

**From:** Michael Mahoney  
**Sent:** Tuesday, June 18, 2024 2:17 PM  
**To:** Mack, Jarrett  
**Subject:** Supplement to Audit Plan - Turkey Point - 18 to 24 Month Fuel Cycle LAR (L-2023-LLA-0161)  
**Attachments:** Revised Audit Questions and New - Turkey Point 24 Month FC LAR.docx

Hi Jarrett,

Attached is a supplement to the audit plan for the Turkey Point 18-to-24-month fuel cycle LAR. The attached has revised audit questions AQ-SNSB-1 and AQ-SNSB-5 and includes a new audit question, AQ-SNSB-18. Please let me know if you have any questions.

This email will be added to ADAMS, and I will provide the accession number to you.

Thanks

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**Recipients:**  
"Mack, Jarrett" <Jarrett.Mack@fpl.com>  
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**REVISED AUDIT QUESTIONS**  
**BY NUCLEAR SYSTEMS PERFORMANCE BRANCH**  
**TURKEY POINT NUCLEAR GENERATING STATION, UNIT NOS. 3 AND 4**  
**LICENCE AMENDMENT REQUEST No. 278**  
**DOCKET NOS. 50-250 AND 50-251**  
**EPID: L-2023-TOP-0060**

**AQ-SNSB-1, Revision 1**

In addition to a fuel cycle transition from 18-months to 24-months, the LAR proposes a change in the fuel from the currently used Westinghouse Vantage to Westinghouse 15x15 Upgrade PRIME assembly with ADOPT fuel pellets (a modified UO<sub>2</sub> pellet doped with small amounts of chromia and alumina) and AXIOM cladding. Based on the changes to the overall fuel assembly, pellet, and cladding design, as discussed in various sub-sections of Section 4.0 of the LAR, the NRC staff considers the proposed change includes a fuel transition and therefore requests the licensee to clearly state in its response that the LAR includes a fuel transition to mixed cores (new fuel design plus existing fuel) leading to a 100% new fuel design core. Include in the response a table that shows a comparison of all properties and features of the proposed fuel with the currently used fuel.

**AQ-SNSB-5, Revision 1**

A change in the sensible and decay heat in the proposed fuel and the fuel cycle would affect the mass and energy release (M&E) in containment during a large break loss-of-coolant accident (LOCA). Provide the evaluation and results of LOCA sump temperature response, net positive suction head (NPSH) margin (available NPSH minus required NPSH) evaluation, and changes in the performance of the safety injection (SI) pumps and containment spray system (CSS) that draw water from the containment sump during the recirculation phase of a large break LOCA. Include in the response any impact on the long-term containment and core cooling and if any containment accident pressure (CAP) above the vapor pressure at the transient sump water temperature is needed to have adequate NPSH margin due to the fuel transition and 24-month fuel cycle transition.

**New Audit Question**

**AQ-SNSB-18**

A change in the sensible and decay heat in the proposed fuel and the fuel cycle would affect the M&E release in containment during a large break loss-of-coolant accident (LOCA). Provide the evaluation and results of (a) containment pressure and temperature response, and impacts on: (b) equipment qualification, (c) containment integrated leak test (ILRT) pressure (Pa), and (d) maximum containment wall temperature used for structural design.