



December 9, 2021

L-2021-223
10 CFR 54.17

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
11545 Rockville Pike
One White Flint North
Rockville, MD 20852-2746

Point Beach Nuclear Plant Units 1 and 2
Dockets 50-266 and 50-301
Renewed License Nos. DPR-24 and DPR-27

**SUBSEQUENT LICENSE RENEWAL APPLICATION - AGING MANAGEMENT REQUESTS FOR
ADDITIONAL INFORMATION (RAI) SET 12 RESPONSE**

References:

1. NextEra Energy Point Beach, LLC (NEPB) Letter NRC 2020-0032 dated November 16, 2020, Application for Subsequent Renewed Facility Operating Licenses (ADAMS Package Accession No. ML20329A292)
2. NRC Email and Attachment dated November 16, 2021, Point Beach SLRA Safety RAI Set 12 Final
3. NRC December 2, 2021 Public Meeting Announcement, Public Meeting with NextEra Energy to Discuss Point Beach Nuclear Plant, Units 1 and 2, Subsequent License Renewal Application (Safety) – Proposed Aging Management Programs (ADAMS Accession No. ML21323A064)
4. NEPB Letter L-2021-2222 dated November 23, 2021, Subsequent License Renewal Application - Aging Management Requests for Additional Information (RAI) Set 11 Response Revision 1

NEPB, owner and licensee for Point Beach Nuclear Plant (PBN) Units 1 and 2, has submitted a subsequent license renewal application (SLRA) for the Facility Operating Licenses for PBN Units 1 and 2 (Reference 1). The attachment to this letter provides the response to the NRC's Set 12 RAI (Reference 2) that includes clarifications discussed with the NRC (Reference 3) and supersedes a portion of Reference 4 Attachment 1.

For ease of reference, the index of attached information is provided on page 3 of this letter. The attachment includes associated revisions to the SLRA (Enclosure 3 Attachment 1 of Reference 1) denoted by ~~strike through~~ (deletion) and/or **bold red underline** (insertion) text. Prior SLRA revisions are denoted by **bold black** text, with SLRA table revisions included as excerpts from each affected table.

Should you have any questions regarding this submittal, please contact me at (561) 304-6256 or William.Maher@fpl.com.

NextEra Energy Point Beach, LLC

6610 Nuclear Road, Two Rivers, WI 54241

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

Executed on the 9th day of December 2021.

Sincerely,
**William
Maher**

Digitally signed by William Maher
DN: cn=William Maher, o=Nuclear,
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William D. Maher
Licensing Director - Nuclear Licensing Projects

Cc: Administrator, Region III, USNRC
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Public Service Commission Wisconsin

Attachments Index		
Attachment No.	RAI No.	Subject
1	B.2.3.15-3a	Inspection of Penetration Seals and Fire Damper Assemblies

SLRA Section B.2.3.15, “Fire Protection”

RAI B.2.3.15-3a (Inspection of penetration seals and fire damper assemblies)

Regulatory Basis:

Section 54.21(a)(3) of Title 10 of the Code of Federal Regulations (10 CFR) requires an applicant to demonstrate that the effects of aging for structures and components will be adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis for the period of extended operation. One of the findings that the U.S. Nuclear Regulatory Commission (NRC) staff must make to issue a renewed license (10 CFR 54.29(a)) is that actions have been identified and have been or will be taken with respect to managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21, such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis. In order to complete its review and enable it to make a finding under 10 CFR 54.29(a), the staff is requesting additional information regarding the matters described below.

Background:

NextEra's October 25, 2021 (ADAMS Accession No. ML21298A090), response to the NRC's Request for Additional Information (RAI) B.2.3.15-3 clarifies the enhancement to the “monitoring and trending” and “corrective actions” program elements. Specifically, the response states that the Fire Protection program will be enhanced to expand the visual inspection sample size when more than 15 percent of a type of penetration seal or fire damper assembly has any sign of degradation. The expanded inspection will include an additional 10 percent of a type of penetraton seal or fire damper assembly. The additional testing will continue until failures are less than 15 percent. The response includes changes to SLRA Appendix A, Section 16.2.2.15 and Table 16-3, and SLRA Appendix B, Section B.2.3.15 to reflect this clarification.

