

DEPARTMENT OF TRANSPORTATION**Research and Special Programs Administration****49 CFR Parts 171, 172, 173, 178**

[Docket No. HM-181H; Notice No. 96-11]

RIN 2137-AC80

Performance-Oriented Packaging Standards; Final Transitional Provisions**AGENCY:** Research and Special Programs Administration (RSPA), DOT.**ACTION:** Notice of proposed rulemaking (NPRM).

SUMMARY: RSPA is proposing to incorporate into the Department's Hazardous Materials Regulations (HMR) a number of changes, based on agency initiative, petitions for rulemaking and comments received at public meetings, to the classification of certain hazardous materials which are poisonous by inhalation and to provisions for the manufacture, use and reuse of hazardous materials packagings. The intended effect of these regulatory changes is to improve safety, reduce costs to offerors and transporters of hazardous materials, make the regulations easier to use and correct errors.

DATES: Comments must be received on or before August 2, 1996.

ADDRESSES: Address comments to Dockets Unit (DHM-30), Hazardous Materials Safety, RSPA, U.S. Department of Transportation, Washington, DC 20590-0001. Comments should identify the docket and notice number and be submitted, when possible, in five copies. Persons wishing to receive confirmation of receipt of their comments should include a self-addressed, stamped postcard. The Dockets Unit is located in Room 8421 of the Nassif Building, 400 Seventh Street SW., Washington, DC 20590-0001. Office hours are 8:30 am to 5:00 pm Monday through Friday, except on public holidays when the office is closed.

FOR FURTHER INFORMATION CONTACT: Beth Romo, telephone (202) 366-8553, Office of Hazardous Materials Standards, or Bill Gramer, telephone (202) 366-4545, Office of Hazardous Materials Technology, Research and Special Programs Administration, Washington DC, 20590-0001.

SUPPLEMENTARY INFORMATION:**I. Background**

On December 21, 1990, RSPA published a final rule [Docket HM-181;

55 FR 52402], which comprehensively revised the HMR with respect to hazard communication, classification, and packaging requirements based on the United Nations (UN) Recommendations on the Transport of Dangerous Goods. A document responding to petitions for reconsideration and containing editorial and substantive revisions to the final rule was published on December 20, 1991 [56 FR 66124]. On October 1, 1992, under Dockets HM-181 and HM-189, RSPA issued editorial and technical corrections to the regulations published in 1991. On September 24, 1993, RSPA issued a final rule under Docket HM-181F [58 FR 50224] which made changes to the HMR based on agency initiative and petitions for rulemaking received since the December 20, 1991 response to petitions for reconsideration. That final rule primarily revised requirements with a mandatory compliance date of October 1, 1993, as provided in the transitional provisions in § 171.14(b)(4).

This rule, as proposed, addresses most remaining issues associated with the implementation of Docket HM-181 provisions and certain other issues arising from a final rule issued December 29, 1994, under Docket HM-215A [59 FR 67390]. Many of these proposed changes are to requirements with a compliance date of October 1, 1996. These issues have been raised through petitions for rulemaking and agency initiative. Although these proposed changes focus primarily on provisions concerning hazard classification and the maintenance and use of performance packaging, RSPA also is proposing changes to intermediate bulk container (IBC) requirements, portable tank requirements, and regulated medical waste provisions adopted under Dockets HM-181E and HM-181G, respectively. Several current exemptions would be converted into regulations of general applicability, and an approval concerning design qualification and periodic testing would be incorporated into the HMR.

This proposed rule does not address the manufacture, maintenance and use of fiber drums. A final rule was published February 29, 1996 [61 FR 7958] which extends the authority to ship certain liquid hazardous materials in open-head fiber drums that do not meet performance-oriented packaging standards for hazardous materials in Packing Group III.

This proposed rule is consistent with the goals of President Clinton's Regulatory Reinvention Initiative. The President directed Federal agencies to review all agency regulations and

eliminate or revise those that are outdated or in need of reform. A notice issued April 4, 1995 by RSPA requested comments on regulatory reform (Docket HM-222; 60 FR 17049) and announced a comprehensive review of the HMR to identify provisions that are candidates for elimination, revision, clarification, or relaxation. Certain proposed changes in this document reflect the results of this review.

II. Summary of Proposed Regulatory Changes by Section

Listed below is a section-by-section summary of the proposed changes and, where applicable, the assigned petition number.

Part 171

Section 171.7. The table of material incorporated by reference would be amended by adding a new entry referencing a publication issued by the Department of Health and Human Services for defining biosafety levels.

Section 171.14. All transitional provisions reflecting a compliance date of October 1, 1996, or earlier would be removed. Three remaining transition provisions apply to packages filled prior to October 1, 1991, new placard specifications, and authorization for use of fiber drums.

Part 172

Section 172.101. The text preceding the § 172.101 Hazardous Materials Table (HMT) sets forth procedures for using the HMT. RSPA received a petition for rulemaking [P-1169] from the Hazardous Materials Advisory Council (HMAC) requesting clarification of the procedures contained in paragraph (c)(12)(iii) for selecting a proper shipping name for a material that meets the definition of more than one hazard class. RSPA agrees and is proposing to replace the phrase "identify . . . by a specific description" with "identify . . . specifically by name" and include an example.

Section 172.101; the Hazardous Materials Table (HMT). A new entry to provide for the domestic transportation of black powder for small arms reclassified as a Division 4.1 would be added. This proposed revision is in response to a petition [P-1295] asking RSPA to incorporate the provisions of an exemption (DOT-E-8958) into regulations of general applicability. As part of the justification for the request, the petitioner noted an incident-free shipping history of more than 12 years and cited comparable provisions for smokeless powder, small arms cartridges and power device cartridges. In conjunction with this proposed

change, a new Special Provision 70 and new non-bulk packaging section § 173.170 would be added.

In the HMT, the entries "Chlorosilanes, n.o.s.", with identification numbers UN 2986, UN 2987, and UN 2988, are not authorized to be shipped in IM portable tanks. A petitioner [P-1257] requested that RSPA authorize IM portable tanks for all chlorosilanes because individual chlorosilanes, such as Ethyldichlorosilane, Methylchlorosilane and Trichlorosilane, pose similar hazards and are authorized under the HMR to be shipped in IM portable tanks. RSPA agrees with the petitioner that authorizing certain IM portable tanks for all chlorosilanes would not compromise safety and would be consistent with packaging authorizations for other materials posing similar hazards. RSPA proposes to add special provisions in Column (7) for "Chlorosilanes, n.o.s.", with identification numbers UN 2986, UN 2987, and UN 2988, to permit the transport of these materials in IM portable tanks.

Bulk packaging references for three Type F organic peroxides (UN 3110, UN 3119, and UN 3120) would be revised by changing "None" to "225" in Column (8C) to indicate that these materials are authorized in bulk packagings. In addition, for the entries "Organic Peroxide, type F, liquid (or solid), temperature controlled" (UN 3119 and UN 3120), in Column (8A), the packaging exception reference "152" would be removed for each entry to indicate that these temperature controlled organic peroxides are not eligible for packaging exceptions.

Twenty-nine entries classed as Division 4.3 (dangerous when wet) solids in Packing Groups II and III would be amended by revising Column (8A) to authorize § 173.151 as a packaging exception section.

Revisions to Classification and Hazard Zone Identification for Certain Materials Poisonous by Inhalation. Based on acute inhalation toxicity data and related information obtained by RSPA, the HMT would be amended to change the hazard zone for some materials poisonous by inhalation, and to add other materials to the list of materials poisonous by inhalation. For certain materials this revision would impose more stringent hazard communication and packaging requirements. The materials and a description of the data on which these proposals are based are listed as follows:

a. *Bromine trifluoride (UN1746).* This material is a liquid at 20°C and is identified as a Hazard Zone B inhalation

hazard. Based on harmonization of the HMR with the UN Recommendations (Eighth revised edition), bromine trifluoride is assigned to Division 5.1. However, according to § 173.2a(a), "Division 6.1 (poisonous liquids), Packing Group I, poisonous-by-inhalation only" takes precedence over "Division 5.1 (oxidizers)." Therefore, RSPA is proposing to add the plus (+) symbol to Column 1 of the entry for bromine trifluoride.

b. *Hydrogen cyanide, solution in alcohol (with not more than 45 percent hydrogen cyanide) (UN3294).* This material is a liquid at 20°C and is classified as a Division 6.1 material. Packing Group I only is assigned. Hydrogen cyanide, stabilized (UN1051), is identified as a Hazard Zone A inhalation hazard. Therefore, based on the toxicity and volatility of hydrogen cyanide, the packing group assigned and the dilution factor for this solution of hydrogen cyanide, RSPA is proposing to identify hydrogen cyanide, solution in alcohol with not more than 45 percent hydrogen cyanide as a Hazard Zone B inhalation hazard.

c. *Metal carbonyls, n.o.s. (UN3281).* This generic entry covers Division 6.1, Packing Group I, II and III toxic metal carbonyls that are not specifically listed by name but which exhibit acute oral, dermal and/or inhalation toxicity. The acute toxicity of these metal carbonyls may differ from one compound to another. Those toxic by inhalation may fall into Hazard Zone A or Hazard Zone B. Others may not be toxic by inhalation, but may exhibit oral and/or dermal toxicity, which places them in Division 6.1, Packing Group I. Therefore, RSPA is proposing to add special provision "5" to Column 7 of the entry for metal carbonyls, n.o.s. at the Packing Group I level.

d. *Methanesulfonyl chloride (UN3246).* This material is a liquid at 20°C and is classified as a Division 6.1 material. Acute inhalation toxicity data for this material was obtained from a Special Approval application before the material was listed by name in the UN Recommendations (Seventh revised edition) and, subsequently, in the HMR. Following publication of the final rule under Docket HM-215A (59 FR 67390; December 29, 1994), a manufacturer submitted data identifying the material as a Hazard Zone B inhalation hazard (rat; LC50:205 ppm/1H (hour); V (saturated vapor concentration):2760 ppm). RSPA agrees with the data and is proposing to identify methanesulfonyl chloride as a Hazard Zone B inhalation hazard.

