

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

July 13, 2004

**NRC REGULATORY ISSUE SUMMARY 2003-18, SUPPLEMENT 1,  
USE OF NUCLEAR ENERGY INSTITUTE (NEI) 99-01, "METHODODOLOGY  
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 Nuclear Regulatory Commission (NRC) is providing this regulatory issue summary (RIS) to supplement previously issued information in RIS 2003-18, "Use of NEI 99-01, 'Methodology for Development of Emergency Action Levels,' Revision 4, dated January 2003." The NRC is clarifying technical positions regarding the revision of emergency action levels (EALs). This RIS requires no action or written response on the part of an addressee.

**BACKGROUND INFORMATION**

Recently, the NRC has reviewed licensee processes for emergency action level (EAL) changes and issued findings related to the improper implementation of EAL changes. In one recent example, a licensee made improvements to its emergency plan change process to require approval of proposed emergency plan changes by the station regulatory affairs department and the plant operations review committee. That licensee subsequently submitted changes to EALs which were not of sufficient detail to support NRC review. The NRC asked the licensee to withdraw the proposed changes.

The NRC staff has received several recent prior approval submittals from licensees converting EALs to the endorsed NEI 99-01, Revision 4 scheme. Those submittals have been inconsistent in format and quality. The staff has conducted a review of NRC guidance and held discussions with the industry to ensure a common understanding of expectations for implementation of EAL revisions consistent with RIS 2003-18. The most recent information was received from a public

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workshop held on April 26, 2004 (ADAMS Accession No. ML041210096), to discuss practices for making EAL changes. The NRC staff believes that additional explanation regarding documentation for proposed EAL changes could be helpful.

The regulations governing the development and implementation of EALs for nuclear power licensees are contained in 10 CFR Part 50. Guidance documents used to review EAL schemes are identified in Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," Revision 2 (dated October 1982), Revision 3 (dated August 1992), and Revision 4 (dated October 2003).

RIS 2003-18 describes the 10 CFR Part 50 sections and guidance references in detail, as they pertain to EAL revisions. The details contained in RIS 2003-18 remain applicable to this RIS.

## **SUMMARY OF ISSUE**

The purpose of this RIS is to supplement previously issued information in RIS 2003-18 by clarifying technical positions regarding the revision of EALs. Specifically, this RIS provides clarification on the level of detail licensees need to provide to support proposed changes to EALs. RIS 2003-18 contained staff suggestions intended to enhance the review process. These suggestions were discussed during the April 26, 2004, public workshop.

As evidenced by recent licensee submittals for NRC prior approval of EAL changes, and as reinforced by discussion with licensees prior to and during the April 26, 2004 public workshop, licensees have not consistently provided the level of detail necessary to allow the NRC to effectively review proposed EAL changes. Further, the information in RIS 2003-18 did not appear to provide sufficient explanation of the expectations which NRC intended for the example EAL change scenarios discussed in RIS 2003-18. The following information was provided to the public in the April 26, 2004 workshop and may be useful to licensees preparing EAL revisions.

### **General Expectations**

As discussed in RIS 2003-18, the staff recognizes that certain EAL changes do not warrant NRC review and approval, and that licensees may make changes to EALs without prior NRC approval when changes do not decrease the effectiveness of the emergency plan and continue to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E. As also discussed in RIS 2003-18, certain other types of changes, such as scheme changes from EALs based on NUREG-0654 to EALs based on NUMARC/NESP-007 or NEI 99-01, should include a formal review and approval by NRC prior to implementation. RIS 2003-18 provides detailed examples of the type of changes that should receive prior review and approval, as well as examples that are appropriate to implement in accordance with 10 CFR 50.54(q).

Whether EAL changes warrant NRC prior approval or implementation per 50.54(q), it is recommended that detailed documentation be compiled to justify the EAL changes. EAL justifications, which "stand alone" in the arrangement of documentation necessary to explain

proposed changes, will aid in supporting an efficient review process. Supporting information, (such as engineering studies, calculations, referenced procedures, diagrams, maps, etc.), is useful.

A pre-submittal conference between the licensee and the NRC, as referenced in 10 CFR 2.101(a)(1), is often useful prior to the submittal of proposed EAL changes. The conference serves to clarify the NRC's expectations for documentation and allows the licensee to understand the process by which the change will be evaluated, including NRC time estimations for completion of the review.

