UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 25, 2011

Mr. Larry Meyer
Site Vice President
NextEra Energy Point Beach, LLC
Point Beach Nuclear Plant
6610 Nuclear Road
Two Rivers, WI 54241-9516

SUBJECT: POINT BEACH NUCLEAR PLANT (PBNP), UNITS 1 AND 2 - ISSUANCE OF LICENSE AMENDMENTS RE: REVISION OF REACTOR PROTECTION SYSTEM (RPS) AND ENGINEERED SAFETY FEATURE ACTUATION SYSTEM (ESFAS) INSTRUMENTATION SETPOINTS (TAC NOS. ME1083 AND ME1084)

Dear Mr. Meyer:

The Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment Nos. 239 and 243 to Renewed Facility Operating License Nos. DPR-24 and DPR-27, for PBNP, Units 1 and 2. The amendments revise RPS and ESFAS instrumentation setpoints in response to your application dated April 7, 2009, as supplemented by letters dated June 17, September 11, September 25, November 20, November 30, and December 8 of 2009; February 11, February 25, April 22, April 30, July 21, July 28, August 2, and September 28 of 2010. These changes were originally included as part of the April 7, 2009, extended power uprate (EPU) license amendment request, but subsequently divided into a separate licensing action for independent technical review.

By letter dated September 28, 2010, the licensee withdrew, in its entirety, the application dated August 2, 2010, for the RPS and ESFAS setpoints not related to the EPU. NextEra decided to not implement non-EPU related RPS and ESFAS Technical Specification (TS) changes prior to implementation of the EPU on each unit and will now implement both the non-EPU and EPU RPS and ESFAS TS changes at the same time for each unit.

The amendment changes the Technical Specifications to support 1) an EPU to increase plant core thermal power from 1,540 megawatts thermal (MWt) to 1,800 MWt; 2) update non-conservative RPS and ESFAS setpoints not associated with the EPU, and 3) modifications to the AFW system. The amendments also modify the RPS instrumentation setpoints of TS Table 3.3.1-1 and the ESFAS instrumentation setpoints of TS Table 3.3.2-1. The changes include both EPU and non-EPU related setpoints. The revised TS allowable values have been calculated to account for new analytical limits, instrument uncertainties, and instrument drift. The changes also include the addition of a new column entitled Nominal Trip Setpoint that was added to provide consistency with the TS Table format in NUREG 1431, "Standard Technical Specifications – Westinghouse Plants," and Technical Specification Task Force (TSTF)-493, Revision 4, "Clarify the Application of Setpoint Methodology for Limiting Safety System Setting (LSSS) Functions." The RPS and ESFAS instrumentation uncertainty/setpoint calculations have also been revised to eliminate the use of a single-sided reduction factor in the total loop error determination for LSSS setpoints.

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

Terry A. Beltz, Senior Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-266 and 50-301

Enclosures:
1. Amendment No. 239 to DPR-24
2. Amendment No. 243 to DPR-27
3. Safety Evaluation

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NEXTERA ENERGY POINT BEACH, LLC

DOCKET NO. 50-266

POINT BEACH NUCLEAR PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 239
Renewed License No. DPR-24

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by NextEra Energy Point Beach, LLC (the licensee), dated April 7, 2009, as supplemented by letters dated June 17, September 11, September 25, November 20, November 30, and December 8 of 2009; and February 11, February 25, April 22, April 30, July 21, July 28, August 2, and September 28 of 2010, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 4.B of Renewed Facility Operating License No. DPR-24 is hereby amended to read as follows:

   B. Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 239, are hereby incorporated in the renewed operating license. NextEra Energy Point Beach shall operate the facility in accordance with Technical Specifications.

3. The license amendment is effective as of its date of issuance and shall be implemented prior to Unit 1 startup from the Fall 2011 refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert J. Pascarelli, Chief
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License No. DPR-24
and Technical Specifications

Date of Issuance: March 25, 2011

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NEXTERA ENERGY POINT BEACH, LLC

DOCKET NO. 50-301

POINT BEACH NUCLEAR PLANT, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 243
Renewed License No. DPR-27

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by NextEra Energy Point Beach, LLC (the licensee), dated April 7, 2009, as supplemented by letters dated June 17, September 11, September 25, November 20, November 30, and December 8 of 2009; and February 11, February 25, April 22, April 30, July 21, July 28, August 2, and September 28 of 2010, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 4.B of Renewed Facility Operating License No. DPR-27 is hereby amended to read as follows:

   B. Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 243, are hereby incorporated in the renewed operating license. NextEra Energy Point Beach shall operate the facility in accordance with Technical Specifications.

3. The license amendment is effective as of its date of issuance and shall be implemented within 180 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert J. Pascarelli, Chief
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License No. DPR-27
and Technical Specifications

Date of Issuance: March 25, 2011

ATTACHMENT TO LICENSE AMENDMENT NOS. 239 AND 243

RENEWED FACILITY OPERATING LICENSE NOS. DPR-24 AND DPR-27

DOCKET NOS. 50-266 AND 50-301

Replace the following pages of the Renewed Facility Operating License Nos. DPR-24 and DPR-27 Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Operating License

REMOVE	INSERT
3	3

Technical Specifications

REMOVE	INSERT
3.3.1-13	3.3.1-13
3.3.1-14	3.3.1-14
3.3.1-15	3.3.1-15
3.3.1-16	3.3.1-16
3.3.1-17	3.3.1-17
3.3.1-18	3.3.1-18
3.3.1-19	3.3.1-19
---	3.3.1-20
3.3.2-6	3.3.2-6
3.3.2-7	3.3.2-7
3.3.2-8	3.3.2-8

D. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, NextEra Energy Point Beach to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

E. Pursuant to the Act and 10 CFR Parts 30 and 70, NextEra Energy Point Beach to possess such byproduct and special nuclear materials as may be produced by the operation of the facility, but not to separate such materials retained within the fuel cladding.

4. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

A. Maximum Power Levels

NextEra Energy Point Beach is authorized to operate the facility at reactor core power levels not in excess of 1540 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 239, are hereby incorporated in the renewed operating license. NextEra Energy Point Beach shall operate the facility in accordance with Technical Specifications.

