



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

January 21, 2022

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 - AUDIT PLAN TO SUPPORT REVIEW
OF LICENSE AMENDMENT REQUEST FOR TECHNICAL SPECIFICATION
CHANGES DUE TO REVISED DOSE CALCULATIONS
(EPID L-2021-LLA-0181)

Dear Sir or Madam:

By letter dated September 30, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21274A874), as supplemented by letter dated December 2, 2021 (ADAMS Accession No. ML21337A245), Entergy Operations, Inc. (Entergy, the licensee) submitted a license amendment request (LAR) for Arkansas Nuclear One, Unit 1 (ANO-1), regarding proposed revisions to ANO-1 Dose Equivalent I-131 and the reactor coolant system (RCS) primary activity limits required by Technical Specification (TS) 3.4.12, "RCS Specific Activity." In addition, the licensee is proposing to revise the primary-to-secondary leak rate limit provided in TS 3.4.13, "RCS Operational Leakage." These proposed changes are due to non-conservative inputs used in the steam generator tube rupture accident, the main steam line break accident, and the control rod ejection accident dose calculations.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed Entergy's LAR and determined that a regulatory audit would assist in the timely completion of the review. The NRC staff will conduct a regulatory audit to support its review in accordance with the enclosed audit plan. A regulatory audit is a planned activity that includes the examination and evaluation of primarily non-docketed information.

The audit will be conducted to increase the NRC staff's understanding of the LAR and identify information that will require docketing to support the NRC staff's regulatory findings. The audit will be conducted from January 31, 2022, through March 11, 2022, through an online portal (also known as electronic portal, ePortal, or electronic reading room) established by Entergy. The enclosed audit plan was discussed with your staff on January 7, 2022.

If you have any questions, please contact me at (301) 415-4037 or by e-mail 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 Plan

cc: Listserv

REGULATORY AUDIT PLAN
TO SUPPORT REVIEW OF LICENSE AMENDMENT REQUEST
FOR TECHNICAL SPECIFICATION CHANGES
DUE TO REVISED DOSE CALCULATIONS
ENTERGY OPERATIONS, INC.
ARKANSAS NUCLEAR ONE, UNIT 1
DOCKET NO. 50-313

1.0 BACKGROUND

By letter dated September 30, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21274A874), as supplemented by letter dated December 2, 2021 (ADAMS Accession No. ML21337A245), Entergy Operations, Inc. (Entergy, the licensee) submitted a license amendment request (LAR) for Arkansas Nuclear One, Unit 1 (ANO-1), regarding proposed revisions to ANO-1 Dose Equivalent Iodine (I)-131 and the reactor coolant system (RCS) primary activity limits required by Technical Specification (TS) 3.4.12, "RCS Specific Activity." In addition, the licensee is proposing to revise the primary-to-secondary leak rate limit provided in TS 3.4.13, "RCS Operational Leakage." These proposed changes are due to non-conservative inputs used in the steam generator tube rupture (SGTR) accident, the main steam line break (MSLB) accident, and the control rod ejection (CRE) accident dose calculations.

The U.S. Nuclear Regulatory Commission (NRC) staff has determined the need for a regulatory audit to be conducted in accordance with the Office of Nuclear Reactor Regulation Office Instruction LIC-111, Revision 1, "Regulatory Audits" (ADAMS Accession No. ML19226A274), 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.

2.0 REGULATORY AUDIT BASIS

The NRC staff (i.e., audit team) will perform the audit to support its evaluation of whether the licensee's request meets the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36(c)(2), "Limiting conditions for operation," 10 CFR 50.36(c)(3), "Surveillance requirements," and continues to meet the dose limits in 10 CFR 50.67, "Accident source term."

3.0 REGULATORY AUDIT SCOPE AND METHODOLOGY

The audit team will review the licensee's analyses and calculations supporting the proposed TS changes. The audit team will use this review to determine if the licensee needs to submit any additional information contained in the analyses and calculations performed in support of the requested changes to support or develop conclusions for the NRC staff's safety evaluation.

