From: John Lamb
Sent: Thursday, June 26, 2025 11:31 AM
To: Lowery, Ken G.
Cc: Joyce, Ryan M.
Subject: For Your Action - RCI - Vogtle 3 and 4 - Spent Fuel Assemblies Maximum Enrichment LAR (L-2025-LLA-0085)

Ken,

By letter dated May 22, 2025 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML25142A172), Southern Nuclear Operating Company (SNC, the licensee) submitted a license amendment request (LAR) for Vogtle Electric Generating Plant (Vogtle), Units 3 and 4. SNC proposes that the LAR change the technical specifications to include “nominal” to clarify requirements for spent fuel assembly initial enrichment.

The U.S. Nuclear Regulatory Commission (NRC) staff has determined that additional information is required for the staff to complete its review. The NRC staff’s draft request for confirmatory information (RCI) was sent on June 17, 2025. A clarifying call was held on June 26, 2025. SNC said that it would respond to this RCI by July 11, 2025.

If you have any questions, please contact me.

John G. Lamb, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

REQUEST FOR CONFIRMATORY INFORMATION

By letter dated May 22, 2025 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML25142A172), Southern Nuclear Operating Company (SNC, the licensee) submitted a license amendment request (LAR) for Vogtle Electric Generating Plant (Vogtle), Units 3 and 4. SNC proposes that the LAR change the technical specifications to include “nominal” to clarify requirements for spent fuel assembly initial enrichment.

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Regulatory Basis

In accordance with paragraph C.6. of Section VIII of the *Code of Federal Regulations* (10 CFR) “Processes for Changes and Departures” of Appendix D to Part 52 “Design Certification Rule for the AP1000 Design,” changes to the plant-specific TS will be treated as license amendments under 10 CFR 50.90. Pursuant to 10 CFR 50.90, whenever a COL holder desires to amend the license, application for an amendment must be filed with the Commission fully describing the changes desired and following, as far as applicable, the form prescribed for original applications.

Per 10 CFR 52.79(a)(30), the application for a COL shall include proposed TSs prepared in accordance with the requirements of 10 CFR 50.36. The regulation at 10 CFR 50.36(c)(2) requires that TSs include limiting conditions for operation (LCOs). Per 10 CFR 50.36(c)(2)(i), LCOs "are the lowest functional capability or performance levels of equipment required for safe operation of the facility." The regulation also requires that when an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the condition can be met.

The regulation 10 CFR 50.68(b)(7) states:

The maximum nominal U-235 enrichment of the fresh fuel assemblies is limited to five (5.0) percent by weight.

Regulation 10 CFR 50, Appendix A, General Design Criterion (GDC) 62, *Prevention of criticality in fuel storage and handling*, states:

Criticality in the fuel storage and handling system shall be prevented by physical systems or processes, preferably by use of geometrically safe configurations.

The NRC staff's guidance for the review of TSs is in Chapter 16.0, "Technical Specifications," of NUREG 0800, Revision 3, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light Water Reactor] Edition" (SRP), March 2010 (ML100351425). As described therein, as part of the regulatory standardization effort, the NRC staff has prepared standard technical specifications (STSs) for each of the LWR nuclear designs. Accordingly, the NRC staff's review includes consideration of whether the proposed changes are consistent with the NUREG-2194, Revision 1[1], as modified by NRC approved travelers.

Request for Confirmatory Information

1. Confirm that Vogtle, Units 3 and 4, spend fuel pool nuclear criticality safety analysis of record was performed up to a maximum U-235 enrichment of 4.95 weight percent (wt/%) and included a manufacturing tolerance on the enrichment that was used to calculate an uncertainty which was in turn used in the determination that 10CFR50.68(b)(4) was met.

[1] U.S. Nuclear Regulatory Commission, "Standard Technical Specifications, Westinghouse Advanced Passive 1000 (AP1000) Plants," NUREG 2194, Volume 1 "Specifications," and Volume 2, "Bases," Revision 1, dated January 2024 (ADAMS Accession Nos. ML24026A214 and ML24026A234, respectively).

[1] U.S. Nuclear Regulatory Commission, "Standard Technical Specifications, Westinghouse Advanced Passive 1000 (AP1000) Plants," NUREG 2194, Volume 1 "Specifications," and Volume 2, "Bases," Revision 1, dated January 2024 (ADAMS Accession Nos. ML24026A214 and ML24026A234, respectively).

Hearing Identifier: NRR_DRMA
Email Number: 2777

Mail Envelope Properties (MN2PR09MB5084FBABD0A7A64C6A7175B6FA7AA)

Subject: For Your Action - RCI - Vogtle 3 and 4 - Spent Fuel Assemblies Maximum Enrichment LAR (L-2025-LLA-0085)
Sent Date: 6/26/2025 11:30:31 AM
Received Date: 6/26/2025 11:30:00 AM
From: John Lamb

Created By: John.Lamb@nrc.gov

Recipients:
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Tracking Status: None

Post Office: MN2PR09MB5084.namprd09.prod.outlook.com

Files	**Size**	**Date & Time**
MESSAGE	4950	6/26/2025 11:30:00 AM

Options
Priority: Normal
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Expiration Date: