



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

May 17, 2022

LICENSEE: Southern Nuclear Operating Company, Inc.

FACILITY: Vogtle Electric Generating Plant, Units 1 and 2

SUBJECT: SUMMARY OF MAY 11, 2022, PUBLIC MEETING WITH SOUTHERN NUCLEAR OPERATING COMPANY, INC., REGARDING A PROPOSED ACCIDENT TOLERANT FUEL LICENSE AMENDMENT REQUEST AND EXEMPTIONS FOR VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2 (EPID NO. L-2022-LRM-0023)

On May 11, 2022, a partial open and partial closed 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 an accident tolerant fuel (ATF) license amendment request (LAR) and exemption request to load 16 fuel rods (4 assemblies with 4 rods per assembly) with an enrichment of 6 weight-percent U-235 for Vogtle Electric Generating Plant (Vogtle), Units 1 and 2.

This was the second pre-submittal meeting on this topic. The first pre-submittal meeting was held on January 27, 2022, with the meeting summary dated February 1, 2022 (Agencywide Document and Access Management System (ADAMS) Accession No. ML22028A046).

A list of attendees is provided as an Enclosure.

On April 1, 2022 (ML22126A129), the meeting was noticed on the NRC public webpage.

The NRC staff opened the meeting with introductory remarks and a roll call of the attendees. The NRC staff provided slides with licensing questions as a follow-up to the pre-submittal meeting held on January 27, 2022 (ML22126A010).

The SNC representative discussed the following topics: (1) Vogtle LTA [Lead Test Assembly] program objective, (2) Vogtle LAR format, (3) proposed license condition, (4) LTA evaluation method and approach, (5) Cladding Exemption – Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors," and 10 CFR 50 Appendix K, "ECCS [emergency core cooling systems] Evaluation Models," (6) Enrichment Exemption – Paragraph (b) of 10 CFR 50.68, "Criticality Accident requirements," (7) source term and environmental considerations, (8) impact on probabilistic risk assessment (PRA), severe accident management guidelines (SAMG) timing, and surveillance frequency control program (SFCP), and (9) schedule.

The SNC representative presented slides contained in ML22126A001.

Vogtle LTA Program Objective

Vogtle, Units 1 and 2, have 193 fuel assemblies, and the rod array is 17 x 17, with 264 rods per assembly.

SNC stated that the 4 Westinghouse ATF LTAs with higher enrichment capable of higher burnup have the following:

- 4 rods with enrichment up to 6 weight-percent U-235 in 4 LTAs (16 ATF rods total),
- **AXIOM**® high performance fuel rod cladding,
- **EnCore**® chromium coated cladding (one or more rods may be uncoated),
- **ADOPT**™ doped fuel material for non-IFBA [Integral Fuel Burnable Absorbers] rods,
- Standard (undoped) fuel material for IFBA rods.

ADOPT™, **AXIOM**®, and **EnCore**® are trademarks or registered trademarks of Westinghouse.

Vogtle LAR Format

SNC stated that the LAR format will consist of five enclosures: (1) evaluation of the proposed change – proprietary version, (2) evaluation of the proposed change – non-proprietary version, (3) 10 CFR 50.46 and 10 CFR 50 Appendix K exemption, (4) 10 CFR 50.68 exemption, and affidavit for enclosure 1.

Proposed License Condition

SNC presented slides 8 and 9 regarding the proposed license condition.

Lead Test Assembly Evaluation Method and Approach

SNC said that some NRC-approved methods outside Vogtle's current licensing basis will be used solely to assess performance of the LTAs but noted that analytical results will be confirmed in accordance with the Core Operating Limits (COLR) report.

Cladding Exemption – 10 CFR 50.46 and 10 CFR 50 Appendix K

SNC stated that it would request an exemption to 10 CFR 50.46 and 10 CFR 50 Appendix K to use **AXIOM**® cladding.

Enrichment Exemption – 10 CFR 50.68(b)

SNC stated that it would change Vogtle's licensing basis from 10 CFR 70.24, "Criticality accident requirements," to 10 CFR 50.68. SNC said an exemption is needed to 10 CFR 50.58(b)(7) to allow the proposed LTAs to have greater than 5 weight percent U-235 rods.

Source Term and Environmental Considerations

SNC said that it would present comparisons of the LTA versus the analysis of record nuclide inventories in the proposed LAR. SNC stated that it plans to submit the proposed LAR under the categorical exclusion clause regarding environmental considerations.

Impact on PRA, SAMG Timing, and SFCP

SNC said that there would be no impacts for PRA, SAMG timings, or SFCP related to the proposed LAR.

Schedule

SNC stated that it plans to submit the proposed LAR and exemption requests on June 30, 2022, and to request completion by the NRC no later than by July 15, 2023.

