



October 2, 2009

NRC 2009-0105  
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 Clarification Request

- References:
- (1) FPL Energy Point Beach, LLC letter to NRC, dated December 8, 2008, License Amendment Request 241, Alternative Source Term (ML083450683)
  - (2) FPL Energy Point Beach, LLC Letter to NRC, dated January 27, 2009, Supplement to License Amendment Request 241, Transmittal of Proposed License Conditions (ML090280348).
  - (3) NRC letter to NextEra Energy Point Beach, LLC, dated August 7, 2009, Point Beach Nuclear Plant, Units 1 and 2 – Request for Additional Information from Electrical Engineering Branch Re: Alternate Source Term (TAC Nos. ME0219 and ME0220) (ML092150092)
  - (4) NextEra Energy Point Beach, LLC letter to NRC, dated September 4, 2009, License Amendment Request 241, Alternative Source Term, Response to Request for Additional Information (ML092510118)
  - (5) NRC electronic mail to NextEra Energy Point Beach, LLC, Draft – RAI Questions from the Electrical Engineering Regarding the Alternate Source Term Round 2, dated September 21, 2009 (ML092640514)

NextEra Energy Point Beach, LLC (NextEra) submitted License Amendment Request (LAR) 241 (Reference 1) and transmitted proposed License Conditions related to LAR 241 (Reference 2), 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 via Reference (3) to enable the staff's review of the amendment request. NextEra provided responses to the request for

additional information in Reference (4). In Reference (5), the NRC staff requested additional clarification for two of the responses provided in Reference (4).

Enclosure 1 provides the NextEra response to the NRC staff's clarification request.

Enclosure 2 provides the list of proposed AST license conditions. One additional License Condition in support of the AST LAR has been added to the list. The Plant Operating Review Committee has reviewed this change.

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

Summary of Regulatory Commitments

The following new Regulatory Commitment is proposed:

- Modifications will be completed prior to implementation of LAR-241 to reduce the limiting design basis emergency diesel generator loading on Train B to less than or equal to 2877 kW.

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 October 2, 2009.

Very truly yours,

NextEra Energy Point Beach, LLC

A handwritten signature in black ink, appearing to read "Larry Meyer", is written over a horizontal line.

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 CLARIFICATION REQUEST

The NRC staff requested additional information (Reference 1) to complete the staff's review of License Amendment Request (LAR) 241, Alternative Source Term (AST) (Reference 2). NextEra Energy Point Beach, LLC (NextEra) provided responses to the request for additional information (RAI) via Reference 3. Electronic mail dated September 21, 2009, from the NRC staff to NextEra requested additional clarification for two of the responses provided in Reference 3. The following information is provided by NextEra in response to the NRC staff's clarification request.

##### **Question 1**

*Provide additional details describing the testing of the EDGs to ensure the EDGs are capable to handle the AST loading, as provided in the response to RAI #1 (Sept 4, 2009 letter).*

##### **NextEra Response**

During a teleconference between NextEra and the NRC on September 22, 2009, the NRC asked whether the containment spray (CS) pumps are accounted for in the current emergency diesel generator (EDG) loading. As noted in NextEra's response to Question 1 of Reference 3, the CS pumps are currently automatically loaded on the EDGs. Therefore, the EDG loading summarized in NextEra's response to Question 2 of Reference 3 included the loads associated with the CS pumps.

Additionally, the NRC staff asked whether the current EDG load testing will address the additional loads as a result of the AST modifications. The current EDG margin and endurance testing addresses and bounds the additional loads as a result of the AST modifications as follows:

- For the A Train EDGs (G-01 and G-02), margin load testing is based on the 2000-hour rating of the EDG (2850 kW) rather than the specific load. The worst case design basis accident Train A loading of 2779 kW is well within the 2000-hour rating of the Train A EDGs. This includes the 25 kW for the additional automatic loads associated with AST. Current margin load testing is performed over a range of 2835–2970 kW at rated power factor and accounts for the additional automatic loads for AST.
- For the Train B EDGs (G-03 and G-04), AST modifications will result in a net decrease in the worst case design basis accident loading. Certain non-essential loads which are currently automatically loaded will be removed. The worst case design basis accident

Train B loading considering AST loads is 2877 kW. This value supersedes the 2890 kW value provided in Reference 3. The 200-hour rating for B-train EDGs is 2951 kW. A License Condition (Enclosure 2) is proposed that requires the current margin load testing for Train B EDGs to be performed over a range of 2877–2950 kW at rated power factor. This range will account for the automatic loads for AST. The License Condition will remain in effect until the implementation of LAR 261 (Reference 4) for Unit 1. New EDG TS were submitted for approval in Supplement 2 to LAR 261 (Reference 5).

