



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

May 15, 2019

MEMORANDUM TO: Jennifer Dixon-Herrity, Chief
Licensing Branch 2
Division of Licensing, Siting,
and Environmental Analysis
Office of New Reactors

FROM: Chandu Patel, Senior Project Manager /RA/
Licensing Branch 2
Division of Licensing, Siting,
and Environmental Analysis
Office of New Reactors

SUBJECT: AUDIT PLAN FOR VOGTLE ELECTRIC GENERATING PLANT
UNITS 3 AND 4, REQUEST FOR LICENSE AMENDMENT:
CREDITING PREVIOUSLY COMPLETED ADS
BLOWDOWN FIRST THREE PLANT TESTS (LAR 19-006)

By letter dated April 26, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML19119A249), Southern Nuclear Operating Company (the licensee) 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 requires changes to the COL Conditions and 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 related changes to the VEGP Units 3 and 4 COL.

The requested amendment includes changes to credit the previously completed Automatic Depressurization System (ADS) Blowdown first three plant tests as described in the licensing basis documents, including COL Condition 2.D.(2)(a). Specifically, the proposed changes would revise the COL, License Condition 2.D.(2)(a)2, by removing the requirement to perform the ADS Blowdown first three plant test during preoperational testing.

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The Reactor Systems, Nuclear Performance & Code Review Branch (NRO/SRSB), the Mechanical Engineering Branch (NRO/MEB), and the Quality Assurance Vendor Inspection Branch (NRO/QVIB) staff plan to conduct an audit to gain a better understanding of the proposed changes and to review related documentation and non-docketed information in order 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: CREDITING PREVIOUSLY COMPLETED ADS BLOWDOWN FIRST THREE PLANT TESTS (LAR 19-006) DATED: MAY 15, 2019

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NRO-008

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| DATE | 5/15/19 | 5/14/19 | 5/15/19 |

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(Revised 05/08/2019)

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**AUDIT OF REPORTS AND CALCULATIONS IN SUPPORT OF A REQUEST
FOR A LICENSE AMENDMENT RELATED TO CREDITING PREVIOUSLY
COMPLETED AUTOMATIC DEPRESSURIZATION SYSTEM (ADS)
BLOWDOWN FIRST THREE PLANT TESTS**

**SOUTHERN NUCLEAR OPERATING COMPANY
VOGTLE ELECTRIC GENERATING PLANT, UNITS 3 AND 4
Docket Nos. 52-025 and 52-026**

The purpose of the audit is to review the documentation and calculations needed by the U.S Nuclear Regulatory Commission (NRC) staff to verify the information and conclusions in the "Request for License Amendment: Crediting Previously Completed ADS Blowdown First Three Plant Tests" (LAR 19-006) submitted by Southern Nuclear Operating Company (SNC) for the Vogtle Electric Generating Plant (VEGP), Units 3 and 4 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19119A249).

A. Background:

In LAR 19-006, SNC requests changes to the Updated Final Safety Analysis Report (UFSAR) in the form of departures from the incorporated plant-specific Design Control Document Tier 2* and Tier 2 information and related changes to the VEGP Units 3 and 4 Combined License (COL).

The LAR includes changes to credit previously completed Automatic Depressurization System (ADS) Blowdown first three plant tests as described in the licensing basis documents, including COL Condition 2.D.(2)(a). SNC requested prior NRC approval because the proposed changes impact the COL and plant-specific Tier 2* information.

B. Regulatory Audit Basis

This regulatory audit is based on the following:

- VEGP Unit 3, Current Facility Combined License NPF-91, Revised April 30, 2019, License Condition 2.D.(2)(a) (ADAMS Accession No. ML14100A106).
- VEGP Unit 4, Current Facility Combined License NPF-92, Revised April 30, 2019, License Condition 2.D.(2)(a) (ADAMS Accession No. ML14100A135).
- VEGP Units 3 and 4 UFSAR Tier 1, Revision 6, June 15, 2018 (ADAMS Accession No. ML18179A250).
- VEGP Units 3 and 4 UFSAR Tier 2, Section 3.9.6, Revision 6, June 15, 2018 (ADAMS Accession No. ML18179A275).
- VEGP Units 3 and 4 UFSAR Tier 2, Section 14.2.9.1.3, Revision 7, June 15, 2018 (ADAMS Accession No. ML18179A289).

