

“173.301(i) and (j)” and adding “173.301(j) through (m)” in its place.

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

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

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

■ 9. In § 173.40, paragraphs (b) and (d)(2) are revised to read as follows:

### **§ 173.40 General packaging requirements for toxic materials packaged in cylinders.**

\* \* \* \* \*

(b) *Outage and pressure requirements.* The pressure at 55 °C (131 °F) of Hazard Zone A and, after December 31, 2003, Hazard Zone B materials may not exceed the service pressure of the cylinder. Sufficient outage must be provided so that the cylinder will not be liquid full at 55 °C (131 °F).

\* \* \* \* \*

(d) \* \* \*

(2) Each cylinder with a valve must be equipped with a protective metal cap, other valve protection device, or an overpack which is sufficient to protect the valve from breakage or leakage resulting from a drop of 2.0 m (7 ft) onto a non-yielding surface, such as concrete or steel. Impact must be at an orientation most likely to cause damage.

\* \* \* \* \*

■ 10. Section 173.163 is revised to read as follows:

### **§ 173.163 Hydrogen fluoride.**

Hydrogen fluoride (hydrofluoric acid, anhydrous) must be packaged in a specification 3, 3A, 3AA, 3B, 3BN, 3E, or 4A cylinder; or a specification 4B, 4BA, or 4BW cylinder if the cylinder is not brazed. Filling density may not exceed 85 percent of the cylinder's water weight capacity. In place of the periodic volumetric expansion test, cylinders used in exclusive service may be given a complete external visual inspection in conformance with part 180, subpart C, of this subchapter, at the time such periodic requalification becomes due. Cylinders removed from hydrogen fluoride service must be condemned in accordance with § 180.205 of this subchapter and, at the direction of the owner, the cylinder may be rendered incapable of holding pressure.

### **§ 173.181 [Amended]**

■ 11. In § 173.181, the last sentence in paragraph (a)(2) is amended by removing the reference “§§ 173.34(d)(6) and 177.838(h)” adding “§ 177.838(h)” in its place.

■ 12 In § 173.226, paragraph (a) is revised to read as follows:

### **§ 173.226 Materials poisonous by inhalation, Division 6.1, Packing Group 1, Hazard Zone A.**

\* \* \* \* \*

(a) In seamless specification cylinders conforming to the requirements of § 173.40. However, a welded cylinder filled before October 1, 2002, may be transported for reprocessing or disposal of the cylinder's contents until December 31, 2003.

\* \* \* \* \*

■ 13. In § 173.228, paragraph (b) is revised to read as follows:

### **§ 173.228 Bromine pentafluoride or bromine trifluoride.**

\* \* \* \* \*

(b) A material in Hazard Zone A must be transported in a seamless specification cylinder conforming to the requirements of § 173.40. However, a welded cylinder filled before October 1, 2002, in accordance with the requirements of this subchapter in effect at the time of filling, may be transported for reprocessing or disposal of the cylinder's contents until December 31, 2003. No cylinder may be equipped with a pressure relief device.

### **§ 173.301 [Amended]**

■ 14. In § 173.301, the following amendments are made:

■ a. Paragraph (a) is amended by removing the reference “173.302 through 173.305” and adding “173.301a through 173.305” in its place.

■ b. Paragraphs (a)(3), (f)(2), (f)(3), (g)(1) introductory text, (h)(2)(iv), (i)(3), and the beginning of the first sentence in paragraph (h)(3) introductory text, are revised.

■ c. Paragraph (m) is redesignated as paragraph (n) and a new paragraph (m) is added.

The revisions and additions read as follows:

### **§ 173.301 General requirements for shipment of compressed gases in cylinders and spherical pressure vessels.**

\* \* \* \* \*

(a) \* \* \*

(3) Pressure relief devices must be tested for leaks before a filled cylinder is shipped from the cylinder filling plant. It is expressly forbidden to repair a leaking fusible plug device where the leak is through the fusible metal or between the fusible metal and the opening in the plug body, except by removal and replacement of the pressure relief device.

\* \* \* \* \*

(f) \* \* \*

(2) After December 31, 2003, a pressure relief device, when installed, must be in communication with the vapor space of a cylinder containing a Division 2.1 (flammable gas) material.

(3) For a specification 3, 3A, 3AA, 3AL, 3AX, 3AXX, 3B, 3BN, or 3T cylinder filled with gases in other than Division 2.2, beginning with the first requalification due after December 31, 2003, the burst pressure of a CG–1, CG–4, or CG–5 pressure relief device must be at test pressure with a tolerance of plus zero to minus 10%. An additional 5% tolerance is allowed when a combined rupture disk is placed inside a holder. This requirement does not apply if a CG–2, CG–3 or CG–9 thermally activated relief device or a CG–7 reclosing pressure valve is used on the cylinder.

\* \* \* \* \*

(g) \* \* \*

(1) Cylinder manifolding is authorized only under conditions prescribed in this paragraph (g). Manifolder cylinders must be supported and held together as a unit by structurally adequate means. Except for Division 2.2 materials, each cylinder must be equipped with an individual shutoff valve that must be tightly closed while in transit. Manifold branch lines must be sufficiently flexible to prevent damage to the valves that otherwise might result from the use of rigid branch lines. Each cylinder must be individually equipped with a pressure relief device as required in paragraph (f) of this section, except that pressure relief devices on manifolded horizontal cylinders that are mounted on a motor vehicle or framework may be selected as to type, location, and quantity according to the lowest marked pressure limit of an individual cylinder in the manifolded unit. The pressure relief devices selected for the manifolded unit must have been tested in accordance with CGA pamphlets S–1.1 and S–7 (incorporated by reference; see § 171.7 of this subchapter). Pressure relief devices on manifolded horizontal cylinders filled with a compressed gas must be arranged to discharge unobstructed to the open air. In addition, for Division 2.1 (flammable gas) material, the PRDs must be arranged to discharge upward to prevent any escaping gas from contacting personnel or any adjacent cylinders. Valves and pressure relief devices on manifolded cylinders filled with a compressed gas must be protected from damage by framing, a cabinet, or other method. Manifolding is authorized for cylinders containing the following gases:

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