

From: Kalyanam, Kaly
Sent: Wednesday, November 17, 2010 11:03 AM
To: CLARK, ROBERT W; BICE, DAVID B
Cc: Lent, Susan; Burkhardt, Janet
Subject: RAI on ANO-2 LAR dated June 17, 2010 (TAC No. ME4090)

Licensee: Entergy Operations, Inc.
Plant: Arkansas Nuclear One, Unit 2
Docket No.: 50-368
Subject: Request for Additional Information on License Amendment Request dated June 17, 2010, Technical Specification Change to Extend the Type A Test Frequency to 15 years
TAC Nos.: ME4090
SUNSI Review Done: Yes. Publicly Available, Normal Release, Non-sensitive,
From: N. Kalyanam
To: Dave Bice/Robert Clark

Dave/Bob,

By letter dated June 17, 2010 (ADAMS Accession No. ML101680380), Entergy Operations, Inc. (Entergy) submitted to NRC for approval a License Amendment Request regarding Technical Specification Change to Extend the Type A Test Frequency to 15 Years.

The TAC No. for this request is ME4090.

The NRC Staff has reviewed the and determined that we require additional information to complete our review. A request for additional information appears below.

The staff requests you to provide a response to the RAI within 60 days from the date of this email. Please let me know if this date cannot be met.

Thanks

Kaly

REQUEST FOR ADDITIONAL INFORMATION
OFFICE OF NUCLEAR REACTOR REGULATION
LICENSE AMENDMENT REQUEST FOR A PERMANENT EXTENSION
TO THE INTEGRATED LEAK RATE TEST INTERVAL

ARKANSAS NUCLEAR ONE, UNIT 2

DOCKET NO. 50-368

TAC NO. ME4090

The Nuclear Regulatory Commission (NRC) staff is reviewing the Arkansas Nuclear One, Unit 2 (ANO-2 or the licensee) license amendment request (LAR) application dated June 17, 2010. The NRC staff has determined that the additional information requested below is needed to complete its review.

- 1.1 Since degradation of bellows is a source for potential leakage, the staff requests the licensee to please identify any bellows used on penetrations through containment pressure retaining boundaries, and if present, provide information on their location, inspection, testing and operating experience with regard to detection of leakage.
- 1.2 The staff notes that the licensee's stated intent, as indicated throughout the LAR (see sections 1.0, 2.0 and 4.0), is to implement a containment leakage rate testing program in accordance with the guidelines contained in NEI 94-01, Revision 2-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," dated October 2008.

However, in page 5 of the LAR, the licensee states the following:

The proposed change replaces the reference to RG 1.163 with a reference to NEI 94-01; however, the proposed TS change is worded to indicate that the Appendix J Testing Program must be in accordance with NRC-reviewed and accepted guidelines (i.e., NEI 94-01), with the specific version of those guidelines specified in the Appendix J Testing Program Plan. These proposed TS changes are consistent with the regulatory requirement to include the implementation document used to develop the performance-based leakage testing program, by general reference, in the plant TS, and assures that only NRC-reviewed and accepted guidance is used to develop the program. In addition, these changes will allow the use of later NRC-accepted versions of NEI 94-01 without the unnecessary burden of processing a license amendment.

The above is not consistent with the intent of the LAR nor does it reflect that any changes to the containment Type A testing program that are not in accordance with the guidance provided with NEI-94-01, Rev 2-A would require NRC approval before implementation.. The staff requests that the licensee revise or clarify the statement made in page 5 of the LAR.

- 2.1 In order for the NRC staff to assess the proper and effective implementation of the Type B and Type C local leak rate testing program, the licensee is requested to provide:

- (a) A table of all containment pressure boundary components at ANO-2 that are subject to the Type B and Type C testing, under the Containment Leakage Rate Testing Program, with the current test frequency and the approximate dates (or refueling outage) of the last test and the next scheduled test.
 - (b) Provide a summary of performance results for Type B and Type C testing that would support the maximum and minimum Pathway Leakage values detailed in section 4.2 of the LAR.
 - (c) A summary table of LLRT results of those containment penetrations (including their test schedule intervals) that have not demonstrated acceptable performance history in accordance with the Containment Leakage Rate Program and a discussion of the causes and corrective actions taken.
 - (d) Discuss how these interval was implemented in the current 10 CFR Appendix J Testing Program Plan using Regulatory Guide (RG) 1.163 (September 1995) as the implementing document. In addition, discuss how these interval will be implemented using NEI 94-01, Revision 2-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," as the implementing document.
 - (e) A discussion of whether there have been any refueling outages since the last Type A test in which the combined leakage from Type B and Type C tests did not meet the acceptance criteria. Provide a discussion of the results, cause(s), and corrective actions taken.
- 2.2 Please provide a summarized Table containing the previous ANO-2 ILRT Type A tests data, including the completion dates of the last two tests, actual as-found results data as well as the allowable T.S acceptance criterion values for those tests that confirm that the containment structure leakage is acceptable.
- 2.3 In regards to the ANO-2 Containment Inservice Inspection Plan (CISI), an extension to a 15-year ILRT interval would span at least four ISI inspection periods. Please provide a schedule, with approximate dates (or refueling outage) of the next general visual examinations to be performed in order to satisfy the requirements of NEI 94-01 Rev. 2-A, section 9.2.3.2.
- 2.4 Consistent with NRC Information Notice 2004-09, "*Corrosion of Steel Containment and Containment Liner*," discuss the operating experience and evaluation results, if any, of the potential for, or presence of corrosive conditions at the junction of the metal liner and interior concrete floor, including the potential for stagnant water behind a degraded floor seal area that may promote pitting corrosion.
- 2.5 In response to Condition 4 in Section 4.1 of the NRC SE for topical report NEI 94-01, Revision 2-A, the ANO-2 response in Item 4 of the Table on page 5 of 14

of the LAR states that, *“The design change process will address any testing requirements for this potential and any future containment structure modifications.”*

- (a) Describe how the above statement addresses the requirements of Condition 4 of Section 4.1 and as discussed in Section 3.1.4 of the NRC safety evaluation for NEI 94-01, Revision 2-A, with regard to major and minor containment repairs and modifications.
- (b) Address why it is appropriate to make reference to a “design change process,” which is not subject to NRC review, in an application for a licensing action.
- (c) Clarify whether the repair/replacement program, which includes associated post modification testing for the NMP2 containment structure, is performed as part of the CISI program in accordance with 10 CFR 50.55a(g)(4) or as part of the “station design change process.”

3.1 The discussion of PRA quality relies on a Peer Review of the ANO2 Probabilistic Risk Analysis (PRA). For the ANO2 PRA model used to support the application, please

- (a) Provide a list of findings from the ANO2 PRA peer review relevant to this submittal
- (b) Explain how these items were addressed for this application.

E-mail Properties

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