November 14, 2014

NRC 2014-0073
10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

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

Response to Request for Additional Information (Radiation Release)
License Amendment Request 271 Associated with NFPA 805

References:
(1) NextEra Energy Point Beach, LLC, letter to NRC, dated June 26, 2013, "License Amendment Request 271, Transition to 10 CFR 50.48(c) - NFPA 805, 'Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants,' 2001 Edition" (ML131820453)
(2) NRC e-mail to NextEra Energy Point Beach, LLC, dated September 9, 2013, "Point Beach Nuclear Plant, Units 1 and 2 – Acceptance Review Regarding the NFPA 805 License Amendment Request – Opportunity to Supplement (TAC Nos. MF2372 and NF2373)" (ML13256A197)
(3) NextEra Energy Point Beach, LLC, letter to NRC, dated September 16, 2013, "License Amendment Request 271 Supplement 1 Transition to 10 CFR 50.48(c) – NFPA 805" (ML13259A273)
(4) NRC letter to NextEra Energy Point Beach, LLC, dated September 25, 2013, "Point Beach Nuclear Plant, Units 1 and 2 - Acceptance Review of Licensing Action re: License Amendment Request to Transition to NFPA 805, 'Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants' (TAC NOS. MF2372 and MF2373)" (ML13267A037)
(5) NRC e-mail to NextEra Energy Point Beach, LLC, dated October 20, 2014, "Point Beach Nuclear Plant, Units 1 and 2 – Requests for Additional Information (Radiation Release) re: LAR to Adopt NFPA 805 (TAC Nos. MF2372 and MF2373)" (ML14295A013)

Pursuant to 10 CFR 50.90, NextEra Energy Point Beach, LLC, (NextEra) requested to amend Renewed Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Plant (PBNP), Units 1 and 2 (Reference 1 and supplemented via Reference 3). The NRC accepted the license amendment request for review in response to Reference (2), as documented in Reference (4).

The NRC Staff has determined that additional information (Reference 5) is required to complete its evaluation. The Enclosure provides the NextEra response to the NRC Staff's request for additional information.

This letter contains no new Regulatory Commitments and no revisions to existing Regulatory Commitments.

If you have any questions regarding this letter, please contact Mike Millen at (920) 755-7845.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on November 14, 2014.

Very truly yours,

NextEra Energy Point Beach, LLC

Eric McCartney
Site Vice President

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC
PSCW

ENCLOSURE

NEXTERA ENERGY POINT BEACH, LLC
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
(RADIATION RELEASE) LICENSE AMENDMENT REQUEST 271
ASSOCIATED WITH NFPA 805

Pursuant to 10 CFR 50.90, NextEra Energy Point Beach, LLC, (NextEra) requested to amend renewed Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Plant (PBNP), Units 1 and 2 (Reference 1 and supplemented via Reference 3). The NRC accepted the license amendment request for review in response to Reference (2), as documented in Reference (4).

The NRC Staff has determined that additional information (Reference 5) is required to complete its evaluation. This Enclosure provides the NextEra responses to the NRC Staff's requests for additional information.

ARCB RAI 01

Attachment E, "NEI 04-02 Radioactive Release Transition" (located in ADAMS Accession No. ML13182A350), to the June 26, 2013, application references Calculation 99-0045, Revision 1, as the bounding analysis for a fire occurring in several facilities and in outside yard areas within the Protected Area where engineering controls may not be sufficient to control the release of radioactive materials. However, Attachment E does not identify outside yard areas as having been screened.

If radioactive materials may be stored in the outside yard areas, please explain why these areas were not considered in the Radioactive Release Transition Review, or provide justification for how the radioactive release is bounded by Calculation 99-0045.

NextEra Response

Outside Yard areas are screened in by the Radioactive Release Transition Review documented in Attachment E of the License Amendment Request (LAR 271, Reference 1). Fire Area "A01-F" / Fire Zone "YARD" encompasses all outside yard areas. Page E-186 of the LAR states that Fire Zone "YARD" is screened in, which means that it was determined that radioactive materials may be stored in these areas and that they are considered in the Radioactive Release Transition Review. Calculation 99-0045, "Site Boundary Dose Calculation for SeaLand Container Failure," is referenced in both the "Engineering Controls" and "Conclusions" sections for Fire Zone "YARD." The "Conclusions" section states, in part:

> *"Based on the results of PBNP Calculation No. 99-0045, Revision 1 and the use of radiation protection procedures, and revised fire emergency plans and training materials, PBNP's approach is deemed acceptable to meet NFPA 805 radioactive release performance criteria."*

Therefore, LAR Attachment E, as submitted, does screen in outside yard areas and does explain that Calculation 99-0045 is credited as the applicable bounding calculation. The explicit purpose of Revision 1 of this calculation is to provide a bounding analysis for the Point Beach site on the release of radioactivity contained within the maximally loaded low-specific activity (LSA) container due to a fire. The calculation results bound the dose consequences for all types of LSA containers and credible radioactive sources in Warehouse 7, the dry fuel cask manufacturing building, the Steam Generator Storage Facility south bay, outside yard areas within the protected area, the Unit 1 and 2 containment façades, and the turbine building.

