

NRR-PMDAEm Resource

From: Williams, Shawn A
Sent: Wednesday, June 29, 2016 1:12 PM
To: Jpredd@southernco.com
Cc: PATEL, Chandu P
Subject: Vogtle, Units 3 and 4, Request for Additional Information Regarding Emergency Action Level Scheme LAR 16-002
Attachments: Vogtle 3-4 EAL Scheme Change RAIs.docx

Mr. Redd,

By letter dated March 4, 2016, Southern Nuclear Operating Company, LLC., (SNC, the licensee) requested approval of an emergency action level (EAL) scheme change for the Vogtle Electric Generating Plant (VEGP), Units 3 and 4 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML16064A352). VEGP proposes to revise their current EAL scheme for Units 3 and 4 from one based on Nuclear Energy Institute (NEI) document NEI 07-01, "Methodology for Development of Emergency Action Levels for Passive Reactors," Revision 0 (ADAMS Accession Number ML092030210), to an alternative scheme proposed by VEGP for staff review and approval.

The attached requests for additional information (RAIs) are needed to support NRC staff's continued technical review of the proposed EAL scheme change.

These RAIs are near identical to the similar V.C. Summer RAIs dated May 16, 2016 (ADAMS Accession No. ML16137A251).

However, RAI-VEGP-07 and RAI-VEGP-08 have some differences.

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REQUESTS FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST

EMERGENCY ACTION LEVEL SCHEME CHANGE

VOGTLE ELECTRIC GENERATING PLANT, UNITS 3 AND 4

LICENSE NOS NPF-91 AND NPF-92

By letter dated March 4, 2016, Southern Nuclear Operating Company, LLC., (SNC, the licensee) requested approval of an emergency action level (EAL) scheme change for the Vogtle Electric Generating Plant (VEGP), Units 3 and 4 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML16064A352). VEGP proposes to revise their current EAL scheme for Units 3 and 4 from one based on Nuclear Energy Institute (NEI) document NEI 07-01, "Methodology for Development of Emergency Action Levels for Passive Reactors," Revision 0 (ADAMS Accession Number ML092030210), to an alternative scheme proposed by VEGP for staff review and approval.

The requests for additional information (RAIs) listed below are needed to support NRC staff's continued technical review of the proposed EAL scheme change.

RAI-VEGP-01

For Section 5.1 (Definitions), the definition of SAFETY SYSTEM was inappropriately carried over from Nuclear Energy Institute (NEI) 99-01, "Methodology for Development of Emergency Action Levels," Revision 6 (ADAMS Accession No. ML12326A805). This document is not directly applicable to VEGP as NEI 99-01 is for non-passive reactor designs. In NUREG-1793, "Final Safety Evaluation Report Related to Certification of the AP1000 Standard Design," dated September 2004, Section 22, "Regulatory Treatment of Non-Safety Systems," provides the staff's position on safety and non-safety systems as it relates to the AP1000 design. VEGP may not be able to use the SAFETY SYSTEM definition provided in NEI 99-01 as it does not encompass important non-safety systems.

Please develop another definition that: (1) will not create confusion by having multiple definitions of SAFETY SYSTEM in the licensee's EAL scheme; (2) will encompass the safety systems applicable to VEGP, and (3) will encompass the important non-safety systems applicable to VEGP as discussed in NUREG-1793. Once this has been developed, please ensure that the applicable EALs are revised accordingly.

RAI-VEGP-02

RIS 2003-18, "Use of NEI 99-01, Methodology for Development of Emergency Action Levels," and Supplements 1 and 2, recommend that licensees provide appropriate justification for submittals that are different than the NRC published or endorsed guidance used to develop the proposed EAL scheme. While this RIS was speaking to non-passive reactor designs that use the methodology outlined in NEI 99-01 for the development of an EAL scheme, this rationale also applies to passive reactor designs (i.e., AP1000, ESBWR). This additional information is needed to support the staff's technical evaluation of the proposed changes to the guidance in NEI 07-01, "Methodology for Development of Emergency Action Levels Advanced Passive Light Water Reactors" (Revision 0). The justification should include differences and deviations between the approved EAL scheme (based on NEI 07-01) for VEGP Units 3 and 4, and the proposed hybrid EAL scheme. The staff notes that the proposed EAL scheme for VEGP Units 3 and 4, adopted the NEI 99-01 (Revision 6) EAL scheme guidance; however, NEI 99-01 is not directly applicable to VEGP Units 3 and 4 due to the reactors' passive design.

Please provide a difference/deviation matrix for the entire proposed EAL Basis Document for VEGP Units 3 and 4 that clearly evaluates all differences/deviations between the proposed scheme and the currently approved scheme based on NEI 07-01. Also, please identify the basis for each change (e.g., NEI 99-01, DCD, Flex, EPFAQs, etc.).

