



NRC 2018-0044  
10 CFR 50.90

September 28, 2018

ATTN: Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Point Beach Nuclear Plant, Units 1 and 2  
Dockets 50-266 and 50-301

Subject: Supplement to Response to Request for Additional Information Regarding License Amendment Request 287, Application to Adopt 10 CFR 50.69, "Risk informed Categorization and Treatment of Structures, System, and Components (SSCs) for Nuclear Power Plants"

References:

1. NextEra Energy Point Beach, LLC letter NRC 2017-0043, "License Amendment Request 287, Application to adopt 10 CFR 50.69, 'Risk informed Categorization and Treatment of Structures, System, and Components (SSCs) for Nuclear Power Plants,' " August 31, 2017 (ML17243A201)
2. NextEra Energy Point Beach, LLC letter NRC 2017-0052, "Supplement to LAR 287, Application to adopt 10 CFR 50.69, 'Risk informed Categorization and Treatment of Structures, System, and Components (SSCs) for Nuclear Power Plants,' " October 26, 2017 (ML17299A012)
3. NRC e-mail "Final - Point Beach - 50.69 Risk Informed LAR 287, Request for Additional Information, CAC Nos. MG0196 and MG0197, EPID L-2017-LLA-0284," June 27, 2018 (ML18178A599)
4. NextEra Energy Point Beach, LLC letter NRC 2018-0038, "Response to Request for Additional Information Regarding License Amendment Request 287, Application to Adopt 10 CFR 50.69, 'Risk informed Categorization and Treatment of Structures, System, and Components (SSCs) for Nuclear Power Plants,' " August 10, 2018 (ML18222A539)

In Reference 1 and supplemented by References 2 and 4, NextEra Energy Point Beach, LLC (NextEra) submitted a license amendment request for the Point Beach Nuclear Plant, Units 1 and 2. The proposed amendment would revise the licensing basis by adding a license condition to allow for implementation of the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors."

NextEra Energy Point Beach, LLC

6610 Nuclear Road, Two Rivers, WI 54214

On September 12, 2018, NextEra participated in a conference call with the NRC staff to discuss the license condition and implementation items provided in Reference 4. This letter clarifies these items as discussed during the conference call. Attachment 1 to this letter lists the items that must be completed prior to implementation of the 10 CFR 50.69 categorization process and supersedes Attachment 1 to the Enclosure in Reference 4. Attachment 2 provides markups of the Point Beach Units 1 and 2 operating licenses containing the proposed license condition and supersedes Attachment 2 to the Enclosure in Reference 4.

This response does not alter the conclusions in Reference 1 that the proposed change does not involve a significant hazards consideration pursuant to 10 CFR 50.92, and there are no significant environmental impacts associated with the change.


This letter contains no new or revised regulatory commitments.

Should you have any questions regarding this submittal, please contact Mr. Eric Schultz, Licensing Manager, at 920-755-7854.

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

Executed on Sept 28, 2018

Sincerely,



Robert Craven  
Site Director  
NextEra Energy Point Beach, LLC

Enclosure

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

**Attachment 1**

**Table of 10 CFR 50.69 Implementation Items**

The table below identifies the items that are required to be completed prior to implementation of the 10 CFR 50.69 categorization process at Point Beach Nuclear Plant, Units 1 and 2. All issues identified below will be addressed and any associated changes will be made, focused scope peer reviews will be performed on changes that are PRA upgrades as defined in the PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.

NextEra Energy Point Beach, LLC 10 CFR 50.69 PRA Implementation Items	
Description	Resolution
NextEra will perform an evaluation of the as-built, as-operated plant against the SMA SSEL.	NextEra will perform an evaluation of the as-built, as-operated plant against the SMA SSEL. The SSEL updated to reflect the as-built, as-operated plant will be used in the 10 CFR 50.69 categorization.
The disposition to F&O IE-A1-01 presented in the TSTF-425 LAR indicates that a number of special initiators related to the 4160 volts alternating current (VAC) Vital Switchgear bus were not included in the internal events PRA (IEPRA) model because they were considered not significant, and estimated the CDF for sequences associated with these initiators as high as 1.9E-07/year. It is not clear to the NRC staff that excluding these sequences cannot increase the risk importance values for specific system components above the threshold criteria for determining safety significance as discussed in NEI 00-04, Section 5	The loss of a 4,160 VAC bus will be added to the PRA model as a special initiator to resolve internal events finding F&O IE-A1-01, as indicated in response to RAI 02.a.
The dispositions to F&Os AS-B6-01 and SY-A21-01 presented in the TSTF-425 LAR stated that although Emergency Diesel Generator (EDG) load management is a potential failure mode for EDGs, it is not modeled in the PRA. The TSTF-425 LAR further provided an estimate of the low likelihood that the EDG load management would be needed. The estimated low likelihood is based on the assumption that the events used in the estimate are independent. The NRC staff notes that loss of coolant accident (LOCA) initiators can induce loss of offsite power (LOOP) events and LOOP initiators can induce LOCAs (i.e., the need for safety injection (SI)) making these events dependent. Additionally, NRC staff notes that	A new failure mode associated with EDG load management will be added to the internal events and fire PRA model to resolve internal events findings AS-B6-01 and SY-A21-01 and fire finding PRM-B2-01, as indicated in response to RAI 02.b and 02.f.



