NRR-PMDAPEm Resource

From: Poole, Justin
Sent: Monday, August 01, 2016 10:08 AM
To: Browne, Kenneth
Subject: DRAFT RAIs on ILRT (Mechanical and Civil Branch)
Attachments: DRAFT RAIs from EMCB re Seabrook ILRT Extension (MF7565).docx

Ken,

By letter dated March 31, 2016, as supplemented by letter dated May 31, 2016 (ADAMS Accession Numbers ML16068A128 and ML16159A194), NextEra Energy Seabrook, LLC (NextEra), submitted a license amendment request to revise Technical Specification 6.15, Containment Leakage Rate Testing Program. In reviewing NextEra's request, the NRC staff has developed the attached DRAFT request for additional information (RAI). Please review to ensure that the RAI questions are understandable, the regulatory basis is clear, there is no proprietary information contained in the RAI, and to determine if the information was previously docketed. If further clarification is needed, and you would like to discuss the questions in a conference call, let us know. This email does not convey a formal NRC staff position, and it does not formally request for additional information.

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From: Poole, Justin

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Recipients:
"Browne, Kenneth" <Kenneth.J.Browne@nexteraenergy.com>
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REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST

REVISION OF TS 6.15 FOR ADOPTION OF NEI 94-01, REVISION 3-A

NEXTERA ENERGY SEABROOK, LLC,

SEABROOK STATION, UNIT 1

DOCKET NO. 50-443

Mechanical and Civil Engineering Branch (EMCB)

EMCB RAI-1

In letter dated March 31, 2016 (Reference 1), Section 3.2.1 notes that Seabrook has no areas subject to American Society of Mechanical Engineers Boiler and Pressure Vessel (ASME) Code Section XI, Subsection IWE augmented examinations. Section 3.2.1.1 of Reference 1 notes that multiple indications on the containment liner were accepted via Engineering Evaluation during the last examination and require successive inspection per IWE-2420. ASME Code Section XI, Subsection IWE, Paragraph IWE-2420(b) states in part that when a component is acceptable based on engineering evaluation the area "… shall be reexamined during the next inspection period … in accordance with Table IWE-2500-1, Examination Category E-C [Containment Surfaces Requiring Augmented Examination]."

Please explain how areas can be identified for successive inspections per IWE-2420 yet the program can include a statement saying no areas are subject to augmented examinations.

EMCB RAI-2

Section 3.2.1.1 of Reference 1 summarizes recent inspections and corrective actions related to the containment liner to concrete floor moisture barrier. In the fall of 2015 degradation was identified of the moisture barrier and the liner near the moisture barrier. The degradation compromised the design function of the moisture barrier to seal the joint between the metal containment liner and the concrete floor slab. The licensee repaired the degraded moisture barrier and took UT measurements of the accessible areas of the metal liner. All UT measurements were above the nominal wall thickness and the liner was recoated. These corrective actions adequately addressed identified degradation of the accessible portions of the liner and the moisture barrier; however, if the moisture barrier was degraded, and the accessible portion of the liner was degraded, it is likely liner degradation exits below the moisture barrier.

10 CFR 50.55a(b)(2)(ix)(A) requires that the acceptability of inaccessible areas be evaluated when conditions exist in accessible areas that could indicate the presence of or result in degradation to such inaccessible areas. It is unclear to the staff if this evaluation was completed and how possible degradation of the inaccessible portions of the liner below the moisture barrier was addressed.

Please explain what was done to meet the requirements of 50.55a(b)(2)(ix)(A) and to demonstrate the acceptability of the inaccessible portions of the containment liner below the moisture barrier or explain why no additional actions were necessary.