e. *Methyl vinyl ketone (UN1251).* This material is a liquid at 20°C and is

classified as a Class 3 material. Acute inhalation toxicity data for methyl vinyl ketone was listed in the Registry of Toxic Effects of Chemical Substances (RTECS) (RTECS: EM9800000), as follows: Rat; LC50:7 mg/m³/4H. The value, converted to ppm/one hour, was: Rat; LC50:5 ppm/1H. The saturated vapor concentration was calculated to be: V:93400 ppm at 20°C, indicating that methyl vinyl ketone is a material poisonous by inhalation and falls within Hazard Zone A. RSPA agrees with this data and is proposing to identify methyl vinyl ketone as a Hazard Zone A inhalation hazard. Also, to maintain harmony with the UN Recommendations (Eighth revised edition), RSPA is proposing to add the plus (+) symbol to Column 1 of the entry for methyl vinyl ketone.

f. *Nitriles, toxic, flammable, n.o.s. (UN3275).* This generic entry covers Division 6.1, Packing Group I and II toxic, flammable nitriles that are not specifically listed by name but exhibit acute oral, dermal and/or inhalation toxicity. The acute toxicity of these nitriles may differ from one compound to another. Those toxic by inhalation may fall into Hazard Zone A or Hazard Zone B. Other nitriles may not be toxic by inhalation, but may exhibit oral and/or dermal toxicity which places them in Division 6.1, Packing Group I. Therefore, RSPA is proposing to add special provision "5" to Column 7 of the entry for nitriles, toxic, flammable, n.o.s. at the Packing Group I level.

g. *Nitriles, toxic, n.o.s. (UN3276).* This generic entry covers Division 6.1, Packing Group I, II and III toxic nitriles that are not specifically listed by name but exhibit acute oral, dermal and/or inhalation toxicity. The acute toxicity of these nitriles may differ from one compound to another. Those toxic by inhalation may fall into Hazard Zone A or Hazard Zone B. Other nitriles may not be toxic by inhalation, but may exhibit oral and/or dermal toxicity which places them in Division 6.1, Packing Group I. Therefore, RSPA is proposing to add special provision "5" to Column 7 of the entry for nitriles, toxic, n.o.s. at the Packing Group I level.

h. *Organoarsenic compound, n.o.s. (UN3280).* This generic entry covers Division 6.1, Packing Group I, II and III toxic organoarsenic compounds that are not specifically listed by name but exhibit acute oral, dermal and/or inhalation toxicity. The acute toxicity of these organoarsenic compounds may differ from one compound to another. Those toxic by inhalation may fall into Hazard Zone A or Hazard Zone B. Others may not be toxic by inhalation, but may exhibit oral and/or dermal

toxicity which places them in Division 6.1, Packing Group I. Therefore, RSPA is proposing to add special provision "5" to Column 7 of the entry for organoarsenic compound, n.o.s. at the Packing Group I level.

i. Organophosphorus compound, toxic, flammable, n.o.s. (UN3279). This generic entry covers Division 6.1, Packing Group I and II toxic, flammable organophosphorus compounds that are not specifically listed by name but may exhibit acute oral, dermal and/or inhalation toxicity. The acute toxicity of these organophosphorus compounds may differ from one compound to another. Those toxic by inhalation may fall into Hazard Zone A or Hazard Zone B. Others may not be toxic by inhalation, but may exhibit oral and/or dermal toxicity which places them in Division 6.1, Packing Group I. Therefore, RSPA is proposing to add special provision "5" to Column 7 of the entry for organophosphorus compound, toxic, flammable, n.o.s. at the Packing Group I level.

j. Organophosphorus compound, toxic, n.o.s. (UN3278). This generic entry covers Division 6.1, Packing Group I, II and III toxic organophosphorus compounds that are not listed by name but exhibit acute oral, dermal and/or inhalation toxicity. The acute toxicity of these organophosphorus compounds may differ from one compound to another. Those toxic by inhalation may fall into Hazard Zone A or Hazard Zone B. Others may not be toxic by inhalation, but may exhibit oral and/or dermal toxicity which places them in Packing Group I. Therefore, RSPA is proposing to add special provision "5" to Column 7 of this entry for organophosphorus compound, toxic, n.o.s. at the Packing Group I level.

k. Phosphorus pentafluoride (UN2198). This material is a gas at 20°C and is currently identified as a Hazard Zone A inhalation hazard - a tentative classification since no acute inhalation toxicity data was available. The Compressed Gas Association, Inc. (CGA) has reviewed the acute inhalation toxicity of phosphorous pentafluoride, among others. In their Standard for Classification of Toxic Gas Mixtures (CGA P-20-1995), the CGA estimates the toxicity to be: Rat; LC50:260 ppm/1H. RSPA agrees with the CGA estimate and is proposing to identify phosphorus pentafluoride as a Hazard Zone B inhalation hazard.

l. Tungsten hexafluoride (UN2196). This material is a gas at 20°C and is currently identified as a Hazard Zone C inhalation hazard. This was an RSPA estimate since no acute inhalation

toxicity data was available. The CGA has reviewed the acute inhalation toxicity of tungsten hexafluoride. In their Standard for Classification of Toxic Gas Mixtures, the CGA estimates the toxicity to be: Rat; LC50:217 ppm/1H. RSPA agrees with the CGA estimate and is proposing to identify phosphorus pentafluoride as a Hazard Zone B inhalation hazard.

Section 172.102. Special Provision B59, which authorizes AAR 207A rail cars for phosphorus pentasulfide, would be revised based on a petition [P-1286] submitted by the Association of American Railroads (AAR). In its petition, the AAR maintained that the current authorization in B59 for AAR Specification "207A tank cars" is not correct. The AAR acknowledged that it has contributed to the problem by referring to these cars in its Tank Car Manual as tank cars, when they are, in fact, hopper cars used to transport solid materials. RSPA agrees that these cars are more appropriately described as hopper cars and proposes to amend Special Provision B59 accordingly.

A new special provision (N42) would be added to authorize a UN 1A1 steel drum for stabilized benzyl chloride. Prior to the adoption of performance packaging standards under Docket HM-181, the use of DOT Specification 5A and 17C steel drums was authorized for stabilized benzyl chloride. Under Docket HM-181, Special Provision N43 was assigned to both stabilized and unstabilized benzyl chloride, which prohibited use of metal drums other than those constructed of monel or nickel. Based on a petition for rulemaking [P-1296], RSPA agrees with the petitioner that certain 1A1 steel drums having a phenolic lining are appropriate for stabilized benzyl chloride. Therefore, RSPA is proposing to remove N43 from the entry for benzyl chloride and replace it with a new special provision N42, which will allow use of phenolic-lined steel drums with a minimum thickness of 0.050 inches which have been tested and certified to a Packing Group I level at a specific gravity of 1.8.

Section 172.302. In the general marking requirements for bulk packagings, markings on portable tanks with capacities of less than 3,785 L (1,000 gallons) must be at least 6.0 mm (0.24 inch) wide and at least 25 mm (one inch) high. RSPA received a petition for rulemaking [P-1191] requesting that paragraph (b)(2) of this section be amended to decrease to 3 mm the minimum width of markings required on portable tanks having a capacity less than 3,785 L (1,000 gallons). The petitioner stated that the

required minimum width (6 mm) is disproportionate to the required minimum height (25 mm). The petitioner stated that this marking is difficult to read, which reduces the effectiveness of the marking. RSPA agrees that the width of the markings should be proportionate to the height, but believes that 3 mm may be too narrow for the size of the packaging. In this notice, RSPA proposes to revise the minimum width of markings for portable tanks with capacities less than 3,785 L (1,000 gallons) to 4 mm (0.16 inches). In addition, minimum height of markings required on IBCs would be specified in paragraph (b)(2) as 25 mm (one inch). Currently, minimum height markings for IBCs would fall under paragraph (b)(3) with IBCs described as "other bulk packagings" which are required to have a minimum height of 50 mm (2.0 inches). RSPA has received comments requesting the minimum height requirement be lowered for IBCs. After reviewing this issue, RSPA agrees that the minimum marking height for IBCs should be consistent with markings for smaller portable tanks and is proposing a reduction in both height and width for IBCs.

Section 172.504. In response to a petition for rulemaking from HMCA [P-1169], RSPA is proposing to remove paragraph (f)(8), which allows a CLASS 9 placard to be substituted for a COMBUSTIBLE LIQUID placard for a material meeting both Combustible liquid and Class 9 hazard classes. HMCA noted the potential for confusion and delay of a shipment because of inconsistencies between the documentation and marking requirements describing a Combustible liquid and the application of CLASS 9 placards. In addition, this alternative placarding conflicts with paragraph (f)(9), which provides an exception from placarding for Class 9 materials in domestic transportation.

Part 173

Section 173.24a. It has come to RSPA's attention that certain cushioning materials deteriorate if there is even minimal leakage from an inner packaging. A degradation of cushioning materials could seriously reduce the effectiveness of a packaging and render it as not conforming to its marked performance standard or not meeting general packaging requirements. Paragraph (a)(3) would be revised to clarify that cushioning material used to protect inner packagings must not be adversely affected (e.g., disintegrate) if there is leakage of a hazardous material from the inner packagings. This clarification is consistent with

international air transport provisions contained in the International Civil Aviation Organization's Technical Instructions.

Currently, paragraphs (b)(1) and (b)(2) provide filling limits for single and composite packagings, but no such limits are provided for combination packagings. RSPA proposes to revise paragraph (b)(2) of this section to prescribe filling limits for all non-bulk packagings, including combination packagings. This provision would prohibit combination packagings from being filled with a hazardous material to a gross mass greater than the maximum gross mass marked on the packaging.

In addition, a new paragraph (e) would be added to incorporate a definition for stainless steel as it pertains to non-bulk packaging. This is consistent with paragraph (b) in § 173.24b for calculating equivalent steel for bulk packagings.

