



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

January 30, 2012

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

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF  
AMENDMENT TO REVISE TECHNICAL SPECIFICATION OPERATING LIMITS  
TO INCLUDE MEASUREMENT UNCERTAINTY (TAC NOS. ME5906 AND  
ME5907)

Dear Mr. Meyer:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 246 and 250 to Renewed Facility Operating License Nos. DPR-24 and DPR-27 for the Point Beach Nuclear Plant, Units 1 and 2, respectively. These amendments consist of changes to the Technical Specifications in response to your application dated March 23, 2011.

These amendments revise non-conservative values for five Technical Specification operating limits with more conservative values that incorporate measurement uncertainty.

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,

A handwritten signature in black ink, which appears to read "Terry A. Beltz", is written over a horizontal line.

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. 246 to DPR-24
2. Amendment No. 250 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. 246  
License No. DPR-24

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by NextEra Energy Point Beach, LLC (the licensee) dated March 23, 2011, 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 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 the 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. 246, are hereby incorporated in the renewed operating license. NextEra Energy Point Beach shall operate the facility in accordance with Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Shawn A. Williams, Acting Chief  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications  
and the Renewed Facility Operating License

Date of issuance: January 30, 2012



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. 250  
License No. DPR-27

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by NextEra Energy Point Beach, LLC (the licensee) dated March 23, 2011, 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 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 the 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. 250, are hereby incorporated in the renewed operating license. NextEra Energy Point Beach shall operate the facility in accordance with Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Shawn A. Williams, Acting Chief  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications  
and Renewed Facility Operating License

Date of issuance: January 30, 2012

ATTACHMENT TO LICENSE AMENDMENT NO. 246  
TO RENEWED FACILITY OPERATING LICENSE NO. DPR-24  
AND LICENSE AMENDMENT NO. 250  
TO RENEWED FACILITY OPERATING LICENSE NO. 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, and Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Renewed Facility Operating License

REMOVE

3

INSERT

3

Technical Specifications

REMOVE

3.4.5-2

3.4.6-2

3.4.7-1

3.4.7-2

3.5.4-2

3.6.4-1

3.6.5-1

3.6.7-2

INSERT

3.4.5-2

3.4.6-2

3.4.7-1

3.4.7-2

3.5.4-2

3.6.4-1

3.6.5-1

3.6.7-2

- 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 1800 megawatts thermal.
  - B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 246, 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 of 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 1800 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 250, 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.



CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Two RCS loops inoperable.  <u>OR</u>  No RCS loop in operation.	C.1 Place the Rod Control System in a condition incapable of rod withdrawal.	Immediately
	<u>AND</u>  C.2 Suspend all operations involving a reduction of RCS boron concentration.	Immediately
	<u>AND</u>  C.3 Initiate action to restore one RCS loop to OPERABLE status and operation.	Immediately

#### SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.5.1	Verify one RCS loop is in operation.	12 hours
SR 3.4.5.2	Verify steam generator secondary side water levels are $\geq 35\%$ narrow range for required RCS loops.	12 hours
SR 3.4.5.3	Verify correct breaker alignment and indicated power are available to the required pump that is not in operation.	7 days

**ACTIONS (continued)**

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One required RHR loop inoperable.</p> <p><u>AND</u></p> <p>Two required RCS loops inoperable.</p>	<p>B.1 Be in MODE 5.</p>	<p>24 hours</p>
<p>C. Required RCS or RHR loops inoperable.</p> <p><u>OR</u></p> <p>No RCS or RHR loop in operation.</p>	<p>C.1 Suspend all operations involving a reduction of RCS boron concentration.</p> <p><u>AND</u></p> <p>C.2 Initiate action to restore one loop to OPERABLE status and operation.</p>	<p>Immediately</p> <p>Immediately</p>

## SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.6.1	Verify one RHR or RCS loop is in operation.	12 hours
SR 3.4.6.2	Verify SG secondary side water levels are $\geq 35\%$ narrow range for required RCS loops.	12 hours
SR 3.4.6.3	Verify correct breaker alignment and indicated power are available to the required pump that is not in operation.	7 days

### 3.4 REACTOR COOLANT SYSTEM (RCS)

#### 3.4.7 RCS Loops—MODE 5, Loops Filled

LCO 3.4.7 One residual heat removal (RHR) loop shall be OPERABLE and in operation, and either:

- a. One additional RHR loop shall be OPERABLE; or
- b. The secondary side water level of at least one steam generator (SG) shall be  $\geq 35\%$  narrow range.

