

**POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 (PBN)
SUBSEQUENT LICENSE RENEWAL APPLICATION (SLRA)
REQUEST FOR ADDITIONAL INFORMATION (RAI)
SAFETY - SET 12**

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 making 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.