Section 173.28. RSPA received a petition [P-1303] requesting that paragraph (b)(4) be revised to incorporate a calculation which may be used to determine an equivalent drum thickness for stainless steel drums. The petitioner maintained that drums fabricated of stainless steel are less susceptible to damage or a reduction in structural integrity resulting from mechanical stresses associated with handling and reuse. The petitioner further claimed that an equivalent level of safety can be achieved through reuse of a thinner stainless steel drum and noted the same method is authorized already in the HMR for calculating equivalent minimum thicknesses of portable tanks and metal IBCs. RSPA agrees, and is proposing to add a formula in paragraph (b)(4) for calculating an equivalent minimum thickness for stainless steel drums. This proposed formula is consistent with the formula contained in § 178.705 for calculating minimum wall thicknesses for metal IBCs.

The Association of Container Reconditioners (ACR) submitted a petition for rulemaking [P-1292] dated August 10, 1995, asking RSPA to revise the footnote in paragraph (b)(4) once again to reflect a 1.1 mm (0.043 inch) head. This footnote has been revised three times since the issuance of the 1990 Docket HM-181 final rule. In 1988, ACR (formerly National Barrel and Drum Association) was among commenters to the HM-181 NPRM asking RSPA to allow the "20/18 gauge" drum. RSPA responded to this comment in the 1990 final rule by adopting a footnote to the § 173.28(b)(4) minimum thickness table, to allow the "20/18 gauge" drum, (i.e. drums of 220 liters

with a body thickness of 0.82 mm and head thickness of 1.09 mm) to be reused. The 1991 revised final rule under Docket HM-181 amended the footnote to allow a minimum body thickness of 0.8 mm, with minimum head thickness of 1.1 mm. This change was not based on comments or RSPA's intent to change minimum thickness requirements, but from revised methods of rounding metric units. In 1993, the eighth revised edition of the UN Recommendations adopted a requirement to mark *nominal* thickness, which is tied to minimum thickness by ISO 3574. RSPA, in response to an ACR request for clarification, stated that drums marked in accordance with the UN Recommendations would be satisfactory, but they must be marked with the *minimum* thickness to the nearest 0.1 mm. In the 1994 edition of the HMR, Footnote 1 continued to authorize a minimum thickness of 0.8 mm (0.03 inch) body and 1.1 mm (0.043 inch) head. No changes to the footnote were proposed in the Docket HM-215A NPRM published July 18, 1994, but in its September 6, 1994 comment to this proposed rule, ACR "strongly" urged RSPA to restore Footnote 1 to the original provision implemented in the 1990 HM-181 final rule (0.82 mm body and 1.09 mm head). ACR stated: "In reprinting this table in 1991, however, the thicknesses identified in this footnote were changed, from 0.82 mm (0.0324 inch) to '0.8 mm (0.03 inch)' in the body and from 1.09 mm (0.0428 inch) to '1.1 mm (0.043 inch)' in the heads." ACR claimed these criteria do *not* correspond to the 20/18 gauge DOT specification drums in current use at the time HM-181 was adopted, "nor were they explained in any fashion in the preamble to the second printing of the final rule." ACR suggested that the footnote "could be recast" to prescribe "0.9 mm nominal (0.82 mm minimum) body and 1.2 mm nominal (1.1 mm minimum) body". In the December 29, 1994 final rule issued under HM-215A, RSPA adopted a requirement to mark drums with *nominal*, rather than *minimum* thickness, based on revised UN Recommendations, but retained minimum thickness standards for reuse. In Footnote 1, RSPA revised the 0.8 mm thickness to read "0.80 mm" for clarity. On January 27, 1995, ACR submitted a petition for reconsideration of HM-215A final rule within the prescribed 30-day period following the December 29, 1994 final rule. ACR requested an immediate "spot" amendment to Footnote 1. In its petition, ACR stated ". . . we ask you to issue an immediate correction to the footnote to

§ 173.28(b)(4) to make it read properly as it did in the December 21, 1990 Federal Register: 'Metal drums or jerricans constructed with a minimum thickness of 0.82 mm (0.032 inch) body and 1.09 mm (0.043 inch) heads are authorized.'" However, on February 24, 1995, after the petition for reconsideration period for HM-215A had ended, ACR submitted another letter "intended to provide *clarifying detail*" regarding Footnote 1. This letter indicated the footnote should be corrected to express minimum thicknesses for nominal markings in accordance with the ISO standard and should reference a minimum thickness of 0.82 mm body and 1.11 mm heads, which would bear a nominal marking "1.2/0.9/1.2." Less than a month after receipt of the petition requesting an immediate correction to authorize 1.09 mm minimum thickness for heads, ACR again requested a minimum thickness of 1.11 mm heads. A revised final rule under Docket HM-215A issued on May 18, 1995, addressed the ACR petition of January 27, 1995, by restoring the minimum thicknesses of 0.82 mm body and 1.09 heads, as adopted in the HM-181 final rule issued December 21, 1990. ACR responded by submitting a petition for rulemaking on August 10, 1995, claiming that RSPA had not adjusted Footnote 1 to correlate with ISO Standard 3574:1986, and petitioning RSPA to revise Footnote 1 to prescribe a metal drum minimum thickness of 0.82 mm body and 1.11 mm heads. ACR indicated that this would result in a "modest increase in the minimum head thickness of 0.02 mm, . . . most of the metal thicknesses now set forth in the table . . . also involved modest increases." In a subsequent action, ACR sent a letter to the RSPA Administrator, claiming that "DOT has been unable to successfully marry the international standards used and cited by the UN with DOT's minimum thickness requirements, with respect to '20/18' style drums." ACR also cited "changes made by RSPA in HM-215A" (one based on the ACR petition for a spot amendment to restore the footnote to 0.82 body and 1.09 heads) and noted the agency's failure to adjust the § 173.28 footnote to correspond with ISO. Based on this discussion, RSPA is proposing one final adjustment to Footnote 1 to specify a minimum thickness of 0.82 mm body and 1.11 mm head to correspond with ISO and respond to ACR's latest petition.

Paragraph (b)(7)(iv)(C) would be revised to clarify that there are established conditions which must be met before an approval is granted by the

Associate Administrator for Hazardous Materials Safety to allow relief from leakproofness testing for a packaging constructed of a material or thickness not otherwise authorized in the exception.

Paragraph (c)(2) prescribes reconditioning requirements for non-bulk packagings other than metal drums. Based on the merits of a request for clarification from the National Association of Chemical Distributors, RSPA is proposing that paragraph (c)(2) be revised to clarify that repair or replacement of a bung or a removable gasket in a plastic closed head (UN 1H1) drum is not considered reconditioning and does not subject the drum to reconditioning marking requirements or to leakproofness testing requirements if the drum was otherwise excepted from leakproofness testing.

Section 173.32. A final rule issued July 26, 1994, under Docket HM-181E adopted provisions for intermediate bulk containers and imposed a termination date of September 30, 1996 for new construction of DOT Specification 56 and 57 portable tanks. As part of that final rule, requirements in Part 178 for design, construction and testing of these tanks were removed. Although new construction of these tanks will no longer be authorized after September 30, 1996, existing DOT 57 tanks are authorized for use as long as they are successfully retested in accordance with retest provisions of § 173.32(e). Because the pressure testing requirements for DOT 57 tanks refer to a section in Part 178 which has been removed, RSPA is proposing to reinstate this requirement in paragraph (e)(2)(i). In addition, based on the merits of a petition [P-1092], RSPA is proposing to amend paragraph (d) to allow plastic discharge valves for certain stainless steel DOT 57 tanks constructed before October 1, 1996. Allowing a plastic discharge valve on these tanks will eliminate the need for an existing exemption, DOT-E-10916, and will permit continued use of thousands of portable tanks with a proven safety record.

Section 173.115. The Association of American Railroads (AAR), in a petition for rulemaking [P-1152], requested a revision to paragraph (b)(1) to correct the conversion of 280 kPa to read "280 kPa (40.6 psia)." RSPA agrees and paragraph (b)(1) is revised to reflect the correct conversion in parentheses for informational purposes.

Section 173.120 and Appendix H to Part 173. Based on the merit of requests from industry, RSPA is proposing to add provisions to test combustible liquids with a flash point above 60.5°C (141°F)

and below 93°C (200°F) for the ability to sustain combustion. Appendix H was added in the Docket HM-215A final rule to incorporate additional testing procedures for a material meeting the definition of Class 3 (flammable liquid). If this material was unable to sustain combustion when heated under test conditions and exposed to an external source of flame, it was excepted from the regulations as a Class 3 material. This notice proposes to expand the exception to apply to materials which meet the definition in paragraph (b) for combustible liquids. Appendix H to Part 173 would be revised to provide additional test temperatures in paragraph 5.(h) for combustible liquids that would closely parallel the approach for flammable liquids.

Sections 173.121, 173.125, and 173.127. Currently, procedures for assigning a packing group to a hazardous material in these sections convey to the reader that the § 172.101 Table indicates that the packing group is to be determined on the basis of the grouping criteria for a given hazard class. The AAR and HMA, in petitions for rulemaking [P-1152 and P-1169, respectively], requested that RSPA amend the regulatory language in §§ 173.121(a), 173.125(a), and 173.127(b) to mirror the language in §§ 173.133 and 173.137 for consistency and clarity. In this notice, RSPA proposes to clarify the methods for determining packing groups described in §§ 173.121(a), 173.125(a), and 173.127(b) for Class 3, Class 4, and Class 5 materials, respectively.

Section 173.133. The introductory text of paragraph (a) sets forth procedures for selecting packing group or hazard zone when the § 172.101 Table provides more than one packing group and hazard zone for a hazardous material. The AAR requested, in a petition for rulemaking [P-1152], that RSPA revise the wording "provides more than one packing group and hazard zone" to read "provides more than one packing group and/or hazard zone" because hazard zones do not apply to Packing Group II and III Division 6.1 materials. RSPA agrees and proposes to revise the wording "more than one packing group and hazard zone" to read "more than one packing group or hazard zone".