## **Question 2**

*For the components listed in response to RAI#6, are these existing cables, motors, and motor terminations?*

## **NextEra Response**

The components listed in response to Question 6 of Reference 3 that will be added to the PBNP 10 CFR 50.49 program environmental qualification (EQ) will be a combination of replacement and existing components. The EQ evaluation for these components has been completed. The results are summarized in the table below. Although the mission time for these components following design basis accidents is 30 days, the EQ qualification is based on the worst-case one year integrated post accident dose.

Component	Replacement or Existing	Required Qualification Rads	Component Qualification Rads
Power cables for exhaust stack fan motor (W-21A-M)	Replacement	$1.16 \times 10^7$	$1.84 \times 10^8$
Power cables for exhaust stack fan motor (W-21B-M)	Replacement	$1.16 \times 10^7$	$1.84 \times 10^8$
Exhaust filter fan motor (W-30A-M) and motor terminations	Replacement	$1 \times 10^5$	$2 \times 10^7$
Exhaust filter fan motor (W-30B-M) and motor terminations	Replacement	$1 \times 10^5$	$2 \times 10^7$
Power cables for W-30A-M and W-30B-M	Existing	$1.16 \times 10^7$	$4.3 \times 10^7$
Power and control cables for control room recirculation fan motor (W-13B1-M)	Existing	$1.16 \times 10^7$	$3.89 \times 10^7$
Power and control cables for control room recirculation fan motor (W-13B2-M)	Existing	$1.16 \times 10^7$	$3.89 \times 10^7$
Power and control cables for control room recirculation fan motor (W-14A-M)	Existing	$1.16 \times 10^7$	$3.89 \times 10^7$
Power and control cables for control room recirculation fan motor (W-14B-M)	Existing	$1.16 \times 10^7$	$3.89 \times 10^7$

The addition of these components to the 10 CFR 50.49 EQ program and the installation of the replacement motors and cables are being implemented as part of the AST modifications. Addition of the components to the 10 CFR 50.49 EQ program ensures that they are qualified for design basis accident harsh environmental conditions.

## **References**

- (1) NRC letter to NextEra Energy Point Beach, LLC, dated August 7, 2009, Point Beach Nuclear Plant, Units 1 and 2 – Request for Additional Information from Electrical Engineering Branch Re: Alternate Source Term (TAC Nos. ME0219 and ME0220) (ML092150092)
- (2) FPL Energy Point Beach, LLC letter to NRC, dated December 8, 2008, License Amendment Request 241, Alternative Source Term (ML083450683)
- (3) NextEra Energy Point Beach, LLC letter to NRC, dated September 4, 2009, License Amendment Request 241, Alternative Source Term, Response to Request for Additional Information (ML092510118)
- (4) FPL Energy Point Beach, LLC letter to NRC, dated April 7, 2009, License Amendment Request 261, Extended Power Uprate (ML091250564)
- (5) NextEra Energy Point Beach, LLC letter to NRC, dated June 17, 2009, License Amendment Request 261 Supplement 2, Extended Power Uprate (ML091690087)

**ENCLOSURE 2**

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

**LICENSE AMENDMENT REQUEST 241  
ALTERNATIVE SOURCE TERM  
RESPONSE TO CLARIFICATION REQUEST**

**PROPOSED LICENSE CONDITIONS TO APPENDIX C  
FOR OPERATING LICENSES DPR-24 AND DPR-27**

APPENDIX C  
ADDITIONAL CONDITIONS  
OPERATING LICENSE DPR-24

NextEra Energy Point Beach, LLC shall comply with the following conditions and the schedules noted below:

