None	62	None	Forbidden	Forbi
railway track, explosive	1.4S	UN0193		1.4S		None	62	None	25 kg	10
*		*		*		*		*		*
smoke	1.1G	UN0196		1.1G		None	62	None	Forbidden	Forbi
smoke	1.4G	UN0197		1.4G		None	62	None	Forbidden	7
smoke	1.2G	UN0313		1.2G		None	62	None	Forbidden	Forbi
smoke	1.3G	UN0487		1.3G		None	62	None	Forbidden	Forbi
*		*		*		*		*		*
dinitro-o-cresolate, dry or wetted with less than 15 percent y mass	1.3C	UN0234		1.3C		None	62	None	Forbidden	Forbi
*		*		*		*		*		*
picramate, dry or wetted with less than 20 percent water, by	1.3C	UN0235		1.3C		None	62	None	Forbidden	Forbi
*		*		*		*		*		*
g devices, explosive	1.2F	UN0204		1.2F		None	62	62	Forbidden	Forbi
g devices, explosive	1.1F	UN0296		1.1F		None	62	62	Forbidden	Forbi
g devices, explosive	1.1D	UN0374		1.1D		None	62	62	Forbidden	Forbi
g devices, explosive	1.2D	UN0375		1.2D		None	62	62	Forbidden	Forbi
*		*		*		*		*		*
ces, explosive, n.o.s.	1.1L	UN0357		1.1L	101	None	62	None	Forbidden	Forbi
ces, explosive, n.o.s.	1.2L	UN0358		1.2L	101	None	62	None	Forbidden	Forbi
ces, explosive, n.o.s.	1.3L	UN0359		1.3L	101	None	62	None	Forbidden	Forbi
ces, explosive, n.o.s.	1.1A	UN0473		1.1A	101, 111	None	62	None	Forbidden	Forbi
ces, explosive, n.o.s.	1.1C	UN0474		1.1C	101	None	62	None	Forbidden	Forbi
ces, explosive, n.o.s.	1.1D	UN0475		1.1D	101	None	62	None	Forbidden	Forbi
ces, explosive, n.o.s.	1.1G	UN0476		1.1G	101	None	62	None	Forbidden	Forbi
ces, explosive, n.o.s.	1.3C	UN0477		1.3C	101	None	62	None	Forbidden	Forbi
ces, explosive, n.o.s.	1.3G	UN0478		1.3G	101	None	62	None	Forbidden	Forbi
ces, explosive, n.o.s.	1.4C	UN0479		1.4C	101	None	62	None	Forbidden	7

ces, explosive, n.o.s.	1.4D	UN0480		1.4D	101	None	62	None	Forbidden	7
ces, explosive, n.o.s.	1.4S	UN0481		1.4S	101	None	62	None	25 kg	7
ces, explosive, n.o.s.	1.4G	UN0485		1.4G	101	None	62	None	Forbidden	7
ces, explosive, very insensitive, n.o.s. or Substances, EVI,	1.5D	UN0482		1.5D	101	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
roaniline	1.1D	UN0207		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
l-1-acetic acid	1.4C	UN0407		1.4C		None	62	None	Forbidden	7
*		*		*		*		*		*
bes, liquid fueled, with inert head	1.3J	UN0450		1.3J			62	None	Forbidden	Forbid
bes, liquid fueled, with or without bursting charge	1.1J	UN0449		1.1J			62	None	Forbidden	Forbid
bes with bursting charge	1.1E	UN0329		1.1E			62	62	Forbidden	Forbid
bes with bursting charge	1.1F	UN0330		1.1F			62	None	Forbidden	Forbid
bes with bursting charge	1.1D	UN0451		1.1D			62	62	Forbidden	Forbid
*		*		*		*		*		*
bs	1.4S	NA0337		1.4S		None	62	None	25 kg	10
for ammunition	1.3G	UN0212		1.3G		None	62	None	Forbidden	Forbid
for ammunition	1.4G	UN0306		1.4G		None	62	None	Forbidden	7
*		*		*		*		*		*
-m-cresol	1.1D	UN0216		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
aniline or Picramide	1.1D	UN0153		1.1D		None	62	None	Forbidden	Forbid
anisole	1.1D	UN0213		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
benzene, dry or wetted with less than 30 percent water, by	1.1D	UN0214		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
benzenesulfonic acid	1.1D	UN0386		1.1D		None	62	None	Forbidden	Forbid
benzoic acid, dry or wetted with less than 30 percent water,	1.1D	UN0215		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
chlorobenzene or Picryl chloride	1.1D	UN0155		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
fluorenone	1.1D	UN0387		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
naphthalene	1.1D	UN0217		1.1D		None	62	None	Forbidden	Forbid
phenetole	1.1D	UN0218		1.1D		None	62	None	Forbidden	Forbid
phenol (picric acid), wetted, with not less than 10 percent y mass	4.1	UN3364	I	4.1	23, A8, A19, N41, N84	None	211	None	0.5 kg	0.
phenol or Picric acid, dry or wetted with less than 30 percent by mass	1.1D	UN0154		1.1D		None	62	None	Forbidden	Forbid
phenol, wetted with not less than 30 percent water, by mass	4.1	UN1344	I	4.1	162, A8, A19, N41	None	211	None	1 kg	1
*		*		*		*		*		*
phenylmethylnitramine or Tetryl	1.1D	UN0208		1.1D		None	62	None	Forbidden	Forbid

