UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555-0001

October 8, 2003

NRC REGULATORY ISSUE SUMMARY 2003-18
USE OF NEI 99-01, "METHODOLOGY FOR DEVELOPMENT OF EMERGENCY ACTION LEVELS," REVISION 4, DATED JANUARY 2003

ADDRESSEES

All holders of operating licenses for nuclear power reactors and licensees that have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

INTENT

The U.S. Nuclear Regulatory Commission (NRC) is issuing this regulatory issue summary (RIS) to inform addressees that the NRC has reviewed Nuclear Energy Institute (NEI) 99-01 "Methodology for Development of Emergency Action Levels", Revision 4, January 2003, and is endorsing the report for use as guidance in developing or changing a standard emergency classification and action level scheme. In addition, this RIS provides recommendations to assist licensees in determining whether to seek prior NRC approval of deviations from the new guidance. This RIS requires no action or written response on the part of an addressee.

BACKGROUND INFORMATION

The regulations governing the development and implementation of emergency action levels (EALs) for nuclear power licensees are contained in 10 CFR Part 50:

- Section 50.47(b)(4) states, in part: "A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee..."

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- Section IV.B of Appendix E to 10 CFR Part 50 states in part: “These emergency action levels shall be discussed and agreed on by the applicant and State and local governmental authorities and approved by the NRC...”

- Section IV.C, of Appendix E to 10 CFR Part 50 states in part: “Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as the pressure in containment and the response of the Emergency Core Cooling System) for notification of offsite agencies shall be described...The emergency classes defined shall include: (1) notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency...”

The guidance documents used to review EAL schemes are identified in Regulatory Guide 1.101, “Emergency Planning and Preparedness for Nuclear Power Reactors.”

- Revision 2 of Regulatory Guide 1.101 states in part: “The criteria and recommendations contained in Revision 1 of NUREG-0654/FEMA-REP-1 are considered by the NRC staff to be acceptable methods for complying with the standards in 10 CFR 50.47 that must be met in onsite and offsite emergency response plans.” NUREG-O654/FEMA-REP-1, Revision 1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” includes the following criteria for EALs:

  Section II.D.1: “An emergency classification and emergency action level scheme as set forth in Appendix 1 must be established by the licensee.”

  Section II.D.2: “The initiating conditions shall include the example conditions found in Appendix 1 [of NUREG-0654]...”

- Revision 3 of Regulatory Guide 1.101 endorsed NUMARC/NESP-007, “Methodology for Development of Emergency Action Levels,” Revision 2, dated January 1992, as an acceptable alternative to NUREG-0654 for developing EAL schemes. In Section D, “Implementation” the regulatory guide states:

  > Except in those cases in which an applicant or licensee proposes an acceptable alternative method for complying with specific portions of the Commission’s regulations, the method described in this regulatory guide will be used in the evaluation of emergency plans and preparedness for nuclear power reactors.

After using the NUMARC/NESP-007 guidance for sometime, the industry and NRC identified improvements. Many of the industry-identified improvements were captured in NUMARC’s

June 1993 "Question and Answer" (Q&A) document[1]. In addition, during its review of EAL schemes developed using NUMARC/NESP-007, the NRC noted areas where the guidance could be improved to permit less resource-intensive reviews.

SUMMARY OF ISSUE

The purpose of this RIS is to inform licensees that the NRC has revised Regulatory Guide 1.101 to endorse the updated industry guidance in NEI 99-01, Revision 4. According to 10 CFR Part 50, Appendix E, Section IV.B, EALs developed by licensees must be agreed on by offsite emergency response authorities and approved by NRC. Licensees may use NEI 99-01, Revision 4 as an alternative to the NUREG-0654 methodology to develop EALs that are agreeable to offsite emergency response authorities and acceptable to NRC. Additionally, the RIS offers staff suggestions to aid licensees in determining whether to obtain prior NRC approval of changes to their existing EAL scheme in accordance with 10 CFR Part 50, Appendix E.

The emergency planning standard of 10 CFR 50.47(b)(4) requires that licensees use a standard emergency classification and action level scheme. The method described in Regulatory Guide 1.101, Revision 4, will be used in the evaluation of emergency plans and preparedness for nuclear power reactors, except where an acceptable alternative method for complying with specific portions of the Commission's regulations is proposed or in use. The NRC staff will use the guidance documents identified in that regulatory guide to review the scheme chosen.