Questions

The NRC staff asked questions:

- Will the proposed LAR include changes to technical specifications (TSs) 4.2.1, 4.3.1, and 3.7.18?
- Will the proposed LAR change the license condition and not the TSs?
- Will the proposed LAR reference certain figures in the proposed license condition?
- What would be the action if a part of the proposed license condition is not met?
- To what extent will the proposed LAR rely on unapproved topical reports?
- Will the proposed LAR only rely on plant-specific analyses?
- Will the proposed LAR assessment of radiological consequences rely only on the current analysis of record but also include analysis supporting the proposed alternate source term (AST) LAR?
- What radiological information will be submitted so the NRC staff can perform a confirmatory calculations?
- Will the proposed LAR address the impact of the risk-informed completion time (RICT) program in TSs?
- Will the proposed LAR have an explanation of the assessment and impact on probabilistic risk assessment?
- Will the proposed exemptions be related only to the proposed LTAs or more broadly?

Public Participation

There was one member of the public in attendance. The member of the public did not have any questions or comments for the NRC staff.

Closing

The open portion of the meeting was adjourned at 9:58 am Eastern Time (ET).

The closed portion of the meeting was held between 10:15 am and 11:30 am ET to discuss proprietary information related to the proposed LAR and exemption requests.

The NRC staff made no regulatory decisions during the meeting.

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

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

Please direct any inquiries to me at John.Lamb@nrc.gov or 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: Distribution via Listserv

LIST OF ATTENDEES
MAY 11, 2022, PUBLIC MEETING WITH SOUTHERN NUCLEAR COMPANY
REGARDING A PROPOSED ACCIDENT TOLERANT FUEL (ATF)
LICENSE AMENDMENT REQUEST AND EXEMPTION
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
Kevin Hsueh	NRC
Vic Cusumano	NRC
Matt Hamm	NRC
Henry Wagage	NRC
Steve Jones	NRC
Scott Krepel	NRC
Charles Peabody, Jr.	NRC
Elijah Dickson	NRC
Edward Stutzcage	NRC
Donald Palmrose	NRC
Robert Lukes	NRC
Brandon Wise*	NRC
Kent Wood	NRC
Josh Whitman	NRC
Kevin Heller*	NRC
Larry Burkhart	NRC
James Rubenstone	NRC
Delza Mas-Pernanda	NRC
Mike Norris	NRC
Ed Robinson	NRC
Dave Gasperson	NRC
Lynnea Wilkins	NRC
Zena Abdullahi	NRC
Weidong Wang	NRC
Carolyn Wolf	NRC
Paul Clifford	NRC
Ben Parks*	NRC
Angel Moreno	NRC
Rob Elliott	NRC
Ravi Grover*	NRC
Joe Messina*	NRC
Kristy Bucholtz	NRC
Jeremy Dean	NRC
Brian Wittick	NRC
Prema Chandrathil	NRC
Don Palmrose	NRC
Ken Erwin	NRC

<u>ATTENDEE</u>	<u>REPRESENTING</u>
Chris Safouri	NRC
MJ Ross-Lee	NRC
Joe Donoghue*	NRC
Bo Pham	NRC
Ryan Joyce*	Southern Nuclear Operating Company (SNC)
Wes Sparkman*	SNC
Johnathan Chavers*	SNC
Bradley Balltrip*	SNC
Jennifer Baker	SNC
Ernest Bates*	SNC
Thomas Kindred*	SNC
Cheryl Gayheart	SNC
Jason Douglass*	SNC
Matt Leonard*	SNC
Jeremiah Gilbreath	SNC
Ken Lowery	SNC
DeLisa Pournaras	SNC
Dale Lancaster	SNC
Dr. S. I. Abdel-Khalik	SNC Contractor
Frank Boylan*	Westinghouse
Michael Anness*	Westinghouse
Michael Boone*	Westinghouse
Radu Pomirleanu*	Westinghouse
Micheal Wenner*	Westinghouse
John Moorehead*	Westinghouse
Ann Marie DiLullo*	Westinghouse
Carey Haas	Westinghouse
Zachary Harper	Westinghouse
Parvez Khambatta	Westinghouse
Cenk Guler	Westinghouse
Tanya Sloma-DeLosier	Westinghouse
Andrew Bowman	Westinghouse
Zeses Karoutas*	Westinghouse
Robert Schillat	Westinghouse
Rachel Christian	Westinghouse
Gregory Stehle	Westinghouse
Brian Pasco	Westinghouse
Susan Hoxie-Key	Public

*In-Person

Enclosure

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**ADAMS Accession Nos.: PKG ML22132A008 Meeting Notice ML22126A129
Meeting Summary ML22132A010 Slides ML22126A001 and ML22126A010**

OFFICE	DORL/LPL2-1/PM	DORL/LPL2-1/LA	DSS/SNSB/BC	DORL/LPL2-1/BC	DORL/LPL2-1/PM
NAME	JLamb	KGoldstein	SKrepel	MMarkley	JLamb
DATE	5/11/2022	05/12/2022	05/16/2022	05/16/2022	05/17/2022

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