resorcinol or Styphnic acid, dry or wetted with less than 20 water, or mixture of alcohol and water, by mass	1.1D	UN0219		1.1D		None	62	None	Forbidden	Forbid
resorcinol, wetted or Styphnic acid, wetted with not less than ent water, or mixture of alcohol and water by mass	1.1D	UN0394		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
toluene and Trinitrobenzene mixtures or TNT and benzene mixtures or TNT and hexanitrostilbene mixtures or toluene and hexanitrostilnene mixtures	1.1D	UN0388		1.1D		None	62	None	Forbidden	Forbid
toluene mixtures containing Trinitrobenzene and rostilbene or TNT mixtures containing trinitrobenzene and rostilbene	1.1D	UN0389		1.1D		None	62	None	Forbidden	Forbid
toluene or TNT, dry or wetted with less than 30 percent by mass	1.1D	UN0209		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
	1.1D	UN0390		1.1D		None	62	None	Forbidden	Forbid
*		*		*		*		*		*
rate, dry or wetted with less than 20 percent water, by mass	1.1D	UN0220		1.1D	119	None	62	None	Forbidden	Forbid
*		*		*		*		*		*
ds, rocket with burster or expelling charge	1.4D	UN0370		1.4D		None	62	62	Forbidden	7
ds, rocket with burster or expelling charge	1.4F	UN0371		1.4F		None	62	None	Forbidden	Forbid
ds, rocket with bursting charge	1.1D	UN0286		1.1D		None	62	62	Forbidden	Forbid
ds, rocket with bursting charge	1.2D	UN0287		1.2D		None	62	62	Forbidden	Forbid
ds, rocket with bursting charge	1.1F	UN0369		1.1F		None	62	None	Forbidden	Forbid
ds, torpedo with bursting charge	1.1D	UN0221		1.1D		None	62	62	Forbidden	Forbid
*		*		*		*		*		*
sbestos (chrysotile, actinolite, anthophyllite, tremolite)	9	UN2590	III	9	156, IB8, IP2, IP3, T1, TP33	155	216	216	200 kg	20
*		*		*		*		*		*
um picramate, dry or wetted with less than 20 percent water,	1.3C	UN0236		1.3C		None	62	None	Forbidden	Forbid
*		*		*		*		*		*

* * * * *

10. In § 172.102, in paragraph (c)(1) Special Provision 136 is revised to read as follows:

§ 172.102 Special provisions.

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(c) * * *

(1) * * *

136 This entry only applies to machinery and apparatus containing hazardous materials as an integral element of the machinery or apparatus. It may not be used to describe machinery or apparatus for which a proper shipping name exists in the § 172.101 Table. Except when approved by the Associate Administrator, machinery or apparatus may only contain hazardous materials for which exceptions are referenced in Column (8) of the § 172.101 Table and are provided in part 173, subparts D and G, of this subchapter. Hazardous materials shipped under this entry are excepted from the labeling requirements of this subchapter unless offered for transportation or transported by aircraft and are not subject to the placarding requirements of part 172, subpart F, of this subchapter. Orientation markings as described in § 172.312(a)(2) are required when liquid hazardous materials may escape due to incorrect orientation. The machinery or apparatus, if unpackaged, or the packaging in which it is contained shall be marked "Dangerous goods in machinery" or "Dangerous goods in apparatus," as appropriate, with the identification number UN3363. For transportation by aircraft, machinery or apparatus may not contain any material forbidden for transportation by passenger or cargo aircraft. The Associate Administrator may except from the requirements of this subchapter equipment, machinery and apparatus provided:

a. It is shown that it does not pose a significant risk in transportation;

b. The quantities of hazardous materials do not exceed those specified in § 173.4a of this subchapter; and

c. The equipment, machinery or apparatus conforms with § 173.222 of this subchapter.

* * * * *

11. In § 172.201, paragraph (d) is revised to read as follows:

§ 172.201 Preparation and retention of shipping papers.

* * * * *

(d) Emergency response telephone number. Except as provided in § 172.604(d), a shipping paper must contain an emergency response telephone number and, if utilizing an emergency response information telephone number service provider, identify the person (by name or contract number) who has a contractual agreement with the service provider, as prescribed in subpart G of this part.

* * * * *

12. In § 172.301, paragraph (f) is revised to read as follows:

§ 172.301 General marking requirements for non-bulk packagings.

* * * * *

(f) NON-ODORIZED marking on cylinders containing LPG. No person may offer for transportation or transport a specification cylinder, except a Specification 2P or 2Q container or a Specification 39 cylinder, containing unodorized liquefied petroleum gas (LPG) unless it is legibly marked NON-ODORIZED or NOT ODORIZED in letters not less than 6.3 mm (0.25 inches) in height near the marked proper shipping name required by paragraph (a) of this section. The NON-ODORIZED or NOT ODORIZED marking may appear on a cylinder used for both unodorized and odorized LPG.

13. In 173.326, paragraph (d) is revised to read as follows:

§ 172.326 Portable tanks.

* * * * *

(d) NON-ODORIZED marking on portable containing LPG. No person may offer for transportation or transport a portable tank containing unodorized liquefied petroleum gas (LPG) as authorized in § 173.315(b)(1) unless it is legibly marked NON-ODORIZED or NOT ODORIZED on two opposing sides near the marked proper shipping name required by paragraph (a) of this section, or near the placards. The NON-ODORIZED or NOT ODORIZED marking may appear on a portable tank used for both unodorized and odorized LPG.

14. In 173.328, paragraph (e) is revised to read as follows:

§ 172.328 Cargo tanks.

