NRR-PMDAPEm Resource

From: Pulvirenti, April
Sent: Monday, December 19, 2016 8:39 AM
To: Milster, Leia Elizabeth; Zamber, Maria; MEIKLEJOHN, SCOTT W
Cc: Pascarelli, Robert; Singh, Gursharan; Snyder, Pete
Subject: MF8325 DRAFT RAIs regarding the License Amendment Request to revise the table notation for Table 4.3-2, "ESFAS Surveillance Requirements"

Leia, Maria, and Scott,

By letter dated September 1, 2016 (Agencywide Document Access and Management System Accession No. ML16245A359), Entergy Operations, Inc. (the licensee) submitted a license amendment request for Waterford Steam Electric Station Unit 3 (Waterford 3). The proposed amendment would revise the table notation for Table 4.3-2, "Engineered Safety Feature Actuation System Surveillance Requirements" to provide consistency with the existing licensee-controlled Surveillance Frequency Control Program, which is implemented in accordance with Nuclear Energy Institute 04-10, "Risk Informed Specification Initiative 5B, Risk-Informed Method for Control of Surveillance Frequencies."

The U.S. Nuclear Regulatory Commission staff has reviewed the application and concluded that additional information delineated below is necessary to enable the staff to make an independent assessment regarding the acceptability of the proposed amendment. Below please see the DRAFT RAIs regarding this amendment.

A clarification teleconference to discuss these DRAFT RAIs will be conducted on Wednesday, December 21, at 2 p.m. Eastern standard time (1 p.m. central standard time). The telephone number for this clarification call is 888-566-7686 and the passcode is 46224.

The objectives of this clarification call are to
1) confirm that the RAIs contain no proprietary or other non-public information,
2) confirm that the requested information is not already contained in the application, on the docket, or in the public domain,
3) confirm that the licensee understands the wording of the question, and
4) confirm that the licensee is able to provide the information within the requested time frame, in this case, within 30 days.

Because the public has not been informed of and does not have an opportunity to participate in this teleconference, technical information or information which may impact a safety decision may not be discussed during this call.

After the completion of the call, the RAIs will be finalized and transmitted to the licensee by formal signed letter.

I look forward to talking to you all on Wednesday.

DRAFT RAI QUESTIONS

1. The staff understands that the current design does not permit in service testability, and that the current design was granted an exception to General Design Criterion (GDC) 21 and IEEE 279-1971 by invoking section D.4 of Regulatory Guide (RG) 1.22, as supported by References 7, 8, and 9 in the application. The current exception does not apply to the proposed design, which contains two contacts in each circuit, such that actuation of any one of the relays will not result in an ESFAS component actuation. If a spurious actuation of one relay during testing does not result in an ESFAS actuation,

then the proposed design would permit in service testability, and testing of the relays need not be limited to periods of cold shutdown. Demonstrate that the new configuration will meet the surveillance requirements of GDC 21 and IEE 279-1971, or fully justify why the new configuration should be granted an exception to GDC 21 and IEEE 279-1971 via the criteria outlined in RG 1.22 Section D.4.

2. The license amendment request (LAR), in part, supports the hardening of the ESFAS single-point vulnerability (SPV) by adding an additional contact in the Feedwater and Main Steam Isolation actuation by Mains Steam Isolation Signal (MSIS) and Closed Component Water containment isolation valve closure actuation by Containment Spray Actuation Signal (CSAS). Provide circuit diagrams of both the current configuration and proposed modification which demonstrate that the configuration will meet the requirements of IEEE 279-1971 as it applies to the likelihood of spurious actuation during testing. Specifically:

    a. Demonstrate that the power supply to these relays (with the new contact wiring) is independent of the power to the existing relays that are wired in the circuits to ensure trip hardening due to SPV
    b. If the DC power source are interconnected at one or more point, then please explain how the power supply independence is maintained, (e.g., is the power floating or grounded?)
    c. Have any new features, e.g., a toggle switch, been added to the circuit design to facilitate testing?

3. In the LAR, the licensee states that the relocation of the surveillance requirements from technical specifications to a licensee-controlled program allowed under Amendment 249 will be reviewed by NRC staff as a result of the modification; however, the modification itself can be completed pursuant to 10 CFR 50.59 without NRC review. In addition, the LAR states that “part of this revision is needed to support the ESFAS SPV trip hardening modification. Clarify the relationship between the licensee-evaluated modification and the LAR. In addition, clarify the relationship between Amendment 249 and the current LAR.

4. The license amendment would remove the second sentence of Note 3 of the current TS Table 3/4.3-2, which states “relays K109, K114, K202, K301, K305, K308 and K313 are exempt from testing during power operation but shall be test in accordance with the Surveillance Frequency Control Program and during each COLD SHUTDOWN condition unless tested within the previous 62 days. “ The LAR proposes to remove this sentence and relocate all of the surveillance requirements, including testing during COLD SHUTDOWN, to the Surveillance Frequency Control Program, based on the adoption of TSTF-425 as approved in License Amendment 249. However, TSTF-425, as included in Amendment 249, requires that a surveillance requirement may not be relocated to the SFCP if it falls into one of the four exclusion categories. The text “unless tested within the previous 62 days” seems to meet the exclusion criteria for frequencies which are event-driven but have a time component for performing the surveillance on a onetime basis once the event occurs. Explain why this text does not meet these exclusion criteria for TSTF-425, and why this text may be relocated to the SFCP.

5. Section 1.0 of the LAR states that

    > Additional subgroup relays that are being added to the ESFAS as part of the modification will be subject to the same testing frequency. The note [Note 3 of the current TS Table 3/4.3-2] will be revised in order to remove information that is being included in the licensee-controlled SFCP. Following completion of the ESFAS SPV Trip Hardening Modification, the additional relays will be added to the SFCP to the group that is not tested during power operation.

    In order to establish this frequency and then relocate this frequency to the SFCP, please provide the following information:

    a. Please confirm that the LAR proposes to include the surveillance testing of the new relays in Table 4.3-2 and the SFCP with an initial frequency of once per 18 months and during each

COLD SHUTDOWN condition unless tested within the previous 62 days. 10 CFR 50.36(c)(2)(ii) states “A technical specification limiting condition for operation of a nuclear reactor must be established for each item meeting one or more of the following criteria.” 10 CFR 50.36(c)(2)(ii)(C) Criterion 3 states “a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure or of presents a challenge to the integrity of a fission product barrier.” Explain why the additional subgroups relays being added meet or do not meet 10 CFR 50.36(c)(2)(ii) and 10 CFR 50.36(c)(2)(ii)(C) Criterion 3 for which a TS must be established.

b. The surveillance frequency of the existing relays was granted as an exception to General Design Criterion (GDC) 21 and IEEE 279-1971 through invoking section D.4 of Regulatory Guide (RG) 1.22, as supported by References 7, 8, and 9 in the application. The proposed design contains two contacts in each circuit, such that actuation of any one of the relays will not result in an ESFAS component actuation. Therefore, justify that the surveillance frequency of the new relays, which is the same as the existing relays, should be granted this same exception to GDC 21 and IEEE 279-1971.

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