



November 25, 2009

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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

License Amendment Request 241  
Alternative Source Term  
Response to Request for Additional Information

- References:
- (1) FPL Energy Point Beach, LLC letter to NRC, dated December 8, 2008, Submittal of License Amendment Request 241, Alternative Source Term (ML083450683)
  - (2) NRC letter to FPL Energy Point Beach, LLC, dated August 26, 2009, Point Beach Nuclear Plant, Units 1 and 2 - Request for Additional Information from Containment and Ventilation Branch Related to the Proposed Alternate Source Term Amendment (TAC Nos. ME0219 and ME0220) (ML092360535)
  - (3) NextEra Energy Point Beach, LLC letter to NRC, dated September 10, 2009, License Amendment Request 241, Alternative Source Term, Response to Request for Additional Information (ML092540144)
  - (4) NRC electronic mail to NextEra Energy Point Beach, LLC, dated October 8, 2009, Request for Additional Information from the Containment and Ventilation Branch Regarding Alternate Source Term - Round 3 (ML092810465)
  - (5) NextEra Energy Point Beach, LLC letter to NRC, dated April 17, 2009, Supplement to License Amendment Request 241, Proposed Technical Specifications for Primary Auxiliary Building Ventilation (VNPAB) (ML091100182)

NextEra Energy Point Beach, LLC (NextEra) submitted License Amendment Request (LAR) 241 (Reference 1) to the NRC pursuant to 10 CFR 50.90. The license amendment would revise the current licensing basis to implement the alternative source term (AST) through reanalysis of the radiological consequences of the Point Beach Nuclear Plant (PBNP) Final Safety Analysis Report (FSAR) Chapter 14 accidents.

The NRC staff determined that additional information was required to enable the staff's review of the amendment request (Reference 2). NextEra provided responses to the request for additional information in Reference (3). The NRC staff requested that NextEra provide additional clarification of this response in Reference (4). Enclosure 1 provides the NextEra response to the NRC staff's request.

In response to the Question on SCVB#4b received in Reference (4), additional changes to proposed Technical Specification (TS) 3.7.14 Surveillance Requirements (SR), submitted in Reference (5), were identified. The proposed revision to TS 3.7.14 SR and corresponding Bases are contained in Enclosure 2. The revised Bases are being provided for information only. NextEra is not requesting approval of the Bases.

The information contained in this letter does not alter the no significant hazards consideration contained in References (1) and (5), and continues to satisfy the criteria of 10 CFR 51.22 for categorical exclusion from the requirements for an environmental assessment.

The revision to proposed TS 3.7.14 SR has been reviewed by the Plant Operations Review Committee.

This letter contains no new regulatory commitments and no revision to existing commitments.

In accordance with 10 CFR 50.91, a copy of this letter is being provided to the designated Wisconsin Official.

I declare under penalty of perjury that the foregoing is true and correct.  
Executed on November 25, 2009.

Very truly yours,

NextEra Energy Point Beach, LLC



Larry Meyer  
Site Vice President

Enclosures

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

## ENCLOSURE 1

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

#### LICENSE AMENDMENT REQUEST 241 ALTERNATIVE SOURCE TERM RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

Via electronic mail (Reference 1), the NRC staff determined that clarification of information provided in Reference (2) was required to enable the Containment and Ventilation Branch to complete its review of License Amendment Request (LAR) 241, Alternative Source Term (AST). The following information is provided by NextEra Energy Point Beach, LLC (NextEra) in response to the NRC staff's clarification request.

#### **Question on SCVB#1**

*Confirm that the new equipment that will be added to the CREFS and the VNPAB systems (see list in RAI response) to provide active redundancy will be procured or commercially dedicated as safety-related.*

#### **NextEra Response**

The new equipment identified in the Reference (2) response to Question SCVB#1 will be procured or commercially dedicated as safety-related.

#### **Questions on SCVB#3**

- a. *Describe the CREFS supply register connected to the Control Room Mechanical Equipment Room and justify why the Mechanical Equipment Room will be at essentially the same pressure as the Turbine Building.*

#### **NextEra Response**

The 10" x 16" register into the mechanical equipment room provides a small amount of air flow from the control room emergency filtration system (CREFS) to cool the room with filtered air during all modes of operation. To ensure accurate control room (CR) unfiltered in-leakage measurements during the tracer gas test in 2003, the door between the mechanical equipment room and the turbine building was opened to assist in venting tracer gas that was introduced into the room via this register. This tracer gas test simulated the new CREFS Accident Mode 5 test configuration. Considering that the mechanical equipment room is not part of the control room envelope (CRE), leaving the door open during tracer gas testing ensures that the pressure in the mechanical equipment room is equal to the turbine building pressure.

