## DEPARTMENT OF TRANSPORTATION

## Research and Special Programs Administration

# 49 CFR Parts 171, 172, 173, 174, 175, 176, 177, and 178

[Docket No. HM–169A; Amdt. Nos. 171–135, 172–143, 173–244, 174–80, 175–53, 176–37, 177–85, 178–109]

## RIN 2137-AB60

## Hazardous Materials Transportation Regulations; Compatibility with Regulations of the International Atomic Energy Agency

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

SUMMARY: This final rule amends the Hazardous Materials Regulations pertaining to the transportation of radioactive materials to harmonize them with those of the International Atomic Energy Agency (IAEA) and, thus, most major nuclear nations of the world. Several substantive changes are made to provide a more uniform degree of safety for various types of shipments, such as requiring offerors and carriers to maintain written radiation protection programs, revisions to the definition and packaging for low specific activity radioactive materials, and requiring use of the International System of Units for the measurement of activity in a package of radioactive material. However, the basic standards for packaging radioactive materials remain unchanged. The intended effect of this rulemaking is to increase the level of safety and facilitate international commerce concerning the transportation of radioactive materials. Elsewhere in todays Federal Register, the Nuclear Regulatory Commission (NRC) has published a corresponding final rule to its transportation regulations found in 10 CFR Part 71.

**DATES:** Effective date. The effective date of these amendments is April 1, 1996.

Incorporation by reference date: The incorporation by reference of certain publications listed in this amendment is approved by the Director of the Federal Register as of April 1, 1996.

Čompliance date. Voluntary compliance with these regulations, as amended herein, is authorized as of November 1, 1995.

FOR FURTHER INFORMATION CONTACT: A. Wendell Carriker, Office of Hazardous Materials Technology, (202) 366–4545, or John A. Gale, Office of Hazardous Materials Standards, (202) 366–8553, U.S. Department of Transportation, 400 Seventh Street SW., Washington, DC 20590.

#### SUPPLEMENTARY INFORMATION:

#### I. Background

On November 14, 1989, RSPA published a notice of proposed rulemaking (NPRM; Notice No. 89-8; 54 FR 47454) under Docket HM-169A proposing to amend the Hazardous Materials Regulations (HMR; 49 CFR Parts 171–180) pertaining to the transportation of radioactive materials so that the HMR would be consistent with IAEA Safety Series No. 6, "Regulations for the Safe Transport of Radioactive Material Revised 1985 and Supplemented 1988" (IAEA SS6-85). An extension of time to file comments until May 11, 1990, was published in the Federal Register on February 8, 1990 (55 FR 4445).

## **II.** Comments Received

A total of 56 comments were received, representing the views of Federal and State agencies, power utilities, and offerors and carriers of radioactive materials. All commenters were in general agreement with the NPRM, but expressed concerns on various topics. Several commenters requested that RSPA issue a second NPRM incorporating the knowledge gained from the comments received. RSPA does not agree that a second NPRM is needed or desirable. RSPA believes that the issues addressed in this Docket should not be delayed further and that the merits of comments have been addressed in this final rule, alleviating the need for another NPRM to be issued under Docket HM-169A.

RSPA received many comments that were editorial and general in nature and some comments that raised issues beyond the scope of this rulemaking. All of the comments that correctly pointed out editorial errors in the NPRM are adopted. Comments that are beyond the scope of this rulemaking are not adopted, and, generally, have not been discussed in this preamble. Other comments to Notice No. 89–8 are discussed in the applicable parts of Section III and IV of this preamble.

### III. Discussion of Amendments

While this final rule amends extensive portions of the regulations dealing with the transportation of radioactive materials, the majority of the changes are not substantive. Many changes involve the revision of section and paragraph numbers and their references and the incorporation of the International System of Units (SI units) for radiological measurements, where appropriate. In addition, some sections are rewritten to provide clarity without changing their subject matter. Although not all of 49 CFR Part 173, Subpart I, entitled "Radioactive Materials", has been amended, it is reissued in its entirety for convenience of the reader. Substantive changes are discussed in the following paragraphs.

## A. Radiation Protection

On January 27, 1987, the Environmental Protection Agency (EPA) published a document entitled, "Radiation Protection Guidance to Federal Agencies for Occupational **Exposure: Recommendations Approved** by the President." Among its recommendations, EPA specified that no exposure should occur unless an overall benefit is derived from the activity causing the exposure; that radiation doses must be maintained as low as is reasonably achievable (ALARA); that the annual effective dose equivalent be limited to 50 millisieverts (mSv) (5 rem) to the whole body, 150 mSv (15 rem) to lens of the eye, and 500 mSv (50 rem) to any other organ, tissue or extremity of the body; that occupational exposure for individuals under the age of 18 not exceed 1/10 of the values recommended for radiation workers; and that the dose equivalent to an embryo-fetus as a result of the occupational exposure of a woman who has declared herself to be pregnant should not exceed 5 mSv (500 mrem) during the entire gestation period.

In establishing the requirements for radiation protection programs in this rule, RSPA believes they are consistent with the intent of the requirements issued by EPA. RSPA views the radiation exposures being received by workers and the general public as offset by beneficial uses of radioactive material. These benefits are not possible without transportation. The required radiation protection program must keep all radiation exposures as low as reasonably achievable (ALARA), which is also a basic requirement of the EPA guidance. The radiation dose limit specified for workers is 50 mSv (5 rem) per year, which is the whole body dose limit specified in the EPA guidance; and similarly workers are not subject to a radiation protection program if the expected annual radiation dose is less than 5 mSv (500 mrem). The radiation dose limit for an embryo-fetus carried by a female worker who has declared her pregnancy is consistent with the EPA requirements. The radiation protection program has elements that involve training workers, maintaining records, and providing certain kinds of information to workers and to RSPA.