



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

July 14, 2011

Mr. George H. Gellrich, Vice President
Calvert Cliffs Nuclear Power Plant, LLC
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RE: REQUEST TO ADOPT
REVISED EMERGENCY ACTION LEVELS - CALVERT CLIFFS NUCLEAR
POWER PLANT, UNIT NOS. 1 AND 2 - (TAC NOS. ME5424 AND ME5425)

Dear Mr. Gellrich:

By letter dated February 1, 2011, Calvert Cliffs Nuclear Power Plant, LLC, the licensee, submitted a request to adopt revised Emergency Action Levels (EALs) for use at the Calvert Cliffs Nuclear Power Plant in accordance with Title 10 of the *Code of Federal Regulations*, Part 50, Appendix E, Section IV(B)(1). The revised EALs are based on Nuclear Energy Institute (NEI) 99-01, Revision 5, "Methodology for Development of Emergency Action Levels," dated February 2008. The existing EALs used at Calvert Cliffs are based on NEI 99-01, Revision 4.

Based upon the Nuclear Regulatory Commission staff review, additional information will be necessary for the staff to complete its review. Enclosed is the staff's request for additional information (RAI). Based on discussions with your staff, we understand that you plan to respond to the enclosed RAI within 60 days of the date of this letter.

Please contact me at 301-415-1364 if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Douglas V. Pickett".

Douglas V. Pickett, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-317 and 50-318

Enclosure:
Request for Additional Information

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

REVISED EMERGENCY ACTION LEVELS

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-317 AND 50-318

By letter dated February 1, 2011, Constellation Energy Nuclear Group, LLC, (CENG), requested prior approval of a revised emergency action level (EAL) scheme for Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 (CCNPP).

CENG's letter stated that the current CCNPP EAL scheme is based on generic development guidance from NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, dated January 2003 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML041470143). Since 1992, numerous enhancements and clarification efforts have been made to the generic EAL development guidance resulting in the most latest document, Nuclear Energy Institute (NEI) 99-01, Revision 5, "Methodology for Development of Emergency Action Levels," (ADAMS Accession No. ML080450149), which was found to be acceptable for use as generic EAL development guidance by the Nuclear Regulatory Commission (NRC) staff by letter dated February 22, 2008 (ADAMS Accession No. ML080430535).

The proposed EAL schemes were developed using the generic development guidance from NEI 99-01, Revision 5 with numerous differences and deviations based upon design criteria applicable to the site as well as licensee preferences for terminology, format, and other licensee desired modifications to the generic EAL scheme provided in NEI 99-01 Revision 5.

The NRC staff has determined that the following request for additional information (RAI) is necessary to facilitate the staff review.

1. Section 1.0, "Purpose," needs to clearly state that the EAL Technical Bases Document is intended to provide clarification and understanding of how the EALs were developed for CCNPP as well as the intent of each EAL. While the EAL Technical Bases Document supports the technical review of the CCNPP EAL scheme, the document is actually intended to ensure consistent understanding of the EAL scheme for EAL decision makers at CCNPP. The document states that it "may" be useful in training; however, this document "shall" be used for training purposes. Please ensure this section accurately captures this point.
2. Section 4.0, "Definitions," has the words "...from the Control Room panels" added to the definition for "unisolable" without any justification as to why. Please explain why this was added to the definition or return the definition to the accepted industry standard verbiage as reflected in the latest NRC approved EAL scheme development guidance.
3. EAL RU1.1 and RU1.2: For the site specific EAL development method chosen by CCNPP, please consider combining these EALs to aid in reducing reader burden and

Enclosure

possibly improve the timeliness of the declaration. Each EAL refers to the exact same table, for the exact same time duration, and with the same Note being applicable. The only difference would be the incorporation of the basis information for each EAL.

