



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

November 29, 2021

Ms. Cheryl A. Gayheart
Regulatory Affairs Director
Southern Nuclear Operating Co., Inc.
3535 Colonnade Parkway
Birmingham, AL 35243

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2 – REGULATORY
AUDIT IN SUPPORT OF REVIEW OF THE APPLICATION TO ADOPT
RISK-INFORMED EXTENDED COMPLETION TIMES – RITSTF INITIATIVE 4B
(EPID L-2021-LLA-0199)

Dear Ms. Gayheart:

By letter dated October 26, 2021, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21300A153), Southern Nuclear Operating Company (SNC, the licensee) submitted a license amendment request (LAR) for Edwin I. Hatch Nuclear Plant (Hatch), Units 1 and 2. The proposed LAR would modify the plant's Technical Specification requirements to permit the use of risk-informed completion times in accordance with Technical Specification Task Force Traveler TSTF 505, "Provide Risk-informed Extended Completion Times, RITSTF [Risk-Informed Technical Specification Task Force] Initiative 4b."

The U.S. Nuclear Regulatory Commission (NRC) staff has identified the need for a regulatory audit to examine the SNC's 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.

The NRC staff will conduct the audit virtually via Teams using a licensee-established electronic portal available to NRC staff from approximately December 13, 2021, through June 30, 2022, with formal audit meetings to be scheduled during this period as needed. The detailed audit plan is enclosed with this letter.

C. Gayheart

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If you have any questions, please contact me at (301) 415-3100 or by e-mail at John.Lamb@nrc.gov.

Sincerely,

/RA/

John G. Lamb, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-321 and 50-366

Enclosure:
Audit Plan

cc: Listserv

REGULATORY AUDIT PLAN
BY THE OFFICE OF NUCLEAR REACTOR REGULATION
TO SUPPORT THE REVIEW OF THE LICENSE AMENDMENT REQUEST
TO ADOPT RISK-INFORMED COMPLETION TIMES
SOUTHERN NUCLEAR OPERATING COMPANY
EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 50-321 AND 50-366

1.0 BACKGROUND

By letter dated October 26, 2021 (Reference 1), Southern Nuclear Operating Company (SNC, the licensee) submitted a license amendment request (LAR) to amend Renewed Operating License Nos. DPR-57 and NPF-5 for the Edwin I. Hatch Nuclear Plant (Hatch), Units 1 and 2, respectively. The proposed LAR would modify the plant's Technical Specification (TS) requirements to permit the use of risk-informed completion times (RICTs) in accordance with Technical Specification Task Force (TSTF) Traveler TSTF-505, "Provide Risk-informed Extended Completion Times, RITSTF [Risk-Informed Technical Specification Task Force] Initiative 4b" (Reference 2). These RICTs would apply to certain actions required when limiting conditions for operation are not met.

The staff from the Nuclear Regulatory Commission's (NRC) Office of Nuclear Reactor Regulation (NRR) has initiated its review of the LAR in accordance with NRR Office Instruction LIC-101, "License Amendment Review Procedures" (Reference 3).

2.0 REGULATORY AUDIT BASIS

A regulatory audit is a planned license- or regulation-related activity that includes the examination and evaluation of primarily non-docketed information associated with the LAR. An audit is conducted to gain understanding, to verify information, and to identify information that will require docketing to support the basis of a licensing or regulatory decision. An audit will assist the NRC staff in efficiently conducting its review and gaining insights to the licensee's processes and procedures. Information that the NRC staff relies upon to make the safety determination must be submitted on the docket. This audit will be conducted in accordance with NRR Office Instruction LIC-111, "Regulatory Audits," Revision 1, dated October 2019 (Reference 4), with exceptions noted within this audit plan.

The NRC staff will perform the audit to support its evaluation of whether SNC's LAR can be approved per Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.90, "Application for amendment of license, construction permit, or early site permit." The NRC staff's review will be informed by NUREG-0800, Standard Review Plan Section 19.2, "Review of Risk Information Used to Support Permanent Plant-Specific Changes to the Licensing Basis" (Reference 5). The audit will assist the NRC staff with understanding the licensee's proposed program to implement RICTs for certain TSs.

3.0 REGULATORY AUDIT SCOPE AND METHODOLOGY

NRC's objectives of the audit are the following:

- Learn how the licensee's proposed program implements TSTF-505 and conforms to NRC-endorsed guidance in Nuclear Energy Institute (NEI) report NEI 06-09, Revision 0-A, "Risk-Informed Technical Specification Initiative 4b, Risk-Managed Technical Specification Guidelines" (Reference 6).
- Gain a better understanding of the detailed calculations, analyses, and bases underlying the LAR and confirm the NRC staff's understanding of the LAR.
- Gain a better understanding of plant design features and their implications for the LAR.
- Identify any information needed to enable the staff's evaluation of the technical acceptability of the probabilistic risk assessment (PRA) used for this application.
- Identify any information needed to enable the NRC staff's evaluation of whether the proposed changes challenge design-basis functions or adversely affect the capability or capacity of plant equipment to perform design-basis functions.
- Identify questions and requests that may become formal requests for additional information (RAIs) per NRR Office Instruction LIC-115, "Processing Requests for Additional Information" (Reference 7).

