From: Brown, Eva
Sent: Wednesday, September 1, 2021 3:11 PM
To: stavroula.mihalakea@fpl.com
Cc: Mack, Jarrett; Fairbanks, Carolyn; Wrona, David
Subject: FINAL: Turkey Point Units 3 and 4 - Request for Additional Information Concerning Relief Requests 8 and 9 (EPID L-2021-LLR-0038)

Ms. Mihalakea,

On August 31, 2021, the U.S. Nuclear Regulatory Commission (NRC) staff sent Florida Power and Light Company (FPL or the licensee) the draft Request for Additional Information (RAI) provided below.

You on behalf of FPL subsequently informed the NRC staff that the information requested by the NRC staff was understood and no additional clarification of the RAI was necessary. It was agreed that FPL would provide a response to this RAI within 30 days from the date of this correspondence. The NRC staff also informed the licensee that a publicly available version of this RAI would be placed in the NRC's Agencywide Documents Access and Management System.

If there are any questions of concerns, please feel free to contact me.

Thanks.

Eva Brown
Senior Project Manager, Turkey Point
Plant Licensing Branch II-2
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By letter dated May 13, 2021 (ADAMS Accession No.ML21134A151), Florida Power and Light Company (FPL or the licensee) requested an alternative from the requirements of the American Society of the Mechanical Engineers Boiler and Pressure Vessel, Division 1, Section XI (henceforth ASME Section XI) for Turkey Point Nuclear Generating Plant Units 3 and 4. The licensee's Code alternative proposed in Relief Request Nos. 8 and 9 (RR8 and RR9, respectively) requests NRC staff authorization to eliminate the performance of the inservice inspection (ISI) volumetric examinations that are required to be performed on pressure retaining welds in the heads, flanges, and shells of the reactor pressure vessel (RPV) and on associated RPV-to-nozzle welds and nozzle inside radius locations (i.e., ASME Code Section XI Category B-A and B-D required examinations) during the ASME-defined fifth (5^{th}) 10-Year ISI interval for Turkey Point Units 3 and 4. Instead, the licensee requests authorization to defer performance of these volumetric inspections until the sixth (6th) 10-year ISI interval for the units. If approved, the NRC staff's authorization of this ISI alternative will result in an alternate, 20-year ISI Interval
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for performance of these RPV component-specific ISI examinations, with the alternate interval which will end no later than 2033 for Unit 3, and no later than 2034 for Unit 4.

Regulatory Basis

In a safety evaluation dated July 6, 2011, the NRC staff approved the use of WCAP-16168-NP-A, Rev. 2, "Risk-Informed Extension of the Reactor Vessel In-Service Inspection Interval." Section 50.61a(e) of Title 10 to the *Code of Federal Regulations* (10 CFR), 'Alternate fracture toughness requirements for protection against pressurized thermal shock," describes the allowable flaw distribution for embedded flaws and surface-breaking flaws that would be permitted for reactor pressure vessels (RPVs) that are at the pressurized thermal shock (PTS) screening limits in 10 CFR 50.61a. By monitoring flaw sizes in accordance with the criteria described in 10 CFR 50.61a(e), licensees are expected to ensure that their RPVs do not have flaws that invalidate the results of the WCAP 16168-NP-A probabilistic fracture mechanics (PFM) analyses. The following request for additional information (RAI) is needed to reach a conclusion that the licensee's proposed alternative achieves an acceptable level of quality and safety. [The NRC staff notes that Rev. 3 of the WCAP simply reflects the Rev. 2 NRC approval with additional approved incorporated comments].

Issue

Table 2 in RR8 of Enclosure 1 to the May 13, 2021 submittal (ADAMS Accession No. ML21134A151) states that the licensee has performed four volumetric ISI examinations of the RPV pressure retaining welds. The licensee identifies that one indication was detected within the inner 1/10th or inner 1 inch of the RPV wall thickness.

It is not evident whether the fourth volumetric ISI inspections of the welds containing this indication were the first inspections that revealed evidence of this flaw or re-inspections of the welds containing this flaw. The NRC staff seeks information relative to the risk-based assessments of this flaw that addresses whether any potential growth of this flaw is bounded by fatigue flaw growth assumptions and values used in the WCAP-16168-NP-A, Rev. 3 methodology.

Request

Confirm whether the fourth volumetric ISI inspections were the first ISI inspections that detected this flaw and whether there is any site-specific flaw growth data for this flaw evaluated in Table 2 of RR8. If there is applicable site-specific flaw growth data for this flaw, identify the limiting site-specific flaw growth value that was calculated for this flaw evaluated in Table 2.

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