NRR-DMPSPEm Resource

From: Wentzel, Michael
Sent: Thursday, April 18, 2019 3:01 PM
To: Mike.Snyder@fpl.com
Cc: Frehafer, Ken; Mack, Jarrett
Subject: St. Lucie Plant, Unit No. 2, Request for Additional Information Regarding the License Amendment Request Pertaining to the Iodine Removal System (EPID L-2018-LLA-0301)

Dear Mr. Snyder:

By application dated November 9, 2018 (Agencywide Documents Access and Management System Accession No. ML18316A028), Florida Power & Light Company (FPL, the licensee) submitted a license amendment request (LAR) for St. Lucie Plant, Unit No. 2 (St. Lucie 2). The proposed amendment would revise the Technical Specifications (TS) to eliminate the Iodine Removal System, as well as revise the surveillance requirements (SRs) for the trisodium phosphate dodecahydrate (TSP) basket.

The NRC's Chemical, Corrosion, & Steam Generator Branch (MCCB) staff is reviewing the application and has identified areas where it needs additional information to support its review. The NRC staff's request for additional information (RAI) is provided below. As discussed with Mr. Ken Frehafer of your staff, the NRC staff requests your response to the RAI within 30 days of the date of this email.

If you have any questions, please contact me at (301) 415-6459 or michael.wentzel@nrc.gov.

Sincerely,

Michael Wentzel, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST REGARDING

THE IODINE REMOVAL SYSTEM

EPID L-2018-LLA-0301

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE PLANT, UNIT NO. 2

DOCKET NO. 50-389

RAI-MCCB-1:

Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.67, "Accident source term," provides the requirements for postulated fission product releases during a postulated design basis accident (DBA), and General Design Criterion (GDC) 41 states that systems to control fission products shall be provided to reduce

the concentration of fission products released following postulated accidents. NUREG-0800 Section 6.5.2, “Containment Spray as a Fission Product Cleanup System,” provides review guidance to the NRC staff regarding control of containment spray pH as it relates to fission product removal effectiveness. Additionally, Branch Technical Position 6-1, “pH for Emergency Coolant Water for Pressurized Water Reactors,” provides review guidance to the staff regarding stress-corrosion cracking due to exposure to containment spray during a postulated DBA.

In Section 3, “Technical Evaluation,” of the LAR, the licensee states that containment spray additives (i.e. hydrazine) in the containment spray system were not credited for radioiodine removal as part of the extended power uprate license amendment. However, the NRC staff has reviewed the reference provided by the licensee and could not determine whether spray additives are credited for radioiodine removal. In order to determine whether the Iodine Removal System, which injects hydrazine into the containment spray system, may be removed from TS, the NRC staff requires confirmation that hydrazine is not credited for radioiodine removal.

Provide the justification, or previously approved reference, to demonstrate that hydrazine is not required for radioiodine removal, or to reduce the probability of stress-corrosion cracking of austenitic stainless steel components during a postulated DBA.

RAI-LLA0301-MCCB-2:

Section 50.67, “Accident source term,” of 10 CFR provides the requirements for postulated fission product releases during a postulated DBA, and GDC 41 states that systems to control fission products shall be provided to reduce the concentration of fission products released following postulated accidents. NUREG-0800 Section 6.5.2, “Containment Spray as a Fission Product Cleanup System,” provides review guidance to the NRC staff regarding pH control systems as they relate to fission product removal effectiveness. The St. Lucie 2 TSs credit the use of TSP to buffer the pH of the containment spray and emergency core cooling system solution during a postulated DBA.

In LAR Section 2.3, “Description of Proposed Changes,” the licensee proposes to change SR 4.5.2.e.4 to state that a sample of TSP will be submerged in a solution representative of the refueling water tank (RWT). However, the LAR doesn’t describe how the solution will be representative of the water in the RWT. Explain how the solution representative of the RWT water will be prepared, including any chemical species added to reflect water chemistry conditions in the RWT, and the temperature at which the SR is conducted.

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