



December 30, 2016

SBK-L-16205
10 CFR 50.90
Docket No. 50-443

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Seabrook Station

Response to Request for Supplemental Information Regarding License Amendment Request 16-01, "Request to Extend Containment Leakage Test Frequency" and EMCB-RAI-2

References:

1. NextEra Energy Seabrook, LLC letter SBK-L-16029, "License Amendment Request 16-01, Request to Extend Containment Leakage Test Frequency," March 31, 2016 (ML16095A278)
2. NRC letter "Seabrook Station, Unit No. 1 - Supplemental Information Needed for Acceptance of Requested Licensing Action Re: Request to Extend Containment Leakage Test Frequency (CAC No. MF7565)," May 19, 2016 (ML16139A181)
3. NextEra Energy Seabrook, LLC letter SBK-L-16082, "Supplement to License Amendment Request 16-01, Request to Extend containment Leakage Test Frequency," May 31, 2016 (ML 16159A 194)
4. NRC letter "Seabrook Station, Unit No. 1 – Request for Additional Information Re: Request to Extend Containment Leakage Test Frequency (CAC No. MF7565)," October 3, 2016 (ML16230A106)
5. NextEra Energy Seabrook, LLC letter SBK-L-16165, "Response to Request for Additional Information Regarding License Amendment Request 16-01, "Request to Extend Containment Leakage Test Frequency", October 27, 2016 (ML16302A397)
6. NRC e-mail "Need for Supplement to ILRT License Amendment," November 10, 2016 (ML16319A422)

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7. NextEra Energy Seabrook, LLC letter SBK-L-16190, "Response to Request for Additional Information Regarding License Amendment Request 16-01, "Request to Extend Containment Leakage Test Frequency", November 17, 2016 (ML16327A065)
8. NRC e-mail "Need for Supplement to ILRT license amendment," December 1, 2016 (ML16337A008)

In Reference 1 and supplemented by References 3, 5 and 7, NextEra Energy Seabrook, LLC (NextEra) submitted a license amendment request (LAR) to revise Technical Specification (TS) 6.15, Containment Leakage Rate Testing Program. The proposed amendment would revise the TS to require a containment leakage rate testing program that is in accordance with Nuclear Energy Institute (NEI) technical report NEI 94-01, Revision 3-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J. This proposed change will allow extension of the Type A test interval up to one test in 15 years and extension of the Type C test interval up to 75 months, based on acceptable performance history as defined in NEI 94-01, Revision 3-A.

In Reference 8, based on a teleconference held on November 28, 2016 to clarify NextEra's responses in Reference 5, the NRC staff requested that NextEra provide clarifications related to the Mechanical and Civil Engineering Branch (EMCB) review on the docket in a supplemental response. The Enclosure to this letter provides the requested supplemental information. Additionally, NextEra is providing supplemental information in relation to EMCB-RAI-4 and EMCB-RAI-5.

This supplement to LAR 16-01 does not alter the conclusion in Reference 1 that the changes do not involve a significant hazards consideration pursuant to 10 CFR 50.92, and there are no significant environmental impacts associated with the changes.

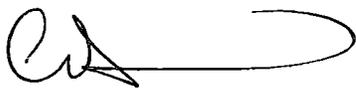
No new or revised commitments are included in this letter.

Should you have any questions regarding this letter, please contact Mr. Kenneth Browne, Licensing Manager, at (603) 773-7932.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 30, 2016.

Sincerely,



Christopher Domingos
Plant General Manager
NextEra Energy Seabrook, LLC

Enclosure

cc: NRC Region I Administrator
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Enclosure to SBK-L-16205

Supplement to License Amendment Request 16-01
Request to Extend Containment Leakage Test Frequency

It should be noted the general corrosion rate is based on aerated data which is more conservative than the de-aerated trapped in condition of the liner material below containment concrete pour.

EMCB-RAI-4 – Supplemental Information:

The 2016 ASME Section XI, subsection IWL examination has been completed and utilizes the revised ASME IWL examination procedure that includes a requirement to inspect for the presence of ASR on containment concrete surfaces. Indications of ASR on containment identified during the 2016 ASME IWL examinations are evaluated in accordance with Seabrook's Structural Monitoring Program and ASME Section XI, subsection IWL, paragraph IWL-3300. Results of the 2016 ASME IWL examinations are further discussed in the updated response to EMCB-RAI-5.

