



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

April 25, 2014

Mr. Kevin Walsh
Site Vice President
NextEra Energy Seabrook, LLC
P.O. Box 300
Seabrook, NH 03874

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RELATED TO THE REVIEW OF
THE SEABROOK STATION LICENSE RENEWAL APPLICATION – SET 21
(TAC NO. ME4028)

Dear Mr. Walsh:

By letter dated May 25, 2010, NextEra Energy Seabrook, LLC submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54, to renew the Operating License NPF-86 for Seabrook Station, Unit 1, for review by the U.S. Nuclear Regulatory Commission (NRC or the staff). The staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete the review.

The request for additional information was discussed with Mr. Edward Carley, and a mutually agreeable date for the response is within 60 days from the date of this letter. If you have any questions, please contact me at 301-415-1427 or by e-mail at richard.plasse@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Plasse".

Richard Plasse, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosure:
Requests for Additional Information

cc w/encl: Listserv

April 30, 2014

Mr. Kevin Walsh
Site Vice President
NextEra Energy Seabrook, LLC
P.O. Box 300
Seabrook, NH 03874

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RELATED TO THE REVIEW OF
THE SEABROOK STATION LICENSE RENEWAL APPLICATION – SET 21
(TAC NO. ME4028)

Dear Mr. Freeman:

By letter dated May 25, 2010, NextEra Energy Seabrook, LLC, submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54, to renew the Operating License NPF-86 for Seabrook Station, Unit 1, for review by the U.S. Nuclear Regulatory Commission (NRC or the staff). The staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete the review.

The request for additional information was discussed with Mr. Edward Carley, and a mutually agreeable date for the response is within 60 days from the date of this letter. If you have any questions, please contact me at 301-415-1427 or by e-mail at richard.plasse@nrc.gov.

Sincerely,

/RA/

Richard Plasse, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosure:
Requests for Additional Information

cc w/encl: Listserv

DISTRIBUTION: See Next Page

ADAMS Accession No.: ML14101A324

*concurred via email

OFFICE	LA:RPB1:DLR*	PM:RPB1:DLR	BC:RPB1:DLR	PM:RPB1:DLR
NAME	YEdmonds	RPlasse	YDiaz-Sanabria	RPlasse
DATE	04/25/14	04/25/14	04/25/14	04/25/14

OFFICIAL RECORD COPY

SEABROOK STATION
LICENSE RENEWAL APPLICATION
REQUEST FOR ADDITIONAL INFORMATION SET 21

RAI LRA Appendix B-1 – Aging Management of Reactor Vessel Internals

Background:

The license renewal application (LRA) for Seabrook Station proposed aging management for the reactor vessel internal (RVI) components based on a regulatory commitment in the LRA's Updated Final Safety Analysis Report (UFSAR) Supplement. The commitment stated that the applicant will develop an aging management program (AMP) and inspection plan based on augmented inspection activities for the components developed by the EPRI Materials Reliability Project (MRP), and that the inspection plan will be submitted for NRC review and approval not later than 2 years after receipt of the renewed license or not less than 24 months prior to the period of extended operation, whichever comes first.

The NRC's recommended AMP for Pressurized Water Reactor (PWR) RVIs in Revision 2 of NUREG-1801, Generic Aging Lessons Learned (GALL) Report, is given in Chapter XI.M16A, "PWR Vessel Internals," which was issued in December 2010. On January 9, 2012, subsequent to the issuance of Revision 2 of the GALL Report, the EPRI MRP issued Technical Report No. 1022863, "Materials Reliability Program: Pressurized Water Reactor Internals Inspection and Evaluation Guidelines (MRP-227-A)," which included the NRC safety evaluation (SE) for the report's methodology dated December 16, 2011. On June 3, 2013, the staff revised AMP XI.M16A and the aging management review (AMR) items in GALL for PWR RVI components to be consistent with the contents of the MRP-227-A report and issued them in License Renewal Interim Staff Guidance Document No. LR-ISG-2011-04, "Updated Aging Management Criteria for Reactor Vessel Internal Components for Pressurized Water Reactors."

On July 21, 2011, the NRC issued Regulatory Information Summary (RIS) 2011-07, "License Renewal Submittal Information for Pressurized Water Reactor Internals Aging Management," which provided updated NRC procedures for LRA reviews of PWR RVI AMPs. This RIS identified Category C plants as those plants that have an LRA currently under review, and stated that these applicants will be expected to revise their commitment for aging management of PWR vessel internals such that the information identified in the SE for MRP-227 would be submitted to the NRC for review and approval not later than two years after issuance of the renewed license or not later than two years before the plant enters the PEO, whichever comes first. Seabrook Station is a Category C plant in accordance with the RIS.