In addition, the response to RAI B.2.3.15-3 states that the approach to expand the inspection sample size is consistent with the sample population and acceptable failure rate for fire dampers and states that the approach is part of the plant's approved Fire Protection program. The response cites an NRC letter dated February 5, 1988, containing a copy of Wisconsin Electric's “Technical Evaluation of Fire Damper Tests at Point Beach Nuclear Plant,” and an inspection report dated April 13, 1989 (ADAMS Accession Nos. ML20149E960 and ML20245A450, respectively).

The evaluation included with the February 5, 1988, letter states, in part, that “Ten percent of the fire dampers listed in Table FD-1 will be tested statically [emphasis added] every 18 months to provide continued damper operability. Should more than 15% of the dampers tested fail to close, an additional 10% of the listed dampers shall be tested until the quantity of failed dampers is less than 15% of the quantity tested.” The April 13, 1989, inspection report closed the associated open item related to the static testing of the fire dampers. However, neither the letter or the inspection report

address the acceptability of the 15 percent failure rate as the criteria for needing to test additional dampers and the inspection report did not provide any technical basis for closing the open item.

Issue:

The approach described in the evaluation included with the February 5, 1988, letter is related to testing fire damper closure under normal air flow. While the plant's approved fire protection program may currently limit fire damper closure test expansions for failure rates less than 15 percent (the active function of the fire damper), the program does not currently address expansion of visual inspections [emphasis added] for age-related degradation of fire damper assemblies or penetration seals (enhancement to "monitoring and trending" and "corrective actions" program elements).

GALL-SLR Report AMP XI.M26 is specific to periodic visual inspections of fire damper assemblies for cracking and loss of material. It is unclear to the NRC staff how the approach for fire damper closure test expansions (i.e., sample population and acceptable failure rate) is an acceptable approach for expanding visual inspections of fire damper assemblies after age-related degradation is detected because the "acceptance criteria" program element in GALL-SLR Report AMP XI.M26 states, in part, that "[t]he acceptance criteria include...(d) no visual indications [emphasis added] of cracks or corrosion of fire damper assemblies...."

The "acceptance criteria" program element in GALL-SLR Report AMP XI.M26 states, in part, that "The acceptance criteria include (a) no visual indications [emphasis added] (outside those allowed by approved penetration seal configurations) of cracking, separation of seals from walls and components, separation of layers of material, or ruptures or punctures of seals." In addition, the "corrective actions" program element in GALL-SLR Report AMP XI.M26 states, in part, "[d]uring the inspection of penetration seals, if any sign of degradation is detected within that sample, the scope of the inspection is expanded to include additional seals in accordance with the plant's approved fire protection program [emphasis added]." Therefore, it is unclear to the NRC staff how the approach for fire damper closure test expansions (i.e., sample population and acceptable failure rate) is an acceptable approach for expanding the visual inspections of penetration seals after age-related degradation is detected.

Request:

1. Provide the basis/justification for how the approach for fire damper closure test expansions (i.e., sample population and acceptable failure rate (would allow 15 percent to have age-related degradation before expanding the inspection scope)) is an acceptable approach for expanding visual inspections of fire damper assemblies and penetration seals after age-related degradation is detected.