* * * * *

(e) NON-ODORIZED marking on cargo tanks containing LPG. No person may offer for transportation or transport a cargo tank containing unodorized liquefied petroleum gas (LPG) as authorized in § 173.315(b)(1) unless it is legibly marked NON-ODORIZED or NOT ODORIZED on two opposing sides near the marked proper shipping name as specified in paragraph (b)(1) of this section, or near the placards. The NON-ODORIZED or NOT ODORIZED marking may appear on a cargo tank used for both unodorized and odorized LPG.

15. In 173.330, paragraph (c) is revised to read as follows:

§ 172.330 Tank cars and multi-unit tank car tanks.

* * * * *

(c) No person may offer for transportation or transport a tank car or multi-unit tank car tank containing unodorized liquefied petroleum gas (LPG) unless it is legibly marked NON-ODORIZED or NOT ODORIZED on two opposing sides near the marked proper shipping name required by paragraphs (a)(1) and (a)(2) of this section, or near the placards. The NON-ODORIZED or NOT ODORIZED

marking may appear on a tank car or multi-unit tank car tank used for both unodorized and odorized LPG.

16. In § 172.406, paragraph (d) is revised to read as follows:

§ 172.406 Placement of labels.

* * * * *

(d) Contrast with background. Each label must be printed on or affixed to a background color contrasting to the color specification of the label as required by § 172.407(d)(1) of this part, or must have a dotted or solid line outer border, to enhance the visibility of the label. However, labels created with a dotted or solid line outer border need not be limited to only backgrounds of non-contrasting color.

* * * * *

17. In § 172.407, paragraph (d)(4)(ii) is revised to read as follows:

§ 172.407 Label specifications.

* * * * *

(d) * * *

(4) * * *

(ii) Color charts conforming to appendix A to this part are on display at the Standards and Rulemaking Division, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001.

* * * * *

18. In § 172.514, paragraph (c)(4) is revised to read as follows:

§ 172.514 Bulk Packagings.

* * * * *

(c) * * *

(4) For an IBC labeled in accordance with subpart E of this part, instead of being placarded, the IBC may display the proper shipping name and UN identification number markings in accordance with the size requirements of § 172.301(a)(1) in place of the UN number on an orange panel, placard or white square-on-point configuration as prescribed in § 172.336(b); and

* * * * *

19. In 172.604, paragraph (a) is revised to read as follows:

§ 172.604 Emergency response telephone number.

(a) A person who offers a hazardous material for transportation must provide a numeric emergency response telephone number, including the area code, for use in an emergency involving the hazardous material. For telephone numbers outside the United States, the international access code or the "+" (plus) sign, country code, and city code, as appropriate, that are needed to complete the call must be included. The telephone number must be—

* * * * *

PART 173--SHIPPERS--GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

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

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

21. In § 173.4a, paragraph (a) introductory text is revised to read as follows:

§ 173.4a Excepted quantities.

(a) Excepted quantities of materials, other than articles, are not subject to requirements of this subchapter except for:

* * * * *

22. In § 173.21, paragraph (e) is revised to read as follows:

§ 173.21 Forbidden materials and packages.

* * * * *

(e) A material in the same packaging, freight container, overpack, or transport vehicle with another material, the mixing of which is likely to cause a dangerous evolution of heat, produce flammable or poisonous gases or vapors, or produce corrosive materials.

* * * * *

23. In § 173.24a, paragraph (c)(1)(iv) is revised to read as follows:

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

* * * * *

(c) * * *

(1) * * *

(iv) For transportation by aircraft, the total net quantity does not exceed the lowest permitted maximum net quantity per package as shown in Column (9a) or (9b), as appropriate, of the § 172.101 Table. The permitted maximum net quantity must be calculated in kilograms if a package contains both a liquid and a solid. These requirements do not apply to limited quantity hazardous materials packaged in accordance with § 173.27(f)(2) of this part.

* * * * *

24. In § 173.27, paragraph (f)(2)(i) is revised to read as follows:

§ 173.27 General requirements for transportation by aircraft.

* * * * *

(f) * * *

(2) * * *

(i) Unless otherwise specified in this part, or in subpart C of part 171 of this subchapter, when a limited quantity of hazardous material packaged in a combination packaging is intended for transportation aboard an aircraft, the inner and outer packagings must conform to the quantity limitations set forth in Table 3 of this paragraph. Materials and articles must be authorized for transportation aboard a passenger-carrying aircraft (see Column (9A) of the § 172.101 Hazardous Materials Table of this subchapter). Not all unauthorized materials or articles may be indicated in this table. For mixed content packages of limited quantity material, the total net quantity must not exceed the lowest permitted maximum net quantity (for each of the hazard classes or divisions represented in the package) per outer package set forth in Table 3 of this paragraph. The permitted maximum net quantity must be calculated in kilograms for a package that contains both a solid and a liquid. Unless otherwise excepted, packages must be marked and labeled in accordance with this section and any additional requirements in subparts D and E, respectively, of part 172 of this subchapter. Materials or articles not authorized as limited quantity by aircraft are:

* * * * *

25. In § 173.150, paragraphs (f)(3)(ix) and (x) are revised and paragraph (f)(3)(xi) is added as follows:

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

* * * * *

(f) * * *

(3) * * *

(ix) The training requirements of subpart H of part 172 of this subchapter;

(x) Emergency response information requirements of subpart G of part 172; and

(xi) For bulk packagings only, registration requirements of subpart G of part 107 of this subchapter.

* * * * *

26. In 173.158, paragraph (e) is revised to read as follows:

§ 173.158 Nitric acid.

