DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Parts 171, 173 and 178

[Docket No. HM-190; Amdt. Nos. 171-96, 173-206, 178-90]
RIN 2137-AA72

Modifications to DOT Specification 21 PF-1 Overpacks

AGENCY: Research and Special Programs Administration (RSPA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: This final rule amends the Hazardous Materials Regulations (HMR) by changing the requirements for the fabrication, modification, maintenance, and use of DOT 21PF-1 (49 CFR 178.121) overpacks for fissile uranium hexafluoride. This action is necessary to incorporate into the regulations the experience gained over the past 20 years from the use of the these overpacks. The intent of this final rule is to enhance safety in the transport and use of the overpacks.

DATES: This amendment is effective April 1, 1989. However, compliance with the regulations as amended herein with regard to criteria for modification of existing DOT 21PF-1 overpacks, and for fabrication of new 21PF-1 overpacks, is authorized immediately. The incorporation by reference of certain publications listed in this amendment is approved by the Director of the Federal Register as of April 1, 1989.

FOR FURTHER INFORMATION CONTACT: John A. Gale (202-366-4488), Standards Division, or A. Wendell Carriker (202-366-4545), Technical Division, Office of Hazardous Materials Transportation, RSPA, 400 7th Street, SW., Washington, DC 20590.

SUPPLEMENTARY INFORMATION:

I. Background

The DOT 21PF-1 protective overpack is a cylindrical metal drum used to "overpack" a 30-inch diameter cylinder containing enriched uranium hexafluoride (UF_6). The overpack provides additional containment of the UF_6 during transport. Since about 1968, thousands of overpacks have been produced and used in domestic and international commerce.

Many of these overpacks have been damaged during the course of tranport, or have deteriorated in service. Problems have centered around corrosion of the external skin and warping of the wooden step joint, allowing in-leakage of rainwater and ocean spray. The primary difficulty encountered is a tendency for these overpacks to collect and retain water during normal use. This water, especially salt (ocean) water, accelerates the corrosion of metal parts and the decay of wooden parts. The water collects inside the overpacks during rainy weather or during ocean voyages from salt spray, and then leaks or sloshes out during dry weather. Although the water has not been contaminated with radioactive material, liquid leakage from a package marked and labeled "RADIOACTIVE" may cause considerable alarm.

On August 16, 1984, RSPA published a Notice of Proposed Rulemaking (NPRM) (Docket No. HM-190, Notice No. 84-7; 49 FR 32774) which proposed to modify existing DOT 21PF-1 overpacks and to change construction requirements for new DOT 21PF-1 overpacks. The notice was in response to a request by the Department of Energy (DOE) who investigated the safety of the DOT 21PF-1 overpack. Subsequently, the DOE developed a proposal to modify existing overpacks and for the fabrication of new overpacks, thus enhancing safety and extending their service life. The NPRM included a detailed description of the packaging experience and specific proposals for fabrication, modification, maintenance, and use of the DOT 21PF-1 overpack. In the four years since the publication of the NPRM, RSPA has received eight comments to the proposal. In addition, DOE conducted further tests on the DOT 21FP-1 overpack to assure that the modifications will provide the maximum level of safety to the general public and will provide for a longer service life. This final rule is based on the merits of comments to the notice and the results of further testing of phenolic foam saturated with water and its drying. The new design and modification requirements, drawing, bills of materials, and supporting documents are consolidated in a single report, "Proposal for Modifications to U.S. Department of Transportation Specification 21PF-1 Fire and Shock Resistant Phenolic Foam-Insulated Metal Overpack," K/SS-471, Oak Ridge Gaseous Diffusion Plant, Martin Marietta Energy Systems, November 30, 1986. A copy of that report is on file at RSPA's Dockets Unit located in room 8421 at 400 7th Street, SW., Washington, DC, 20590.

II. Comments Received

As noted above, RSPA received eight comments to the NPRM. Of the eight commenters only one did not fully support the proposal. The following is a discussion of these comments and what action, if any, RSPA has undertaken.

The Nuclear Regulatory Commission (NRC) questioned provisions of the proposal for prevention of wood degradation and warping, welding integrity requirements and welder qualifications, the need for continuous welds at the seams and joints, the need for thermal conductivity measurements, the mechanics of foam drying, and the establishment of acceptance criteria. RSPA agreed with these concerns and asked DOE to respond.

In response, the DOE developed a revised detailed packaging safety analysis report, "Safety Analysis Report for Modified UF_6 Cylinder Shipping Package, DOT Specification 21PF-1," Report No. K/D-5400, Rev. 3, Oak Ridge Gaseous Diffusion Plant, Martin Marietta Energy Systems, Inc., December 1986. A copy of that report is also on file in RSPA's Dockets Unit and is a part of the USDOE report K/SS-471 available from the address identified in § 171.7(c)(16). This report satisfied the concerns of the NRC and RSPA noted above.

