

**DEPARTMENT OF TRANSPORTATION****Research and Special Programs Administration**

**49 CFR Parts 107, 110, 130, 171, 172, 173, 174, 175, 176, 177, 178, 179 and 180**

[Docket No. RSPA-2001-9567 (HM-189R)]

RIN 2137-AD51

**Hazardous Materials Regulations: Minor Editorial Corrections and Clarifications**

**AGENCY:** Research and Special Programs Administration (RSPA), DOT.

**ACTION:** Final rule.

**SUMMARY:** This final rule corrects inconsistencies in terminology and makes minor editorial corrections to improve the clarity of the Hazardous Materials Regulations (HMR). The intended effect of this rule is to enhance the accuracy and reduce misunderstandings of the regulations. The amendments contained in this rule are minor editorial changes and do not impose new requirements.

**DATES:** *Effective Date:* September 27, 2001.

**FOR FURTHER INFORMATION CONTACT:** Gigi Corbin, Office of Hazardous Materials Standards, (202) 366-8553, Research and Special Programs Administration, U.S. Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590-0001.

**SUPPLEMENTARY INFORMATION:****I. Introduction**

This final rule corrects inconsistent use of terminology to enhance the clarity of the HMR. Because these amendments do not impose new requirements, notice and public comment procedures are unnecessary.

**II. Summary of Regulatory Changes**

The following is a summary of the amendments made under this final rule. It does not discuss all minor editorial corrections (for example: typographical, capitalization and punctuation errors) and certain other minor adjustments to enhance the clarity of the HMR.

—The term “Associate Administrator” is added in §§ 110.20 and 171.8 to the listing of definitions and abbreviations for uniformity and continuity with the definition that appears in § 107.3. The wording “Associate Administrator for Hazardous Materials Safety” is revised to read “Associate Administrator” wherever it appears in 49 CFR Parts 107 through 180. However, the title “Associate

Administrator for Hazardous Materials Safety” is retained when it appears as part of an address.

- The definition of “DOT and Department” in § 179.2 is removed and is added in §§ 107.3 and 171.8. All other references to “Department of Transportation” are revised to read “Department”, except where they appear in an address.
- Obsolete references to Explosive A, Class A, Explosive B, Class B, Explosive C, Class C and blasting agent are removed.
- The term “frangible disc” is revised to read “rupture disc” for consistency of usage. These terms are synonymous.
- The definition of “intermediate bulk container” in § 171.8 is revised to include the acronym “IBC.” All other references in the HMR to “intermediate bulk container” and “intermediate bulk containers” are revised to read “IBC” or “IBCs” respectively.
- The definition of “Maximum Allowable Working Pressure or MAWP” in § 171.8 is removed and the acronym “MAWP” is added. All other references to “maximum allowable working pressure” are revised to read “MAWP”.
- RSPA has reviewed the references to units of pressure measurements in the HMR for consistency. The units used are psi (pounds per square inch), psig (pounds per square inch, gauge) and psia (pounds per square inch, absolute). Revisions have been made, where necessary, to designate “psi” for units of material stress, “psig” for test pressure measurements, and “psia” for measurements of vapor pressure. The entry “Psi” is removed in § 179.2—Definitions and abbreviations, since the entry already is in § 171.8.
- The term “UN Recommendations” is added in § 171.8 to the listing of definitions and abbreviations. References to the “UN Recommendations on the Transport of Dangerous Goods” are revised to read “UN Recommendations”.
- In § 172.102, special provision 27 does not appear in any entry in the § 172.101 Hazardous Materials Table and is removed.
- A typographical error is corrected in § 173.315(n)(1)(v), column (4), by replacing “paragraph (n)(3)” with “paragraph (n)(2)” the second time it appears.
- In § 175.78, all references to “ICAO” (hazard) classes are removed.
- Text indicating units of measure is replaced by the International System of Units (SI) symbol.

**III. Rulemaking Analyses and Notices****A. Executive Order 12866 and DOT Regulatory Policies and Procedures**

This final rule is not considered a significant regulatory action under section 3(f) of Executive Order 12866 and, therefore, was not subject to review by the Office of Management and Budget. This rule is not significant according to the Regulatory Policies and Procedures of the Department of Transportation (44 FR 11034). Because of the minimal economic impact of this rule, preparation of a regulatory impact analysis or a regulatory evaluation is not warranted.

**B. Executive Order 13132**

This final rule has been analyzed in accordance with the principles and criteria in Executive Order 13132 (“Federalism”). This final rule does not propose any regulation that: (1) 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; (2) imposes substantial direct compliance costs on State and local governments; or (3) preempts state law.

RSPA is not aware of any State, local, or Indian tribe requirements that would be preempted by correcting editorial errors and making minor regulatory changes. This final rule does not have sufficient federalism impacts to warrant the preparation of a federalism assessment.

**C. Executive Order 13084**

This rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13084 (“Consultation and Coordination with Indian Tribal Governments”). Because this rule would not significantly or uniquely affect the communities of the Indian tribal governments, the funding and consultation requirements of this Executive Order do not apply.

**D. Regulatory Flexibility Act**

I certify that this final rule will not have a significant economic impact on a substantial number of small entities. This rule makes minor editorial changes which will not impose any new requirements on persons subject to the HMR; thus, there are no direct or indirect adverse economic impacts for small units of government, businesses or other organizations.

*E. Unfunded Mandates Reform Act of 1995*

This rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of \$100 million or more to either State, local, or tribal governments, in the aggregate, or to the private sector, and is the least burdensome alternative that achieves the objective of the rule.

*F. Paperwork Reduction Act*

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

*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.

**List of Subjects***49 CFR Part 107*

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

*49 CFR Part 110*

Disaster assistance, Education, Emergency preparedness, Grant programs—environmental protection, Grant programs—Indians, Hazardous materials transportation, Hazardous substances, Indians, Reporting and recordkeeping requirements.

*49 CFR Part 130*

Oil pollution, Packaging and containers, Response Plans, Reporting and recordkeeping requirements, Transportation.

*49 CFR Part 171*

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

*49 CFR Part 172*

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

*49 CFR Part 173*

Hazardous materials transportation, Packaging and containers, Radioactive

materials, Reporting and recordkeeping requirements, Uranium.

*49 CFR Part 174*

Hazardous materials transportation, Radioactive materials, Railroad safety.

*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, Motor carriers, Radioactive materials, Reporting and recordkeeping requirements.

*49 CFR Part 178*

Hazardous materials transportation, 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, 49 CFR Chapter I is amended 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. 5101–5127; 44701; Sec. 212–213, Pub. L. 104–121, 110 Stat. 857; 49 CFR 1.45, 1.53.

2. Amend 49 CFR part 107 by removing the wording “Associate Administrator for Hazardous Materials Safety” and adding the wording “Associate Administrator” each place it appears in the following sections:

107.1(a)  
107.7(a), (c)  
107.305(a), (c), (d)  
107.307(a) introductory text, (b)  
107.309(a), (b)(1)  
107.310(a), (b) introductory text, (c)  
107.317(c)  
107.335  
107.401(b)  
107.402(b)(6), (c)

107.403(a), (b), (c)  
107.404(a)(3), (b)  
107.405(a) introductory text, (b) introductory text

3. Amend § 107.3 by adding a new definition for “DOT or Department” in appropriate alphabetical order to read as follows:

**§ 107.3 Definitions.**

\* \* \* \* \*

*DOT or Department* means U.S. Department of Transportation.

\* \* \* \* \*

**§ 107.117 [Amended]**

4. Amend § 107.117 by making the following changes:

a. In paragraph (d) introductory text, remove the wording “U.S. Department of Transportation” and add the word “Department” each place it appears.

b. In paragraph (e), remove the wording “Department of Transportation” and add the word “Department” in its place.

**§ 107.127 [Amended]**

5. Amend § 107.127, paragraph (a), by removing the wording “Dockets Unit” and adding the wording “RSPA Records Center” in its place.

**§ 107.327 [Amended]**

6. Amend § 107.327, the last sentence in paragraph (a)(1) introductory text, by removing the wording “with Associate Administrator for Hazardous Materials Safety” and adding the wording “with the Associate Administrator” in its place.

**PART 110—HAZARDOUS MATERIALS PUBLIC SECTOR TRAINING AND PLANNING GRANTS**

7. The authority citation for part 110 continues to read as follows:

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

8. Amend 49 CFR part 110 by removing the wording “Associate Administrator for Hazardous Materials Safety” and adding the wording “Associate Administrator” each place it appears in the following sections:

110.40(a)(7), (b)(6)  
110.60(a)(4)  
110.70(c) introductory text, (d)  
110.100  
110.110  
110.120

9. Amend 110.20 by adding a new definition for “Associate Administrator” in appropriate alphabetical order to read as follows:

§ 110.20 Definitions.

\* \* \* \* \*

Associate Administrator means the Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration.

\* \* \* \* \*

PART 130—OIL SPILL PREVENTION AND RESPONSE PLANS

10. The authority citation for part 130 continues to read as follows:

Authority: 33 U.S.C. 1321.

§ 130.5 [Amended]

11. Amend § 130.5, the Note following the definition of "Liquid", by removing the wording "Dockets Unit" and adding the wording "RSPA Records Center" in its place.

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

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

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

§ 171.1 [Amended]

13. Amend § 171.1, paragraph (a) introductory text, by removing the wording "of Transportation".

§ 171.7 [Amended]

14. Amend § 171.7:

a. In paragraph (a)(2)(i), by removing the wording "Dockets Branch, room 8419" and adding the wording "RSPA Records Center, Room 8421" in its place.

b. In paragraph (a)(3) table, under Association of American Railroads, in the entry for "AAR Manual of Standards and Recommended Practices, Section C—Part III, Specifications for Tank Cars M–1002, September 1996" by removing the word "September" and adding the word "January" in its place.

15. Amend § 171.8 by:

a. Removing the definitions for "Intermediate bulk container" and "Maximum Allowable Working Pressure or MAWP".

b. Revising the definitions for "Competent Authority", "EX number", "Gas", "Liquid", "Metered delivery service" and "UN standard packaging".

c. Adding new definitions for "Associate Administrator", "DOT or Department", "Intermediate bulk container or IBC", "MAWP" and "UN Recommendations" in appropriate alphabetical order to read as follows:

§ 171.8 Definitions and abbreviations.

\* \* \* \* \*

Associate Administrator means the Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration.

\* \* \* \* \*

Competent Authority means a national agency responsible under its national law for the control or regulation of a particular aspect of the transportation of hazardous materials (dangerous goods). The term Appropriate Authority, as used in the ICAO Technical Instructions (see § 171.7), has the same meaning as Competent Authority. For purposes of this subchapter, the Associate Administrator is the Competent Authority for the United States.

\* \* \* \* \*

DOT or Department means U.S. Department of Transportation.

\* \* \* \* \*

EX number means a number preceded by the prefix "EX", assigned by the Associate Administrator, to an item that has been evaluated under the provisions of § 173.56 of this subchapter.

\* \* \* \* \*

Gas means a material which has a vapor pressure greater than 300 kPa (43.5 psia) at 50 °C (122 °F) or is completely gaseous at 20 °C (68 °F) at a standard pressure of 101.3 kPa (14.7 psia).

\* \* \* \* \*

Intermediate bulk container or IBC means a rigid or flexible portable packaging, other than a cylinder or portable tank, which is designed for mechanical handling. Standards for IBCs manufactured in the United States are set forth in subparts N and O of part 178 of this subchapter.

\* \* \* \* \*

Liquid means a material, other than an elevated temperature material, with a melting point or initial melting point of 20 °C (68 °F) or lower at a standard pressure of 101.3 kPa (14.7 psia). A viscous material for which a specific melting point cannot be determined must be subjected to the procedures specified in ASTM D 4359 "Standard Test Method for Determining Whether a Material is Liquid or Solid" (see § 171.7).

