

NRC 2011-0002 10 CFR 50.90

January 7, 2011

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

<u>License Amendment Request 261</u> <u>Extended Power Uprate</u> <u>Response to Request for Clarification</u>

- References: (1) FPL Energy Point Beach, LLC letter to NRC, dated April 7, 2009, License Amendment Request 261, Extended Power Uprate (ML091250564)
 - NextEra Energy Point Beach, LLC letter to NRC, dated December 10, 2010, License Amendment Request 261, Extended Power Uprate, Response to Request for Additional Information (ML103440557)

NextEra Energy Point Beach, LLC (NextEra) submitted License Amendment Request (LAR) 261 (Reference 1) to the NRC pursuant to 10 CFR 50.90. The proposed amendment would increase each unit's licensed thermal power level from 1540 megawatts thermal (MWt) to 1800 MWt, and revise the Technical Specifications to support operation at the increased thermal power level.

During an NRC desk audit of the Extended Power Uprate (EPU) boron precipitation analysis at Westinghouse's Rockville, MD. Offices on December 29, 2010, additional supporting information for the request for additional information responses provided in Reference (2) was requested. Enclosures 1 and 2 provide the additional information requested by the NRC.

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

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 of an environmental assessment.

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

NextEra Energy Point Beach, LLC, 6610 Nuclear Road, Two Rivers, WI 54241

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I declare under penalty of perjury that the foregoing is true and correct. Executed on January 7, 2011.

Very truly yours,

NextEra Energy Point Beach, LLC

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Larry Meyer 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 1

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

LICENSE AMENDMENT REQUEST 261 EXTENDED POWER UPRATE RESPONSE TO REQUEST FOR CLARIFICATION

During an NRC desk audit of the Extended Power Uprate (EPU) boron precipitation analysis at Westinghouse's Rockville, MD. Offices on December 29, 2010, additional supporting information for the request for additional information responses provided in Reference (1) was requested. The following information is provided by NextEra Energy Point Beach, LLC, (NextEra) in response to the NRC staff's request for clarification.

Clarification Request 1

Based on the LBLOCA boron precipitation analysis provided in LAR 261, Attachment 5, page 2.8.5.6.3-11, operators would need to re-establish cold leg injection no later than 4 hours and 30 minutes from the termination of safety injection to the cold legs, or 4 hours and 50 minutes from initiation of a LBLOCA event assuming maximum safeguards flow during the injection phase, to prevent boric acid precipitation. Considering Containment Spray operation during the recirculation phase could take 3 hours, and cold leg injection cannot be re-established until termination of Containment Spray, cold leg injection would have to be initiated within 30 minutes of termination of Containment Spray on recirculation to prevent boric acid precipitation. Please confirm that termination of Containment Spray and re-initiation of cold leg injection during the recirculation phase can be accomplished well within 30 minutes.

NextEra Response

Per the proposed revision to Emergency Operating Procedure EOP-1.3, "Transfer to Containment Sump Recirculation – Low Head Injection," in support of LAR 241, Alternative Source Term, the steps required to terminate Containment Spray system operation and re-initiate cold leg injection during the recirculation phase following a large break loss of coolant accident (LBLOCA) are as follows:

- 1. Stop the containment spray pump
- 2. Shut the containment spray pump residual heat removal (RHR) suction motor-operated valve (MOV)
- 3. Ensure the RHR pump core deluge valve is throttled
- 4. Ensure the safety injection pump suction from the refueling water storage tank (RWST) isolation valve is shut
- 5. Open RHR heat exchanger outlet to the safety injection pump suction valve

6. Start the safety injection pump

These steps can be accomplished from the control room in less than 10 minutes. This is well within the worst case required time of 30 minutes to prevent boric acid precipitation.

Clarification Request 2

Please provide a copy of backup information related to the boric acid precipitation analysis requested during the NRC desk audit on December 29, 2010.

NextEra Response

The information requested during the NRC desk audit is provided in Enclosure 2.

