



U.S. ATOMIC ENERGY COMMISSION

REGULATORY GUIDE

DIRECTORATE OF REGULATORY STANDARDS

REGULATORY GUIDE 3.3

QUALITY ASSURANCE PROGRAM REQUIREMENTS FOR FUEL REPROCESSING PLANTS AND FOR PLUTONIUM PROCESSING AND FUEL FABRICATION PLANTS

A. INTRODUCTION

Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Licensing of Production and Utilization Facilities," establishes quality assurance requirements for the design, construction, and operation of nuclear power plant and fuel reprocessing plant structures, systems, and components. Paragraph 70.22(f) of 10 CFR Part 70, "Special Nuclear Material," requires that each application for a license to possess and use special nuclear material in a plutonium processing and fuel fabrication plant contain a description of the quality assurance program to be applied to the design, fabrication, construction, testing, and operation of the structures, systems, and components of the plant. It further provides that the description include a discussion of how the criteria of Appendix B of Part 50 will be met. Paragraph 70.23(b) of 10 CFR Part 70 provides that the Commission will approve construction of a plutonium processing and fuel fabrication plant when it has determined that the design bases and the quality assurance program provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents noting that the criteria in Appendix B will be used in determining the adequacy of the quality assurance program. This regulatory guide describes a method acceptable to the Regulatory staff of complying with the Commission's regulations with regard to overall quality assurance program requirements for fuel reprocessing and for plutonium processing and fuel fabrication plants.

B. DISCUSSION

Subcommittee N45-3, Nuclear Quality Assurance Standards (formerly ad hoc Committee N45-3.7), of the

Committee N45, Reactor Plants and Their Maintenance,

*Lines indicate substantial changes from previous issue.

under the sponsorship of the American Society of Mechanical Engineers, has developed a standard which includes general guidance for the establishment and execution of quality assurance programs during the design, construction, and operation phases of nuclear power plants. This standard was approved by the American National Standards Committee N45 and its Secretariat, and it was subsequently approved and designated N45.2-1971 by the American National Standards Institute on October 20, 1971.

This standard is adaptable to fuel reprocessing plants and to plutonium processing and fuel fabrication plants, since it was prepared to satisfy the intent and amplify the requirements of AEC quality assurance regulations and to provide general guidance for the establishment and execution of quality assurance programs.

C. REGULATORY POSITION

The general guidelines for establishing and executing quality assurance programs for nuclear power plants which are included in ANSI N45.2-1971, "Quality Assurance Program Requirements for Nuclear Power Plants,"¹ may be adapted to fuel reprocessing plants and to plutonium processing and fuel fabrication plants, and are generally acceptable and provide an adequate basis for complying with the program requirements of Appendix B to 10 CFR Part 50 applicable to fuel reprocessing plants and to plutonium processing and fuel fabrication plants. When adapting ANSI N45.2-1971 to fuel reprocessing plants and to plutonium processing and fuel fabrication plants, the term "fuel reprocessing and plutonium processing and fuel fabrication plants" should be substituted as applicable wherever specific reference is made to the term "nuclear power plant(s)".

¹ Copies may be obtained from the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, New York 10017.

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 |