NRR-PMDAPEm Resource

From: Buckberg, Perry
Sent: Monday, March 28, 2016 2:34 PM
To: Frehafer, Ken
Cc: Snyder, Mike; Cross, William
Subject: Request for Additional Information - St. Lucie TSTF-505 EICB - MF5372 & MF5373
Attachments: St Lucie TSTF-505 EICB RAIs 3-28-16.pdf

Ken,

By letter dated December 5, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14353A016), Florida Power and Light (FPL, the licensee) submitted a License Amendment Request (LAR) regarding St. Lucie Units 1 and 2. The proposed amendment would revise Technical Specifications (TS) to Implement TS Task Force (TSTF)-505, Revision 1, "Provide Risk-Informed Extended Completion Times RITSTF [Risk Informed TSTF] Initiative 4b."

The U.S. Nuclear Regulatory Commission Staff reviewed the submittal and identified areas where it needs additional information and clarification to complete its review. The Request for Additional Information (RAI) is attached. The NRC requests that the licensee respond to this RAI within 60 days of this email.

Thanks,

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REQUEST FOR ADDITIONAL INFORMATION
LICENSE AMENDMENT REQUEST TO IMPLEMENT TSTF-505, REVISION 1,
ST LUCIE UNITS 1 AND 2
DOCKET NOS. 50-335 AND 50-389
(CAC NOS. MF5372 AND MF5373)

By letter dated December 5, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14353A016), Florida Power and Light (FPL, the licensee) submitted a License Amendment Request (LAR) regarding St. Lucie Units 1 and 2. The proposed amendment would revise Technical Specifications (TS) to Implement TS Task Force (TSTF)-505, Revision 1, "Provide Risk-Informed Extended Completion Times RITSTF [Risk Informed TSTF] Initiative 4b."

Based on the review of the amendment request, the U.S. Nuclear Regulatory Commission (NRC) staff has determined that additional information is required for review of the LAR.

RAI-MF5372/73-EICB-01
The LAR does not describe conditions where instrumentation and control (I&C) functions are INOPERABLE but are probabilistic risk assessment (PRA) Functional.

(a) For each I&C function where there is a proposed ACTION for the condition where two or more less than the minimum number of operable channels are OPERABLE, please provide some example conditions that would be considered PRA Functional.

(b) For each example condition provided in (a), please include an evaluation against the criteria in NEI 06-09 Section 2.3.1, Item No. 10 (i.e., Item No. 11 as augmented and supplemented by Section 3.2.3).

(c) Title 10 of the Code of Federal Regulations (10 CFR), part 50.55a, "Codes and Standards," requires (see 10 CFR50.55a(h)(2)):

> "Protection systems. For nuclear power plants with construction permits issued after January 1, 1971, but before May 13, 1999, protection systems must meet the requirements in IEEE Std 279–1968, "Proposed IEEE Criteria for Nuclear Power Plant Protection Systems," or the requirements in IEEE Std 279–1971, "Criteria for Protection Systems for Nuclear Power Generating Stations," or the requirements in IEEE Std 603–1991, "Criteria for Safety Systems for Nuclear Power Generating Stations["], and the correction sheet dated January 30, 1995. For nuclear power plants with construction permits issued before January 1, 1971, protection systems must be consistent with their licensing basis or may meet the requirements of IEEE Std. 603–1991 and the correction sheet dated January 30, 1995."

Furthermore, both IEEE 279-1968 and IEEE 279-1971 require (see Clause 4.1, General Functional Requirement"):

> "The nuclear power generating station protection system shall, with precision and reliability, automatically initiate appropriate protective action whenever a condition monitored by the system reaches a preset level. This requirement applies for the full range of conditions and performance enumerated in Sections 3(7), 3(8), and 3(9)."

For each example condition provided in (a), please describe if, in any way, this regulatory requirement is NOT met.

RAI-MF5372/73-EICB-02
NEI 06-09 Rev. 0-A states that a Risk Informed Completion Time (RICT) cannot be used in a condition where there is a total loss of Technical Specification (TS) specified safety function; however, the LAR does not describe how it will be determined if there is a total loss of safety function.

For each I&C function where there is a proposed ACTION for the condition where two or more less than the minimum number of operable channels are OPERABLE, please describe the process of how it will be determined if there is total loss of TS specified safety function.

RAI-MF5372/73-EICB-03
For each FUNCTIONAL UNIT in TS Tables 3.3-1 and 3.3-3 (to which TSTF-505 is being applied), please identify the minimum number of channels that must be OPERABLE or PRA Functional for there not to be a total loss of TS specified safety function.

RAI-MF5372/73-EICB-04
The Model Application to TSTF-505, Revision 1, "Proposed Revision to the Model Application for TSTF-505, Revision 1, 'Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b'," Enclosure 1 (ADAMS Accession No. ML12032A065) states:

> *This enclosure [Enclosure 1, "List of Revised Required Actions to Corresponding PRA Functions"] should provide a description of PRA functionality for each associated specified safety function that corresponds to each proposed Required Action that is applicable when all trains of equipment are inoperable as discussed in Section 2.3.1.10 of NEI 06-09. For example, the number and identity of instrumentation and control channels (or functions) required to be PRA functional is highly dependent on the specific plant and associated equipment design.*

Enclosure 1 guidance is included as part of the model application because the NRC staff seeks clarity in how PRA Functional will be used during full power operation following "loss of a specified safety function or inoperability of all required trains or divisions of a system."

In the LAR, Enclosure 1, "List of Revised Required Actions to Corresponding PRA Functions," the "PRA Success Criteria" is indicated as being the same as the "Design Success Criteria," that is, the same minimum number of channels actuate.

In several cases the LAR, Enclosure 1 identifies that I&C SSCs are not modeled in the PRA, rather are surrogated to conservatively bound the risk increase is used (e.g., operator action). NEI 06-09 Section 2.3.1 Item No 11 includes criteria for determining PRA functionality of components, and these criteria were developed based on the assumption the function would be modeled in the PRA.

Please describe how the criteria of Item No. 11 will be applied to surrogates.

RAI-MF5372/73-EICB-05

The LAR appears to be making the same changes to both units; however, Insert No. 3 (see Attachment 7 page 2 of 15) contains an insert that is not on Unit 1 (i.e., for “B.3.3.2, Engineered Safety Features Actuation System Instrumentation”). Please explain.

RAI-MF5372/73-EICB-06

The LAR appears to be making the same changes to both units; however, the wording associated with the two units is different (Attachment 2 Insert No. 6 vs. Attachment 3 Insert No. 4). The meaning of these two texts is different when applied to the Manual (trip buttons). Please explain.

Furthermore, for Unit 1 option “a.” and option “b.” address the same condition when applied to the Manual (trip buttons). Please explain.

RAI-MF5372/73-EICB-07

The LAR adds an action “d.” to Action No. 10. This action addresses the condition when “two or more less than the minimum channels of the Containment Pressure High-High” are OPERABLE. If only one channel is INOPERABLE then the applicant must place that channel in trip within 48 hours (see action “a.”); however, for more degraded conditions (see actions “c.” and “d.” there is not comparable requirement. Please explain.

Also, the way Action No. 10 (on Unit 1) is formatted, it appears that the preamble text is applicable to all sub-actions (i.e., “a.” through “d.”), but it does not apply to actions “c.” and “d.”. The same condition exists on Unit 2. Please explain.