C. Spent Fuel Pool Modification

The licensee is authorized to modify the spent fuel storage pool to increase its storage capacity from 351 to 1502 assemblies as described in licensee's application dated March 21, 1978, as supplemented and amended. In the event that the on-site verification check for poison material in the poison assemblies discloses any missing boron plates, the NRC shall be notified and an on-site test on every poison assembly shall be performed.

C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, NextEra Energy Point Beach to receive, possess and use at any time any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed source for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

D. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, NextEra Energy Point Beach to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

E. Pursuant to the Act and 10 CFR Parts 30 and 70, NextEra Energy Point Beach to possess such byproduct and special nuclear materials as may be produced by the operation of the facility, but not to separate such materials retained within the fuel cladding.

4. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

A. Maximum Power Levels

NextEra Energy Point Beach is authorized to operate the facility at reactor core power levels not in excess of 1540 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 243 are hereby incorporated in the renewed operating license. NextEra Energy Point Beach shall operate the facility in accordance with Technical Specifications.

C. Spent Fuel Pool Modification

The licensee is authorized to modify the spent fuel storage pool to increase its storage capacity from 351 to 1502 assemblies as described in licensee's application dated March 21, 1978, as supplemented and amended. In the event that the on-site verification check for poison material in the poison assemblies discloses any missing boron plates, the NRC shall be notified and an on-site test on every poison assembly shall be performed.

Table 3.3.1-1 (page 1 of 8)
Reactor Protection System Instrumentation

	FUNCTION	APPLICABLE MODES	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE	NOMINAL TRIP SETPOINT
1.	Manual Reactor Trip	1,2	2	B	SR 3.3.1.13	NA	NA
		3(a), 4(a), 5(a)	2	C	SR 3.3.1.13	NA	NA
2.	Power Range Neutron Flux						
	a. High	1,2	4	D	SR 3.3.1.1 SR 3.3.1.2 SR 3.3.1.7(m) SR 3.3.1.11(m)	≤ 108% RTP	106% RTP
	b. Low	1(b),2	4	D	SR 3.3.1.1 SR 3.3.1.8(m) SR 3.3.1.11(m)	≤ 27% RTP	20% RTP
3.	Intermediate Range Neutron Flux	1(b), 2(c)	2	F,G	SR 3.3.1.1 SR 3.3.1.8(m) SR 3.3.1.11(m)	≤ 43% RTP	25% RTP
4.	Source Range Neutron Flux	2(d)	2	H,I	SR 3.3.1.1 SR 3.3.1.8(m) SR 3.3.1.11(m)	≤ 3.0 E5 cps	1.5 E5 cps
		3(a), 4(a), 5(a)	2	I,J	SR 3.3.1.1 SR 3.3.1.7(m) SR 3.3.1.11(m)	≤ 3.0 E5 cps	1.5 E5 cps
5.	Overtemperature ΔT	1,2	4	D	SR 3.3.1.1 SR 3.3.1.3 SR 3.3.1.6 SR 3.3.1.7(m) SR 3.3.1.11(m)	Refer to Note 1 (Page 3.3.1-18)	Refer to Note 1 (Page 3.3.1-18)
6.	Overpower ΔT	1,2	4	D	SR 3.3.1.1 SR 3.3.1.7(m) SR 3.3.1.11(m)	Refer to Note 2 (Page 3.3.1-19)	Refer to Note 2 (Page 3.3.1-19)

(continued)

(a) With Reactor Trip Breakers (RTBs) closed and Rod Control System capable of rod withdrawal.
(b) Below the P-10 (Power Range Neutron Flux) interlock.
(c) Above the P-6 (Intermediate Range Neutron Flux) interlock.
(d) Below the P-6 (Intermediate Range Neutron Flux) interlock.
(m) Table 3.3.1-1 Notes 3 and 4 are applicable

Table 3.3.1-1 (page 2 of 8)
Reactor Protection System Instrumentation

	FUNCTION	APPLICABLE MODES	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE	NOMINAL TRIP SETPOINT
7.	Pressurizer Pressure						
	a. Low	1(e)	4	K	SR 3.3.1.1 SR 3.3.1.7(m) SR 3.3.1.11(m)	≥ 1860 psig	1925 psig
	b. High	1,2	3	D	SR 3.3.1.1 SR 3.3.1.7(m) SR 3.3.1.11(m)	≤ 2380 psig	2365 psig
8.	Pressurizer Water Level — High	1(e)	3	K	SR 3.3.1.1 SR 3.3.1.7(m) SR 3.3.1.11(m)	≤ 85%	80%
9.	Reactor Coolant Flow-Low						
	a. Single Loop	1(f)	3 per loop	L	SR 3.3.1.1 SR 3.3.1.7(m) SR 3.3.1.11(m)	≥91%	93%
	b. Two Loops	1(g)	3 per loop	K	SR 3.3.1.1 SR 3.3.1.7(m) SR 3.3.1.11(m)	≥91%	93%
10.	Reactor Coolant Pump (RCP) Breaker Position						
	a. Single Loop	1(f)	1 per RCP	M	SR 3.3.1.13	NA	NA
	b. Two Loops	1(g)	1 per RCP	N	SR 3.3.1.13	NA	NA
11.	Undervoltage Bus A01 & A02	1(e)	2 per bus	K	SR 3.3.1.9 SR 3.3.1.10(m)	≥ 3120 V	3170 V

(continued)

(e) Above the P-7 (Low Power Reactor Trips Block) interlock.
(f) Above the P-8 (Power Range Neutron Flux) interlock.
(g) Above the P-7 (Low Power Reactor Trips Block) interlock and below the P-8 (Power Range Neutron Flux) interlock.
(m) Table 3.3.1-1 Notes 3 and 4 are applicable