Tri-State Motor Transit (TSMT) verified the need for modification to the specification, and supported the proposal. Tri-State expressed concern that the water in-leakage may affect the overpacks capability to perform to designed specifications and the possibility of a steam explosion in the case of a fire involving a water-logged overpack.

Three U.S. affiliates of Japanese entities, Marubeni America Corporation, Mitsubishi International Corporation and Mitsui and Company (U.S.A.), Inc., supported the proposal but requested that the effective date for mandatory modification of existing overpacks be extended from the proposed 18 to 24 months. Those three firms claimed that the extra time would be needed to obtain the necessary changes to their Japanese governmental license. One American company, Norfolk Southern Corporation, also requested an extension of the conversion period to 24 months. RSPA agrees with these commenters and has provided a 24-month conversion period.

ASEA-ATOM of Sweden commented that the "proposed drying method appeared to be an over specification" and that there may be more effective drying procedures than the one proposed. In addition, ASEA-ATOM believes the proposed one-piece gasket was a "tight specification" and suggested that a formed four-piece gasket be substituted in place of or in

addition to the one-piece gasket. The original drying procedure proposed in the NPRM was found by DOE to be flawed. Based on tests conducted by Nuclear Container, Inc., and Martin Marietta Energy Systems, Oak Ridge Gaseous Diffusion Plant, it was determined that in order to remove the water from the overpack insulation, a temperature between 190°F. and 200°F. is required. Based on the extensive experience gained by DOE on the proper method of drying these overpacks, RSPA believes that alternative methods of drying should be subjected to RSPA's exemption process contained in § 107.103. Therefore, RSPA denies ASEA–ATOM's request that the drying methods be at the discretion of the package owner.

In regard to ASEA–ATOM's request for a four-piece gasket, the appropriate drawings have been revised to allow an alternate gasket. This gasket is made of four to six strips which are bonded together to form an effective one-piece gasket. This alternate is a "closed cell, medium density silicon sponge rated for continuous temperature of 400°F. Bonded in place in the same manner as silastic." RSPA believes that this alternative gasket satisfies the request of ASEA–ATOM without compromising the safety of the new DOT 21PF–1 overpack design.

III. Discussion of Amendments

These amendments provide for changes to the requirements for both used and new DOT 21PF–1 overpacks. Used overpacks are required to be rehabilitated, including modifications for easier maintenance and longer service life. After modification they are to be designated as DOT 21PF–1A overpacks. New overpacks are required to meet improved design criteria incorporating hardware provisions similar to those of the modified overpacks. New overpacks are designated as DOT 21PF–1B. Accordingly, § 173.417 has been changed to authorize the use of DOT 21PF–1A and 21PF–1B. In addition, Table 6 in § 173.417 is revised to identify the DOT 21PF–1 series (i.e., DOT 21PF–1, DOT 21PF–1A, and DOT 21PF–1B). These changes result in a redesign of the closure mechanism and extensive use of stainless steel rather than carbon steel, thereby increasing durability and providing improved resistance to moisture encountered in the transport environment.

The basis for and evaluation of the changes to the DOT 21PF–1 overpack are contained in USDOE report K/SS–471. This evaluation culminated in new engineering drawings and bills of materials for the construction and modification of DOT 21PF–1 overpacks and are contained in CAPE–1662, Revision 1 and Supplement 1. Therefore, RSPA is updating the regulatory reference to CAPE–1662 and is incorporating USDOE report K/SS–471 into the specification. The following is a description of regulatory references and other modifications relative to reconditioning and manufacture of the DOT 21PF–1 overpack.

Regulatory References

CAPE–1662 is a package of drawings, incorporated by reference in § 171.7(d)(16), used in the construction of the 20PF and 21PF series of overpacks. To update the regulatory reference in § 171.7(d)(16), CAPE–1662 is amended to "CAPE–1662, Revision 1, and Supplement 1" to identify the following drawings and bills of materials: (1) E–S–31536–J, Revision P and S1E–31536–J2, Revision B which describes the new DOT 21PF–1 design (DOT 21PF–1B); and (2) S1E–31536–J1, Revision D which describes the modifications necessary to existing DOT 21PF–1 overpacks (DOT 21PF–1A).

Also in regard to availability, 49 CFR 171.7(c)(16) is revised to add at the end of the last sentence "and from the USDOE, Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831."