- b. *Describe the design details on how the CSR Outside Air Damper (VNCSR-4850) will be maintained in the closed position during both normal operation and design basis events.*

**NextEra Response**

Cable spreading room (CSR) outside air damper VNCSR-4850 will be manually aligned to the closed position as the normal position and will also fail closed on loss of power and instrument air. Additionally, there will be no automatic signals provided to open this valve. This provides assurance that the damper will remain closed during both normal operation and design basis events.

- c. *Describe the Tech Spec Surveillance Requirement SR 3.7.9.6 (CREFS 18 Month Flow and DP Test) test procedure requirement to measure DP from the Control Room Envelope (CRE) to all adjacent volumes.*

**NextEra Response**

Technical Specification (TS) Surveillance Requirement (SR) 3.7.9.6 requires measurement of  $\Delta P$  between the control room envelope (CRE) and the turbine building. As part of the site's surveillance program, additional measurements are taken including the  $\Delta P$  between the CRE and the CSR, the CRE and the mechanical equipment room, the CRE and the Operations office, and the CRE and the primary auxiliary building (PAB).

**Question on SCVB#4b**

*Modify the proposed VNPAB TS surveillance and/or Basis to include additional or more specific acceptance criteria (e.g., fan speed, minimum flow rate, pressure differential) to ensure the VNPAB safety function for AST is satisfied.*

**NextEra Response**

NextEra submitted proposed TS 3.7.14, Primary Auxiliary Building Ventilation (VNPAB), and corresponding Bases in Reference (3) to provide the limiting conditions which ensure that the primary auxiliary building vent stack will be the source of the release associated with emergency core cooling system (ECCS) equipment leakage during the recirculation phase of a large break loss of coolant accident (LOCA). Verification that the associated low flow lights for the filter and stack fans, with one VNPAB filter fan and one VNPAB stack fan running, is being added to previously submitted SR 3.7.14.1. Previously submitted SR 3.7.14.2 is renumbered as SR 3.7.14.3. Verification that the VNPAB system can maintain a PAB pressure less than atmospheric pressure and less than turbine building pressure is being added as SR 3.7.14.2. These changes to TS 3.7.14 are being added as verification for the AST function of the VNPAB system.

As a result of further review of TS 3.7.14 relative to this question, the NRC requested the following additional information (Reference 4):

*"LCO 3.7.14 - The operability definition provided in page B 3.7.14-2 together with LCO 3.7.14 and CONDITION A implies that you have 7 days before entering Required Action B.1, if the entire VNPAB system is not operable. We are not sure if this is your intent. If it is, provide justification for the proposed TS."*

This topic was further discussed in a teleconference between NRC and NextEra representatives on November 13, 2009. NextEra confirmed in the teleconference that the intent of TS 3.7.14 is to allow 7 days before entering Required Action B.1, even if the entire VNPAB system is not operable. Provided below is further justification for the allowed out-of-service (OOS) time for VNPAB.

The VNPAB system was added to the technical specifications as a Criterion 4 limiting condition for operation as a system that has been shown by operating experience to have potential significance for the control room operators. The proposed technical specification provides a 7 day OOS time for the VNPAB. The proposed allowed OOS time for the VNPAB is based upon it having no role in the contribution to the core damage frequency and the extremely low probability of  $3.4 \times 10^{-8}$  per year for core damage due to a large break LOCA, in combination with maximum containment leakage, maximum ECCS leakage and maximum CR in-leakage occurring while the VNPAB system is OOS. Under these conditions, the dose to control room operators will increase by approximately 6 Rem, with no increase to previously analyzed offsite dose. The proposed TS allowing a 7 day OOS time is also based on the existing CREFS TS 3.7.9 which allows a 7 day OOS time for the entire CREFS system not being operable. A justification for deviation for TS 3.7.9 to permit the 7 day OOS time for CREFS was submitted to the NRC as part of the PBNP LAR to convert to Improved Technical Specifications (Reference 5). The NRC subsequently approved this LAR in Reference (6).

The VNPAB and the CREFS are similar in design with the use of multiple fans in single duct work systems. The PBNP maintenance practices for the VNPAB system take into consideration the VNPAB system design and typically require that all four VNPAB filter and stack fans be removed from service to allow corrective maintenance or repair of any one of the fans or their associated components. Therefore, an allowed OOS time of less than 7 days has the potential to require the shutdown of both PBNP units for a minimal safety benefit.

The proposed revisions to TS 3.7.14 and associated Bases are contained in Enclosure 2. The Bases are being provided for information only. NextEra is not requesting approval of the Bases.

The proposed revisions to TS 3.7.14 do not alter the no significant hazards consideration contained in References (2) and (3), and continue to satisfy the criteria of 10 CFR 51.22 for categorical exclusion from the requirements for an environmental assessment.