* * * * *

(e) Nitric acid of less than 90 percent concentration, when offered for transportation or transported by rail, highway, or water may be packaged in 4A, 4B, or 4N metal boxes, 4G fiberboard boxes or 4C1, 4C2, 4D or 4F wooden boxes with inside glass packagings of not over 2.5 L (0.66 gallon) capacity each. When placed in wooden or fiberboard outer packagings, the glass inner packagings must be packed in tightly-closed, non-reactive intermediate packagings, cushioned with a non-reactive absorbent material.

* * * * *

27. In § 173.159, paragraph (j) is added as follows:

§ 173.159 Batteries, wet.

* * * * *

(j) Damaged electric storage batteries incapable of retaining battery fluid inside the outer casing during transportation may be transported by highway or rail provided the batteries are transported in non-bulk packaging, meet the requirements of paragraph (a) of this section, and are prepared for transport under one or more of the following conditions:

(1) Drain the battery of fluid to eliminate the potential for leakage during transportation;

(2) Individually pack the battery in a leakproof intermediate package with sufficient non-reactive absorbent material capable of absorbing the release of any electrolyte;

(3) Place the intermediate packaging in a leakproof outer packaging that conforms to the general packaging requirements of subpart B of this part; or,

(4) Pack the battery in a salvage packaging in accordance with the provisions of § 173.3(c) of this part.

28. In § 173.166, paragraph (e)(6) introductory text is revised to read as follows:

§ 173.166 Air bag inflators, air bag modules and seat-belt pretensioners.

* * * * *

(e) * * *

(6) Devices from or for a motor vehicle. When removed from or having been intended to be used in a motor vehicle, a serviceable air bag inflator, air bag module, or seat-belt pretensioner of Class 9 (UN3268) that was manufactured as required for use in the United States and is to be offered for domestic transportation by highway or cargo vessel to a recycling or waste disposal facility may be offered for transportation and transported in the following authorized packaging:

* * * * *

29. In § 173.170, paragraph (b) is revised to read as follows:

§ 173.170 Black powder for small arms.

* * * * *

(b) The total quantity of black powder in one transport vehicle or freight container may not exceed 45.4 kg (100 pounds) net mass. No more than four freight containers may be on board one cargo vessel;

* * * * *

30. In § 173.171, paragraph (b)(1) is revised to read as follows:

§ 173.171 Smokeless powder for small arms.

* * * * *

(b) * * *

(1) One transport vehicle or cargo-only aircraft; or

* * * * *

31. In § 173.199, paragraph (a)(4) is revised to read as follows:

§ 173.199 Category B infectious substances.

(a) * * *

(4) The completed package must be designed, constructed, maintained, filled, its contents limited, and closed so that under conditions normally encountered in transportation, including removal from a pallet or overpack for subsequent handling, there will be no release of hazardous material into the environment. Package effectiveness must not be substantially reduced for minimum and maximum temperatures, changes in humidity and pressure, and shocks, loadings and vibrations normally encountered during transportation. The packaging must be capable of successfully passing the drop test in § 178.609(d) of this subchapter at a drop height of at least 1.2 meters (3.9 feet). Following the drop test, there must be no leakage from the primary receptacle, which must remain protected by absorbent material, when required, in the secondary packaging. At least one surface of the outer packaging must have a minimum dimension of 100 mm by 100 mm (3.9 inches).

* * * * *

32. In § 173.216, paragraph (c)(1) is revised to read as follows:

§ 173.216 Asbestos, blue, brown or white.

* * * * *

(c) * * *

(1) Rigid, leaktight packagings,, such as metal, plastic or fiber drums, portable tanks, hopper-type rail cars, hopper-type motor vehicles or additional bulk packagings authorized in §173.240;

* * * * *

33. In § 173.225, the table in paragraph (d)(4) is revised to read as follows:

§ 173.225 Packaging requirements and other provisions for organic peroxides.

* * * * *

(d) * * *

(4) The maximum quantity per packaging or package for Packing Methods OP1-OP8 must be as follows:

MAXIMUM QUANTITY PER PACKAGING/PACKAGE

[For Packing Methods OP1 to OP8]

Maximum Quantity	Packing Method							
	OP1	**OP2[1]**	**OP3**	**OP4[1]**	**OP5**	**OP6**	**OP7**	**OP8**
Solids and combination packagings (liquid and solid) (kg)	0.5	0.5/10	5	5/25	25	50	50	[2]400
Liquids (L)	0.5		5		30	60	60	[3]225

[1]If two values are given, the first applies to the maximum net mass per inner packaging and the second to the maximum net mass of the complete package.

[2]60 kg for jerricans/200 kg for boxes and, for solids, 400 kg in combination packagings with outer packagings comprising boxes (4C1, 4C2, 4D, 4F, 4G, 4H1, and 4H2) and with inner packagings of plastics or fiber with a maximum net mass of 25 kg.

[3]60 L for jerricans.

* * * * *

34. In § 173.301, paragraph (g)(1)(iii) is revised 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.

* * * * *

(g) * * *

(1) * * *

(iii) Acetylene as authorized by § 173.303. Mobile acetylene trailers must be maintained, operated and transported in accordance with CGA Pamphlet G-1.6 (IBR, see § 171.7 of this subchapter).

* * * * *

35. In § 173.304a, paragraph (d)(5) is added as follows:

§ 173.304a Additional requirements for shipment of liquefied compressed gases in specification cylinders.