Table 3.3.1-1 (page 3 of 8)
Reactor Protection System Instrumentation

	FUNCTION	APPLICABLE MODES	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE	NOMINAL TRIP SETPOINT
12.	Underfrequency Bus A01 & A02	1(e)	2 per bus	E	SR 3.3.1.10(m)	≥ 55.0 Hz	57 Hz
13.	Steam Generator (SG) Water Level — Low Low	1,2	3 per SG	D	SR 3.3.1.1 SR 3.3.1.7(m) SR 3.3.1.11(m)	≥ 29.5%	31%
14.	SG Water Level — Low	1,2	2 per SG	D	SR 3.3.1.1 SR 3.3.1.7(m) SR 3.3.1.11(m)	≥ 11%	31%
	Coincident with Steam Flow/Feedwater Flow Mismatch	1,2	2 per SG	D	SR 3.3.1.1 SR 3.3.1.7(m) SR 3.3.1.11(m)	≤ 1 E6 lbm/hr	0.8 E6 lbm/hr
15.	Turbine Trip						
	a. Low Autostop Oil Pressure	1(j)	3	O	SR 3.3.1.14	NA	NA
	b. Turbine Stop Valve Closure	1(j)	2	O	SR 3.3.1.14	NA	NA
16.	Safety Injection (SI) Input from Engineered Safety Feature Actuation System (ESFAS)	1,2	2 trains	P	SR 3.3.1.13	NA	NA

(continued)

(e) Above the P-7 (Low Power Reactor Trips Block) interlock.
(j) Above the P-9 (Power Range Neutron Flux) interlock.
(m) Table 3.3.1-1 Notes 3 and 4 are applicable

Table 3.3.1-1 (page 4 of 8)
Reactor Protection System Instrumentation

FUNCTION	APPLICABLE MODES	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE	NOMINAL TRIP SETPOINT
17. Reactor Trip System Interlocks						
a. Intermediate Range Neutron Flux, P-6	2(d)	2	R	SR 3.3.1.11 SR 3.3.1.12	≥ 4E-11 amp	1E-10 amp
b. Low Power Reactor Trips Block, P-7						
(1) Power Range Neutron Flux	1	4	S	SR 3.3.1.11 SR 3.3.1.12	≤ 13% RTP	10% RTP
(2) Turbine First Stage Pressure	1	2	S	SR 3.3.1.11 SR 3.3.1.12	≤ 12.8% turbine power	10% turbine power
c. Power Range Neutron Flux, P-8	1	4	S	SR 3.3.1.11 SR 3.3.1.12	≤ 38% RTP	35% RTP
d. Power Range Neutron Flux, P-9	1(k)	4	S	SR 3.3.1.11 SR 3.3.1.12	(h)	(i)
e. Power Range Neutron Flux, P-10	1,2	4	R	SR 3.3.1.11 SR 3.3.1.12	≥ 6% RTP and ≤ 12% RTP	9% RTP
18. Reactor Trip Breakers (RTBs)	1,2	2 trains	Q	SR 3.3.1.4	NA	NA
	3(a), 4(a), 5(a)	2 trains	T	SR 3.3.1.4	NA	NA
19. Reactor Trip Breaker Undervoltage and Shunt Trip Mechanisms	1,2	1 each per RTB	U	SR 3.3.1.4	NA	NA
	3(a), 4(a), 5(a)	1 each per RTB	T	SR 3.3.1.4	NA	NA

(continued)

(a) With the RTBs closed and the Rod Control System capable of rod withdrawal.
(d) Below the P-6 (Intermediate Range Neutron Flux) interlock.
(h) ≤ 38% RTP for full design power T_{avg} < 572°F or ≤ 53% RTP for full design power T_{avg} ≥ 572°F. For EOC coastdown, P-9 is not reset if T_{avg} decreases to < 572°F.
(i) 35% RTP for full design power T_{avg} < 572°F or 50% RTP for full design power T_{avg} ≥ 572°F. For EOC coastdown, P-9 is not reset if T_{avg} decreases to < 572°F.
(k) With 1 of 2 circulating water pump breakers closed and condenser vacuum ≥ 22 "Hg.

Table 3.3.1-1 (page 5 of 8)
Reactor Protection System Instrumentation

	FUNCTION	APPLICABLE MODES	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE	NOMINAL TRIP SETPOINT
20.	Reactor Trip Bypass Breaker and associated Undervoltage Trip Mechanism	$1^{(l)}, 2^{(l)}$	1	V	SR 3.3.1.4	NA	NA
		$3^{(l)}, 4^{(l)}, 5^{(l)}$	1	W	SR 3.3.1.4	NA	NA
21.	Automatic Trip Logic	1, 2,	2 trains	P	SR 3.3.1.5 SR 3.3.1.15	NA	NA
		$3^{(a)}, 4^{(a)}, 5^{(a)}$	2 trains	X	SR 3.3.1.5	NA	NA

(a) With RTBs closed and Rod Control System capable of rod withdrawal.
(l) When Reactor Trip Bypass Breakers are racked in and closed and the Rod Control System is capable of rod withdrawal.

Table 3.3.1-1 (page 6 of 8)
Reactor Protection System Instrumentation

Note 1: Overtemperature ΔT

$$\Delta T\left(\frac{1}{1+\tau_3 S}\right) \le \Delta T_o\left(K_1 - K_2\left(T\left(\frac{1}{1+\tau_4 S}\right) - T'\right)\left(\frac{1+\tau_1 S}{1+\tau_2 S}\right) + K_3(P - P') - f(\Delta I)\right)$$

Where:

ΔT_o	=	indicated ΔT at RTP, °F
T	=	average temperature, °F
T'	$\le$	[*]°F
P	=	pressurizer pressure, psig
P'	=	[*] psig
K_1	$\le$	[*]
K_2	=	[*]
K_3	=	[*]
τ_1	=	[*] sec
τ_2	=	[*] sec
τ_3	=	[*] sec
τ_4	=	[*] sec

$f(\Delta I)$ = [*] {[*] - (q_t - q_b)} when (q_t - q_b) $\le$ [*]% RTP
0% of RTP when [*]% RTP < (q_t - q_b) $\le$ [*]% RTP
[*] {(q_t - q_b) - [*]} when (q_t - q_b) > [*]% RTP

Where q_t and q_b are percent RTP in the upper and lower halves of the core, respectively, and (q_t + q_b) is the total THERMAL POWER in percent RTP.

* The values denoted with [*] are specified in the COLR.

Table 3.3.1-1 (page 7 of 8)
Reactor Protection System Instrumentation

Note 2: Overpower ΔT

$$\Delta T \left(\frac{1}{1+\tau_3 S}\right) \leq \Delta T_o [K_4 - K_5 \left(\frac{\tau_5 S}{\tau_5 S + 1}\right)\left(\frac{1}{1+\tau_4 S}\right) T - K_6 [T \left(\frac{1}{1+\tau_4 S}\right) - T']]$$

Where:

ΔT_o	=	indicated ΔT at RTP, °F
T	=	average temperature, °F
T'	≤	[*]°F
K_4	≤	[*]
K_5	=	[*] for increasing T
	=	[*] for decreasing T
K_6	=	[*] for $T \geq T'$
	=	[*] for $T < T'$
τ_5	=	[*] sec
τ_3	=	[*] sec
τ_4	=	[*] sec

* The values denoted with [*] are specified in the COLR.

