November 23, 2021

L-2021-222
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 11 RESPONSE REVISION 1

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. NEPB letter L-2021-200 dated October 25, 2021, Subsequent License Renewal Application – Aging Management Requests for Additional Information (RAI) Set 11 Response (ADAMS Accession No. ML21298A090)

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 supersedes the Reference 2 Attachment 1 RAI response.

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 ~~strikethrough~~ (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.

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

Executed on the 23rd day of November 2021.

Sincerely,

William Maher

Digitally signed by William Maher
DN: cn=William Maher, o=Nuclear, ou=Nuclear Licensing Projects, email=william.maher@fpl.com, c=US
Date: 2021.11.23 09:06:52 -05'00'

William D. Maher
Licensing Director - Nuclear Licensing Projects

Cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC
Public Service Commission Wisconsin

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

SLRA Section B.2.3.15, "Fire Protection"

RAI B.2.3.15-3 (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 requires additional information in regard to the matters described below.

Background:

The "corrective actions" program element in GALL-SLR Report AMP XI.M26, "Fire Protection," states, in part, that "During the inspection of penetration seals, if any sign of degradation is detected within that sample [emphasis added], the scope of the inspection is expanded to include additional seals in accordance with the plant's approved fire protection program."

SLRA Appendix A, Section 16.2.2.15, "Fire Protection," and Appendix B, Section B.2.3.15, "Fire Protection," state, in part, that "During the inspection of penetration seals and fire damper assemblies, if any sign of abnormal degradation is detected within the sample [emphasis added], the inspection sample size is expanded, in accordance with the approved PBN fire protection program, to include an additional 10 percent of each type [emphasis added] of sealed penetration or fire damper assembly."

The enhancement to the "monitoring and trending" and "corrective actions" program elements in SLRA Section B.2.3.15 states, "Enhance plant procedures to require an inspection of an additional 10 percent of a type of seal when more than 15 percent of the sample population does not meet any acceptance criteria [emphasis added] during the 18-month inspection period."

The NRC staff notes that Routine Maintenance Procedure (RMP) 9057, "Fire Barrier Penetration Fire Seal Surveillance," states, for fire dampers, that an additional 10 percent will be tested due to damper failure and that the additional testing continues until failures is less than 15 percent.

Issue:

The NRC staff is unclear on whether the additional 10 percent is of each type of penetration seal or of a type of penetration seal, what is meant by "abnormal

degradation," and whether the additional 10 percent sample is inspected when any sign of degradation within the sample is detected or only when more than 15 percent of the sample does not meet any acceptance criteria.

Request:

1. Please discuss, including the basis/justification, whether the Fire Protection program will include inspection of an additional 10 percent of each type of penetration seal or an additional 10 percent of a type of penetration seal.
2. Given that GALL-SLR AMP XI.M26 states "any sign of degradation," please discuss what is meant by "abnormal degradation."
3. Please discuss whether the additional 10 percent sample is inspected when any sign of degradation within the sample is detected or only when more than 15 percent of the sample does not meet any acceptance criteria. If the later, then provide the basis/justification for "more than 15 percent." In addition, discuss the basis/justification for continuing additional testing for fire dampers until failures are less than 15 percent.

NEPB Response:

Based on further review of available documentation referenced in the applicable plant procedure, this response supersedes Attachment 1 to NEPB's October 25, 2021 response [Ref. 1] in its entirety to revise the information regarding penetration seal surveillance.

The following numbered responses correspond to the numbered requests above:

1. Each fire barrier penetration seal inspection sample comprises multiple penetration seal types. If degradation is detected in a given penetration seal type in the inspection sample, then evaluation in accordance with the Fire Protection program may require an expanded sample. When required, the expanded sample would be drawn from the remaining population of the fire penetrations seal type(s) that exhibited degradation in the initial inspection sample.

   [Note: Determining the need for sample expansion is discussed further in the response to request #3.]

   Limiting scope expansion in this manner will focus the inspection on the extent of condition for the seal type(s) of concern. This is similar to the approach used for other sample inspection programs described in NUREG-2191 where components of different materials are grouped separately to establish populations and sample sizes. The Appendix A and Appendix B Fire Protection sections in the SLRA will be revised to clarify that the additional inspections will include the penetration seal type(s) that exhibited degradation.
2. The word abnormal should not have been used. It will be removed from Appendix A, Section 16.2.2.15 and Appendix B, Section B.2.3.15. The acceptance criteria for seal inspections currently are no visual indications of cracking, separation of

seals from building structures and components, rupture, or puncture. Following incorporation of Commitment No. 19-a of this subsequent license renewal application, the acceptance criteria will include no indications of hardness, shrinkage and loss of strength as well.