Section 173.134. Paragraph (a)(4) limits the definition of regulated medical waste to exclude discarded cultures and stocks of infectious substances. In this proposed rule, paragraph (b) would be revised by adding a new paragraph (b)(4) authorizing discarded cultures and stocks in Biosafety Levels 1, 2 and 3, as

defined in HHS Publication No. (CDC) 93-8395, *Biosafety in Microbiological and Biomedical Laboratories*, 3rd Edition, May 1993, Section II to be described and packaged as regulated medical waste rather than infectious substances. Packagings would be required to conform to Packing Group II performance requirements. Transport of these materials would be limited to private or contract motor freight carriers in dedicated service to the transportation of medical waste.

Section 173.151. A new paragraph (d) would be added to incorporate limited quantity provisions for Division 4.3 (dangerous when wet) solid materials in Packing Groups II and III. This proposal would align the HMR with limited quantity exceptions contained in the UN Recommendations.

Section 173.156. In the December 21, 1990 final rule under Docket HM-181, RSPA imposed a gross weight limit of 30 kg (66 pounds) per package on materials shipped under limited quantity and consumer commodity provisions to minimize their aggregate risk. RSPA also provided an exception in § 173.156 from this 30 kg weight limitation for packages of consumer commodities unitized in cages, carts, boxes, or similar overpacks when shipped by private or contract carrier or common carrier in exclusive use between a manufacturer, a distribution center, and a retail outlet. RSPA received a petition for rulemaking [P-1213] from the Conference on the Safe Transportation of Hazardous Articles (COSTHA) requesting removal of the 30 kg weight restriction for ORM-D materials packaged in "display packs." COSTHA described these display packs as containing inner receptacles of ORM-D materials which are secured in corrugated fiberboard trays and then stacked and placed within a strong outer container. Each outer container is strapped to a wooden pallet with steel or polyester strapping to form an integral part of the packaging. COSTHA claimed the completed package meets the general packaging requirements of Subpart B of Part 173 and is marked in accordance with § 172.316. As part of its petition, COSTHA cited an exemplary safety record in transporting these display packs under pre-HM-181 limited quantity provisions, which do not impose any weight limitations, but will no longer be authorized after October 1, 1996.

RSPA believes that ORM-D materials shipped in the above-described display packs achieve an adequate level of safety in transportation. Therefore, RSPA proposes to amend § 173.156 by revising paragraph (b) to authorize

ORM-D materials in palletized display packs exceeding the 30 kg (66 pound) gross weight limitation to be offered for transportation, or transported, by highway or rail between a manufacturer, a distribution center, and a retail outlet.

In addition, RSPA is proposing to provide an exception for transportation of ORM-D materials to disposal facilities. A petitioner [P-1308] requested that RSPA amend paragraph (b) to allow discarded consumer commodities to be transported from manufacturing, distribution or retail facilities to a disposal facility when packaged in large boxes or overpacks exceeding 30 kg (66 pounds). The petitioner claimed that the cost of meeting the 30 kg weight limit or packaging these consumer commodities in UN-certified performance packagings far exceeds any safety benefit achieved. The petitioner also noted that allowing distribution centers and retail outlets to ship discarded consumer commodities to local disposal facilities rather than back to the manufacturer could enhance transportation safety by shortening the shipping distance. RSPA agrees and is proposing to amend paragraph (b) to authorize discarded consumer commodities to be shipped to disposal facilities when packaged in large boxes or similar overpacks exceeding 30 kg (66 pounds).

Section 173.158. This section would be revised to authorize additional packagings for nitric acid. RSPA received one petition [P-1280] which pointed out that packaging authorizations for nitric acid in 90 percent or greater concentrations, when offered for transportation or transported by rail, highway or water, are more stringent than packaging authorizations for transportation by cargo aircraft only or packaging authorizations for red fuming nitric acid, a toxic by inhalation hazard material. RSPA agrees with this petitioner, and paragraph (d) would be revised to authorize additional packagings for nitric acid in concentrations of 90 percent or greater when offered for transportation or transported by rail, highway or water. A combination packaging consisting of a 1A2, 1B2, 1D, 1G, 1H2, 3H2 or 4G outer packaging with inner glass packagings of 2.5 L (0.66 gallons) or less capacity cushioned with a non-reactive, absorbent material and packed within a leak-tight packaging of metal or plastic would be authorized.

In addition, RSPA is proposing to revise paragraph (f)(1) based on the merits of a petition [P-1289] requesting that 6HH1 and 6HA1 composite packagings with PFA Teflon inner receptacles be authorized for nitric acid

concentrations of 70 percent or less. These composite packagings are authorized under the provisions of three exemptions and have demonstrated an equivalent level of safety.

Section 173.183. Currently under the HMR, § 173.183 authorizes nitrocellulose base film to be packaged in combination packagings consisting of inner packagings made of metal, strong cardboard, or fiberboard, that are packed in certain UN standard packagings. Plastic inner packagings are not authorized except under the terms of an exemption. A petitioner [P-1130] requested that RSPA amend § 173.183 to authorize the use of polypropylene inner packagings because polypropylene is flame-retardant, produces minimum toxic gases when burned, and will not deteriorate film. Because the petitioner has been using the packaging under the terms of an exemption and has encountered no adverse experience in transportation, RSPA proposes to amend § 173.183 by adding a packaging authorization to allow the use of polypropylene inner packagings for nitrocellulose base film.

Section 173.225. Paragraph (a) would be revised to specify that inner plastic packagings of a combination packaging used for transporting organic peroxides must be constructed of new resin. This proposed change is based on a petition for rulemaking [P-1281] submitted by the Society of the Plastics Industry for the Organic Peroxide Producers Safety Division, which represents major U.S. organic peroxide manufacturers. RSPA agrees with the petitioner's claim that most regulated organic peroxides are too sensitive to contamination to be stored in packages manufactured from "resin of unknown history."

Section 173.306. This section specifies limited quantity provisions for compressed gases. In its petition [P-1169], HMAAC requested that RSPA amend § 173.306 by removing paragraph (i)(1) because it is ineffective and does not provide accurate results. In addition, RSPA is proposing to revise the introductory text of paragraph (i) to clarify that flammability of aerosols is based on obtaining a positive test result from any of the three methods contained in this paragraph. This approach is consistent with the ICAO Technical Instructions.

Section 173.314. Prior to issuance of a final rule under Docket HM-181, the HMR contained summer and winter fill tables that authorized an increase in filling densities for liquids and liquefied gases during the winter months. In a supplemental notice of proposed rulemaking under Docket HM-181C (55 FR 21342), RSPA noted that this filling

limit provision was ambiguous and did not take into account lading temperatures that might be encountered in transit, such as temperature extremes in the Northern and Southern regions of the United States. Without regard for these broad ranges of temperature, the HMR authorized a higher filling limit for certain Class 2 (compressed gas) materials in the same tank car during the months of November through March (winter) than during the months of April through October (summer). Also, for certain products RSPA discovered that the filling limit was higher for noninsulated tanks than for insulated tanks during the winter season. Based on these inconsistencies and comments received to the Docket HM-181C NPRM, RSPA removed the winter filling limit criteria for tank cars in the Docket HM-181 final rule published December 21, 1990. When transitional provisions for the maintenance and use of current packagings end on October 1, 1996, the regulations will require for hazardous materials (other than those meeting the criteria for materials poisonous by inhalation) a 1.0% outage (or 99.0% filling limit) at 41° C (105° F) for insulated tanks and 46° C (115° F) for noninsulated tanks, throughout the year. Unless otherwise specified in the HMR, materials poisonous by inhalation require a 5.0% outage (or 95% filling limit) at 41° C (105° F) for insulated tanks and 46° C (115° F) for noninsulated tanks.

In a letter dated May 24, 1996, the American Petroleum Institute (API) petitioned RSPA to amend the filling limit regulations to account for lower air temperatures during the winter months. The basis for API's letter was its further review of safety and economic impacts of the final rule on its member companies. As stated in API's letter, "the industry calculates that the amount of product loaded will be reduced by 3.9 percent from the amount of product now loaded using the Winter Fill tables. In the case of uninsulated tank cars, there is a 4.8 percent reduction. * * *"

As part of its petition, API referenced a Phillips Petroleum report, Maximum Calculated Liquid Temperatures for Tank Cars in Anhydrous Ammonia and LP Gas Service for 14 Summer and 23 Winter Locations in the United States for the Years 1933 through 1957, that empirically calculated the maximum liquid temperature in a tank under extreme temperature conditions. This report concludes that for liquefied petroleum gas, the maximum temperature of the liquid in transit would reach 83° F in an insulated tank car and 100.6° F for a noninsulated tank

car in the winter months. The temperatures indicated in the Phillips Petroleum report are for the years 1933 through 1957.

The Phillips Petroleum report confirms RSPA's earlier findings that the filling limit requirement did not take into account the maximum lading temperatures that might be encountered in transit; i.e., the temperature maximum for a noninsulated tank car loaded in the winter season was recorded at 100.6° F, but the pre-HM-181 regulations assumed a temperature maximum of 32° C (90° F). The Phillips Petroleum report also indicates a number of data points within the range of 90° F to 100° F during the winter season. This data confirms that the pre-HM-181 filling limit for noninsulated tanks loaded in the winter months did not allow sufficient outage for gas expansion.

In its letter, API petitioned for a reference temperature of 80° F for insulated tanks, 87° F for certain thermally protected and jacketed tanks, and 90° F for noninsulated tanks. If adopted, API stated that its proposed reference temperatures for the winter months would align the filling limit requirement for tank cars with the regulations in effect prior to Docket HM-181. The filling limit reference temperature used by API for thermally protected and jacketed tanks is based on RSPA's provisions adopted recently under Docket HM-216. In the Docket HM-216 final rule, RSPA authorized a new reference temperature for certain tank cars having a thermal protection material (see §§ 173.24b and 173.314(c) Note 2) that reduces heat transfer into the tank. (See 61 FR 28665)

The following Table I compares API's proposal and the post-HM-181 fill limit requirement. The filling limit reference temperatures of 46° C (115° F) and 41° C (105° F) in § 173.24b are adjusted to 15.5° C (60° F) for liquefied petroleum gas to correspond to pre-HM-181 regulations and to aid in the comparison between the old and the new requirements.