Table 3.3.1-1 (page 8 of 8)
Reactor Protection System Instrumentation

Note 3:

If the as-found channel setpoint is outside its predefined as-found tolerance, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service.

Note 4:

The instrument channel setpoint shall be reset to a value that is within the as-left tolerance around the Nominal Trip Setpoint (NTSP) at the completion of the surveillance; otherwise, the channel shall be declared inoperable. Setpoints more conservative than the NTSP are acceptable provided that the as-found and as-left tolerances apply to the actual setpoint implemented in the Surveillance procedures (field setting) to confirm channel performance. The methodologies used to determine the as-found and the as-left tolerances are specified in FSAR Section 7.2.

Table 3.3.2-1 (page 1 of 4)
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE	NOMINAL TRIP SETPOINT
1. Safety Injection						
a. Manual Initiation	1,2,3,4	2	B	SR 3.3.2.7	NA	NA
b. Automatic Actuation Logic and Actuation Relays	1,2,3,4	2 trains	C	SR 3.3.2.2 SR 3.3.2.4 SR 3.3.2.5	NA	NA
c. Containment Pressure—High	1,2,3	3	D	SR 3.3.2.1 SR 3.3.2.3(f) SR 3.3.2.8(f)	≤ 5.1 psig	4.8 psig
d. Pressurizer Pressure—Low	1,2,3(a)	3	D	SR 3.3.2.1 SR 3.3.2.3(f) SR 3.3.2.8(f)	≥ 1730 psig	1735 psig
e. Steam Line Pressure—Low	1,2,3(b)	3 per steam line	D	SR 3.3.2.1 SR 3.3.2.3(f) SR 3.3.2.8(f)	≥ 535(c) psig	545 psig
2. Containment Spray						
a. Manual Initiation	1,2,3,4	2	E	SR 3.3.2.7	NA	NA
b. Automatic Actuation Logic and Actuation Relays	1,2,3,4	2 trains	C	SR 3.3.2.2 SR 3.3.2.4 SR 3.3.2.5	NA	NA
c. Containment Pressure—High High	1,2,3	2 sets of 3	D	SR 3.3.2.1 SR 3.3.2.3(f) SR 3.3.2.8(f)	≤ 28 psig	25 psig

(continued)

(a) Pressurizer Pressure > 2000 psig.
(b) Pressurizer Pressure > 2000 psig, except during Reactor Coolant System hydrostatic testing.
(c) Time constants used in the lead/lag controller are $t_1 \geq 18$ seconds and $t_2 \leq 2$ seconds.
(f) Table 3.3.2-1 Notes 1 and 2 are applicable.

Table 3.3.2-1 (page 2 of 4)
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE	NOMINAL TRIP SETPOINT
3. Containment Isolation						
a. Manual Initiation	1,2,3,4	2	B	SR 3.3.2.7	NA	NA
b. Automatic Actuation Logic and Actuation Relays	1,2,3,4	2 trains	C	SR 3.3.2.4 SR 3.3.2.5	NA	NA
c. Safety Injection	Refer to Function 1 (Safety Injection) for all initiation functions and requirements, except Manual SI initiation.					
4. Steam Line Isolation						
a. Manual Initiation	1,2[d],3[d]	1/loop	F	SR 3.3.2.7	NA	NA
b. Automatic Actuation Logic and Actuation Relays	1,2[d],3[d]	2 trains	G	SR 3.3.2.2 SR 3.3.2.5	NA	NA
c. Containment Pressure—High High	1,2[d],3[d]	3	D	SR 3.3.2.1 SR 3.3.2.3[f] SR 3.3.2.8[f]	$\leq$ 18 psig	15 psig
d. High Steam Flow	1,2[d],3[d]	2 per steam line	D	SR 3.3.2.1 SR 3.3.2.3[f] SR 3.3.2.8[f]	$\leq \Delta p$ corresponding to 0.8×10^6 lb/hr at 1005 psig	Δp corresponding to 0.52×10^6 lb/hr at 1005 psig
Coincident with Safety Injection	Refer to Function 1 (Safety Injection) for all initiation functions and requirements.					
and						
Coincident with T_{avg}—Low	1,2[d],3[d]	3	D	SR 3.3.2.1 SR 3.3.2.3[f] SR 3.3.2.8[f]	$\geq 542^\circ F$	$543^\circ F$
e. High High Steam Flow	1,2[d],3[d]	2 per steam line	D	SR 3.3.2.1 SR 3.3.2.3[f] SR 3.3.2.8[f]	$\leq \Delta p$ corresponding to 4.9×10^6 lb/hr at 586 psig	Δp corresponding to 4.85×10^6 lb/hr at 586 psig
Coincident with Safety Injection	Refer to Function 1 (Safety Injection) for all initiation functions and requirements.					

(continued)

(d) Except when all MSIVs are closed and de-activated.
(f) Table 3.3.2-1 Notes 1 and 2 are applicable.

Table 3.3.2-1 (page 3 of 4)
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE	NOMINAL TRIP SETPOINT
5. Feedwater Isolation						
a. Automatic Actuation Logic and Actuation Relays	1,2(e),3(e)	2 trains	G	SR 3.3.2.2 SR 3.3.2.4 SR 3.3.2.5	NA	NA
b. SG Water Level—High	1,2(e),3(e)	3 per SG	D	SR 3.3.2.1 SR 3.3.2.3(f) SR 3.3.2.8(f)	≤ 90%	78%
c. Safety Injection	Refer to Function 1 (Safety Injection) for all initiation functions and requirements.					
6. Auxiliary Feedwater						
a. Automatic Actuation Logic and Actuation Relays	1,2,3	2 trains	G	SR 3.3.2.2	NA	NA
b. SG Water Level— Low Low	1,2,3	3 per SG	D	SR 3.3.2.1 SR 3.3.2.3(f) SR 3.3.2.8(f)	≥ 29.5%	31%
c. Safety Injection	Refer to Function 1 (Safety Injection) for all initiation functions and requirements.					
d. Undervoltage Bus A01 and A02	1,2	2 per bus	H	SR 3.3.2.6 SR 3.3.2.8(f)	≥ 3120 V	3255 V
e. AFW Pump Suction Transfer on Suction Pressure - Low	1,2,3	1 per pump	J	SR 3.3.2.1 SR 3.3.2.3(f) SR 3.3.2.8(f)	≥ 5.8 psig	6.1 psig
7. SI Block-Pressurizer Pressure	1,2,3	3	I	SR 3.3.2.1 SR 3.3.2.3 SR 3.3.2.8	≤ 2005 psig	2000 psig