3. There are no predetermined sample expansion criteria for fire barrier penetration seals in the PBN Fire Protection program. Rather, performance-based methods are approved for use to establish inspection, testing, and maintenance frequencies for fire protection systems and features required by NFPA 805 [Ref. 3]. Currently, approximately 33% of the fire barrier penetration seals are visually inspected every 18 months. When any of the penetration seals sampled 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 barrier penetration seal remains capable of performing its intended fire barrier function until the next scheduled inspection, or to identify the required repairs necessary to restore the approved seal design configuration. Additional fire barrier penetration seal inspections will be performed as required to provide reasonable assurance that the intended functions for fire protection are maintained. The expanded sample would focus on penetration seals 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. The Appendix A and Appendix B Fire Protection sections in the SLRA will be revised accordingly.

   The fire damper testing noted in the ‘Background’ discussion exercises an active portion of the fire damper assembly that is not subject to an aging management review; performance of static closure testing is not credited for SLR. The basis for continuing additional static closure testing until failures are less than 15 percent is that this is in accordance with the plant’s approved fire protection program as documented in ML20149E960 [Ref. 4] and ML20245A450 [Ref. 5]. Visual inspection of passive portions of the fire damper assemblies for age-related degradation coincides with the above testing and results in 10 percent of the fire damper assemblies being inspected every 18 months. Such inspections are acceptable only if there are no signs of degradation; non-conforming conditions are addressed in accordance with the plant’s approved fire protection program.

References:

1. NextEra Energy Point Beach, LLC (NEPB) Letter to NRC L-2021-200 dated October 25, 2021, Subsequent License Renewal Application – Aging Management Requests for Additional Information (RAI) Set 11 Response (ADAMS Accession No. ML21298A090)
2. 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)

3. Section 3.1.4.1 in Enclosure 3 to Letter from USNRC to NextEra Energy Point Beach, LLC, Subj: Point Beach Nuclear Plant, Units 1 and 2 – Issuance of Amendments Regarding Transition to a Risk-Informed, Performance-Based Fire protection Program in Accordance With 10 CFR 50.48(c) (CAC Nos. MF2372 and MF2373) (ADAMS Accession No. ML16196A093)
4. Letter from USNRC to Wisconsin Electric Power Company, Subj: NRC Receipt of Technical Evaluation of Fire Damper Tests for Point Beach Nuclear Plants, Units 1 and 2 in Response to Inspection Reports No. 50-266/87007 and No. 50-301/87007 (ADAMS Accession No. ML20149E960)
5. NRC Inspection Reports No. 50-266/89006 and No. 50-301/89006 (ADAMS Accession No. ML20245A450)

Associated SLRA Revisions:

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 evalua**~~inspec~~tion ~~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 ~~10 percent~~**sample** of each type of **penetration** seal~~ed 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 2 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	Continue the existing PBN Fire Protection AMP, including enhancement to: 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 specify that any loss of material to 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 preforming FP inspections will be qualified to do so, f) Enhance plant procedures to state that 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), i) Enhance plant procedures to specify that the dry chemical fire extinguishing systems will be inspected semi-annually, **and**	No later than 6 months prior to the SPEO, i.e.: PBN1: 04/05/2030 PBN2: 09/08/2032

No.	Aging Management Program or Activity (Section)	NUREG-2191 Section	Commitment	Implementation Schedule
			j) Enhance plant procedures to specify that the dry chemical fire extinguishing system inspections will be monitored and trended~~, and~~. ~~k) Enhance plant procedures to require an inspection of an additional 10 percent of a type of seal when more than 15 percent of the sample population does not meet any acceptance criteria during the 18-month inspection period.~~	

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, then **n evalua**~~inspec~~tion ~~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 ~~10 percent~~**sample** of each type of **penetration** seal~~ed 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 2 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 specify that any loss of material to 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 preforming FP inspections will be qualified to do so.
4. Detection of Aging Effects	Enhance plant procedures to state that 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 inspection of an additional 10 percent of a type of seal when more than 15 percent of the sample population does not meet any acceptance criteria during the 18-month inspection period.~~

Associated Enclosures:

None.