NEI 07-01 provides detailed information (i.e., use of specific equipment and alarms/setpoints), and information to determine the appropriate changes applicable to a passive design versus a non-passive design. When evaluating the proposed EAL scheme, please describe why the detailed EALs as approved (based on NEI 07-01) are no longer applicable for the appropriate EAL.

NEI 99-01 can be used as a guide, however, NEI 07-01 is the approved EAL scheme for VEGP Units 3 and 4, and as such, should be used as the source document for evaluation purposes. Many of the non-design related EALs from NEI 99-01 (Revision 6) are appropriate for VEGP Units 3 and 4, but justification for the proposed EAL scheme (as compared to the approved EAL scheme) must be provided in order to reach our reasonable assurance finding. In addition, it is not readily apparent to the staff which proposed changes are based upon VEGP attempting to adopt NEI 99-01 guidance or are based upon changes to the VEGP Units 3 and 4 Design Control Document (DCD).

RAI-VEGP-03

Please confirm that all setpoints and indications used in the proposed EAL scheme are within the calibrated range(s) of the stated instrumentation and that the resolution of the instrumentation is appropriate for the setpoint/indication. For those EALs that the specific setpoint has not been determined yet, please confirm appropriate actions will be taken to verify that eventual setpoint will fall within the calibrated range of the stated instrument.

RAI-VEGP-04

For EAL RA2, the threshold is based upon a "Hi-Rad" alarm on a list of radiation monitors. Please confirm that this is the actual alarm applicable to this EAL for all the listed radiation monitors, and for the Refueling Bridge Portable Monitor. In addition, please explain why an

elevated reading on these radiation monitors would not be applicable in addition to the alarm(s), or revise accordingly.

RAI-VEGP-05

For EAL RA3, the approved EAL specifies instrument RMS-JE-RE009 for the Central Alarm Station (CAS). Please explain why the proposed EAL states that the CAS will be monitored by survey rather than by an installed radiation monitor as previously referenced, or revise accordingly.

RAI-VEGP-06

NOTE-09, states: “*Classification is not required if either train of RNS (normal residual heat removal) can be placed in service for Shutdown Cooling.*” Please explain: (1) why this note was added; (2) the impact this note has on EAL timing, and (3) the effect this note has on the overall EAL scheme, for each applicable EAL.

RAI-VEGP-07

For EAL CA1, please address the following:

1. Explain why the approved EAL scheme states that 64.5% RCS Hot Leg level is called “Low 4” and the proposed EAL calls this “Low 1.”
2. The approved EAL states a threshold for “*pressurizer level at 12% and lowering on RCS-LT-200.*” Please explain why this was removed, or revise accordingly.
3. Explain why the timing was changed from the approved “*≥30 minutes*” to “*≥15 minutes.*”

RAI-VEGP-08

For EAL CU6, please explain why the timing note was omitted, or revise accordingly.

RAI-VEGP-09

For EAL CS1, please address the following:

1. Explain why the timing was changed from the approved “*≥60 minutes*” to “*≥30 minutes.*”
2. Explain why the approved EAL cannot be implemented as it is more detailed and specific than the proposed EAL, or revise accordingly.

RAI-VEGP-10

For EAL CU4, please explain why this EAL was added to the scheme, or revise accordingly.

RAI-VEGP-11

For EALs CU6, SA2, SS2 and HG1, please explain why the approved EAL cannot be implemented, or revise accordingly. Specifically, this EAL was apparently carried over from NEI 99-01, Revision 6, which may be problematic as it is not entirely applicable to the AP1000 design. VEGP Units 3 and 4 have digital instrumentation and control systems, and uses the AP1000 passive reactor design. As a result, this EAL needs to be unique to VEGP Units 3 and 4, and the AP1000 design.

RAI-VEGP-12

For EALs CU8, CA2 and CA7 (all from the approved EAL scheme), please explain why these were removed from the proposed EAL scheme, or revise accordingly.

RAI-VEGP-13

For EAL HU3, please explain why the threshold for high winds > 145 mph was removed, or revise accordingly.

RAI-VEGP-14

For EAL HU4, please explain why the following areas from the approved EAL scheme were removed from the proposed EAL scheme, or revise accordingly:

- annex building,
- turbine building, and
- radwaste building.

In addition, if using the EAL from NEI 99-01, Revision 6, please explain why the Appendix R information is not carried over as well, or revise accordingly.

RAI-VEGP-15

For EAL HS6, please explain why the timing was changed from the approved “within 60 minutes” to “*within 15 minutes*.” In addition, this EAL was apparently carried over from NEI 99-01, Revision 6, which may be problematic as it is not entirely applicable to the AP1000 design. VEGP Units 3 and 4 have digital instrumentation and control systems, and use the AP1000 passive reactor design. As a result, this EAL needs to be unique to VEGP, Units 3 and 4, and the AP1000 design.