(e) Except when all MFIVs, MFRVs and associated bypass valves are closed and de-activated.
(f) Table 3.3.2-1 Notes 1 and 2 are applicable.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

AMENDMENT NO. 239 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-24

AND

AMENDMENT NO. 243 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-27

NEXTERA ENERGY POINT BEACH, LLC

POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-266 AND 50-301

1.0 INTRODUCTION

1.1 Background

By application dated April 7, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML091250564), as supplemented by the following letters: June 17, 2009 (ADAMS Accession Nos. ML091690087 and ML091690090), September 11, 2009 (ADAMS Accession No. ML092570205), September 25, 2009 (ADAMS Accession No. ML092750395), November 20, 2009 (ADAMS Accession No. ML093270030), November 30, 2009 (ADAMS Accession No. ML093360143), December 8, 2009 (ADAMS Accession No. ML093430114), February 11, 2010 (ADAMS Accession No. ML100470786), February 25, 2010 (ADAMS Accession No. ML100600576), April 22, 2010 (ADAMS Accession No. ML101130030), April 30, 2010 (ADAMS Accession No. ML101200544), July 21, 2010 (ADAMS Accession No. ML102040138), July 28, 2010 (ADAMS Accession No. ML102110116), August 2, 2010 (ADAMS Accession No. ML102180370), and September 28, 2010 (ADAMS Accession No. ML102710358), NextEra Energy Point Beach, LLC (formerly FPL Energy Point Beach, LLC) (NextEra, the licensee) requested a license amendment to revise the instrumentation Technical Specifications (TSs) for the Point Beach Nuclear Plant (PBNP), Units 1 and 2.

The proposed changes would revise the Reactor Protection System (RPS) Instrumentation TS setpoints listed in Table 3.3.1-1 and Engineered Safety Features Actuation System (ESFAS) listed in Table 3.3.2-1 to support (1) an Extended Power Uprate (EPU) to increase plant core thermal power from 1,540 megawatts thermal (MWt) to 1,800 MWt; (2) update non-conservative RPS and ESFAS setpoints not associated with the EPU, and 3) modifications to the AFW system.

By letter dated September 28, 2010, the licensee withdrew the August 2, 2010 application in its entirety, for the RPS and ESFAS setpoints which are not related to the EPU. NextEra decided to not implement non-EPU related RPS and ESFAS TS changes prior to implementation of the EPU on each Unit. NextEra will now implement the non-EPU and EPU RPS and ESFAS TS changes submitted at the same time for each unit. Therefore, the September 28, 2010, letter does not change the NRC staff's initial proposed finding of no significant hazards consideration.

2.0 REGULATORY EVALUATION

Instrumentation and control systems are provided (1) to control plant processes having a significant impact on plant safety, (2) to initiate the reactivity control system (including control rods), (3) to initiate the engineered safety features (ESF) systems and essential auxiliary supporting systems, and (4) to achieve and maintain a safe shutdown condition of the plant. Diverse instrumentation and control systems and equipment are provided for the express purpose of protecting against potential common-mode failures of instrumentation and control protection systems. The NRC staff reviewed the proposed TS changes in the application against the following regulatory requirements and guidance.

- Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," establishes the fundamental regulatory requirements. Specifically, Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50 provides, in part, the necessary design, fabrication, construction, testing, and performance requirements for structures, systems, and components important to safety.

- In 10 CFR 50.36, "Technical Specifications," the Commission established its regulatory requirements related to the contents of the TS. Specifically, 10 CFR 50.36 states that "each applicant for a license authorizing operation of a production or utilization facility shall include in his application proposed technical specifications in accordance with the requirements of this section." In addition, 10 CFR 50.36(c)(3) states, "Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions of operation will be met."

- The NRC issued Regulatory Guide (RG) 1.105, "Setpoints for Safety-Related Instrumentation," Revision 3, in December 1999 (ADAMS Accession No. ML993560062). The information provided in RG 1.105 describes a method that the NRC staff considers acceptable for complying with the agency's regulations for ensuring that setpoints for safety-related instrumentation are initially within, and remain within, the TS limits. Furthermore, RG 1.105 endorses Part I of Instrument Society of America S67.04-1994, "Setpoints for Nuclear Safety-Related Instrumentation," subject to NRC staff clarifications. The staff used this guide to establish the adequacy of the licensee's setpoint calculation methodologies and the related plant surveillance procedures.

- The application of the setpoint methodology is further clarified in TSTF-493 and an errata sheet, "Transmittal of TSTF-493, Revision 4, Errata," dated April 23, 2010 (ADAMS Accession No. ML101160026). *Federal Register* Notice, "Notice of Availability of the Models for Plant-Specific Adoption of Technical Specifications Task Force

Traveler TSTF-493, Revision 4, 'Clarify Application of Setpoint Methodology for LSSS Functions,'" (*75 FR 26294,* dated May 11, 2010).

3.0 TECHNICAL EVALUATION

The NRC staff conducted a review of the RPS, ESFAS, safe shutdown systems, and diverse instrumentation and control systems for the proposed PBNP TS changes to ensure that these systems and any changes necessary are adequately designed such that the systems continue to meet their safety functions. The NRC staff's review was also conducted to ensure that failures of the systems do not affect safety functions.

3.1 Details of Changes to TS:

The NRC staff reviewed the following TS changes:

A. Addition of a new column, "NOMINAL TRIP SETPOINT" (NTSP), to TS Table 3.3.1-1, "Reactor Protection System Instrumentation," and Table 3.3.2-1, "Engineered Safety Feature Actuation System Instrumentation."