NEPB Response:

As explained in the revised NEPB Response to RAI B.2.3.15-3 (Reference 1), the approach for fire damper closure test expansions will not be applied to expanding visual inspections of fire damper assemblies and penetration seals after age-related degradation is detected at PBN. Based on the public meeting conducted between NEPB and NRC on December 2, 2021 (Reference 2), the inspection/testing sample expansion approaches are clarified below:

- The PBN Fire Protection program calls for visual inspection of the plant's entire fire barrier penetration seal population every 4.5 years; currently, this is accomplished by visually inspecting a sample representing approximately 33 percent of the fire barrier penetration seals every 18 months. Following incorporation of new SLRA Appendix A Table 16-3 Commitment Item 19 f), plant procedures will state that each of these inspection samples includes at least 10 percent of each type of seal. Text describing the associated enhancement in the SLRA is revised accordingly.
- The PBN Fire Protection program calls for testing of the plant's entire fire damper population every 15 years. By visually inspecting passive portions of the fire damper assemblies whenever fire damper closure testing is performed, at least 10 percent of the fire damper assemblies are inspected every 18 months. Following incorporation of new SLRA Appendix A Table 16-3 Commitment Item 19 b), plant procedures will specify that any loss of material from the fire damper assembly is unacceptable. When any of the fire damper assemblies inspected during the 18-month inspection period fails to meet the acceptance criteria, an Action Request is prepared in accordance with the corrective action process. The degraded condition is evaluated to confirm that the fire damper assembly remains capable of performing its intended fire barrier function until the next scheduled inspection, or to identify the required repairs necessary to restore the fire damper assembly. Evaluation may include performing additional fire damper assembly inspections as required to provide reasonable assurance that the intended functions for fire protection are maintained. The expanded inspection sample would focus on fire damper assemblies considered most susceptible to similar degradation based on attributes such as configuration, materials, location, and previous inspection results. This approach is consistent with the "corrective actions" program element in GALL-SLR Report AMP XI.M26. Discussions in the SLRA regarding results of the subject inspections (i.e., in Appendix A Section 16.2.2.15; in the Program Description subsection of Appendix B Section B.2.3.15) are revised to include fire damper assemblies.
- There are no predetermined sample expansion criteria for visual inspections of fire damper assemblies and penetration seals in the PBN Fire Protection program. Following incorporation of new SLRA Appendix A Table 16-3 Commitment Item 19 k), plant procedures will require conducting an assessment for additional inspections as part of evaluation for each type of penetration seal

or fire damper assembly that exhibited degradation. The Appendix A and Appendix B Fire Protection sections in the SLRA are revised accordingly.

- As observed by the NRC in their 'Background' discussion for RAI B.2.3.15-3, the PBN fire barrier penetration fire seal surveillance procedure (RMP 9057) specifies that fire damper failure will require testing for an additional 10 percent of the fire damper population until the total number of damper failures is less than 15 percent of dampers tested during the 18-month inspection period. Following incorporation of new SLRA Appendix A Table 16-3 Commitment Item 19 b), the procedure will be revised to clearly define the applicability of this approach, which is limited by the PBN Fire Protection program to testing of the active function (i.e., closure) of the fire dampers. Text describing the associated enhancement in the SLRA is revised accordingly.

References:

1. NextEra Energy Point Beach, LLC (NEPB) Letter to NRC L-2021-222 dated November 23, 2021, Subsequent License Renewal Application – Aging Management Requests for Additional Information (RAI) Set 11 Response Revision 1
2. NRC December 2, 2021 Public Meeting Announcement, Public Meeting with NextEra Energy to Discuss Point Beach Nuclear Plant, Units 1 and 2, Subsequent License Renewal Application (Safety) – Proposed Aging Management Programs (ADAMS Accession No. ML21323A064)
3. NextEra Energy Point Beach, LLC (NEPB) Letter to NRC L-2021-081 dated April 21, 2021, Subsequent License Renewal Application – Aging Management Supplement 1 (ADAMS Accession No. ML21111A155)

Associated SLRA Revisions:

The revisions that follow supersede those provided in Attachment 1 to Reference 1.

