

NRR-DMPSPEm Resource

From: Regner, Lisa
Sent: Wednesday, August 1, 2018 4:38 PM
To: SCHENK, TIM
Cc: bjohns (bjohns@entergy.com)
Subject: DRAFT RAI - RBS EP EAL Scheme Change LAR (L-2018-LLA-0130)

Follow Up Flag: Follow up
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Tim,
Below is the DRAFT RAI for your EAL Scheme Change application to update to NEI 99-01, Revision 6. Please let me know if you need a clarification call.

Thanks.

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REQUESTS FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST

EMERGENCY ACTION LEVEL SCHEME CHANGE

RIVER BEND STATION, UNIT 1

DOCKET NUMBER 50-458

By letter dated April 30, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML18128A044 [package]), Entergy Operations, Inc. (the licensee or Entergy) requested U.S. Nuclear Regulatory Commission (NRC) approval for an emergency action level (EAL) scheme change for River Bend Station (RBS), Unit 1. The NRC staff has reviewed the submittal and determined that additional information is needed to complete the review, as indicated in the requests for additional information (RAIs) below.

Regulatory Requirements/Background

The requirements of Section 50.47(b)(4) to Title 10 of the *Code of Federal Regulations* (10 CFR) state, in part, that:

A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee...

The most recent industry EAL scheme development guidance is provided in the Nuclear Energy Institute (NEI) document NEI 99-01, "Development of Emergency Action Levels for Non-Passive Reactors" (ADAMS Accession Number ML12326A805). By letter dated March 28, 2013, the NRC endorsed NEI 99-01, Revision 6, as acceptable generic (i.e., non-plant-specific) EAL scheme development guidance. Entergy proposed to revise its current EAL scheme to one based on NEI 99-01, Revision 6.

1. For EALs CS1.3 and CG1.2, the Basis discussion for the proposed threshold value for the containment radiation monitors states that the value is “higher than that likely to be attributable to normal refuel operations.” Additional justification provided in the EAL Comparison Matrix, which states, “[t]he dose rate due to core shine when the top of the core becomes uncovered should result in the indicated value.” Neither of these discussions provides sufficient justification to determine if the proposed value is reasonable or to justify a change from the currently approved value. Provide additional detail that supports the threshold value for the proposed containment radiation monitors.
2. The proposed EAL CU3.1 contains the condition “...due to the loss of decay heat removal capability,” which is not consistent with NEI 99-01, Revision 6. This could result in potential misclassification for an event that causes reactor coolant system (RCS) temperature to rise above 200 degrees Fahrenheit (°F) when decay heat removal capability has not been lost. Provide additional justification for the condition, “...due to the loss of decay heat removal capability,” to the EAL CU3.1 threshold value, or revise accordingly.
3. The proposed EAL CA3.1 Basis discussion (1st paragraph), contains the condition, “...caused by the loss of decay heat removal capability,” which is not consistent with NEI 99-01, Revision 6. This could result in potential misclassification for an event other than a loss decay heat removal capability that leads to an unplanned RCS pressure increase. Provide additional justification that the proposed Basis wording would not result in an inaccurate or delayed assessment, or revise accordingly.
4. In EALs CU5.1 and SU7.1, the proposed State and local agency communications methods include the INFORM Notification System (INFORM), satellite phones, and the State of Louisiana radio.
 - a. Please explain how INFORM can be used as a State and local agency communication method. This response should explain whether or not INFORM is independent of the provided telephone systems and if INFORM supports two-way communications.
 - b. Please explain how the satellite phones can be used as an offsite and NRC communication method. This response should explain how the satellite phones can be used to concurrently provide offsite and NRC communications.
 - c. Please explain how the State of Louisiana radio can be used to concurrently communicate with all designated State and local response organizations.
5. The NRC staff could not determine why the threshold value for Fuel Cladding Barrier (FCB) Loss under FCB3 is significantly higher than that for Grand Gulf Nuclear Station (GGNS), which is a higher power Boiling Water Reactor Type 6 (BWR-6) with a Mark 3 Containment (400 R/hr for GGNS and 3000 R/hr for RBS), while the Containment Barrier (CNB) threshold values under CNB8 for a Potential Loss were much closer (7000 R/hr for GGNS and 12000 R/hr for RBS). Please verify that the containment radiation monitor threshold values for a FCB Loss are based on a loss of the RCS with between approximately 2% and 5% clad damage and that the radiation monitor threshold values for a CNB Potential Loss are based on approximately 20% clad damage.
6. The currently approved EAL scheme includes high pressure core spray (HPCS) as a threshold value for a loss of the RCS under the Fission Product Barrier Matrix. However, HPCS does not appear to be included in the proposed EAL scheme. The guidance states that the list of systems should also include high pressure coolant injection [high pressure core spray], since a rupture of the HPCS, if not isolated, could rapidly depressurize the reactor pressure vessel. Please justify not including the HPCS as a threshold value for the proposed RCB2.
7. Please explain why the Basis discussion (third paragraph) for a Potential Loss under CNB7, which states, “cannot be maintained above,” does not use the same wording as the threshold value, which states, “cannot be restored and maintained within.” This difference in wording could result in an inaccurate or delayed assessment.

8. The proposed EAL HU4.2 - Table H-1, "Fire Areas," includes the entire Reactor Building in all modes. This could result in an event declaration due to the spurious actuation of a single fire alarm.

The NRC staff could not determine if the Containment Fire Detection System, in combination with the Containment Ventilation System, supported the inclusion of the Reactor Building as a fire area for EAL HU4.2. Provide justification that demonstrates why the Reactor Building is included in the Table H-1 for all modes, or modify accordingly.

9. The proposed EAL SU4.1 threshold value is based on the Offgas Pretreatment Radiation Monitor High Alarm, while the currently approved EAL scheme uses a table that includes various radiation monitor readings, which correspond to various flow rates.

The NRC staff could not determine if a value that was approximately equal to the technical specification allowable limits could be assessed with the proposed threshold value. Please provide a justification that supports using the Offgas Pretreatment Radiation Monitor High Alarm as a threshold value for SU4.1. This justification should include a discussion of the apparent difference between the currently approved EAL scheme (EAL SU9.1) and the proposed EAL SU4.1.

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