NextEra Energy Point Beach, LLC 10 CFR 50.69 PRA Implementation Items	
Description	Resolution
modelling exclusions that cause just small increases to CDF/LERF can impact the categorization of specific structures, systems, and components (SSCs).	
The disposition to F&O AS-B7-01 presented in the TSTF-425 LAR states that recovery of LOOP events is only credited for station blackout (SBO) scenarios and the direct current (DC) batteries are conservatively assumed to fail at time zero. Conservative modeling in the PRA can skew the plant's risk profile and impact the SSCs risk importance values determined as part of 10 CFR 50.69 categorization.	The treatment of power recovery after LOOP events and battery modeling in the PRA model will be revised to be more realistic to resolve internal events finding AS-B7-01, as indicated in response to RAI 02.c.
The disposition to F&O HR-D1-01 in LAR Attachment 3 states that no further changes are required. Also, based on the disposition presented in the TSTF-425 LAR, the F&O appeared resolved. Yet, the LAR associated with the adoption of 10 CFR 50.69 states regarding the disposition of this F&O, "[p]rior to implementation, either this finding will be closed or a sensitivity study case will be performed to determine the impact on the CDF and LERF results for those categorizations that could be adversely affected by this finding."	F&O HR-D1-01 will be closed by the licensee using an NRC-accepted process (e.g., full-scope peer review, focused-scope peer review, or F&O closure review in accordance with Appendix X accepted by the NRC, with conditions, in letter dated May 3, 2017).
The description for F&O IFQU-A6-01 states, "HFEs from internal events are 'adjusted' with inadequate basis for those adjustments." The disposition for this F&O presented in the TSTF-425 LAR states that "stress multipliers" from Table 20-16 of NUREG/CR-1278, "Handbook of Human Reliability Analysis with Emphasis on Nuclear Power Plant Applications, Final Report," 1983 (ADAMS Accession Number ML071210299), which are referred to as "stress modifiers" in NUREG/CR-1278, were used to account for the stress associated with an internal flooding event. However, Table 20-16 of the cited NUREG lists modifiers to be applied to human error probabilities (HEPs) for different stress levels and they are not specific to internal flooding.	F&O IF-QU-A6-01 will be closed by the licensee using an NRC-accepted process (e.g., full-scope peer review, focused-scope peer review, or F&O closure review in accordance with Appendix X accepted by the NRC, with conditions, in letter dated May 3, 2017).

NextEra Energy Point Beach, LLC 10 CFR 50.69 PRA Implementation Items	
Description	Resolution
<p>The description for F&amp;O HRA-B2-01 found that credit for graphically distinct factors is taken for all HRA events, as opposed to taking credit for graphically distinct procedural steps that stand out from the other steps. The disposition for this F&amp;O states, “[o]nly about 10% of the HEPs that credited graphically distinct procedure steps would be increased by more than a factor of 2.” The disposition concludes “[b]ased on this review, the impact on the model from this finding is judged minimal.” NRC staff notes that modelling issues that can cause even small increases to CDF and LERF can potentially increase the risk importance values for specific system components above the threshold criteria for determining safety significance specified in NEI 00-04, Section 5</p>	<p>The HEPs developed for the Fire PRA model will be updated to remove the graphically distinct credit in the cognitive portion of the HEP. The dependency analysis will be updated and the Fire PRA quantified using these updated Human Error Probabilities, as indicated in response to RAI 02.g.</p>
<p>The description for F&amp;O FQ-A1-01 states, “some basic events that have been mapped to scenarios, components, or cables are not found in the CAFTA model.” The associated disposition states that “information in the mapping table should be reviewed to eliminate the extraneous information and eliminate the discrepancies.” The disposition for this F&amp;O presented in the PBNP LAR for transition to the National Fire Protection Association (NFPA) Standard 805 (ADAMS Accession Number ML13182A353) indicates that this review has been performed which identified six failure events that were excluded from the PRA associated with the MCR. The PBNP NFPA 805 LAR for this disposition also states that a sensitivity study was conducted which determined that the exclusion of these basic events have a negligible impact on fire risk.</p>	<p>The basic event mapping tables in the fire PRA will be reviewed and compared to the present basic event mapping associated with each equipment or cable. Those items that are no longer needed will be removed and any incorrect mapping will be updated. The Fire PRA model will be quantified using this updated mapping table, as indicated in response to RAI 02.h.</p>

