

NRR-PMDAPEm Resource

From: Dietrich, Allison
Sent: Thursday, October 13, 2016 8:16 AM
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Cc: 'dmburgoyne@aep.com'; Wrona, David; Kuntz, Robert; Evans, Jonathan; Fong, CJ; Rosenberg, Stacey
Subject: Donald C. Cook Nuclear Plant Unit 1 - RAI #2 concerning LAR for one-time extension of Completion Time for LCO 3.8.1
Attachments: PRA RAI Cook U1 ELAR.pdf

By letter dated October 11, 2016, Indiana Michigan Power Company submitted a license amendment request for the Donald C. Cook Nuclear Plant, Unit 1. The proposed amendment would allow a one-time extension of the Completion Time for Technical Specification 3.8.1, "AC Sources – Operating." The proposed amendment was requested on an emergency basis pursuant to 10 CFR 50.91(a)(5).

The U.S. Nuclear Regulatory Commission staff has reviewed your submittal. The staff has determined that additional information is needed in order to complete the review, as described in the attached request for additional information.

Please let me know if you have any questions or concerns.

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REQUEST FOR ADDITIONAL INFORMATION REGARDING
EMERGENCY LICENSE AMENDMENT REQUEST FOR ONE-TIME EXTENSION
OF COMPLETION TIME FOR INOPERABLE AC SOURCE - OPERATING
DONALD C. COOK NUCLEAR PLANT, UNIT 1
DOCKET NO. 50-315
CAC NO. MF8457

RAI-PRA-1

In the License Amendment Request (LAR), the licensee stated that “the peer review determined that the resolutions were acceptable and that all [Supporting Requirements] SRs (SRs HR-A1, A2, A3, B1, B2, C2) were met at CC II or higher.” In ASME/ANS RA-Sa-2009 (“The PRA Standard”), the technical elements that apply to pre-initiator Human Reliability Analysis (HRA), that are expected to be affected by an upgrade to the pre-initiator HRA and would require subsequent peer review, are [High Level Requirement] HLR-HR-A, HLR-HR-B, HLR-HR-C, HLR-HR-D and HLR-HR-I. NEI 05-04 describes the scope of the focused peer review stating, in part:

“[T]he scope may be limited within a PRA technical element to only the SRs that are germane to a specific PRA upgrade (e.g., re-evaluation of pre-initiator human error probabilities). The focused peer review may be limited to a single PRA technical element, or may include multiple (or all) technical elements.”

Was the scope of the focused peer review limited only to the specific F&Os, and corresponding SRs, that were identified in the previous peer review? If so, explain how the upgrade to the pre-initiator HRA did not warrant review of all technical elements and SRs related to the HRA HLRs (i.e., HLR-HR-A, HLR-HR-B, HLR-HR-C, HLR-HR-D and HLR-HR-I).

RAI-PRA-2

The licensee listed the Westinghouse Generation III Reactor Coolant Pump (RCP) Shutdown Seals (SDS) model as a key assumption (i.e., source of modelling uncertainty). The licensee goes on to state that the “[r]isk metrics such as [Core Damage Frequency] CDF and [Large Early Release Frequency] LERF increase significantly if failure of the shutdown seals is assured.” Furthermore, the licensee stated that the seals were credited only for the internal events model and not the Fire PRA. For the internal events model, the licensee stated that they used PWROG-14001-P, “PRA Model for the Generation III Westinghouse Shutdown Seal,” Revision 1, July 2014, which does not currently have NRC approval. Explain how the licensee has accounted for the uncertainty in the contribution of the SDS to the internal event risk for this application and estimate the potential impact on the reported risk numbers (i.e., is the decision to take credit for the SDS necessary to meet the acceptance guidelines in RG 1.177?)

RAI-PRA-3

In Enclosure 2 of the LAR, the licensee assumed that “[n]o surveillance testing will occur on Unit 1 PRA credited equipment” and that no other work will be undertaken that could jeopardize the operation of Unit 1. Are there any surveillances that would be required to be performed during this extended time period to remain in compliance? If so, how are these accounted for in the risk calculations? Explain what controls will be in place to preclude unnecessary transients (e.g. plant-centered Loss of Offsite Power) that may challenge the plant during the extended outage. Explain how current weather conditions (e.g. high winds, rain, etc.) are accounted for during the outage.

RAI-PRA-4

Page 8 of Enclosure 2 states that “The Unit 1 East- Unit 2 West [Essential Service Water] ESW crosstie is scheduled to be closed for outage work on the Unit 2 West ESW pump. This crosstie valve will be assumed to be closed for this risk analysis.”

Given that the schedule for the cable repair has changed since the LAR was submitted, confirm whether the crosstie valve will be closed for the duration of the outage in preparation for the work. Explain the risk impact of the position of the crosstie valve on the extended outage.

RAI-PRA-5

Do Incremental Conditional Core Damage Probability (ICCDP) and Incremental Conditional Large Early Release Probability (ICLERP) values that were provided take credit for the supplemental diesel generators described on page 2 of enclosure 2? If so, describe how they were modeled in the PRA (i.e., assumed failure rates, common cause failure model).

RAI-PRA-6

Do ICCDP and ICLERP values that were provided take credit for any FLEX equipment? If so, describe how this equipment was modeled in the PRA (e.g., assumed failure rates, important operator actions).