SLRA Appendix A, Section 16.2.2.15, last paragraph (page A-23), is revised as follows:

The results of inspections and functional testing of the in-scope fire protection equipment are collected, analyzed, and summarized by engineers in health reports. The system and program health reporting procedures identify adverse trends and prescribe preemptive corrective actions to prevent further degradation or future failures. When performance degrades to unacceptable levels, the PBN CAP is utilized to drive improvement. During the inspection of penetration seals and fire damper assemblies, if any sign of abnormal degradation is detected within the sample, the ~~n evaluation~~ inspection sample size is expanded, in accordance with the approved PBN fire protection program, **may require scope of the inspection to be expanded** to include an additional 40 percent sample of each type of **penetration** sealed penetration or fire damper assembly **that exhibited degradation**.

SLRA Appendix A, Table 16-3, Commitment No. 19 (pages A-76 and A-77), as amended by Reference 3 is revised as follows:

No.	Aging Management Program or Activity (Section)	NUREG-2191 Section	Commitment	Implementation Schedule
19	Fire Protection (16.2.2.15)	XI.M26	<p>Continue the existing PBN Fire Protection AMP, including enhancement to:</p> <ul style="list-style-type: none"> a) Enhance plant procedures to specify that penetration seals will be inspected for indications of increased hardness, shrinkage and loss of strength, b) Enhance plant procedures to clearly divide corrective actions applicable to fire damper closure test failures from those applicable to visual inspection results and to specify that any loss of material tofrom the fire damper assembly is unacceptable, c) Enhance plant procedures to specify that well-sealed and robustly secured components and fully enclosed cable tray covers credited to prevent internal fires from propagating outside of the component, and fire proofing material sprayed onto structural steel will be inspected for loss of material, cracking, and changes to elastomer properties as appropriate, d) Enhance plant procedures to add spalling and scaling to the degradation effects for which masonry block walls are inspected, e) Enhance plant procedures to indicate that personnel performing FP inspections will be qualified to do so, f) Enhance plant procedures to state that the sample of fire barrier penetration seals visually inspected every 18 months will include at least 10% of each type of seal will be visually inspected every 18 months, g) Enhance plant procedures to include inspecting, monitoring, and trending of oil collection channels, trenches, and skids credited to mitigate the spread of combustible liquids for cracking and loss of material at least once every 18 months. The acceptance criteria will be no indication of cracking or loss of material, h) Enhance plant procedures to specify that well-sealed and robustly secured components and fully enclosed cable tray covers credited to prevent internal fires from propagating outside of the component, and fire proofing material sprayed onto structural steel will be inspected every 4.5 years (33% of the population every 18 months), 	<p>No later than 6 months prior to the SPEO, i.e.:</p> <p>PBN1: 04/05/2030 PBN2: 09/08/2032</p>

No.	Aging Management Program or Activity (Section)	NUREG-2191 Section	Commitment	Implementation Schedule
			<p>i) Enhance plant procedures to specify that the dry chemical fire extinguishing systems will be inspected semi-annually,</p> <p>j) Enhance plant procedures to specify that the dry chemical fire extinguishing system inspections will be monitored and trended, and</p> <p>k) Enhance plant procedures to require an assessment for additional inspections to be conducted as part of evaluation if one of the inspected penetrations an additional 10 percent of a type of seals or fire damper assemblies when more than 15 percent of the sample population does not meet any acceptance criteria due to current or projected degradation ring the 18-month inspection period. If evaluation in accordance with the Corrective Action program determines that additional inspection is required, then the expanded inspection sample would be drawn from the remaining population of the penetration seal or fire damper assembly type(s) that exhibited degradation in the initial inspection sample.</p>	

SLRA Appendix B, Section B.2.3.15, Program Description subsection, last paragraph on page B-123, is revised as follows:

The results of inspections and functional testing of the in-scope fire protection equipment are collected, analyzed, and summarized by engineers in health reports. The system and program health reporting procedures identify adverse trends and prescribe preemptive corrective actions to prevent further degradation or future failures. When performance degrades to unacceptable levels, the PBN CAP is utilized to drive improvement. During the inspection of penetration seals and fire damper assemblies, if any sign of abnormal degradation is detected within the sample, the ~~n evaluation inspection sample size is expanded~~, in accordance with the approved PBN fire protection program, **may require scope of the inspection to be expanded** to include an additional 40 percent ~~sample~~ of each type of **penetration sealed penetration or fire damper assembly that exhibited degradation**.