\* \* \* \* \*

MAWP means maximum allowable working pressure.

\* \* \* \* \*

Metered delivery service means a cargo tank unloading operation conducted at a metered flow rate of 378.5 L (100 gallons) per minute or less through an attached delivery hose with

a nominal inside diameter of 3.175 cm (1¼ inches) or less.

\* \* \* \* \*

UN Recommendations means the UN Recommendations on the Transport of Dangerous Goods.

UN standard packaging means a packaging conforming to standards in the UN Recommendations.

\* \* \* \* \*

§ 171.10 [Amended]

16. Amend § 171.10, the table in paragraph (c)(2), by:

a. Removing the period after the acronym "TBq." in the first entry of the table, in column 3.

b. Removing the acronym "gr" and adding the acronym "g" in its place in the fourth entry of the table, in columns 2 and 3.

c. Removing the acronym "l" and adding the acronym "L" in its place in the seventh entry of the table, in columns 2 and 3.

d. Removing the acronym "ml" and adding the acronym "mL" in its place in the seventh entry of the table, in columns 2 and 3.

e. Removing the acronym "ml" and adding the acronym "mL" in its place in the abbreviations following the table.

§ 171.14 [Amended]

17. Amend § 171.14, paragraph (c), by removing the wording "Associate Administrator for Hazardous Materials Safety" and adding the wording "Associate Administrator" in its place.

§ 171.20 [Amended]

18. Amend § 171.20, paragraphs (a) and (c), by removing the wording "Associate Administrator for Hazardous Materials Safety" and adding the wording "Associate Administrator" in its place.

§ 171.21 [Amended]

19. Amend § 171.21, paragraphs (a) and (b), by removing the wording "of Transportation" each place it appears.

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

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

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

21. Amend 49 CFR part 172 by removing the wording "Associate Administrator for Hazardous Materials Safety" and adding the wording

“Associate Administrator” each place it appears in the following sections:

172.101(b)(1), (d)(2), (f), (l)(2)  
App. B to 172.101, paragraph 5.  
172.102(c)(1) special provisions 26, 29, 53, 55, 60, 105, 118, 121, 125, 129, 131, 133 and 136  
172.102(c)(3) special provisions B46, B55, B61, B69, B77 and B81  
172.102(c)(5) special provisions N10 and N72  
172.102(c)(7)(ii) special provision T42  
172.320(d)

22. Amend 49 CFR part 172 by removing the word “liters” and adding the acronym “L” each place it appears in the following sections:

172.102(c)(1) special provision 36  
172.102(c)(2) special provision A14  
172.322(d)(1)(i), (d)(2)(i)

23. Amend 49 CFR part 172 by removing the word “kilograms” and adding the acronym “kg” each place it appears in the following sections:

172.102(c)(2) special provisions A13 and A14  
172.310(a)  
172.322(d)(2)(ii)

24. Amend 49 CFR part 172 by removing the acronym “ml” and adding the acronym “mL” each place it appears in the following sections:

172.102 (c)(1) special provisions 40 and 47  
172.102(c)(5) special provision N76  
172.312(c)(3)

25. Amend 49 CFR part 172 by removing the wording “safety relief device” and adding the wording “reclosing pressure relief device” each place it appears in the following section:  
172.102(c)(3) special provisions B42 and B76

26. Amend § 172.1 by removing the wording “of Transportation”.

#### § 172.101 [Amended]

27. Amend § 172.101, paragraphs (k)(2)(i), (k)(4) and (k)(5), by removing the wording “three meters” and adding the wording “3 m” each place it appears.

#### § 172.102 [Amended]

28. In § 172.102:  
a. Amend paragraph (c)(1) by removing special provision 27.  
b. Amend paragraph (c)(2), special provision A13, by removing the wording “50 milliliters” and adding the wording “50 mL” in its place.  
c. In paragraph (c)(3):  
i. Amend special provisions B11 and B27 by removing the acronym “psi” and adding the acronym “psig” each place it appears.

ii. Amend special provision B60 by removing the wording “safety relief device” and adding the wording “pressure relief device” in its place.  
iii. Amend special provision B69 by removing the wording “intermediate bulk containers (FIBCs)” and adding the acronym “IBCs” in its place.  
iv. Amend special provision B103 by removing the wording “intermediate bulk container” and adding the acronym “IBC” in its place.  
v. Amend special provisions B100 and B104 by removing the wording “Intermediate bulk containers” and adding the acronym “IBCs” each place it appears.  
vi. Amend special provisions B101, B105, B106, B108 and B109 by removing the wording “intermediate bulk containers” and adding the acronym “IBCs” each place it appears.  
vii. Revise special provisions B45, B47, B57, the second sentence in special provision B49, and the fourth and fifth sentences in special provision 78 to read as follows:

#### § 172.102 Special provisions.

\* \* \* \* \*  
(c) \* \* \*  
(3) \* \* \*

#### Code/Special Provisions

\* \* \* \* \*  
B45 Each tank must have a reclosing combination pressure relief device equipped with stainless steel or platinum rupture discs approved by the AAR Tank Car Committee.  
\* \* \* \* \*

B47 Each tank may have a reclosing pressure relief device having a start-to-discharge pressure setting of 310 kPa (45 psig).  
\* \* \* \* \*

B49 \* \* \* Single unit tank car tanks must have a reclosing pressure relief device having a start-to-discharge pressure set at no more than 1551 kPa (225 psig).  
\* \* \* \* \*

B57 Class 115A tank car tanks used to transport chloroprene must be equipped with a non-reclosing pressure relief device of a diameter not less than 305 mm (12 inches) with a maximum rupture disc burst pressure of 310 kPa (45 psig).  
\* \* \* \* \*

B78 \* \* \* If a tank car tank is equipped with a non-reclosing pressure relief device, the rupture disc must be perforated with a 3.2 mm (0.13 inch) diameter hole. If a tank car tank is equipped with a reclosing pressure relief valve, the tank must also be equipped with a vacuum relief valve.  
\* \* \* \* \*

#### § 172.203 [Amended]

29. Amend § 172.203, paragraph (d)(7)(ii), by removing the wording “6 meters” and adding the wording “6 m” in its place.

#### § 172.302 [Amended]

30. Amend § 172.302, paragraph (b)(2), by removing the wording “intermediate bulk containers” and adding the acronym “IBCs”.

#### § 172.312 [Amended]

31. Amend § 172.312, paragraph (c)(2), by removing the wording “one liter” and adding the wording “1 L” in its place.

#### § 172.322 [Amended]

32. Amend § 172.322, paragraph (d)(1)(ii), by removing the wording “500 grams” and adding the wording “500 g” in its place.

33. Amend § 172.401 by revising paragraphs (c)(1), (c)(2), (c)(3) and (c)(4) to read as follows:

#### § 172.401 Prohibited labeling.

\* \* \* \* \*  
(c) \* \* \*  
(1) The UN Recommendations (see § 171.7 of this subchapter);  
(2) The IMDG Code (see § 171.7 of this subchapter);  
(3) The ICAO Technical Instructions (see § 171.7 of this subchapter);  
(4) The TDG Regulations (see § 171.7 of this subchapter).  
\* \* \* \* \*

#### § 172.514 [Amended]

34. Amend § 172.514, paragraph (c)(4), by removing the wording “intermediate bulk container” and adding the acronym “IBC”.

#### § 172.602 [Amended]

35. Amend § 172.602, paragraph (a)(1), by removing the wording “as appropriate” at the end of the paragraph and adding the wording “as appropriate (see § 171.7 of this subchapter)” in its place.

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

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

**Authority:** 49 U.S.C. 5101–5127, 44701; 49 CFR 1.45, 1.53.

37. Amend 49 CFR part 173 by removing the wording “Associate Administrator for Hazardous Materials Safety” and adding the wording “Associate Administrator” each place it appears in the following sections:

173.2a(c)(4)  
173.4(c)  
173.21(f)(3) introductory text, (i)  
173.22(c)(2)  
173.24(e)(3)(iii)  
173.28(b)(2)(ii), (b)(7)(iv)(C)

- 173.34(c)(3), (e)(2)(i), (e)(2)(ii) introductory text, (e)(2)(ii)(A), (e)(2)(ii)(B), (e)(2)(iii), (e)(4)(iii) introductory text, (e)(7)(ii), (e)(8)(i)(C), (i) introductory text, (i)(4)(i), (l) introductory text, (l)(2), (l)(3)
- 173.51(a), (b)
- 173.52(a)
- 173.56(a)(2), (b)(1) introductory text, (b)(4), (c) introductory text, (f), (g), (i), (j) introductory text, (j)(3)
- 173.58(d), (e)
- 173.59 Definition of "Initiation, means of."
- 173.62(c)(5)
- 173.115(a)(2)
- 173.120(d)
- 173.124(a)(1)(ii) introductory text, (a)(2)(i)(E), (a)(2)(iii)(D)
- 173.128(a)(3), (d)(1) introductory text
- 173.132(d)
- 173.159(f)
- 173.166(b)(1), (b)(3)(ii), (c), (d)(1)
- 173.171(d)
- 173.185(i)
- 173.214
- 173.222(b)(3)
- 173.224(c)(1), (d)
- 173.225(b)(4) introductory text, (c)(1)
- 173.245(a), (b)
- 173.300a(c), (d), (e), (g), (h), (i)
- 173.300b(c), (d), (e), (f), (g)
- 173.300c(a) introductory text, (b)
- 173.301(j)(1)(i)
- 173.305(c)(1)
- 173.306(f)(5)
- 173.315(i)(12)
- 173.316(d)
- 173.318(f)(4)
- 173.334(d)
- 173.340(a), (b), (c)(4)
- 173.411(c)
- 173.433(b)
- 173.457(b)(4)
- 173.471(e)
- 173.472(f)
- 173.473(a)(1)
- 173.476(a), (c) introductory text
38. Amend 49 CFR part 173 by removing the wording "intermediate bulk container" and adding the acronym "IBC" each place it appears in the following sections:
- 173.35(a), (c), (d), (f)(1), (f)(2), (g), (h) introductory text, (h)(1) introductory text, (h)(1)(i), (h)(1)(ii), (h)(1)(iii), (h)(1)(iv), (h)(2) introductory text, (j), (k), (l) heading, (l)(1), (l)(2), (l)(3), (l)(4)
- 173.240(d)(1)(i)
- 173.241(d)(1)(i)(A), (d)(1)(ii)(A)
- 173.242(d)(1)(i)(A), (d)(1)(ii)(A)
39. Amend 49 CFR part 173 by removing the wording "intermediate bulk containers" and adding the acronym "IBCs" each place it appears in the following sections:
- 173.35(h)(2), (j)
- 173.224(d)
- 173.225(b)(8) Notes 7 and 10 to table
- 173.240(d)(1)(i), (d)(2) introductory text, (d)(2)(i), (d)(2)(ii)
- 173.241(d)(2) introductory text, (d)(2)(i), (d)(2)(ii), (d)(2)(iii)
- 173.242(d)(1)(i)(A), (d)(2)(i), (d)(2)(ii), (d)(2)(iii), (d)(2)(iv)
- 173.243(d)(1), (d)(2)(i), (d)(2)(ii), (d)(2)(iii)
40. Amend 49 CFR part 173 by removing the wording "Intermediate bulk containers" and adding the acronym "IBCs" each place it appears in the following sections:
- 173.225(e)(5) heading and introductory text
- 173.240(d) heading and introductory text
- 173.241(d) heading, (d)(1) introductory text
- 173.242(d) heading, (d)(1) introductory text, (d)(2) introductory text
- 173.143(d) heading, (d)(2) introductory text
41. Amend 49 CFR part 173 by removing the acronym "psi" and adding the acronym "psig" each place it appears in the following sections:
- 173.3(c)(1)
- 173.27(c)(2)(i), (c)(3)(ii)
- 173.28(b)(2)(i)
- 173.31(c)(3), (e)(2) introductory text, (f)(1) introductory text, (f)(1)(i)(A)
- 173.34(d)(1)(ii), (d)(1)(iii), (d)(2), (e) Table and Note 2 to Table, (e)(4)(iii)(A), (e)(4)(v), (e)(10), (e)(12)
- 173.115(i)
- 173.159(d)(3)(ii)
- 173.172(a), (b)
- 173.181(a)
- 173.196(f)
- 173.226(b) introductory text
- 173.227(b) introductory text
- 173.301(g)(5)
- 173.303(b)
- 173.314(c) Table Notes 7 and 8, (o)
- 173.319(a)(4)(iii), (c), (e)(1), (e)(2)(i)
- 173.323(c)(1)
- 173.335(a)
- 173.337 introductory text
42. Amend 49 CFR part 173 by removing the acronym "psi" and adding the acronym "psia" each place it appears in the following sections:
- 173.24a(b)(4)(i), (b)(4)(ii), (b)(4)(iii)
- 173.27(c)(2)(ii)(A), (c)(2)(ii)(B), (c)(2)(ii)(C)
- 173.35(h)(1)(ii), (h)(1)(iii)
- 173.115(a) introductory text, (a)(1), (a)(2), (c) introductory text, (j)
43. Amend 49 CFR part 173 by removing the wording "pounds per square inch" and adding the acronym "psi" each place it appears in the following sections:
- 173.28(b)(4)(ii)
- 173.306(g)(3)
- 173.412(f)
- 173.465(d)(1)(ii)
44. Amend 49 CFR part 173 by removing the word "liters" and adding the acronym "L" each place it appears in the following sections:
- 173.8(b), (c)
- 173.22(a)(3)(i)
- 173.125(c)(2)(ii)(B), (c)(2)(ii)(C), (d)(1), (d)(2)
- 173.306(f)(4)(i)
- 173.309(a)(3)(i)
- 173.315(k)(2), (n)(1) Table item (iv), (n)(1) Table item (v), (n)(5)(iii)
- 173.417(b)(1), Table 4 note 2
45. Amend 49 CFR part 173 by removing the word "liter" and adding the acronym "L" each place it appears in the following sections:
- 173.124(c)
- 173.125(d)(3)
- 173.225(d)(3)
- 173.306(f)(4)(i), (f)(4)(ii)
- 173.403, Definition of "Low Specific Activity (LSA) material", paragraph (2)(i)
- 173.453(d)
46. Amend 49 CFR part 173 by removing the wording "one liter" and adding the wording "1 L" each place it appears in the following sections:
- 173.306(a)(3)(i), (b)(1) introductory text
- 173.314(c), Table Note 1.
47. Amend 49 CFR part 173 by removing the word "kilograms" and adding the acronym "kg" each place it appears in the following sections:
- 173.417(a)(6)(viii), (b)(2)(i), (b)(2)(ii), Table 5 note 1
- 173.419(c)
- 173.465(c)(3), (c)(4), (e)(1)
- 173.469(b)(2)(i), (b)(3)(iv)
48. Amend 49 CFR part 173 by removing the word "kilogram" and adding the acronym "kg" each place it appears in the following section:
- 173.417(b)(2)(ii), Table 5 note 3
49. Amend 49 CFR part 173 by removing the word "meter" and adding the acronym "m" each place it appears in the following sections:
- 173.416(f)
- 173.443(d)(1)
- 173.459(b) introductory text
- 173.465(c)(2), (c)(3), (c)(4), (e)(2)
- 173.469(b)(2)(i), (b)(3)(iv)
50. Amend 49 CFR part 173 by removing the word "meters" and adding the acronym "m" each place it appears in the following sections:
- 173.189(d)(4)(iii)
- 173.315(n)(3) introductory text, (n)(3)(i)

