



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

February 26, 2019

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

**SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 – AUDIT SUMMARY IN
SUPPORT OF THE LICENSE AMENDMENT REQUEST TO IMPLEMENT RISK-
INFORMED TECHNICAL SPECIFICATIONS INITIATIVE 4B
(EPID L-2018-LLA-0210)**

Dear Ms. Gayheart:

By letter dated July 27, 2018, Southern Nuclear Operating Company (SNC, the licensee) submitted a license amendment request to implement changes to their technical specifications program that establishes a risk-informed approach for voluntary extension of completion times for Limiting Conditions of Operations based on the Nuclear Energy Institute 06-09 methodology, "Risk-Informed Technical Specification Initiative 4b Risk-Managed Technical Specification (RMTS) Guidelines," Revision 0-A, for Joseph M. Farley Nuclear Plant, Units 1 and 2.

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the licensee's submittal and determined that a regulatory audit would assist in the timely completion of the licensing review process. The NRC staff issued the regulatory audit plan on January 4, 2019.

The NRC staff conducted the regulatory audit on February 5-7, 2019, at the SNC corporate office in Birmingham, Alabama. The results of the regulatory audit will be used by the NRC staff to finalize requests for additional information.

The audit summary report is provided as an enclosure to this letter.

C. Gayheart

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If you have any questions, please contact me at 301-415-1009 or via e-mail at Shawn.Williams@nrc.gov.

Sincerely,

A handwritten signature in cursive script that reads "Shawn Williams".

Shawn A. Williams, Senior Project Manager
Plant Licensing Branch II 1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-348 and 50-364

Enclosure:

1. Audit Summary

cc: Listserv

FEBRUARY 5-7, 2019, AUDIT SUMMARY

LICENSE AMENDMENT REQUEST TO ADOPT NEI 06-09, REVISION 0-A

RISK-INFORMED COMPLETION TIMES

SOUTHERN NUCLEAR OPERATING COMPANY

JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-348 AND 50-364

1.0 INTRODUCTION

By letter dated July 27, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18208A619), Southern Nuclear Operating Company (SNC, the licensee) submitted a license amendment request (LAR) to implement changes to their technical specifications program that establishes a risk-informed approach for voluntary extension of completion times for Limiting Conditions of Operations based on the Nuclear Energy Institute (NEI) 06-09 methodology, "Risk-Informed Technical Specification Initiative 4b Risk-Managed Technical Specification (RMTS) Guidelines," Revision 0-A, for Joseph M. Farley Nuclear Plant, Units 1 and 2.

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the licensee's submittal and determined that a regulatory audit would assist in the timely completion of the licensing review process. The NRC staff issued the regulatory audit plan on January 4, 2019 (ADAMS Accession No. ML18338A005) that included 26 questions to be discussed during the audit.

The NRC staff conducted the regulatory audit on February 5-7, 2019, at the SNC corporate office in Birmingham, Alabama. The results of the regulatory audit will be used by the NRC staff to finalize requests for additional information (RAIs).

The regulatory audit was performed consistent with NRC Office of Nuclear Reactor Regulation (NRR) Office Instruction LIC-111, "Regulatory Audits" (ADAMS Accession No. ML082900195).

2.0 AUDIT ACTIVITIES AND OBSERVATIONS

The purpose of the audit was to understand the calculations, analyses, and bases for the LAR, and to develop requests for additional information, as needed. NRC staff discussions with SNC focused on internal events and fire probabilistic risk assessment (PRA) quality, PRA functionality, implementation of the risk informed completion time (RICT) program, TS limiting conditions for operation, and associated RICT program guidance documents. SNC provided a demonstration of how it would implement the RICT. The NRC staff reviewed applicable program documents.

