

November 6, 2002

MEMORANDUM TO: Christopher I. Grimes, Program 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 EMERGENCY ACTION LEVEL ISSUES

DATE & TIME: November 21, 2002
9:00 a.m. - 12:00 noon

LOCATION: U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852
Room O-10B4

PURPOSE: To discuss NEI document, NEI 99-01, Revision 4, " Methodology for
Development of Emergency Action Levels." A preliminary agenda is
attached (Attachment 1). Also attached is NRC staff's questions to be
discussed in the meeting (Attachment 2).

PARTICIPANTS: NRC NEI/Industry
K. Gibson W. Lee, SNC
P. Milligan A. Nelson, et al.
T. Blount, 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 Peter Wen at (301) 415-2832 or pxw@nrc.gov.

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PRELIMINARY AGENDA FOR NRC/NEI
MEETING ON EMERGENCY ACTION LEVEL ISSUES

November 21, 2002; 9:00 a.m. - 12:00 noon
11555 Rockville Pike, Rockville, MD 20852-2738
Room O-10B4

<u>TOPIC</u>	<u>LEAD</u>
• Introductions and Opening Remarks	NRC/NEI
• Review of NEI 99-01, Rev 4 Submittal	NEI
• Discussion of Regulatory Analysis	NRC/NEI
• Response to NRC Questions - Refer to Attachment 2	NRC/NEI
• Public Questions and Answers	Public
• Summary / Conclusion / Action Item Review	NRC/NEI

NRC Questions/Comments on NEI 99-01, Rev. 4

Table of Contents.

- Item 2.0 should read “CHANGES INCORPORATED IN REVISION 4.”

Section 3.8 Emergency Class Thresholds.

- This section does not seem to address the class threshold for Cold shutdown and Refueling modes. A basic ‘tenet’ of NUMARC-007 was that emergency conditions existed when operations were outside the Tech Spec LCO and Action Statement Times. This does not seem to be applied to the Cold Shutdown mode EALs. How is this addressed?

Section 3.14 Cold Shutdown/Refueling IC/EALs

- Typo in last paragraph on pg 3.14, “NUREG-054” missing the “6”.
- This section does not address the “Refueling Tech Specs.” It seems that they should be acknowledged in some manner relative to their usefulness or lack of benefit.

Section 5.1 Generic Arrangement

- Second to last bullet item, second sentence has a formatting error (unnecessary carriage return.).

Section 5.2 Generic Bases

- The last paragraph addresses the “Hazards Recognition Category.” It states that if the hazard results in VISIBLE DAMAGE to plant structures or equipment associated with safety systems or if system performance is affected, the event may be escalated to an Alert. Is it intentional that impact to personnel is not a reason for escalation, or is the only way to escalate intended to be by impact on structures or equipment? This seems inappropriate since the purpose of an E-Plan is to protect the health and safety.....

Table 5-A-1, Recognition Category A

- IC AU1 has a “-“ in “Radiological” unnecessarily.

IC AU2, Unexpected increase in Plant Radiation.

- This IC is a change from the NUMARC-007, in that the “Airborne concentration” part has been removed. Additionally, the previous document (007) had 4 EALs for this IC, this version has 2. Why is the change appropriate?

IC CU1, EAL 1 or 2

- The values provided for the Cold shutdown condition are the same as the values for leakage at the same classification level when pressurized. What is the justification for the use of the same criteria when the RCS is pressurized or depressurized?
- The bases refer to the use of reduced inventory instrumentation such as level hose indication however the mode is Cold shutdown. Is this level indication expected to be employed when the vessel head bolts are still tensioned?

IC CU2, EAL 1 or 2

- Are these EALs equally applicable for one bundle as well as the entire core, in other words there is no distinction of risk for number of bundles in the core?
- Why is the spent fuel pool level decrease considered to be appropriately handled through the use of the Abnormal Rad conditions but level decreases in the RPV during refueling are not?

Attachment 2

IC CU3, EAL 1

- The time threshold during Cold shutdown and Refueling modes is the same as pressurized operations, is this appropriate to the associated risk for the given conditions? Why is 15 minutes the correct threshold for power operations were the starting temperatures and pressures are higher and therefore closer to a fuel melt / clad damage condition if 15 minutes is the correct time when the corresponding starting temperatures are considerably less?