Issue:

The categorization of Seabrook Station and other plants in Category C of RIS 2011-07 was based on an expectation that the LRA would be reviewed and approved on a normal review schedule of 22 months, and that it would be an unreasonable burden to expect the applicant to address all aspects of the NRC's SE on MRP-227 within the LRA review. Since the completion of the staff's review of the LRA is still ongoing due to the ASR open item, the staff has concluded that the applicant should provide an LRA update or amendment that includes updated AMP and AMR items for the RVI components, including responses to the applicable Applicant/License Actions Items identified in the staff's SE for MRP-227 dated December 16, 2011.

ENCLOSURE

Request:

The staff requests that the applicant provide either an LRA amendment or an update that includes updated AMP and AMR items for the PWR RVI components at the Seabrook Station that are based on the guidance in LR-ISG-2011-04, including responses to applicable Applicant/License Actions Items identified in the staff's SE for MRP-227 dated December 16, 2011.

RAI B.2.1.22-6

Background:

The Buried Piping Inspection Locations table provided in a letter dated July 2, 2013, states the number of inspections based on the material type, interval of inspection, and status of cathodic protection, backfill, and soil sample results.

Issue:

The staff has concluded that the referenced table is consistent with LR-ISG-2011-03 Table 4a, "Inspections of Buried Pipe," with the following exceptions:

1. The not to exceed number of inspections for polymeric piping in the 40–50 year period is three in the referenced table and four in Table 4a of LR-ISG-2011-03. The fire protection system is the only in-scope system with polymeric piping. The Buried Piping and Tanks Inspection Program states that it may conduct jockey pump monitoring in lieu of excavated direct visual inspections of fire protection piping. However, if the program were changed to use excavated direct visual inspections of the fire protection system in lieu of jockey pump monitoring, the number of inspections would not be consistent with LR-ISG-2011-03.
2. Footnote 5 of the referenced table states, "[i]f cathodic protection does not meet Category C and backfill has been determined to be inadequate, buried steel piping will be inspected as Category F [the highest inspection quantity category]." Footnote 2 of the referenced table states, "[t]he adequacy of backfill will be determined by the condition of coatings and base materials noted during inspections. If damage to the coatings or base materials is determined to have been caused by the backfill, the backfill will be considered to be 'inadequate' (for the purpose of this program)." The applicant's table states that Category F inspections will be performed if the soil is determined to be corrosive.

LR-ISG-2011-03 Table 4a states that the conditions that result in conducting the highest number of inspections (Category F) are: (a) coatings and backfill have not been provided in accordance with the "preventive actions" program element, (b) a leak has occurred in buried piping due to external corrosion, (c) significant coating degradation or metal loss in more than 10 percent of inspections conducted, and (d) the soil has been demonstrated to be corrosive for steel piping.

The staff concludes the following in relation to each of the Table 4a conditions:

- a. The referenced table is not consistent with condition (b) because it has not stated leaks as a criterion for entry into Category F.

- b. The referenced table is not consistent with condition (c) because, although footnote 2 states that if damage to the coatings or base materials are determined to have been caused by the backfill, the backfill will be considered to be inadequate (resulting in use of Category F to determine the number of inspections), the Table 4a condition is not solely based on damage to coatings by backfill.

Request:

1. State the basis why conducting three excavated direct visual inspections of polymeric piping in the 40–50 year period; in lieu of the jockey pump monitoring; is adequate to provide reasonable assurance that the piping will meet its current licensing basis intended function(s). Alternatively, revise the table to be consistent with the number of recommended inspections for buried polymeric piping in LR-ISG-2011-03.
2. State the basis for why the proposed criteria for invoking Category F inspections will be adequate to provide reasonable assurance that the piping will meet its current licensing basis intended function(s). Alternatively, revise the table to be consistent with LR-ISG-2011-03.

RAI A.1-2, License Renewal Commitments and the UFSAR

Background:

By letter dated May 25, 2010, NextEra Energy Seabrook, LLC submitted an application pursuant to Title 10 of the Code of Federal Regulations (CFR) Part 54 to renew the operating license, NPF-86 for Seabrook Station, for review by the U.S. Nuclear Regulatory Commission (NRC) staff. The NRC staff is reviewing this application in accordance with the guidance in NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants." During the review of the Seabrook license renewal application (LRA) by the NRC staff, NextEra Energy Seabrook made commitments related to aging management programs (AMPs), aging management reviews (AMRs), and time-limited aging analyses, as applicable, related to managing the aging effects of structures and components prior to the PEO. The list of these commitments, as well as the implementation schedules and the sources for each commitment, will be included as a Table in Appendix A to the LRA and the SER.

