



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

August 29, 2012

Vice President, Operations
Arkansas Nuclear One
Entergy Operations, Inc.
1448 S.R. 333
Russellville, AR 72802

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 1 – LICENSE AMENDMENT REQUEST
REGARDING NEW TECHNICAL SPECIFICATION GOVERNING EMERGENCY
SWITCHGEAR ROOM CHILLER TRAINS (TAC NO. ME8579)

Dear Sir or Madam:

By letter dated May 9, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12131A405), Entergy Operations, Inc. (Entergy, the licensee), submitted a license amendment request (LAR) for Arkansas Nuclear One, Unit 1 (ANO-1). The proposed amendment request would establish a new Technical Specification (TS) 3.7.16, "Class IE Electrical Equipment Air-Conditioning System (EEACS)," to the ANO-1 TSs. The new TS 3.7.16 would include the Limiting Condition for Operation (LCO) statement, Applicability during which the LCO must be met, Actions (with Conditions, Required Actions, and Completion Times) to be applied when the LCO is not met, and Surveillance Requirements to periodically demonstrate that the LCO is met for the Class IE EEACS trains at ANO-1.

The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this amendment request. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), an amendment to the license (including the technical specifications) must fully describe the changes requested, and following as far as applicable, the form prescribed for original applications.

The NRC staff has reviewed your application and concluded that it did not provide technical information in sufficient detail to enable the NRC staff to complete its detailed review and make an independent assessment regarding the acceptability of the proposed amendment in terms of regulatory requirements and the protection of public health and safety and the environment.

This informational need was conveyed to you by a phone call on August 15, 2012.

The NRC staff concludes that the LAR does not provide sufficient and complete information for determining appropriate completion times and action statements for introducing new TS governing ANO-1 emergency switchgear room chiller trains, as explained in detail below:

1. The existing TS requirements for Electrical Equipment in TS 3.8.4, "DC [Direct Current] Sources – Operating," TS 3.8.7, "Inverters – Operating," and TS 3.8.9, "Distribution Systems – Operating," provide appropriate Required Actions and Completion Times (CTs) for conditions when certain electrical equipment is inoperable. The CTs in the proposed (new) TS 3.7.16, "Class IE Electrical Equipment Air-Conditioning System (EEACS)," in some cases, would be 21 times (7 days compared to 8 hours for TS 3.8.4 Condition A) as long as those in section TSs 3.8.4, 3.8.7 and 3.8.9. The LAR lacks sufficient justification for the large increase in CTs necessary for staff review.
2. The description of the proposed change contains an apparent contradiction. In the Energy letter dated May 9, 2012, the proposed change is described as being more restrictive. The NRC concludes, however, that the proposed change is less restrictive because it allows more time for equipment to be in a condition that does not meet the Limiting Condition of Operation (LCO) than the current requirements. The application does not explain this apparent contradiction.
3. The "background" section of the LAR, states, in part, that:

With one EEACS [Electrical Equipment Air-Conditioning System] train inoperable, procedures contain guidance for establishing passive measures (associated with opening doors separating electrical equipment areas and reducing non-essential heat loads) to verify unnecessary equipment is de-energized post-accident should an event occur. The compensatory measure having the most restrictive time for completion post-accident is within 2 hours following accident initiation, providing Operators sufficient opportunity to complete these tasks.

[C]alculations have also been completed that conclude the required electrical equipment would remain below qualified temperature limits with no operable EEACS, provided the outside air temperature is at or below 80 °F [degrees Fahrenheit] or 90 °F, for a pre-accident condition of red train and green train EEACS inoperability, respectively. ... These calculations rely, in part, on passive compensatory measures associated with opening doors and verifying unnecessary equipment is de-energized. The most restrictive time for establishing any of these measures is within 2 hours post-accident, again affording Operators sufficient opportunity to complete the necessary actions.

These paragraphs appear to describe operator actions as part of passive measures that can be credited to justify the proposed CT. The application lacks sufficient information regarding whether or not these actions have been reviewed and approved by the NRC staff previously.

Additionally, based on the above statement in the application, it appears that the TS, as written, may not be conservative when ambient temperatures are above 80 °F or 90 °F. Historical review of ambient temperatures at ANO-1 during the summer months shows them to be much higher than 80°F for extended periods of time. The application lacks sufficient discussion regarding the limited applicability of the calculations that conclude equipment will remain below the qualified temperature limits.

4. Compensatory measures are not generally acceptable to maintain system operability for coping with an event. The automatic functions and redundancy in system design (e.g., capacity, capability, etc.) should provide the confidence that plant safety will be maintained during postulated events. The application lacks sufficient information to justify reliance on compensatory measures.
5. Attachment 3 of the application contains TS Bases pages which state that the EEACS trains satisfy Criterion 3 of 10 CFR 50.36(c)(2)(ii). The application itself contains no apparent discussion or justification supporting this statement.

Because of the extensive nature of the information needed, the NRC staff concludes that the request for approval of the proposed action is unacceptable for NRC review pursuant to 10 CFR 2.101. Additionally, other aspects of the requested licensing action may also be insufficient but were not reviewed or identified due to the significance of the aforementioned information insufficiency. NRC staff activities on the review have ceased and the associated Technical Assignment Control number has been closed.

If you have any questions, please contact me at (301) 415-1480 or by e-mail at kaly.kalyanam@nrc.gov.

Sincerely,



N. Kaly Kalyanam, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-313

Enclosure:
As stated

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Sincerely,
/RA/
N. Kaly Kalyanam, Project Manager
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Division of Operating Reactor Licensing
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