The following are the specific presentation and discussion topics discussed during the audit:

- SNC Presentation of Electrical Systems Modeled in the PRA (Question 25)
- Configuration Risk Management Program (CRMP) Tool Overview

- SNC Presentation of Responses to Questions 12, 19, 20, 21 and 24 (LAR/TS)
- Loss of Function Discussion and SNC response to Questions 13, 15, 16, and 18
- External Hazards Discussion and SNC response to Question 11
- SNC Presentation of PRA Functional Definition, Development and Use
- SNC responses to Questions 14, 17, 22, and 23 (PRA Functionality)
- Presentation of Risk Management Actions (RMAs) Determinations /Examples (plus SNC response to Q26)
- Detailed CRMP Presentation
- PRA Quality Discussion and SNC responses to Questions 1, 2, 3, 6, 8, 10
- SNC responses to Questions 4 and 5 (PRA Modeling)
- SNC responses to Questions 7 and 9 (Uncertainties)

Audit Exit:

NRC staff went through each question/discussion topic in the Audit plan, and shared preliminary thoughts on any changes to the original set of questions/discussion topics. There were no regulatory decisions made regarding the final set of questions. NRC staff stated that they planned to issue a formal RAI within 30 days of the Audit.

4.0 AUDIT PARTICIPANTS

NRC Participants:

- Shawn Williams, Project Manager, Office of Nuclear Reactor Regulation (NRR), Division of Reactor Licensing (DORL)
- Mihaela Biro, NRR, Division of Risk Assessment (DRA), Probabilistic Risk Assessment Licensing Branch A (APLA)
- Jonathan Evans, NRR, DRA, APLA
- Candace De Messieres, NRR, APLA
- Gurcharan Matharu, NRR, Division of Engineering (DE), Electrical Engineering Operating Reactors Branch (EEOB)
- Victor Cusumano, NRR, Division of Safety Systems (DSS), Branch Chief Technical Specifications Branch (STSB)
- Garill Coles, PNNL (Contractor)

SNC Participants:

- Pamela Burns-Frazier
- Jonathan Register
- Adam Coker
- Alex Gilbreath
- Dan Williams
- Matthew Barefield
- Phillip Ward
- Vish Patel
- Owen Scott
- Matthew Warden

5.0 DOCUMENTS REVIEWED

The following documents were available on the Farley Portal, and reviewed by NRC and PNNL staff.

1. SNC Calculation PRA-BC-F-17-002, "Seismic Risk Evaluation based on IPEEE and EPRI 2014 Farley Seismic Hazard," Version 1 (Reference 6 of Enclosure 4 to NL-18-0039), and
2. "Joseph M. Farley Nuclear Plant Units 1 and 2, Evaluation of Other External Hazards," Southern Nuclear PRA Report, Revision 0, December 31, 2013 (Reference A.2-2 of Enclosure 3 to NL-18-0039).
3. Draft Responses to the Audit Questions.
4. F-RIE-FIREPRA-U00-014, Fire PRA Quantification and Summary Report, Revision 1
5. F-RIE-IEIF-U00-01, Internal Events and Internal Flooding and LERF Model Update" Revision 10, Version 2.0.
6. F-RIE-IEIF-U00-013, Characterizing the Sources of Model Uncertainty for Farley Nuclear Plant
7. 05058-RPT-011, Farley Fire PRA Uncertainty Analysis, Revision 2
8. NMP-GM-031-003, Risk Management Actions for RICT Program, Version 4.0
9. NMP-GM-031-002, Calculation of RMAAT and RICT for the RICT Program, Version 3.1
10. NMP-GM-031-004, PRA Functionality Determination
11. FNP-0-SOP-0.13, Recording Limiting Conditions for Operation
12. SNCF-00358-REPT-001, Farley Internal Events F&O Closure Review (ENERCON)
13. F-FIE-FIREPAR U00-014, Internal Events PRA Uncertainty Analysis
14. FNP-O-AOP-21.0, Severe Weather Abnormal Operating Procedure
15. SNCF-00355-REPT-001, Farley Fire PRA Focused-Scope Peer Review, July 2018 (ENERCON)
16. R-401292913-255, Farley Fire PRA Focused-Scope Peer Review, January 2018 (ABS Consulting)

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ADAMS Accession No. ML19042A108

***via E-mail**

OFFICE	NRR/DORL/LPL2-1/PM	NRR/DORL/LPL2-1/LA	NRR/DE/APLA/BC*	NRR/DORL/LPL2-1/BC
NAME	SWilliams	KGoldstein	MWentzel	MMarkley
DATE	02/22/19	02/14/19	02/22/19	02/26/19
OFFICE	NRR/DORL/LPL2-1/PM			
NAME	SWilliams			
DATE	02/26/19			

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