B. Addition of footnote (f) to Table 3.3.2-1 and footnote (m) to Table 3.3.1-1 for surveillance requirements (SR) in the "Allowable Value" (AV) column to address how to deal with as-left and as-found tolerances around the NTSP in conformance with TS Task Force Traveler (TSTF)-493, "Clarify Application of Setpoint Methodology for LSSS Functions," Revision 4, dated January 5, 2010 (ADAMS Accession No. ML100060064):

Footnote (f) reads: Table 3.3.2-1, Notes 1 and 2 are applicable.

Footnote (m) reads: Table 3.3.1-1, Notes 3 and 4 are applicable.

Note 1 in Table 3.3.2-1 and Note 3 in Table 3.3.1-1 read: "If the as-found channel setpoint is outside its predefined as-found tolerance, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service."

Note 2 in Table 3.3.2-1 and Note 4 in Table 3.3.1-1 read:

> The instrument channel setpoint shall be reset to a value that is within the as-left tolerance around the Nominal Trip Setpoint (NTSP) at the completion of the surveillance: otherwise, the channel shall be declared inoperable. Setpoints more conservative than the NTSP are acceptable provided that the as-found and as-left tolerances apply to the actual setpoint implemented in the Surveillance procedures (field setting) to confirm channel performance. The methodologies used to determine the as-found and the as-left tolerances are specified in FSAR Section 7.2.

C. Table 3.3.1-1, Reactor Protection System Instrumentation:

- *Function 1, Manual Reactor Trip:*

  Addition of "NA" in NTSP column

- *Function 2.a, Power Range Neutron Flux High:*

  Addition of "106% RTP" in the NTSP column

  SR 3.3.1.7 and SR 3.3.1.11: Addition of footnote (m)

- *Function 2.b, Power Range Neutron Flux—Low:*

  Revision of AV from "≤25% RTP" to "≤27% RTP" and addition of "20%" in the NTSP column

  SR 3.3.1.8 and SR 3.3.1.11: Addition of footnote "(m)"

  Revision of footnote (b) to change from "interlocks" to "interlock"

- *Function 3, Intermediate Range Neutron Flux:*

  Revision of AV from "≤40% RTP" to "≤43% RTP" and addition of "25% RTP" in the NTSP column

  SR 3.3.1.8 and SR 3.3.1.11: Addition of footnote "(m)"

- *Function 4, Source Range Neutron Flux:*

  Revision of AV from "within span of instrumentation" to "≤ 3.0E5 cps" and addition of "1.5 E5 cps" in the NTSP column

  SR 3.3.1.7, SR 3.3.1.8, and SR 3.3.1.11: Addition of footnote "(m)"

- *Function 5, Overtemperature ΔT:*

  Addition of "Refer to Note 1 (Page 3.3.1-18)" in the NTSP column

  SR 3.3.1.7 and SR 3.3.1.11: Addition of footnote "(m)"

  Revision of Note 1 in TS Table 3.3.1-1 (page 3.3.1-18)

- *Function 6, Overpower ΔT:*

  Addition of "Refer to Note 2 (Page 3.3.1-19)" in the NTSP column

  SR 3.3.1.7 and SR 3.3.1.11: Addition of footnote "(m)"
  Revision of Note 2 in TS Table 3.3.1-1 (page 3.3.1-19)

- *Function 7.a, Pressurizer Pressure—Low:*

  Revision of AV from "h" to "≥ 1860 psig" and addition of "1925 psig" in the NTSP column

  SR 3.3.1.7 and SR 3.3.1.11: Addition of footnote "(m)"

- *Function 7.b, Pressurizer Pressure—High:*

  Revision of AV from "i" to "≤ 2380 psig" and addition of "2365 psig" in the NTSP column

  SR 3.3.1.7 and SR 3.3.1.11: Addition of footnote "(m)"

  Deletion of footnote "(i) ≤ 2385 psig during operation at 2250 psia, or

  ≤ 2210 psig during operation at 2000 psia"

- *Function 8, Pressurizer Water Level—High:*

  Revision of AV from "≤ 95% of span" to "≤ 85%" and addition of "80%" in the NTSP column

  SR 3.3.1.7 and SR 3.3.1.11: Addition of footnote "(m)"

- *Function 9.a, Reactor Coolant Flow—Low, Single Loop:*

  Revision of AV from "≥ 90%" to "≥ 91%" and addition of "93%" in the NTSP column

  SR 3.3.1.7 and SR 3.3.1.11: Addition of footnote "(m)"

- *Function 9.b, Reactor Coolant Flow—Low, Two Loops:*

  Revision of AV from "≥ 90%" to "≥ 91%" and addition of "93%" in the NTSP column

  SR 3.3.1.7 and SR 3.3.1.11: Addition of footnote "(m)"

- *Function 10, Reactor Coolant Pump (RCP) Breaker Position –*

  a. Single Loop:
  b. Two Loops:

  Addition of "NA" in NTSP column

- *Function 11, Undervoltage Bus A01 and A02:*

  Addition of "3170 V" in the NTSP column

  SR 3.3.1.10: Addition of footnote "(m)"

- *Function 12, Underfrequency Bus A01 and A02:*

  Addition of "57 Hz" in the NTSP column and footnote "(m)" to SR 3.3.1.10

- *Function 13, Steam Generator (SG) Water Level—Low Low:*

  Revision of AV from "≥ 20% of span" to "≥ 29.5%" and addition of "31%" in the NTSP column

  SR 3.3.1.7 and SR 3.3.1.11: Addition of footnote "(m)"

- *Function 14, SG Water Level—Low Low:*

  Revision of AV from "NA" to "≥ 11%" and addition of "31%" in the NTSP column

  SR 3.3.1.7 and SR 3.3.1.11: Addition of footnote "(m)"

- *Function 14, SG Water Coincident with Steam Flow/Feedwater Flow/Mismatch:*

  Addition of "0.8 E6 lbm/hr" in the NTSP column

  SR 3.3.1.7 and SR 3.3.1.11: Addition of footnote "(m)"

- *Function 15 – Turbine Trip – a. Low Autostop Oil Pressure and b. Turbine Stop Valve Closure:*

  Addition of "NA" in NTSP column

- *Function 16 – Safety Injection (SI) Input from Engineered Safety Feature Actuation System (ESFAS):*