* * * * *

(d) * * *

(5) Odorization. (i) All liquefied petroleum gas must be odorized as required in this paragraph to indicate positively, by a distinctive odor, the presence of gas down to a concentration in air of not over one-fifth the lower limit of combustibility; however, odorization is not required if it is harmful in the use or further processing of the liquefied petroleum gas or if it will serve no useful purpose as a warning agent in such use or further processing.

(A) The lower limits of combustibility of the more commonly used liquefied petroleum gases are: propane, 2.15 percent; butane, 1.55 percent. These figures represent volumetric percentages of gas-air mixtures in each case.

(B) The use of 1.0 pound of ethyl mercaptan, 1.0 pound of thiophane, or 1.4 pounds of amyl mercaptan per 10,000 gallons of liquefied petroleum gas is considered sufficient to meet the requirements of this paragraph. Use of another odorant is not prohibited so long as there is enough to meet the requirements of this paragraph.

(ii) Except as provided in paragraph (d)(5)(i), the offeror must ensure that enough odorant will remain in the cylinder during the course of transportation. The shipper must have procedures in place to:

(A) Ensure quantitative testing methods are used to measure the amount of odorant in the liquefied petroleum gas;

(B) Ensure that, when the odorization of liquefied petroleum gas is manually injected, the required amount of odorant is added;

(C) Ensure that, when odorization of liquefied petroleum gas is automatically injected, equipment calibration checks are conducted to ensure the required amount of odorant is consistently added;

(D) Ensure quality control measures are in place to make sure that persons who receive cylinders that have been subjected to any condition that could lead to corrosion of the cylinder or receive new or recently cleaned cylinders are notified of this information and that a person filling these packagings implement quality control measures to ensure that potential odorant fade is addressed;

(E) Inspect a cylinder for signs of oxidation or corrosion;

(F) Take corrective action needed to ensure enough odorant remains in the cylinder during the course of transportation, such as increasing the amount of odorant added to the liquefied petroleum gas; and

(G) Address odorant fade.

* * * * *

36. In § 173.306, paragraph (k) is revised to read as follows

§ 173.306 Limited quantities of compressed gases.

* * * * *

(k) Aerosols for recycling or disposal. Aerosols, as defined in §171.8 of this subchapter, containing a limited quantity which conforms to the provisions of paragraph (a)(3), (a)(5), (b)(1), (b)(2), or (b)(3) of this section are excepted from the labeling requirements of subpart E of part 172 this subchapter, the specification packaging requirements of this subchapter when packaged according to this

paragraph, the shipping paper requirements of subpart C of part 172 of this subchapter (unless the material meets the definition of a hazardous substance or hazardous waste), and the 30 kg (66 pounds) gross weight limitation, when transported by motor vehicle for purposes of recycling or disposal under the following conditions:

(1) The strong outer packaging and its contents must not exceed a gross weight of 500 kg (1,100 pounds);

(2) Each aerosol container must be secured with a cap to protect the valve stem or the valve stem must be removed;

(3) Each completed packages must be marked in accordance with § 172.315(a);

(4) If the package contains aerosols conforming to the provisions of paragraph (a)(3), (a)(5), or (b)(1), it must also be marked "INSIDE CONTAINERS COMPLY WITH PRESCRIBED REGULATIONS"; and

(5) The packaging must be offered for transportation or transported by—

(i) Private or contract motor carrier; or

(ii) Common carrier in a motor vehicle under exclusive use for such service.

* * * * *

37. In § 173.314, revise paragraph (h) as follows:

§ 173.314 Compressed gases in tank cars and multi-unit tank cars.

* * * * *

(h) *Special requirements for liquefied petroleum gas (odorization).* (1) All liquefied petroleum gas must be odorized as required in this paragraph to indicate positively, by a distinctive odor, the presence of gas down to a concentration in air of not over one-fifth the lower limit of combustibility;

however, odorization is not required if it is harmful in the use or further processing of the liquefied petroleum gas or if it will serve no useful purpose as a warning agent in such use or further processing.

(i) The lower limits of combustibility of the more commonly used liquefied petroleum gases are: propane, 2.15 percent; butane, 1.55 percent. These figures represent volumetric percentages of gas-air mixtures in each case.

(ii) The use of 1.0 pound of ethyl mercaptan, 1.0 pound of thiophane, or 1.4 pounds of amyl mercaptan per 10,000 gallons of liquefied petroleum gas is considered sufficient to meet the requirements of this paragraph. Use of another odorant is not prohibited so long as there is enough to meet the requirements of this paragraph.

(2) Except as provided in paragraph (h)(1)(i), the shipper must ensure that enough odorant will remain in the tank car during the course of transportation. The shipper must have procedures in place to:

(i) Ensure quantitative testing methods are used to measure the amount of odorant in the liquefied petroleum gas;

(ii) Ensure that, when the odorization of liquefied petroleum gas is manually injected, the require amount of odorant is added;

(iii) Ensure that, when odorization of liquefied petroleum gas is automatically injected, equipment calibration checks are conducted to ensure the required amount of odorant is consistently added;

(iv) Ensure quality control measures are in place to mark sure that persons who receive tank cars that have been subjected to any condition that could lead to corrosion of the tank car or receive new or recently cleaned tank cars are notified of this information and that a person filling these packagings implement quality control measures to so that potential odorant fade is addressed;

(v) Inspect a tank car for signs of oxidation or corrosion;

(vi) Take corrective action needed to ensure enough odorization remains in the tank car during the course of transportation, such as increasing the amount of odorant added to the liquefied petroleum gas; and

(vii) Address odorant fade.

