NEXTera ENERGY POINT BEACH

January 8, 2010

NRC 2010-0003
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 261
Extended Power Uprate
Auxiliary Feedwater System Pipe Stress Analysis Information

References: (1) FPL Energy Point Beach, LLC letter to NRC, dated April 7, 2009, License Amendment Request 261, Extended Power Uprate (ML091250564)

(2) NextEra Energy Point Beach, LLC letter to NRC, dated November 21, 2009, License Amendment Request 261, Extended Power Uprate, Response to Request for Additional Information (ML093270032)

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.

Via Reference (2), NextEra made a commitment to provide additional information for the auxiliary feedwater (AFW) system. Enclosure 1 provides this information.

Summary of Regulatory Commitments

The information provided in Enclosure 1 fulfills the following Regulatory Commitment made in Reference (2):

- NextEra will supplement the response to RAI Questions 2 and 3 to the NRC by January 8, 2010. The supplement will contain: (1) The results of the pipe stress analysis for the Unit 1 tie-in locations. (2) The summary of loads compared to specific allowable values for the nozzles. (3) Confirmation that all AFW piping and pipe supports have been evaluated and are demonstrated to remain structurally adequate.

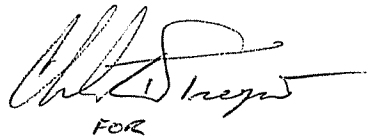
The information contained in this letter does not alter the no significant hazards consideration contained in Reference (1) and continues to satisfy the criteria of 10 CFR 51.22 for categorical exclusion from the requirements of an environmental assessment.

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

I declare under penalty of perjury that the foregoing is true and correct.
Executed on January 8, 2010.

Very truly yours,

NextEra Energy Point Beach, LLC



FOR
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
AUXILIARY FEEDWATER SYSTEM PIPE STRESS ANALYSIS INFORMATION

Via letter dated November 21, 2009, NextEra Energy Point Beach, LLC (NextEra) committed to provide additional information related to auxiliary feedwater pipe and support analyses (Reference 1). The following information is provided by NextEra in response to this Regulatory Commitment.

Item 1

NextEra will provide the results of the pipe stress analysis for the Unit 1 tie-in locations for the auxiliary feedwater (AFW) system.

NextEra Response

The following summarizes results of pipe stress analysis for the design configuration of the Unit 1 motor-driven AFW (MDAFW) tie-ins:

- Unit 1 MDAFW pump discharge to existing AFW discharge header to A steam generator outside containment

Table of Maximum Stresses

	NODE	STRESS (psi)	ALLOWABLE STRESS (psi)	RATIO
Equation 8	245	5,830	15,000	0.389
Equation 9B	860	8,950	18,000	0.497
Equation 9C	860	14,000	27,000	0.519

- Unit 1 MDAFW pump discharge to existing AFW discharge header to B steam generator outside containment

Table of Maximum Stresses

	NODE	STRESS (psi)	ALLOWABLE STRESS (psi)	RATIO
Equation 8	210	4,880	15,000	0.325
Equation 9B	1080	8,820	18,000	0.490
Equation 9C	990	14,600	27,000	0.541

Item 2

NextEra will provide the summary of loads compared to specific allowable values for the nozzles on the AFW system.

NextEra Response

The following nozzle loads were identified from the piping analysis:

- Unit 1 MDAFW Pump

LOADING	DISCHARGE	SUCTION
Level B – Operating Basis Earthquake	$M_a = 122$	$M_a = 47$
	$M_b = 68$	$M_b = 346$
	$M_c = 100$	$M_c = 462$
	$F_a = 8$	$F_a = 164$
	$F_b = 172$	$F_b = 380$
	$F_c = 36$	$F_c = 48$
Level C – Safe Shutdown Earthquake	$M_a = 250$	$M_a = 89$
	$M_b = 146$	$M_b = 684$
	$M_c = 700$	$M_c = 777$
	$F_a = 200$	$F_a = 319$
	$F_b = 350$	$F_b = 564$
	$F_c = 65$	$F_c = 83$

- Unit 2 MDAFW Pump

LOADING	DISCHARGE	SUCTION
Level B – Operating Basis Earthquake	M_a = 227	M_a = 101
	M_b = 80	M_b = 390
	M_c = 240	M_c = 517
	F_a = 22	F_a = 204
	F_b = 342	F_b = 605
	F_c = 65	F_c = 101
Level C – Safe Shutdown Earthquake	M_a = 444	M_a = 200
	M_b = 158	M_b = 763
	M_c = 472	M_c = 734
	F_a = 43	F_a = 402
	F_b = 615	F_b = 904
	F_c = 128	F_c = 190

The following bounding loads were reviewed with the pump vendor. The pump vendor has preliminarily indicated that with these loads, the pump stresses are within Code allowable values. Confirmation that the loads are within Code allowable values will be confirmed by final calculations.

LOADING	DISCHARGE	SUCTION
Level B – Operating Basis Earthquake	M_a = 250	M_a = 250
	M_b = 450	M_b = 450
	M_c = 600	M_c = 600
	F_a = 250	F_a = 250
	F_b = 700	F_b = 700
	F_c = 150	F_c = 150
Level C – Safe Shutdown Earthquake	M_a = 500	M_a = 500
	M_b = 850	M_b = 850
	M_c = 900	M_c = 900
	F_a = 450	F_a = 450
	F_b = 1,000	F_b = 1,000
	F_c = 250	F_c = 250

Moments (M) are expressed in ft-lbs
Forces (F) are expressed in lbs
a – axial
b – veritical
c – lateral

Item 3

NextEra will provide confirmation that all AFW piping and pipe supports have been evaluated and are demonstrated to remain structurally adequate.

NextEra Response

Piping and pipe supports affected by modifications to the AFW system have been evaluated and remain structurally adequate for the current design.

Reference

(1) NextEra Energy Point Beach, LLC letter to NRC, dated November 21, 2009, License Amendment Request 261, Extended Power Uprate, Response to Request for Additional Information (ML093270032)