Modeling of the Reactor Coolant Pump (RCP) Shutdown Seals	Update the internal events and fire PRA models to credit the Westinghouse Generation III RCP seals using the guidance from PWROG-14001-P, Revision 1 and the limitations and conditions in the associated NRC's safety evaluation (ADAMS Accession Number ML17200A116), as stated in response to RAI 10. The additional failure contribution of the Westinghouse RCP Shutdown Seal Bypass failure mode will be added to the PRA models, consistent with the limitations and conditions in the NRC safety evaluation for PWROG-14001-P, Revision 1.
PRA maintenance versus PRA upgrade	All changes performed to the PRA to address the above implementation items will be independently reviewed to determine if the resolution of those items in the PRA model constitutes a PRA upgrade. If the review identifies a change is a PRA upgrade, a focused-scope peer review will be performed for that change, and any resulting F&Os will be resolved in the PRA to meet Capability Category II.

Attachment 2

Markup of the Point Beach Units 1 and 2 Operating Licenses



**INSERT CONDITION E**

E. Adoption of 10 CFR 50.69, “Risk-Informed categorization and treatment of structures, systems, and components for nuclear power plants”

1. NextEra Energy Point Beach is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 structures, systems, and components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (AN0-2) passive categorization method to assess passive component risk for Class 2 and Class 3 SSCs and their associated supports; and the results of non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards, i.e., seismic margin analysis (SMA) to evaluate seismic risk, and a screening of other external hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009; as specified in License Amendment No. [NUMBER] dated [DATE].
2. Prior to implementation of the provisions of 10 CFR 50.69, NextEra Energy Point Beach shall complete the items below:
  - a. Item A in Attachment 1, List of Categorization Prerequisites, to NextEra Energy Point Beach letter NRC 2017-0043, “License Amendment Request 287, Application to Adopt 10 CFR 50.69, ‘Risk-Informed Categorization and Treatment of Structures, Systems, and Components (SSCs) for Nuclear Power Plants,’ ” dated August 31, 2017; and
  - b. Attachment 1, Point Beach 10 CFR 50.69 PRA Implementation Items, in NextEra Energy Point Beach letter NRC-2018-0044, “Supplement to Response to Request for Additional Information Regarding License Amendment Request 287, Application to Adopt 10 CFR 50.69, ‘Risk informed Categorization and Treatment of Structures, System, and Components (SSCs) for Nuclear Power Plants,’ ” dated September 28, 2018.
3. Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

D. Physical Protection

NextEra Energy Point Beach shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans, including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Point Beach Nuclear Plant Physical Security Plan, (Revision 4)," submitted by letter dated May 10, 2006. NextEra Energy Point Beach, LLC shall fully implement and maintain in effect all provisions of the Commission-approved Point Beach Nuclear Plant Cyber Security Plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The NextEra Energy Point Beach CSP was approved by License Amendment No. 243 as supplemented by a change approved by License Amendment No. 247 and License Amendment No. 252.

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F. NextEra Energy Point Beach Unit 1 shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the license amendment request dated June 26, 2013, and supplements dated September 16, 2013, July 29, 2014, August 28, 2014, September 25, 2014, November 14, 2014, December 19, 2014, January 16, 2015, May 12, 2015, August 26, 2015, February 22, 2016, April 07, 2016, and May 3, 2016, and as approved in the safety evaluation report dated September 8, 2016. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or license condition, and the criteria listed below are satisfied.

1. Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.



D. Physical Protection

NextEra Energy Point Beach shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans, including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Point Beach Nuclear Plant Physical Security Plan, (Revision 4)," submitted by letter dated May 10, 2006. NextEra Energy Point Beach, LLC shall fully implement and maintain in effect all provisions of the Commission-approved Point Beach Nuclear Plant Cyber Security Plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The NextEra Energy Point Beach CSP was approved by License Amendment No. 247 as supplemented by a change approved by License Amendment No. 251 and License Amendment No. 256.

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F. NextEra Energy Point Beach Unit 2 shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the license amendment request dated June 26, 2013, and supplements dated September 16, 2013, July 29, 2014, August 28, 2014, September 25, 2014, November 14, 2014, December 19, 2014, January 16, 2015, May 12, 2015, August 26, 2015, February 22, 2016, April 07, 2016, and May 3, 2016 and as approved in the safety evaluation report dated September 8, 2016. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or license condition, and the criteria listed below are satisfied.

1. Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact