



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

July 6, 2021

LICENSEE: Southern Nuclear Operating Company, Inc.
FACILITY: Joseph M. Farley Nuclear Plant, Units 1 and 2
SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 - SUMMARY OF PUBLIC MEETING ON JUNE 24, 2021, REGARDING PROPOSED LICENSE AMENDMENT REQUEST TO PERMANENTLY REMOVE THE ENCAPSULATION VESSELS AROUND CONTAINMENT SUMP RECIRCULATION VALVES (EPID L-2021-LRM-0058)

On June 24, 2021, an Observation Public Meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Southern Nuclear Operating Company, Inc. (SNC, the licensee). The purpose of the meeting was to discuss a proposed future license amendment request (LAR) to permanently remove the encapsulation vessels around containment recirculation suction valves at the Joseph M. Farley Nuclear Plant, Units 1 and 2 (Farley).

A list of attendees is provided as an Enclosure.

On June 7, 2021 (Agencywide Document and Access Management System (ADAMS) Accession No. ML21158A226), the meeting was noticed on the NRC public webpage for the meeting to be held on June 24, 2021.

The SNC presented slides contained in ADAMS Accession No. ML21173A063.

Introduction

The NRC staff opened the meeting with introductory remarks and introduction of the attendees.

The SNC staff discussed the following topics: (1) LAR summary description, (2) system design and operation, (3) current licensing basis requirements, (4) reason for proposed change, (5) description of proposed change, and (6) technical evaluation of proposed change.

Background

The SNC staff stated that it plans to request a license amendment to permanently remove encapsulation vessels and associated guard piping installed around the first Containment Spray (CS) and first Residual Heat Removal (RHR) / Low Head Safety Injection (LHSI) motor-operated gate isolation valves and the upstream suction piping. The recirculation suction lines for CS and RHR/LHSI from the containment sump have two isolation valves in each line that are outside of containment. The first isolation valve in each line, the valve nearest to containment, is enclosed in a metal housing to collect leakage out of the valve. SNC stated that the LAR would propose to change the licensing basis from relying on the valve encapsulation to collect leakage to

relying on the design of the valve and piping to preclude leakage and the capability of detecting and terminating leakage from the valve packing or bonnet seals.

Proposed License Amendment Request

SNC stated that it determined that the proposed change would involve a “more than minimal” increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the updated final safety analysis report, (UFSAR) (per Title 10 of the Code of Federal Regulations [10 CFR], Part 50.59(c)(2)(ii)). Therefore, SNC plans to submit a proposed LAR to request NRC approval of the change.

SNC stated that the proposed LAR would describe a change to the Farley licensing basis, as described in the UFSAR, to allow permanent removal of the encapsulation vessels around the first isolation valves in the recirculation suction lines for the CS and RHR/LHSI systems and the associated guard piping. SNC stated that the proposed design will be in accordance with the acceptance criteria in NRC review guidance in NUREG-0800, “Standard Review Plan [SRP],” Section 6.2.4 “Containment Isolation System,” Revision 3 (ADAMS Accession No. ML070380197), and meet the applicable requirements in Appendix A, “General Design Criteria for Nuclear Power Plants” (GDC), to 10 CFR Part 50. SNC stated that the existing encapsulations and guard piping are credited to meet the GDC-56, “Primary Containment Isolation,” and the licensee’s proposed method for meeting GDC-56 is consistent with American National Standards Institute (ANSI) N271-1976, Section 3.6.5 that is endorsed by NRC Regulatory Guide (RG) 1.141, “Containment Isolation Provisions for Fluid Systems.” The NRC Staff noted that the current version of RG 1.141 is Revision 1 (ADAMS Accession No. ML092850042) and suggested the amendments reference the applicable version in the submittal.

SNC stated that the initial licensing basis of some plants did not include CS and RHR encapsulations. SNC indicated it was unaware of any previous reviews where credited encapsulations were removed and stated that its submittal would likely be a first-of-a-kind LAR review.

SNC stated that it plans to submit the LAR in July or August 2021 and would request that the NRC staff complete its review by March 2022 to support removing the first encapsulations in the spring 2022 outage for Unit 2.

NRC Questions to SNC

The NRC staff had questions on slides 5, 7, 8, 13, 15, 19, and 21-23.

The NRC staff questioned the licensee’s 10 CFR 50.59 determination of the “‘more than minimal’ increase in the likelihood of occurrence of a malfunction of an SSC important to safety previously evaluated in the UFSAR and requested to understand more about the aspects of proposed change that are not determined to be “more than minimal,” which SNC plans to address separately, outside the scope of the proposed LAR. The licensee did not elaborate on what those other changes may be as the 10 CFR 50.59 screenings are not yet complete.