* * * * *

38. In § 173.315, paragraph (b) is revised to read as follows:

§ 173.315 Compressed gases in cargo tanks and portable tanks.

* * * * *

(b) * * *

(1) Odorization. All liquefied petroleum gas must be odorized as required in this paragraph to indicate positively, by a distinctive odor, the presence of gas down to a concentration in air of not over one-fifth the lower limit of combustibility; however, odorization is not required if it is harmful in the use or further processing of the liquefied petroleum gas or if it will serve no useful purpose as a warning agent in such use or further processing.

(i) The lower limits of combustibility of the more commonly used liquefied petroleum gases are: propane, 2.15 percent; butane, 1.55 percent. These figures represent volumetric percentages of gas-air mixtures in each case.

(ii) The use of 1.0 pound of ethyl mercaptan, 1.0 pound of thiophane, or 1.4 pounds of amyl mercaptan per 10,000 gallons of liquefied petroleum gas is considered sufficient to meet the requirements of this paragraph. Use of any other odorant is not prohibited so long as there is enough to meet the requirements of this paragraph.

(2) Except as provided in paragraph (b)(1)(i), the shipper must ensure that enough odorant will remain in the cargo tank or portable tank during the course of transportation. The shipper must have procedures in place to:

(i) Ensure quantitative testing methods are used to measure the amount of odorant in the liquefied petroleum gas;

(ii) Ensure that, when the odorization of liquefied petroleum gas is manually injected, the required amount of odorant is being added;

(iii) Ensure that, when odorization of liquefied petroleum gas is automatically injected, equipment calibration checks are conducted to ensure the required amount of odorant is consistently added;

(iv) Ensure that quality control measures are in place to make sure that persons who receive cargo tanks or portable tanks that have been subjected to any condition that could lead to corrosion of the packaging or receive new or recently cleaned cargo tanks or portable tanks are notified of this information and that a person filling these packagings implement quality control measures to ensure that potential odorant fade is addressed;

(v) Inspect a cargo tank or portable tank for signs of oxidation or corrosion;

(vi) Take corrective action needed to ensure enough odorant remains in the cargo tank or portable tank during the course of transportation, such as increasing the amount of odorant added to the liquefied petroleum gas; and

(vii) Address odorant fade.

* * * * *

PART 175—CARRIAGE BY AIR

39. The authority citation for part 175 is revised to read as follows:

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

40. In § 175.1, paragraph (d) is added to read as follows:

§ 175.1 Purpose, scope and applicability.

* * * * *

(d) The requirements of this subchapter does not apply to transportation of hazardous material in support of dedicated air ambulance, firefighting, or search and rescue operations performed in compliance with the operator requirements under federal air regulations, the 14 CFR.

* * * * *

41. In § 175.8, paragraph (b)(1) is revised to read as follows:

§ 175.8 Exceptions for operator equipment and items of replacement.

* * * * *

(b) * * *

(1) Oxygen, or any hazardous material used for the generation of oxygen, for medical use by a passenger, which is furnished by the aircraft operator in accordance with 14 CFR §§ 121.574, 125.219, or 135.91. For the purposes of this paragraph, an aircraft operator that does not hold a certificate under 14 CFR parts 121, 125, or 135 may apply this exception in conformance with 14 CFR §§ 121.574, 125.219, or 135.91 in the same manner as required for a certificate holder. See § 175.501 of this part for additional requirements applicable to the stowage of oxygen.

* * * * *

§ 175.9 [Amended]

42. In § 175.9, remove and reserve paragraph (b)(4).

43. In § 175.10, paragraphs (a)(6), (a)(22) and (a)(24) are revised to read as follows:

§ 175.10 Exceptions for passengers, crewmembers, and air operators.

(a) * * *

(6) Hair curlers (curling irons) containing a hydrocarbon gas such as butane, no more than one per person, in carry-on baggage only. The safety cover must be securely fitted over the heating element. Gas refills for such curlers are not permitted in carry-on or checked baggage.

* * * * *

(22) Non-infectious specimens in preservative solutions transported in accordance with § 173.4b(b).

* * * * *

(24) Small cartridges fitted into or securely packed with devices with no more than four small cylinders of carbon dioxide or other suitable gas in Division 2.2. The water capacity of each cartridge must not exceed 50 mL (equivalent to a 28 g carbon dioxide cartridge), with the approval of the operator.

* * * * *

44. In § 175.75, in paragraph (e)(2) is revised to read as follows:

§ 175.75 Quantity limitations and cargo location.

* * * * *

(e) * * *

(2) Packages of hazardous materials transported aboard a cargo aircraft, when other means of transportation are impracticable or not available, in accordance with procedures approved in writing by the FAA Regional Office in the region where the operator is certificated.

* * * * *

PART 176—CARRIAGE BY VESSEL

45. The authority citation for part 176 is revised to read as follows:

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

46. In § 176.30, paragraph (a)(4) is revised to read as follows:

§ 176.30 Dangerous cargo manifest.

(a) * * *

(4) The number and description of packages (barrels, drums, cylinders, boxes, etc.) and gross weight for each type of package;

* * * * *

PART 177--- CARRIAGE BY PUBLIC HIGHWAY

47. The authority citation for part 177 is revised to read as follows:

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

* * * * *

48. In § 177.840, paragraph (a)(3) is added to read as follows:

§ 177.840 Class 2 (gases) materials.

* * * * *

(a) * * *

(3) Cylinders for acetylene. Cylinders containing acetylene and manifolded as part of a mobile acetylene trailer system must be transported in accordance with § 173.301(g).

