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REGULATORY GUIDE

OFFICE OF NUCLEAR REGULATORY RESEARCH

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NUCLEAR CRITICALITY SAFETY TRAINING

A. INTRODUCTION

In 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material," "Requirements for the Approval of Applications" states that applications for a specific license to own, acquire, deliver, receive, possess, use, or transfer special nuclear material will be approved if the Commission determines that the applicant is qualified by reason of training and experience to use the material for the purpose requested. This regulatory guide provides guidance on an appropriate nuclear criticality safety training program for the use of special nuclear material, especially the prevention of criticality accidents, for license applicants and all members of their staffs associated with operations. It is not adequate for training for the nuclear criticality staff.

The information collections contained in this regulatory guide are covered by the requirements in 10 CFR Part 70, which were approved by the Office of Management and Budget, approval number 3150-0009.

B. DISCUSSION

ANSI/ANS-8.20-1991, "Nuclear Criticality Safety Training,"* was prepared by Subcommittee 8, "Fissionable Materials Outside Reactors," of the Standards Committee of the American Nuclear Society; it provides a framework and criteria for training employees associated with fissionable material operations outside reactors when a potential exists for criticality accidents. ANSI/ANS-8.20-1991 was approved by the American National Standards Institute (ANSI) on May 20, 1991.

The ANSI/ANS standard presents a training outline, procedures, and responsibilities for providing nuclear criticality safety training for employees associated with fissile material operations outside reactors that is generally acceptable to the NRC staff. The standard includes provisions for the establishment of training objectives, the designation of personnel requiring training, a skeletal framework of training program content, and criteria for documentation and evaluation.

C. REGULATORY POSITION

1. The general outline and content for a nuclear criticality safety training program described in ANSI/ANS-8.20-1991 is generally acceptable to the NRC staff for meeting the requirements in 10 CFR Part 70 for a nuclear criticality safety training program for personnel associated with operations outside of reactors.

2. The nuclear criticality safety training program should be developed with the cooperative involvement of management, supervision, and the criticality safety staff.

3. The nuclear criticality safety training program should include specific learning objectives, program structure, program content, and program evaluation,

*Copies may be purchased from the American Nuclear Society, 555 North Kensington Avenue, La Grange Park, IL 60525.

established through a systematic approach to training that includes:

3.1 Analysis of jobs and tasks to determine what a worker must know to be able to perform effectively;

3.2 Design and development of learning objectives based on the analysis of jobs and tasks that reflect the knowledge, skills, and abilities needed by the worker;

3.3 Development of instructional materials based on the learning objectives;

3.4 Implementation of the training program to achieve the performance objectives identified in the analysis and design phase of the facility, and

3.5 Evaluation and, as appropriate, revision of the training program based on internal and external audits and results obtained from written, oral, and operational examinations.

4. The nuclear criticality safety training program should include instruction concerning implementation of revised or temporary operating procedures.

5. NUREG–1220, "Training Review Criteria and Procedures" (Revision 1, January 1993)** contains methods acceptable to the NRC staff for evaluating the development and implementation of a training program and is a useful tool for quality control of the program.

D. IMPLEMENTATION

The purpose of this section is to provide information to applicants and licensees regarding the NRC staff's plan for using this regulatory guide.

Except in those cases in which an applicant proposes an acceptable alternative method for complying with specified portions of the Commission's regulations, the methods described in this guide will be used in the evaluation of applications for new licenses, license renewals, and license amendments submitted under 10 CFR Part 70.

**Copies may be purchased at current rates from the U.S. Government Printing Office, Mail Stop SSOP, Washington, DC 20402–9328 (telephone (202) 512–2249 or (202) 512–2171); or from the National Technical Information Service by writing NTIS at 5285 Port Royal Road, Springfield, VA 22161.

VALUE/IMPACT STATEMENT

A draft value/impact statement was published with the draft of this guide when it was published for public comment (Task DG–3008, January 1993). No changes were necessary, so a separate value/impact statement for the final guide has not been prepared. A copy of the draft value/impact statement is available for inspection or copying for a fee in the Commission's Public Document Room at 2120 L Street NW, Washington, DC, under Task DG–3008.

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