References

(1) NextEra Energy Point Beach, LLC letter to NRC, dated December 10, 2010, License Amendment Request 261, Extended Power Uprate, Response to Request for Additional Information (ML103440557)

ENCLOSURE 2

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

LICENSE AMENDMENT REQUEST 261 EXTENDED POWER UPRATE RESPONSE TO REQUEST FOR CLARIFICATION

WESTINGHOUSE SUPPORTING INFORMATION FOR BORIC ACID PRECIPITATION ANALYSIS

3 pages follow





Period	ECCS	ECCS Pump	ECCS Pump	ECCS Fluid	Notes
	Pumps in	Operating	Flow Rate	Temperature/	
	Operation	Mode		Enthalpy Basis	
Up to T1	RHR	Injection	WeCAIR ⁽⁵⁾ Item	RWST	Typical injection phase
•			16.1.739		modeling used in the
					ASTRUM analysis.
	SI	Injection	WeCAIR ⁽⁵⁾ Item	RWST	Modeling T1 = 20
		2	16.1.739		minutes conservatively
					bounds the WeCAIR ⁽⁶⁾
					Item 17.6.779 minimum
					value of 1646 seconds
					(RWST level ≤34%). SI
					pump(s) are stopped at
					Step 29 of Unit 1 and
					Step 30 of Unit 2 EOP-
				,	1.3 Rev. 39 when RWST
					level is ≤34%. (If two
					ECCS trains operate
					during the injection
					phase, one train is
					stopped in either Step 4
					or 5 of both Unit 1 and
					Unit 2 EOP-1.3 Rev. 39
		Posirculation		Sump	BHP flow rate is
		Recirculation	16 1 730 ⁽¹⁾	Sump	unchanged but enthalpy
			10.1.700		increases upon switching
					suction to sumn "B" when
					RWST level is <34%
					Modeling $T2 = 60$
					minutes conservatively
					bounds the WeCAIR ⁽⁶⁾
					Item 5.8.192 minimum
					value of 4000 seconds
					(RWST level ≤12.5%).
T2 to T3	RHR	Reduced	500 gpm ^(1,2)	Sump	RHR flow to RCS
		Recirculation			reduced using limit switch
					position on SI-852
					valve(s). 20 minute (1200
					second) maximum
					duration per WeCAIR ^(6,8)
					Item 9.9.929.

Table 1 ECCS Flow and Temperature/Enthalpy Modeling – Injection and Recirculation Modes

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Period	ECCS Pumps in Operation	ECCS Pump Operating Mode	ECCS Pump Flow Rate	ECCS Fluid Temperature/ Enthalpy Basis	Notes
T3 to T4	RHR	Reduced Recirculation	500 gpm ^(2,3)	Sump	3 hour duration per WeCAIR ⁽⁹⁾ Item 16.2.895. The minimum recirculation spray flow rate is 900 gpm (WeCAIR ⁽⁷⁾ Item 5.8.178).
T4 to T5	RHR	Reduced Recirculation	500 gpm ^(2,3)	Sump	It may be best to simplify the EOPs by eliminating this period and instructing the operations staff to restart cold leg SI recirculation immediately after terminating recirculation spray.
Beyond T5	RHR	Reduced Recirculation	500 gpm ^(2,3)	Sump	This alignment is assumed to continue indefinitely. The true
	SI	Piggy-Back Recirculation	WeCAIR ⁽⁵⁾ Item 16.1.739 ⁽⁴⁾	Sump	mission time is determined in the evaluations supporting the response to GL 2004- 02.

1. Acceptability to be confirmed by <u>W</u>COBRA/TRAC ECCS recirculation analysis.

- 2. It is assumed that recirculation spray will be required for all LOCAs that meet the entry conditions for EOP-1.3.
- Acceptability at time T2 = 60 minutes ensures acceptability at later times since decay heat decreases with time.
- 4. Acceptability to be confirmed by simplified hand calculations using established generic methods.
- 5. PB-EPU-08-0126, "WeCAIR Update DIT-PB-EPU-08-WEC-0011, Revision 5," 4/9/08.
- 6. PB-EPU-08-0021. "Final Transmittal of WeCAIR Data Input Requested by Westinghouse for the Point Beach Extended Power Uprate," 2/15/08.
- 7. PB-EPU-08-0219, "WeCAIR Update DIT-PB-EPU-08-WEC-0011 Revision 9," 4/29/08.
- 8. PB-EPU-08-0233, "WeCAIR Update DIT-PB-EPU-08-WEC-0011 Revision 10," 5/5/08.
- 9. PB-EPU-08-0466, "WeCAIR Update DIT-PB-EPU-08-WEC-0011, Revision 16," 6/24/08.