

NRR-PMDAPEm Resource

From: Klett, Audrey
Sent: Tuesday, July 22, 2014 5:05 PM
To: Tomonto, Bob (Bob.Tomonto@fpl.com); Czaya, Paul (Paul.Czaya@fpl.com); 'Hanek, Olga' (Olga.Hanek@fpl.com); Cross, William (WILLIAM.CROSS@fpl.com)
Subject: Turkey Point 3 and 4 Request for Additional Information - LAR 231 (TACs MF4392 and MF4393)

Follow Up Flag: Follow up
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Bob, Paul, Olga,

By letter dated July 10, 2014, as supplemented by letter dated July 17, 2014, Florida Power & Light Company (the licensee) submitted a license amendment request (LAR) for the Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point). The licensee requested revisions to the Turkey Point Technical Specifications (TSs), Section 3/4.7.4, "Ultimate Heat Sink [UHS]."

The U.S. Nuclear Regulatory Commission's (NRC's) Containment and Ventilation Branch (SCVB) staff reviewed the information provided by the licensee and determined that it needs additional information to complete the review. The NRC staff's request for additional information (RAI) is as follows.

SCVB RAI-1

The LAR does not clearly describe changes in the current methodology for analyzing the component cooling water (CCW) supply cooling water temperature to the emergency containment coolers (ECCs) and residual heat removal (RHR) heat exchanger (HX). In the revision of the Turkey Point Updated Final Safety Analysis Report (UFSAR) dated April 17, 2013, page 14.3.4-25, under the heading, "Noding Structure," the last sentence states:

"The recirculation system model uses GOTHIC component models for the residual heat removal and component cooling water heat exchangers and pumps. Recirculation flow from the sump is modeled as a boundary condition."

Page 13 of 17 of the LAR enclosure (under the heading, "Safety Analysis Scenarios,") states:

"The calculation for CCW heat exchanger performance was revised using the HX3/HX4 computer program to demonstrate that the CCW heat exchangers can remove the necessary post-accident containment heat load for the LOCA and MSLB containment integrity analyses."

- A. Does the HX3/HX4 computer program replace the currently used GOTHIC methodology in the current licensing basis analysis? If so, please describe in detail how the HX3/HX4 computer program replaces the GOTHIC modeling to determine the revised CCW supply temperature to the ECCs and RHR HX, while considering the limiting values of all of the post-accident CCW HX heat loads. Please include the analysis inputs and assumptions used in the revised method justifying their conservatisms.
- B. Using the current GOTHIC model and the proposed ICW water temperature of 104 °F as input, provide the CCW supply water temperature profiles to the ECCs and RHR HX for the limiting Double-Ended Pump Suction (DEPS) and Double-Ended Hot Leg (DEHL) Break Loss-of-Coolant Accidents (LOCAs) and Main Steam Line Break (MSLB) accident, and provide the CCW peak temperature values. The analysis should be performed using the same inputs as in the current analysis, i.e., assuming the worst safety related equipment heat loads, while using the proposed improved CCW HX tube resistance. If any of the remaining inputs are revised, please justify.

SCVB RAI-2

The Turkey Point UFSAR Revision dated April 17, 2013, Section 14.3.4.3.3, "Description of Analysis," states that the containment response for a LOCA or MSLB accident is performed using GOTHIC computer code. The UFSAR Table 14.3.4.3-1, "Containment Analysis Parameters," provided the intake cooling water (ICW) temperature used for containment integrity as 100 °F, which is proposed to be revised to 104 °F as an input to the analysis. The Table does not explicitly state the assumed value of the CCW supply water temperature to the ECCs and RHR HX in the GOTHIC analysis.

Please confirm that based on the proposed ICW temperature of 104 °F, and the revised worst value of the CCW supply water temperature (to be stated in response to this RAI) to RHR HX and ECCs, all current containment analyses for containment peak pressure and temperature response and for containment heat removal are not affected and will remain as the licensing basis.

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