



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

December 12, 2011

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

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE
SEABROOK STATION, LICENSE RENEWAL APPLICATION

Dear Mr. Freeman:

By letter dated May 25, 2010, NextEra Energy Seabrook, LLC, submitted an application pursuant to 10 CFR Part 54, to renew the operating license NPF-86 for Seabrook Station, 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.

These requests for additional information were discussed with Richard Cliche, 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) 415-2927 or by e-mail at richard.plasse@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Plasse", with a long, sweeping line extending from the end of the signature.

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

SEABROOK STATION
LICENSE RENEWAL APPLICATION
REQUESTS FOR ADDITIONAL INFORMATION Set 18

RAI B.1.4-2

Background

In request for additional information (RAI) B.1.4-1, issued on May 23, 2011, the staff asked the applicant to describe the programmatic activities that will be used to continually identify aging issues, evaluate them, and, as necessary, enhance the aging management programs (AMPs) or develop new AMPs for license renewal. In its response dated June 24, 2011, the applicant described how it considers operating experience under its current operating experience review process and corrective action program. In addition, the applicant stated that it will enhance the operating experience review process and provide additional training.

Issue

The applicant's response provides a general description of how it considers operating experience on an ongoing basis; however, it does not directly address several areas in RAI B.1.4-1 on which the staff requested information. Further, it does not provide specific information on how the operating experience review activities address issues related to aging. The staff identified the following issues with the response:

- (a) The applicant did not fully describe the sources of plant-specific operating experience information that it monitors on an ongoing basis. Additional details are needed to determine whether the applicant will consider an adequate scope of information from which to identify potential operating experience related to aging.
- (b) The staff requested that the applicant indicate which NRC guidance documents and generic communications require monitoring. The applicant did not indicate whether it considers NRC guidance documents and generic communications to be sources of operating experience information.
- (c) The applicant did not describe its criteria for identifying and categorizing operating experience items as related to aging.
- (d) The applicant stated that it will provide additional training; however, it did not describe the details of this training with respect to aging issues nor did it indicate whether the training will be provided to those plant personnel responsible for screening, assigning, evaluating, and submitting operating experience items.

ENCLOSURE

- (e) The applicant did not describe how evaluations of operating experience related to aging consider the potentially affected plant
- systems, structures, and components,
 - materials,
 - environments,
 - aging effects,
 - aging mechanisms, and
 - AMPs.
- (f) The applicant did not describe how it will consider as operating experience the results of the inspections, tests, analyses, etc., conducted through implementation of the AMPs.
- (g) The applicant stated that necessary changes to aging management programs would be tracked and implemented via the corrective action program. The applicant did not, however, describe the records of operating experience evaluations, how it retains those records, or how it ensures that such documents will be auditable and retrievable for NRC inspection and oversight purposes.
- (h) The applicant did not describe timeframes for evaluating operating experience issues under the operating experience review process and corrective action program. Also, it did not state how it determines the relative significance of the operating experience issues. It is therefore unclear whether the operating experience evaluations will be completed in a timely manner or whether they will be appropriately prioritized.
- (i) The applicant stated that the corrective action program is used for degraded conditions related to the qualification or functional capability of systems, structures, and components, and is the primary source of internal operating experience. It is not clear whether use of the corrective action program is appropriate to obtain operating experience information related to aging. For example, it is not clear whether the corrective action program applies to all in-scope structures and components; their materials, environments, aging effects, and aging mechanisms; the AMPs credited for managing the effects of aging; and the activities under those AMPs.
- (j) The applicant did not describe criteria for considering when AMPs should be modified or new AMPs developed due to operating experience.
- (k) The applicant stated that the operating experience review process provides for the sharing of lessons learned with other utilities; however, the applicant did not provide criteria for reporting its plant-specific operating experience on age-related degradation to the industry.
- (l) As requested, the applicant stated that the operating experience review process is procedurally controlled. The applicant did not, however, state whether these controls provide for a formal review and approval process and periodic audits by the applicant.

- (m) The applicant stated that it will enhance the operating experience review process and provide additional training to process owners to include reviews of plant-specific and industry operating experience in order to confirm the effectiveness of the license renewal AMPs and to determine the need for programs to be enhanced or the need to develop new AMPs. The applicant further stated that necessary changes to AMPs would be tracked and implemented via the corrective action program. The applicant did not, however, state whether the creation of new programs would also be implemented through the corrective action program.
- (n) The applicant committed to enhance its current station operating experience review process within ten years prior to entering the period of extended operation. This implementation schedule would result in a period of time when the applicant would not use the enhanced operating experience review process to confirm the effectiveness of the license renewal AMPs, determine the need for programs to be enhanced, or the need to develop new AMPs.

Request

For the operating experience review process and corrective action program, provide a response to each item below.

