DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Parts 171 and 173

[Docket No. HM-163V; Notice No. 88-2]

Hazardous Materials; Uranium Hexafluoride

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

ACTION: Notice of proposed rulemaking; supplemental proposals.

SUMMARY: By these supplemental proposals to the Notice of Proposed Rulemaking (NPRM; Notice No. 87-7) published in the **Federal Register** on July 6, 1987 (52 FR 25342), RSPA is proposing to amend the Hazardous Materials Regulations (HMR) to permit the transport of uranium hexafluoride (UF_6) in packagings that meet the requirements of American National Standard N14.1-1987 (ANSI N14.1-1987), and to permit the transport of depleted UF_6 in packagings filled to a capacity not exceeding 62% by volume at 70 °F. This action is necessary to permit the design and fabrication of UF_6 packaging in accordance with the latest revision of ANSI N14.1, and to increase the filling limit of packages of depleted UF_6 from 61% to 62% of the volumetric capacity.

DATE: Comments must be received on or before May 6, 1988.

ADDRESS: Address comments to Dockets Unit, Office of Hazardous Materials Transportation, U.S. Department of Transportation, Washington, DC, 20590. Comments should identify the docket and notice and be submitted, if possible, in 5 copies. Persons wishing to receive confirmation of receipt of their comments should include a self-addressed stamped postcard. The Dockets Unit is located in Room 8426 of the Nassif Building, 400 Seventh Street SW., Washington, DC, 20590. Office hours are 8:30 a.m. to 5:00 p.m., Monday through Friday.

FOR FURTHER INFORMATION CONTACT: Michael E. Wangler, Chief, Radioactive Materials Branch, Technical Division, Office of Hazardous Materials Transportation, U.S. Department of Transportation, 400 Seventh Street SW., Washington, DC 20590. (202) 366-4545.

SUPPLEMENTARY INFORMATION:

Background

On July 6, 1987, RSPA published a notice of proposed rulemaking (NPRM; Notice 87-7) in the **Federal Register** (52 FR 25342) which proposed to permit the transport of uranium hexafluoride (UF_6) in packagings not meeting either the requirements of American National Standard N14.1-1982 (ANSI N14.1-1982), or the specifications for DOT Class 106A multi-unit tank car tanks, provided the packagings were designed, fabricated and marked in accordance with an earlier edition of the ANSI N14.1 standard, or Section VIII, Division I of the American Society of Mechanical Engineers (ASME) Code. In addition, the packagings had to meet the mimimum wall thickness requirements, and be used within their original design specifications. Finally, the packagings would be subject to the periodic testing and marking requirements of § 173.420(b). RSPA took this action to permit the continued use of more than 50,000 existing packagings that had been used safely for the transport of UF_6. The proposed regulation will ensure that the packagings have been manufactured in accordance with an acceptable standards. RSPA believes that these controls are necessary to ensure an acceptable level of safety.

At the time of the publication of Notice 87-7, the new American National Standard 14.1-1987 (ANSI N14.1-1987) had not been approved by the ANSI Committee. However, on November 19, 1987, RSPA was notified that the ANSI Board of Standards Review had approved ANSI N14.1-1987 with an effective date of October 30, 1987. RSPA believes that it is now appropriate to consider incorporation of the new ANSI N14.1 standard.

One area of interest in ANSI N14.1-1987 is the establishment of standards for a type of packaging to be used primarily for the transportation and storage of depleted UF_6. The packagings will have a nominal diameter of 48 inches and a wall thickness of 0.25 inch. The packagings must meet specified service pressure requirements and must be marked in accordance with Section VIII, Division I of the ASME Code. Although this type of packaging has been used by the industry for storage for many years, it has not been specifically covered by previous editions of ANSI N14.1 for use in transport. Incorporation of ANSI N14.1-1987 would also allow the use of existing and newly manufactured packaging of this type.

Another issue of interest is that unlike previous ANSI N14.1 standards, ANSI N14.1-1987 recognizes that a wide variety of packagings are currently in service, although not specifically covered by an ANSI N14.1 standard, and may be acceptable for service, provided the packagings are used within their original design limitations and are inspected, tested, and maintained, in conformance with ANSI N14.1-1987. RSPA's proposal, in § 173.420(a)(2)(iv), may be more limited in scope than the packagings addressed in ANSI N14.1. Comments are requested concerning the need, if any, to "grandfather" any categories of packagings not addressed in proposed § 173.420.