173.427(a)(1)  
173.441(b)(3)  
173.447(a)  
173.466(a)(1), (a)(2)  
173.469(b)(1)

51. Amend 49 CFR part 173 by removing the word "centimeters" and adding the acronym "cm" each place it appears in the following sections:

173.412(b)  
173.417(b)(2)(ii), (b)(2), Table 5 note 5  
173.465(b), (e)(1)  
173.469(b)(2)(ii), (b)(3)(i), (b)(3)(v)

52. Amend 49 CFR part 173 by removing the word "centimeter" and adding the acronym "cm" each place it appears in the following section:

173.417(b)(2)(ii)

53. Amend 49 CFR part 173 by removing the word "millimeters" and adding the acronym "mm" each place it appears in the following sections:

173.417(b)(2)(ii), Table 5 note 6  
173.469(b)(2)(ii), (b)(3)(v)

54. Amend 49 CFR part 173 by removing the word "millimeter" and adding the acronym "mm" each place it appears in the following section:

173.417(a)(6)(iv)

55. Amend 49 CFR part 173 by removing the acronym "ml" and adding the acronym "mL" each place it appears in the following sections:

173.4(a)(1)(i)  
173.6(a)(3)  
173.115(c)(2)  
173.120(c)(3)  
173.121(b)(2)(ii)  
173.133(b)(1)(i), (b)(1)(ii), (b)(1)(iv)  
Table, (b)(2)(i)(A), (b)(2)(ii)(A),  
(b)(2)(iii)(A), (b)(2)(iv)(A), (b)(2)(iv)(B)  
173.152(b)(3)(i), (b)(3)(ii), (b)(4)(i)  
173.153(c)(2)  
173.161(b)  
173.194(a), (b)(1), (b)(2)  
173.220(b)(1), (b)(4)  
173.308(a)(1)  
173.309(a)(3)(i)  
173 App H, 3. Apparatus (e), 5.  
Procedure (d)

56. Amend 49 CFR part 173 by removing the wording "safety relief" and adding the wording "pressure relief" each place it appears in the following sections:

173.314(j), (l), (n), (o)  
173.315(i)(2), (i)(3), (i)(5), (i)(6), (i)(7),  
(i)(8), (i)(9), (i)(11), (i)(13)

57. Amend 49 CFR part 173 by removing the wording "cargo tank" and adding the wording "cargo tank motor vehicle" each place it appears in the following sections:

173.315(n)(1) introductory text,  
(n)(2)(ii), (n)(3)(ii), (o)(2), (o)(3)

58. Amend 49 CFR part 173 by removing the wording "cargo tanks" and adding the wording "cargo tank motor vehicles" each place it appears in the following sections:

173.315(k)(5), (n) heading, (n)(3)  
heading, (o) heading

**§ 173.7 [Amended]**

59. Amend § 173.7(c), by removing the wording "one gram" and adding the wording "1 g" in its place.

**§ 173.13 [Amended]**

60. Amend § 173.13, paragraph (c)(1)(i), by removing the wording "1.2 liters" in the first sentence and adding the wording "1.2 L" in its place and by removing the wording "one liter" in the last sentence and adding the wording "1 L" in its place.

61. Amend § 173.21 by revising paragraph (f)(3)(ii) to read as follows:

**§ 173.21 Forbidden materials and packages.**

\* \* \* \* \*

(f) \* \* \*

(3) \* \* \*

(ii) For transportation by vessel, shipments are authorized in accordance with the control-temperature requirements of Section 21 of the General Introduction of the IMDG Code (see § 171.7 of this subchapter).

\* \* \* \* \*

62. Amend § 173.22 by revising paragraph (a)(2)(iii) to read as follows:

**§ 173.22 Shipper's responsibility.**

(a) \* \* \*

(2) \* \* \*

(iii) National or international regulations based on the UN Recommendations, as authorized in § 173.24(d)(2);

\* \* \* \* \*

**§ 173.22a [Amended]**

63. Amend § 173.22a, paragraph (b), by removing the wording "Docket Section" in the last sentence and adding the wording "RSPA Records Center" in its place.

64. Amend § 173.24 by revising paragraphs (d)(2) introductory text and (d)(2)(i) to read as follows:

**§ 173.24 General requirements for packagings and packages.**

\* \* \* \* \*

(d) \* \* \*

(2) UN standard packagings manufactured outside the United States. A UN standard packaging manufactured outside the United States, in accordance with national or international regulations based on the UN

Recommendations (see § 171.7 of this subchapter), may be imported and used and is considered to be an authorized packaging under the provisions of paragraph (c)(1) of this section, subject to the following conditions and limitations:

(i) The packaging fully conforms to applicable provisions in the UN Recommendations and the requirements of this subpart, including reuse provisions;

\* \* \* \* \*

65. Amend § 173.31 by revising paragraph (b)(2)(ii) to read as follows:

**§ 173.31 Use of tank cars.**

\* \* \* \* \*

(b) \* \* \*

(2) \* \* \*

(ii) Except for shipments of chloroprene, inhibited, in class DOT 115 tank cars, single-unit tank cars used for materials meeting the definition for Division 6.1 liquid, Packing Group I or II, Class 2 materials, or Class 3 or 4 liquids, must have reclosing pressure relief devices. However, a tank car built before January 1, 1991, and equipped with a non-reclosing pressure relief device may be used to transport a Division 6.1 or Class 4 liquid if the liquid is not poisonous by inhalation. Unless otherwise specifically provided in this subchapter, rupture discs may not have any perforated holes to allow for venting.

\* \* \* \* \*

**§ 173.31 [Amended]**

66. Amend § 173.31, paragraph (d)(1)(vi), by removing the wording "frangible disc in non-closing" and adding the wording "rupture disc in non-reclosing" in its place.

**§ 173.35 [Amended]**

67. Amend § 173.35, in the heading by removing the wording "intermediate bulk containers" and the parentheses around the acronym "IBCs", and in paragraph (k) by removing the word "flashpoint" and adding the wording "flash point" in its place.

68. Amend § 173.61 by revising paragraph (e)(2) to read as follows:

**§ 173.61 Mixed packaging requirements.**

\* \* \* \* \*

(e) \* \* \*

(2) Explosives of the same compatibility group or authorized combination of compatibility group but different division number may be packed together, provided that the whole package is treated as though its entire contents were comprised of the lower division number. For example, a

mixed package of Division 1.2 explosives and Division 1.4 explosives, compatibility group D, must be treated as 1.2D explosives. However, when 1.5D explosives are packed together with 1.2D explosives, the whole package must be treated as 1.1D explosives.

§ 173.62 [Amended]

69. Amend § 173.62(c) by removing the wording "Associate Administrator for Hazardous Materials Safety" in Packing Instruction 101 in the "Table of Packing Methods" and in Exception 1, column 1, and adding the wording "Associate Administrator" in its place.

70. Amend § 173.115(g), by revising the first sentence to read as follows:

§ 173.115 Class 2, Divisions 2.1, 2.2, and 2.3—Definitions.

(g) Cryogenic liquid. A cryogenic liquid means a refrigerated liquefied gas having a boiling point colder than -90 °C (-130 °F) at 101.3 kPa (14.7 psia).

71. Amend § 173.132 by revising paragraph (a)(1)(iii)(B) to read as follows:

§ 173.132 Class 6, Division 6.1—Definitions.

(B) A material with a saturated vapor concentration in air at 20 °C (68 °F) greater than or equal to one-fifth of the LC50 for acute toxicity on inhalation of vapors and with an LC50 for acute toxicity on inhalation of vapors of not more than 5000 mL/m³; or

§ 173.150 [Amended]

72. Amend § 173.150, paragraph (d)(2), by removing the wording "five liters" and adding the wording "5 L" in its place.

§ 173.225 [Amended]

73. Amend § 173.225, paragraph (e)(3)(i)(B), by removing the wording "self-reclosing pressure" and adding the wording "reclosing pressure" in its place.

74. Amend § 173.240 by revising paragraph (d)(1)(vi) to read as follows:

§ 173.240 Bulk packaging for certain low hazard solid materials.

(vi) Wooden: 11C, 11D, or 11F.