In Section 1.7, "Summary of Proposed License Conditions," of the SER with Open Items, the staff stated that following its review of the LRA, including subsequent information and clarifications provided by the applicant, it identified proposed license conditions. The first license condition requires the information in the UFSAR supplement, submitted pursuant to 10 CFR 54.21(d), as revised during the LRA review process, be made a part of the UFSAR. The second license condition in part states that the new programs and enhancements to existing programs listed in Appendix A of the SER and the applicant's UFSAR supplement be implemented no later than 6 months prior to the PEO. This license condition also states, in part, that activities in certain other commitments shall be completed by 6 months prior to the PEO or the end of the last refueling outage prior to the PEO, whichever occurs later.

The NRC plans to revise Appendix A of the SER to align with this guidance, and to reformat the license condition to be as follows:

The UFSAR supplement submitted pursuant to 10 CFR 54.21(d), as revised during the license renewal application review process, and as supplemented by Appendix A of NUREG [XXXX], "Safety Evaluation Report Related to the License Renewal of Seabrook Station" dated [Month Year], describes certain programs to be implemented and activities to be completed prior to the PEO.

- a. The licensee shall implement those new programs and enhancements to existing programs no later than 6 months prior to the PEO.
- b. The licensee shall complete those inspection and testing activities, as noted in Commitment Nos. [x] through [xx] of Appendix A of NUREG [XXXX], by the 6 month date prior to PEO or the end of the last refueling outage prior to the PEO, whichever occurs later.

The licensee shall notify the NRC in writing within 30 days after having accomplished item (a) above and include the status of those activities that have been or remain to be completed in item (b) above.

The staff also notes that in the course of its evaluating multiple commitments to be implemented in the future in order to arrive at a conclusion of reasonable assurance that requirements of 10 CFR 54.29(a) have been met, these license renewal commitments must be incorporated either into a license condition or into a mandated licensing basis document, such as the UFSAR. Those commitments that are incorporated into the UFSAR are typically done so by incorporating each one verbatim (or by a summary and a commitment reference number) into the respective UFSAR summaries in the applicant's LRA Appendix A.

Issue:

As reflected in the SER Appendix A, the implementation schedule for some commitments may conflict with the implementation schedule intended by the generic license condition. In addition, these licensing commitments need to be incorporated either into a license condition or into the applicant's UFSAR summary in such a manner as discussed above.

Request:

1. Identify those commitments to implement new programs and enhancements to existing programs. Indicate the expected date for completing the implementation of each of these programs and enhancements.

2. Identify those commitments to complete inspection or testing activities prior to the PEO. Indicate the expected dates for the completion of each of these inspection and testing activities.
- 3 For each commitment provided by the applicant in the SER Appendix A, identify where and how NextEra Energy Seabrook, LLC proposes that it be incorporated: into either a license condition or into the Seabrook UFSAR.

Letter to K. Walsh from R. Plasse dated April 30, 2014

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RELATED TO THE REVIEW OF
THE SEABROOK STATION LICENSE RENEWAL APPLICATION – SET 21
(TAC NO. ME4028)

DISTRIBUTION:

HARDCOPY:

DLR RF

E-MAIL:

PUBLIC

RidsNrrDlr Resource
RidsNrrDlrRpb1 Resource
RidsNrrDlrRpb2 Resource
RidsNrrDlrRarb Resource
RidsNrrDlrRasb Resource
RidsNrrDlrRerb Resource
RidsNrrDraApla Resource
Listserv

Lois.James@nrc.gov
Richard.Plasse@nrc.gov
Brian.Wittick@nrc.gov
Yaira.Diaz-Sanabria@nrc.gov
John.Lamb@nrc.gov
David.McIntyre@nrc.gov
Eugene.Dacus@nrc.gov
Brian.Harris@nrc.gov
Glenn.Dental@nrc.gov
Paui.Cataldo@nrc.gov
Chris.Newport@nrc.gov
Jasmine.Gilliam@nrc.gov
Nancy.McNamara@nrc.gov
Doug.Tiff@nrc.gov
Neil.Sheehan@nrc.gov
Diane.Screnci@nrc.gov