* * * * *

49. In § 177.848, revise paragraph (e)(5) to read as follows:

§ 177.848 Segregation of hazardous materials.

* * * * *

(e) * * *

(5) The note "A" in the second column of the table means that, notwithstanding the requirements of the letter "X", ammonium nitrate (UN1942) and ammonium nitrate fertilizer may be

loaded or stored with Division 1.1 (explosive) or Division 1.5 materials, unless otherwise prohibited by § 177.835(c).

*****

PART 178—SPECIFICATIONS FOR PACKAGINGS

50. The authority citation for part 178 is revised to read as follows:

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

51. In § 178.65, paragraph (i)(1) is revised to read as follows:

§ 178.65 Specification 39 non-reusable (non-refillable) cylinders.

* * * * *

(i) * * *

(1) The markings required by this section must be durable and waterproof. The requirements of § 178.35(g) do not apply to this section.

* * * * *

52. In § 178.337-17, paragraph (a) is revised to read as follows:

§ 178.337-17 Marking.

(a) General. Each cargo tank certified after October 1, 2004 must have a corrosion-resistant metal name plate (ASME Plate); and each cargo tank motor vehicle certified after October 1, 2004 must have a specification plate, permanently attached to the cargo tank by brazing, welding, or other suitable means on the left side near the front, in a place accessible for inspection. If the specification plate is attached directly to the cargo tank wall by welding, it must be welded to the tank before the cargo tank is postweld heat treated.

* * * * *

53. In § 178.345-3, revise paragraph (c)(1) introductory text to read as follows:

§ 178.345-3 Structural integrity.

* * * * *

(c) * * *

(1) Normal operating loadings. The following procedure addresses stress in the cargo tank shell resulting from normal operating loadings. The effective stress (the maximum principal stress at any point) must be determined by the following formula:

$S = 0.5(S_y + S_x) \pm [0.25(S_y - S_x)^2 + S_S^2]^{0.5}$

Where:

* * * * *

54. In § 178.955, paragraph (h) is redesignated as paragraph (i), paragraph (i) is redesignated as paragraph (j) and a new paragraph (h) is added to read as follows:

§ 178.955 General requirements.

* * * * *

(h) Approval of equivalent packagings. A Large Packaging differing from standards in subpart P of this part, or tested using methods other than those specified in this subpart, may be used if approved by the Associate Administrator. The Large Packagings and testing methods must be shown to have an equivalent level of safety.

* * * * *

PART 179—SPECIFICATIONS FOR TANK CARS

55. The authority citation for part 179 is revised to read as follows:

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

56. In § 179.13, paragraph (b) is revised to read as follows:

§ 179.13 Tank car capacity and gross weight limitation.

* * * * *

(b) Tank cars containing poisonous-by-inhalation material meeting the applicable authorized tank car specifications listed in § 173.244(a)(2) or (3) or § 173.314(c) or (d) may have a gross weight on rail of up to 286,000 pounds (129,727 kg). Tank cars containing poisonous-by-inhalation material not meeting the specifications listed in § 173.244(a)(2) or (3) or § 173.314(c) or (d) may be loaded to a gross weight on rail of up to 286,000 pounds (129,727 kg) only upon approval of the Associate Administrator for Safety, Federal Railroad Administration (FRA). Any increase in weight above 263,000 pounds may not be used to increase the quantity of the contents of the tank car.

57. In § 179.24, paragraph (a)(2) introductory text is revised to read as follows:

§ 179.24 Stamping.

* * * * *

(a) * * *

(2) Each plate must be stamped, embossed, or otherwise marked by an equally durable method in letters 3⁄16 inch high with the following information (parenthetical abbreviations may be used, and the AAR form reference is to the applicable provisions of the AAR Specifications for Tank Cars (IBR, see §171.7 of this subchapter)):

* * * * *

PART 180—CONTINUING QUALIFICATION AND MAINTENANCE OF PACKAGINGS

58. The authority citation for part 180 is revised to read as follows:

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

59. In § 180.209, paragraph (j) is revised to read as follows:

§ 180.209 Requirements for requalification of specification cylinders.

* * * * *

(j) Cylinder used as a fire extinguisher. Only a DOT specification cylinder used as a fire extinguisher and meeting the requirements of § 173.309(a) of this subchapter may be requalified in accordance with this paragraph (j).

* * * * *

60. Section 180.401 is revised to read as follows:

§ 180.401 Applicability.

This subpart prescribes requirements, in addition to those contained in parts 107, 171, 172, 173 and 178 of this subchapter, applicable to any person, hazmat employer or hazmat employee responsible for the continuing qualification, maintenance or periodic testing of a cargo tank.

* * * * *

61. In § 180.407, the table and notes in paragraph (c) and paragraphs (d)(3) and (g)(1)(ii) are revised; and paragraph (j) is added to read as follows:

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

* * * * *

(c) * * *

COMPLIANCE DATES—INSPECTIONS AND TEST UNDER § 180.407(c)

Test or inspection (cargo tank specification, configuration, and service)	Date by which first test must be completed (see Note 1)	Interval period after first test
External Visual Inspection:		
* * *	* * *	* * *
Internal Visual Inspection:		
All insulated cargo tanks, except MC 330, MC 331, MC 338 (see Note 4)	September 1, 1991	1 year.
All cargo tanks transporting lading corrosive to the tank	September 1, 1991	1 year.
MC 331 cargo tanks less than 3,500 gallons water capacity in dedicated propane service constructed of nonquenched and tempered NQT SA-612 steel (see Note 5)	TBD	10 years.
All other cargo tanks, except MC 338	September 1, 1995	5 years.
Lining Inspection:		
* * *	* * *	* * *
Leakage Test:		
* * *	* * *	* * *
Pressure Test:		
(Hydrostatic or pneumatic) (See Notes 2 and 3)		
All cargo tanks which are insulated with no manhole or insulated and lined, except MC 338	September 1, 1991	1 year.
All cargo tanks designed to be loaded by vacuum with full opening rear heads	September 1, 1992	2 years.