75. Amend § 173.242 by revising paragraph (d)(1)(ii)(F) to read as follows:

§ 173.242 Bulk packagings for certain medium hazard liquids and solids, including solids with dual hazards.

(F) Wooden: 11C, 11D, or 11F.

§ 173.247 [Amended]

76. Amend § 173.247, in paragraph (g)(1)(iii)(C) by removing the word "nonreclosing" and adding the word "non-reclosing" in its place, and in paragraph (g)(1)(iv), by removing the wording "frangible discs" and adding the wording "rupture discs" in its place.

§ 173.300a [Amended]

77. Amend § 173.300a, paragraph (a)(2), by removing the wording "of Transportation".

§ 173.302 [Amended]

78. Amend § 173.302(c)(3) by: a. Removing the wording "S = wall stress, pounds per square inch;" and adding the wording "S = wall stress in psi;" each place it appears. b. Removing the wording "P = test pressure, pounds per square inch" and adding the wording "P = test pressure in psig" each place it appears.

79. Amend § 173.304(a)(2) by revising the first sentence in Note 4 to the table to read as follows:

§ 173.304 Charging of cylinders with liquefied compressed gas.

(a) \* \* \* (2) \* \* \*

Note 4: Special carbon dioxide mining devices containing a heating element and charged with not over 6 pounds of carbon dioxide may be filled to a density of not over 85 percent, provided the cylinder is made of steel with a calculated bursting pressure in excess of 39,000 psi, be fitted with a frangible disc that will operate at not over 57 percent of that pressure, and be able to withstand a drop of 10 feet when striking crosswise on a steel rail while under a pressure of at least 3,000 psig.

80. In § 173.304:

a. Amend paragraph (e)(1) by removing the wording "pounds per square inch absolute" and adding the acronym "psia" in its place. b. Amend paragraph (f)(1) by removing the wording "psi, absolute" and adding the acronym "psia" each place it appears.

§ 173.306 [Amended]

81. Amend § 173.306(b) heading by removing the word "Exemptions" and adding the word "Exceptions" in its place.

§ 173.314 [Amended]

82. Amend § 173.314(g)(4), by removing the wording "safety relief device" and adding the wording "reclosing pressure relief device" in its place.

83. Amend § 173.314 by revising the last two sentences in paragraph (l) and the second sentence in paragraph (o) to read as follows:

(l) \* \* \* A threaded solid plug must seal each valve outlet. In addition, a metal cover must protect all valves.

(o) \* \* \* Each tank car must be equipped with one reclosing pressure relief valve having a start-to-discharge pressure not to exceed 75 percent of the tank test pressure and one non-reclosing pressure relief valve having a rupture disc design to burst at a pressure less than the tank test pressure.

§ 173.315 [Amended]

84. In § 173.315: a. Amend paragraph (i)(10) by removing the wording "frangible disc devices" and adding the wording "non-reclosing pressure relief devices" in its place. b. Amend paragraph (i)(13) by removing the word "tanks" and adding the word "tank" in its place. c. Amend paragraph (n)(1)(v), column (4) of the chart, by removing the wording "paragraph (n)(3) or" and adding the wording "paragraph (n)(2) or" in its place.

85. Amend § 173.315 by revising the first sentence of paragraph (i) introductory text and the first sentence of paragraph (i)(4) to read as follows:

§ 173.315 Compressed gases in cargo tanks and portable tanks.

(i) Each tank must be provided with one or more pressure relief devices which, unless otherwise specified in this part, must be of the spring-loaded type.

(4) Each pressure relief valve must be plainly and permanently marked with the pressure in psig at which it is set to discharge, with the actual rate of discharge of the device in cubic feet per minute of the gas or of air at 60 °F and 14.7 psia, and with the manufacturer's

name or trade name and catalog  
number. \* \* \*

\* \* \* \* \*

#### § 173.319 [Amended]

86. Amend § 173.319, paragraph (e)(4), by removing the wording “frangible disc” the first time it appears and adding the wording “rupture disc” in its place, and removing the wording “with a new frangible disc”.

#### § 173.323 [Amended]

87. Amend § 173.323, paragraph (i), by removing the wording “safety relief valve or frangible disc” in the second sentence and adding the wording “pressure relief valve or rupture disc” in its place.

#### § 173.403 [Amended]

88. Amend § 173.403 by removing the wording “1.5 meters” in the definition for “Freight container” and adding the wording “1.5 m” in its place, and removing the wording “one meter” in the definition for “Transport index” and adding the wording “1 m” each place it appears.

89. Amend § 173.411 by revising paragraph (b)(4)(ii) to read as follows:

#### § 173.411 Industrial packagings.

\* \* \* \* \*

(b) \* \* \*

(4) \* \* \*

(ii) Be capable of withstanding a test pressure of 265 kPa (37.1 psig);

\* \* \* \* \*

#### § 173.425 [Amended]

90. Amend § 173.425, Table 7, by removing the wording “TBq/liter” in the first column and adding the wording “TBq/L” in its place.

#### § 173.453 [Amended]

91. Amend § 173.453, paragraphs (a), (b)(2), (b)(3) and (d), by removing the word “grams” and adding the acronym “g” each place it appears, and paragraph (e), by removing the wording “one kilogram” and adding the wording “1 kg” in its place.

92. The authority citation for part 174 continues to read as follows:

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

#### PART 174—[AMENDED]

93. Amend 49 CFR part 174 by removing the wording “Class A” each place it appears in the following sections:

174.16(b)(1), (b)(2), (b)(3)

174.81(e)(5), (g)(3)(iv), (g)(3)(v), (h), (i)

174.83(f)

174.84

174.85(d), Table Note “Group 1”

174.101(a), (c), (d), (h), (l), (n)

174.102(a), (b)

174.103(a)

174.104 heading, (a), (b) introductory text, (c), (d), (e), (f)

174.105

174.106 heading, (a), (b), (c)

174.110

94. Amend 49 CFR part 174 by removing the wording “Class C” each place it appears in the following sections:

174.81(g)(3)(iv), (h)

174.115 heading, (a), (b), (b)(3)

#### § 174.63 [Amended]

95. Amend § 174.63, in the heading by removing the wording “intermediate bulk containers” and adding the acronym “IBCs” in its place and in paragraph (a) by removing the wording “intermediate bulk container” and adding the acronym “IBC” in its place.

#### § 174.81 [Amended]

96. Amend § 174.81, in paragraph (e)(5) by removing the wording “(blasting agents)” and in paragraph (i) by removing the wording “(blasting agent)”.

#### § 174.85 [Amended]

97. Amend § 174.85(d), by removing the wording “Class B and C” in the note “Group 2” following the table.

#### § 174.101 [Amended]

98. Amend § 174.101, paragraphs (b) and (o) introductory text, by removing the wording “Class A or Class B” each place it appears.

#### § 174.112 [Amended]

99. In 174.112:

a. Amend the heading and paragraphs (a), (b), (c) introductory text and (c)(3) by removing the wording “devices corresponding to Class B” each place it appears.

b. Amend the heading and paragraphs (a), (b), (c) introductory text and (c)(3) by removing the wording “(Class B explosive) materials” each place it appears.

#### § 174.700 [Amended]

100. In § 174.700:

a. Amend paragraph (c) by removing the wording “0.9 meter” and adding the wording “0.9 m” in its place, and by removing the wording “4.5 meters” and adding the wording “4.5 m” in its place.

b. Amend paragraph (d) by removing the wording “6 meters” and adding the wording “6 m” in its place.

#### § 174.715 [Amended]

101. Amend § 174.715, paragraph (b), by removing the wording “1 meter” and adding the wording “1 m” in its place in the first sentence, and by removing the wording “7.6 centimeters” and adding the wording “7.6 cm” in its place in the last sentence.

#### PART 175—CARRIAGE BY AIRCRAFT

102. The authority citation for part 175 continues to read as follows:

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

#### PART 175—[AMENDED]

103. Amend 49 CFR part 175 by removing the wording “Associate Administrator for Hazardous Materials Safety” and adding the wording “Associate Administrator” each place it appears in the following sections:

175.10(a)(2), (a)(15)

175.701(c) introductory text

104. Amend 49 CFR part 175 by removing the word “liters” and adding the acronym “L” each place it appears in the following sections:

175.10(a)(4)(iv), (b)(2)

175.85(i)(3)

175.310 introductory text, (c)(1), (c)(2), (c)(3)

175.320(a) Table

105. Amend 49 CFR part 175 by removing the word “meters” and adding the acronym “m” each place it appears in the following sections:

175.701(b)(3)

175.702(b)(2)(i)(A), (b)(2)(i)(B)

#### § 175.10 [Amended]

106. Amend § 175.10, paragraphs (a)(4)(ii) and (a)(4)(iv), by removing the acronym “ml” and adding the acronym “mL” in its place.

#### § 175.78 [Amended]

107. Amend § 175.78, paragraph (a), by removing the acronym “ICAO” each place it appears in Table 1 and in Note 4; and by revising Note 3 to Table 1 to read as follows:

(a) \* \* \*

TABLE 1

\* \* \* \* \*

\* \* \* \* \*

**Note 3:** For import or export shipment, explosives other than explosives of Division 1.4, Compatibility Group S, that do not belong to the same compatibility group according to the ICAO Technical Instructions

may not be stowed together, except that compatibility groups C, D and E may be stowed together. Explosives of Division 1.4, Compatibility Group S may be stowed with explosives of all compatibility groups with the exception of A and L.

\* \* \* \* \*

**§ 175.85 [Amended]**

108. Amend § 175.85, paragraph (c)(1)(iv), by removing the word “flashpoint” and adding the wording “flash point” in its place.

**§ 175.320 [Amended]**

109. Amend § 175.320, paragraph (a), by removing the wording “(Class A)”

and “(Class C)” each place it appears in column 2 of the table; and by revising the second entry under “High explosives” in column 3 of the table to read as follows:

(a) \* \* \*

Material	Class	Conditions
* * * * *		
High explosives .....	* * *	Ammonium nitrate-fuel oil mixtures. Explosive, blasting, Type A, B, C, D and E (Div. 1.1D or 1.5D) or Agent, blasting, Type B (Div. 1.5D); Substances, explosive, very insensitive, n.o.s., or Substances, EVI, n.o.s. (Div. 1.5D); Articles, explosive, extremely insensitive or Articles, EEI (Div. 1.6N).
* * * * *		

\* \* \* \* \*

**PART 176—CARRIAGE BY VESSEL**

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

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

**PART 176—[AMENDED]**

111. Amend 49 CFR part 176 by removing the wording “Associate Administrator for Hazardous Materials Safety” and adding the wording “Associate Administrator” each place it appears in the following sections:

- 176.166(b), Table Footnote “d”
- 176.168(d)
- 176.704(e)(2)

112. Amend 49 CFR part 176 by removing the wording “Class A” each place it appears in the following sections:

- 176.9 introductory text
- 176.144(c)
- 176.194(e)

113. Amend 49 CFR part 176 by removing the wording “Class A and B” each place it appears in the following sections:

- 176.4(b) introductory text, (c)
- 176.99
- 176.104(h) introductory text, (j) introductory text
- 176.128(c)
- 176.192(a)
- 176.194(c)

114. Amend 49 CFR part 176 by removing the wording “Class B” each place it appears in the following sections:

- 176.144(c)

115. Amend 49 CFR part 176 by removing the wording “Class C” each

place it appears in the following sections:

- 176.83(a)(6)
- 176.112
- 176.116(e)(3)
- 176.142(b)(1)
- 176.145(b)
- 176.150(a), (b)
- 176.164(c)
- 176.166(a)(1)
- 176.172(c)

116. Amend 49 CFR part 176 by removing the acronym “psi” and adding the acronym “psig” each place it appears in the following sections:

- 176.340(b)(7), (b)(8)
- 176.905(i)(5)

117. Amend 49 CFR part 176 by removing the word “meters” and adding the acronym “m” each place it appears in the following sections:

- 176.83(c)(2)(ii), (c)(2)(iii), (c)(2)(iv), (c)(2)(v), (f)(4) Table footnote, (g)(3) Table 176.704(f), Notes b and d to Table III
- 176.905(a)(5)

118. Amend 49 CFR part 176 by removing the word “liters” and add the acronym “L” each place it appears in the following sections:

- 176.84(b), Code 115 in the Table
- 176.315(a)
- 176.340(b)(2)
- 176.905(i)(2)

119. Amend 49 CFR part 176 by removing the wording “(blasting agents)” each place it appears in the following sections:

- 176.99
- 176.400 heading, (c), (d)
- 176.410 heading, (a)(1), (c) introductory text
- 176.415 heading, (b)(5), (c)(1), (c)(5)

120. Amend § 176.30 by revising paragraph (a)(5)(ii) to read as follows:

**§ 176.30 Dangerous cargo manifest.**

- (a) \* \* \*
- (5) \* \* \*
- (ii) The IMDG Code.

