

**From:** Wengert, Thomas  
**Sent:** Monday, June 1, 2020 1:27 PM  
**To:** Keele Jr, Riley D  
**Cc:** BICE, DAVID B (ANO); Dixon-Herrity, Jennifer  
**Subject:** ANO-2 Final RAI RE: License Amendment Request Concerning Proposed Technical Specification Additions, Deletions, and Relocations (EPID L-2019-LLA-0284)  
**Attachments:** ANO-2 Final RAI - LAR for TS Additions-Deletions-Relocations.pdf

On May 15, 2020, the U.S. Nuclear Regulatory Commission (NRC) staff sent Entergy Operations, Inc. (Entergy) the draft Request for Additional Information (RAI) identified below. This RAI relates to the December 16, 2019, license amendment request (LAR) that proposed changes to several Arkansas Nuclear One, Unit 2 technical specification (TS) requirements by the addition, deletion, or relocation of certain TS Limiting Conditions for Operation (LCOs), Actions, and Surveillance Requirements (SRs).

Entergy subsequently informed the NRC staff that the information requested was understood and that no additional clarification of the RAI was necessary. A publicly available version of this final RAI (attached with "Draft" removed) will be placed in the NRC's Agencywide Documents Access and Management System (ADAMS). As agreed, please provide a response to this RAI within 30 days of this correspondence.

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**From:** Wengert, Thomas  
**Sent:** Friday, May 15, 2020 11:03 AM  
**To:** Keele Jr, Riley D  
**Cc:** BICE, DAVID B (ANO) ; Dixon-Herrity, Jennifer  
**Subject:** ANO-2 Draft RAI RE: License Amendment Request Concerning Proposed Technical Specification Additions, Deletions, and Relocations (EPID L-2019-LLA-0284)

By application dated December 16, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19350B324), Entergy Operations, Inc. (the licensee) submitted a license amendment request (LAR), proposing various revisions to the Arkansas Nuclear One, Unit 2 (ANO-2) technical specifications (TSs). The proposed changes would revise several TS requirements by the addition, deletion, or relocation of certain TS Limiting Conditions for Operation (LCOs), Actions, and Surveillance Requirements (SRs). Relocated TSs would be placed in the ANO-2 Technical Requirements Manual or the associated TS Bases.

The U.S. Nuclear Regulatory Commission (NRC) staff has determined that additional information, as described in the attached request for additional information (RAI), is required for the staff to complete its review of this application. This RAI is identified as draft at this time to confirm your understanding of the information that the NRC staff needs to complete the evaluation.

Please contact me if you would like to set up a conference call with the NRC staff to clarify this request for information. In addition, let's discuss the timing for your response to this request.

Tom Wengert  
Project Manager – Arkansas Nuclear One  
NRR/DORL/LPL4  
(301) 415-4037

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**From:** Wengert, Thomas

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REQUEST FOR ADDITIONAL INFORMATION  
LICENSE AMENDMENT REQUEST CONCERNING PROPOSED  
TECHNICAL SPECIFICATION DELETIONS, ADDITIONS, AND RELOCATIONS  
ENTERGY OPERATIONS, INC.  
ARKANSAS NUCLEAR ONE, UNIT 2  
DOCKET NO. 50-368

By application dated December 16, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19350B324), Entergy Operations, Inc. (the licensee) submitted a license amendment request (LAR), proposing various revisions to the Arkansas Nuclear One, Unit 2 (ANO-2) technical specifications (TSs). The proposed changes revise several TS requirements by the addition, deletion, or relocation of certain TS Limiting Conditions for Operation (LCOs), Actions, and Surveillance Requirements (SRs). Relocated TSs would be placed in the ANO-2 Technical Requirements Manual or the associated TS Bases. The Nuclear Regulatory Commission (NRC) staff has reviewed the application and determined that additional information is needed to complete the review, as indicated in the Request for Additional Information (RAI) below.

Regulatory Basis

General Design Criterion (GDC) 26, "Reactivity Control System Redundancy and Capability," of Appendix A of Title 10 of the *Code of Federal Regulations*, states:

Two independent reactivity control systems of different design principles shall be provided. One of the systems shall use control rods, preferably including a positive means for inserting the rods, and shall be capable of reliably controlling reactivity changes to assure that under conditions of normal operation, including anticipated operation occurrences, and with appropriate margin for malfunctions such as stuck rods, specified acceptable fuel design limits are not exceeded. The second reactivity control system shall be capable of reliably controlling the rate of reactivity changes resulting from planned, normal power changes (including xenon burnout) to assure acceptable fuel design limits are not exceeded. One of the systems shall be capable of holding the reactor core subcritical under cold conditions.

Background

The licensee proposed to delete TS Limiting Condition for Operation (LCO) 3.1.1.3, "Boron Dilution," and the associated ACTION statement and SRs in SR 4.1.1.3. The APPLICABILITY for LCO 3.1.1.3 is ALL MODES (i.e., Modes 1 through 6). The licensee stated that the deletion of the TS for Boron Dilution is justified because the minimum required reactor coolant flow for boron dilution can be assured under LCOs 3.4.1.1 (Modes 1 and 2), 3.4.1.2 (Mode 3), 3.4.1.3 (Modes 4 and 5), and 3.9.8.1 (Mode 6). The NRC staff reviewed these other TSs and determined that the following additional information is needed in order to complete its safety review of this proposed change.

**RAI-SNSB-1: ACTION for Boron Dilution Under LCO 3.1.1.3**

Provide a justification for the proposed deletion of TS 3.1.1.3, when the other ACTIONS cited above, assuring the minimum required reactor coolant flow for boron dilution (e.g., LCO 3.4.1.1 in Modes 1 and 2), become controlling and replace the required ACTION for LCO 3.1.1.3. Specifically, the ACTION statement for TS LCO 3.4.1.1 does not include the word “immediately,” while the ACTION statement for LCO 3.1.1.3 currently does. Please justify this difference.

**RAI-SNSB-2: SRs 4.4.1.1, 4.4.1.2, and 4.4.1.3 for Boron Dilution**

Provide a justification for the proposed deletion of TS 3.1.1.3, when SR 4.4.1.1, SR 4.4.1.2, and SR 4.4.1.3, cited above, become controlling. Specifically, the current SR for LCO 3.1.1.3 (i.e., SR 4.1.1.3) states:

The flow rate of reactor coolant through the reactor coolant system shall be determined to be [greater than or equal to 2000 gallons per minute] within one hour prior to the start of and in accordance with the Surveillance Frequency Control Program during a reduction in the Reactor Coolant System boron concentration **once per hour**. [bold emphasis added]

However, current SRs 4.4.1.1, 4.4.1.2, and 4.4.1.3 do not include this same surveillance frequency of once per hour. Please justify this difference.