

NRR-PMDAPEm Resource

From: Koenick, Stephen
Sent: Friday, May 20, 2016 2:24 PM
To: BURMEISTER, BARRY M
Cc: HUFFSTATLER, KRISTI Y; SICARD, PAUL A; ONeal, Daniel; Kim, James; Khanna, Meena; Biro, Mihaela
Subject: Request for Additional Information - RBS LAR to Extend Type A and Type C Test Frequencies (NEI 94-01, Rev. 3-A) and Drywell Bypass Test frequency - TAC No. MF7037
Attachments: MF7037 - draf RAI - APLA.docx

Dear Mr. Burmeister,

Thank you for your response to my email dated Wednesday, May 11, 2016. This email represents the formal issuance of the request for additional information (attached and unchanged from the May 11, 2016 email) related to the Entergy license amendment request (LAR) to extend the Type A and Type C Test frequencies by implementing NEI 94-01, Rev 3-A. The LAR also extends the Drywell Test frequency. I acknowledge in your email, you request a call to discuss the expected scope of the responses. This call will be conducted following NRR Office Instruction COM-203, "Informal Interfacing and Exchange of Information with Licensees and Applicants." Consistent with this office instruction, if the call becomes more technical in nature, then the call will be postponed and noticed as a public teleconference.

Furthermore, I note that in your response, Entergy has committed to respond to this request in 60 days of this email.

Please let me know if you have any questions.

Regards

Stephen S. Koenick

Senior Project Manager
Plant Licensing Branch IV-2 (LPL4-2)
Division of Operating Reactor Licensing (DORL)
Office of Nuclear Reactor Regulation (NRR)
US Nuclear Regulatory Commission
(301) 415-6631
Stephen.Koenick@nrc.gov

From: BURMEISTER, BARRY M [<mailto:BBURMEI@entergy.com>]
Sent: Tuesday, May 17, 2016 2:02 PM
To: Koenick, Stephen <Stephen.Koenick@nrc.gov>
Cc: HUFFSTATLER, KRISTI Y <KHUFFST@entergy.com>; SICARD, PAUL A <PSICARD@entergy.com>
Subject: [External_Sender] RE: DRAFT Request for Additional Information - RBS LAR to Extend Type A and Type C Test Frequencies (NEI 94-01, Rev. 3-A) - TAC No. MF7037

[Stephen](#)

We believe we understand the draft questions sufficiently to accept an official RAI. We request a 60 day response based upon the scope along with current plant and personnel commitments.

I will be out of town May 18 – 24. Please issue the RAI through Kristi Huffstatler, Acting Regulatory Assurance Manager.

As discussed a call discussing the expected scope of an RAI response can be scheduled for Wednesday after noon central (1 pm eastern) and again afternoon on Thursday May 25 – 26.

For additional information please call Kristi Huffstatler at (225) 378-3305.

From: Koenick, Stephen [<mailto:Stephen.Koenick@nrc.gov>]

Sent: Wednesday, May 11, 2016 3:06 PM

To: BURMEISTER, BARRY M

Subject: DRAFT Request for Additional Information - RBS LAR to Extend Type A and Type C Test Frequencies (NEI 94-01, Rev. 3-A) - TAC No. MF7037

Mr. Burmeister,

By application dated October 29, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15307A293), Entergy Operations, Inc. (Entergy, the licensee), submitted a license amendment request (LAR) for River Bend Station, Unit 1 (RBS). The LAR would revise Technical Specification (TS) 5.5.13, "Primary Containment Leakage Rate Testing Program," to incorporate Nuclear Energy Institute (NEI) topical report 94-01, Revision 3-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," which would allow for the extension of the Type A Test (Integrated Leak Rate Test) and Type C Test (Local Leak Rate Test) frequencies from 10 to 15 years and 60 to 75 months, respectively. Surveillance Requirement (SR) 3.6.5.1.3, would also be revised to extend the maximum interval for performing the Drywell Bypass Test from 10 to 15 years in order to synchronize with the proposed extended Type A Test frequency provided for in NEI 94-01, Revision 3-A.

In the course of its review, the U.S. Nuclear Regulatory Commission (NRC) staff has determined that additional information is required in order to complete its evaluation. A draft request for additional information (RAI) is attached to this email. This second set of RAI is related to the risk assessment submitted in support of the LAR. The NRC staff is available to have a clarification call regarding this RAI, as necessary. Please let me know if Entergy would like to have a clarification call and I can set something up. If you have any questions, I can be reached by phone or email.

Sincerely,

Stephen S. Koenick

Senior Project Manager

Plant Licensing Branch IV-2 (LPL4-2)

Division of Operating Reactor Licensing (DORL)

Office of Nuclear Reactor Regulation (NRR)

US Nuclear Regulatory Commission

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Subject: Request for Additional Information - RBS LAR to Extend Type A and Type C Test Frequencies (NEI 94-01, Rev. 3-A) and Drywell Bypass Test frequency - TAC No. MF7037
Sent Date: 5/20/2016 2:23:55 PM
Received Date: 5/20/2016 2:23:00 PM
From: Koenick, Stephen

Created By: Stephen.Koenick@nrc.gov

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Tracking Status: None
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Tracking Status: None

Post Office:

Files	Size	Date & Time
MESSAGE	4604	5/20/2016 2:23:00 PM
MF7037 - draf RAI - APLA.docx		32616

Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST TO INCORPORATE NEI 94-01 REVISION 3-A INTO THE
TECHNICAL SPECIFICATIONS TO ALLOW FOR THE EXTENSION OF TYPE A AND TYPE C
TESTING AND TO EXTEND THE FREQUENCY OF DRYWELL BYPASS TESTING

ENTERGY OPERATIONS, INC.

