



June 1974

U.S. ATOMIC ENERGY COMMISSION

REGULATORY GUIDE

DIRECTORATE OF REGULATORY STANDARDS

REGULATORY GUIDE 7.2

PACKAGING AND TRANSPORTATION OF RADIOACTIVELY CONTAMINATED BIOLOGICAL MATERIALS

A. INTRODUCTION

The Commission's regulation, 10 CFR Part 71, "Packaging of Radioactive Material for Transport and Transportation of Radioactive Material Under Certain Conditions," applies to licensees of the Commission who transport licensed material or who deliver licensed material to a carrier for transport. In their transport or delivery of packages containing no more than Type A quantities of radioactive material, licensees may be required by a provision of §71.5 10 CFR Part 71, to conform to certain standards and requirements of the Department of Transportation (DOT). This regulatory guide describes a method acceptable to the Regulatory staff for licensees of the Commission to comply with that provision in § 71.5 with respect to packaging, shipping, and transporting of radioactively contaminated biological materials.

B. DISCUSSION

Radioactively contaminated biological materials present unique problems because of (1) potential radiation dose to individuals, (2) potential hazard from the chemical preservative used, (3) potential exposure to pathogenic microorganisms, (4) generation of decomposition gases that might cause the shipping containers to rupture and possibly explode, and (5) noxious odors.

American National Standards Institute (ANSI) Subcommittee N14.3 has developed a standard that provides guidance for the packaging, shipping, and transport of

radioactively contaminated biological materials. This standard, designated ANSI N14.3-1973,¹ "Packaging and Transportation of Radioactively Contaminated Biological Materials," was processed and approved by the American National Standards Institute, Inc., on August 24, 1973. The standard includes recommendations for packaging and limits on radioactive contents for any single package of this type of material, for the marking and labeling of packages, and for limitations on storage of the packaged material before, during, and after transport.

C. REGULATORY POSITION

The recommendations contained in ANSI N14.3-1973¹ are generally acceptable for the packaging, shipment, and transport of radioactively contaminated biological materials, subject to the following:

Section 7.1 "Visual Survey of Outer Container," of ANSI N14.3-1973 recommends that a package be surveyed on receipt only if damage is apparent. The user of this guide is directed to the requirements of paragraph 20.205(b) of 10 CFR Part 20, "Standards for Protection Against Radiation," which requires that certain packages, and in particular those containing radioactive material in liquid form (with some exceptions), be monitored on receipt for evidence of leakage even in the absence of apparent damage.

¹Copies may be obtained from the American National Standards Institute, Inc., 1430 Broadway, New York, N.Y. 10018.

USAEC REGULATORY GUIDES

Regulatory Guides are issued to describe and make available to the public methods acceptable to the AEC Regulatory staff of implementing specific parts of the Commission's regulations, to delineate techniques used by the staff in evaluating specific problems or postulated accidents, or to provide guidance to applicants. Regulatory Guides are not substitutes for regulations and compliance with them is not required. Methods and solutions different from those set out in the guides will be acceptable if they provide a basis for the findings requisite to the issuance or continuance of a permit or license by the Commission.

Published guides will be revised periodically, as appropriate, to accommodate comments and to reflect new information or experience.

Copies of published guides may be obtained by request indicating the divisions desired to the U.S. Atomic Energy Commission, Washington, D.C. 20545, Attention: Director of Regulatory Standards. Comments and suggestions for improvements in these guides are encouraged and should be sent to the Secretary of the Commission, U.S. Atomic Energy Commission, Washington, D.C. 20545, Attention: Chief, Public Proceedings Staff.

The guides are issued in the following ten broad divisions:

- | | |
|-----------------------------------|------------------------|
| 1. Power Reactors | 6. Products |
| 2. Research and Test Reactors | 7. Transportation |
| 3. Fuels and Materials Facilities | 8. Occupational Health |
| 4. Environmental and Siting | 9. Antitrust Review |
| 5. Materials and Plant Protection | 10. General |