TABLE I.—API AND PRE- AND POST-HM-181 REQUIREMENTS
[Filling Limits for LPG]

Type of tank	Winter (adjusted to 60° F)		
	Pre HM-181	Post HM-181	API Proposal
Insulated	0.9495	0.9108	0.9489
Thermally-protected, jacketed (See HM-216)	0.9440

TABLE I.—API AND PRE- AND POST-HM-181 REQUIREMENTS—Continued
[Filling Limits for LPG]

Type of tank	Winter (adjusted to 60° F)		
	Pre HM-181	Post HM-181	API Proposal
Noninsulated	0.9386	0.8915	0.9380

Note: The American Society for Testing Materials' Table-24 provides an easy correction factor for the conversion of a liquid volume to 15.5° C (60° F). For liquefied petroleum gas at 46° C (115° F), the correction factor is 0.904. Multiplying the post-HM-181 filling limit of 99.0% (0.990) by the ASTM correction factor of 0.904 yields an authorized filling limit of 89.5% at 15.5° C (60° F), a close approximation to the pre-HM-181 requirement.

Although the Phillips Petroleum data supports RSPA's earlier findings, the data does suggest that a lower reference temperature than the post-HM-181 regulatory minimum may be acceptable during the winter months. Based on a review of API's application and the Phillips Petroleum report, RSPA is proposing an amendment to the HMR to recognize a winter filling reference temperature. However, to account for the maximum liquid temperature extremes expected in transit, RSPA is proposing winter reference temperatures of 29° C (85° F), 32° C (90° F), and 38° C (100° F), compared to API's request of 84° F, 87° F, and 90° F, for insulated, thermally-protected and jacketed, and noninsulated tanks respectively.

RSPA is soliciting comments on whether the temperature extremes shown in the Phillips Petroleum report have changed since 1957 and, if so, whether the proposed changes in this NPRM would have an adverse impact on transportation safety. Commenters also are encouraged to supply transportation data to support or argue against the proposed reference temperatures in this NPRM. Such data may be used to increase or decrease the proposed reference temperatures.

Table II shows RSPA's proposed filling limits, adjusted to 15.5° C (60° F). RSPA's proposal would authorize a filling limit less than API's suggestion, but greater than the HM-181 final rule for noninsulated tanks loaded in the winter. For insulated and thermally-protected and jacketed tanks, the proposed filling limits would authorize a filling limit greater than the HM-181 final rule. RSPA believes that the proposed filling limits will ensure safety in transit while providing economic relief from the requirements adopted in the HM-181 final rule.

TABLE II.—PROPOSED AMENDMENTS
[Filling Limits for LPG]

Type of tank	Winter adjusted to 60° F		
	Pre-HM-181	Post-HM-181	RSPA proposal
Insulated	0.9495	0.9108	0.9484
Thermally-protected, jacketed (See HM-216)	0.9306
Noninsulated	0.9386	0.8915	0.9010

In this NPRM, RSPA is proposing to amend the reference temperatures used to calculate the required outage for tank car tanks that are loaded during the winter (November through March). No changes are proposed to the reference temperatures used for other bulk packagings; i.e., cargo tanks and portable tanks. This decision is based on the Phillips Petroleum report, which considered only tank car tanks. No similar information has been submitted on temperature extremes for insulated and noninsulated cargo tanks or portable tanks. Commenters seeking corresponding changes for other bulk packagings and materials should provide RSPA with information and an analysis similar to the Phillips Petroleum report.

Part 178

Section 178.245. RSPA is proposing to make several editorial changes for clarity and one significant change to allow DOT Specification 51 portable tanks to have openings at locations other than the top or one end of the tank under certain circumstances.

Section 178.245-1. This section would be reorganized for clarity and revised to allow DOT Specification 51 portable tanks to have openings at locations other than the top or one end of the tank under certain circumstances. When originally developed, the DOT Specification 51 portable tank was principally a skid mounted liquefied petroleum gas container. With the advent and acceptance of containerization as a means of shipping bulk quantities of compressed gases, RSPA has issued numerous exemptions which authorize the transportation in commerce of portable tanks which fully conform to the requirements of DOT Specification 51 except for the location of filling and discharge openings. These tanks generally must be enclosed in an ISO frame and fitted with bottom or side filling and discharge openings. Based upon the successful operating experience of these tanks under exemption, RSPA believes that the HMR

should be revised to authorize portable tanks with this type of loading and discharge configuration. Additionally, one petitioner [P-1108] requested that paragraph (b) be amended to permit openings on the sides or bottom of these portable tanks. The petitioner stated that authorizing side or bottom mounted valves and openings on DOT Specification 51 portable tanks is consistent with the IMDG Code and would improve the competitiveness of U.S. manufacturers of these tanks in the European market. The petitioner asserted that the side or bottom mounted valves would be protected to a degree equal or greater than top mounted valves. By adopting this proposed change, numerous exemptions will no longer be required.

Section 178.245-4. RSPA is proposing to add a new paragraph (e) to require that a DOT 51 portable tank in an ISO framework for containerized transportation must meet the requirements specified in 49 CFR Parts 450-453.

Section 178.245-6. The first sentence of paragraph (a) would be revised to require the nameplate to be in close proximity to the ASME plate.

Section 178.270-12. RSPA is proposing to amend paragraph (a) to assure that manufacturers, owners and approval agencies are aware of the requirements for the number and type of closures required for filling and discharge connections located below the normal liquid level of DOT Specification Intermodal (IM) portable tanks. In a review of the regulations concerning IM portable tanks, RSPA discovered a discrepancy in the regulations. While § 173.32c(g) clearly informs shippers of the requirements for the number and type of closures required for filling and discharge connections located below the normal liquid level of the tank, there is no corresponding requirement in the design requirements for the manufacture of IM portable tanks.

Section 178.601. Paragraph (g)(8) would be added, based on an approval issued to the Steel Shipping Container Institute, to list changes in one or more design elements which would constitute a different drum design type. If one or more of these changes is made to a carbon steel drum having a capacity greater than 50 liters, the drum manufacturer must perform design qualification testing and periodic retesting in accordance with Subpart M of Part 178.

Section 178.705. Paragraph (c)(2) of this section specifies pressure relief devices for metal IBCs. RSPA received a petition [P-1271] from a manufacturer

of fusible vents stating that since fusible vents do not open at room temperature, start-to-discharge pressure requirements in § 178.702(c)(2) appear to prohibit fusible venting. In response to this petition, RSPA is proposing to add a new sentence in paragraph (c)(2)(ii) to clarify that the specified start-to-discharge pressure does not apply to fusible links unless these links are the sole source of pressure relief for the IBC. In addition, a correction would be made to the constant in the equivalence thickness formula for U.S. Standard Units in paragraph (c)(1)(iv)(B) to ensure that the resulting thickness is in inches.

III. Rulemaking Analyses and Notices

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

This proposed rule is not considered a significant regulatory action under section 3(f) of Executive Order 12866 and therefore, was not reviewed by the Office of Management and Budget. The rule is not considered a significant rule under the Regulatory Policies and Procedures of the Department of Transportation [44 FR 11034].

The economic impact of this proposed rule is expected to result in only minimal costs to certain persons subject to the HMR and may result in modest cost savings to a small number of persons subject to the HMR and to the agency. Because of the minimal economic impact of this rule, preparation of a regulatory impact analysis or a regulatory evaluation is not warranted. This certification may be revised as a result of public comment.

B. Executive Order 12612

This proposed rule has been analyzed in accordance with the principles and criteria contained in Executive Order 12612 ("Federalism"). Federal law expressly preempts State, local, and Indian tribe requirements applicable to the transportation of hazardous material that cover certain subjects and are not substantively the same as Federal requirements. 49 U.S.C. 5125(b)(1). These subjects are:

- (1) The designation, description, and classification of hazardous material;
- (2) The packing, repacking, handling, labeling, marking, and placarding of hazardous material;
- (3) The preparation, execution, and use of shipping documents pertaining to hazardous material, and requirements respecting the number, content, and placement of such documents;
- (4) The written notification, recording, and reporting of the unintentional release in transportation of hazardous material; or

(5) The design, manufacturing, fabrication, marking, maintenance, reconditioning, repairing, or testing of a package or container which is represented, marked, certified, or sold as qualified for use in the transportation of hazardous material.

If adopted as final, this rule would preempt 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 law (49 U.S.C. 5125(b)(2)) provides that if DOT issues a regulation concerning any of the covered subjects, after November 16, 1990, DOT must determine and publish in the Federal Register the effective date of Federal preemption. The effective date may not be earlier than the 90th day following the date of issuance of the final rule and not later than two years after the date of issuance. RSPA requests comments on what the effective date of Federal preemption should be for the requirements in this proposed rule that concern covered subjects.

C. Regulatory Flexibility Act

This proposed rule would respond to petitions for rulemaking. It is intended to provide clarification of the regulations and relax certain requirements. Therefore, I certify that this proposal will not, if promulgated, have a significant economic impact on a substantial number of small entities. This certification is subject to modification as a result of a review of comments received in response to this proposal.

D. Paperwork Reduction Act

There are no new information collection requirements in this proposed rule.