- (a) Describe the sources of plant-specific operating experience that are monitored on an ongoing basis to identify potential aging issues.
- (b) Indicate whether guidance documents are considered as a source of operating experience information. If they are considered as a potential source, provide a plan for considering the content of guidance documents, such as the GALL Report, as operating experience applicable to aging management. If they are not a potential source, justify why they should not be considered as operating experience.
- (c) Describe how operating experience issues will be identified and categorized as related to aging. If an identification code is used, provide its definition or the criteria for its application. Also, describe how age-related operating experience will be trended.
- (d) Describe the training requirements and justify the level of training on aging issues for those plant personnel responsible for screening, assigning, evaluating, and submitting operating experience. Also, provide the periodicity of the training and describe how it will account for personnel turnover.
- (e) Describe how evaluations of operating experience issues related to aging will consider the following:
- systems, structures, or components
 - materials
 - environments
 - aging effects
 - aging mechanisms
 - AMPs

- (f) Describe how the results of the AMP inspections, tests, analyses, etc. will be considered as operating experience, both when they meet and do not meet the applicable acceptance criteria.
- (g) Describe the operating experience evaluation records with respect to what is considered for aging. Indicate whether these records are maintained in auditable and retrievable form.
- (h) Provide details on the timeframes for evaluating operating experience and justify why they provide for timely evaluations. Also, describe how the relative significance of operating experience items is determined so that their review can be prioritized appropriately.
- (i) Justify why use of the corrective action program is appropriate for capturing operating experience related to aging management.
- (j) Describe the criteria for considering when AMPs should be modified or new AMPs developed due to operating experience.
- (k) Provide criteria used for reporting plant-specific operating experience on age-related degradation to the industry.
- (l) Indicate whether the operating experience review process is subject to a formal review and approval process and whether it is subject to periodic audits to ensure its effectiveness.
- (m) Clarify whether the creation of new programs will be implemented through the corrective action program.
- (n) Justify why use of the operating experience review process is adequate, without enhancement until within ten years prior to entering the period of extended operation, to ensure the AMPs are effective to manage the aging effects for which they are credited, or to enhance the programs or develop new programs when the review of operating experience indicates that the programs may not be effective.

For any additional enhancements identified as necessary based on the response to the above items, provide and justify the implementation schedule for incorporating the enhancements into the existing programmatic operating experience review activities.

RAI B.1.4-3

Background

In RAI B.1.4-1, the staff asked the applicant to provide, in accordance with 10 CFR 54.21(d), an updated final safety analysis report (UFSAR) supplement summary description of the

programmatic activities for the ongoing review of operating experience. By letter dated August 25, 2011, the applicant provided this description:

The existing Corrective Action Program and the Operating Experience Program ensure, through the continual review of both plant-specific and industry operating experience, that the license renewal aging management programs are effective to manage the aging effects for which they are credited. The programs are either enhanced or new programs are developed when the review of operating experience indicates that the programs may not be effective. For each aging management program, operating experience is reviewed on a continuing basis.

Issue

As described in the issue section of RAI B.1.4-2 above, the applicant described generally how it intends to consider operating experience on an ongoing basis; however, it did not provide specific information on how its operating experience review activities address issues related to aging. Similarly, the above entry for UFSAR supplement also lacks detail on how aging is considered in the ongoing operating experience reviews.

Request

Consistent with the response to RAI B.1.4-2, provide additional details in the UFSAR supplement on how the ongoing operating experience review activities address issues specific to aging. Include in the UFSAR supplement the implementation schedule for these activities.

RAI B.2.1.11-2

Background

GALL Report AMP XI.M20, "Open-Cycle Cooling Water," states that the program includes surveillance and control techniques to manage aging effects caused by various aging mechanisms including protective coating failures. GALL Report, Table IX.F, "Aging Mechanisms," states that fouling includes macrofouling (e.g., peeled coatings and debris), and can result in a reduction of heat transfer or loss of material.

SRP-LR Section A.1.2.3.10 "Operating Experience," states that past corrective actions for existing AMPs should be considered and that feedback from past failures should have resulted in appropriate program enhancements. The SRP-LR also states that operating experience information should provide objective evidence to support the conclusion that the effects of aging will be managed adequately so that the structure and component intended function(s) will be maintained during the period of extended operation.

LRA Section B.2.1.11 describes the Open-Cycle Cooling Water System Program as an existing program that manages the aging effects due to various mechanisms including "liner/coating degradation." In addition, the Operating Experience section for this program states:

The cement lined above ground piping associated with the Diesel Generator heat exchangers has been replaced with flanged Plastisol PVC lined carbon steel spool pieces. The size and

accessibility of this piping did not permit the use of AMEX-10/WEKO seals. Follow up inspections of weld areas by ultrasonic testing and internal visual examinations during refueling outages have confirmed that the engineering design change has been effective in preventing loss of material.

Issue

According to recent information provided by Regional NRC personnel, the Plastisol PVC lining has degraded to the extent that it was found missing in certain portions of the carbon steel piping, which potentially affected the intended function of the diesel generator heat exchangers. Based on this plant-specific operating experience, additional information is needed by the staff relative to the effectiveness of past aging management activities for the Open-Cycle Cooling Water System Program, and any enhancements, if warranted, to address this degradation.

Request

- (a) Provide a description of the recent PVC lining degradation event, including the associated cause and extent of condition. As part of the response, address the expected life span of the PVC lining material. In addition, provide a discussion of the previous aging management activities that were performed to manage liner degradation prior to the event, including whether any previous activities were specifically performed on the degraded areas.
- (b) Provide a description of the corrective actions taken in response to the recent event and provide any enhancements made to the Open-Cycle Cooling Water Program to ensure that components' intended function(s) will not be impacted during the period of extended operation. If enhancements will not be made, provide the bases for why there is reasonable assurance that the intended functions will be maintained consistent with current licensing bases.

December 12, 2011

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Site Vice President
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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

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DATE	12/8/11	12/8/11	12/8/11	12/9/11	12/12/11

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Letter to P. Freeman from R. Plasse dated December 12, 2011

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