RSPA has reviewed ANSI N14.1-1987 and has found this standard to be acceptable for incorporation by reference and, therefore, proposes to incorporate this document in its entirety In addition to the incorporation of ANSI N14.1-1987, RSPA proposes to permit the shipment of packages containing depleted UF_6 up to a filling capacity not exceeding 62% by volume. The current fill limit of 61% of the volumetric capacity was promulgated by RSPA on November 18, 1986 (51 FR 41632), and was derived from Table 1 of ANSI N14.1-1982. Prior to that time, the Department of Energy (DOE) had filled over 6000 cylinders with depleted UF_6 to about 62% of the capacity of the packaging. DOE had based its fill limit on one of its internal documents, ORO-651. ANSI N14.1-1982 did not specifically address fill limits for depleted UF_6. However, the new ANSI N14.1-1987 indicates that a fill limit of 62% is acceptable for packagings containing depleted UF_6. Since a 62% fill limit still provides a safety margin of 38% during transportation, RSPA believes that this fill limit is acceptable for transportation.

Since the proposed incorporation of ANSI N14.1-1987 affects a number of paragraphs in § 173.420 and Notice 87-7 substantially changes § 173.420(a), the entire § 173.420 is being published for reference. However, only those changes referring to ANSI N14.1-1987 and to the change in the permitted fill limit are the subject of this notice. Comments addressing only these two issues are requested.

Administrative Notices

The RSPA has determined that this rulemaking (1) is not "major" 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 jusrisdictions; 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 economic 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"). Although this proposed regulation intends to incorporate ANSI N14.1–1987, it has no substantial direct effects on the states, on the Federal-state relationship or the distribution of power and responsibilities among levels of government. Thus, this proposed regulation contains no policies that have Federalism implications, as defined in Executive Order 12612.

List of Subjects

49 CFR Part 171

Hazardous materials transportation, Matter incorporated by reference.

49 CFR Part 173

Hazardous materials transportation, Packaging, Radioactive materials.

In consideration of the foregoing, 49 CFR Parts 171 and 173 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 U.S.C. 1802, 1803, 1804, 1808; 49 CFR Part 1, unless otherwise noted.

2. In § 171.7, paragraph (d)(4)(iii) would be revised to read as follows:

§ 171.7 Matter incorporated by reference.

* * * * *

(d) * * *

(4) * * *

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

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PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

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

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

4. § 173.420 would be revised to read as follows:

§ 173.420 Uranium hexafluoride (fissile and low specific activity).

(a) In addition to any other applicable requirements of this subchapter, uranium hexafluoride, fissile or low specific activity, must be packaged in conformance with the following requirements:

(1) Before initial filling and during periodic inspection and test, packaging shall be cleaned in accordance with American National Standard N14.1–1987;

(2) Packagings must be designed, fabricated, inspected, tested and marked in accordance with—

(i) American National Standard N14.1–1987;

(ii) An edition of American National Standard N14.1 issued prior to 1987 provided the standard was in effect at the time the packaging was manufactured;

(iii) Specifications for DOT Class 106A multi-unit tank car tanks (§§ 179.300, 179.301, and 179.302 of this subchapter); or

(iv) Section VIII, Division I of the ASME Code, provided the packaging—

(A) Was manufactured on or before June 30, 1987;

(B) Conforms to the edition of the ASME Code in effect at the time the packaging was manufactured;

(C) Is used within its original design limitations; and

(D) Has wall (shell and head) thicknesses that have not decreased below the minimum value specified in the following table:

Packaging model	Minimum thickness millimeters (inches)
1S, 2S	1.58 (0.062)
5A, 8A	3.17 (0.125)
12A, 12B	4.76 (0.187)
30B	7.93 (0.312)
48A, F, X, and Y	12.70 (0.500)
48T, O, OM, OM Allied, HX, H, and G	6.35 (0.250)

(3) Uranium hexafluoride must be in solid form when offered for transportation;

(4) The volume of the solid uranium hexafluoride, except solid depleted uranium hexafluoride, at 21.1 °C (70 °F) may not exceed 61% of the volumetric capacity of the packaging. The volume of solid depleted uranium hexafluoride, at 21.1 °C (70 °F) may not exceed 62% of the volumetric capacity of the packaging.

(5) The pressure in the package at 21.1 °C (70 °F) must be less than 101.3 kPa (14.8 psia).

(b) Packagings of uranium hexafluoride must be periodically inspected, tested and marked in accordance with American National Standard N14.1–1987.

(c) Each repair to a packaging for uranium hexafluoride shall be performed in conformance with American National Standard N14.1–1987.

Issued in Washington, DC on April 1, 1988, under authority delegated in 49 CFR Part 106, Appendix A.

Alan I. Roberts,

Director, Office of Hazardous Materials Transportation.

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