E. Regulation Identifier Number (RIN)

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

List of Subjects

49 CFR Part 171

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

§ 172.101—HAZARDOUS MATERIALS TABLE—Continued

Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or division	Identification numbers	PG	Label codes	Special provisions	(8) Packaging authorizations (§ 173.* * *)			(9) Quantity limitations		(10) Vessel stowage requirements	
							Excep-tions	Nonbulk packag-ing	Bulk packag-ing	Passenger aircraft or railcar	Cargo air-craft only	Vessel stow-age	Other stowage provisions
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	* Hydrogen cyanide, solution in alcohol with not more than 45 percent hydrogen cyanide.	* 6.1	UN3294	* I	6.1, 3	* 2, B9, B14, B32, B74, T38, T43, T45.	None	* 227	244	* Forbidden	* Forbidden	* D	* 40
	* Methanesulfonyl chloride	* 6.1	UN3246	* I	6.1, 8	* 2, B9, B14, B32, B74, T38, T43, T45.	None	* 227	244 ...	* Forbidden	* Forbidden	* D	* 40
+	* Methyl vinyl ketone	* 3	UN1251	* II	3, 6.1	* 1, B9, B14, B30, B72, T38, T43, T44.	None	* 226	244 ...	* Forbidden	* Forbidden	* D	* 20, 40, 95
	*	*	*	*	*	*	*	*	*	*	*	*	*

§ 172.101 [Amended]

8. In addition, in § 172.101, in the Hazardous Materials Table, the following changes would be made:

a. For the entry "Benzyl chloride", in column (7), Special Provision "N43" would be revised to read "N42".

b-c. For the entry "Chlorosilanes, corrosive, flammable, n.o.s.", in Column (7), Special Provisions "T18," "T26" would be added following "B100".

d. For the entry "Chlorosilanes, corrosive, n.o.s.", in Column (7), Special Provisions "T8," "T26" would be added following "B2".

e. For the entry, "Chlorosilanes, water-reactive, flammable, corrosive, n.o.s.", in Column (7), Special Provisions "T24," "T26" would be added following "A2".

f. For the entries "Organic peroxide type F, liquid, temperature controlled" and "Organic peroxide type F, solid, temperature controlled", in Column (8A), the reference "225" would be removed each place it appears and "None" added in each place, and in Column (8C), the reference "None" would be removed each place it appears and "225" added in each place.

g. For the entry "Organic peroxide type F, solid", in Column (8C), the reference "None" would be removed and "225" would be added in its place.

h. For the entry "Phosphorus pentafluoride", in Column (7), the wording "1" would be removed and "2, B9, B14" would be added in its place; in Column (8B) "302" would be revised to read "302, 304"; and in Column (8C), "None" would be revised to read "314, 315".

i. For the entry "Tungsten hexafluoride", in Column (7), special provision "3" would be revised to read "2".

j. For the entries "Metal carbonyls, n.o.s., UN3281, PG I"; "Nitriles, toxic, flammable, n.o.s., UN3275, PG I"; "Nitriles, toxic, n.o.s., UN3276, PG I"; "Organoarsenic compound, n.o.s., UN3280, PG I"; "Organophosphorus compound, toxic, flammable, n.o.s., UN3279, PG I"; and "Organophosphorus compound, toxic, n.o.s., UN3278, PG I", in Column (7), Special Provision "5" would be added.

k. For each of the following entries, in Column (8A), the word "None" would be removed and "151" added in its place:

Alkali metal amides
Alkaline earth metal alloys, n.o.s.
Aluminum carbide
Aluminum ferrosilicon powder (both entries)
Aluminum powder, uncoated (both entries)

Aluminum processing by-products (both entries)

Aluminum silicon powder, uncoated

Barium

Calcium

Calcium carbide, in Packing Group II

Calcium cyanamide *with more than 0.1 percent of calcium carbide*

Calcium manganese silicon

Calcium silicide (both entries)

Cerium, *turnings or gritty powder*

Ferrosilicon *with 30 percent or more but less than 90 percent silicon*

Lithium ferrosilicon

Lithium hydride, fused solid

Lithium silicon

Magnesium granules, coated *particle size not less than 149 microns*

Magnesium, powder or Magnesium alloys, powder, in Packing Groups II and III

Magnesium silicide

Maneb stabilized or Maneb

preparations, stabilized *against self-heating*

Metal hydrides, water-reactive, n.o.s., in Packing Group II

Metallic substance, water-reactive,

n.o.s., in Packing Groups II and III

Phosphorous pentasulfide, *free from yellow or white phosphorus*

Sodium aluminum hydride

Water-reactive solid, n.o.s., in Packing Groups II and III

Zinc ashes

9. In § 172.102, in paragraph (c)(1) Special Provision 70 would be added, in paragraph (c)(3) Special Provision B59 would be revised, and in paragraph (c)(5), Special Provision N42 would be added, to read as follows:

§ 172.102 Special provisions.

* * * * *

(c) * * *

(1) * * *

* * * * *

70 Black powder that has been classed in accordance with the requirements of § 173.56 of this subchapter may be reclassified and offered for domestic transportation as a Division 4.1 material if it is offered for transportation and transported in accordance with the limitations and packaging requirements of § 173.170 of this subchapter.

* * * * *

(3) * * *

* * * * *

B59 Water-tight, sift-proof, closed-top, metal-covered hopper cars are also authorized provided that the lading is covered with a nitrogen blanket.

* * * * *

(5) * * *

* * * * *

N42 1A1 drums made of carbon steel with thickness of body and heads of not less than 0.050 inches and with a corrosion-resistant phenolic lining are authorized for stabilized benzyl chloride if tested and certified to the Packing Group I performance level at a specific gravity of not less than 1.8.

* * * * *

10. In § 172.302, paragraph (b) would be revised to read as follows:

§ 172.302 General marking requirements for bulk packagings.

* * * * *

(b) *Size of markings.* Except as otherwise provided, markings required by this subpart on bulk packagings must—

(1) Have a width of at least 6.0 mm (0.24 inch) and a height of at least 100 mm (3.9 inches) for rail cars;

(2) Have a width of at least 4.0 mm (0.16 inch) and a height of at least 25 mm (one inch) for portable tanks with capacities of less than 3,785 L (1,000 gallons) and intermediate bulk containers; and

(3) Have a width of at least 6.0 mm (0.24 inch) and a height of at least 50 mm (2.0 inches) for cargo tanks and other bulk packagings.

* * * * *

§ 172.504 [Amended]

11. In § 172.504, paragraph (f)(8) would be removed and reserved.

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

12. The authority citation for Part 173 would continue to read as follows:

Authority: 49 U.S.C. 5102–5127; 49 CFR 1.53.

13. In § 173.24a, the last sentence of paragraph (a)(3) and paragraph (b)(2) would be revised, to read as follows:

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

(a) * * *

(3) * * * Cushioning material must not be capable of reacting dangerously with the contents of the inner packagings or having its protective

properties significantly impaired in the event of leakage.

* * * * *

(b) * * *

(2) Except as otherwise provided in this section, a non-bulk packaging may not be filled with a hazardous material to a gross mass greater than the maximum gross mass marked on the packaging.

* * * * *

§ 173.24b [Amended]

14. In § 173.24b, in the first sentence of paragraph (b), the wording “stainless steel is steel” would be revised to read “the reference stainless steel is stainless steel”.

15–16. In § 173.28, paragraphs (b)(4) and (b)(7)(iv)(C) would be revised and a new sentence would be added in paragraph (c)(2) following the first sentence, to read as follows:

§ 173.28 Reuse, reconditioning and remanufacture of packagings.

* * * * *

(b) * * *

(4) Metal and plastic drums and jerricans used as single packagings or the outer packagings of composite packagings are authorized for reuse only when they are marked in a permanent manner (e.g., embossed) in millimeters with the nominal (for metal packagings) or minimum (for plastic packagings) thickness of the packaging material, as required by § 178.503(a)(9) of this subchapter, and—

(i) Except as provided in paragraph (b)(4)(ii) of this section, conform to the following minimum thickness criteria:

Maximum capacity not over	Minimum thickness of packaging material	
	Metal drum or jerrican	Plastic drum or jerrican
20 L	0.63 mm (0.025 inch)	1.1 mm (0.043 inch)
30 L	0.73 mm (0.029 inch)	1.1 mm (0.043 inch)
40 L	0.73 mm (0.029 inch)	1.8 mm (0.071 inch)
60 L	0.92 mm (0.036 inch)	1.8 mm (0.071 inch)
120 L	0.92 mm (0.036 inch)	2.2 mm (0.087 inch)
220 L	0.92 mm (0.036 inch) ¹	2.2 mm (0.087 inch)
450 L	1.77 mm (0.070 inch)	5.0 mm (0.197 inch)

¹ Metal drums or jerricans constructed with a minimum thickness of 0.82 mm body and 1.11 mm heads are authorized.

(ii) For stainless steel drums and jerricans, conform to a minimum wall thickness as determined by the following equivalence formula:

$$e_1 = \frac{21.4 \times e_0}{\sqrt[3]{Rm_1 \times A_1}}$$

$$e_1 = \frac{21.4 \times e_0}{\sqrt[3]{(Rm_1 \times A_1)/145}}$$

Where:

e_1 = required equivalent wall thickness of the metal to be used (in mm or, for U.S. Standard units, use inches).

e_0 = required minimum wall thickness for the reference steel (in mm or, for U.S. Standard units, use inches).

Rm_1 = guaranteed minimum tensile strength of the metal to be used (in

N/mm² or for U.S. Standard units, use pounds per square inch).

A_1 = guaranteed minimum elongation (as a percentage) of the metal to be used on fracture under tensile stress (see paragraph (c)(1) of this section).

* * * * *

(7) * * *

(iv) * * *

(C) another material or thickness when approved under the conditions established by the Associate

Administrator for Hazardous Materials Safety for reuse without retesting.

(c) * * *

(2) * * * For a UN 1H1 plastic drum, replacing a removable gasket or closure device with a replacement which provides equivalent performance does not constitute reconditioning. * * *

* * * * *

§ 173.28 [Amended]

17. In addition, in § 173.28, in the first sentence of paragraph (c)(2), the wording "or a UN 1H1 plastic drum" would be added immediately following the wording "other than a metal drum".

18. In § 173.32, in paragraph (d) a new sentence would be added at the end of the paragraph and in paragraph (e)(2)(i), the second sentence would be revised, to read as follows:

§ 173.32 Qualification, maintenance and use of portable tanks other than Specification IM portable tanks.

* * * * *

(d) * * * A stainless steel portable tank internally lined with polyethylene, which was constructed on or before October 1, 1996, and complies with all requirements of Specification 57 except that it is equipped with a polypropylene discharge ball valve and polypropylene secondary discharge opening closure, may be marked as a Specification 57 portable tank and used in accordance with the provisions of this section.

(e) * * *

(2) * * *

(i) * * * Each Specification 57 tank must be leak tested by a minimum sustained air pressure of at least three pounds per square inch gage applied to the entire tank. * * *

* * * * *

§ 173.115 [Amended]

19. In § 173.115, in paragraph (b)(1), the wording "(41 psia)" would be revised to read "(40.6 psia)".

20. In § 173.120, paragraph (b)(1) would be amended by adding two sentences at the end of the paragraph to read as follows:

§ 173.120 Class 3—Definitions.