C. Regulatory Audit Scope and Methodology

The audit team will view the documentation and calculations that provide the technical support for LAR 19-006. In addition, the audit team might request to discuss with subject matter expert(s) (1) potential differences between VEGP Units 3 and 4, and the plants for which testing has been conducted, (2) quality assurance of the test data, (3) physical phenomena

observed in the test data, and (4) design changes to the ADS valves in response to operating experience.

D. Information and Other Material Necessary for the Regulatory Audit

The staff requests that the following documents be made available to the staff in the electronic reading room:

- a) Applicable Quality Assurance (QA) requirements, administrative procedures, and ADS Blowdown test specification, test procedures, test diagnostic equipment, test acceptance criteria, blowdown test simulation, test results, test analysis methods, test reports, test anomaly resolution, and post-test analyses by Westinghouse Electric Company.
- b) Reviews of QA requirements, administrative procedures, and ADS Blowdown test specification, test procedures, test diagnostic equipment, test acceptance criteria, blowdown test simulation, test results, test analysis methods, test reports, test anomaly resolution, and post-test analyses documented by the licensee.
- c) Test observations documented by the licensee.
- d) Disposition of inconsistencies in test procedures and other aspects noted in LAR 19-006.
- e) Documentation of resolution of operational experience that resulted in design changes to ADS valves in support of the ADS Blowdown test that will be addressed as part of ADS valve qualification in accordance with American Society of Mechanical Engineers (ASME) Standard QME-1-2007, "Qualification of Active Mechanical Equipment Used in Nuclear Power Plants," as accepted in NRC Regulatory Guide 1.100 (Revision 3), "Seismic Qualification of Electrical and Active Mechanical Equipment and Functional Qualification of Active Mechanical Equipment for Nuclear Power Plants."
- f) Report documenting the review of Sanmen and Haiyang nuclear power plant design changes for the critical design attributes for the ADS Blowdown test.

Other documents may be requested based on the staff's review of the above documents.

The staff acknowledges and will observe appropriate handling and protection of proprietary information made available for the audit.

E. Audit Team

The following are the NRC audit team members:

- Harry Wagage, Senior Reactor Engineer, Lead
- Andrea Keim, Reactor Operations Engineer
- Thomas Scarbrough, Senior Mechanical Engineer
- Alina Schiller, Project Manager

The following are the licensee contacts:

- Steve Leighty
- Amy Chamberlain

F. Logistics

Date: May 20, 2019 – August 1, 2019

Location: Westinghouse Electric Company, LLC
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11333 Woodglen Drive, Suite 203
Rockville, Maryland 20852 Telephone: 301-881-7040/7042

Additionally, the review of documents supporting LAR 19-006, and identified in Section D of this audit plan, can be conducted at NRC Headquarters via the licensee's electronic reading room.

Location: NRC Headquarters
Two White Flint North
11545 Rockville Pike
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G. Special Requests

If necessary, the staff requests that subject matter expert(s) be made available to discuss the (1) potential differences between VEGP Units 3 and 4, and the plants for which testing has been conducted, (2) quality assurance of the test data, (3) physical phenomena observed in the test data, and (4) design changes to the ADS valves in response to operating experience.

Alina Schiller (NRC), NRC Project Manager, can be reached at 301-415-8177 or Alina.Schiller@nrc.gov.

H. Deliverables

On completion of the audit, the staff will prepare an audit summary report within 45 days that will be declared and entered as an official agency record in ADAMS. The audit outcome may be used to identify any additional information to be submitted for making regulatory decisions and will assist the staff in the issuance of requests for additional information (if necessary) in completing its review of LAR 19-006.