



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

June 1, 2021

LICENSEE: Southern Nuclear Operating Company, Inc.

FACILITY: Vogtle Electric Generating Plant, Units 1 and 2

SUBJECT: SUMMARY OF MAY 24, 2021, PUBLIC MEETING WITH SOUTHERN NUCLEAR OPERATING COMPANY, INC., REGARDING A PROPOSED RELIEF REQUEST TO USE AN ALTERNATIVE TO CERTAIN AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) SECTION XI AND SECTION III REQUIREMENTS FOR REPAIR OF REACTOR VESSEL HEAD PENETRATIONS FOR VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2 (EPID NO. L-2021-LRM-0047)

On May 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 for SNC to describe its plan to submit a relief request to propose an alternative to certain American Society of Mechanical Engineers (ASME) Section XI and Section III requirements for repair of reactor vessel head penetrations for Vogtle Electric Generating Plant, Units 1 and 2 (Vogtle).

A list of attendees is provided as an Enclosure.

On April 9, 2021 (Agencywide Document and Access Management System (ADAMS) Accession No. ML21099A249), the meeting was noticed on the NRC public webpage for the meeting to be held on May 10, 2021 (withdrawn and now non-publicly available). On May 6, 2021, the meeting was changed from May 10 to May 24, 2021 (ADAMS Accession No. ML21126A338) at SNC's request.

The SNC presented slides contained in ADAMS Accession No. ML21124A252.

### Introduction

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

The SNC personnel discussed the following topics: (1) background information, and (2) the proposed relief request.

### Background

SNC personnel stated that it would request an alternative using WCAP-15987-P, Rev. 2-P-A, "Issuance of Approved Versions of WCAP-15987-P, Revision 2-P-A (Proprietary) and WCAP-15987-NP, Revision 2-NP-A (Non-Proprietary), "Technical Basis for the Embedded Flaw

Process for Repair of Reactor Vessel Head Penetrations,” dated January 26, 2004 (ADAMS Accession No. ML040290241).

SNC personnel said that it plans to use the alternative for the repair of vessel head penetrations.

SNC personnel stated that the affected components for Vogtle are Class 1 reactor vessel head penetrations and J-groove welds. SNC personnel said it plans to request an alternative to (1) ASME Section XI, IWA-4000 requirements, (2) ASME Section III, NB-4131, NB-2538, and NB-2539 to eliminate and repair defects in materials, and (3) ASME Section III, NB-4450, NB-5340, and NB-5350 to eliminate and repair defects in weld metal.

SNC personnel said it will conduct examinations of the Vogtle reactor vessel head penetrations in accordance with ASME Code Case N-729-6, “Alternative Examination Requirements for [Pressurized-Water Reactor] PWR Reactor Vessel Upper Heads With Nozzles Having Pressure-Retaining Partial-Penetration Welds Section XI,” Division 1, Supplement 5, as amended by Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a, “Codes and standards.” SNC personnel stated that Vogtle flaw indications that require repair may be found on the vessel head penetration tube material and/or the J-groove attachment welds on the underside of the reactor vessel head.

#### Proposed Relief Request

SNC personnel said that the Vogtle repairs will be consistent with approved WCAP-15987-P, Rev. 2-P-A, which the NRC staff has approved for seal weld repairs of circumferential and axial cracks in the vessel head penetration nozzle inner diameter (ID) at or above the j-groove weld, in the vessel head penetration nozzle ID and outer diameter (OD) below the j-groove weld, and in the j-groove.

SNC personnel stated that the embedded flaw repair technique involves deposition of Alloy 52 weld metal to isolate existing flaws and the susceptible materials from the primary water (PW) environment. SNC personnel also said that the embedded flaw repair technique is considered a permanent repair. SNC personnel stated that as long as a Primary Water Stress Corrosion Crack (PWSCC) remains isolated from the PW environment, the flaws cannot propagate. SNC personnel said that since Alloy 52 weldment is resistant to PWSCC, a new PWSCC crack will not initiate and grow through the Alloy 52 overlay to permit the PW environment to contact the susceptible material.

SNC personnel stated that it will perform a combination of volumetric and surface examinations to provide reasonable assurance that the embedded flaw repairs at Vogtle will continue to perform its design function. SNC personnel said it will provide a Vogtle plant-specific analysis to support the request for the alternative and it will be part of the submittal.

SNC personnel stated that other licensees have requested to use the embedded flaw technique to repair cracks on the OD of vessel head penetrations as well as to repair flaws in the J-groove attachment welds of vessel head penetrations previously. The NRC has approved the following on a plant-specific basis (1) Braidwood, Units 1 and 2 (ADAMS Accession Nos. ML18284A445 and ML19141A020), (2) Byron, Units 1 and 2 (ADAMS Accession Nos. ML16229A250 and ML17062A428), and (3) Beaver Valley, Unit 2 (ADAMS Accession Nos. ML15273A066 and ML16190A133).

SNC personnel said it plans to request that the duration of the proposed alternative be for the remainder of the renewed operating license (60 years). SNC personnel stated it plans to submit the alternative request in August 2021, and request that the NRC staff complete its review by September 2022.

#### NRC Questions to SNC

The NRC staff questioned the life of the repair and the specific inservice inspection (ISI) 10-year interval. The NRC staff had questions on slides 5, 6, and 7. The SNC said it understood and would consider those comments and questions as it develops its submittal.

#### Public Questions to NRC

There were no members of the public in attendance.

#### Closing

The NRC staff made no regulatory decisions during the meeting.

Once received, the NRC staff will perform a thorough review of the proposed alternative request and make any regulatory decisions in writing in a timely manner.

Public Meeting Feedback forms were available, but no comments were received.

The meeting adjourned at 2:27 pm (Eastern time).

Please direct any inquiries to me at 301-415-3100.

**/RA/**

John G. Lamb, Senior Project Manager  
Plant Licensing Branch, II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

Enclosure: List of Attendees

cc w/encls: Listserv

LIST OF ATTENDEES  
MAY 24, 2021, PUBLIC MEETING WITH SOUTHERN NUCLEAR COMPANY  
REGARDING A PROPOSED RELIEF REQUEST  
VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2

<u>ATTENDEE</u>	<u>REPRESENTING</u>
John G. Lamb	U.S. Nuclear Regulatory Commission (NRC)
Mike Markley	NRC
Joel Jenkins	NRC
Jay Collins	NRC
Austin Young	NRC
DeLisa Pournaras	Southern Nuclear Operating Company (SNC)
Jamie Coleman	SNC
Ken Lowery	SNC
Hien Do	SNC
Asif Patel	SNC
Corey Thomas	SNC
Julia Zhao	SNC

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RidsRgn2MailCenter Resource

JJenkins, NRR

MMarkley, NRR

CSafouri, Region 2

MEndress, Region 2

MMitchell, NRR

**ADAMS Accession Nos:**

**ML21124A265 (Package);**

**ML21099A249, ML21126A335, and ML21126A338 (Meeting Notices)**

**ML21124A265 (Meeting Summary); ML21124A252 (Slides)**

OFFICE	NRR/DORL/LPL2-1/PM	NRR/DORL/LPL2-1/LA	NRR/DNRL/NPHP/BC
NAME	JLamb	KGoldstein	MMitchell
DATE	05/24/2021	05/25/2021	05/27/2021
OFFICE	NRR/DORL/LPL2-1/BC	NRR/DORL/LPL2-1/PM	
NAME	MMarkley	JLamb	
DATE	06/01/2021	06/01/2021	

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