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**DEPARTMENT OF TRANSPORTATION****Research and Special Programs  
Administration****49 CFR Parts 171, 172, 173, 174, 175,  
176, 177, 178, 179, 180**[Docket No. **RSPA-99-6283 (HM-230)**]**RIN 2137-AD39****Hazardous Materials Regulations;  
Compatibility With the Regulations of  
the International Atomic Energy  
Agency****AGENCY:** Research and Special Programs  
Administration (RSPA), DOT.**ACTION:** Advance notice of proposed  
rulemaking.

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**SUMMARY:** RSPA is considering issuing a notice of proposed rulemaking (NPRM) proposing to amend requirements in the Hazardous Materials Regulations (HMR) pertaining to the transportation of radioactive materials based on recent changes contained in the International Atomic Energy Agency (IAEA) publication, entitled "IAEA Safety Standards Series: Regulations for the Safe Transport of Radioactive Material, 1996 Edition, Requirements, No. **ST-1**" (hereafter referred to as **ST-1**). The purpose of this rulemaking initiative is to harmonize requirements of the HMR with international standards for hazardous materials. Comments are requested from interested persons concerning the scope of the NPRM, i.e., extent to which differences between the HMR and the IAEA publication **ST-1** should be considered in proposing changes to the HMR.

**DATES:** Submit comments by March 29, 2000. To the extent practicable, we will consider comments received after this date.

**ADDRESSES:** Submit written comments to the Dockets Management System, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, D.C. 20590-0001. Comments should refer to Docket Number RSPA-99-6283 and be submitted in two copies. If you wish to receive confirmation of receipt of your written comments, include a self-addressed, stamped postcard. Comments may also be submitted to the docket electronically by logging onto the Dockets Management System website at <http://dms.dot.gov>. Click on "Help &

Information" to obtain instructions for filing the comment electronically. In every case, the comment should refer to the Docket number "RSPA-99-6283".

The Dockets Management System is located on the Plaza level of the Nassif Building at the Department of Transportation at the above address. You can review public dockets there between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays. You can also review comments on-line at the DOT Dockets Management System web site at "http://dms.dot.gov/."

**FOR FURTHER INFORMATION CONTACT:** Dr. Fred D. Ferate II, Office of Hazardous Materials Technology, (202) 366-4545, or Charles E. Betts, Office of Hazardous Materials Standards, (202) 366-8553; RSPA, U.S. Department of Transportation, 400 Seventh Street SW, Washington, DC 20590-0001.

**SUPPLEMENTARY INFORMATION:**

**I. Background**

In 1958, at the request of the Economic and Social Council of the United Nations, the IAEA undertook the development of international regulations for the safe transportation of radioactive materials. The IAEA published its initial regulations in 1961, and recommended these to member states as the basis for national regulations and for application to international transportation. Most nations have since adopted the IAEA regulations as a basis for national regulations governing the transportation of radioactive materials.

In 1967, after extensive revisions, the IAEA published its regulations entitled "Regulations for the Safe Transport of Radioactive Materials, Safety Series No. 6." In October 1968, DOT published amendments for radioactive materials which were in substantial conformance with the 1967 IAEA regulations (Docket HM-2, 33 FR 14918).

Based on work done by participants from member states, including the U.S., the IAEA issued two subsequent major updates of Safety Series No. 6, in 1973 and 1985. On March 10, 1983, RSPA published a final rule (Docket HM-169, 48 FR 10218), bringing the HMR requirements relating to the transportation of radioactive materials into alignment with the 1973 IAEA regulations. On September 28, 1995, RSPA published a final rule (Docket HM-169A, 60 FR 50291) that revised the radioactive materials requirements in the HMR to align them with the 1985 revision of Safety Series No. 6. In each case, DOT coordinated these revisions to the HMR with the Nuclear Regulatory

Commission (NRC), which concurrently revised 10 CFR 71, and in each case these revisions made the United States radioactive material transport regulations compatible with those of most other industrialized nations.

Following the major revisions of Safety Series No. 6 in 1973 and 1985, the IAEA published the most recent major revision in 1996; at this time Safety Series No. 6 became ST-1. Copies of ST-1 may be obtained from the U. S. distributor, Bernan Associates, 4611-F Assembly Drive, Lanham, MD 20706-4391, telephone (301) 459-7666.