ARCB RAI 02

For the liquid effluent, Calculation 99-0045, Revision 1, uses the recirculation water discharge flow rate to calculate the dilution factor. For the case in which the fire occurs in an outside yard area, please provide a justification for using this flow rate. Provide information on the availability and use of spill control kits, temporary dikes, storm drain covers, or other materials for containment of liquid effluents in areas where engineering controls are not in place.

NextEra Response

The basis for using the recirculation water discharge flow rate to calculate the dilution factor is described in Input 8 of Calculation 99-0045, Revision 1:

> "If there is more than one release point to the unrestricted area per unit within one-quarter mile of each other, then the combined liquid release may be used as the dilution factor."

Since any contaminated water released from firefighting efforts would leave the restricted area and enter Lake Michigan within 1/4 mile of the plant circulating water discharge(s), the total flow rate for the site was used to calculate the dilution factor.

This approach is described in NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants: A Guidance Manual for Users of Standard Technical Specifications," dated October 1987. Section 4.3 of NUREG-0133, Requirement for Implementing 10 CFR Part 50, describes the standard technical specification requirement for determining the cumulative dose contributions at least once every 31 days. In this section the near field average dilution factor (F_l) is defined. The description of the factor states that it shall consider "the combined liquid releases from each unit even if there is more than one release point to the unrestricted area per unit within one-quarter mile of each other."

Using this dilution factor, Calculation 99-0045 Revision 1 demonstrates that the dose limits of 10 CFR 20.1301, "Dose Limits for Individual Members of the Public," and 10 CFR 20.1302, "Compliance with Dose Limits for Individual Members of the Public," will not be exceeded for any fire involving radioactive materials stored on site.

Potential releases of contaminated gaseous and liquid effluents resulting from a fire in areas where engineering controls are not in place are bounded by Calculation 99-0045, Revision 1. Therefore, Point Beach does not rely upon special provisions (e.g., spill control kits, temporary dikes, storm drain covers, etc.) in order to meet the NFPA 805 fire protection program goals, objectives, and performance criteria for radioactive release in areas where engineering controls are not in place.

ARCB RAI 03

For Calculation 99-0045, Revision 1, please provide a summary of the assumptions, methodology, and resulting doses.

NextEra Response

Calculation 99-0045 Revision 1 contains one assumption. The calculation assumes that the standard container used for low-specific activity (LSA) waste shipments at the plant is completely consumed by an ordinary-hazard-type fire with the resulting release of all contained radioactivity over a period of one hour. The standard container is a twenty-foot intermodal (SeaLand) container of non-combustible construction. The one-hour duration is based on the use of a container that does not support combustion and the use of administrative controls which limit the amount of time a container is open, and prevent the storage of materials that could affect container integrity or serve as an ignition source.

The methodology used in Calculation 99-0045 Revision 1 is as follows:

1. The radioactivity contained in the standard container is calculated using the RADMAN radwaste computer program. The RADMAN program calculated the radioactivity in the standard container when it is maximally loaded with radioactive waste using the dimensional characteristics of the standard 20 foot intermodal container, the Point Beach Nuclear Plant (PBNP) radwaste source term, and the maximum permitted dose rate of 10 millirem/hour (mrem/hr) at two meters from the surface of the standard container (49 CFR Part 173, "Shippers – General Requirements for Shipments and Packagings").
2. For the airborne effluent pathway, the quantity of radioactivity released by the fire is calculated using the radioactivity contained in the standard container and fire release fractions described in Table 15 of NUREG-1889, "RASCAL 3.0.5 Workbook," dated September 2007. For the liquid effluent pathway, all of the radioactivity contained in the standard container is released by the fire.
3. The concentrations of radioactive material released in gaseous and liquid effluents and the dose consequences to an individual member of the public at the boundary of the unrestricted area are calculated using the methodology established in the PBNP Radiological Effluent Control Manual (RECM) and the PBNP Offsite Dose Calculation Manual (ODCM) to demonstrate compliance with 10 CFR 20.1302, "Compliance with dose limits for individual members of the public."

The calculated dose to an individual member of the public is 1.89E-02 mrem for the airborne effluent pathway and 1.08E-03 mrem for the liquid effluent pathway.

References

(1) NextEra Energy Point Beach, LLC, letter to NRC, dated June 26, 2013, "License Amendment Request 271, Transition to 10 CFR 50.48(c) - NFPA 805, 'Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants,' 2001 Edition" (ML131820453)

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