  Addition of "NA" in NTSP column

- *Function 17.a, Reactor Trip System Interlocks, Intermediate Range Neutron Flux, P-6:*

  Revision of AV from "> 1E-10 amp" to "≥ 4E-11 amp" and addition of "1E-10 amp" in the NTSP column

- *Function 17.b (1), Reactor Trip System Interlocks, Low Power Reactor Trips Block, P-7, Power Range Neutron Flux:*

  Revision of AV from "< 10% RTP" to "≤ 13% RTP" and addition of "10% RTP" in the NTSP column

- *Function 17.b (2), Reactor Trip System Interlocks, Low Power Reactor Trips Block, P-7, Turbine Impulse Pressure:*

  Revision of Function designation from "Turbine Impulse Pressure" to "Turbine First Stage Pressure"

  Revision of AV from "< 10% turbine power" to "≤ 12.8% turbine power" and addition of "10% turbine power" in the NTSP column

- *Function 17.c, Reactor Trip System Interlocks, Power Range Neutron Flux, P-8:*

  Revision of AV from "< 50% RTP" to "≤ 38% RTP" and addition of "35% RTP" in the NTSP column

- *Function 17.d, Reactor Trip System Interlocks, Power Range Neutron Flux, P-9:*

  Revision of AV from "< 50% RTP" to footnote "(h)" and addition of footnote "(i)" in the NTSP column

  > Footnote (h) reads: "≤ 38% RTP for full design power T_{avg} <572°F or ≤ 53% RTP for full design power T_{avg} ≥ 572°F. For EOC coastdown, P-9 is not reset if T_{avg} decreases to < 572°F."
  >
  > Footnote (i) reads: "35% RTP for full design power T_{avg} <572°F or 50% RTP for full design power T_{avg} ≥ 572°F. For EOC coastdown P-9 is not reset if T_{avg} decreases to < 572°F."

- *Function 17.e, Reactor Trip System Interlocks, Power Range Neutron Flux, P-10:*

  Revision of AV from "> 8% RTP and < 10% RTP" to "≥ 6% RTP and ≤ 12% RTP" and addition of "9% RTP" in the NTSP column

- *Function 18, Reactor Trip Breakers (RTBs):*

  Addition of "NA" in the NTSP column

- *Function 19, Reactor Trip Breaker Undervoltage and Shunt Trip Mechanisms:*

  Addition of "NA" in the NTSP column

- *Function 20, Reactor Trip Bypass Breaker and associated Undervoltage Trip Mechanism:*

  Addition of "NA" in the NTSP column

- *Function 21, Automatic Trip Logic:*

  Addition of "NA" in the NTSP column

D. Table 3.3.2-1, ESFAS Instrumentation:

- *Function 1.a, Safety Injection, Manual Initiation:*

  Addition of "NA" in the NTSP column

- *Function 1.b, Safety Injection, Automatic Actuation Logic and Actuation Relays:*

  Addition of "NA" in the NTSP column

- *Function 1.c, Safety Injection, Containment Pressure—High:*

  Revision of AV from "≤ 6 psig" to "≤ 5.1 psig" and addition of "4.8 psig" in the NTSP column

  SR 3.3.2.3 and SR 3.3.2.8: Addition of footnote "(f)"

- *Function 1.d, Safety Injection, Pressurizer Pressure—Low:*

  Revision of AV from "≥ 1715 psig" to "≥ 1730 psig" and addition of "1735 psig" in the NTSP column

  SR 3.3.2.3 and SR 3.3.2.8: Addition of footnote "(f)"

  Revision of footnote (a) from "(a) Pressurizer Pressure > 1800 psig " to "(a) Pressurizer Pressure > 2000 psig "

- *Function 1.e, Safety Injection, Steam Line Pressure—Low:*

  Revision of AV from "≥ 500[(c)] psig" to "≥ 535[(c)] psig" and addition of "545 psig" in the NTSP column

  SR 3.3.2.3 and SR 3.3.2.8: Addition of footnote "(f)"

  Revision of footnote (b) from "(b) Pressurizer Pressure > 1800 psig, except during Reactor Coolant System hydrostatic testing" to "(b) Pressurizer Pressure > 2000 psig, except during Reactor Coolant System hydrostatic testing"

- *Function 2.a, Containment Spray, Manual Initiation:*

  Addition of "NA" in the NTSP column

- *Function 2.b, Containment Spray, Automatic Actuation Logic and Actuation Relays:*

  Addition of "NA" in the NTSP column

- *Function 2.c, Containment Spray, Containment Pressure—High-High:*

  Revision of AV from "≤ 30 psig" to "≤ 28 psig" and addition of "25 psig" in the NTSP column

  SR 3.3.2.3 and SR 3.3.2.8: Addition of footnote "(f)"

- *Function 3.a, Containment Isolation, Manual Initiation:*

  Addition of "NA" in the NTSP column

- *Function 3.b, Containment Isolation, Automatic Actuation Logic and Actuation Relays:*

  Addition of "NA" in the NTSP column

- *Function 4.a, Steamline Isolation, Manual Initiation:*

  Addition of "NA" in the NTSP column

- *Function 4.b, Steamline Isolation, Automatic Actuation Logic and Actuation Relays:*

  Addition of "NA" in the NTSP column

- *Function 4.c, Steamline Isolation, Containment Pressure—High-High:*

  Revision of AV from "≤ 20 psig" to "≤ 18 psig" and addition of "15 psig" in the NTSP column

  SR 3.3.2.3 and SR 3.3.2.8: Addition of footnote "(f)"

- *Function 4.d, Steamline Isolation, High Steam Flow, Coincident with Safety Injection (SI) and T_{avg}—Low:*

  Revision of AV from "≤ Δp corresponding to $0.66x10^6$ lb/hr at 1005 psig" to "≤ Δp corresponding to $0.8x10^6$ lb/hr at 1005 psig" and addition of "Δp corresponding to $0.52x10^6$ lb/hr at 1005 psig in the NTSP column"

  Revision of AV from "≥ 540°F" to "≥ 542°F" and addition of "543°F" in the NTSP column

  SR 3.3.2.3 and SR 3.3.2.8: Addition of footnote "(f)"

- *Function 4.e, Steamline Isolation on High-High Steam Flow Coincident with Safety Injection:*

  Revision of AV from "≤ Δp corresponding to $4x10^6$ lb/hr at 806 psig" to "≤ Δp corresponding to $4.9x10^6$ lb/hr at 586 psig" and addition of "Δp corresponding to $4.85x10^6$ lb/hr at 586 psig in the NTSP column"

  SR 3.3.2.3 and SR 3.3.2.8: Addition of footnote "(f)"

- *Function 5.a, Feedwater Isolation, Automatic Actuation Logic and Actuation Relays:*

  Addition of "NA" in the NTSP column

  Revision of footnote (e) from "(e) Except when all MFRVs and associated bypass valves are closed and de-activated." to "(e) Except when all MFIVs, MFRVs and associated bypass valves are closed and de-activated."