EMCB RAI-3

In Section 3.2.3 of Reference 1, the licensee summarized actions taken during the fall 2015 outage in response to NRC Information Notice (IN) 2014-07 related to inspections of leak-chase channel systems. The section includes a summary of the inspections conducted and the assumptions made in order to determine that the identified degradation was acceptable. It also includes an assumed corrosion rate of 0.0025 inches / year as well as an acceptable liner thickness of 1/8 inch. It is unclear to the staff how the information provided led to the conclusion that the existing degradation was acceptable, and it is unclear how this issue will be addressed in the future. Please provide the additional information discussed below:

1. A tabular summary of the status of inspections conducted or planned for all 59 leak chase test connections. This should include how much of the connection was inspected in 2015 (i.e., outer cover, removed outer cover but inner plug stuck, video probe of riser to elbow, video probe of riser to leak chases, etc.) and summary of the results of the inspection. Connections that were not inspected should include a brief explanation of why they were not inspected along with any plans to inspect the connections in the future.

2. A technical justification for the assumed corrosion rate of 0.0025 inches / year, including a discussion of the applicability of that assumed rate to the leak chase channels.

3. The structural evaluation was only mentioned very briefly. Provide additional information on the evaluation including the purpose of the original evaluation, the assumptions and limitations of the evaluation, and the applicability of the 1/8 inch limit (i.e., does the limit only apply to localized areas, or does it only apply to the portion of the liner in the floor).

4. An explanation of how leak-chases will be inspected in the future under the ASME Section XI, Subsection IWE Program. This should include a discussion of whether or not the leak-chases will be inspected during each period and if the leak-chases that have been inspected to date will be subject to successive inspections per IWE-2420. Include a description of the acceptance criteria that will be used for leak-chases.

EMCB RAI-4

Sections 3.2.1.2 of Reference 1 provides a high-level summary of the ASME Code, Section XI, Subsection IWL inspection results for 2010 and notes that 84 suspect areas were identified that required engineering evaluation. Reference 1 also notes that walkdown assessments conducted under the Structures Monitoring Program identified four isolated locations of patterned cracking indicative of ASR on the containment. It is unclear if the ASR indications were identified within the 84 suspect areas noted during the 2010 IWL examinations. In order for the NRC staff to assess the proper and effective implementation of the ASME Section XI, Subsection IWL containment inspection program, please provide the following information:

1. Explain whether or not the ASME Section XI, Subsection IWL examination in 2010 noted the indications of ASR.

2. If the ASME Section XI, Subsection IWL program did not identify the degradation, explain why not and what steps will be taken to ensure ASR indications on the containment will be identified and addressed in the future.

EMCB RAI-5

The letter dated May 31, 2016 (Reference 2), provides a high-level summary of ASR and the four ASR indications on the containment structure. The discussion provides an explanation of why containment leak-tightness should not be impacted by ASR; however, the discussion does not clearly address the ASR impact on structural integrity of the containment. Based on the ASR degradation the containment is currently classified as operable but degraded and non-conforming, which is currently an unresolved issue that may impact structural integrity.

Provide justification for extending the Type A test interval for the current interval (i.e., for the test due in 2018) without a positive physical verification of structural and leak-tight integrity in the current non-conforming condition.

EMCB RAI-6

Several sections in Reference 1 appear to have typographical errors or confusing terminology. Please address the issues identified below.

1. The second paragraph of the "Supplemental Inspection Requirement" in Section 3.2.2 mentions the performance of "containment structural integrity tests." Historically a containment structural integrity test (SIT) is a pressure test of the containment at 1.15 design pressure. Please verify that this is not what was intended by the terminology in the LAR and clarify what the wording meant.

2. The final sentence in Section 3.2.4 states, "additional detail on recent inspection is provided in Section 3.6.1." The LAR does not contain a section 3.6.1. Please update the sentence with the correct reference.

References:

1. Letter SBK-L-16029, dated March 31, 2016 from Dean Curtland, NextEra Energy Seabrook to USNRC regarding the Proposed License Amendment Regarding Extending the Containment Leakage Test Frequency (ADAMS Accession No. ML16095A278).

2. Letter SBK-L-16082, dated May 31, 2016, from Eric McCartney, NextEra Energy Seabrook to USNRC regarding the Supplement to Request to Extend the Containment Leakage Test Frequency (ADAMS Accession No. ML16159A194).