Many of the detailed design changes are not listed in the amended portions of 49 CFR 178.121, but are instead shown in CAPE–1662, Revision 1 and Supplement 1 and K/SS–471. These documents are available from the USDOE at the addresses identified in § 171.7(c)(16). In addition, reference has been made in §§ 171.7(d)(16) and 178.121–1(a) to identify K/SS–471 and its importance to the construction of DOT 21PF–1A and 1B overpacks.

On July 6, 1987, RSPA published Notice No. 87–7 under Docket HM–166V (52 FR 25342), proposing modification to § 173.420 which pertains to the packaging of UF_6 for transport. This Notice was supplemented on April 6, 1988, (53 FR 11320) which proposed to update the regulatory reference to ANSI Standard N14.1–1987 and to provide a higher filling density for cylinders of UF_6. The updating of ANSI N14.1 affects this final rule because § 173.417 requires DOT 21PF–1 overpacks to be handled and packaged in accordance with ANSI N14.1–1982. Because no adverse comments were received to the supplementary proposed rule change regarding the updating of ANSI N14.1, RSPA is incorporating as part of this final rule the amendatory language proposed in that rule, limited to the regulatory update of ANSI N14.1. This action is necessary to provide regulatory consistency in the transport of packages containing UF_6. The additional proposals contained in HM–166V published July 6, 1987 and supplemented April 6, 1988, are not affected by this rule change.

Existing Overpacks

The first set of changes involves existing overpacks. The major changes are designed to remove (by drying) water which may be retained in the overpack, to drill drain holes in the external stiffener braces which tend to collect water, and to seal those joints which easily admit water. The sealing involves installation of a new joint cover and gasket, and application of a sealant compound to the stiffener joints and outer shell joints.

A carbon steel step-joint cover must be installed on the joint for the lower half of the overpack where experience indicates that water accumulation has been most significant. Step joint gaskets have been changed from a vinyl foam or expanded rubber to either a Silastic E RTV rubber or a silicon sponge. Inspection for wood warpage is required.

Corroded outer shells, inner liners, and support framing must be inspected, replaced and repaired as necessary to meet specified acceptance criteria. Additional welding performance and inspection requirements and welder qualification criteria are specified. Moisture absorption measurement techniques are specified. Vent holes are to be covered with a seal which will remain intact during normal conditions of transport. Modified DOT 29PF–1 overpacks are to be redesignated as DOT 21PF–1A overpacks.

New Construction

The second part of the amendment involves future construction of DOT 21PF–1 overpacks. These design changes are more comprehensive than those proposed for existing overpacks. The most significant of these changes involve (1) use of stainless steel instead of mild (carbon) steel for the metal shell, and (2) the step-joint at the overpack closure is reversed from a step-down to step-up joint. Continuous welds will assure the integrity of body seams and joints for the liner, shell, and step-joint. Welding requirements and welder qualifications are similar to those required for existing overpacks.

Wood materials are amended to include white oak as well as hard or sugar maple. All metal parts are changed from carbon steel to stainless

steel, thereby eliminating the need for painting the metal for weather resistance. The wood step-joint must be covered with stainless steel painted with a fire-retardant (intumescent) paint.

Silastic 732 RTV adhesive/sealant is added between the intermittent welds for all stiffeners, angles, plates, etc. Identification plates are required to indicate the initial tare weight of the overpack to allow for determination of possible water in-leakage. Cover support legs have been relocated for stronger attachment. New DOT 21PF–1 overpacks are to be designated as DOT 21PF–1B overpacks.

Under this final rule, existing overpacks must be removed from service and modified. The NPRM proposed an eighteen-month period for this modification. As a result of the merits of the comments received, the conversion period has been extended to 24 months from the effective date of this amendment. During the interim period, unmodified overpacks may be continued to be used. After the 24 months, the use of unmodified overpacks is prohibited.

No new construction to the previous design criteria is permitted on or after the effective date of this amendment. In the NPRM an effective date of six months after the publication of the final rule was proposed. RSPA has provided this in the final rule. However, there may be new overpacks already under construction. Those overpacks under construction on the effective date of this amendment are required to be modified, on the same time schedule, to the same specification as existing overpacks.

RSPA received a request from DOE to further amend the regulatory requirements pertaining to the DOT 21PF–1 series overpack. DOE's request is summarized as follows:

(1) DOT 21PF–1A and 1B overpacks should be recertified every 5 years beginning after modification or initial fabrication, as applicable; and

(2) Persons modifying, fabricating, recertifying or making repairs to DOT 21PF–1, 21PF–1A or 1B overpacks, should be required to have an approved quality assurance program.

(3) The regulatory references to the USDOE report ORO–651 entitled, "Uranium Hexafluoride Handling Procedures and Container Criteria," should be updated to Revision 5, 1987 edition.

