



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 17, 2018

MEMORANDUM TO: Jennifer Dixon-Herrity, Chief
Licensing Branch 4
Division of New Reactor Licensing
Office of New Reactors

FROM: Peter Hearn, Senior Project Manager /RA/
Licensing Branch 4
Division of New Reactor Licensing
Office of New Reactors

SUBJECT: AUDIT PLAN FOR VOGTLE ELECTRIC GENERATING PLANT
UNITS 3 AND 4, REQUEST FOR LICENSE AMENDMENT AND
EXEMPTION: CHANGES TO CONTAINMENT COOLING AND
SPENT FUEL POOL MAKEUP STRATEGIES (LAR 17-021)

By letter dated July 14, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML17198A596), Southern Nuclear Operating Company (the licensee) requested an amendment to Combined License Numbers NPF-91 and NPF-92, for Vogtle Electric Generating Plant (VEGP) Units 3 and 4.

The requested amendment proposes changes to the Updated Final Safety Analysis Report in the form of departures from the Plant-Specific Design Control Document (DCD) Tier 2 information and involves changes to the VEGP Units 3 and 4 plant specific Tier 1 information (and associated COL Appendix C information) and to the VEGP Units 3 and 4 COL Appendix A, "Technical Specifications." Pursuant to the provisions of 10 Title 10 of the *Code of Federal Regulations* (10 CFR) 52.63(b)(1), an exemption from elements of the design as certified in the 10 CFR Part 52, Appendix D, "Design Certification Rule," is also requested for the plant-specific DCD Tier 1 material departures.

The requested amendment proposes changes to plant-specific Tier 1 (and COL Appendix C) to revise the inspected volume for the spent fuel pool and cask loading pit, and make corresponding changes to the minimum volumes. A new Tier 1 inspection is also added for the cask washdown pit with appropriate acceptance criteria for its volume. The requested amendment also proposes changes to the Technical Specification reactor decay heat limits and spent fuel pool decay heat limits which reflect when various safety-related makeup paths are required to be available for containment cooling or spent fuel pool makeup.

CONTACT: Peter Hearn, NRO/DNRL/LB4
301-415-1189

The Balance of Plant Branch and the Containment and Ventilation Branch staff plans to conduct an audit to gain better understanding of proposed design changes to reach reasonable findings and review related documentation and non-docketed information to evaluate conformance with the Standard Review Plan or technical guidance.

Docket Nos.: 52-025 and 52-026

Enclosure:
Regulatory Audit Plan

cc: See next page

U.S. NUCLEAR REGULATORY COMMISSION AUDIT PLAN FOR VOGTLE ELECTRIC
GENERATING PLANT UNITS 3 AND 4 REQUEST FOR LICENSE AMENDMENT AND
EXEMPTION: CONTAINMENT COOLING AND SPENT FUEL POOL MAKEUP STRATEGIES
(LAR 17-021)

DATED: January 17, 2018

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NRO-008

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OFFICIAL RECORD COPY

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(Revised 01/09/2018)

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**U.S. Nuclear Regulatory Commission
Audit Plan for
Vogtle Electric Generating Plant Units 3 and 4
Request for License Amendment and Exemption:
Changes to Containment Cooling and Spent fuel Pool Makeup Strategies (LAR 17-021)**

Applicant: Southern Nuclear Operating Company (SNC)

Applicant Point of Contact: Ryan Henderson, SNC

Date and Duration: A kickoff teleconference will be held on January 22, 2018. Audit documents will remain available in an electronic reading room (ERR) from January 22, 2018, through March 15, 2018.

Audit Location: The licensee will arrange for access to the ERR by U.S. Nuclear Regulatory Commission (NRC) audit team members.

Purpose

The staff will perform a regulatory audit to examine and evaluate technical information in order to understand or verify the key assumptions, methodology, analyses, and calculations that support the basis of information stated in License Amendment Request (LAR) 17-021, "Changes to Containment Cooling and Spent Fuel Pool Makeup Strategies." The staff will review the licensee's documentation to determine whether the information in LAR 17-021 meets applicable regulations and guidance.