The NRC staff will audit the PRA methods that the licensee would use to determine the risk impact from which the revised completion times would be obtained, including the licensee's assessments of internal events (including internal flooding), fire, and seismic PRAs. The NRC will also audit the licensee's assessment of risk from other external events, and the licensee's evaluation of defense-in-depth.

4.0 INFORMATION AND OTHER MATERIAL NECESSARY FOR THE AUDIT

The NRC staff will request information and an audit meeting(s) throughout the audit period. The NRC staff will use an "audit items list" to identify the information (e.g., methodology, process information, and calculations) to be audited. The NRC staff will provide the final audit items list as an enclosure to the audit summary report, which will be publicly available. The attachment to this audit plan includes the initial audit items list. Throughout the audit period, the NRC staff will provide SNC with audit questions and audit-related requests so that the licensee can better prepare for audit discussions with NRC staff. Any information accessed through the licensee's portal will not be held or retained in any way by NRC staff. The NRC staff requests the licensee to have the requested audit information listed in the audit items list to be readily available and accessible for the NRC staff's review via a Web-based portal.

5.0 TEAM ASSIGNMENTS

The audit team will consist of the following NRC staff from NRR and contractors.

- Dawnmathews Kalathiveettil, Plant Licensing Branch 2-1 (LPL2-1)
- John G. Lamb, LPL2-1
- Ed Miller, LPL2-1
- Adrienne Driver, PRA Licensing Branch A (APLA)
- Joshua Havertape, APLA
- Bernard Grenier, PRA Licensing Branch B (APLB)
- Sunwoo Park, PRA Licensing Branch C (APLC)

- Keith Tetter, APLC
- Andrea Russell, Technical Specifications Branch (STSB)
- Brian Lee, Containment and Plant Systems Branch (SCPB)
- Norbert Carte, Instrumentation and Controls Branch B (EICB)
- Joseph Ashcraft, EICB
- Nadim Khan, Electrical Engineering Branch (EEEE)
- Steve Wyman, EEEB
- Chris Jackson, Nuclear Systems Performance Branch (SNSB)
- Mark Wilk, Pacific Northwest National Laboratory (PNNL)
- Steve Short, PNNL

6.0 LOGISTICS

To support the review schedule communicated to SNC when the NRC staff accepted the LAR for technical review, audit activities will be performed remotely and virtually using Microsoft Teams, teleconference, and a Web-based portal or other virtual meeting space created by the licensee. NRC information requests and communications with licensee staff will be coordinated through the NRC's licensing project manager.

A desktop audit will take place between December 13, 2021, and June 30, 2022. The NRC's entrance meeting with the licensee will be on December 13, 2021. The NRC's licensing project manager will inform the licensee of the entrance and exit meeting dates when they are established. The NRC intends to establish a three-day virtual audit meeting via Microsoft Teams on mutually agreeable dates and times, tentatively scheduled for the week of April 4, 2022, to discuss information needs and questions arising from the NRC's review of the audited items. The NRC staff may change and/or add audit dates and times when deemed necessary. Audit meeting agenda and questions will be sent in advance of the audit meeting.

The NRC staff requests the licensee to have the information referenced in Section 4.0 of this audit plan available and accessible for the NRC staff's review via an internet-based portal within 6 weeks of the date of this audit plan. The NRC staff requests that any supplemental information requested be available and accessible for the NRC staff's review within 1 week of the date of the NRC's notification to the licensee of the new requests. The NRC's licensing project manager will inform the licensee via routine communications when the NRC staff no longer needs access to the portal. The NRC staff requests the licensee to notify the review team when an audit item is added to its portal by sending an e-mail to the NRC licensing project manager or to the review team email address (HatchTSTF-505@usnrc.onmicrosoft.com).

7.0 SPECIAL REQUESTS

The NRC requests access to requested documents and information through a Web-based portal that allows the NRC staff and contractors to access documents over the Internet. The following conditions associated with the online portal must be maintained while the NRC staff and contractors have access to the online portal:

- The online portal will be password-protected. A separate password will be assigned to each member of the NRC staff and NRC contractors participating in the audit.
- The online portal will prevent the NRC participants from printing, saving, downloading, or collecting any information directly from the online portal.

- Conditions of use of the online portal will be displayed on the login screen and will require acknowledgment by each user.

Username and password and/or other Web-based portal access information should be provided directly to members of the NRC staff and contractors as needed. The NRC licensing project manager will provide the licensee with names and contact information of the NRC staff and contractors participating in the audit. All other communications should be coordinated through the NRC project manager.

8.0 DELIVERABLES

The NRC staff will develop any RAIs, as needed, via NRR Office Instruction LIC-115 and issue such RAIs separately from audit-related correspondence. The NRC staff will issue an audit summary report prior to completing its review of the LAR.