**§ 176.36 [Amended]**

121. Amend § 176.36, paragraph (b), by removing the wording “of Transportation”.

**§ 176.76 [Amended]**

122. Amend § 176.76, in paragraph (h)(5) by removing the wording “five meters” and adding the wording “5 m” in its place, and in paragraph (i) by removing the word “flashpoint” and adding the wording “flash point” in its place.

123. Amend § 176.83, paragraphs (b), (f) and (g), by revising the table headings to read as follows:

**§ 176.83 Segregation.**

- \* \* \* \* \*
- (b) \* \* \*

Table 176.83(b).—General Segregation Requirements for Hazardous Materials

[Segregation must also take account of a single secondary hazard label, as required by paragraph (a)(6) of this section.]

- \* \* \* \* \*
- (f) \* \* \*

Table 176.83(f).—Segregation of Containers on Board Container Ships

- \* \* \* \* \*
- (g) \* \* \*

Table 176.83(g).—Segregation of Transport Units on Board Trailerships and Trainships

- \* \* \* \* \*

**§ 176.100 [Amended]**

124. Amend § 176.100 by removing the wording “Classes A and B” each place it appears.

**§ 176.104 [Amended]**

125. Amend § 176.104, paragraph (i), by removing the wording “(Class A and B explosive materials)” in the first sentence and adding the wording “(explosive) materials” in its place.

126. Amend § 176.116, paragraph (e)(2), by revising the second sentence to read as follows:

**§ 176.116 General stowage conditions for Class 1 (explosive) materials.**

\* \* \* \* \*

(e) \* \* \*  
(2) \* \* \* Division 1.1, 1.2, 1.3, or 1.5 materials may not be stowed within 3 m (10 feet) of this bulkhead; in the decks immediately above or below an accommodation space they must be stowed at least 3 m (10 feet) from the line of this bulkhead projected vertically.

\* \* \* \* \*

127. Amend § 176.144, paragraph (a), by revising the table heading to read as follows:

**§ 176.144 Segregation of Class 1 (explosive) materials.**

(a) \* \* \*

Table 176.144(a).—Authorized Mixed Stowage for Explosives

[An “X” indicates that explosives in the two different compatibility groups reflected by the location of the “X” may not be stowed in the same compartment, portable magazine, or transport unit]

\* \* \* \* \*

128. Amend § 176.166, paragraph (b), by revising the table heading to read as follows:

**§ 176.166 Transport of Class 1 (explosive) materials on passenger vessels.**

\* \* \* \* \*

(b) \* \* \*

Table 176.166(b).—Stowage Arrangements in Passenger Vessels

\* \* \* \* \*

**§ 176.194 [Amended]**

129. Amend § 176.194, paragraph (c), by removing the wording “(Class A explosive)” and adding “(explosive)” in its place and by removing the wording “Class A or B” in the last sentence.

**§ 176.315 [Amended]**

130. Amend § 176.315, paragraph (a), by removing the word “liter” and adding the acronym “L” each place it appears.

**Subpart J—[Amended]**

131. Amend Subpart J, the heading, by removing the wording “(Blasting Agents)”.

**§ 176.415 [Amended]**

132. Amend § 176.415, paragraph (a)(1), by removing the wording “(blasting agent)”.

**§ 176.700 [Amended]**

133. Amend § 176.700, paragraph (c), by removing the wording “six meters” and adding the wording “6 m” in its place.

**§ 176.704 [Amended]**

134. Amend § 176.704, in paragraph (b) by removing the wording “two meters” and adding the wording “2 m” in its place, and in paragraph (d) by removing the wording “six meters” and adding the wording “6 m” in its place.

**§ 176.905 [Amended]**

135. Amend § 176.905, paragraphs (i)(1) and (i)(2), by removing the word “flashpoint” and adding the wording “flash point” each place it appears.

**PART 177—CARRIAGE BY PUBLIC HIGHWAY**

136. The authority citation for part 177 continues to read as follows:

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

**PART 177—[AMENDED]**

137. Amend 49 CFR part 177 by removing the wording “Class A” each place it appears in the following sections:

177.835(c) introductory text  
177.848(e)(5), (g)(3)(v), (h), (i)

138. Amend 49 CFR part 177 by removing the wording “Class C” each place it appears in the following sections:

177.848(h)  
177.870(d)

139. Amend 49 CFR part 177 by removing the word “liters” and adding the acronym “L” each place it appears in the following sections:

177.840(h) introductory text, (p)(1),  
(p)(2) introductory text

140. Amend 49 CFR part 177 by removing the word “meters” and adding the acronym “m” each place it appears in the following sections:

177.834(i)(3)  
177.840(o), (p)(2) introductory text,  
(q)(1)  
177.842(b)(2), (f)

**§ 177.835 [Amended]**

141. Amend § 177.835, paragraphs (f) and (j), by removing the wording “Class A or Class B” each place it appears.

**§ 177.840 [Amended]**

142. In § 177.840:  
a. Amend paragraph (d), in the heading by removing the wording “cargo tanks” and adding the wording “cargo tank motor vehicles” in its place, and in the first sentence, by removing the wording “cargo tank” and adding the wording “cargo tank motor vehicle” in its place.

b. Amend paragraph (e) by removing the wording “cargo tanks” and adding the wording “cargo tank motor vehicles” in its place.

c. Amend paragraph (g) by removing the wording “cargo tank” and adding the wording “cargo tank motor vehicle” in its place.

d. Amend paragraph (i), in the first sentence by removing the wording “cargo tank” and adding the wording “cargo tank motor vehicle” in its place and by removing the wording “tank” and add the wording “cargo tank” in its place, and in the last sentence by removing the word “tank” and adding the wording “cargo tank” in its place.

e. Amend paragraph (m), the heading, by removing the wording “Cargo tank” and adding the wording “Cargo tank motor vehicle” in its place.

f. Amend paragraph (r)(2), the last sentence, by removing the wording “cargo tanks” and adding the wording “cargo tank motor vehicles” in its place.

g. Amend paragraph (t), in the first sentence by removing the wording “cargo tank” and adding the wording “cargo tank motor vehicle” in its place, and in the last sentence by removing the wording “cargo tanks” and adding the wording “cargo tank motor vehicles” in its place.

h. Amend paragraph (u), by removing the wording “cargo tanks” and adding the wording “cargo tank motor vehicles” in its place, and by removing the wording “cargo tank” and adding the wording “cargo tank motor vehicle” in its place.

**§ 177.848 [Amended]**

143. Amend § 177.848, paragraph (e)(5), by removing the wording “(blasting agents)” and paragraph (i), by removing the wording “(blasting agent)”.

**§ 177.854 [Amended]**

144. Amend § 177.854, paragraphs (f)(1) and (g)(2)(iv), by removing the wording “Class A or B”.

**PART 178—SPECIFICATIONS FOR PACKAGINGS**

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

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

146. Amend 49 CFR part 178 by removing the wording “Associate Administrator for Hazardous Materials Safety” and adding the wording “Associate Administrator” each place it appears in the following sections:

178.3(a)(2), (b)(2)  
 178.33–9(a)(2)  
 178.33a–9(a)(2)  
 178.270–2(c)  
 178.352–6(a)(3)  
 178.358–5(b)(5)  
 178.362–6(b)  
 178.503(a)(8), (c)(1)(ii)  
 178.509(b)(1)  
 178.601(e), (g)(7), (h), (i) introductory text, (i)(2), (k)  
 178.603(b)  
 178.604(b)(2)  
 178.605(b)  
 178.606(b), (c)(1)  
 178.608(b)(5)  
 178.703(a)(1)(vi)  
 178.801(e)(2) introductory text, (h), (i), (j) introductory text, (j)(2)  
 178.813(c)

147. Amend 49 CFR part 178 by removing the words “Intermediate Bulk Container” and adding “IBC” each place it appears in the following sections:

**Subpart N heading**

148. Amend 49 CFR part 178 by removing the wording “intermediate bulk container” and adding the acronym “IBC” each place it appears in the following sections:

178.700(c) introductory text  
 178.702(b)  
 178.703(a)(1) introductory text, (a)(1)(ii), (a)(1)(v), (a)(2)(i), (a)(2)(ii), (a)(2)(iii), (a)(2)(iv), (b) introductory text, (b)(1) introductory text, (b)(2) introductory text, (b)(3), (b)(4), (b)(5), (b)(6) introductory text, (b)(6)(i), (b)(6)(ii)  
 178.704 heading, (a), (b), (c), (d) introductory text, (e)  
 178.705(a) introductory text, (b)(1), (b)(2), (c)(1)(iii) introductory text, (c)(2)(ii)  
 178.706(a) introductory text, (c)(1), (c)(4)  
 178.707(a)(1) introductory text, (b) introductory text, (b)(1), (c)(2), (c)(3)(iv), (c)(4) introductory text, (c)(5) introductory text, (c)(5)(i), (c)(5)(ii), (c)(5)(iv)  
 178.708(b) introductory text, (c)(3), (c)(4) introductory text, (c)(4)(i), (c)(4)(ii)

178.709(a) introductory text, (c)(2) introductory text, (c)(2)(i), (c)(3), (c)(4) introductory text, (c)(4)(i), (c)(4)(ii)  
 178.710(a) introductory text, (b)(3), (c)(1)  
 178.801(b), (c)(1), (c)(2), (c)(3), (c)(4), (c)(5), (c)(6), (c)(7) introductory text, (c)(7)(ii), (d), (e)(1), (e)(2)(i), (e)(2)(ii), (f)(1) introductory text, (f)(1)(i), (f)(1)(ii), (f)(2), (g), (h), (i), (j)(2), (k), (l)(1), (l)(2)  
 178.803 introductory text, Table Notes 4, 5, and 7  
 178.810(a), (c), (d)(3)(i), (e)  
 178.811(a), (b), (c), (d)  
 178.812(a), (b)(1), (b)(2), (c)(1), (c)(2) introductory text, (d)  
 178.813(a), (b), (c), (d)  
 178.814(a), (c), (d)(1), (d)(2), (d)(4), (d)(5) introductory text, (d)(5)(i)(A), (d)(5)(ii)(A), (d)(5)(ii)(B), (e)(1), (e)(3)  
 178.815(a), (b)(1), (b)(2), (c)(3), (c)(4)(i), (c)(4)(ii), (d), (e)(1), (e)(2)  
 178.816(a), (b), (c)  
 178.817(b), (c), (d)  
 178.818(a), (b), (c), (d)  
 178.819(a), (b)(1), (b)(2), (b)(3), (c)

149. Amend 49 CFR part 178 by removing “Intermediate bulk container” and adding “IBC” each place it appears in the following sections:

178.702 heading, (a) introductory text, (a)(1), (a)(2)  
 178.704(f)  
 178.801(c)(1)