RIVER BEND STATION, UNIT 1

DOCKET NO. 50-458

By application dated October 29, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15307A293), Entergy Operations, Inc. (Entergy, the licensee), submitted a license amendment request (LAR) for River Bend Station, Unit 1 (RBS). The LAR would revise Technical Specification (TS) 5.5.13, "Primary Containment Leakage Rate Testing Program," to incorporate Nuclear Energy Institute (NEI) topical report 94-01, Revision 3-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," which would allow for the extension of the Type A Test (Integrated Leak Rate Test, or ILRT) and Type C Test (Local Leak Rate Test) frequencies from 10 to 15 years and 60 to 75 months, respectively. Surveillance Requirement (SR) 3.6.5.1.3, would also be revised to extend the maximum interval for performing the Drywell Bypass Test (DWBT) from 10 to 15 years in order to remain consistent with the proposed extended Type A Test frequency provided for in NEI 94-01 Revision 3-A.

The U.S. Nuclear Regulatory Commission (NRC) staff has determined that additional information is required in order to complete its review of the LAR. This set of questions relates to the first and second proposed changes to extend the Type A ILRT and the DWBT as they are supported by risk information. The specific questions relate to the NRC Safety Evaluation Limitations and Conditions for EPRI Report No. 1009325, Revision 2¹ and for Regulatory Guide 1.174².

APLA RAI-1

1. The LAR Attachment 3, Section 5.7 provides the evaluation of contributors from hazard groups other than the internally initiated events modeled in the probabilistic risk assessment (PRA). Table 5.7-1 shows the evaluation of an "external events multiplier." As shown in Table 5.7-2 the large early release frequency (LERF) increase due to

¹ U.S. Nuclear Regulatory Commission, Final Safety Evaluation for Nuclear Energy Institute (NEI) Topical Report (TR) 94-01, Revision 2, "Industry Guideline for Implementing Performance-Based Option Of 10 CFR Part 50, Appendix 3" and Electric Power Research Institute (EPRI) Report No. 1009325, Revision 2, August 2007, "Risk Impact Assessment Of Extended Integrated Leak Rate Testing Intervals" (TAC No. MC9663), Accession Number ML081140105, June 25, 2008.

² U.S. Nuclear Regulatory Commission, An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis, Regulatory Guide 1.174, Revision 2, May 2011.

Enclosure

external events is derived from the LERF increase due to internal events times the external events multiplier.

- a. For seismic events, the seismic risk analysis should consider the River Bend Mark III containment performance during a seismic event with potentially pre-existing flaws. A pre-existing flaw classified in Class_3a may grow due to the seismic event and may not remain a Class_3a flaw type for some seismic initiators. The external events multiplier method assumes that the initiating event has no impact on the flaw size, whereas a flaw may have growth potential due to seismic initiating event stresses prior to core damage occurring.

Provide an updated seismic risk contribution due to the ILRT frequency extension, accounting for the River Bend Mark III containment performance with potentially pre-existing flaws, given a seismic initiating event, and describe your method. Include in the discussion your technical justification for the method and results. Alternatively, perform an appropriate sensitivity study to determine the risk significance of Class_3a flaws for the application due to seismic events.

- b. The LAR notes that the RBS seismic CDF used for the ILRT extension is one order of magnitude smaller than an NRC-estimated seismic CDF. Determine whether, when using the NRC estimated seismic CDF, the risk acceptance criteria for the ILRT frequency extension can be met, otherwise provide the technical justification for reducing the seismic risk one order of magnitude.

APLA RAI-2

2. The LAR Table 5.3-2 contains the following note:

“(3) The DWBT leakage cases of 10x and 100x with unit coolers unavailable are assumed to lead to an increased frequency of Class 7 (non-LERF).”

Provide justification for not increasing the Class 7 frequency of LERF also, or update the Class 7 frequency and the risk results for the application.

APLA RAI-3

3. In the LAR Figure 4.1-1 the highest leakage from the drywell boundary is assumed to be 100DWL_b, consistent with the limitations and conditions noted in the NRC safety evaluation report dated June 25, 2008 (ADAMS Accession No. ML081140105) for NEI 94-01, Revision 2, and EPRI TR-1009325, Revision 2. This represents an increase from 35DWL_b, the highest drywell leakage assumed for the one-time DWBT extension license amendment request dated February 16, 2004. The NRC staff safety evaluation for the one-time drywell bypass test extension (ADAMS Accession number ML043200567) stated that for events in which containment unit coolers operate, drywell leakage was assumed to have no impact on the containment's existing leakage category, since the containment coolers would condense any steam that bypasses the suppression pool. Address how the increase in drywell leakage rate from 35DWL_b to 100DWL_b impacts the assumed containment leakage categories and include updated risk assessment if necessary.

APLA RAI-4

4. The LAR Section 5.7 of Attachment 3 to the LAR discusses external events designated as “other” such as external floods and transportation and nearby facility accidents. The LAR references the results from the Individual Plant Examination of External Events (IPEEE) which concluded that no undue risks are present that might contribute to CDF with predicted frequency in excess of $1E-6$ /yr. However, since the IPEEE is outdated, assess these external events for the current plant, and discuss your assessment for the ILRT extension application.

APLA RAI-5

5. If the evaluations or updates in RAIs 1 through 4 resulted in changes to the LAR results, provide the updated cumulative risk results for the application.

APLA RAI-6

6. Appendix A to Attachment 3 to the LAR discusses the peer review of the internal events PRA.
 - a. Confirm that the 2011 peer review was a full scope peer review.
 - b. The LAR Section A.2.4 states that the peer review team generated 59 findings. However, only 29 findings are provided the LAR. Please provide the remaining findings (or observations) other than suggestions, following the same tabular format as in Appendix A to Attachment 3 to the LAR.