



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 3, 2009

Site Vice President
Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360-5508

SUBJECT: PILGRIM NUCLEAR POWER STATION - REQUEST FOR ADDITIONAL
INFORMATION REGARDING EMERGENCY ACTION LEVELS BASIS
CHANGES TO NUCLEAR ENERGY INSTITUTE (NEI) 99-01, REVISION 5
(TAC NO. ME0101)

Dear Sir or Madam:

By letter dated October 17, 2008, Entergy Nuclear Operations, Inc. (the licensee) requested changes to convert the technical basis for Pilgrim Nuclear Power Station (Pilgrim) Emergency Action Levels (EALs) from NUREG-0654 to NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 5.

The Nuclear Regulatory Commission staff has been reviewing the changes to EALs and has determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information (RAI). A response to this RAI is requested to be provided by June 1, 2009.

Sincerely,

A handwritten signature in cursive script that reads "James Kim".

James Kim, Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-293

Enclosure:
As stated

cc w/encl: Distribution via Listserv

PILGRIM - REQUEST FOR ADDITIONAL INFORMATION REGARDING EMERGENCY

ACTION LEVELS BASIS CHANGES TO NEI 99-01, REVISION 5

RAI #	EAL	Question
	GENERIC	<p>It is expected that licensees adhere to endorsed guidance, particularly for Initiating Conditions and Definitions, with no differences or deviations other than those related to a licensee's particular design. This is to drive regulatory stability by enforcing the expectation that licensees adhere to NRC reviewed and endorsed guidance with no non-design related deviations and little to no differences.</p> <p>This also ensures that, as stated in 10 CFR 50.47(b)(4), licensees implement a "...standard emergency classification and action level scheme...."</p> <p>While the NRC is not enforcing strict verbatim compliance with the endorsed guidance, where applicable, the NRC will be pointing out areas where we expect compliance with the endorsed guidance to ensure implementation of a standard scheme. This is primarily based upon industry and NRC experience with issues related to the particular EAL.</p> <p>While formatting is usually not technically relevant to the staff's review of EALs, when inconsistent formatting may result in potential misunderstanding, an RAI will be developed to correct the formatting or to obtain additional information in support of the deviation.</p>
	BASES INFORMATION	<p>Staff has noted numerous discrepancies between the proposed Bases Information wording and the endorsed Bases Information wording. Incorporate the endorsed wording to ensure a standard emergency classification and action level scheme or provide detailed justification for not doing so in each case.</p>
	GENERAL COMMENT	<ol style="list-style-type: none"> 1. The EAL Comparison Matrix does not consistently reflect the changes made to the EALs, nor does it consistently justify the changes adequately (for example, HA1.4). There appears to be many instances of inattention to detail in ensuring that the wording justified in this matrix is actually the wording used on the EAL Bases. As the wording from EAL Basis will be the wording implemented, the technical review is limited to the information provided in the EAL Bases. Please explain how/why the information in the EAL Comparison Matrix does not align with the exact wording given in the EAL Bases. 2. Explain where the information related to the treatment of multiple events and classification downgrading (Sections 3.10 and 3.11 of the endorsed guidance) is in your proposed EAL Bases Document. Add the information from the endorsed guidance to ensure implementation of a standard emergency classification and action level scheme.

RAI #	EAL	Question
1	GLOBAL DIFF	The staff disagrees with the stated positions given in #2 and #3 and expects the terms "valid" and "unplanned" to be used as per the endorsed guidance to ensure implementation of a standard emergency classification and action level scheme. Several of the following RAIs are to restore compliance with the endorsed guidance.
2	SECT 1.0	Add information from the 5 th paragraph of the endorsed guidance, Section 5.3, to ensure implementation of a standard scheme.
3	SECT 3.0	<ol style="list-style-type: none"> 1. Definitions need to be verbatim to the endorsed guidance to ensure implementation of a standard emergency classification and action level scheme. 2. Define "sabotage" to ensure implementation of a standard emergency classification and action level scheme.
4	SECT 4.7	Place a comma after "All" to ensure "All" is not confused with "Not Applicable" to ensure implementation of a standard emergency classification and action level scheme.
5	SECT 4.8	Add 2 nd paragraph of Sect 3.13 of the endorsed guidance to ensure implementation of a standard emergency classification and action level scheme.
6	SECT 4.10	This section is not consistent with the endorsed guidance. Explain why this wording was chosen and adopt the endorsed wording to ensure implementation of a standard emergency classification and action level scheme.
7	SECT 5.0	<ol style="list-style-type: none"> 1. Step 2 is not consistent with the current regulations. Once approval for the EAL scheme is obtained, the process for future changes is to evaluate the proposed change(s) against the approved EAL wording as required via 10 CFR 50.54(q). Every change is to be evaluated in accordance with 10 CFR 50.54(q), and submitted to the NRC for prior approval if the licensee determines the change(s) to be a reduction in effectiveness. 2. Add reference to the EAL Technical Bases Document to step 4.
8	SECT 6.0	<ol style="list-style-type: none"> 1. Revise to make consistent with the response to the above RAI. 2. How is the EP Manager made aware of proposed changes as stated in step 2?