RSPA did not incorporate these requests into the final rule because the public was not provided an opportunity to comment on these requests. However, RSPA may address these issues in future rulemaking actions.

IV. Administrative Notices

RSPA has determined that this rulemaking: (1) Is not a "major rule" under Executive Order 12291; (2) is not "significant" under DOT's regulatory policies and procedures (44 FR 11034); (3) will not affect not-for-profit enterprises or small governmental jurisdictions; and (4) does not require an environmental impact statement under the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*). A regulatory evaluation is available for review in the docket.

Based on limited information concerning the size and nature of entities likely to be affected, I certify that this regulation will not have a significant impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. I have reviewed this regulation in accordance with Executive Order 12612 ("Federalism"). It has no substantial direct effects on the States, on the Federal-State relationship or on the distribution of power and responsibilities among levels of government. Thus, this regulation contains no policies that have Federalism implications as defined in Executive Order 12612.

A regulatory information number (RIN) is assigned to each regulatory action listed in the Unified Regulatory 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 Regulatory Agenda.

List of Subjects

49 CFR Part 171

Hazardous materials transportation, Incorporation by reference.

49 CFR Part 173

Hazardous materials transportation, Packaging, Radioactive materials.

49 CFR Part 178

Hazardous materials transportation, Packaging, Specifications and standards.

In consideration of the foregoing, 49 CFR Parts 171, 173, and 178 are amended as follows:

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

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

Authority: 49 App. U.S.C. 1802, 1803, 1804, 1808; 49 CFR Part 1, unless otherwise noted.

2. In § 171.7, paragraphs (c)(16), (d)(4)(iii) and (d)(16) are revised to read as follows:

§ 171.7 Matter incorporated by reference.

* * * * *

(c) * * *

(16) *USDOE:* United States Department of Energy, Washington, DC 20545. Regulations of the USDOE are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Other publications by the USDOE may be obtained from the USDOE, Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831.

* * * * *

(d) * * *

(4) * * *

(iii) American National Standard N14.1 is titled, "Uranium Hexafluoride Packaging for Transport," 1987 edition.

* * * * *

(16) USDOE, CAPE–1662, Revision 1, and Supplement 1, one of the series of "Civilian Applications Program Engineering Drawings". This is a package of information including drawings and bills of material, describing phenolic-foam insulated, DOT 21PF–1 and 21PF–2 protective overpacks.

(i) USDOE, Material and Equipment Specification No. SP–9, Rev. 1, and Supplement, is titled "Fire Resistant Phenolic Foam."

(ii) USDOE, ORO–651 is titled, "Uranium Hexafluoride Handling Procedures and Container Criteria," Revision 3, 1972 edition.

(iii) USDOE, K/SS–471, November 30, 1986, as titled "Proposal For Modifications to U.S. Department Of Transportation Specification 21PF–1 Fire and Shock Resistant Phenolic Foam-Insulated Metal Overpack." This report contains several supporting documents which are a part of K/SS–471:

(1) "Quality Assurance/Control in the Fabrication, Modification, Use, and Maintenance of the DOT 21PF–1 shipping Package";

(2) K/D–5400; Revision 3;

(3) K–2057 Revision 1;

(4) K/PS–1128;

(5) K/PS–5068; and

(6) Several engineering drawings and two bills of materials.

* * * * *

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

3. The authority for Part 173 continues to read as follows:

Authority: 49 App. U.S.C. 1803, 1804, 1805, 1806, 1807, 1808; 49 CFR Part 1, unless otherwise noted.

4. In § 173.417, paragraph (a)(8) is revised and in paragraph (b)(5) the text preceding Table 6 is revised to read as follows:

§ 173.417 Authorized packaging—fissile material.

(a) * * *

(8) Packagings as prescribed in paragraph (b)(5) of this section, for materials, quantities and conditions as authorized and prescribed therein.

(b) * * *

(5) DOT Specifications 20PF-1, 20PF-2, or 20PF-3 (§ 178.120 of this subchapter), or Specifications 21PF-1, 21PF-1A, 21PF-1B, or 21PF-2 (§ 178.121 of this subchapter) phenolic-foam insulated overpack with snug fitting inner metal cylinders, meeting all requirements of §§ 173.24, 173.411, and 173.412, and the following:

(i) Handling procedures and packaging criteria must be in accordance with DOE Report ORO-651 or ANSI N14.1.

(ii) DOT Specification 21PF-1 overpacks in use or under construction before April 1, 1989, must be modified to DOT Specification 21PF-1A before April 1, 1991. Use of unmodified DOT 21PF-1 overpacks is prohibited after March 31, 1991. All new construction to DOT Specification 21PF-1 beginning after March 31, 1989, must meet DOT Specification 21PF-1B.