EMCB-RAI-5– Supplemental Information:

The recently completed 2016 ASME Section XI, subsection IWL examination identified additional areas of potential ASR indications. Identifying ASR on containment is difficult due to the awkward nature of inspecting the surface (rappelling down the annulus area between the containment and the containment enclosure building is necessary). During the IWL examination, NextEra used a broad review approach to identify any areas with indications that could even potentially be considered ASR. This broad review identified 82 locations of interest that may potentially reflect the presence of ASR. NextEra then performed a more precise evaluation using an independent panel of subject matter experts well versed in field identification of ASR affected concrete. This review was able to exclude 32 areas that did not, in fact, display visual features suggestive of ASR. Thirty three additional areas, spread out over the mid to upper elevations of the cylindrical portion of containment, were identified that exhibit some visual features that are suggestive of ASR indicating that ASR may be present. Finally, NextEra identified 17 areas that have indications indicative of ASR and which NextEra considers to be ASR. These locations are in the lower elevations of the containment where ASR was previously identified and where moisture infiltration has occurred in the past.

Of the 17 locations identified as ASR, four locations were identified during the initial ASR walkdown in 2011 and have been included in the ASR inspection monitoring program that started in the 2011-2012 time period. One of the locations, IWL-16-298—28, has been monitored on a six-month frequency and the other three locations have been monitored at a 30-month frequency. The most recent six-month ASR monitoring per the inspection completed at location IWL-16-298--28 in June 2016, concluded that there were no signs of significant changes in condition as compared to prior inspections, such as an apparent increase in crack density or crack widths, recent apparent large-scale concrete spalling or aggregate pop-outs, or any visible apparent unusual condition in the structural elements within the vicinity of the inspection area. The newly identified locations most likely to be ASR are locations on containment at the lower elevations that have been exposed to groundwater infiltration or moisture. These locations are representative of the previously identified ASR locations that were assessed, found to be acceptable, and are part of the Structures Monitoring Program.

Considering that the previously evaluated locations of ASR have not exhibited progression of distress mechanisms in the concrete and the locations are representative of the newly identified location, the 2016 ASME IWL-3300 Engineering Evaluation Report concluded the containment is capable of performing its design functions and an ASME Section XI code repair under subsection IWL 3213 is not required. The potential ASR locations identified during the 2016 IWL examination will continue to be monitored in accordance with Seabrook's Structures Monitoring Program. Non-remote locations will be monitored on a six-month or 30-month frequency. Remote areas, which require rappelling down the annulus area between the containment and the containment enclosure building, will be monitored at a frequency consistent with ASME section XI, subsection IWL 2400.

Background

NextEra Energy Seabrook, LLC (NextEra) letter dated October 27, 2016 (SBK-L-16165) provided responses to the NRC staff's request for additional information (RAI) related to the license amendment request regarding extending containment leakage testing frequency. On November 28, 2016 NRC staff held a phone call with NextEra staff to discuss the responses to EMCB-RAI-2. NRC has requested that the clarifying information be provided to NRC in a supplemental letter. The information below provides the requested supplemental information as discussed during the November 28, 2016 phone call. Additionally, NextEra is providing supplemental information in relation to EMCB-RAI-4 and EMCB-RAI-5.

Mechanical and Civil Engineering Branch (EMCB)

EMCB-RAI-2 – NRC Follow-up Question:

The last sentence of the response to EMCB-RAI-2 states, "since the corrosion allowance for the base mat is less than the cylindrical liner plate, the corrosion analysis is bounded by the base mat analysis and further justified in the response to EMCB RAI-3." Earlier in the response the licensee states the corrosion allowance for the cylinder is 0.094" in general with a 0.1875" allowance for localized areas and the allowance for the base mat area is 0.125."

It is not clear the quoted statement is accurate unless the licensee is referring to the localized corrosion allowance for the cylinder. The licensee should clarify the statement and if the localized allowance is being used a technical justification should be provided for use of the localized allowance instead of the general allowance.

NextEra Response:

The localized corrosion rate was used for the leak chase channel due to the small area in the previous response to EMCB-RAI -3. The general corrosion rate was used for EMCB-RAI -2 instead of the localized corrosion rate resulting in the confusion.

The containment minimum wall calculation was re-evaluated and updated for a minimum wall thickness of 0.0625 inch for the nominal 0.25 inch thick base mat liner and 0.1875 inch for the nominal 0.375 inch thick cylinder wall liner which is below the moisture barrier. Results of the reevaluation concluded that the inaccessible areas which were conservatively assumed to experience 0.1875" general wall loss in the liner thickness and would still be capable of maintaining a leak tight barrier for containment during all design basis conditions.

Using the general corrosion rate of 0.0025 inches per year and a general wall loss of 0.1875 inches for the base mat liner and cylinder wall liner, a 75 year life is supported.

(0.1875 in / 0.0025 in/yr =75 years)