150. Amend 49 CFR part 178 by removing the wording “intermediate bulk containers” and adding the acronym “IBCs” each place it appears in the following sections:

178.700(a)  
 178.702(b)  
 178.703 heading, (a)(1)(i), (a)(1)(iii)(A), (a)(1)(iii)(B), (a)(1)(iii)(C), (a)(1)(vii), (a)(1)(viii)  
 178.705 heading, (a) introductory text, (b) introductory text, (c) introductory text, (c)(1)(ii), (c)(2) introductory text  
 178.706 heading, (a) introductory text, (a)(1), (a)(3), (a)(5), (b), (c) introductory text, (c)(3), (c)(4)  
 178.707 heading, (a)(1) introductory text, (a)(1)(i), (a)(1)(ii), (a)(1)(iii), (a)(1)(iv), (a)(1)(v), (a)(1)(vi), (c) introductory text, (c)(2), (c)(3) introductory text, (c)(3)(iv), (c)(5)(iv)  
 178.708 heading, (a), (b)(1), (c) introductory text, (c)(1), (c)(2) introductory text, (c)(2)(ii), (c)(4)(iv)  
 178.709 heading, (a) introductory text, (b) introductory text, (b)(1), (c) introductory text, (c)(1), (c)(2)(iv), (c)(4)(iv)  
 178.710 heading, (a) introductory text, (b) introductory text, (b)(1), (c) introductory text, (c)(2), (c)(4), (c)(5), (c)(6), (c)(7)

178.800  
 178.801(a), (g), (h), (i), (l)(1)  
 178.802 heading, (a) introductory text, (c)  
 178.803 heading, Table Notes 1, 2, 3 and 6  
 178.810(b)(1), (b)(2), (b)(3), (d)(1) introductory text  
 178.812(a)  
 178.814(b), (c), (d)(3), (e)(1), (e)(2)  
 178.815(b)(1), (c)(1), (c)(2), (c)(4) introductory text, (c)(4)(i), (d), (e)(1), (e)(2), (e)(3)  
 178.816(d) introductory text, (e)  
 178.817(a), (d)

151. Amend 49 CFR part 178 by removing “Intermediate Bulk Containers” in the heading for subpart O and adding “IBCs” in its place.

152. Amend 49 CFR part 178 by removing “Intermediate bulk containers” and adding “IBCs” each place it appears in the following sections:

178.704(a)  
 178.705(c)(2)(i)

153. Amend 49 CFR part 178 by removing the wording “pounds per square inch” and adding the acronym “psig” each place it appears in the following sections:

178.36(a)(1), (a)(2), (e)(1), (f), (i)(2), (k)(3)(iii)  
 178.37(a)(1), (a)(2) introductory text, (e)(1), (i)(2)  
 178.38(a), (e)(1), (i)(2)  
 178.39(a), (i)(2)  
 178.42(a), (f)(1), (f)(2), (f)(3)  
 178.44(a), (i)(2)  
 178.47(a), (j)(2)  
 178.50(a), (i)(2)  
 178.51(a) introductory text  
 178.53(a), (h)(2)  
 178.55(a), (i)(2)  
 178.56(a), (i)(2)  
 178.57(a) introductory text  
 178.58(a), (i)(2)  
 178.59(a) introductory text, (h)(4)  
 178.60(a), (j)(4)  
 178.68(a)  
 178.270–11(c)(4)

154. Amend 49 CFR part 178 by removing the wording “pounds per square inch” and adding the acronym “psi” each place it appears in the following sections:

178.37(k)(3)(iii)  
 178.38(f), (k)(3)(iii)  
 178.39(k)(3)(iii)  
 178.44(f)(2), (m)(3)(iii)  
 178.45(d)(1), (d)(2)(ii)  
 178.50(f)(1)(i), (f)(1)(ii), (f)(1)(iii), (k)(3)(iii)  
 178.51(f)(1)(iii), (f)(2), (f)(3), (j)(3)(iii), (k), (l)(3)  
 178.53(j)(5)(iii)

178.55(f), (k)(3)(iii)  
 178.56(f)(1)(ii), (f)(2), (j)(3)(iii), (k), (l)(3)  
 178.57(f)(1), (j)(3)(iii), (k), (l)(3)  
 178.58(m)(5)(iii)  
 178.59(j)(3)(iii)  
 178.60(g)(1) introductory text, (l)(3)(iii), (m), (n)(3)

178.61(f)(3), (j)(3)(iii), (k), (l)(3)  
 178.68(f)(1)(i), (f)(2), (h)(4) introductory text, (l)(1)  
 178.705(c)(1)(iii)(A), (c)(1)(iii)(B), (c)(1)(iv)(A), (c)(1)(iv)(B)

155. Amend 49 CFR part 178 by removing the acronym "psi" or "p.s.i.", as appropriate, and adding the acronym "psig" each place it appears in the following sections:

178.38(o) introductory text  
 178.45(a), (g)(4)  
 178.46(c)(5)(ii), (g)(2), (g)(3)(i), (g)(3)(ii), (g)(3)(iii)  
 178.47(f) introductory text  
 178.57(d)(3)  
 178.270-10(a), (b)  
 178.270-11(c)(1)(i), (c)(1)(ii)  
 178.338-1(f)(1)  
 178.347-1(c)  
 178.702(a)(1) Table

156. Amend 49 CFR part 178 by removing the wording "pounds per square inch gauge" and adding the acronym "psig" each place it appears in the following sections:

178.33-8(a)  
 178.33a-8(a)  
 178.61(a)

157. Amend 49 CFR part 178 by removing the wording "maximum allowable working pressure" or "Maximum allowable working pressure" or "Maximum Allowable Working Pressure", as appropriate, and adding the acronym "MAWP" each place it appears in the following sections:

178.245-3 Note 1  
 178.270-4(b)(1), (b)(2), (b)(3)  
 178.270-12(b), (e)  
 178.270-13(a)  
 178.270-14(b)(7), (c)(2)  
 178.271-1(b)  
 178.272-1(b)  
 178.337-1(b) Note 1  
 178.338-1(a)(1)  
 178.345-1(f)  
 178.346-1(b)

158. Amend 49 CFR part 178 by removing the word "centimeters" and adding the acronym "cm" each place it appears in the following sections:

178.337-8(a)(3), (a)(4)(v), (a)(4)(vi)  
 178.352-3(a), (b), (c)(1), (c)(2)(i), (c)(2)(ii), (c)(2)(iii), (c)(3)  
 178.354-3(b), (c) introductory text, (e)  
 178.356-2(a)(2), (c)  
 178.356-3(a)

178.358-2(a)(2), (a)(3)  
 178.360-1(b)  
 178.360-3(a)  
 178.362-2(a)(2), (b), (d)(2), (d)(3), (e)(1), (e)(2), (e)(3), (e)(4), (e)(5)  
 178.362-3(b)  
 178.364-2(a), (b), (d), (e), (f)  
 178.364-3

159. Amend 49 CFR part 178 by removing the word "centimeter" and adding the acronym "cm" each place it appears in the following sections:

178.352-3(a), (c)(1), (c)(3)  
 178.354-3(a) introductory text  
 178.358-2(a) introductory text  
 178.364-2(a)  
 178.364-3

160. Amend 49 CFR part 178 by removing the word "millimeter" and adding the acronym "mm" each place it appears in the following sections:

178.352-3(c)(1)  
 178.362-2(a)(1)

161. Amend 49 CFR part 178 by removing the word "millimeters" and adding the acronym "mm" each place it appears in the following sections:

178.270-9  
 178.352-3(b), (c)(1), (c)(2)(i), (c)(2)(ii), (c)(3)  
 178.354-3(e)  
 178.358-1(c)  
 178.360-1(b)

162. Amend 49 CFR part 178 by removing the word "kilograms" and adding the acronym "kg" each place it appears in the following sections:

178.356-1(b)(1), (b)(2), (b)(3)  
 178.358-1(b)  
 178.362-1(b)(1), (b)(2), (b)(3), (b)(4), (b)(5), (b)(6)  
 178.364-1(b)  
 178.700(c)(1)

163. Amend 49 CFR part 178 by removing the word "liters" and adding the acronym "L" each place it appears in the following sections:

178.270-9  
 178.270-11(a)(2)  
 178.337-8(a)(4)(i), (a)(4)(ii)  
 178.352-2(a)  
 178.352-3(c)(1), (c)(3)  
 178.354-2(a)  
 178.354-3(a) introductory text  
 178.700(c)(1)  
 178.703(b) introductory text, (b)(1)(i), (b)(2)(i)  
 178.707(c)(6)

164. Amend 49 CFR part 178 by removing the word "meters" and adding the acronym "m" each place it appears in the following sections:

178.270-5(d)  
 178.272-2(b)(1), (b)(2)

165. Amend 49 CFR part 178 by removing the wording "frangible

pressure relief devices" and adding the wording "non-reclosing pressure relief devices" each place it appears in the following sections:

178.705(c)(2)(i)  
 178.706(c)(4)  
 178.707(c)(3)(iv)

#### § 178.33a-2 [Amended]

166. Amend § 178.33a-2, paragraph (b), by removing the wording "one liter" and adding the wording "1 L" in its place.

#### § 178.36 [Amended]

167. In § 178.36:

a. Amend paragraph (a)(2)(iii), in the definitions following the formula, by removing the wording "P=hydrostatic test pressure-p.s.i." and adding the wording "P=hydrostatic test pressure-psig" in its place.

b. Amend paragraph (f), in the definitions following the formula, by removing the wording "S = wall stress in pounds per square inch" and adding the wording "S = wall stress in psi" in its place, and by removing the wording "P = minimum test pressure prescribed for water jacket test or 450 pounds per square inch" and adding the wording "P = minimum test pressure prescribed for water jacket test or 450 psig" in its place.

#### § 178.37 [Amended]

168. Amend § 178.37:

a. In paragraph (a)(2)(iii), in the definitions following the formula, by removing the wording "P=hydrostatic test pressure-p.s.i." and adding the wording "P=hydrostatic test pressure-psig" in its place.

b. By revising paragraphs (f)(2) and (f)(3) and the first sentence in paragraph (f)(1) to read as follows:

#### § 178.37 Specification 3AA and 3AAX seamless steel cylinders.

\* \* \* \* \*

(f) \* \* \*  
 (1) For cylinders with a service pressure of less than 900 psig, the wall stress may not exceed 24,000 psi. \* \* \*

(2) For cylinders with service pressure of 900 psig or more the minimum wall must be such that the wall stress at the minimum specified test pressure may not exceed 67 percent of the minimum tensile strength of the steel as determined from the physical tests required in paragraphs (k) and (l) of this section and must be not over 70,000 psi.

(3) Calculation must be made by the formula:

$$S = [P(1.3D^2 + 0.4d^2)] / (D^2 - d^2)$$

Where:

S=wall stress in psi;

P=minimum test pressure prescribed for water jacket test or 450 psig whichever is the greater;  
 D=outside diameter in inches;  
 d=inside diameter in inches.

\* \* \* \* \*

#### § 178.38 [Amended]

169. Amend § 178.38, paragraph (f), in the definitions following the formula, by removing the wording "S = wall stress in pounds per square inch" and adding the wording "S = wall stress in psi" in its place and by removing the wording "P = at least two times service pressure or 450 pounds per square inch," and adding the wording "P = at least two times service pressure or 450 psig," in its place.

#### § 178.39 [Amended]

170. In § 178.39, amend paragraph (f) by removing the wording "15,000 pounds per square inch" and adding the wording "15,000 psi" in its place; and, in the definitions following the formula, by removing the wording "S = wall stress in pounds per square inch" and adding the wording "S=wall stress in psi" and by removing the wording "P = minimum test pressure prescribed for water jacket test or 450 pounds per square inch" and adding the wording "P=minimum test pressure prescribed for water jacket test or 450 psig" in its place.

