

## **NRR-PMDAPEm Resource**

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**From:** Kalyanam, Kaly  
**Sent:** Monday, October 28, 2013 11:18 AM  
**To:** BICE, DAVID B (ANO) (DBICE@entergy.com)  
**Subject:** RAI related to the LAR on adoption of TSTF-431, Revision 3, "Change in TS End States (BAW-2441)" (TAC No. MF1182)

To: Dave Bice

Subject: ARKANSAS NUCLEAR ONE, UNIT 1 - RAI related to the adoption of TSTF-431, Revision 3, "Change in Technical Specifications End States (BAW-2441)" (TAC No. MF1182)

By letter dated March 26, 2013 (ADAMS Accession No. ML13085A282), Entergy Operations, Inc. (Entergy, the Licensee) submitted a License Amendment Request (LAR) proposing changes to the Technical Specifications (TS) for Arkansas Nuclear One, Unit 1, facility.

The proposed amendment would modify the TS requirements for end states associated with the implementation of the approved Topical Report BAW-2441-A, Revision 2, "Risk-Informed Justification for LCO End-State Changes." TS Actions End States modifications would permit, for some systems, entry into a hot shutdown (Mode 4) end state rather than a cold shutdown (Mode 5) end state that is the current TS requirement.

The US Nuclear Regulatory Commission staff has reviewed the submittal and identified the need for additional information to complete its review of the LAR. A response to this RAI within 30 days from the receipt of this correspondence is requested. If this schedule cannot be met, please advise us as soon as possible, which would enable the staff to adequately plan the resources.

The staff RAI is as below:

### REQUEST FOR ADDITIONAL INFORMATION

#### ARKANSAS NUCLEAR ONE, UNIT 1

#### ENTERGY OPERATIONS, INC

#### ADOPTION OF TSTF-431, REVISION 3,

#### "CHANGE IN TECHNICAL SPECIFICATIONS END STATES (BAW-2441)"

By letter dated March 26, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13085A282), Entergy Operations, Inc. (Entergy) (The Licensee) submitted an LAR which proposed changes to the TS for Arkansas Nuclear One, Unit 1. According to the licensee, the proposed amendment would modify the TS requirements for end states associated with the implementation of the approved Topical Report BAW-2441-A, Revision 2, "Risk-Informed Justification

for LCO End-State Changes,” as well as Required Actions revised by a specific Note in TSTF-431, Revision 3, “Change in Technical Specifications End States (BAW-2441).”

#### Discussion:

The licensee’s application proposes changes to end-states associated with several of its TS Limiting Conditions for Operation (LCOs) as listed in the application. During review of the application, the Staff noticed a concern regarding changes to four of the specific LCOs as below:

- LCO 3.8.1, “AC Sources–Operating,” (REQUIRED ACTION F.2),
- LCO 3.8.4, “DC Sources – Operating,” (REQUIRED ACTION B.2),
- LCO 3.8.7, “Inverters–Operating,” (REQUIRED ACTION B.2), and
- LCO 3.8.9, “Distribution Systems – Operating,” (REQUIRED ACTION D.2),

For these LCOs, if the required actions and associated completion times cannot be met, ANO’s current TSs prescribe Mode 3 within 12 hours AND Mode 5 within 36 hours. The licensee’s proposed change would modify the end-state change from Mode 5 within 36 hours to Mode 4 within 12 hours. The licensee does not propose any change to MODE 3’s Completion Time requirement.

The staff is concerned that upon implementation of the proposed end state changes in these LCO Conditions, when the plant enters in that Condition, plant operations will be placed in Mode 3 AND Mode 4 within 12 hours per the revised REQUIRED ACTION B.2, F.2 or D.2. Since there is no change in the MODE 3’s Completion Time of 12 hours, both (3 and 4) Modes change action would have to be completed within the same 12 hour Completion Time clock, which seems to be unusual. In addition, it may create confusion for operators and inspectors. For instance, if the licensee takes most of the 12 hours to transition the plant into Mode 3, there may be insufficient time remaining in the REQUIRED ACTION Completion Time to complete the transition to Mode 4.

Standard Technical Specifications (STS, NUREG-1432 Revision 4), for these LCO Conditions, typically specify a Completion Time of 6 hours for Mode 3 and 12 hours for Mode 4 change.

#### Request For Additional Information:

The Staff requests the licensee to provide technical basis for having simultaneous Completion Times for Modes 3 and 4. As mentioned above, the STS allow upto 18 hours for such Modes change in an orderly fashion.

#### Regulatory Basis:

The regulations under 10 CFR 50.36 (c)(2)(i) state that Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility (emphasis added). When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met. The licensee’s proposed remedial action Completion Time provides a potentially confusing expectation on operators, and needs clarification or modification.

Rev.: Ravi Grover

**Hearing Identifier:** NRR\_PMDA  
**Email Number:** 889

**Mail Envelope Properties** (Kaly.Kalyanam@nrc.gov20131028111800)

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