The revision to proposed TS 3.7.14 SR has been reviewed by the Plant Operations Review Committee.

## References

- (1) NRC electronic mail to NextEra Energy Point Beach, LLC, dated October 8, 2009, Request for Additional Information from the Containment and Ventilation Branch Regarding Alternate Source Term - Round 3 (ML092810465)
- (2) NextEra Energy Point Beach, LLC letter to NRC, dated September 10, 2009, License Amendment Request 241, Alternative Source Term, Response to Request for Additional Information (ML092540144)
- (3) NextEra Energy Point Beach, LLC letter to NRC, dated April 17, 2009, Supplement to License Amendment Request 241, Proposed Technical Specifications for Primary Auxiliary Building Ventilation (VNPAB) (ML091100182)
- (4) NRC electronic mail to NextEra Energy Point Beach, LLC, dated November 12, 2009, RE: Status-Containment and Ventilation Branch (ML093240426)
- (5) Nuclear Management Company, LLC letter to NRC, dated November 15, 1999, Application for Amendment to Facility Operating License Appendix A: Technical Specifications Improvement Project, Point Beach Nuclear Plant, Units 1 and 2 (ML993490282 and ML993490440)
- (6) NRC letter to Nuclear Management Company, LLC, dated August 8, 2001, Point Beach, Units 1 and 2, License Amendment, Conversion to Improved Technical Specifications (ML012250504)

## ENCLOSURE 2

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

#### LICENSE AMENDMENT REQUEST 241 ALTERNATIVE SOURCE TERM RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

#### PROPOSED REVISION TO TECHNICAL SPECIFICATION 3.7.14 SURVEILLANCE REQUIREMENTS AND CORRESPONDING BASES

In a supplement to License Amendment Request 241, Proposed Technical Specifications for Primary Auxiliary Building Ventilation (VNPAB) (Reference 1), the following new Technical Specification (TS) 3.7.14 Surveillance Requirements (SR) were proposed:

SR 3.7.14.1 Operate the VNPAB for  $\geq 15$  minutes. FREQUENCY 31 days

SR 3.7.14.2 Verify VNPAB manual start capability and alignment. FREQUENCY 18 months

SR 3.7.14.1 is modified to add "filter and stack fans" and "Verify the associated low flow lights for filter fans and for stack fans are not lit" as follows:

SR 3.7.14.1 Operate the VNPAB filter and stack fans for  $\geq 15$  minutes. Verify the associated low flow lights for filter fans and for stack fans are not lit. FREQUENCY 31 days

New SR 3.7.14.2 states, "Verify the VNPAB system can maintain a PAB pressure less than atmospheric pressure and less than turbine building pressure" as follows:

SR 3.7.14.2 Verify the VNPAB system can maintain a PAB pressure less than atmospheric pressure and less than turbine building pressure. FREQUENCY 18 months

Previously submitted SR 3.7.14.2 is renumbered as "SR 3.7.14.3" as follows:

SR 3.7.14.3 Verify VNPAB manual start capability and alignment. FREQUENCY 18 months

The proposed revisions TS SR 3.7.14 do not alter the no significant hazards consideration contained in References (1) and (2), and continue to satisfy the criteria of 10 CFR 51.22 for categorical exclusion from the requirements for an environmental assessment.

The proposed revisions to TS SR 3.7.14 and associated Bases follow.

## **References**

- (1) NextEra Energy Point Beach, LLC letter to NRC, dated April 17, 2009, Supplement to License Amendment Request 241, Proposed Technical Specifications for Primary Auxiliary Building Ventilation (VNPAB) (ML091100182)
- (2) FPL Energy Point Beach, LLC letter to NRC, dated December 8, 2008, Submittal of License Amendment Request 241, Alternative Source Term (ML083450683)

### 3.7 PLANT SYSTEMS

#### 3.7.14 Primary Auxiliary Building Ventilation (VNPAB)

LCO 3.7.14 VNPAB shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

#### ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. VNPAB inoperable.	A.1 Restore VNPAB to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

#### SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.14.1 Operate the VNPAB <u>filter and stack fans</u> for $\geq 15$ minutes. <u>Verify the associated low flow lights for filter fans and for stack fans are not lit.</u>	31 days
<u>SR 3.7.14.2</u> <u>Verify the VNPAB system can maintain a PAB pressure less than atmospheric pressure and less than turbine building pressure.</u>	<u>18 months</u>
SR 3.7.14.3 Verify VNPAB manual start capability and alignment.	18 months

## B 3.7 PLANT SYSTEMS

### B 3.7.14 Primary Auxiliary Building Ventilation (VNPAB)

#### BASES

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#### BACKGROUND

The VNPAB exhaust system ensures that the primary auxiliary building vent stack is the source of the release associated with the ECCS equipment leakage during the containment sump recirculation phase of a large break LOCA, by ~~providing exhaust flow from areas which have possible contamination~~ maintaining a PAB pressure less than atmospheric pressure and less than turbine building pressure. No minimum VNPAB exhaust flow rate is assumed in the LOCA dose analysis. The VNPAB system operates during normal unit operation.