#### § 178.45 [Amended]

171. Amend § 178.45, paragraph (d)(2)(iii), in the definitions following the formula, by removing the wording "S=Tensile stress in pounds per square inch" and adding the wording "S=Tensile stress in psi" in its place, and by removing the wording "P=Hydrostatic test pressure in pounds per square, inch" and adding the wording "P=Hydrostatic test pressure-psig" in its place.

#### § 178.46 [Amended]

172. Amend § 178.46, paragraph (d), in the definitions following the formula, by removing the wording "S=Wall stress in pounds per square inch" and adding the wording "S=Wall stress in psi" in its place, and by removing the wording "P=Prescribed minimum test pressure in pounds per square inch (see paragraph (g) of this section)" and adding the wording "P=Prescribed minimum test pressure in psig (see paragraph (g) of this section)" in its place.

#### § 178.47 [Amended]

173. In § 178.47:

a. Amend paragraph (f)(1), in the definitions following the formula, by

removing the wording "S=Wall stress in pounds per square inch" and adding the wording "S=Wall stress in psi" in its place, and by removing the wording "P=Test pressure prescribed for water jacket test, i.e., at least two times service pressure, in pounds per square inch" and adding the wording "P=Test pressure prescribed for water jacket test, i.e., at least two times service pressure, in psig" in its place.

b. Amend paragraph (f)(2), in the definitions following the formula, by removing the wording "S=Wall stress in pounds per square inch" and adding the wording "S=Wall stress in psi" in its place, and by removing the wording "P=Test pressure prescribed for water jacket test, i.e., at least two times service pressure, in pounds per square inch" and add the wording "P=Test pressure prescribed for water jacket test, i.e., at least two times service pressure, in psig" in its place.

#### § 178.50 [Amended]

174. Amend § 178.50, paragraph (f)(2), in the definitions following the formula, by removing the wording "S=wall stress in pounds per square inch" and adding the wording "S=wall stress in psi" in its place, and by removing the wording "P=minimum test pressure prescribed for water jacket test or 450 pounds per square inch" and adding the wording "P=minimum test pressure prescribed for water jacket test or 450 psig" in its place.

#### § 178.53 [Amended]

175. In § 178.53:

a. Amend paragraph (e), introductory text, by removing the wording "24,000 pounds per square inch" in the first sentence and adding the wording "24,000 psi" in its place, and by removing the wording "37,000 pounds per square inch" and adding the wording "37,000 psi" in its place.

b. Amend paragraph (e)(1), in the definitions following the formula, by removing the wording "S=wall stress in pounds per square inch" and add the wording "S=wall stress in psi" in its place, and by removing the wording "P=test pressure prescribed for water jacket test, i.e., at least two times service pressure, in pounds per square inch" and add the wording "P=test pressure prescribed for water jacket test, i.e., at least two times service pressure, in psig" in its place.

c. Amend paragraph (e)(2), in the definitions following the formula, by removing the wording "S=wall stress in pounds per square inch" and adding the wording "S=wall stress in psi" in its place, and by removing the wording "P=test pressure prescribed for water

jacket test, i.e., at least two times service pressure, in pounds per square inch" and adding the wording "P=test pressure prescribed for water jacket test, i.e., at least two times service pressure, in psig" in its place.

#### § 178.57 [Amended]

176. Amend § 178.57, paragraph (f)(6), in the definitions following the formula, by removing the wording "S=wall stress in pounds per square inch" and adding the wording "S=wall stress in psi" in its place, and by removing the wording "P=minimum test pressure prescribed for pressure test in pounds per square inch" and adding the wording "P=minimum test pressure prescribed for pressure test in psig" in its place.

#### § 178.58 [Amended]

177. In § 178.58:

a. Amend paragraph (f)(1), in the definitions following the formula, by removing the wording "S=wall stress in pounds per square inch" and adding the wording "S=wall stress in psi" in its place, and by removing the wording "P=test pressure prescribed for water jacket test, i.e., at least two times service pressure, in pounds per square inch" and adding the wording "P=test pressure prescribed for water jacket test, i.e., at least two times service pressure, in psig" in its place.

b. Amend paragraph (f)(2), in the definitions following the formula, by removing the wording "S=wall stress in pounds per square inch" and adding the wording "S=wall stress in psi" in its place, and by removing the wording "P=test pressure prescribed for water jacket test, i.e., at least two times service pressure, in pounds per square inch" and adding the wording "P=test pressure prescribed for water jacket test, i.e., at least two times service pressure, in psig" in its place.

#### § 178.60 [Amended]

178. Amend § 178.60, paragraph (g)(1)(i), in the definitions following the formula, by removing the wording "S=wall stress in pounds per square inch" and adding the wording "S=wall stress in psi" in its place, and by removing the wording "P=750 pounds per square inch (minimum test pressure)" and adding the wording "P=750 psig (minimum test pressure)" in its place.

#### § 178.61 [Amended]

179. Amend § 178.61, paragraph (f)(4), in the definitions following the formula, by removing the wording "S=wall stress, p.s.i." and adding the wording "S=wall stress, psi" in its place, and by removing the wording "P=service

pressure, p.s.i.” and adding the wording “P=service pressure, psig” in its place.

#### § 178.65 [Amended]

180. Amend § 178.65, paragraphs (d)(1) and (d)(2), in the definitions following the formula, by removing the wording “S=Wall stress, in p.s.i.” and adding the wording “S=Wall stress, in psi” in its place, and by removing the wording “P=Test pressure” and adding the wording “P=Test pressure in psig” in its place.

#### § 178.270–2 [Amended]

181. Amend § 178.270–2, paragraph (b), by removing the wording “maximum allowable working pressure or”.

182. Amend § 178.270–5, by revising paragraphs (b)(1) and (b)(2) to read as follows:

#### § 178.270–5 Minimum thickness of shells and heads.

\* \* \* \* \*

(b) \* \* \*

(1) With a maximum cross-sectional dimension of 1.8 m (5.9 feet) or less, shall be at least 5 mm (0.197 inches) thick; or

(2) With a maximum cross-sectional dimension exceeding 1.8 m (5.9 feet), shall be at least 6.35 mm (0.250 inches) thick.

\* \* \* \* \*

#### § 178.270–11 [Amended]

183. In § 178.270–11:

a. Amend paragraph (a)(2) by removing the wording “frangible disc” and adding the wording “non-reclosing device” in its place.

b. Amend paragraph (b)(1), introductory text, by removing the wording “frangible discs” in the first sentence and adding the wording “rupture discs” in its place.

c. Amend paragraph (c)(2) by removing the wording “frangible disc” in the first sentence and adding the wording “rupture disc” in its place, and by removing the wording “pressure relief valve used as an emergency” in the last sentence.

d. Amend paragraph (d)(4) by removing the abbreviation “sq.” and adding the word “square” each place it appears.

e. Amend paragraph (e)(2)(i) by removing the wording “frangible discs” and adding the wording “rupture discs” in its place, and paragraph (e)(2)(ii) by removing the wording “start to discharge” and adding the wording “start-to-discharge” in its place.

f. Amend paragraph (e)(4) by removing the wording “start to discharge” and adding the wording “start-to-discharge” in its place.

g. By revising paragraph (a)(1) and the first sentence in paragraph (a)(3) to read as follows:

(a) \* \* \*

(1) Each portable tank, or each independent compartment of a portable tank, with a capacity of more than 1893 L (500 gallons), must be provided with a primary spring-loaded pressure relief device and, in addition, may have one or more emergency pressure relief devices that may be a spring-loaded pressure relief valve, a rupture disc or fusible element in parallel with the primary pressure relief device.

(3) If a non-reclosing device is inserted in series with a required pressure relief valve, the space between them must have a suitable tell-tale indicator to permit detection, prior to and during shipment, of disc rupture, pinholing, or leakage which could cause a malfunction of the pressure relief system.

\* \* \* \* \*

#### § 178.345–1 [Amended]

184. Amend § 178.345–1, in paragraph (c), in the definition for “Maximum Allowable Working Pressure or MAWP” by removing the wording “Maximum Allowable Working Pressure or”, and paragraph (k) introductory text, by removing the wording “Maximum Allowable Working Pressure (MAWP)” and adding the acronym “MAWP” in its place.

#### § 178.345–10 [Amended]

185. Amend § 178.345–10, paragraph (b)(3)(ii), by removing the wording “one liter” in the first sentence and adding the wording “1 L” in its place.

#### § 178.345–14 [Amended]

186. Amend § 178.345–14, paragraph (b)(3), by removing the wording “maximum allowable working pressure (MAWP)” and adding the acronym “MAWP” in its place.

#### § 178.346–3 [Amended]

187. Amend § 178.346–3, paragraph (b)(3), by removing the wording “one liter” in the first sentence and adding the wording “1 L” in its place.

188. Amend § 178.352–2 by revising paragraph (b) to read as follows:

#### § 178.352–2 Rated capacity.

\* \* \* \* \*

(b) The authorized maximum gross weight of the package is 160 kg (350 pounds) for sizes not over 210 L (55 gallons) or 220 kg (480 pounds) for sizes over 210 L (55 gallons) but not over 420 L (110 gallons).

#### § 178.352–3 [Amended]

189. Amend § 178.352–3, in the second sentence in paragraph (a) and the last sentence in paragraph (c)(3), by removing the wording “210L” and adding the wording “210 L” in its place.

190. Amend § 178.356–1, paragraph (c), by revising the fourth and fifth sentence to read as follows:

#### § 178.356–1 General requirements.

\* \* \* \* \*

(c) \* \* \* Each joint between sections must be stepped a minimum of 5 cm (2 inches) and gaps between mating surfaces must not exceed 5 mm (0.2 inch). Gaps between foam surface of top section and liner lid must not exceed 1 cm (0.4 inch) or 5 cm (2 inches) where taper is required for mold stripping.

\* \* \*

\* \* \* \* \*

191. Amend § 178.358–3, by revising paragraph (b)(2), the first sentence in paragraph (b)(3) and paragraph (b)(4) to read as follows:

#### § 178.358–3 Modification of Specification 21PF–1 overpacks.

\* \* \* \* \*

(b) \* \* \*

(2) Weigh each packaging element (top and bottom halves) separately to an accuracy of  $\pm 2.3$  kg ( $\pm 5$  pounds) and record the weights. If this measured weight exceeds the initially measured weight at the time of fabrication by 11.3 kg (25 pounds) (indicating a significant retained water content), the packaging element must be dried.

(3) Place overpack element in drying oven; maintain temperature between 87.8–98.9 °C (190–210 °F) for a minimum of 72 hours.

(4) Drying may be discontinued after 72 hours if the weight of the packaging element does not exceed the initially measured tare weight of that element at the time of fabrication by more than 11.3 kg (25 pounds). If the weight of the packaging element exceeds the initial fabricated weight (indicating a significant remaining water content) by more than 11.3 kg (25 pounds), drying must be continued until the weight differential is not higher than 11.3 kg (25 pounds), or until the rate of weight loss is less than 1.1 kg (2.5 pounds) per day.

\* \* \* \* \*

192. Revise § 178.364–3 to read as follows:

#### § 178.364–3 Closure.

Closure for the protective overpack must be provided by at least 4 mild steel hinges formed from minimum 2.5 cm (1 inch) x 5 mm ( $\frac{3}{16}$  inch) bar stock. Hinge pins must be minimum 6 mm ( $\frac{1}{4}$  inch)

diameter by 13.3 cm (5¼ inches) long mild steel rod drilled at both ends for cotter pins.

193. Amend § 178.605, by revising paragraphs (d)(2), (d)(3) and (d) concluding text to read as follows:

§ 178.605 Hydrostatic pressure test.

\* \* \* \* \*

(d) \* \* \*

(2) Not less than 1.75 times the vapor pressure at 50 °C (122 °F) of the material to be transported minus 100 kPa (15 psi) but with a minimum test pressure of 100 kPa (15 psig); or

(3) Not less than 1.5 times the vapor pressure at 55 °C (131 °F) of the material to be transported minus 100 kPa (15 psi), but with a minimum test pressure of 100 kPa (15 psig).