(iii) Quantities of uranium hexafluoride are authorized as shown in Table 6, with each package to be shipped as Fissile Class II, and assigned a minimum transport index as also shown:

* * * * *

§ 173.417 [Amended]

5. In § 173.417, paragraph (b)(5), the entry "21PF-1[1]" in the first column of Table 6 is revised to read "21PF-1 Series[1, 4]" and a fourth footnote is added following the Table to read:

[4] 21PF-1 series includes the 21PF-1, 21PF-1A, and 21PF-1B. Allowable quantities are identical for all three overpacks. See the limitations on usage in paragraph (b)(5) of this section.

§ 173.420 [Amended]

6. In § 173.420, the term "N14.1-1982" is changed to "N14.1" in paragraphs (a)(1), (a)(2)(i), (b), and (c).

PART 178—SHIPPING CONTAINER SPECIFICATIONS

7. The authority citation for Part 178 continues to read as follows:

Authority: 49 App. U.S.C. 1803, 1804, 1805, 1806, 1808; 49 CFR Part 1.

8. In § 178.121-1, paragraphs (a) and (d) are revised to read as follows:

§ 178.121-1 General requirements.

(a) Each overpack must meet all of the applicable requirements of §§ 173.24, 173.411, and 173.412 of this subchapter.

(1) Specification 21PF-1 overpacks includes the series of 21PF-1, 21PF-1A, and 21PF-1B models. Details of the three models are included in CAPE-1662, Revision 1 and Supplement 1.

(2) Drawings in CAPE-1662, Revision 1 and Supplement 1, which include bills of materials, and K/SS-471, are a part of this specification.

* * * * *

(d) Specification 21PF-1 overpacks in use or under construction before April 1, 1989, must be modified to Specification 21PF-1A before April 1, 1991. All new construction to Specification 21PF-1 beginning after March 31, 1989, must meet Specification 21PF-1B. Use of unmodified 21PF-1 overpacks after March 31, 1991, is prohibited.

9. In § 178.121-2, paragraphs (b) and (g) are revised to read as follows:

§ 178.121-2 Materials of construction and other requirements.

* * * * *

(b) Gaskets for inner liner, outer shell, or where otherwise specified in CAPE-1662, Revision 1, must be as specified in CAPE-1662, Revision 1.

* * * * *

(g) *Waterproofing.* Each screw hole in the outer shell must be sealed with appropriate resin-type sealing material, or equivalent, during installation of the screw. All exposed foam surfaces, including any vent hole, must be sealed with either:

(1) Waterproofing material as prescribed in USDOE Material and Equipment Specification SP-9, Rev. 1 and Supplement, or

(2) As specified in CAPE-1662, Revision 1.

* * * * *

10. Sections 178.121-3 and 178.121-4 are revised and new §§ 178.121-5 and 178.121-6 are added to read as follows:

§ 178.121-3 Modification of Specification 21PF-1 overpacks.

(a) Each Specification 21PF-1 overpack for which construction began or was completed before to April 1, 1989, in conformance with drawing E-S-31536-J, Revision 11, of CAPE-1662 must be modified in conformance with drawing S1E-31536-J1-D of CAPE-1662, Revision 1, Supplement 1, before April 1, 1991.

(b) Each such existing Specification 21PF-1 overpack must be dried and weighed in accordance with the following procedures:

(1) Drill out or otherwise clean the plug material from the vent holes originally provided for foam expansion. See drawing S1E-31536-J1-D of CAPE-1662, Revision 1, Supplement 1, for locations.

(2) Weigh each packaging element (top and bottom halves) separately to an accuracy of +/−5 pounds (+/−2.3 kilograms) and record the weights. If this measured weight is greater than 25 pounds (11.3 Kg) more than the initially measured weight at the time of fabrication (indicating a significant retained water content), the packaging element must be dried.

(3) Place overpack element in drying oven; maintain temperature between 190° and 210°F (87.8-98.9 °C) for a minimum of 72 hours. The oven should have a provision for air exchange or other means of removing moisture driven from the foam structure.

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

(5) As an alternate moisture measurement, a calibrated moisture meter reading for 20 percent maximum water content may be used to indicate an end point in the drying cycle (see details in report "Renovation of DOT Specification 21PF-1 Protective Shipping Packages," Report No. K-2057, Revision 1, November 21, 1986, available from the USDOE and part of USDOE Report No. K/SS-471).