IC CU5, EAL 1 or 2

- How is this EAL applied to a plant that shutdown for a fuel failure to meet the operational LCO? Does entry into Cold Shutdown or Refuel mode require declaration of an emergency?

IC CU6, EAL 1 or 2

- Does it matter if the communications ability is restored in some defined time or does an intermittent or short duration occurrence require classification?
- What does “defeats the plant operations staff ability to perform routine task necessary for plant operations” entail? Can the use of runners or other non-telephonic or radio type communication protocol preclude implementation of this EAL?

IC CA4

- It appears that EALs 1 and 2 are only applicable in the Refuel mode since they specify that RCS integrity is not established, based on the Mode Applicability Matrix Refuel is the mode that allows the vessel head to be de-tensioned. Would RCS integrity be intentionally violated in Shutdown? If this is correct then it appears that EAL 3 only applies in cold shutdown, is this accurate?

IC CG1

- Is this IC intended to be applied regardless of the number of bundles in the core, if so what is the basis for risk significance? If not, what is the core size limitation and basis?
- How does this condition significantly differ from a spent fuel pool drain down situation resulting in fuel uncover that is processed through the abnormal rad condition ICs?
- What is the expected dose consequence off-site from this event?

Hazards and Other Conditions affecting Plant Safety

- HA1 - Natural and Destructive Phenomena affecting the Plant Vital Area.
The Seismic event has to greater than the OBE but does not have to cause damage to any system, structure or component. This does not seem consistent with other parts of this section.
- HA1 - EAL 2, 3 and 6 have similar wording related to “phenomena” occurring inside the protected area boundary and resulting in visible damage. EAL 5 refers to the creation of industrial hazards that preclude access.
Shouldn't the wording of these be more consistent, it seems that the high winds, vehicle crash or other occurrences could reasonably create industrial hazards and /or preclude access? What is the focus of this class, is it structure or equipment failure, hazards to accessibility, or injury to personnel? Is it expected that the impact occur or that the reasonable potential for impact exist?
- HA3 - The IC was changed from the NUMARC - 007 version in that systems required to maintain safe operations are not included in the IC. The IC now only refers to systems required to establish or maintain safe shutdown.
Is this an oversight or intentional, since the EAL refers to the safe operation of the plant?

- HA3 - With regard to EAL 1 and 2:
 EAL 2 appears to only require the presence of a flammable gas in the vital area while the toxic gas must preclude access to the area for safe operation of the plant. Why is there a difference, shouldn't both have the same limitations or constraints?
 EAL 1 requires that personnel are not able to access the area for safe operation of the plant. How is safe operation of the plant different from normal operation of the plant? If the area can be accessed with personal protective equipment is the EAL met? The basis identifies that areas that require only temporary access that can be supported by the use of respiratory protection should not be considered as exceeding the threshold. Does this temporary access mean that without the gas normal access would be available for routine rounds and logkeeping, with the gas present using an appropriate respiratory device, rounds and logkeeping may continue without meeting the EAL threshold?
 It appears that all Vital Areas are considered equal when used in these EALs, if so, why and if not which areas are not to be included?
- IC HS1 – Regarding EAL 1:
 The EAL refers to “the plant VITAL AREA”, is this intended to include all areas designated vital areas at a specific site or can some of the site designated vital areas be left out of the list for this EAL?
- IC SU6 – Regarding EAL 1 and 2:
 Similar to IC CU6, since 10 CFR 50.72 requires notification for loss of communications to occur within 8 hours of event, to ensure loss of communication capability is significantly more comprehensive than the 50.72; does this condition have to extend beyond the 8 hours reporting time in 50.72? What specific criterion distinguishes these events between reportability and emergency conditions?

Appendix C - Matrix

CU1 should be identified as “New” since it was not applicable in Cold Shutdown in the NUMARC – 007 version. CU8 is also new; it is not in NUMARC-007.

Appendix E

Removed the Rad EAL for the ISFSI from the IC, but did not remove it from the discussion appendix (E). Additionally, what is the bases / reasoning for removal?