Packagings intended to contain hazardous materials of Packing Group I must be tested to a minimum test pressure of 250 kPa (36 psig).

\* \* \* \* \*

§ 178.803 [Amended]

194. Amend § 178.803, the table heading, by removing the wording "Intermediate Bulk Container (IBC)" and adding the acronym "IBC" in its place.

PART 179—SPECIFICATIONS FOR TANK CARS

195. The authority citation for part 179 continues to read as follows:

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

PART 179—[AMENDED]

196. Amend 49 CFR part 179, by removing the acronym "psi" or "p.s.i.", as appropriate, and adding the acronym "psig" each place it appears in the following sections:

- 179.12(b)
179.16(a)(3)
179.201–1 Table
179.221–1 Table
179.300–16(b)
179.301(a) Table
179.401–1 Table
App. A, paragraph 2.b.

197. Amend 49 CFR part 179 by removing the word "nonreclosing" and adding the word "non-reclosing" each place it appears in the following sections:

179.15(e) introductory text, (f)(1), (f)(3), (f)(4)

198. Amend 49 CFR part 179 remove the wording "safety relief" and add the wording "pressure relief" each place it appears in the following sections:
179.102–17(l)

- 179.200–13 heading
179.220–24 heading
179.300–17(c)
179.500–10(a)
179.500–12(a)

§ 179.2 [Amended]

199. Amend § 179.2, by removing and reserving paragraphs (a)(4) and (a)(9).

§ 179.15 [Amended]

200. Amend § 179.15, paragraph (e)(2), by removing the wording "start-to-discharge" in the first sentence each place it appears.

§ 179.18 [Amended]

201. Amend § 179.18, paragraph (c), by removing the wording "Dockets Unit" and adding the wording "RSPA Records Center" in its place.

§ 179.101–1 [Amended]

202. Amend § 179.101–1, the column headings of the table, by removing the acronym "psi" and adding the acronym "psig" each place it appears.

§ 179.102–4 [Amended]

203. Amend § 179.102–4, paragraph (i), by removing the wording "safety relief valve" and adding the wording "reclosing pressure relief valve" in its place.

204. Amend § 179.102–17 by revising paragraph (d) to read as follows:

§ 179.102–17 Hydrogen chloride, refrigerated liquid.

\* \* \* \* \*

(d) Pressure relief valves must be trimmed with monel or other approved material and equipped with a rupture disc of silver, polytetrafluoroethylene coated monel, or tantalum. Each pressure relief device shall have the space between the rupture disc and the valve vented with a suitable auxiliary valve. The discharge from each pressure relief valve must be directed outside the protective housing.

\* \* \* \* \*

§ 179.200–6 [Amended]

205. Amend § 179.200–6, paragraphs (a), (b) and (c), in the definitions following the formula, by removing the wording "P=Minimum required bursting pressure in p.s.i." and adding the wording "P=Minimum required bursting pressure in psig" each place it appears.

206. Amend § 179.200–14, paragraph (b), by revising the last sentence to read as follows:

§ 179.200–14 Expansion capacity.

\* \* \* \* \*

(b) \* \* \* The capacity of the dome shall be measured from the inside top of

shell of tank to the inside top of dome or bottom of any vent pipe projecting inside of dome, except that when a pressure relief device is applied to side of dome, the effective capacity of the dome shall be measured from top of the pressure relief device opening inside of dome to inside top of shell of tank.

\* \* \* \* \*

§ 179.201–8 [Amended]

207. Amend § 179.201–8, paragraph (a), by removing the wording "pounds per square inch" in the second sentence and adding the acronym "psig" in its place.

§ 179.220–6 [Amended]

208. Amend § 179.220–6, paragraphs (a) and (b), in the definitions following the formula, by removing the wording "P=Minimum required bursting pressure in p.s.i." and adding the wording "P=Minimum required bursting pressure in psig" each place it appears.

§ 179.300–6 [Amended]

209. In § 179.300–6:
a. In paragraph (a), in the definitions following the formula, remove the wording "P=minimum required bursting pressure in p.s.i." and add the wording "P=minimum required bursting pressure in psig" in its place;
b. In paragraph (b), in the definitions following the formula, remove the wording "p=tank test pressure in p.s.i." and add the wording "p=tank test pressure in psig" in its place.

210. Amend § 179.300–15 by revising the section heading and paragraph (c) to read as follows:

§ 179.300–15 Pressure relief devices.

\* \* \* \* \*

(c) Pressure relief devices shall be set for start-to-discharge and rupture discs shall burst at a pressure not exceeding that specified in § 179.301.

\* \* \* \* \*

211. Amend § 179.300–17 by revising the section heading and paragraph (b) to read as follows:

§ 179.300–17 Tests of pressure relief devices.

\* \* \* \* \*

(b) Rupture discs of non-reclosing pressure relief devices must be tested as prescribed in Appendix A, A5.03 of the AAR Manual of Standards and Recommended Practices, Section C—Part III, Specifications for Tank Cars, Specification M–1002, January 1996 (see § 171.7 of this subchapter).

\* \* \* \* \*

§ 179.400–8 [Amended]

212. In § 179.400–8:

a. Amend paragraphs (a), (b) and (c), in the definitions following the formula, by removing the wording "P=minimum required bursting pressure, in psi" and adding the wording "P=minimum required bursting pressure in psig" each place it appears;

b. Amend paragraph (d) by removing the acronym "psi" in the last sentence of the text preceding the formula and adding the acronym "psig" in its place; and by removing in the definitions following the formula the wording "P<sub>c</sub> = Critical collapsing pressure (37.5 psi minimum), in psi" and adding the wording "P<sub>c</sub> = Critical collapsing pressure (37.5 psig minimum) in psig" in its place.

#### § 179.400–9 [Amended]

213. Amend § 179.400–9, paragraph (d), in the definitions following the formula, by removing the wording "P<sub>c</sub> = critical collapsing pressure (37.5 psi minimum), in psi" and adding the wording "P<sub>c</sub> = critical collapsing pressure (37.5 psig minimum) in psig" in its place.

#### § 179.400–20 [Amended]

214. Amend § 179.400–20, paragraph (d), by removing the wording "frangible disc" in the last sentence and adding the wording "rupture disc" in its place.

#### § 179.400–25 [Amended]

215. Amend § 179.400–25, paragraph (a), by removing the wording "frangible disc" and adding the wording "rupture disc" in its place.

#### § 179.500–3 [Amended]

216. Amend § 179.500–3, paragraph (c)(2), by removing the wording "pounds per square inch" and adding the acronym "psig" in its place.

#### § 179.500–4 [Amended]

217. Amend § 179.500–4, paragraph (a), by removing the wording "pounds per square inch" in the first sentence and adding the acronym "psi" in its place.

#### § 179.500–7 [Amended]

218. Amend § 179.500–7, paragraph (b), by removing the wording "pounds per square inch" and adding the acronym "psi" each place it appears.

#### § 179.500–12 [Amended]

219. Amend § 179.500–12, the section heading, by removing the wording "Safety relief" and adding the wording "Pressure relief" in its place.

220. Amend § 179.500–16 by revising the section heading, the first sentence in paragraph (a) and paragraph (b) to read as follows:

#### § 179.500–16 Tests of pressure relief devices.

(a) Pressure relief valves shall be tested by air or gas before being put into service. \* \* \*

(b) For pressure relief devices that incorporate a rupture disc, samples of the discs used shall burst at a pressure not exceeding the marked test pressure of tank and not less than 7/10 of marked test pressure.

221. Amend § 179.500–17 by revising paragraphs (a)(5) and (a)(6) to read as follows:

#### § 179.500–17 Marking.

(a) \* \* \*

(5) Date (such as 1–01, for January 2001) of tank test, so placed that dates of subsequent tests may easily be added.

(6) Date (such as 1–01, for January 2001) of latest test of the pressure relief device or of the rupture disc, required only when tank is used for transportation of flammable gases.

\* \* \* \* \*

#### § 179.500–18 [Amended]

222. In § 179.500–18, paragraph (c):

a. Amend the table titled "RECORD OF CHEMICAL ANALYSIS OF STEEL IN TANKS", in the column headings, by removing the wording "pounds per square inch" and adding the acronym "psi" each place it appears.

b. Amend the table titled "RECORD OF HYDROSTATIC TESTS ON TANKS" by removing the wording "pounds per square inch" and adding the acronym "psig" in its place.

c. Amend the table titled "RECORD OF GENERAL DATA ON TANKS":

i. In column 10, by removing the wording "pounds per square inch", and adding the acronym "psig" in its place.

ii. In column 11, by removing the wording "pounds per square inch" and adding the acronym "psi" in its place.

iii. By revising the heading of column 9 to read "(S) Calculated fiber stress in psi at 7/10 marked test pressure".

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

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

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

#### PART 180—[AMENDED]

224. Amend CFR part 180 by removing the wording "intermediate bulk container" or "intermediate bulk container", as appropriate, and adding the acronym "IBC" each place it appears in the following sections:

180.350

180.351(a), (b)

180.352(a), (b) introductory text, (b)(3)(i), (c)(1), (c)(2)(i) introductory text, (c)(2)(i)(A), (c)(2)(i)(B), (c)(2)(i)(C), (c)(2)(ii) introductory text, (c)(2)(ii)(C), (c)(2)(iii) introductory text, (c)(2)(iii)(B), (f)

225. Amend 49 CFR part 180 by removing the wording "intermediate bulk containers" and adding the acronym "IBCs" each place it appears in the following sections:

180.351 heading

180.352(b) heading, (b)(3)(ii)

226. Amend 49 CFR part 180 by removing the acronym "psi" or "p.s.i.", as appropriate, and adding the acronym "psig" each place it appears in the following sections:

180.509(j)(2)

180.519(b)(2), (b)(5) Table

227. Amend 49 CFR part 180 by removing the word "liters" and adding the acronym "L" each place it appears in the following sections:

180.405(m)(2), (m)(3), (n)

180.409(b)

#### § 180.352 [Amended]

228. Amend § 180.352, the section heading, by removing the wording "intermediate bulk containers (IBCs)" and adding the acronym "IBCs" in its place.

#### § 180.405 [Amended]

229. Amend § 180.405, paragraph (h)(2), by removing the wording "one liter" in the first sentence and adding the wording "1 L" in its place.

230. Amend § 180.509 by revising paragraphs (h)(2)(i) and (h)(2)(ii) to read as follows:

#### § 180.509 Requirements for inspection and test of specification tank cars.

\* \* \* \* \*

(h) \* \* \*

(2) \* \* \*

(i) Removing the reclosing pressure relief device from the tank car for inspection; and

(ii) Testing the reclosing pressure relief device with air or another gas to ensure that it conforms to the start-to-discharge pressure for the specification or hazardous material in this subchapter.

\* \* \* \* \*

#### § 180.515 [Amended]

231. Amend § 180.515, paragraph (c), by removing the wording "safety relief device" and adding the wording "reclosing pressure relief device" in its place.

**§ 180.519 [Amended]**

232. In § 180.519:

a. Amend paragraph (b)(3), by removing the wording “start to discharge” and adding the wording “start-to-discharge” in its place.

b. Amend paragraph (b)(4), by removing the wording “Frangible discs”

and adding the wording “Rupture discs” in its place.

c. Amend paragraph (b)(5), column headings for RETEST TABLE 1 by removing the wording “Safety relief” and adding the wording “Pressure relief” each place it appears, and in Note (a) of the table by removing the

wording “frangible disc” and adding the wording “rupture disc” in its place.

Issued in Washington, DC, on June 27, 2001, under authority delegated in 49 CFR part 1.

**Edward A. Brigham,**

*Acting Deputy Administrator.*

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