



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

August 3, 2023

ANO Site Vice President
Arkansas Nuclear One
Entergy Operations, Inc.
N-TSB-58
1448 S.R. 333
Russellville, AR 72802

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 1 - REGULATORY AUDIT SUMMARY
CONCERNING REVIEW OF LICENSE AMENDMENT REQUEST TO REMOVE
TECHNICAL SPECIFICATION CONDITION ALLOWING TWO REACTOR
COOLANT PUMP OPERATION (EPID L-2022-LLA-0161)

Dear Sir or Madam:

By letter dated October 31, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22304A669), as supplemented by letter dated June 29, 2023, (ML23180A292), Entergy Operations, Inc. (the licensee) submitted a license amendment request (LAR) that would remove Condition A, "One RCP [Reactor Coolant Pump] not in operation in each loop," of Technical Specification 3.4.4, "RCS [Reactor Coolant System] Loops – MODES 1 and 2," for Arkansas Nuclear One, Unit 1.

To support its review of the LAR, the U.S. Nuclear Regulatory Commission (NRC) staff conducted a regulatory audit via the use of an online reference portal set up by the licensee. The NRC staff reviewed calculations and analyses supporting the licensee's LAR. The audit summary is enclosed.

If you have any questions, please contact me at (301) 415-4037 or by email at Thomas.Wengert@nrc.gov.

Sincerely,

/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:
Audit Summary

cc: Listserv

REGULATORY AUDIT SUMMARY
CONCERNING REVIEW OF LICENSE AMENDMENT REQUEST
REGARDING PROPOSED REMOVAL OF CONDITION A
OF TECHNICAL SPECIFICATION 3.3.4
ENERGY OPERATIONS, INC.
ARKANSAS NUCLEAR ONE, UNIT 1
DOCKET NO. 50-313

1.0 BACKGROUND

By letter dated October 31, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22304A669), as supplemented by letter dated June 29, 2023, (ML23180A292), Entergy Operations, Inc. (the licensee) submitted a license amendment request (LAR) that would remove Condition A, "One RCP [Reactor Coolant Pump] not in operation in each loop," of Technical Specification (TS) 3.4.4, "RCS [Reactor Coolant System] Loops – MODES 1 and 2," for Arkansas Nuclear One, Unit 1 (ANO-1). In its application dated October 31, 2022, the licensee stated that the proposed change would make ANO-1 TS 3.4.4 consistent with NUREG-1430, "Standard Technical Specifications – Babcock and Wilcox Plants," Revision 5, Volume 1, "Specifications," dated September 2021 (ML21272A363).

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the licensee's LAR and determined that a regulatory audit would assist in the timely completion of the licensing review process. The audit was conducted in accordance with the audit plan dated January 27, 2023 (ML23020A936).

2.0 AUDIT DATES AND LOCATION

The regulatory audit was conducted via an internet portal established by the licensee from February 13, 2023, through August 2, 2023.

3.0 AUDIT ACTIVITIES

The purpose of the audit was for the NRC staff to examine the licensee's non-docketed information with the intent to gain a better understanding of the LAR, to verify information, and to identify information that may require docketing to support the basis of the NRC staff's licensing decision. The audit activities conducted by the NRC staff included a review of calculations, reports, and analyses supporting the licensee's LAR.

The licensee provided the following supporting calculations and evaluations for the NRC staff to review via the online reference portal:

- Calculation No. BAW-10103A-03, "24 Hour 2 RCP Limit 2nd Justification" (extract), Revision 3, (Proprietary)

- Calculation No. BAW-10103A-03, Appendix A, “Partial Loop-LOCA [Loss-of-Coolant Accident] Analysis, Revision 1, August 29, 1975
- Calculation No. CALC-ANO1-NE-20-00001, “Safety Analysis Ground Rules Flow Fraction Curves for Various Number of RCP Coastdowns,” Revision 0, figure E-1, “Flow Fraction for 4-Pump Coastdown, 2-Pump Operation, 1-Pump Coastdown and Locked Rotor Events” (Proprietary)
- Calculation No. CALC-22-E-0001-11EC 93070, “ANO RPS [Reactor Protection System] to Power Monitor Setpoint,” Revision 0, August 10, 2022
- B&W [Babcock and Wilcox] Document 32-1123487-0, “ANO NI [Nuclear Instrumentation]/RPS String Error Calculations,” March 16, 1981 (Proprietary)
- AREVA Document BAW Document 10179P-A-009, “Safety Criteria and Methodology for Acceptable Cycle Reload Analyses,” Revision 9, November 2017 (Proprietary)
- B&W Document 51-1153314-00, “ANO-1 Setpoint Methodology Document,” August 28, 1986

The NRC staff conducted an audit teleconference with the licensee on March 14, 2023. During the teleconference, the licensee responded to the NRC staff’s questions, clarified various elements of the supporting calculations and evaluations, and explained how the calculations supported the LAR.

4.0 RESULTS OF THE AUDIT

During the audit, the NRC staff did not make any regulatory decisions regarding the LAR under the NRC staff’s review. At the conclusion of the audit, the NRC staff informed the licensee that it would be issuing a request for additional information following the completion of its review of the audit portal information. The licensee subsequently elected to provide the supplemental letter dated June 29, 2023, which contained the additional information for docketing identified by the NRC staff during the audit. The NRC staff noted that the audit facilitated the NRC staff’s timely review of the request.

5.0 AUDIT PARTICIPANTS

NRC Participants from the Office of Nuclear Reactor Regulation

- Santosh Bhatt, Division of Safety Systems, Nuclear Systems Performance Branch
- Calvin Cheung, Division of Engineering and External Hazards, Instrumentation and Controls Branch
- Thomas Wengert, Division of Operating Reactor Licensing, Plant Licensing Branch IV

Licensee Participants

- Mark Reid, ANO Licensing
- Chris Walker, ANO Safety Analysis
- Bill Carter, Entergy Corporate Fuels, Core Design
- Matt Bindeman, ANO Safety Analysis

- Howard Mahan, Entergy Corporate Licensing
- Eve Clevenger, Supervisor, Entergy Corporate Safety Analysis
- Bob Baxter, Framatome
- Matt Dushaw, Framatome
- Jason St. Clair, Framatome

6.0 EXIT BRIEFING

On August 2, 2023, Thomas Wengert of the NRC informed Mark Reid of Entergy, via telephone, that the NRC staff did not need to review any additional calculations or evaluations and, accordingly, the audit was concluded.

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DATED AUGUST 3, 2023

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***by email**

NRR-106

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