The ST-1 requirements listed in the following section are under consideration for possible incorporation into the HMR. Concepts described there which are not presently found in the HMR are: nuclide-specific activity concentration and consignment activity thresholds, the criticality safety index (CSI), the fissile label, compliance with ISO Standard 7195 for uranium hexafluoride packages, the use of Certificates of Competent Authority for international shipments of these packages, the definition of contamination, Type C packages, and low dispersible material. The remaining changes listed are modifications of present concepts or practices.

As in past rulemakings to incorporate updates of the international regulations into the HMR, RSPA will work in close coordination with the NRC in developing this rulemaking.

**II. Areas of Regulatory Concern**

A partial list of ST-1 requirements under consideration for incorporation in the HMR is given below. With the one exception indicated in item 5 below, the listed items differ from both the present requirements in Safety Series No. 6, 1985 Edition and in the HMR. These ST-1 requirements have been grouped into the following seven areas. Interested persons are invited to review and comment on these areas, and to identify other related issues RSPA should address in any further rulemaking under this docket. Sections, paragraphs and tables cited below are from ST-1.

**1. Scope**

The scope of ST-1 is described in paragraphs 106 through 109 of that document. For the most part, changes from Safety Series No. 6 are minor; for example, the wording has been modified to indicate that the regulations apply to the repair of packagings, as well as their design, fabrication, and maintenance. Whereas previously the regulations were said to apply to the preparation, consigning, handling,

carriage, storage in transit, and receipt of packages, the word "handling" has been removed and the words "loading" and "unloading" added, and these actions are now applied to "loads of radioactive material and packages." Three severity levels have been defined to aid in the application of a graded approach to the performance standards: routine (incident free), normal (minor mishaps), and accident conditions of transport. Note that a certain subset of naturally occurring radioactive materials is excluded from consideration (paragraph 107).

**2. Nuclide-Specific Thresholds**

ST-1 introduces nuclide-specific activity concentrations below which materials are exempt from the transportation requirements for radioactive materials. In addition, it lists nuclide-specific activity values such that a consignment with an activity below that value is also exempt from the transportation requirements for radioactive materials. These nuclide-specific thresholds, and the  $A_1$  and  $A_2$  values for maximum activity permitted in a Type A package, are found in Tables I and II of Section IV, and related information is given in paragraphs 401 through 406. Many  $A_1$  and  $A_2$  values have been adjusted to reflect more recent dosimetric data; in general, the adjustments are not large.

**3. Communication Changes**

Proper shipping names and UN identification numbers are changed (Table VIII). UN identification numbers are now required to be marked on all packages, including excepted packages (paragraph 535). Activities must be expressed in SI units (paragraphs 543 and 549). The former criticality transport index (criticality TI) for fissile material has been abolished, and replaced with the criticality safety index (CSI) (paragraph 218); TI is now derived exclusively from the maximum radiation dose rate at one meter from the package (paragraphs 243, 526, 527). For fissile material, a fissile label is introduced, upon which the CSI must be displayed (Figure 5, paragraphs 544, 545).

**4. Uranium Hexafluoride**

There are specific performance and design requirements for packages containing uranium hexafluoride (paragraphs 629-632), including conformance with ISO Standard 7195, "Packaging of Uranium Hexafluoride ( $UF_6$ ) for Transport." Competent Authority package design certificates are required for international shipments of uranium hexafluoride (paragraph 828).

### 5. *Low Specific Activity (LSA) materials and Surface Contaminated Objects (SCO)*

An additional category has been included under LSA-I (paragraph 226). The definition of contamination (paragraphs 214–216), while not new, was not included in the 49 CFR 173.403 definitions when the regulations in Safety Series No. 6, 1985 Edition were incorporated in the HMR. In addition to the tanks and freight containers presently authorized in the HMR, ST-1 also allows qualified tank containers and metal intermediate bulk containers to serve as industrial packagings, types 2 and 3 (IP-2 and IP-3; paragraphs 624–628).

### 6. *Type B and Fissile Material Package Requirements*

Upper limits have been set for the amount of activity which may be transported by air in Type B(U) and B(M) packages (paragraph 416). There is an enhanced water immersion test for Type B(U) and B(M) packages containing activities greater than  $10^5$  A<sub>2</sub> (paragraphs 657, 730). A definition of confinement system for fissile material is introduced (paragraphs 209, 678). Changes have been made in the conditions under which fissile materials may be excepted from the requirements for fissile packages (paragraph 672).