The VNPAB exhaust system consists of two filter fans (W-30A/B), two stack fans (W-21A/B), and the associated ductwork and backdraft dampers necessary to the extent that the required exhaust flow path can be maintained.

Exhaust air is filtered through roughing and high efficiency filters (F-29) for removal of particulates. The air exhausted from the primary auxiliary building is continuously monitored by a noble gas radiation monitor (RE-214). A detector output above its set point will initiate exhaust filtration through activated charcoal filters (F-23). No filters are credited in the dose analyses.

The LOCA control room dose analysis assumes that the ECCS equipment leakage activity release pathway X/Q to be at the location of the PAB vent stack. Operation of the VNPAB ~~exhaust fans with one filter fan and one stack fan running, and verification that the associated low flow lights for filter fans and for stack fans are not lit and that the VNPAB system can maintain a PAB pressure less than atmospheric pressure and less than turbine building pressure~~, assures this release point.

The VNPAB does not automatically restart after being load shed following a loss of offsite power, and manual Operator action from the Control Room is required to restart VNPAB within 30 minutes following the alignment of RHR to containment sump recirculation. The VNPAB filter and stack fans have been included in the emergency diesel generator loading profile during the recirculation phase of a loss of coolant accident.

BASES

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APPLICABLE  
SAFETY ANALYSES

The VNPAB assures the proper X/Q for airborne radiological protection for control room personnel, as demonstrated by the control room dose analyses for the LOCA.

The VNPAB satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).

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LCO

The VNPAB exhaust is required to be OPERABLE to ensure that the control room habitability limits are met following the LOCA. The VNPAB is considered OPERABLE when individual components necessary to ensure that the primary auxiliary building vent stack is the source of the radiological emission associated with ECCS equipment leakage during the containment sump recirculation phase are OPERABLE. The VNPAB is considered OPERABLE when:

- a. Both VNPAB filter fans (W-30A and W-30B) are OPERABLE;
  - b. Both VNPAB stack fans (W-21A and W-21B) are OPERABLE;
  - c. The associated low flow lights for filter fans and for stack fans are not lit with one VNPAB filter fan and one VNPAB stack fan running;
  - d. The VNPAB system can maintain a PAB pressure less than atmospheric pressure and less than turbine building pressure;
  - e. Ductwork and backdraft dampers are OPERABLE to the extent that an exhaust path can be maintained; and
  - f. VNPAB exhaust is capable of being manually initiated.
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APPLICABILITY

In MODES 1, 2, 3, and 4, VNPAB must be OPERABLE to control operator exposure during a large break LOCA.

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ACTIONS

A.1

When VNPAB is inoperable, action must be taken to restore the system to OPERABLE status within 7 days. The 7 day Completion Time is based on the low probability of a LOCA challenging control room habitability occurring during this period.

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ACTIONS (continued) B.1 and B.2

If VNPAB cannot be restored to OPERABLE status within the required Completion Time, the unit must be placed in a MODE that minimizes accident risk. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Time is reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

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SURVEILLANCE  
REQUIREMENTS

SR 3.7.14.1

One filter and one stack fan are normally in operation. Standby fans should be checked periodically to ensure that they function properly. Proper functioning is confirmed through verification that the associated low flow lights for filter fans and for stack fans are not lit with one filter fan and one stack fan running. As the environment and normal operating conditions on this system are not severe, testing each fan subsystem once every month provides an adequate check of this system. Systems without heaters need only be operated for  $\geq 15$  minutes to demonstrate the function of the system. The 31 day Frequency is based on the reliability of the equipment.

SR 3.7.14.2

This test verifies that the VNPAB system can maintain a PAB pressure less than atmospheric pressure and less than turbine building pressure. These pressure readings are periodically tested to verify proper functioning of the VNPAB system. The VNPAB system is designed to maintain a PAB pressure less than atmospheric pressure and less than turbine building pressure with one filter fan and one stack fan running. The 18 month Frequency is acceptable based on the reliability of the equipment.

SR 3.7.14.3

This test verifies manual actuation capability for VNPAB. Manual actuation capability is required for OPERABILITY of the VNPAB. The 18 month Frequency is acceptable based on the inherent-reliability of manual actuation circuits.

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REFERENCES

1. FSAR. Section 9.5.
  2. FSAR. Section 14.3.5.
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