(6) Following drying, each overpack element (top and bottom halves) must be weighed and the weight in both pounds and kilograms must be engraved on the identification plate required by § 178.121-5(c).

(c) After modification as provided for herein, each Specification 21PF-1 overpack must be marked "USA-DOT-21PF-1A". See the marking requirements of § 178.121-5(b).

§ 178.121-4 Construction of Specification 21PF-1B overpacks.

(a) Each Specification 21PF-1 overpack for which construction began after March 31, 1989, must meet the

requirements of Specification 21PF–1B, in conformance with drawings E–S–31536–J–P, and S1E–31536–J2–B of CAPE–1662, Revision 1, Supplement 1.

(b) With the exception of the closure nuts and bolts, all metal parts of the Specification 21PF–1B must be of stainless steel as shown on the drawings referred to in paragraph (a) of this section.

§ 178.121–5 Required markings.

(a) Markings must be as prescribed in § 173.24 of this subchapter.

(b) Specification marking on the outside of each overpack must be as follows: "USA–DOT–21PF–1", "1A", "1B", or "2", as appropriate.

(1) For Specifications 21PF–1 and 21PF–2 only, if the inner shell is constructed of stainless steel, additional marking such as "304L–SS" are to be marked on the outside of the overpack to indicate the type of stainless steel used.

(2) For Specification 21PF–1 and 21PF–2 only, "TARE WT: * * * lbs. (* * * kg)" where * * * is the tare weight in pounds and kilograms, respectively, of the assembled overpack without the inner product container.

(3) For Specification 21PF–1A and 21PF–1B only: "TARE WT. of Cover: * * * lbs (* * * kg) TARE WT. of BOTTOM: * * * lbs (* * * kg)" where * * * is the tare weight in pounds and kilograms, respectively, of the separate halves of the overpack without the inner product container. For Specification 21PF–1A overpacks, the previous tare weight must be changed to reflect the modified tare weight value or must be covered or removed.

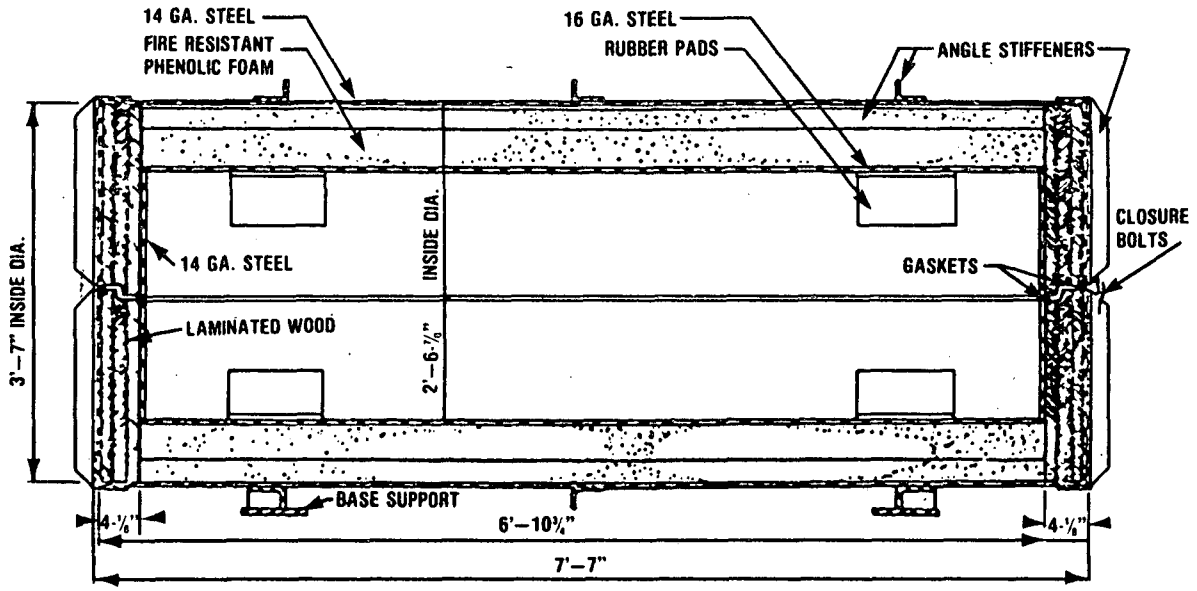
(4) Year of manufacture followed by the year of modification, if applicable.

(5) The name or symbol of maker or party certifying compliance with specification requirements. A symbol, if used, must be registered with the Director, OHMT.

(c) For Specification 21PF–1A and –1B only, the markings required by this section must be affixed to each overpack by inscription upon a metal identification plate 11 inches wide X 15 inches long (28 cm X 38 cm), fabricated of 16 to 20 gauge stainless steel sheet, ASTM A–240, Type 304L.