- *Function 5.b, Feedwater Isolation, SG Water Level—High:*

  Revision of AV from "NA" to "≤ 90%" and addition of "78%" in the NTSP column

  SR 3.3.2.3 and SR 3.3.2.8: Addition of footnote "(f)"

- *Function 6.a, AFW, Automatic Actuation Logic and Actuation Relays:*

  Addition of "NA" in the NTSP column

- *Function 6.b, AFW, SG Water Level—Low-Low:*

  Revision of AV from "≥ 20%" to "≥ 29.5%" and addition of "31%" in the NTSP column

  SR 3.3.2.3 and SR 3.3.2.8: Addition of footnote "(f)"

- *Function 6.d, AFW Undervoltage Bus A01 and A02:*

  Addition of "3255 V" in the NTSP column

  SR 3.3.2.8: Addition of footnote "(f)"

- *Added new Function 6.e, AFW, AFW Pump Suction Transfer on Suction Pressure—Low:*

  Addition of "1,2,3" in the "APPLICABLE MODES" column

  Addition of "1 per pump" in the "REQUIRED CHANNELS" column

  Addition of "J" in the "CONDITIONS" column

  Addition of SR 3.3.2.1, SR 3.3.2.3(f), SR 3.3.2.8(f) in the "SURVEILLANCE REQUIREMENTS" column

  Addition of "≥ 5.8 psig" in the "ALLOWABLE VALUE" column

  Addition of "6.1 psig" in the NTSP column

- *Deleted Function 7, AFW, Condensate Isolation, and renamed current Function 8 as Function 7, SI Block—Pressurizer Pressure:*

  Revision of AV from "≤ 1800 psig" to "≤ 2005 psig" and addition of "2000 psig" in the NTSP column

3.2 Staff Evaluation

3.2.1 Suitability of Existing Instruments

For the proposed PBNP TS changes, the licensee evaluated each existing instrument of the affected NSSS and BOP systems to determine its suitability for the revised operating range of the affected process parameters. Where operation impacted safety analysis limits, the licensee verified that the acceptable safety margin continued to exist under all conditions of the power operation. Where necessary, the licensee revised the setpoint and uncertainty calculations for the affected instruments. Apart from the AFW system that needed to be changed, the licensee's evaluations found all of the existing instrumentation acceptable for the proposed TS changes in Section 1. The licensee performed the required setpoint calculation for the new AFW system.

3.2.2 Addition of NTSP column

The licensee added the NTSP column in conformance with NUREG-1431, "Standard Technical Specifications—Westinghouse Plants," Revision 3, dated June 30, 2004 (ML041830205), and in conformance with TSTF-493, and therefore, the NRC staff finds this TS change acceptable.

3.2.3 Addition of Notes 1, 2, 3, and 4

Notes 1, 2, 3, and 4 conform to TSTF-493 and are, therefore, acceptable to the NRC staff.

3.2.4 Setpoint Calculations

The licensee submitted several sample setpoint calculations for NRC staff evaluation.

The licensee calculated the NTSP from the analytical limit (AL) or the process limits (PL), either by adding or subtracting the total loop uncertainties (TLU) based on whether it is an increasing setpoint or a decreasing setpoint. In addition, the licensee included margin in calculating the NTSP.

The licensee calculated the TLU either by adding or subtracting the total bias of all bias uncertainties from the total random variable calculated by taking the square root of the sum of the squares of all random variables. Furthermore, the licensee revised the setpoint calculations by using double-sided random uncertainties and bias uncertainties to provide a 95/95 confidence level. The licensee based its original calculations on single-sided uncertainties. The double-sided uncertainty calculation is conservative compared to the single-sided uncertainty by about 18 percent.

The licensee calculated the AV from the NTSP, including all channel operational uncertainties, such that the as-found settings are within the AV and there is a 95 percent probability and 95 percent confidence that the trip will occur prior to the process variable exceeding the established limit.

The licensee used setting tolerance as the as-left uncertainty and the square root of the sum of the squares of setting uncertainty, drift, and measuring and test equipment uncertainty in calculating as-found uncertainties.

3.2.5 Addition of Function 6.e, AFW Pump Suction Transfer on Suction Pressure Low, to Table 3.3.2-1, Engineering Safety Feature Actuation System Instrumentation:

The licensee performed the setpoint calculation in conformance to setpoint calculation methodology performed for other instrument channels addressed above and the NRC staff finds setpoint calculation methodology for this instrumentation acceptable. The NRC staff also reviewed the Surveillance Requirements (SRs) added and found them to conform to SRs for other comparable channels and hence acceptable.

3.3 Summary

The staff specifically verified that the proposed footnotes and applicable functions are in conformance with Appendix A to TSTF-493, Revision 4, and that the calculations for the revised

setpoints for total loop uncertainties (TLU), nominal trip setpoints (NTSP), allowable values (AVs), as-found tolerance band, and as-left tolerance band are acceptable.

The NRC staff evaluated the licensee's justifications for the proposed TS changes listed in Section 3.1 of this safety evaluation including the evolution of the new AFW system, and finds that the proposed TS changes comply with the regulatory requirements specified in Section 2.0, and will ensure that there is reasonable assurance that systems and components affected by the proposed TS changes will perform their safety functions.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Wisconsin State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding published in the *Federal Register* on September 21, 2010 (75 FR 57524). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: S. Mazumdar
M. Chawla

Date: March 25, 2011

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Terry A. Beltz, Senior Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-266 and 50-301

Enclosures:
1. Amendment No. 239 to DPR-24
2. Amendment No. 243 to DPR-27
3. Safety Evaluation

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