




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

March 5 , 2018

MEMORANDUM TO: Michael T. Markley, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

FROM: Audrey L. Klett, Project Manager 
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

SUBJECT: OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3 –
REGULATORY AUDIT IN SUPPORT OF REVIEW OF LICENSE
AMENDMENT REQUEST NO. 2017-03
(EPID NO. L-2017-LLA-0365)

By letter ONS-2017-074 dated October 20, 2017 (Agencywide Documents Access and Management System Accession No. ML17299A125), Duke Energy Carolinas, LLC submitted License Amendment Request No. 2017-03 for Oconee Nuclear Station, Units 1, 2, and 3 regarding revisions to the Standby Shutdown Facility description in the Updated Final Safety Analysis Report.

Staff from the U.S. Nuclear Regulatory Commission's (NRC's) Office of Nuclear Reactor Regulation will conduct an audit to support its review of this request. The audit will occur at NRC Headquarters in Rockville, Maryland from February 14, 2018, to March 23, 2018. The audit plan is enclosed.

Sincerely,

A handwritten signature in black ink, appearing to be "AK", is located below the word "Sincerely,".

Audrey L. Klett, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-269, 50-270, and 50-287

Enclosure: As stated

cc: Listserv

REGULATORY AUDIT PLAN
BY THE OFFICE OF NUCLEAR REACTOR REGULATION
OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3
DOCKET NOS. 50-269, 50-270, AND 50-287

1.0 BACKGROUND

By letter ONS-2017-074 dated October 20, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17299A125), Duke Energy Carolinas, LLC (the licensee) submitted License Amendment Request No. 2017-03 for Oconee Nuclear Station, Units 1, 2, and 3 (Oconee or ONS) regarding revisions to the Standby Shutdown Facility (SSF) description in the Updated Final Safety Analysis Report (UFSAR). The licensee proposed to revise the UFSAR to allow off-nominal success criteria for an SSF-mitigated Turbine Building flood event occurring when the Oconee units are not at nominal full power conditions. The licensee also requested approval to use the Main Steam Atmospheric Dump Valves to enhance SSF mitigation capabilities.

In its application, the licensee stated that thermal-hydraulic (T-H) analyses were performed for a Turbine Building flood event using Duke Energy's RETRAN-3D ONS thermal-hydraulic model. The RETRAN-3D model is described in Duke Energy's NRC-approved methodology report DPC-NE-3000-PA and has been modified to capture important phenomena in the reactor coolant system and pressurizer for longer duration SSF events, which may transition to a water-solid condition. The licensee stated that the results from these analyses demonstrate the SSF systems and operator guidance can be used to successfully mitigate a Turbine Building flood event, meeting the current success criteria for nominal full power conditions and the proposed off-nominal success criteria for off-nominal conditions. Staff from the U.S. Nuclear Regulatory Commission's (NRC's) Office of Nuclear Reactor Regulation (NRR) identified the need to better understand the licensee's supporting analyses by reviewing the T-H analyses that are not available in ADAMS.

The NRR Office Instruction LIC-111, "Regulatory Audits" (ADAMS Accession No. ML082900195), states that a regulatory audit is a planned, licensed or regulation-related activity that includes the examination of primarily non-docketed information with the intent to gain understanding, to verify information, or to identify information that will require docketing to support the basis of the licensing or regulatory decision.

2.0 REGULATORY AUDIT BASIS

The NRC staff will perform the audit to support its evaluation of whether the licensee's request can be approved per Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.90.

3.0 REGULATORY AUDIT SCOPE AND METHODOLOGY

The NRC staff will review the licensee's T-H analyses to determine if it will require docketing to support or develop conclusions for the staff's safety evaluation of the requested amendments.

4.0 INFORMATION AND OTHER MATERIAL NECESSARY FOR THE AUDIT

The NRC staff requests the licensee to have the following information readily available and accessible for the staff's review via an internet-based portal:

- All calculations associated with the T-H analyses related to the SSF-mitigated turbine building flood scenarios in support of this amendment request (including both RETRAN and RELAP5 analyses).
- Documentation associated with "operator guidance," as noted in Section 2.4 of the Enclosure to the amendment request which states, "The results from these analyses demonstrate the SSF systems and operator guidance can be used to successfully mitigate a Turbine Building flood event, meeting the current success criteria for nominal full power conditions and the proposed off-nominal success criteria for off-nominal conditions."

The staff will then determine whether it needs to request any additional documents to be available on the portal after reviewing the above information.

5.0 TEAM ASSIGNMENTS AND LOGISTICS

The audit team will consist of the following NRC staff:

- Ms. Audrey Klett, Plant Licensing Branch 2-1 (LPL2-1)
- Mr. Robert Beaton, Reactor Systems Branch (SRXB)
- Mr. John Hughey, PRA Operations and Human Factors Branch (APHB)
- Mr. Gerard Purciarello, Containment and Plant Systems Branch (SCPB)
- Ms. Margaret Chernoff, Technical Specifications Branch (STSB)
- Mr. Reed Anzalone, Nuclear Performance and Code Review Branch (SNPB)
- Mr. Steve Jones, Containment and Plant Systems Branch (SCPB)
- Mr. William Rautzen, Environmental and NEPA Branch (MENB)

The NRC staff will conduct a teleconference with the licensee for the purposes of introductions and discussing the purpose of the audit and information needs. The staff will also confirm the sensitivity of any information discussed or presented on the online portal.

The audit will occur intermittently via an internet-based portal at NRC Headquarters Office in Rockville, Maryland, from February 12, 2018, through March 23, 2018. The NRC staff requests the licensee to have the information discussed in Section 4 readily available and accessible for the staff's review via an internet-based portal. The NRC staff requests the licensee to have its staff available at mutually agreeable business day times (e.g., Monday - Thursday, 9:00 a.m. to 4:00 p.m., Eastern Time) by telephone if the NRC staff has any questions during the audit related to any information on the portal. The NRC staff will not conduct an entrance or exit meeting; however, the NRC's licensing project manager will inform the licensee via routine communications when the staff no longer needs access to the information.

6.0 DELIVERABLES

After the audit, the NRC staff will develop any additional requests for information, as needed, which it will provide the licensee via separate docketed correspondence. The staff intends to issue an audit summary report by April 20, 2018.

SUBJECT: OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3 – REGULATORY AUDIT IN
SUPPORT OF REVIEW OF LICENSE AMENDMENT REQUEST NO. 2017-03
(EPID NO. L-2017-LLA-0365) DATED MARCH 5, 2018

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ADAMS Accession No.: ML18032A461

***by email**

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