### **Submittal Documentation**

Methods which may provide for a more efficient and timely review process were discussed in the April 26, 2004 public workshop. Including the following information in EAL submittal documentation will facilitate the review process:

#### (1) Summary Explanation

A summary document, which generally explains the considerations applicable to the EAL change, provides the NRC reviewer information specific to the current EAL scheme, proposed EAL scheme, plant operational information, useful definitions applicable to understanding the EAL change, and emergency plan specific information that supports the EAL change. Example information in the summary explanation includes:

- Contents in the submittal package, with an explanation for the contents
- Current EAL scheme in use
- Proposed EAL scheme on which the EAL change is based
- Cross-reference comparing scheme basis (NUMARC, NEI) to proposed EAL change(s)
- Specific discussion for the identification of *differences* and *deviations* from the proposed EAL scheme bases, including how changes are indicated for each *difference* and *deviation*
- Description of operational modes, as applicable to the specific unit(s)
- Discussion of applicable State and local government officials who have review and agreement authority for changes to EALs

#### (2) State/Local Government Official Agreement Documentation:

Review of and agreement with EAL changes by applicable State and local government officials is required by 10 CFR Part 50, Appendix E. Evidence of reviews and agreement, provided with the EAL change submittal, documents the level of explanation provided to government officials regarding the impact of the change to offsite agency emergency notifications. For example,

where NUREG-0654 to NUMARC/NESP-007 or NEI 99-01 scheme changes result in a higher or lower classification for a specific event, documentation should be included to show that State and Local government officials were made aware of those changes in classifications.

### (3) Detailed Justification

To facilitate a timely EAL review, a description of each EAL *difference* or *deviation* from the basis scheme or prior NRC-approved site-specific hybrid EAL provides sufficient detail to “stand alone” as justification for the proposed change. It is recommended that supporting information be included (for prior approval submittals) or maintained for follow-up inspection (for 50.54(q) implemented changes). Supporting information includes technical document references, engineering reports, calculations, diagrams, maps, and procedures.

#### **Difference and Deviation**

A *difference* is an EAL change where the basis scheme guidance (NUREG, NUMARC, NEI) differs in wording but agrees in meaning and intent, such that classification of an event would be the same, whether using the basis scheme guidance or the site-specific proposed EAL. Examples of *differences* include the use of site-specific terminology or administrative re-formatting of site-specific EALs.

A *deviation* is an EAL change where the basis scheme guidance differs in wording and is altered in meaning or intent, such that classification of the event could be different between the basis scheme guidance and the site-specific proposed EAL. Examples of *deviations* include the use of altered mode applicability, altering key words or time limits, or changing words of physical reference (protected area, safety-related equipment, etc.).

#### **Good Industry Practices:**

The use of good industry practices in the preparation of EAL change documents is encouraged by the NRC. As EAL changes occur, licensees are expected to gain experience and share information with the industry. Assistance to licensees in the preparation of EAL change packages can be provided by the NRC during pre-submittal conferences, and may be beneficial in reducing regulatory burden through the consistent incorporation of acceptable practices by the licensee.

#### **BACKFIT DISCUSSION**

This RIS requires no action or written response. Any action on the part of addressees to adopt the information 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 to obtain information which was used in the development of this RIS.

**SMALL BUSINESS REGULATORY ENFORCEMENT FAIRNESS ACT OF 1996**

The NRC has determined that this action is not subject to the Small Business Regulatory Enforcement Fairness Act of 1996.

**PAPERWORK REDUCTION ACT NOTIFICATION**

This RIS does not request any information collections and, therefore, is not subject to the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.).

If you have any questions or wish to provide any feedback, please call the technical contact, listed below.

***/RA/***

William D. Beckner, Chief  
Reactor Operations Branch  
Division of Inspection Program Management  
Office of Nuclear Reactor Regulation

Technical Contact: Greg A. Casto, DPR/NSIR  
301-415-4072  
Email: [gac@nrc.gov](mailto:gac@nrc.gov)

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LIST OF RECENTLY ISSUED  
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Regulatory Issue Summary No.	Subject	Date of Issuance	Issued to
2004-11	Supporting Information Associated with Requests For Withholding Proprietary Information	06/29/2004	All submitters of proprietary information to the Nuclear Regulatory Commission.
2004-10	Preparation And Scheduling of Operator Licensing Examinations	06/14/2004	All holders of operating licenses for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.
2004-09	Status on Deferral of Active Regulation of Ground-water Protection At In Situ Leach Uranium Extraction Facilities	06/07/2004	All holders of materials licenses for uranium and thorium recovery facilities.
2004-08	Results of the License Termination Rule Analysis	05/28/2004	All holders of operating licenses for nuclear power reactors, research and test reactors, as well as decommissioning sites.
2004-07	Release of Final Review Standard (RS)-002, "Processing Applications for Early Site Permits"	05/19/2004	All holders of operating licenses for nuclear power reactors, all applicants for early site permits (ESPs), and all prospective vendors of nuclear power plants in the United States.
2004-06	Independent Survey of Power Reactor Licensees	04/16/2004	All holders of operating licenses for nuclear power reactors except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

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