<u>Amendment Number</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
	<u>NextEra Energy Point Beach will modify the PBNP control room (CR) radiation shielding to ensure CR habitability requirements are maintained. This modification is scheduled to be completed following Nuclear Regulatory Commission (NRC) approval of LAR 241, "Alternative Source Term," during the Unit 1 (2010) refueling outage.</u>	
	<u>NextEra Energy Point Beach will modify the containment spray (CS) and residual heat removal (RHR) systems to provide throttling capability of CS and RHR during the emergency core cooling system (ECCS) recirculation phase. These modifications will be completed on a unit-specific basis at the next Unit 1 (2010) refueling outage.</u>	
	<u>NextEra Energy Point Beach will revise PBNP Emergency Operating Procedures (EOPs) to direct continued containment spray while on sump recirculation. These procedure changes will be implemented following NRC approval of LAR 241, "Alternative Source Term," and following the completion of each unit-specific installation of the CS and RHR system modifications to provide throttling capability during the ECCS recirculation phase.</u>	
	<u>NextEra Energy Point Beach will modify the control room emergency filtration system (CREFS) to create a new alignment for the accident mode that provides a combination of filtered outside air and filtered recirculation air. The modifications will include redundancy for all CREFS active components that must reposition from their normal operating position, and auto-start capability on loss of offsite power in conjunction with a containment isolation or high control room radiation signal from an emergency diesel generator supplied source for the CREFS fans required for the new system alignment. This modification will be completed following NRC approval of LAR 241, "Alternative Source Term," during the second site refueling outage that completes installation of the CS and RHR system modifications to provide throttling capability during the ECCS recirculation phase, thus completing installation for both units.</u>	
	<u>NextEra Energy Point Beach will modify the primary auxiliary building (PAB) ventilation system (VNPAB) to ensure redundancy of active components needed to operate the PAB exhaust system. VNPAB components credited for AST will be upgraded to an augmented quality status. No credit is taken by AST for the PAB charcoal filters. NextEra Energy Point Beach will revise PBNP EOPs to address starting the VNPAB fans. This modification is scheduled to be completed following Nuclear Regulatory Commission (NRC) approval of LAR 241, "Alternative Source Term," during the Unit 1 (2010) refueling outage.</u>	

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OPERATING LICENSE DPR-24

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	<u>NextEra Energy Point Beach, LLC will perform Train B Emergency Diesel Generator load testing over a range of 2877 to 2950 kW at rated power factor following implementation of LAR-241 in accordance with the testing schedule. This license condition will remain in effect until implementation of LAR-261 for Unit 1.</u>	



APPENDIX C  
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OPERATING LICENSE DPR-27

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	<u>NextEra Energy Point Beach will modify the PBNP control room (CR) radiation shielding to ensure CR habitability requirements are maintained. This modification is scheduled to be completed following Nuclear Regulatory Commission (NRC) approval of LAR 241, "Alternative Source Term," during the Unit 1 (2010) refueling outage.</u>	
	<u>NextEra Energy Point Beach will modify the containment spray (CS) and residual heat removal (RHR) systems to provide throttling capability of CS and RHR during the emergency core cooling system (ECCS) recirculation phase. These modifications will be completed on a unit-specific basis at the next Unit 2 (2009) refueling outage.</u>	
	<u>NextEra Energy Point Beach will revise PBNP Emergency Operating Procedures (EOPs) to direct continued containment spray while on sump recirculation. These procedure changes will be implemented following NRC approval of LAR 241, "Alternative Source Term," and following the completion of each unit-specific installation of the CS and RHR system modifications to provide throttling capability during the ECCS recirculation phase.</u>	
	<u>NextEra Energy Point Beach will modify the control room emergency filtration system (CREFS) to create a new alignment for the accident mode that provides a combination of filtered outside air and filtered recirculation air. The modifications will include redundancy for all CREFS active components that must reposition from their normal operating position, and auto-start capability on loss of offsite power in conjunction with a containment isolation or high control room radiation signal from an emergency diesel generator supplied source for the CREFS fans required for the new system alignment. This modification will be completed following NRC approval of LAR 241, "Alternative Source Term," during the second site refueling outage that completes installation of the CS and RHR system modifications to provide throttling capability during the ECCS recirculation phase, thus completing installation for both units.</u>	
	<u>NextEra Energy Point Beach will modify the primary auxiliary building (PAB) ventilation system (VNPAB) to ensure redundancy of active components needed to operate the PAB exhaust system. VNPAB components credited for AST will be upgraded to an augmented quality status. No credit is taken by AST for the PAB charcoal filters. NextEra Energy Point Beach will revise PBNP EOPs to address starting the VNPAB fans. This modification is scheduled to be completed following Nuclear Regulatory Commission (NRC) approval of LAR 241, "Alternative Source Term," during the Unit 1 (2010) refueling outage.</u>	

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	<u>NextEra Energy Point Beach, LLC will perform Train B Emergency Diesel Generator load testing over a range of 2877 to 2950 kW at rated power factor following implementation of LAR-241 in accordance with the testing schedule. This license condition will remain in effect until implementation of LAR-261 for Unit 1.</u>	