



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

April 3, 2018

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

FROM: Jordan Hoellman, 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 REGARDING CHANGES TO THE BUILDING GAP
BETWEEN THE NUCLEAR ISLAND AND ADJACENT
BUILDINGS (LAR-18-002)

By letter dated February 1, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18032A359), Southern Nuclear Operating Company (SNC) requested an amendment to Combined License (COL) Numbers NPF-91 and NPF-92, for Vogtle Electric Generating Plant (VEGP) Units 3 and 4.

The requested amendment proposes changes to revise the Updated Final Safety Analysis Report in the form of departures from the incorporated plant-specific Design Control Document Tier 2* and Tier 2 information and involves related changes to plant-specific Tier 1 information, with corresponding changes to the associated COL Appendix C information. Specifically, the requested amendment proposes changes to relax the minimum gap requirement above grade between the nuclear island and the annex building/turbine building and to remove the minimum gap requirement for the radwaste building from the Inspections, Tests, Analyses and Acceptance Criteria.

NRC staff from the Geoscience and Geotechnical Engineering branch plan to conduct an audit to confirm SNC's conclusion that the differential settlement does not have adverse impact on the gaps between the nuclear island and adjacent buildings and to reach reasonable findings by reviewing VEGP Units 3 and 4 settlement survey data and related documentation.

Docket Nos.: 52-025 and 52-026

Enclosure:
Regulatory Audit Plan

cc: See next page

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AUDIT PLAN FOR VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4, REQUEST FOR LICENSE AMENDMENT AND EXEMPTION REGARDING CHANGES TO THE BUILDING GAP BETWEEN THE NUCLEAR ISLAND AND ADJACENT BUILDINGS (LAR-18-002) DATED APRIL 3, 2018

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ADAMS Accession No.: ML18089A282

NRO-008

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DATE	4/3/18	4/2/18	4/3/18

OFFICIAL RECORD COPY

Vogtle Units 3 & 4 Mailing List
cc:

(Revised 03/13/2018)

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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 Regarding
Changes to the Building Gap Between the Nuclear Island and
Adjacent Buildings (LAR-18-002)**

Licensee: Southern Nuclear Operating Company (SNC)

Licensee Contact: Paige Ridgway, SNC

Date: April 5, 2018

Audit Location: Westinghouse Electric Company, LLC
11333 Woodglen Drive, Suite 202
Rockville, Maryland 20852

Purpose

The staff will perform a regulatory audit to examine and evaluate technical information in order to confirm that the differential settlement at the Vogtle Electric Generating Plant (VEGP) Units 3 and 4 does not have adverse impact on the gaps between the nuclear island and adjacent buildings that support the conclusions stated in License Amendment Request (LAR) 18-002, "Changes to the Building Gap between the Nuclear Island and Adjacent Buildings," VEGP Units 3 and 4 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18032A359).

Background

On February 1, 2018, SNC submitted VEGP Units 3 and 4 LAR-18-002 to the U.S. Nuclear Regulatory Commission (NRC). The requested amendment includes changes to revise the Updated Final Safety Analysis Report in the form of departures from the incorporated plant-specific Design Control Document Tier 2* and Tier 2 information and involves related changes to plant-specific Tier 1 information, with corresponding changes to the associated combined license Appendix C information. Specifically, the requested amendment proposes changes to relax the minimum gap requirement above grade between the nuclear island and the annex building/turbine building and to remove the minimum gap requirement for the radwaste building from the Inspections, Tests, Analyses and Acceptance Criteria.

VEGP Units 3 and 4 LAR-18-002 on pages 9 and 10 of Enclosure 1 states that differential settlement of foundations may impact the gaps between the nuclear island and adjacent buildings and that differential settlement of foundations is evaluated based on the VEGP Units 3 and 4 settlement survey data collected from the site specific settlement monitoring program for potential impact on the gap between the nuclear island and adjacent buildings. SNC's conclusion that the differential settlement does not have adverse impact on the gaps between the nuclear island and adjacent buildings is based on the settlement survey data.

The staff will perform an audit to confirm that the differential settlement does not have adverse impact on the gaps between the nuclear island and adjacent buildings by reviewing settlement

survey data demonstrating that the nuclear island and the turbine building foundations have deflected more in the center, and the annex building foundation has deflected uniformly after all construction stages.

Regulatory Bases

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix A, General Design Criterion 1, “Quality standards and records,” as it relates to the requirement that structures, systems, and components (SSCs) important to safety be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety functions to be performed. It also requires that appropriate records of the design, fabrication, erection, and testing of SSCs important to safety be maintained by or under the control of the nuclear power unit licensee throughout the life of the unit.

10 CFR Part 50, Appendix B, “Quality Assurance Criteria for Nuclear Power Plants and Fuel Processing Plants,” as it relates to quality assurance requirements for the design, fabrication, construction, and testing of those SSCs of nuclear power plants that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public.

The NRC staff will follow the Office of New Reactor’s (NRO) Office Instruction NRO-REG-108 (Revision 0), “Regulatory Audits,” (ADAMS Accession No. ML081910260) in performing the audit of the report cited below.

Regulatory Audit Scope

1. NRC staff seeks to confirm SNC’s conclusion that the differential settlement does not have adverse impact on the gaps between the nuclear island and adjacent buildings at VEGP Units 3 and 4.
2. Staff will review the following document:
SV0-0500-XCR-800030 R0, VEGP Units 3&4 Settlement Survey Data

The staff will identify additional documents, if necessary.

3. Audit teleconferences will be scheduled, as necessary, to clarify any information in the documents reviewed.

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:

- Zuhan Xi, Technical Reviewer, Geotechnical Engineering
- Pravin Patel, Technical Reviewer, Structural Engineering
- Jordan Hoellman, Project Manager, Licensing Branch 4

Deliverables

Once the regulatory audit is completed, the audit team will issue an audit summary within 90 days.