RAI #	EAL	Question
9	AU1.1 AA1.1 AS1.1 AG1.1	<ol style="list-style-type: none"> 1. The symbols for "greater than" are missing for several of the setpoints/indicators. Explain the deviation or revise to ensure implementation of a standard emergency classification and action level scheme. 2. Do the Offsite Dose Calculation Manual setpoints correlate to the units given? 3. Since you have so few monitors available, state the compensatory measures you would take if/when these monitors become unavailable, or provide additional monitors applicable for this EAL (if any). 4. Explain why you find it advantageous to separate the gaseous and liquid release EALs when you are using the same table as you have stated in the EAL Technical Bases. 5. [AS1.1, AG1.1] You stated in your submittal cover letter that this information will be submitted to the NRC by December 1, 2008. It has not been submitted as of March 16, 2009. Explain why this information has not been submitted as committed to in your docketed submittal. Provide this information to allow for the technical review.
10	AU1.2 AA1.2	<ol style="list-style-type: none"> 1. The symbols for "greater than" are missing for several of the setpoints/indicators. Explain the deviation or revise to ensure implementation of a standard emergency classification and action level scheme. 2. Explain why you find it advantageous to separate the gaseous and liquid release EALs when you are using the same table as you have stated in the EAL Technical Bases. 3. Since you have so few monitors available, state the compensatory measures you would take if/when these monitors become unavailable, or provide additional monitors applicable for this EAL (if any). 4. [AU1.2] Explain why you state "...nor is it uncontrolled" in the last paragraph of the PNPS Basis.
11	AG1.3	<p>Incorporate the timing note from the endorsed guidance to ensure implementation of a standard emergency classification and action level scheme.</p>
12	AU2.1 AU2.2	<ol style="list-style-type: none"> 1. Add the words "unplanned" and "valid" to the EAL to ensure implementation of a standard emergency classification and action level scheme. 2. [AU2.1} Provide a list of applicable radiation monitors in the EAL as expected in the endorsed guidance to ensure implementation of a standard emergency classification and action level scheme.

RAI #	EAL	Question
13	AA2.3	<ol style="list-style-type: none"> 1. A different IC title should require a different IC number, as per the endorsed guidance. While combining some ICs/EALs may be acceptable, the IC wording should be consistent for all ICs using the same core number (i.e., AA2.x). Explain why the NRC should consider the approach proposed by PNPS or revise to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording and numbering separation. 2. Explain why the sentence related to "...security access point..." is in you PNPS basis information.
14	CU1.1 CA1.1 SU1.1 SA1.1 SS1.1 SG1.1	<ol style="list-style-type: none"> 1. Please explain how EAL decision makers will remember to NOT credit the "Backscuttle via Main Transformer" unless it was already established. It is the staff's expectation that information that could potentially alter an EAL classification be placed, or annotated, in the actual EAL and EAL Wallboard(s). 2. Please explain why you chose to list the various AC power sources. The IC deals with a loss of power to emergency busses, not the evaluation of available sources. 3. Is the station blackout DG controlled via your Tech Specs? 4. [SU1.1] It is "greater than or equal to 15 minutes" (or "15 minutes or longer"). You have it as greater than 15 minutes. Correct the typo to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording.
15	CU2.2	Return the word "Unplanned" to both the IC and the EAL to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording.
16	CA2.1	<ol style="list-style-type: none"> 1. Remove the words "...with irradiated fuel in the RPV" to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording. 2. It is supposed to be a greater than or equal to symbol in the EAL, not just greater than. Make the correction or provide supporting information to justify the deviation.
17	CS2.1 CS2.2 CG2.1 CG2.2	Your NOTE 4 redefines "Containment Closure" slightly different than how you have it defined in Sect 3.0. Provide justification to support the inconsistency, or revise to ensure defined terms are defined only one way in your document.
18	CS2.3 CG2.2	It is expected that licensees develop an indicator using available radiation monitoring to capture loss of inventory conditions when level indication is out of service. Develop the appropriate indicator to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording.

