

May 20, 2004

MEMORANDUM TO: Catherine Haney, Director  
Policy and Rulemaking Program  
Division of Regulatory Improvement Programs, NRR

FROM: Peter C. Wen, Project Manager /RA/  
Policy and Rulemaking Program  
Division of Regulatory Improvement Programs, NRR

SUBJECT: NOTICE OF MEETING WITH NUCLEAR ENERGY INSTITUTE (NEI)  
REGARDING CHANGES TO EMERGENCY PLANS GUIDANCE FOR  
NUCLEAR POWER PLANTS

DATE & TIME: June 3, 2004  
1:00 p.m. - 4:00 p.m.

LOCATION: U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Rockville, Maryland 20852  
Room O-7B4

PURPOSE: To discuss draft NEI 10 CFR 50.54(q) guidance (ADAMS Accession#  
ML041190247) and changes to emergency plans. A preliminary meeting  
agenda is attached.

PARTICIPANTS: NRC NEI/Industry  
N. Mamish A. Nelson, NEI, et al  
T. McGinty  
E. Weiss  
K. Williams  
R. Moody, et al

CATEGORY: This is a Category 2 Meeting. The public is invited to participate in this  
meeting by discussing regulatory issues with the NRC at designated  
points identified on the agenda.

Project No. 689  
Attachments: As stated  
cc: See list

\*Meetings between NRC technical staff and applicants or licensees are open for interested members of the public, petitioners, interveners, or other parties to attend pursuant to the Commission Policy Statement on "Staff Meetings Open to the Public: Final Policy Statement," 67 *Federal Register* 36920, May 28, 2002. Members of the public who wish to attend should contact Kevin Williams at (301) 415-1104 or kxw@nrc.gov.

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**PMNS**

OPA  
OWFN Reception

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Nuclear Energy Institute

Project No. 689

cc: via email

Mr. Alan Nelson, Senior Project Manager  
Nuclear Energy Institute  
apn@nei.org

PRELIMINARY AGENDA FOR NRC/NEI MEETING  
ON CHANGES TO EMERGENCY PLANS FOR NUCLEAR POWER PLANTS

June 3, 2004; 1:00 p.m. -4:00 p.m.  
11555 Rockville Pike, Rockville, MD 20852-2738  
Room O-7B4

<u>TOPIC</u>	<u>LEAD</u>
• Introductions and Opening Remarks	NRC/NEI
• Meeting Overview	NRC
• Discussion Topics*	All
- the meaning of "decrease in effectiveness (DIE)"*	
- the process for making changes to nuclear power plant emergency plans*	
- examples of acceptable changes to an emergency plan and examples of DIE*	
- examples of changes that warrant NRC prior approval*	
- draft NEI 10 CFR 50.54(q) guidance (ADAMS Accession# ML041190247)	
• Public Questions and Comments	Public
• Summation of Meeting and Adjournment	NRC/NEI

\* Further Details of Discussion Topics Provided in Attachment 2

## 50.54(q) Discussion

### **Introduction**

The process for changing an emergency plan is addressed in 10 CFR 50.54(q). The NRC issued guidance to its staff regarding changes to licensees' emergency plans in the form of an Emergency Preparedness Position Statement (EPPOS), which was shared with the industry. Based upon feedback from the nuclear power industry and experience gained by the NRC staff as a result of reviewing emergency plan changes, a need to further clarify the process for making changes to an emergency plan has been identified.

10 CFR 50.54(q) states, in part, "The nuclear power reactor licensee may make changes to these plans without Commission approval only if the changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of 50.47(b) and the requirements of Appendix E to this part . . . Proposed changes that decrease the effectiveness of the approved emergency plans may not be implemented without application to and approval by the Commission."

## Proposed Definitions

1. Decrease in effectiveness (DIE) - a reduction to an emergency preparedness commitment related to the capability or timeliness in performing a function contained in the approved emergency plan.
  - a) A reduction to an emergency preparedness commitment based on functions means that the emergency plan, as changed, would result in the loss of capability to meet a current emergency preparedness commitment(s). Consequently, the capability to perform a function as previously stated in the emergency plan no longer exists.
  - b) A reduction to an emergency preparedness commitment based on timeliness means that the time requirements to perform a function as set forth in 10 CFR 50.47(b) and 10 CFR 50 Appendix E, and as defined in the licensee's approved emergency plan, are not met. This would include items such as notification, classification, and Emergency Response Organization (ERO) augmentation.
2. Emergency preparedness (EP) commitment<sup>1</sup>- a statement(s) made in the emergency plan that addresses how a particular regulatory requirement(s) will be met.
3. Over-commitments - those commitments made by the licensee that exceed the standards set forth in 10 CFR 50.47(b) and the requirements in Appendix E that licensees have in their emergency plan.
4. Approved emergency plan:
  - a) The emergency plan approved by the NRC at initial licensing.
  - b) Revised emergency plan that has been submitted to the NRC, reviewed and approved as documented in a docketed Safety Evaluation.
  - c) An alternate method for complying with the regulations that has been submitted to the NRC, docketed, and found to be acceptable by the NRC.
  - d) The initial/original NRC approved emergency plan that has been maintained in accordance with 50.54(q) and submitted in accordance with 10 CFR 50.4 (Any deviation in the 50.54(q) process may lead to a DIE).