The staff recognizes that all changes to EALs do not warrant NRC review and approval. Licensees may make changes to their emergency plans without prior Commission approval when the changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E. Licensees adopting this latest guidance should consider the application of 10 CFR 50.54(q) and Appendix E, Section IV.B, as appropriate. In this regard licensees should consider the following:

A. NUREG-0654 users converting to NEI 99-01, Revision 4, should seek NRC prior approval since this is a change in scheme.

B. NUREG-0654 users updating their existing EAL guidance to include shutdown or decommissioning EALs should seek prior approval since these changes can significantly modify existing classification schemes.

C. NUREG-0654 users implementing Independent Spent Fuel Storage Installation (ISFSI) EALs in addition to an existing scheme should implement changes under 10 CFR 50.54(q) since the changes in this category are enhancements to the existing classification scheme.

D. NUMARC-007 users implementing decommissioning EALs should seek NRC prior approval since decommissioning is a significant change in operating condition.

[1]In a letter dated June 10, 1993, the NRC concluded that the "answers" in the Q&A document met the intent of Revision 3 of Regulatory Guide 1.101.

E. NUMARC-007 users implementing shutdown EALs or ISFSI EALs or updating EALs to include lessons learned from NEI 99-01, Revision 4, should implement changes under 10 CFR 50.54(q) since these changes are enhancements to the existing classification scheme.

F. Licensees with hybrid EALs schemes that do not meet any one of the above conditions should submit changes for prior approval with the exception of implementing ISFSI EALs in addition to an existing scheme.

The following staff suggestions are intended to enhance the review process. They are not mandatory or expected to form the basis for a licensees submittal, nor do they address all the possible issues. Licensees should:

1. Identify the basis document for the current and proposed EAL schemes.

2. Provide a clear, unambiguous statement of the status of the State and local authority's agreement to the proposed EAL revision.

3. Provide a cross-reference relating the proposed EAL scheme to the appropriate "standard" EAL scheme numbering system.

4. For each deviation from the guidance state why the deviation is appropriate for the facility, why it does not decrease effectiveness, and how the revised EAL continues to protect health and safety within the proposed scheme. Such deviations include instances where the licensee elects not to implement one or more EALs from the applicable basis document, or proposes an EAL not found in the basis document.

Licensees should follow their regulatory action submittal process and consider the items above within that framework.

BACKFIT DISCUSSION

This RIS requires no action or written response. Any action on the part of addressees to adopt the EAL development methodology in NEI 99-01, Revision 4, in accordance with the guidance contained in this RIS is strictly voluntary and, therefore, is not a backfit under 10 CFR 50.109. Consequently, the staff did not perform a backfit analysis.

***FEDERAL REGISTER* NOTIFICATION**

A notice of opportunity for public comment on this RIS was not published in the *Federal Register* because it is informational. NRC worked with NEI, industry representatives, members of the public, and other stakeholders in developing Revision 4 to Regulatory Guide 1.101 to endorse NEI 99-01. Proposed Revision 4 to Regulatory Guide 1.101 was issued for public comment as Draft Regulatory Guide DG-1075 in March 2000.

PAPERWORK REDUCTION ACT NOTIFICATION

This RIS does not request any information collection.

If you have any questions about this matter, please contact the person listed below.

/RA/
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Attachment: List of Recently Issued NRC Regulatory Issue Summaries

LIST OF RECENTLY ISSUED
NRC REGULATORY ISSUE SUMMARIES

Regulatory Issue Summary No.	Subject	Date of Issuance	Issued to
2003-17	Complying with 10 CFR 35.59, "Recentness of Training," for Board-certified Individuals Whose Training and Experience Were Completed More than 7 Years Ago	10/03/2003	All U.S. Nuclear Regulatory Commission (NRC) medical-use licensees and NRC master materials license medical-use permittees.
2003-16	NRC Threat Advisory and Protective Measures System	10/07/2003	(1) All Nuclear Regulatory Commission (NRC) power reactor licensees. (2) All NRC research and test reactors. (3) All NRC decommissioning power reactors and independent spent fuel storage installations using wet storage. (4) All NRC independent spent fuel storage installations using dry storage. (5) All NRC Category I fuel facilities. (6) All NRC Category III fuel facilities. (7) The NRC regulated uranium conversion facility. (8) All NRC regulated gaseous diffusion plants. (9) All NRC power reactor licensees, research and test reactor licensees, independent spent fuel storage installation licensees, and special nuclear material licensees, who possess spent nuclear fuel; and all general licensees under 10 CFR 70.20a who transport spent nuclear fuel greater than 100 grams.
2003-15	Consolidation of the Region I and Region Ii Materials Program	09/05/2003	All materials licensees.

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CP = Construction Permit