RAI #	EAL	Question
19	CU3.1 CA3.1	Return the word "Unplanned" to the EAL to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording.
20	CU3.2	It is supposed to be a greater than or equal to symbol in the EAL, not just greater than. Make the correction or provide supporting information to justify the deviation.
21	CU4.1 SU4.2	<ol style="list-style-type: none"> 1. Does the wireless telephone system work in the Control Room, in the plant, and in the Telecommunications Service Center/Operations Support Center? 2. Is the Gaitronics Maintenance Jack System a viable communication method to support emergency preparedness activities, including accident mitigation and plant shutdown/cooldown? 3. Explain how everything except the NRC-ENS Telephone (for offsite communications) will suffice for informing the NRC of an incident at the site. 4. How are the satellite phones tested?. What is the periodicity? What procedure controls this activity?
22	HA1.1	<ol style="list-style-type: none"> 1. Explain, in much greater detail, what the analysis for determining OBE entails, i.e., how is it done, how timely is it, can it be done in the control room with staff available 24/7, etc. 2. Restore paragraph #1 from the endorsed guidance to the Basis information to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording.
23	HA1.3	Explain why you added "...protected area boundary..." to the EAL as it adds to the reading burden without a commensurate increase in understanding of the intent of the EAL.
24	HU2.1	<ol style="list-style-type: none"> 1. Restore the words "...of detection..." to the IC to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording. 2. Restore the note from the endorsed guidance to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording. 3. Use the wording from the endorsed guidance to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording. 4. The words you added to the bases stating "Alarms caused by smoke are not valid alarms..." is incorrect and not the staff's expectation for this EAL. It is also inconsistent with the previous sentence. Remove this statement to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording.

RAI #	EAL	Question
25	HU2.2	Restore the words “..of detection...” to the IC to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording.
26	HA2.1	Justify, in more detail, why the staff should consider the deviation in the EAL wording, including why the word permanent was added.
27	HG4.1	<ol style="list-style-type: none"> 1. Explain, in more detail, how the EAL wording you chose to use for spent fuel is equivalent to the endorsed guidance as the goal is to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording. 2. Explain how your choice of words is consistent with the EAL Basis, 2nd threshold, wording. 3. Explain, in more detail, why 24 hours has been added to the EAL Basis as a caveat for the EAL. Also, since it alters how/when the EAL is declared, it should be part of the EAL and on the EAL Wallboard. Explain or revise as applicable.
28	SU2.1	Restore the word “unplanned” to the EAL to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording. In addition, please explain how an EAL decision maker can differentiate between normal startup response and an inadvertent criticality event using the EAL wording you have proposed. By restoring the wording as endorsed by the NRC, EAL decision makers can make a timely classification with information provided in the EAL without relying on supporting information contained in the EAL Bases.
29	SA2.1 SS2.1	For these ICs in the Anticipated Transient Without Scram set, staff expectation is to follow the endorsed wording for the EALs and ICs, with the addition of the 3% power (APRM Downscale) value. Restore these EALs to compliance with the endorsed wording, or provide supporting justification as to why the NRC should consider the endorsed wording to not be applicable to your site, i.e., there is a design issue precluding the use of the endorsed wording. This is to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording. While SG2.1 is not exactly like the endorsed guidance, it is close enough to be acceptable. SA2.1 and SS2.1 are not. However, for consistency with other licensees of a similar design, consider restoring SG2.1 to the endorsed wording when restoring SA2.1 and SS2.1, or provide detailed justification to the NRC to support the deviations.
30	SU4.1	<ol style="list-style-type: none"> 1. Restore the word “unplanned” to the IC/EAL to ensure implementation of a standard emergency classification and action level scheme by using the endorsed guidance wording. 2. [SU4.1] Please explain why you think the availability of computer-based monitoring capability is not a factor at the Unusual Event level.

RAI #	EAL	Question
31	FB MATRIX	<ol style="list-style-type: none"> 1. FC Barrier – RPV Level – Loss: Are System Administrator's Guides controlled by 10 CFR 50.54(q) for your site? If not, then it is expected that the relevant conditions be given for this criteria. 2. PC Barrier – PC Pressure/Temperature – Potential Loss: Why do you not have a condition for PC pressure? 3. Please elaborate as to why you have no other FB conditions that would be indicative of a loss or potential loss of one of the three barriers. Provide documentation to support what you evaluated to make this decision as the expectation is for licensees to fully evaluate their capabilities and develop indicators of barrier loss/potential loss suitable for the applicable design and available instrumentation.

April 3, 2009

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James Kim, Project Manager
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