### 7. *Other Changes*

A Type C package is introduced for transport by air of activities larger than the upper limits for Type B(U) and B(M) packages (paragraphs 230, 667–670, 730, 734–737). Fissile material packages to be transported by air must be shown to remain subcritical under tests for Type C packages (paragraph 680 (a)). The concept of low dispersible material (LDM) is introduced as a new form of radioactive material which may be carried in a Type B(U) or B(M) package (paragraphs 225, 605, 663, 712). LDM must be certified as such by the Competent Authority (paragraphs 803, 804, 828, 830). Transitional requirements for packagings and special form materials manufactured under earlier revisions of Safety Series No. 6 are described in paragraphs 815–818.

### III. Request for Comments

Interested persons are invited to review and comment on any or all of the requirements in ST-1 which differ from current HMR requirements, and to identify related issues RSPA should address in any further rulemaking under this docket. Comments should focus on the potential for improved safety, as well as the ease or difficulty, and the advantages and disadvantages, of

complying with requirements of ST-1 that may be incorporated into the HMR. For example, do any of the new A<sub>1</sub> or A<sub>2</sub> values pose a problem? What effect would the use of nuclide-specific threshold activity concentrations and consignment activities have on safety and on your operations? How would the proposed proper shipping name changes, or the requirement for marking the UN identification number on all packages, affect what you do? What would be the effect of the ST-1 uranium hexafluoride packaging requirements? How important to safety is the ST-1 requirement to obtain a Competent Authority certificate for international shipments of uranium hexafluoride? Would safety be improved by incorporation of the new LSA-I category, or the use of metal intermediate bulk containers as IP-2 and IP-3 packagings? Would the activity limits on air transport of Type B packages, or the introduction of Type C packages and low dispersible material have a significant impact on safety, and what would be the effect on your operations?

Comments supporting a position for or against the adoption of a particular requirement should include a supporting justification for the position taken.

There are a number of additional issues that we must address in determining whether to adopt some or all of the provisions contained in ST-1. These include the analyses required under the following statutes and Executive Orders:

1. *Executive Order 12866: Regulatory Planning and Review.* Executive Order 12866 requires agencies to regulate in the “most cost-effective manner,” to make a “reasoned determination that the benefits of the intended regulation justify its costs,” and to develop regulations that “impose the least burden on society.” We therefore request comments, including specific data if possible, concerning the costs and benefits that may be associated with the provisions in ST-1, including specific costs associated with adoption of any of the ST-1 provisions.

2. *Executive Order 13132: Federalism.* Federal hazardous materials transportation law (49 U.S.C. 5101 *et seq.*) preempts many state and local laws and regulations concerning hazardous materials transportation that are not the same as the federal requirements. Executive Order 13132 requires agencies to assure meaningful and timely input by state and local officials in the development of regulatory policies that may have a substantial, direct effect on the states,

on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. We invite comments on the effect that adoption of some or all of the ST-1 provisions may have on state or local safety or environmental protection programs.

3. *Executive Order 13084: Consultation and Coordination with Indian Tribal Governments.* Executive Order 13084 requires agencies to assure meaningful and timely input from Indian tribal government representatives in the development of rules that “significantly or uniquely affect” Indian communities and that impose “substantial and direct compliance costs” on such communities. We invite Indian tribal governments to provide comments as to the effect that adoption of some or all of the proposals in ST-1 may have on Indian communities.

4. *Regulatory Flexibility Act.* Under the Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq.*), we must consider whether a proposed rule would have a significant economic impact on a substantial number of small entities. “Small entities” include small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations under 50,000. We invite comments as to the economic impact that adoption of some or all of the provisions in ST-1 may have on small businesses.

### IV. ST-1 Resources

A copy of ST-1 may be reviewed in the RSPA Records Center between the hours of 8:30 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Records Center is located in Room 8421 of the Nassif Building, 400 Seventh Street, S.W., Washington, DC 20590-0001. Review requests should refer to the Docket number “RSPA-99-6283”. In addition, copies of ST-1 may be obtained from the U. S. distributor, Bernan Associates, 4611-F Assembly Drive, Lanham, MD 20706-4391, telephone (301) 459-7666.

### V. Regulatory Notices

#### A. *Executive Order 12866 and DOT Regulatory Policies and Procedures*

This rulemaking is not considered a significant regulatory action under section 3(f) of Executive Order 12866 and, therefore, was not reviewed by the Office of Management and Budget. This rulemaking is not considered significant under the Regulatory Policies and

Procedures of the Department of  
Transportation (44 FR 11034).

*B. 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.

Issued in Washington, DC on December 22, 1999, under authority delegated in 49 CFR Part 106.

Alan I. Roberts,

*Associate Administrator for Hazardous  
Materials Safety.*

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