* * * * *

(b) * * *

(1) * * * A combustible liquid which does not sustain combustion is not subject to the requirements of this subchapter as a combustible liquid. A procedure for determining if a material sustains combustion when heated under test conditions and exposed to an external source of flame is provided in Appendix H of this part.

* * * * *

§ 173.121 [Amended]

21. In § 173.121, in the second sentence of paragraph (a), the wording "or indicates that the packing group is to be determined on the basis of the grouping criteria for Class 3," would be removed.

22. In § 173.125, paragraph (a) would be revised to read as follows:

§ 173.125 Class 4—Assignment of packing group.

(a) The packing group of a Class 4 material is assigned in Column (5) of the § 172.101 Table. When the § 172.101 Table provides more than one packing group for a hazardous material, the packing group shall be determined on the basis of test results following test methods given in appendix E of this part and by applying the appropriate criteria given in this section.

* * * * *

23. In § 173.127, the section heading would be revised, paragraph (b)(1) would be removed, paragraphs (b)(2) and (b)(3) would be redesignated as paragraphs (b)(1) and (b)(2), and the paragraph (b) heading and newly designated paragraph (b)(1) introductory text would be revised to read as follows:

§ 173.127 Class 5, Division 5.1—Definition and assignment of packing group.

* * * * *

(b) *Assignment of packing group.* (1) The packing group of a Division 5.1 material shall be as assigned in Column (5) of the § 172.101 Table. When the § 172.101 Table provides more than one packing group for a hazardous material, the packing group shall be determined on the basis of test results following test methods given in appendix F of this part and by applying the following criteria:

* * * * *

§ 173.133 [Amended]

24. In § 173.133, in paragraph (a) introductory text, in the second sentence, the wording "more than one packing group and hazard zone" would be revised to read "more than one packing group or hazard zone".

25. In § 173.134, the introductory text of paragraph (b)(3)(ii) would be revised and a new paragraph (b)(4) would be added to read as follows:

§ 173.134 Class 6, Division 6.2—Definitions, exceptions and packing group assignments.

* * * * *

(b) * * *

(3) * * *

(ii) For other than a waste culture or stock of an infectious substance, the specific packaging requirements of

§ 173.197, if packaged in a rigid non-bulk packaging conforming to—

* * * * *

(4) A waste culture or stock of infectious substances may be offered for transportation and transported as a regulated medical waste when the culture or stock—

(i) Conforms to Biosafety Levels 1, 2 or 3, as defined in HHS Publication No. (CDC) 93-8395, *Biosafety in Microbiological and Biomedical Laboratories*, 3rd Edition, May 1993, Section II;

(ii) Is packaged in accordance with requirements specified in § 173.197; and

(iii) Is transported by a private or contract carrier using a vehicle dedicated to the transportation of medical waste.

* * * * *

26. In § 173.151, the section heading would be revised and a new paragraph (d) would be added to read as follows:

§ 173.151 Exceptions for Class 4.

* * * * *

(d) *Limited quantities of Division 4.3 (dangerous when wet) material.* Limited quantities of Division 4.3 (dangerous when wet) solids in Packing Groups II and III are excepted from labeling, unless offered for transportation or transported by aircraft, and the specification packaging requirements of this subchapter when packaged in combination packagings according to this paragraph. In addition, shipments of limited quantities are not subject to subpart F (Placarding) of part 172 of this subchapter. Each package must conform to the packaging requirements of subpart B of this part and may not exceed 30 kg (66 pounds) gross weight. The following combination packagings are authorized:

(1) For Division 4.3 solids in Packing Group II, inner packagings not over 0.5 kg (1.1 pound) net capacity each, packed in strong outer packagings; and

(2) For Division 4.3 solids in Packing Group III, inner packagings not over 1 kg (2.2 pounds) net capacity each, packed in strong outer packagings.

27. In § 173.156, paragraph (b) would be revised to read as follows:

§ 173.156 Exceptions for ORM materials.

* * * * *

(b) *ORM-D.* Packagings for ORM-D materials are specified according to hazard class in §§ 173.150 through 173.155 and in § 173.306. In addition to other exceptions specified for ORM-D materials in this part:

(1) Strong outer packagings as specified in this part, the marking requirements specified in § 172.316 of this subchapter, and the 30 kg (66

pound) gross weight limitation are not required for materials classed as ORM-D when unitized in cages, carts, boxes or similar overpacks and when offered for transportation, or transported, by rail or by a private or contract motor carrier or a common carrier vehicle under exclusive use for such service, to or from a manufacturer, a distribution center, or a retail outlet, or to a disposal facility.

(2) The 30 kg (66 pound) gross weight limitation does not apply to materials classed as ORM-D when offered for transportation, or transported, by highway or rail between a manufacturer, a distribution center, and a retail outlet provided—

(i) The combination packaging consists of inner containers conforming to the quantity limits for inner packagings specified in §§ 173.150(b), 173.152(b), 173.154(b), 173.155(b) and 173.306(a) and (b), as appropriate;

(ii) The inner containers are packed into corrugated fiberboard trays to prevent individual containers from moving freely inside the completed combination packaging;

(iii) The trays are placed in a fiberboard box which is banded and secured to a wooden pallet by metal, fabric, or plastic straps, to form a single palletized unit;

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

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

(vi) The package is properly marked in accordance with § 172.316 of this subchapter.

28. In § 173.158, paragraph (d) would be revised, and paragraph (f)(1) would be amended by adding a sentence at the end of the paragraph, to read as follows:

§ 173.158 Nitric acid.

* * * * *

(d) Nitric acid of 90 percent or greater concentration, when offered for transportation or transported by rail, highway, or water may be packaged as follows:

(1) In 4C1, 4C2, 4D or 4F wooden boxes with inner packagings consisting of glass bottles further individually overpacked in tightly closed metal packagings. Glass bottles must be of 2.5 L (0.66 gallon) or less capacity and cushioned with a non-reactive, absorbent material within the metal packagings.

(2) In combination packagings with 1A2, 1B2, 1D, 1G, 1H2, 3H2 or 4G outer packagings with inner glass packagings of 2.5 L (0.66 gallons) or less capacity

cushioned with a non-reactive, absorbent material and packed within a tightly closed intermediate packaging of metal or plastic.

* * * * *

(f) * * *

(1) * * * 6HH1 and 6HA1 composite packaging with plastic inner receptacles meeting the compatibility requirements § 173.24(e) (e.g., PFA Teflon) are authorized.

* * * * *

29. Section 173.170 would be added to read as follows:

§ 173.170 Black powder for small arms.

Black powder for small arms that has been classed in Division 1.1 may be reclassified as a Division 4.1 material, for domestic transportation by motor vehicle, rail freight, and cargo vessel only, subject to the following conditions:

(a) The powder must be examined and approved for Division 1.1 classification in accordance with § 173.56 and 173.58;

(b) The total quantity of black powder in one motor vehicle, rail car, or freight container may not exceed 45.4 kg (100 pounds) net mass, and no more than four freight containers may be on board one cargo vessel;

(c) The black powder must be packed in inner metal or heavy wall conductive plastic receptacles not over 450 g (15.9 ounces) net capacity each, with no more than 25 cans in one outer UN 4G fiberboard box. The inner packagings must be arranged and protected so as to prevent simultaneous ignition of the contents;

(d) Each completed package must be marked "BLACK POWDER FOR SMALL ARMS" and "UN 1325"; and

(e) Each package must bear the FLAMMABLE SOLID label.

§ 173.183 [Amended]

30. In § 173.183, in paragraphs (a) and (b), the wording ", polypropylene canister," would be added immediately following the wording "closed metal can" each place it appears.

31. In § 173.225, in paragraph (a), a new sentence would be added as the penultimate sentence to read as follows:

§ 173.225 Packaging requirements and other provisions for organic peroxides.

(a) * * * No used material, other than production residues or regrind from the same production process, may be used in plastic packagings. * * *

* * * * *

32. In § 173.306, paragraph (i)(1) would be removed, paragraphs (i)(2) through (i)(4) would be redesignated as paragraphs (i)(1) through (i)(3), respectively, and the introductory text

in paragraph (i) would be revised to read as follows:

§ 173.306 Limited quantities of compressed gases.

* * * * *

(i) An aerosol is flammable if a positive test result is obtained using any of the following test methods:

* * * * *

33. In § 173.314, as amended at 60 FR 49074, effective July 1, 1996, and further amended at 61 FR 28676, effective October 1, 1996, in the paragraph (c) table, Note 2 would be revised and Notes 9 and 10 would be added, to read as follows:

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

* * * * *

(c) * * *

Notes:

* * * * *

2. The liquefied gas must be loaded so that the outage is at least two percent of the total capacity of the tank at the reference temperature of 46°C (115°F) for a noninsulated tank; 43°C (110°F) for a tank having a thermal protection system incorporating a metal jacket that provides an overall thermal conductance at 15.5°C (60°F) of no more than 10.22 kilojoules per hour per square meter per degree Celsius (0.5 Btu per hour/per square foot/per degree F) temperature differential; and 41°C (105°F) for an insulated tank having an insulation system incorporating a metal jacket that provides an overall thermal conductance at 15.5°C (60°F) of no more than 1.5333 kilojoules per hour per square meter per degree Celsius (0.075 Btu per hour/per square foot/per degree F) temperature differential.

* * * * *

9. For a liquefied petroleum gas, the liquefied gas must be loaded so that the outage is at least one percent of the total capacity of the tank at the reference temperature of 46°C (115°F) for a noninsulated tank; 43°C (110°F) for a tank having a thermal protection system incorporating a metal jacket that provides an overall thermal conductance at 15.5°C (60°F) of no more than 10.22 kilojoules per hour per square meter per degree Celsius (0.5 Btu per hour/per square foot/per degree F) temperature differential; and 41°C (105°F) for an insulated tank having an insulation system incorporating a metal jacket that provides an overall thermal conductance at 15.5°C (60°F) of no more than 1.5333 kilojoules per hour per square meter per degree Celsius (0.075 Btu per hour/per square foot/per degree F) temperature differential.