SLRA Appendix B, Section B.2.3.15, Enhancements subsection, pages B-123 and B-124, as amended by Reference 3 is revised as follows:

Element Affected	Enhancement
1. Scope of Program 3. Parameters Monitored or Inspected 4. Detection of Aging Effects 5. Monitoring and Trending 6. Acceptance Criteria	Enhance plant procedures to specify that penetration seals will be inspected for indications of increased hardness, shrinkage and loss of strength.
1. Scope of Program 3. Parameters Monitored or Inspected 4. Detection of Aging Effects 5. Monitoring and Trending 6. Acceptance Criteria	Enhance plant procedures to clearly divide corrective actions applicable to fire damper closure test failures from those applicable to visual inspection results and to specify that any loss of material to from the fire damper assembly is unacceptable.
1. Scope of Program 3. Parameters Monitored or Inspected 4. Detection of Aging Effects 5. Monitoring and Trending 6. Acceptance Criteria	Enhance plant procedures to specify that well-sealed and robustly secured components and fully enclosed cable tray covers credited to prevent internal fires from propagating outside of the component, and fire proofing material sprayed onto structural steel will be inspected for loss of material, cracking, and changes to elastomer properties as appropriate.

Element Affected	Enhancement
1. Scope of Program 3. Parameters Monitored or Inspected 4. Detection of Aging Effects 5. Monitoring and Trending 6. Acceptance Criteria	Enhance plant procedures to add spalling and scaling to the degradation effects for which masonry block walls are inspected.
1. Scope of Program 3. Parameters Monitored or Inspected 4. Detection of Aging Effects 5. Monitoring and Trending 6. Acceptance Criteria	Enhance plant procedures to include inspecting , monitoring, and trending of oil collection channels, trenches, and skids credited to mitigate the spread of combustible liquids for cracking and loss of material at least once every 18 months. The acceptance criteria will be no indication of cracking or loss of material.
4. Detection of Aging Effects	Enhance plant procedures to indicate that personnel performing FP inspections will be qualified to do so.
4. Detection of Aging Effects	Enhance plant procedures to state that the sample of fire barrier penetration seals visually inspected every 18 months will include at least 10 percent of each type of seal will be visually inspected every 18 months.
4. Detection of Aging Effects	Enhance plant procedures to specify that well-sealed and robustly secured components and fully enclosed cable tray covers credited to prevent internal fires from propagating outside of the component, and fire proofing material sprayed onto structural steel will be inspected every 4.5 years (33% of the population every 18 months).
4. Detection of Aging Effects	Enhance plant procedures to specify that the dry chemical fire extinguishing systems will be inspected semi-annually.
5. Monitoring and Trending	Enhance plant procedures to specify that the dry chemical fire extinguishing system inspections will be monitored and trended.
5. Monitoring and Trending 7. Corrective Actions	Enhance plant procedures to require an assessment for additional inspections to be conducted as part of evaluation if one of the inspected penetration or fire damper assemblies when more than 15 percent of the sample population does not meet any acceptance criteria due to current or projected degradation ring the 18-month inspection period. If evaluation in accordance with the Corrective Action program determines that additional inspection is required, then the expanded inspection sample would be drawn from the remaining population of the penetration seal or fire damper assembly type(s) that exhibited degradation in the initial inspection sample.

Point Beach Nuclear Plant Units 1 and 2
Dockets 50-266 and 50-301
NEPB Response to NRC RAI No. B.2.3.15-3a
L-2021-223 Attachment 1 Page 9 of 9

Associated Enclosures:

None.