



U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REGULATORY RESEARCH  
DRAFT REGULATORY GUIDE AND VALUE/IMPACT STATEMENT

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Division 2  
Task HF 201-4

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PROPOSED REVISION 1\* TO REGULATORY GUIDE 2.6  
EMERGENCY PLANNING FOR RESEARCH AND TEST REACTORS

A. INTRODUCTION

Paragraph 50.34(b)(6)(v) of 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," requires that each application for a license to operate a facility include in a Final Safety Analysis Report (FSAR), along with other information, the applicant's plans for coping with emergencies, including the items specified in Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50.<sup>1</sup> Paragraph 50.54(q) requires licensees to follow and maintain in effect emergency plans that meet the requirements of Appendix E to 10 CFR Part 50.

This regulatory guide provides licensees and applicants with a method acceptable to the NRC staff for complying with the Commission's regulations with regard to the content of emergency plans for research and test reactors.

B. DISCUSSION

Working Group ANS-15.16 of the American Nuclear Society Subcommittee ANS-15 has developed Draft II, dated November 29, 1981, of the revision to American National Standard ANSI/ANS-15.16-1978, "Emergency Planning for

\*The substantial number of changes in this proposed revision has made it impractical to indicate the changes with lines in the margin.

<sup>1</sup>Copies are available for public inspection and copying for a fee at the Commission's Public Document Room, 1717 H-Street NW., Washington, D.C. Copies may be purchased from the Government Printing Office. Information on current prices may be obtained by writing the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Publications Sales Manager.

This regulatory guide and the associated value/impact statement are being issued in draft form to involve the public in the early stages of the development of a regulatory position in this area. They have not received complete staff review and do not represent an official NRC staff position.

Public comments are being solicited on both drafts, the guide (including any implementation schedule) and the value/impact statement. Comments on the value/impact statement should be accompanied by supporting data. Comments on both drafts should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch, by **MAY 28 1982**

Requests for single copies of draft guides (which may be reproduced) or for placement on an automatic distribution list for single copies of future draft guides in specific divisions should be made in writing to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Technical Information and Document Control.

Research Reactors,"<sup>2</sup> which is generally consistent with current regulatory requirements. This revision to the standard was developed to provide specific acceptance criteria for complying with the applicable requirements set forth in §50.54 and in Appendix E to 10 CFR Part 50. These criteria provide a basis for research and test reactor licensees and applicants to develop acceptable radiological emergency response plans and improve emergency preparedness at their facilities. This working group was established to develop and coordinate emergency planning guidance criteria as a parallel effort with the NRC staff. American National Standards Institute Committee N17 approved the revised standard for interim use and comment with a ballot closing on December 31, 1981.

Regulatory Guide 2.6 was originally published for comment in January 1979. Since that time, significant changes have been made to the emergency preparedness regulations. This proposed Revision 1 to Regulatory Guide 2.6, which endorses Draft II of ANSI/ANS-15.16 (dated November 29, 1981), is being published for public comment<sup>3</sup> because of the substantial number of changes that have been made to the original regulatory guide.

The Commission's interest in emergency planning is focused primarily on situations that may cause or may threaten to cause radiological hazards affecting the health and safety of the public. Emergency plans should be directed toward mitigating the consequences of emergencies and should provide reasonable assurance that appropriate measures can and will be taken to protect the health and safety of the public in the event of an emergency. Although it is not practicable to develop a completely detailed plan encompassing every conceivable type of emergency situation, advance planning and provisions for ensuring the availability of necessary equipment, supplies, and services can create a high order of preparedness and ensure an orderly and timely decisionmaking process at the time of an emergency. The plans should be an expression of the overall concept of operation that describes how the elements of advance planning have been considered and the provisions that have been made to cope with emergency situations.

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<sup>2</sup>Copies may be obtained from the American Nuclear Society, 555 North Kensington Avenue, La Grange Park, Ill. 60525.

<sup>3</sup>In commenting on this regulatory guide, commenters should be aware that a related document, NUREG-0849, "Standard Review Plan for Preparation and Evaluation of Radiological Emergency Plans for Research and Test Reactors," was issued for comment in January 1982.

In the judgment of the NRC staff, the potential radiological hazards to the public associated with the operation of research and test reactors are considerably less than those involved with nuclear power plants. In addition, because there are many different kinds of research and test reactors, the potential for emergency situations arising and the consequences thereof vary from facility to facility. These differences and variations are expected to be reflected realistically in the emergency plans and procedures developed for each research and test reactor facility.

### C. REGULATORY POSITION

The requirements in Draft II, dated November 29, 1981, of the revision to ANSI/ANS-15.16, "Emergency Planning for Research Reactors"<sup>2</sup> are generally acceptable to the NRC staff as a means for complying with the requirements in § 50.54 and in Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50 as related to research and test reactors, subject to the following clarifications and modifications:

1. Responsibility for planning and implementing all emergency measures within the site boundaries rests with the licensee. In this context, the site boundaries should be clearly defined. Supporting organizations that would augment the licensee's emergency organization, e.g., fire department, hospitals, and security organizations, should be specified. Planning and implementation of measures to cope with reactor-related emergencies beyond the site boundary should be commensurate with and based on the potential consequences of credible accidents or incidents. The emergency plan should describe this planning basis and the corresponding arrangements and agreements among the licensee and the local, State, or Federal agencies expected to respond.