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<sup>1</sup>An EP commitment is not a regulatory commitment as defined in NEI-99-04, "Guidelines for Managing NRC Commitment Changes."

## **Proposed Emergency Plan Change Process**

Reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency is based on an emergency plan that meets the standards of 10 CFR 50.47 and the requirements of 10 CFR 50 Appendix E, and a successful implementation of the emergency plan. Licensees may change their emergency plan without submitting every change to the NRC for prior approval. The 10 CFR 50.54(q) change process is outlined in Attachment 1 and supplemented by Attachment 1A. The licensee identifies the proposed change and then determines whether the proposed change meets the standards of 50.47(b) and the requirements of 10 CFR 50 Appendix E.

If there is any doubt whether the proposed change is a DIE, a pre-application review conference call with the staff is encouraged. This will allow for sufficient exchange of information between the licensee and NRC staff members regarding technical issues related to emergency plan changes being considered prior to the submittal. A key factor for determining whether a change to an emergency plan is a DIE is the approved emergency plan. The approved plan will be used to determine whether there has been a DIE. Changes that are a result of a DIE are required to be submitted to the NRC for review and approval by the Commission. The staff will review the emergency plan change against the standards, regulations, guidance documents (as committed to by the licensee) and the approved plan.

Licensees are encouraged to make changes to their emergency plan as long as they have a comparable basis, and the emergency plan as changed continues to meet NRC requirements. The 50.54(q) review should thoroughly document the change including the basis for the change. The current NRC requirements for document retention specify that changes that do not warrant NRC approval must be retained for three years. Changes that decrease the effectiveness of the emergency plan must be retained until the Commission terminates the license. It is prudent to save emergency plan change documentation in the event that future changes are made. However, the NRC maintains the prerogative to review, at anytime, the emergency plan changes that have been made.

Changes to an emergency plan could be based upon advances in technology, new or revised rules, site specific needs, processes, and/or guidance (such as NEI guidance endorsed by the NRC, Technical Specification changes, or modifications to instrumentation). These changes should be documented and a rationale defining the need should be established. This rationale will serve as part of the basis for the approved plan, and subsequent changes will rely on this basis for any future DIE determinations. If a licensee has changed its basis and subsequently chooses to change the basis back to the previous state, the same process must be followed.

## **Related Topics Regarding Emergency Plan Changes**

### 1. Over-Commitments

Licensees that want to seek relief from over-commitments should submit the request to the NRC for prior approval. The purpose for reviewing these changes is to allow the NRC staff to perform its regulatory function and make determinations to ensure adequate protective measures remain in place. Although it is recognized that the industry is making technological advances, the "over-commitments" could be considered as emergency preparedness commitments and, therefore, need the approval of the NRC prior to removal from the emergency plan. The submittal should document and provide the basis that explains why the over-commitment is no longer necessary.

### 2. Alternate Methods for Complying with the Regulations

Regulatory Guide 1.101, Revision 4, "Emergency Planning and Preparedness for Nuclear Power Reactors," states, "Licensees and applicants may propose means other than those specified by the provisions of the Regulatory Position of this guide for meeting applicable regulations." Licensees that want to use alternate methods for meeting the regulations should submit them to the Office of Nuclear Reactor Regulation (NRR) for review and approval prior to implementation. Alternate methods for complying with the regulations are the licensee's proposed means for meeting the regulations. Alternate methods have not been endorsed by the NRC nor are they contained in the current regulations or guidance documents.

### 3. Emergency Action Level Changes

Emergency action level (EAL) changes are also subject to the requirements of 50.54(q). However, there is a defined process related to making changes to EALs. The NRC staff developed guidance for making changes to EALs in Regulatory Issue Summary (RIS) 2003-18 "Use of NEI 99-01, 'Methodology for Development of Emergency Action Levels,' Revision 4, dated January 2003."

### 4. Inspection Activities

An inspector's review of changes to the emergency plan does not constitute approval of the emergency plan as changed. The inspector performs a screening review of the changes and not a complete review of the emergency plan when conducting an inspection. The purpose of inspecting emergency plan changes is to verify the effectiveness of the implementation of the licensee's 50.54(q) change process.

### 5. Removal of items from the Emergency Plan to Emergency Plan Implementing Procedures

The emergency plan implementing procedures (EPIPs) are not considered to be part of the emergency plan. However, if a licensee removes an emergency preparedness commitment from its approved emergency plan and places it in an EPIP, the emergency plan should be reviewed to determine if a DIE exists. The rationale is, licensees could conceivably remove an item(s) from the emergency plan, place it in an EPIP and then remove it from the EPIPs without conducting a 50.54(q) evaluation, thereby bypassing the Plan as the controlling document for licensing purposes. However, if the EPIP is considered part of the emergency plan through incorporation or is necessary to meet the NRC requirements, any changes to the EPIP should have an accompanying 50.54(q) evaluation.