4.0 INFORMATION AND OTHER MATERIAL NECESSARY FOR THE REGULATORY AUDIT

The NRC staff requests that the licensee have the following information readily available and accessible for the NRC staff's review via an internet-based portal:

- Calculation notebooks and documentation related to the thermal-hydraulic analyses for the following events: SGTR, MSLB, and CRE.
- Calculation notebooks and documentation related to computation of the flashing fraction.
- Calculation and documentation related to the computational fluid dynamics (CFD) analyses and the two-fluid multiphase model.
- Analysis demonstrating the credibility of the CFD analysis and the two-fluid multiphase model (e.g., any associated verification, validation, and uncertainty quantification analyses).

Based on the review of the above documents, the NRC staff will determine whether it needs to request any additional documents to be made available on the portal or whether additional information needs to be submitted on the docket for the staff to complete the review of the requested changes.

5.0 TEAM ASSIGNMENTS

The audit team will consist of the following NRC staff:

- Noushin Amini, Nuclear Engineer
- Robert Beaton, Nuclear Engineer
- Joshua Kaizer, Nuclear Engineer
- Thomas Wengert, Project Manager

6.0 LOGISTICS

The audit will be conducted from January 31, 2022, through March 11, 2022, through an online portal (also known as electronic portal, ePortal, or electronic reading room) established by Entergy.

If requested, the audit team will conduct a telephone conference with the licensee for the purposes of introducing the team, discussing the scope of the audit, and describing the information to be made available on the internet portal. The audit team will also confirm with the licensee if the information made available on the online portal contains any sensitive or proprietary information. The audit team expects to request that representatives of Entergy answer audit team questions during the audit related to information provided on the portal at a mutually agreeable day and time by telephone conference. An exit meeting/call will be held at the conclusion of the audit.

The NRC staff does not foresee the need for an onsite visit or in-person discussions between the NRC and licensee staff to discuss information to be provided on the portal at this time. However, if the need for a such a meeting is identified in the future, the audit plan will be

revised, and the schedule for the audit will be adjusted accordingly. The NRC project manager will coordinate any changes to the audit schedule and location with the licensee.

7.0 SPECIAL REQUESTS

The audit team would like access to the documents listed in Section 4.0 above through an online portal that allows the audit team to access documents via the internet. The following conditions associated with the online portal must be maintained throughout the duration that the audit team has access to the online portal:

- The online portal will be password-protected, and separate passwords will be assigned to the NRC staff and contractors who are participating in the audit.
- The online portal will be sufficiently secure to prevent the NRC staff and contractors from printing, saving, downloading, or collecting any information on the online portal.
- Conditions of use of the online portal will be displayed on the login screen and will require acknowledgement by each user.

Username and password information should be provided directly to the NRC staff and contractors. The NRC project manager will provide to Entergy the names and contact information of the NRC staff who will be participating in the audit. All other communications should be coordinated through the NRC project manager.

8.0 DELIVERABLES

An audit summary will be prepared within 60 days of the completion of the audit. If the NRC staff identifies information during the audit that is needed to support its regulatory decision, the NRC staff will issue requests for additional information to the licensee.

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 1 - AUDIT PLAN TO SUPPORT REVIEW OF LICENSE AMENDMENT REQUEST FOR TECHNICAL SPECIFICATION CHANGES DUE TO REVISED DOSE CALCULATIONS (EPID L-2021-LLA-0181) DATED JANUARY 21, 2022

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ADAMS Accession No. ML22019A134

***by e-mail**

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OFFICE	NRR/DSS/SFNB/BC*	NRR/DORL/LPL4/BC*	NRR/DORL/LPL4/PM*
NAME	RLukes	JDixon-Herrity	TWengert
DATE	1/20/2022	1/21/2022	1/21/2022

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