2. It should be noted that the radiation dose levels of the emergency action levels established for the various emergency classes are slightly different from those specified for power reactors. However, in the judgment of the NRC staff, the radiation dose levels specified in Table I of the Standard are adequate for the credible accidents associated with the operation of research and test reactors, and the specified action levels provide reasonable assurance that protective measures associated with the action levels specified in Table I can and will be taken, provided appropriate emphasis is also given to developing emergency action levels that relate directly to facility parameters (e.g., pool water levels and area radiation monitors).

3. Emergency action levels related to facility parameters and equipment conditions should be developed to the extent feasible for each emergency class as well as emergency action levels related to effluent release levels. These action levels should quantify observations or judgments of the reactor operator that certain occurrences have affected the ability to transfer energy from the core to the normal or alternative heat sink and that these occurrences might lead to a radiological hazard appropriate to the emergency class.

4. Details that can reasonably be expected to change from time to time, e.g., names and telephone numbers, specific items of equipment and supplies, inventory lists, and step-by-step procedures or checklists that may be altered as a result of experience or test exercises, should not be incorporated into the plans but should be listed in the emergency implementing procedures.

5. Emergency procedures that implement the emergency plan need not be incorporated into the plan but should be listed by title in an annex to the emergency plan. The emergency implementing procedures should be maintained and available at the facility for inspection and review at any time by a representative of the NRC.

6. The procedural system used by the licensee for the review and approval of emergency implementing procedures should contain instructions governing the writing, revising, and updating of implementing procedures. The instructions should specify the methods to be used to ensure that procedures, revisions, and changes are reviewed for adequacy, approved for use, and distributed to user organizations and individuals having the responsibility for implementing the procedures.

#### D. IMPLEMENTATION

This proposed revision has been released to encourage public participation in its development. Except in those cases in which an applicant or licensee proposes acceptable alternative practices or methods for complying with specified portions of the Commission's regulations, the practices or methods to be described in the active guide reflecting public comments will be used as a basis for evaluating the adequacy of the emergency plans and preparedness of applicants for a license to operate a research or test reactor as well as the plans and preparedness of current licensees for such reactors.

## DRAFT VALUE/IMPACT STATEMENT

### 1. THE PROPOSED ACTION

The licensee of a research and test reactor is required by the Commission's regulations to develop plans for coping with emergencies. Specific guidance is needed to provide acceptance criteria for complying with the applicable requirements set forth in § 50.54 and in Appendix E of 10 CFR Part 50. Regulatory Guide 2.6, "Emergency Planning for Research and Test Reactors," provides basic guidance for complying with the regulations. More definitive guidance, however, has been developed by the American Nuclear Society Subcommittee ANS-15 in Draft II of ANSI/ANS 15.16, "Emergency Planning for Research Reactors," dated November 29, 1981. The proposed action would endorse this standard with appropriate supplementary material in a regulatory guide.

#### 1.1 Value/Impact Assessment

The proposed action would provide licensees and applicants definitive guidance for developing emergency plans that meet the appropriate regulation.

Value - The value of the proposed action would be more effective emergency preparedness around research and test reactors. Endorsing a national consensus standard reduces the expenditure of staff resources in developing the guidance.

Impact - Most of the impact on industry has already occurred during development, review, and approval of the consensus standard and in attempting to comply with the upgraded emergency preparedness requirements promulgated in August of 1980.

#### 1.2 Decision on the Action

A regulatory guide should be published for public comment.

### 2. TECHNICAL ALTERNATIVES

Because the regulatory guide is endorsing a consensus standard, no technical alternatives have been considered.

### 3. PROCEDURAL ALTERNATIVES

The following NRC procedures could be used to provide the proposed guidance:

1. Rule change
2. Regulatory guide

### 4. STATUTORY CONSIDERATIONS

#### 4.1 NRC Authority

Authority for this action is derived from the Atomic Energy Act of 1954, as amended, through the Commission's regulations in Title 10, Chapter I, of the Code of Federal Regulations.

#### 4.2 Need for NEPA Assessment

Since the guidance in the proposed regulatory guide revision does not represent a major action as defined by paragraph 51.5(a)(10) of 10 CFR Part 51, implementation of the regulatory guide does not require a NEPA assessment.

### 5. RELATIONSHIP TO OTHER EXISTING OR PROPOSED REGULATIONS OR POLICY

This proposed regulatory guide relates to the NRC emergency preparedness regulations, Regulatory Guide 1.101, and NUREG-0654/FEMA-REP-1.

### 6. SUMMARY AND CONCLUSION

A proposed revision to Regulatory Guide 2.6 should be published for comment.

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