

U.S. NUCLEAR REGULATORY COMMISSION

# REGULATORY GUIDE

OFFICE OF STANDARDS DEVELOPMENT

## REGULATORY GUIDE 5.29

### NUCLEAR MATERIAL CONTROL SYSTEMS FOR NUCLEAR POWER PLANTS

#### A. INTRODUCTION

Paragraph 70.51(c) of 10 CFR Part 70 requires each licensee who is authorized to possess at any one time special nuclear material in a quantity exceeding one effective kilogram to establish, maintain, and follow written material control and accounting procedures that are sufficient to enable the licensee to account for the special nuclear material in his possession under license. While other paragraphs and sections of Part 70 provide specific requirements for nuclear material control systems for fuel cycle plants, such detailed requirements are not included for nuclear power reactors. This guide identifies elements acceptable to the NRC staff for a nuclear material control system for nuclear power reactors.

#### B. DISCUSSION

Control and accounting for special nuclear material at a nuclear power reactor is considerably less complex than at other fuel cycle facilities because the material is in the form of identifiable fuel assemblies that can be controlled on an item basis. Nevertheless, control is necessary to ensure that the material is properly accounted for and to provide continuity of control for the total fuel cycle. Subcommittee INMM-1 on Material Control Systems of the Nuclear Standards Committee

\*Lines indicate substantive changes from previous issue.

N15 on Methods of Nuclear Material Control has developed a standard, ANSI N15.8, which provides guidelines on nuclear material control systems for nuclear power plants.

#### C. REGULATORY POSITION

The guidelines set forth in ANSI N15.8-1974, "Nuclear Material Control Systems for Nuclear Power Plants,"<sup>1</sup> are generally acceptable to the NRC staff and provide an adequate basis for systems for the control and accounting for special nuclear material at a nuclear power plant.

#### D. IMPLEMENTATION

The purpose of this section is to provide information to licensees regarding the NRC staff's plans for utilizing this regulatory guide.

This guide reflects current regulatory practice. Therefore, except in those cases in which the licensee proposes an alternative method for complying with specified portions of the Commission's regulations, the method described herein will be used in the evaluation of a licensee's performance in connection with nuclear material control systems for nuclear power plants after this guide is issued.

<sup>1</sup>Copies may be obtained from the American National Standards Institute, Inc., 1430 Broadway, New York, New York, 10018.

#### USNRC REGULATORY GUIDES

Regulatory Guides are issued to describe and make available to the public methods acceptable to the NRC 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.

Comments and suggestions for improvements in these guides are encouraged at all times, and guides will be revised, as appropriate, to accommodate comments and to reflect new information or experience. However, comments on this guide, if received within about two months after its issuance, will be particularly useful in evaluating the need for an early revision.

Comments should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Section.

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