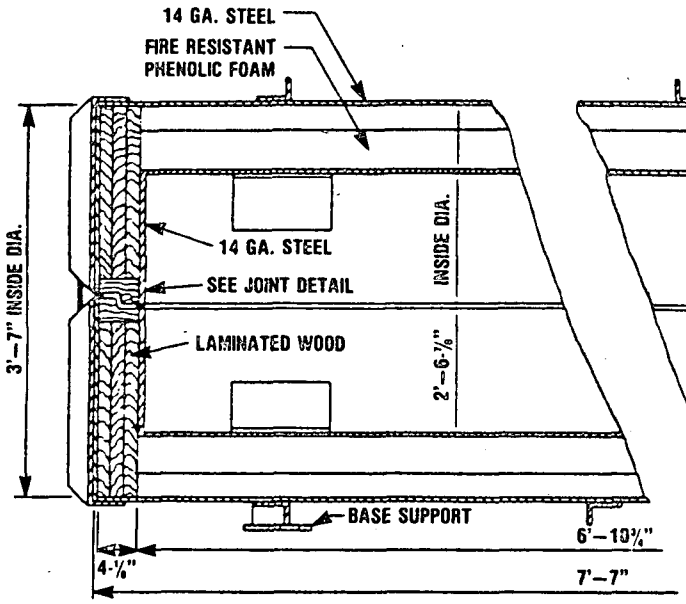
§ 178.121–6 Typical assembly detail.

(a) Specification 21PF–1 (horizontal loading overpack).

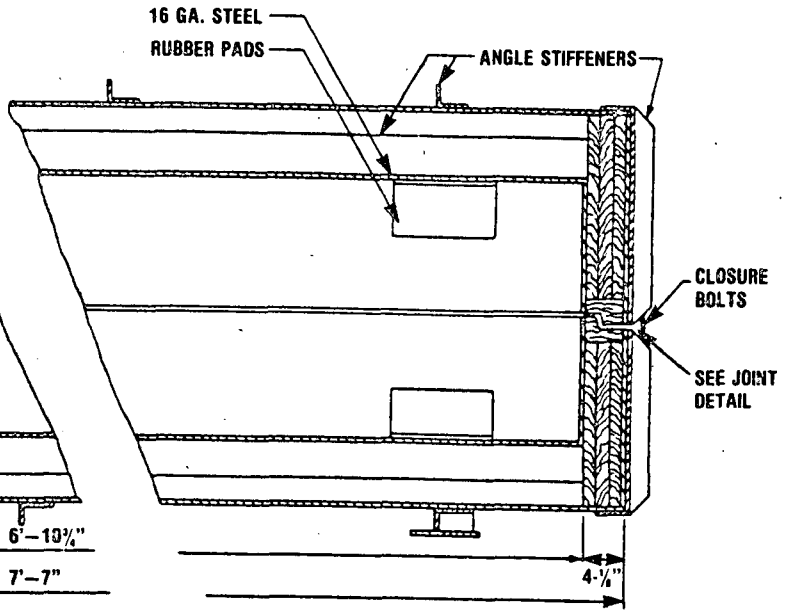


BILLING CODE 4910–60–M

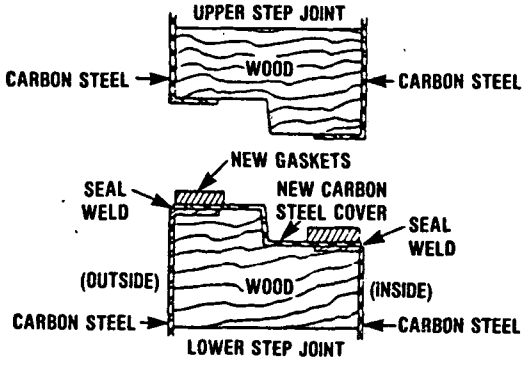
(b) Specification 21PF–1A and 21PF–1B (horizontal loading overpack).