## Proposed Decrease in Effectiveness Determination

1. Does the capability still exist to conduct this function?

Yes  No

2. Are the time requirements of all the affected EP commitment(s) still met?

Yes  No  N/A

If No is checked in box 1 or 2 the change is a decrease in effectiveness. If the answers to questions 1 and 2 are yes, continue to follow the 50.54(q) flowchart.

## **Examples of Acceptable Plan Changes**

- ◆ Management, organization and/or responsibility changes are acceptable if the function for command and control and the line of succession is clearly defined and assigned tasks do not overload the on-shift organization.
- ◆ Organizational changes are acceptable if the ability to maintain an on-shift staff without an overload of assignments, and to augment it in accordance with the emergency plan is maintained.
- ◆ Changes to ERO augmentation processes are acceptable if they remain capable of ensuring augmentation of the initial response staff in accordance with facility activation commitments.
- ◆ Changes to ERO are acceptable if the staffing levels of NUREG-0654 Table B-1 or an approved alternative method are maintained.
- ◆ Changes are acceptable if the level of offsite assistance is maintained.
- ◆ Changes to the Emergency Operations Facility (EOF) are acceptable if accommodations for offsite authorities are adequate.
- ◆ Changes to processes to provide follow-up messages and/or the content of the follow-up messages to offsite authorities are acceptable if the offsite authorities agree that the process and information content is adequate to support their emergency response needs.
- ◆ Changes to communications systems and processes are acceptable if they maintain the capability to implement offsite notifications within 15 minutes.
- ◆ An increase in communications technology that decreases the need for a back-up systems is acceptable.
- ◆ Changes that provide an alternate means of notifying the public consistent with FEMA guidance are acceptable.
- ◆ The use of digital chart recorders versus paper recorders is acceptable.
- ◆ Emergency Action Level and other changes based on NRC approved Technical Specification or Offsite Dose Calculation Manual changes are acceptable.

## Examples of Decreases in Effectiveness

- ◆ The licensee installed seismic monitoring equipment that required local readout by a trained I&C Tech using a computer-like device; however, the I&C tech was a 30-minute responder, rather than an on-shift engineering release order (ERO) member, thereby, delaying the classification of certain EALs.
- ◆ Following an Alert declaration for a carbon dioxide discharge into one of the emergency diesel generator rooms, the licensee implemented a series of corrective actions which included the revision of the EALs pertaining to toxic gas events at two stations. These changes were primarily based upon the licensee's assessment that the conditions did not meet the definition of an Alert. The licensee's change to the EALs would reduce the number of declarable events because not only was the presence of gas required but also an effect on plant operations needs to be considered. (With the revised EALs, no emergency classification would have been made.) The emphasis of the EAL shifted from personnel safety to the impact on plant conditions or operations.
- ◆ A significant deviation in the EAL scheme from the NRC approved version. The deviation involved changes to eight EALs that decreased the effectiveness of the Emergency Plan in that emergency conditions that would have resulted in classification at the General Emergency, Alert, and Notification of Unusual Event levels under the prior NRC approved plan would now result in a lesser classification or no classification.
- ◆ Changes that reduce the coverage of or increase the activation time of Alert and Notification Systems without review and approval by offsite agencies and FEMA.
- ◆ Equipment is removed from the Emergency Response Facility (ERF) and the plan such that the capability to communicate among the ERFs or offsite agencies does not exist.
- ◆ Changes are made such that the capability to notify ERO responders no longer exists.
- ◆ Procedures are revised such that a range of offsite protective actions or adequate protective actions for onsite personnel who are not members of the ERO would not be recommended or implemented.
- ◆ Procedures are revised such that follow-up notifications do not take into account previous PARs.
- ◆ Changes are made such that personnel in the owner controlled area are not informed of the need to evacuate or shelter.
- ◆ A change is made that increases an EP commitment followed by a change that decreases the new EP commitment.

## **Examples of Changes That Warrant NRC Prior Approval**

- ◆ Increase in augmentation response times
- ◆ Increase in facility activation time
- ◆ Removal of current NUREG 0654 Table B-1 responders or alterations of a NRC approved alternative
- ◆ Combining Emergency Operating Facilities (EOF)
- ◆ Alternate methods to comply with the regulations
- ◆ Moving EOFs greater than 25 miles from the site
- ◆ Habitability requirements of the nearsite (within 10 miles) EOF/Technical Support Centers (TSC)
- ◆ Relocation of the (TSC) outside the protected area
- ◆ Complete or major revisions or the combining of the Emergency Plan(s)
- ◆ Changes to EALs as identified in RIS-2003-18 "Use of NEI 99-01, 'Methodology for Development of Emergency Action Levels,' Revision 4, dated January 2003"