



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

September 19, 2023

LICENSEE: Entergy Operations, Inc.

FACILITY: Arkansas Nuclear One, Unit 1

SUBJECT: SUMMARY OF AUGUST 15, 2023, PRESUBMITTAL TELECONFERENCE WITH ENTERGY OPERATIONS, INC. TO DISCUSS PROPOSED LICENSE AMENDMENT REQUEST CONCERNING PRESSURIZER HEATERS FOR ARKANSAS NUCLEAR ONE, UNIT 1 (EPID L-2023-LRM-0055)

On August 15, 2023, an Observation presubmittal meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and Entergy Operations, Inc. (the licensee) via teleconference. The purpose of the meeting was to discuss the licensee's forthcoming license amendment request (LAR) regarding proposed changes to the Safety Analysis Report (SAR) concerning the pressurizer heaters at Arkansas Nuclear One, Unit 1 (ANO-1). The meeting notice and agenda dated August 3, 2023, are available in the NRC's Agencywide Documents Access and Management System (ADAMS) under Accession No. ML23215A158. A list of meeting participants is provided in the enclosure.

During the meeting, the licensee presented information (ML23223A203) regarding its forthcoming LAR. The licensee provided background information concerning the reason for the planned LAR and a detailed description of the proposed changes to the ANO-1 SAR and the 1980 Confirmatory Order that was issued on January 2, 1980 (ML021220215) to implement the requirements in NUREG-0578, TMI [Three Mile Island] Lessons Learned Task Force Status Report and Short-Term Recommendations" (ML090060030) with clarification in NUREG-0737, "Clarification of TMI Action Plan Requirements" (ML051400209). The licensee also described its technical justification for proposing these changes. The licensee informed the NRC staff that it expected to submit the LAR in the first quarter of 2024.

The NRC staff queried the licensee throughout the presentation. Following are some items the staff noted it would like the licensee to provide in its application and some items to consider in preparing its application to facilitate a timely review:

- Historical ANO data on loss of offsite power events of durations greater than 4 hours, if applicable.
- Relevant drawings showing the power feeds to the pressurizer heaters from the emergency diesel generators (EDGs) and their controls/interlocks.
- Drawings showing the station blackout (SBO) diesel generator (DG) power feed to the safety-related buses/pressurizer heaters.

- Confirmation that each EDG and the SBO DG have adequate capacity and margin to feed the pressurizer heaters.
- A description of the SBO DG's capability to provide power to the pressurizer heaters for more than 4 hours and how its use would be prioritized to support both units during an SBO event.
- Justification for using a beyond-design-basis criterion (4 hours) versus an anticipated operational occurrence criterion to maintain minimum subcooling margin.
- Justification why the analysis, without consideration of the expansion and contraction model of the steam volume in the pressurizer, is adequate to determine the 4-hour time for maintaining subcooling margin.
- During the meeting, the NRC staff asked the licensee if they were planning to perform testing to determine the pressurizer heater input required to maintain subcooling and to verify if the currently assumed energy loss remains valid. The licensee stated that they were considering how to address this issue.
- Confirmation of the of the historical heat loss calculations and assumptions to ensure they are accurate.
- Identification of the time it would take for operators to complete necessary actions from outside the control room in case of failure of the "B" train electrical power to the pressurizer heaters, and a discussion of the procedures that would be revised and the training that would be provided to perform such operations.

The NRC staff noted that, due to the anticipated complex nature of this review, the staff may consider performing a regulatory audit to review documentation and calculations.

The NRC staff did not make any regulatory decisions or commitments at the meeting. Members of the public did not participate in the teleconference. Public Meeting Feedback forms were not received.

Please direct any inquiries to me at 301-415-4037, or via email to Thomas.Wengert@nrc.gov.

/RA/

Thomas J. Wengert, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-313

Enclosure:
List of Attendees

cc: Listserv

LIST OF ATTENDEES
AUGUST 15, 2023, TELECONFERENCE MEETING
WITH ENTERGY OPERATIONS, INC.
ARKANSAS NUCLEAR ONE, UNIT 1
FORTHCOMING LICENSE AMENDMENT REQUEST
REGARDING PRESSURIZER HEATERS

U.S. Nuclear Regulatory Commission

Summer Sun, NRR¹/DSS²
Ravi Grover, NRR/DSS
Stephen Smith, NRR/DSS
Mahmoud Jardaneh, NRR/DSS
Wendell Morton, NRR/DEX³
Vijay Goel, NRR/DEX
Hari Kodali, NRR/DEX
Jennifer Dixon-Herrity, NRR/DORL⁴
Tom Wengert, NRR/DORL
Robert Beaton, NRR/DRO⁵
John Dixon, R-IV⁶/DRS⁷

Entergy Operations, Inc.

Stephenie Pyle	Director, Regulatory Compliance
Phil Couture	Senior Manager, Fleet Regulatory Assurance
Riley Keele	Manager, Arkansas Nuclear One (ANO) Regulatory Assurance
David Williams	Senior Staff Engineer, Corporate Licensing
Bob Clark	Senior Licensing Specialist, ANO

¹ Office of Nuclear Reactor Regulation

² Division of Safety Systems

³ Division of Engineering and External Hazards

⁴ Division of Operating Reactor Licensing

⁵ Division of Reactor Oversight

⁶ Region 4

⁷ Division of Reactor Safety

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WITH ENTERGY OPERATIONS, INC. TO DISCUSS PROPOSED LICENSE
AMENDMENT REQUEST CONCERNING PRESSURIZER HEATERS FOR
ARKANSAS NUCLEAR ONE, UNIT 1 (EPID L-2023-LRM-0055)
DATED SEPTEMBER 19, 2023

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ADAMS Accession Nos.

Meeting Notice: ML23215A158

Meeting Summary: ML23257A241

Meeting Slides: ML23223A203

***by email**

OFFICE	NRR/DORL/LPL4/PM*	NRR/DORL/LPL4/LA*	NRR/DORL/LPL4/BC*	NRR/DORL/LPL4/PM*
NAME	TWengert	PBlechman	JDixon-Herrity	TWengert
DATE	9/18/2023	9/18/2023	9/18/2023	9/19/2023

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