



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

April 26, 2021

Ms. Kim Maza
Site Vice President
Shearon Harris Nuclear Power Plant
Mail Code NHP01
5413 Shearon Harris Road
New Hill, NC 27562-9300

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 - REGULATORY AUDIT FOR THE REVIEW OF LICENSE AMENDMENT REQUEST TO REVISE THE 10 CFR 50.69, "RISK-INFORMED CATEGORIZATION AND TREATMENT OF STRUCTURES, SYSTEMS AND COMPONENTS FOR NUCLEAR POWER REACTORS," CATEGORIZATION PROCESS TO REFLECT AN ALTERNATIVE SEISMIC APPROACH (EPID L-2021-LLA-0003)

Dear Ms. Maza:

By application dated January 14, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21014A092), Duke Energy Progress, LLC (the licensee), submitted a license amendment request (LAR) for the Shearon Harris Nuclear Power Plant (Harris), Unit 1.

The proposed LAR would revise the license condition associated with the adoption of Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.69, "Risk-informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors" to reflect an alternative approach to the one provided in Nuclear Energy Institute's (NEI) 00-04, "10 CFR 50.69 SSC Categorization Guideline," Revision 0 (ADAMS Accession No. ML052910035), for evaluating the impact of the seismic hazard in the 10 CFR 50.69 categorization process.

To support the review of the proposed LAR, an audit team consisting of U.S. Nuclear Regulatory Commission (NRC) staff from the Office of Nuclear Reactor Regulation, Division of Risk Assessment (DRA) and Division of Operating Reactor Licensing (DORL), will be conducting a regulatory audit virtually on May 11, 2021. NRC regional staff may also be present as observers. The audit plan is provided in the enclosure to this letter.

In accordance with the schedule in the enclosed audit plan, we will be contacting your staff to set up a teleconference to discuss the audit logistics.

K. Maza

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If you have any questions, please contact me at (301) 415-3867, or Michael.Mahoney@nrc.gov.

Sincerely,

/RA/

Michael Mahoney, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-400

Enclosure:
Audit Plan

cc: Listserv



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AUDIT PLAN

REGARDING LICENSE AMENDMENT REQUEST TO

REVISE THE 10 CFR 50.69, "RISK-INFORMED CATEGORIZATION AND TREATMENT OF
STRUCTURES, SYSTEMS AND COMPONENTS FOR NUCLEAR POWER REACTORS,"
CATEGORIZATION PROCESS TO REFLECT AN ALTERNATIVE SEISMIC APPROACH

DUKE ENERGY PROGRESS, INC.

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

DOCKET NO. 50-400

EPID NO. L-2021-LLA-0003

1.0 BACKGROUND

By application dated January 14, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21014A092), Duke Energy Progress, LLC (the licensee) submitted a license amendment request (LAR) for Shearon Harris Nuclear Power Plant Unit 1 (Harris). The proposed LAR would revise the license condition associated with the adoption of Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.69, "Risk-informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors" to reflect an alternative approach to the one provided in Nuclear Energy Institute's (NEI) 00-04, "10 CFR 50.69 SSC Categorization Guideline," Revision 0 (ADAMS Accession No. ML052910035), for evaluating the impact of the seismic hazard in the 10 CFR 50.69 categorization process.

The U. S. Nuclear Regulatory Commission (NRC) staff's review of the license amendment request (LAR) has commenced in accordance with the Office of Nuclear Reactor Regulation's (NRR) Office Instruction LIC-101, "License Amendment Review Procedures." The NRC staff has determined that a regulatory audit should be conducted in accordance with the NRR Office Instruction LIC-111, Revision 1, "Regulatory Audits," dated October 31, 2019 (ADAMS Accession No. ML19226A274), for the NRC staff to gain a more detailed understanding of the licensee's proposed implementation of the process for the 10 CFR 50.69 categorization process for the seismic licensee's submittal and the audit information needs.

A regulatory audit is a planned, license-related or regulation-related activity that includes the examination and evaluation of primarily non-docketed information. A regulatory audit is

Enclosure

conducted with the intent to gain understanding, to verify information, and/or to identify information that will require docketing to support the basis of the licensing or regulatory decision. Performing a regulatory audit of the licensee's information is expected to assist the NRC staff in efficiently conducting its review or gain insights on the licensee's processes or procedures. Information that the NRC staff relies upon to make the safety determination must be submitted on the docket. However, there may be supporting information retained as records under 10 CFR 50.71, "Maintenance of records, making of reports," and/or 10 CFR 54.37, "Additional records and record-keeping requirements," which although not required to be submitted as part of the licensing action, would help the NRC staff better understand the licensee's submitted information.