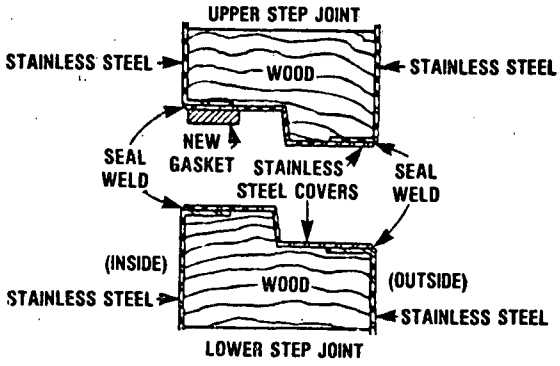
SECTION
DOT SPECIFICATION 21PF-1A
OVERPACK



SECTION
DOT SPECIFICATION 21PF-1B
OVERPACK



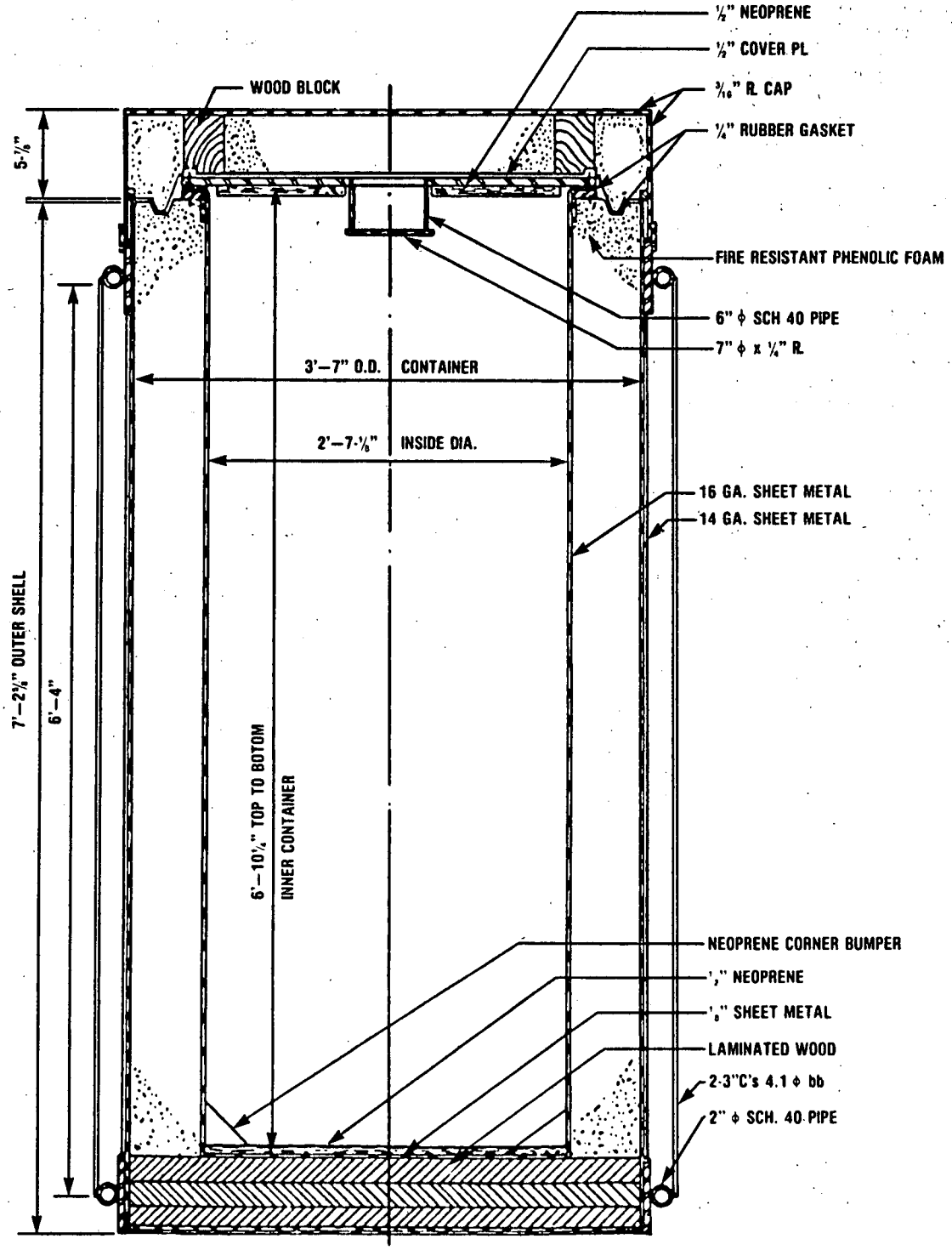
JOINT DETAIL
DOT SPECIFICATION 21PF-1A
OVERPACK



JOINT DETAIL
DOT SPECIFICATION 21PF-1B
OVERPACK

BILLING CODE 4910-60-C

(c) Specification 21PF–2 (end loading overpack).



* * * * *

Issued in Washington, DC, on September 13, 1988 under authority delegated in 49 CFR Part 1.

M. Cynthia Douglass,

Administrator, Research and Special Programs Administration.

[FR Doc. 88–21269 Filed 9–19–88; 8:45 am]

BILLING CODE 4910–60–M