NRR-DMPSPEm Resource

From: Buckberg, Perry
Sent: Wednesday, January 16, 2019 10:05 AM
To: Hanek, Olga
Cc: Hess, Robert
Subject: Request for Additional Information - Turkey Point LAR 265 PRA - NFPA RCP Seals - EPID L-2018-LLA-0280
Attachments: Turkey Point LAR 265 PRA RAIs - NFPA RCP Seals - L-2018-LLA-0280 1-15-2019.pdf

Olga,

By letter dated October 17, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18292A842), as supplemented by letters dated October 24, 2018, and December 3, 2018, Florida Power and Light Company, submitted a license amendment request (LAR) for Turkey Point Unit Nos. 3 and 4 to modify the Operating Licenses, Paragraph 3.D, “Transition License Conditions,” Item 3, to eliminate Implementation Item 22. The staff has identified areas where additional information is needed to complete the review.

The NRC staff’s Request for Additional Information (RAI) related to this LAR is attached. A draft version of this RAI was provided to you on January 11, 2019, and a clarification call held yesterday resulted in no changes to the draft.

Consistent with your e-mail today, the NRC requests that the response to the attached final RAI be issued within 30 days of this email.

Thanks,

Perry Buckberg
Senior Project Manager
Agency 2.206 Petition Coordinator
phone: (301)415-1383
perry.buckberg@nrc.gov
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Mail Stop O-8B1a
Washington, DC, 20555-0001

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"Hess, Robert" <Robert.Hess@fpl.com>
Tracking Status: None
"Hanek, Olga" <Olga.Hanek@fpl.com>
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REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST TO REVISE

NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 805

LICENSE CONDITION FOR REACTOR COOLANT PUMP SEALS

TURKEY POINT NUCLEAR GENERATING STATION UNITS 3 AND 4

(EPID NO: L-2018-LLA-0280)

In a letter dated October 17, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18292A842), as supplemented by letters dated October 24, 2018 (ADAMS Accession No. ML18297A032), and December 3, 2018 (ADAMS Accession No. ML18338A053), Florida Power & Light Company (FP&L) submitted a license amendment request (LAR) for its Turkey Point Nuclear Generating Station, Units 3 and 4, to remove reliance on Nuclear Regulatory Commission (NRC) approval of the Flowserve Reactor Coolant Pump (RCP) Seal Topical Report (TR) as a condition of Turkey Point's transition to National Fire Protection Association Standard (NFPA) 805, and instead apply the guidance outlined in WCAP-16175-P-A, Revision 0, "Model for Failure of RCP Seals Given Loss of Seal Cooling in CE NSSS Plants," March 2007, (ADAMS Accession No. ML071130383), and as discussed in the Final Safety Evaluation For Pressurized Water Reactor Owners Group (PWROG) Topical Report WCAP-16175-P, Revision 0, (CE NPSD-1199, Revision 1) "Model For Failure Of RCP Seals Given Loss Of Seal Cooling In CE NSSS Plants" (TAC No. MB5803), (ADAMS Accession No. ML070240429). The NRC staff has reviewed the information in the submittals and has determined that additional information is needed in order for the NRC staff to complete its review.

Probabilistic Risk Assessment (PRA) RAI 01

In LAR Section 3.1, the licensee proposed to use the guidance from NRC approved WCAP-16175-P-A for the probabilistic risk assessment (PRA) treatment of the RCP seal package, instead of the guidance from the Flowserve RCP Topical Report. The WCAP and the corresponding NRC SE were written for Combustion Engineering (CE) plants. In Section 4.0 of the SE for WCAP-16175-P-A, the NRC staff identified several additional conditions, limitations, and modifications to address some of the issues that must be addressed when applying the CE RCP seal failure model to non-CE plants.

The current fire protection license condition references NFPA 805 LAR Attachment S, as included in your letter dated November 5, 2014 (ADAMS Accession No. ML14336A634). LAR Attachment S, included modification item 33 to replace RCP seals with Flowserve seals, implementation item 18 to update the Fire PRA model after all modifications and procedural changes are complete and as-built, and implementation item 23 to review the changes made to determine if a focused scope peer review would be required.

The NRC staff is unaware of any peer review performed by the licensee for use of the current RCP seal model from WCAP-16175-P-A.

Clarify whether the proposed use of the seal model in WCAP-16175-P-A has been peer reviewed to verify its applicability and use in the PRA model for each unit. If the WCAP-16175-

P-A model has not been peer reviewed, explain why not and include a discussion that includes your conclusion regarding why this change was not considered a PRA upgrade. If you considered this change a PRA upgrade, provide the results from the focused scope peer review including the associated findings and observations (F&Os) and their resolutions.

PRA RAI 02

The NRC staff found two changes to the PRA model that are described in the LAR. The primary change is to replace the existing RCP seal model based on the Flowserve RCP Seal Topical Report with the model from WCAP-16175-P-A. The secondary change is to remove a conservatism with respect to latent human errors in the PRA that impact the ability to cross-tie the Unit 4 Safety Injection pumps to the Unit 3 Safety Injection system.

The NRC staff noted that the secondary change to the PRA model does not appear to be accounted for in the risk reduction credit or in the compliant model used for the delta risk. It appears that the risk reduction credit for Area CC would be decreased by this change to the PRA model. Also, it appears that the compliant plant risk from the original NFPA 805 LAR would be decreased from this adjustment, and therefore, the delta calculation for this LAR with respect to the secondary change could be non-conservative.

Justify removing the conservatism from latent human errors in your application, that includes a discussion that the primary and secondary changes, when integrated in the PRA, meet risk guidelines in Regulatory Guide (RG) 1.174, “An Approach For Using Probabilistic Risk Assessment In Risk-Informed Decisions On Plant-Specific Changes To The Licensing Basis,” Revision 3, (ADAMS Accession No. ML17317A256). In addition, if you choose to maintain the secondary change and the primary and secondary changes results in a non-negative delta risk, provide the additional risk of recovery actions including a comparison to the risk guidelines.