4. EAL RA1.1 and RA1.2: For the site specific EAL development method chosen by CCNPP, please consider combining these EALs to aid in reducing reader burden and possibly improve the timeliness of the declaration. Each EAL refers to the exact same table, for the exact same time duration, and with the same Note being applicable. The only difference would be the incorporation of the basis information for each EAL.
5. EAL RA1.2: Please explain how “off-scale hi” will be differentiated from instrument error and how timely this determination would be.
6. EAL RA3.1:
 - a. Please explain why CAS and SAS both need to be on this list. If the site can function adequately with only CAS (which is the typical industry response) then only CAS needs to be reflected in this EAL. Please explain why both facilities are needed, or revise to reflect CAS or SAS, not both.
 - b. Please explain why you stated “There is no radiation monitoring system at CCNPP for the Control Room....” A review of the Updated Final Safety Analysis Report and previous versions of the CCNPP EAL scheme (ADAMS Accession No. ML021350540) show that instrument O-RI-5350(67), “Control Room Vent,” is available for the CCNPP Control Room. Please explain why the Control Room does not have radiation monitoring, or correct this EAL. In addition, please explain how CCNPP satisfies General Design Criteria 19, Control Room, from Appendix A of 10 CFR Part 50. If this error is due to an oversight, assuming there is an error, please document in your response to this RAI that you reviewed and confirmed that no similar oversights exist in this submittal.
7. EAL CU1.1: Please explain why you added “Defueled” as an Operating Mode for this EAL or correct the discrepancy. You stated that this was an omission from the generic EAL scheme development guidance but provided no justification as to why you believe that to be correct.
8. EAL CA1.1: Please explain why you stated all the exclusion criteria for declaration of this EAL. These statements are not supported in the justification section(s) of this submittal, and as a result, the staff has no basis for effectively evaluating the acceptability of these claims.
9. EALs CU5.1 and SU6.1: Please explain how the “Dedicated offsite agency telephone system” and the “CCNPP Radio System” are acceptable for contacting the NRC in the required timeframe or correct the table.
10. EALs HU1.2 and HA1.2: Please explain if 100 mph is within the calibrated range of the instrumentation available in the Control Room.

11. EAL HU2.1: The proposed revision to the start time of this EAL determination is unacceptable and not supported by the justification provided. The start time for this EAL begins when the alarm/annunciator is received, or when the report of a fire is received, whichever is earlier.
12. EAL HA3.1: Please confirm that the areas listed in Table H-1 are the areas CCNPP will use for this particular EAL. The intent of this EAL is to declare an Alert when access to an area is impeded due to a gaseous event. The areas of concern are limited to those that must be entered for safe operation or safe shutdown/cooldown. If access to the area is unnecessary to operate said equipment, then the table does not need the area listed.
13. EAL HA4.1: Please reflect applicability of this EAL for security events at your independent spent fuel storage installation.
14. EAL SA3.1: The final sentence from your plant-specific bases section does not document that escalation to the site area emergency EAL SS3.1, which can also be due to actions away from the control room panels, are successful in shutting down the reactor. Please explain why, or correct the discrepancy.
15. EALs SU5.1, SA5.1, and SS5.1: These EALs require more detail on which annunciators and indicators are applicable. The generic EAL scheme development requires more guidance for these EALs. Leaving this open for subjective judgment determination by a Control Room Shift Manager is unacceptable and contrary to consistent EAL decision-making within the time considerations required by regulation. Please provide more detail as to what annunciators and indicators are applicable (for example, panel numbers, specific instruments, etc.).
16. Fission Barrier Matrix:
 - a. Please explain why CCNPP did not carryover the critical safety function status tree equivalents developed by the Combustion Engineering Owners Group (CEOG) and as reflected in revision 10 of the CCNPP EAL Technical Basis Document, i.e., Safety Function Status Checks. Develop the equivalent thresholds using CEOG guidance and the existing CCNPP EALs.
 - b. Document and justify why all the other fission barrier thresholds from the existing CCNPP fission barrier matrix are not addressed in this submittal and why the NRC should consider them to no longer be applicable, or revise accordingly.

July 14, 2011

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/ra/

Douglas V. Pickett, Senior Project Manager
Plant Licensing Branch I-1
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