Background

On July 14, 2017, SNC submitted VEGP Units 3 and 4 Request for License Amendment and Exemption: Changes to Containment Cooling and Spent Fuel Pool Makeup Strategies, LAR 17-021, to the NRC (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17198A596). The requested amendment includes changes to the Updated Final Safety Analysis Report in the form of departures from the incorporated Plant-Specific Design Control Document Tier 2 information and involves changes to Combined License (COL) Appendix A (and associated COL Appendix C information) and to the VEGP Units 3 and 4 COL Appendix A, "Technical Specifications." Pursuant to the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) 52.63(b)(1), an exemption from elements of the design as certified in the 10 CFR Part 52 Appendix D, "Design Certification Rule," is also requested for the plant-specific DCD Tier 1 material departures.

The Audit will assist the NRC staff in the issuance of requests for additional information (RAIs) (if necessary) for the LAR review of the proposed changes identified in the license amendment and exemption request. Changes to the Containment Cooling and Spent Fuel Pool Makeup Strategies (LAR 17-021).

Enclosure

The staff will perform an audit to verify key assumptions, methodology, analyses, and calculations associated with the proposed cooling and makeup strategies described in LAR 17-021. The information to be reviewed is intended to provide direct support for the safety conclusions that apply to this LAR under General Design Criteria (GDC) 38 and 61 in 10 CFR Part 50, Appendix A. The information to be assessed is intended to augment the staff's understanding and verification.

Regulatory Bases

This regulatory audit is based on the following:

- 10 CFR Part 50, Appendix A, GDC 38, "Containment heat removal"
- 10 CFR Part 50, Appendix A, GDC 61, "Fuel storage and handling and radioactivity control"

Regulatory Audit Scope

1. The NRC staff will review the requested information supporting the proposed license changes
2. Staff will review the documents supporting the proposed license change including the original and the revised thermal analysis for containment cooling and the SFP heatup and boiloff analysis.

Special Requests

The NRC staff requests the documents in Appendix A to be available for NRC auditors in the ERR. The use of the ERR allows multiple auditors to examine the same documents at same time, which improved the efficiency of the audit.

Audit Team Assignments

The audit team comprises of the following NRC staff. These individuals will review the relevant documents that are related to the audit and are available at the time of the audit:

- Raul Hernandez, Audit Lead, NRO
- Hanry Wagage, Senior Reactor Engineer, NRO/DSRA/SPSPB
- Clint Ashley, Reactor Systems Engineer, NRO/DSRA/SCVB
- Diane Jackson, Branch Chief, NRO/DSRA/SCVB
- Peter Hearn, NRO/DNRL/LB4, Senior Project Manager

Audit Activities and Deliverables

The NRC audit team is expected to consist of aforementioned individuals covering the technical areas affecting inspection, test, analysis, and acceptance criteria (ITAACs) and Technical Specifications. The NRC staff acknowledges the proprietary nature of some of the information requested. It will be handled appropriately throughout the audit. While the NRC staff will take notes for the purpose of the audit, the NRC staff will not remove hard copies or electronic files from the audit site(s).

The audit will assist the NRC staff in the issuance of RAIs (if necessary) for the LAR review of the proposed changes identified in the license amendment and exemption “Changes to Containment Cooling and Spent Fuel Pool Makeup Strategies (LAR 17-021).”

An audit report will be generated after completion of the audit and published in ADAMS.

If necessary, any circumstances related to the conductance of the audit will be communicated to the NRC project manager, Peter Hearn at 301-415-1189 or Peter.Hearn@nrc.gov.

Appendix C References

1. Containment cooling analysis for the certified AP1000 design
2. Spent fuel pool heatup and boiloff analysis for the certified AP1000 design
3. Containment cooling analysis supporting LAR 17-021
4. Spent fuel pool heatup and boiloff analysis supporting LAR 17-021