2.0 REGULATORY AUDIT BASIS

The basis of this remote audit is the licensee's LAR for Harris and the Standard Review Plan Section 19.2, "Review of Risk Information Used to Support Permanent Plant-Specific Changes to the Licensing Basis: General Guidance" (ADAMS Accession No. ML071700658). The remote audit will be performed consistent with NRC Office of Nuclear Reactor Regulation Office Instruction LIC-111, Revision 1. An audit was determined to be the most efficient approach toward a timely resolution of issues associated with this LAR review, since the NRC staff will have an opportunity to minimize the potential for multiple rounds of requests for additional information (RAIs) and ensure no unnecessary burden will be imposed by requiring the licensee to address issues that are no longer necessary to make a safety determination.

3.0 REGULATORY AUDIT SCOPE OR METHOD

The purpose of the remote audit is to gain a more detailed understanding of licensee's proposed implementation of the process for the 10 CFR 50.69 categorization process for the seismic hazard. The areas of focus for the regulatory audit are the information contained in the licensee's January 14, 2021 submittal and the proposed audit questions in Section 6.0 of this audit plan.

4.0 INFORMATION AND OTHER MATERIAL NECESSARY FOR THE AUDIT

The NRC audit team will require access to licensee personnel knowledgeable of the technical aspects of the LAR and the documentation and procedures used to support the LAR.

5.0 AUDIT TEAM AND AGENDA

The following are members of the NRC audit team:

- Michael Mahoney, Project Manager, (Michael.Mahoney@nrc.gov)
- Gianni Nelson, Project Manager, (Gianni.Nelson@nrc.gov)
- Alissa Neuhausen, Reliability and Risk Analyst, (Alissa.Neuhausen@nrc.gov)
- De (Wesley) Wu, Reliability and Risk Analyst, (De.Wu@nrc.gov)

Proposed audit agenda:

Time	Agenda Item
9:00 A.M. – 9:15 A.M.	Entrance briefing - Introductions and logistics.
9:15 A.M. – 10:30 A.M.	Discussion on the alternative seismic Tier 1 approach (Audit Question 1).
10:30 A.M. – 11:45 A.M.	Discussion on the implementation status for the seismic margins analysis (SMA) process (Audit Question 2).
11:45 A.M. – 12:00 P.M.	Summary of audit and exit meeting.

6.0 PROPOSED AUDIT QUESTIONS

Question 1:

In Table 3-1, “IDP Changes from Preliminary [High Safety Significant] HSS to [Low Safety Significant] LSS” of its “Application to Adopt 10 CFR 50.69, ‘Risk-Informed Categorization and Treatment of Structures, Systems, and Components (SSCs) for Nuclear Power Reactors,’” dated February 1, 2018 (ADAMS Accession No. ML18033B768), the licensee provides that for non-modeled seismic risk the evaluation is performed at the component level and that an Integrated Decision-Making Panel (IDP) change from HSS to LSS is not allowed. In its latest “License Amendment Request to Revise the 10 CFR 50.69, ‘Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors,’ Categorization Process to Reflect an Alternative Seismic Approach,” dated January 14, 2021, the treatment of non-modeled seismic risk remains the same.

- a. Because the evaluation level in the alternative seismic Tier 1 approach may be either function or component (as opposed to only component with the SMA), clarify the intended evaluation level for the non-modeled seismic risk in the alternative seismic Tier 1 approach.
- b. Because the alternative Tier 1 seismic approach is not an NEI 00-04 methodology, the application should clarify whether the IDP can change the categorization of components that are not modeled in the probabilistic risk assessment (PRA) from the seismic perspective. Include clarification of whether the IDP can make a change from HSS to LSS and the reverse (i.e., LSS to HSS).

Question 2:

In its “License Amendment Request to Revise the 10 CFR 50.69, ‘Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors,’ Categorization Process to Reflect an Alternative Seismic Approach,” dated January 14, 2021, the licensee proposed to change the categorization process to an alternative seismic approach.

Provide a discussion of the existing implementation status for the SMA process and the transition to the alternative seismic approach for the categorization of SSCs.

7.0 LOGISTICS

The remote audit will be held on May 11, 2021, from 9:00 a.m. (EST) to 12:00 p.m. (EST). If requested, the audit team will conduct a telephone conference with the licensee for the purpose of introducing the team, discussing the scope of the audit, and describing the information to be made available on the online portal. The NRC staff acknowledges the potential for the proprietary nature of some of the information requested. It will be handled appropriately throughout the audit. The NRC staff will take notes that will be marked as proprietary, as appropriate, and will not remove hard copies or copy electronic files. The NRC project manager will coordinate any changes to the audit schedule and location with the licensee. A proposed agenda for the audit is included in Section 5.0 of this audit plan.

8.0 SPECIAL REQUESTS

The NRC audit team will not require any special requests.

9.0 DELIVERABLES

An audit summary will be prepared within 90 days of the completion of the audit. If the NRC staff identifies information during the audit that is needed to support its regulatory decision, the staff will issue RAIs to the licensee.

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ADAMS Accession No. ML21099A274

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