9.0 REFERENCES

- 1 Southern Nuclear Operating Company letter to U.S. Nuclear Regulatory Commission (NRC), "Edwin I. Hatch Nuclear Plant, Units 1 and 2, License Amendment Request to Revise Technical Specifications to Adopt Risk Informed Completion Times TSTF-505, Revision 2, Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b," October 26, 2021 (ADAMS Accession No. ML21300A153).
- 2 Technical Specifications Task Force (A Joint Owners Group Activity); Pressurized Water Reactors Owners Group (PWROG); Boiling Water Reactors Owners Group (BWROG) and Advanced Passive Owners Group (APOG), "letter to U.S. Nuclear Regulatory Commission (NRC) - TSTF Comments on Draft Safety Evaluation for Traveler [Technical Specification Task Force] TSTF-505, "Provide Risk-Informed Extended Completion Times," and Submittal of TSTF-505, Revision 2," July 2, 2018 (ADAMS Accession No. ML18183A493).
- 3 U. S. Nuclear Regulatory Commission (NRC), NRR Office Instruction, "LIC-101, Revision 6 - License Amendment Review Procedures," August 3, 2020 (ADAMS Accession No. ML19248C539).
- 4 U. S. Nuclear Regulatory Commission (NRC), NRR Office Instruction, "LIC-111, Revision 1 - Regulatory Audits," October 31, 2019 (ADAMS Accession No. ML19226A274).
- 5 U.S. Nuclear Regulatory Commission (NRC), "NUREG-0800, Standard Review Plan, Chapter 19.2 - Review of Risk Information to Support Permanent Plant - Specific Changes to the Licensing Basis: General Guidance," June 2007 (ADAMS Accession No. ML071700658).
- 6 Nuclear Energy Institute (NEI), "NEI 06-09 (Revision 0) - A: Risk-Informed Technical Specifications Initiative 4b, Risk-Managed Technical Specifications (RMTS) Guidelines, Industry Guidance Document," November 2006 (ADAMS Accession No. ML12286A322).
- 7 U.S. Nuclear Regulatory Commission (NRC), NRR Office Instruction, "LIC-115, Revision 1 - Processing Requests for Additional Information," August 9, 2021 (ADAMS Accession No. ML21141A238).

Initial Audit Items List

Item #	Audit Item
1	Reports of full-scope and focused-scope peer reviews, facts and observations (F&Os) closure reviews, and any self-assessments referred to in license amendment request (LAR) Enclosure 2 for the internal events, internal flooding, fire, and seismic probabilistic risk assessments (PRAs) cited in the LAR.
2	For the internal events, internal flooding, fire, and seismic PRAs, plant-specific documentation (e.g., uncertainty notebooks) related to: <ul style="list-style-type: none"> a. The review of the PRA model assumptions and sources of uncertainty (generic and plant-specific assumptions/uncertainties). b. Identification of key assumptions and sources of uncertainty for this LAR. c. Parametric uncertainty and state-of-knowledge correlation evaluation.
3	PRA notebooks for the modeling of FLEX equipment and FLEX human error probabilities credited in the PRAs.
4	PRA notebook(s) for the Reactor Protection System.
5	Documentation of how shared or cross-tied systems are modeled in the PRA.
6	Hatch fire PRA notebooks containing the results of the fire PRA.
7	If available, the primary document(s) supporting the revised Hatch Units 1 and 2 warning time analysis to reconfirm that the external flooding hazard can be screened out using screening criterion C5 (or using the criteria of Section 6-2-3 of ASME/ANS RA-Sa-2009 if external flooding cannot be screened as a slow-moving event).
8	If modeled, the PRA notebooks associated with the modeling of Open Phase Condition (OPC) in electrical switchyards and the Open Phase Isolation System (OPIS).
9	Documentation supporting the development of the real-time risk tool and benchmarking it against the PRA.
10	Documentation supporting the example risk informed completion times (RICT) calculations presented in LAR Enclosure 1, Tables E1-2 and E1-3.
11	Plant and PRA configuration control procedures.
12	Any draft or final RICT program procedures (e.g., for risk management actions, PRA functionality determination, and recording limiting conditions for operation).
13	Plant procedures related to risk management actions for the electrical power systems, if available.
14	Relevant design documentation (e.g., single line diagrams of the electrical power distribution systems and piping and instrumentation diagrams).
15	Design details of systems shared or cross-tied between Units 1 and 2, including electrical and mechanical systems.
16	Other documentation that the licensee determines to be responsive to the NRC staff's information requests.

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(EPID L-2021-LLA-0199) DATED NOVEMBER 29, 2021

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DATE	11/23/2021	11/23/2021	11/23/2021	11/17/2021
OFFICE	NRR/DSS/SCPB/BC(A)	NRR/DSS/STSB/BC	NRR/DORL/LPLII-2/BC	NRR/DORL/LPLII-2/PM
NAME	SJones	NJordan	MMarkley	JLamb
DATE	11/22/2021	11/17/2021	11/29/2021	11/29/2021

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