The NRC staff questioned SNC’s proposed submittal and review schedule and asked if the piping stress analyses will be included in the proposed LAR. SNC described its proposed review schedule of July or August 2021, to March 2022, which is an approximately seven-month review schedule, including the Acceptance Review. SNC stated that the piping stress analyses

is currently being performed and that SNC plans to make the analyses available to the NRC staff via audit but would not expect to submit it as an attachment or enclosure to its LAR submittal. The NRC staff informed SNC that its proposed seven-month review schedule may be challenging and is short for a first-of-a-kind LAR review particularly if it is known to require an audit prior to submittal. The NRC clarified that any information relied on in its safety evaluation would need to be submitted on the docket and suggested as much information as possible be submitted in the licensee's LAR.

The NRC staff questioned whether the valve encapsulations were credited for containment isolation and SNC responded that the valve encapsulations were not credited for containment isolation but used to collect potential leakage.

The NRC staff questioned dose rates in the area supporting the licensee's assertion that the proposed change would save radiation exposure. The licensee acknowledged that it was mostly an outage labor issue but reiterated that there would be some dose savings. The NRC staff requested that SNC include information in its submittal concerning: radiation exposure estimates including control room dose; impacts related to SNC's approved 10 CFR 50.67 "Accident source term," and explanation how SNC's analysis is still bounding; and a description of the safety benefit of the proposed change.

The NRC staff asked questions about the assumptions and evaluation methodology that SNC will use to explain that the containment emergency sump suction lines, up to and including the first isolation valve, meet or exceed the piping stress analyses requirements and methodology described in Branch Technical Position (BTP) 3-4, "Postulated Rupture Locations in Fluid System Piping Inside and Outside Containment," Revision 3 (ADAMS Accession No. ML16085A315). SNC stated that the piping included in the stress analyses is assumed to be no more than moderate-energy piping, not high-energy piping. The NRC staff requested that SNC consider the NRC review guidance described in BTP3-4, including equations, parameter assumptions, and the results of the analyses.

SNC responded to the NRC's comments and questions and stated that the pre-licensing meeting feedback would be considered as it develops the submittal.

Closing

The NRC staff made no regulatory decisions during the meeting.

There were no members of the public in attendance.

Please direct any inquiries to me at 301-415-1009.

/RA/

Shawn 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: List of Attendees

cc : Listserv

LIST OF ATTENDEES

JUNE 24, 2021, PUBLIC MEETING WITH SOUTHERN NUCLEAR COMPANY

REGARDING A PROPOSED LICENSE AMENDMENT REQUEST

JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2

<u>ATTENDEE</u>	<u>REPRESENTING</u>
Stephanie Devlin-Gill	U.S. Nuclear Regulatory Commission (NRC)
Ravi Grover	NRC
Dawnmathews Kalathiveettil	NRC
Chang Li	NRC
Yueh-Li Li	NRC
Mike Markley	NRC
Sean Meighan	NRC
Peter Meier	NRC
Steve Smith	NRC
Ian Tseng	NRC
Tristan Villareal	NRC
Shawn Williams	NRC
Jamie Marquess Coleman	Southern Nuclear Operating Company (SNC)
William Evans	SNC
Cheryl Ann Gayheart	SNC
Ryan Joyce	SNC
Thomas McCallum	SNC
Daniel Shutt	SNC
Wesley Sparkman	SNC
Stephen Swantner	SNC
Steve Berryhill	SNC
Kate Barnett	SNC
Keith Brown	SNC
James Andrachek	SNC

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CLi, NRR

RGrover, NRR

SMeighan, NRR

Y-LLi, NRR

PMeier, RII

SSmith, NRR

ITseng, NRR

TVillareal, NRR

ADAMS Accession No: ML21176A171

OFFICE	NRR/DORL/LPL2-1/PM	NRR/DORL/LPL2-1/PM	NRR/DORL/LPL2-1/LA
NAME	SDevlin-Gill	SWilliams	KGoldstein
DATE	6/25/2021	7/2/2021	7/1/2021
OFFICE	NRR/DSS/SCP/BC	NRR/DSS/STSB/ABC	NRR/DRA/ARCB/BC
NAME	BWittick	NJordan	KHsueh
DATE	6/25/2021	6/28/2021	6/30/2021
OFFICE	NRR/DEX/EMIB/ABC	NRR/DORL/LPL2-1/BC	NRR/DORL/LPL2-1/PM
NAME	ITseng	MMarkley	SWilliams
DATE	6/28/2021	7/6/2021	7/6/2021

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