MC 330 and MC 331 cargo tanks in chlorine service	September 1, 1992	2 years.
MC 331 cargo tanks less than 3,500 gallons water capacity in dedicated propane service constructed of nonquenched and tempered NQT SA-612 steel (See Note 5)	TBD	10 years.
All other cargo tanks	September 1, 1995	5 years.
Thickness Test:		
* * *	* * *	* * *

NOTE 1: If a cargo tank is subject to an applicable inspection or test requirement under the regulations in effect on December 30, 1990, and the due date (as specified by a requirement in effect on December 30, 1990) for completing the required inspection or test occurs before the compliance date listed in table I, the earlier date applies.

NOTE 2: Pressure testing is not required for MC 330 or MC 331 cargo tanks in dedicated sodium metal service.

NOTE 3: Pressure testing is not required for uninsulated lined cargo tanks, with a design pressure MAWP 15 psig or less, which receive an external visual inspection and lining inspection at least once each year.

NOTE 4: Insulated cargo tanks equipped with manholes or inspection openings may perform either an internal visual inspection in conjunction with the external visual inspection or a hydrostatic or pneumatic pressure-test of the cargo tank.

Note 5: A 10-year inspection interval period also applies to cargo tanks constructed of NQT SA-202 or NQT SA-455 steels provided the materials have full-size equivalent (FSE) Charpy vee notch (CVN) energy test data that demonstrated 75% shear-area ductility at 32 °F with an average of 3 or more samples > 15 ft-lb FSE with no sample < 10 ft-lb FSE.

* * * * *

(d) * * *

(3) All reclosing pressure relief valves must be externally inspected for any corrosion or damage which might prevent safe operation. All reclosing pressure relief valves on cargo tanks carrying lading corrosive to the valve must be removed from the cargo tank for inspection and testing. Each reclosing pressure relief valve required to be removed and tested must be tested according to the requirements set forth in paragraph (j) of this section.

* * * * *

(g) * * *

(1) * * *

(ii) All self-closing pressure relief valves, including emergency relief vents and normal vents, must be removed from the cargo tank for inspection and testing according to the requirements set forth in paragraph (j) of this section.

* * * * *

(j) Pressure Vent Bench Test. When required by this section, pressure relief valves must be tested for proper function as follows:

(1) Each self-closing pressure relief valve must open and reseat to a leaktight condition at the pressures prescribed for the applicable cargo tank specification or at the following pressures:

(i) For MC 306 cargo tanks:

(A) With MC 306 reclosing pressure relief valves: must open at not less than 3psi and not more than 4.4 psi and must reseat to a leak tight-condition at no less than 2.7 psi.

(B) With reclosing pressure relief valves modified as provided in § 180.405(c) of this part to conform with DOT 406 specifications: according to the pressures set forth for a DOT 406 cargo tank in § 178.346-3 of this subchapter.

(ii) For MC 307 cargo tanks:

(A) With MC 307 reclosing pressure relief valves: must open at not less than the cargo tank MAWP and not more than 110% of the cargo tank MAWP and must reseat to a leak tight-condition at no less than 90% of the cargo tank MAWP.

(B) With reclosing pressure relief valves modified as provided in § 180.405(c) of this part to conform with DOT 407 specifications: according to the pressures set forth for a DOT 407 cargo tank in § 178.347-4 of this subchapter.

(iii) For MC 312 cargo tanks:

(A) With MC 312 reclosing pressure relief valves: must open at not less than the cargo tank MAWP and not more than 110% of the cargo tank MAWP and must reseat to a leak tight-condition at no less than 90% of the cargo tank MAWP.

(B) With reclosing pressure relief valves modified as provided in § 180.405(c) of this part to conform with DOT 412 specifications: according to the pressures set forth for a DOT 412 cargo tank in § 178.348-4 of this subchapter.

(iv) For MC 330 or MC 331 cargo tanks: must open at not less than the required set pressure and not more than 110% of the required set pressure and must reseat to a leak-tight condition at no less than 90% of the required set pressure.

(v) For DOT 400-series cargo tanks: according to the pressures set forth for the applicable cargo tank specification in §§ 178.346-3, 178.347-4, and 178.348-4, respectively, of this subchapter.

(vi) For cargo tanks not specified in this paragraph: must open at not less than the required set pressure and not more than 110% of the required set pressure and must reseat to a leak-tight condition at no less than 90% of the required set pressure or the pressure prescribed for the applicable cargo tank specification.

(2) Normal vents (1 psig vents) must be tested according to the testing criteria established by the valve manufacturer.

(3) Self-closing pressure relief devices not tested or failing the tests in this paragraph (j)(1) must be repaired or replaced.

§ 180.503 [Amended]

62. In section 180.503, under the definition of Qualification, "AAR Tank Car Manual" is removed and "AAR Specifications for Tank Cars" is added in its place.

* * * * *

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Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety
Pipeline and Hazardous Materials Safety Administration

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