10. For liquefied petroleum gas and anhydrous ammonia, during the months of November through March (winter), the following reference temperatures may be used: 38°C (100°F) for a noninsulated tank; 32°C (90°F) for a tank having a thermal protection system incorporating a metal jacket that provides an overall thermal conductance at 15.5°C (60°F) of no more than 10.22 kilojoules per hour per square meter

per degree Celsius (0.5 Btu per hour/per square foot/per degree F) temperature differential; and 29°C (85°F) for an insulated tank having an insulation system incorporating a metal jacket and insulation that provides an overall thermal conductance at 15.5°C (60°F) of no more than 1.5333 kilojoules per hour per square meter per degree Celsius (0.075 Btu per hour/per square foot/per degree F) temperature differential. The winter reference temperatures may only be used for a tank car shipped directly to a consumer for unloading and not stored in transit. The offeror of the tank must inform each customer that the tank car was filled based on winter reference temperatures and must be unloaded as soon as possible after March in order to retain the specified outage and to prevent a release of hazardous material which might occur due to the tank car becoming liquid full at higher temperatures.

* * * * *

§ 173.314 [Amended]

34. In addition, in § 173.314, in the paragraph (c) table, as amended at 60 FR 49074, effective July 1, 1996, and further amended at 61 FR 28676, effective October 1, 1996, the following changes would be made:

a. For the entry "Ammonia, anhydrous, or ammonia solutions > 50 percent ammonia", in Column 2, the wording "Note 2" would be removed and "Notes 2, 10" added in its place.

b. For the entry "Division 2.1 materials not specifically provided in this table" in Column 2, the wording "Note 3" would be removed and the wording "Notes 3, 9, 10" added in its place.

Appendix H to Part 173 [Amended]

35. In Appendix H to Part 173, the second sentence of paragraph 5.(b) would be revised and in paragraph 5.(h), a sentence would be added at the end of the paragraph to read as follows:

Appendix H to Part 173—Method of Testing for Sustained Combustibility

* * * * *

5. * * *

(b) * * * For the appropriate test temperature, see paragraph 5.(h) of this appendix. * * *

* * * * *

(h) * * * In the case of a material which has a flash point above 60.5°C (141°F) and below 93°C (200°F), if sustained combustion interpreted in accordance with paragraph 6. of this appendix is not found at a test temperature of 5°C (9°F) above its flash point, repeat the complete procedure with new test portions, but at a test temperature of 20°C (36°F) above its flash point.

* * * * *

PART 178—SPECIFICATIONS FOR PACKAGINGS

36. The authority citation for part 178 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

37. Section 178.245–1 would be revised to read as follows:

§ 178.245–1 Requirements for design and construction.

(a) Tanks must be seamless or welded steel construction or combination of both and have a water capacity in excess of 1,000 pounds. Tanks must be designed, constructed, certified and stamped in accordance with the ASME Code.

(b) Tanks must be postweld heat treated and radiographed as prescribed in the ASME Code except that each tank constructed in accordance with part UHT of the ASME Code must be postweld heat treated. Where postweld heat treatment is required, the tank must be treated as a unit after completion of all the welds in and/or to the shell and heads. The method must be as prescribed in the ASME Code. Welded attachments to pads may be made after postweld heat treatment is made. A tank used for anhydrous ammonia must be postweld heat treated. The postweld heat treatment must be as prescribed in the ASME Code, but in no event at less than 1050°F tank metal temperature. Additionally, tanks constructed in accordance with part UHT of the ASME Code must conform to the following requirements:

(i) Welding procedure and welder performance tests must be made annually in accordance with section IX of the ASME Code. In addition to the essential variables named therein the following must be considered to be essential variables: Number of passes, thickness of plate, heat input per pass, and manufacturer's identification of rod and flux. The number of passes, thickness of plate and heat input per pass may not vary more than 25 percent from the procedure qualification. Records of the qualification must be retained for at least 5 years by the tank manufacturer and made available to duly identified representatives of the Department of Transportation or the owner of the tank.

(2) Impact tests must be made on a lot basis. A lot is defined as 100 tons or less of the same heat and having a thickness variation no greater than plus or minus 25 percent. The minimum impact required for full-sized specimens shall be 20 foot-pounds (or 10 foot-pounds for half-sized specimens) at 0°F Charpy V–Notch in both the longitudinal and

transverse direction. If the lot test does not pass this requirement, individual plates may be accepted if they individually meet this impact requirement.

(c) Except as provided in paragraph (d) of this section, all openings in the tank shall be grouped in one location, either at the top of the tank or at one end of the tank.

(d) The following openings may be installed at locations other than on the top or end of the tank:

(1) The openings for liquid level gauging devices, or for safety devices, may be installed separately at the other location or in the side of the shell;

(2) One plugged opening of 2-inch National Pipe Thread or less provided for maintenance purposes may be located elsewhere;

(3) An opening of 3-inch National Pipe Size or less may be provided at another location, when necessary, to facilitate installation of condensing coils; or

(4) Filling and discharge connections may be installed below the normal liquid level of the tank if the tank design conforms to the following requirements:

(i) The tank must be permanently mounted in a full framework for containerized transport. For each tank design, a prototype tank, must fulfill the requirements of parts 450 through 453 of this title for compliance with the requirements of Annex II of the International Convention for Safe Containers.

(ii) Each filling and discharge connection must be equipped with an internal self-closing stop-valve capable of closing within 30 seconds of actuation. Each internal self-closing stop-valve must be protected by a shear section or sacrificial device located outboard of the valve. The shear section or sacrificial device must break at no more than 70 percent of the load that would cause failure of the internal self-closing stop-valve.

(iii) Each internal self-closing stop-valve must be provided with remote means of automatic closure, both thermal and mechanical. The thermal means of automatic closure must actuate at a temperature of not over 250°F.

(e) Each uninsulated tank used for the transportation of compressed gas, as defined in § 173.300 of this subchapter, must have an exterior surface finish that is significantly reflective, such as a light reflecting color if painted, or a bright reflective metal or other material if unpainted.

38. In § 178.245–4, a new paragraph (e) would be added to read as follows:

§ 178.245-4 Tank mountings.

* * * * *

(e) A DOT 51 portable tank that meets the definition of "container" in § 450.3(a)(3) must meet the requirements of parts 450 through 453 of this title, in addition to the requirements of this subchapter.

§ 178.245-6 [Amended]

39. In § 178.245-6, in the first sentence of paragraph (a), the wording "on one of the heads of the tank" would be revised to read "in close proximity to the ASME "U" stamp certification".

40. In § 178.270-12, in paragraph (a), the first two sentences would be revised to read as follows:

§ 178.270-12 Valves, nozzles, piping, and gauging devices.

(a) All tank nozzles, except those provided for filling and discharge connections below the normal liquid level of the tank, relief devices, thermometer wells, and inspection openings, must be fitted with manually operated stop valves located as near the shell as practicable either internal or external to the shell. Each filling and discharge connection located below the normal liquid level of the tank must be equipped with an internal discharge valve. * * *

* * * * *

41. In § 178.601, the word "or" would be removed at the end of paragraph (c)(4)(iv), the period at the end of (c)(4)(v) would be removed and "; or" added in its place and new paragraphs (c)(4)(vi) and (g)(8) would be added to read as follows:

§ 178.601 General requirements.

* * * * *

(c) * * *

(4) * * *

(vi) For a steel drum, variations in design elements which do not constitute

a different design type under the provisions of paragraph (g)(8) of this section.

* * * * *

(g) * * *

(8)(i) For a steel drum with a capacity greater than 50 liters manufactured from low carbon, cold-rolled sheet steel meeting ASTM designations A366/A366M or A568/A568M, a change in any one or more of the following design elements constitutes a different drum design type:

(A) The packaging type and category of the original drum and the remanufactured drum, i.e., 1A1 or 1A2;

(B) The style, (i.e., straight-sided or tapered);

(C) The rated (marked) capacity and outside dimensions;

(D) The physical state for which the packaging was originally approved (e.g., tested for solids or liquids);

(E) The marked level of performance of the original drum (i.e., the highest packing group, hydrostatic test pressure, or specific gravity to which the packaging has been tested);

(F) Type of side seam welding;

(G) Steel thicknesses in the head, in the body and in the bottom, and type of steel, i.e., stainless or low-carbon;

(H) End seam type, (e.g., triple or double seam);

(I) The number of rolling hoops which equal or exceed the diameter over the chimes;

(J) The location, type or size, and material of closures (other than the cover of UN 1A2 drums); and

(K) For UN 1A2 drums:

(1) Gasket material (e.g., plastic), or properties affecting the performance of the gasket;

(2) Configuration or dimensions of the gasket;

(3) Closure ring style including bolt size, (e.g., square or round back, 0.625" bolt); and

(4) Closure ring thickness.

(ii) Variations in elements other than those listed in paragraph (g)(8)(i) of this section are considered minor and do not constitute a different drum design type, or "different packaging" as defined in paragraph (c) of this section for which design qualification testing and periodic retesting are required. Minor variations authorized without further testing include changes in the identity of the supplier of component material made to the same specifications, or the original manufacturer of a DOT specification or UN standard drum to be remanufactured.

* * * * *

42. In § 178.705, in paragraph (c)(2)(ii), a new second sentence would be added after the first sentence to read as follows.

§ 178.705 Standards for metal intermediate bulk containers.

* * * * *

(c) * * *

(2) * * *

(ii) * * * This does not apply to fusible links unless such devices are the only source of pressure relief for the IBC. * * *

* * * * *

§ 178.705 [Amended]

43. In addition, in § 178.705, in paragraph (c)(1)(iv)(B), in the second formula, the Formula for U.S. Standard units, the number "544" would be revised to read "21.4".

Issued in Washington, DC on June 12, 1996 under authority delegated in 49 CFR part 106.

Alan I. Roberts,

Associate Administrator for Hazardous Materials Safety.

[FR Doc. 96-15272 Filed 6-25-96; 8:45 am]

BILLING CODE 4910-60-P