-----NOTES-----

1. The RHR pump of the loop in operation may be not in operation for  $\leq 1$  hour per 8 hour period provided:
  - a. No operations are permitted that would cause reduction of the RCS boron concentration; and
  - b. Core outlet temperature is maintained at least  $10^{\circ}\text{F}$  below saturation temperature.
2. One required RHR loop may be inoperable for up to 2 hours for surveillance testing provided that the other RHR loop is OPERABLE and in operation.
3. No reactor coolant pump shall be started with one or more RCS cold leg temperatures  $\leq$  Low Temperature Overpressure Protection (LTOP) arming temperature specified in the PTLR unless the secondary side water temperature of each SG is  $\leq 50^{\circ}\text{F}$  above each of the RCS cold leg temperatures.
4. All RHR loops may be removed from operation during planned heatup to MODE 4 or during the performance of required leakage or flow testing when at least one RCS loop is in operation.

APPLICABILITY: MODE 5 with RCS loops filled.

#### ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One RHR loop inoperable.  <u>AND</u>  Required SG secondary side water level not within limits.	A.1 Initiate action to restore a second RHR loop to OPERABLE status.	Immediately
	<u>OR</u>  A.2 Initiate action to restore required SG secondary side water level to within limit.	Immediately
B. Required RHR loops inoperable.  <u>OR</u>  No RHR loop in operation.	B.1 Suspend all operations involving a reduction of RCS boron concentration.	Immediately
	<u>AND</u>  B.2 Initiate action to restore one RHR loop to OPERABLE status and operation.	Immediately

#### SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.7.1	Verify one RHR loop is in operation.	12 hours
SR 3.4.7.2	Verify SG secondary side water level is $\geq 35\%$ narrow range in the required SG.	12 hours

(continued)

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE		FREQUENCY
SR 3.5.4.1	Verify RWST borated water temperature is $\geq 42.5^{\circ}\text{F}$ and $\leq 97.5^{\circ}\text{F}$ .	24 hours
SR 3.5.4.2	Verify RWST borated water volume is $\geq 275,000$ gallons.	7 days
SR 3.5.4.3	Verify RWST boron concentration is $\geq 2800$ ppm and $\leq 3200$ ppm.	7 days

### 3.6 CONTAINMENT SYSTEMS

#### 3.6.4 Containment Pressure

LCO 3.6.4      Containment pressure shall be  $\geq -1.0$  psig and  $\leq +1.0$  psig.

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

#### ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment pressure not within limits.	A.1 Restore containment pressure to within limits.	1 hour
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 3.6.4.1      Verify containment pressure is within limits.	12 hours

### 3.6 CONTAINMENT SYSTEMS

#### 3.6.5 Containment Air Temperature

LCO 3.6.5 Containment average air temperature shall be:

- a.  $\leq 116.3^{\circ}\text{F}$  based on three averaged temperature channels,
- b.  $\leq 115.7^{\circ}\text{F}$  based on two averaged temperature channels, or
- c.  $\leq 112.5^{\circ}\text{F}$  based on a single temperature channel.

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

#### ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment average air temperature not within limit.	A.1 Restore containment average air temperature to within limit.	8 hours
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 3.6.5.1 Verify containment average air temperature is within limit.	24 hours

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE		FREQUENCY
SR 3.6.7.1	Verify each spray additive manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	31 days
SR 3.6.7.2	Verify spray additive tank solution volume is $\geq 43\%$ .	184 days
SR 3.6.7.3	Verify spray additive tank NaOH solution concentration is $\geq 30\%$ and $\leq 33\%$ by weight.	184 days
SR 3.6.7.4	Verify each spray additive automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	18 months





UNITED STATES  
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SAFETY EVALUATION BY THE  
OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 246 TO  
RENEWED FACILITY OPERATING LICENSE NO. DPR-24  
AND AMENDMENT NO. 250 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

By letter dated March 23, 2011, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML110830009), NextEra Energy Point Beach, LLC (NextEra, the licensee) submitted a license amendment request to revise the Technical Specifications (TSs) of the Point Beach Nuclear Plant, Units 1 and 2 (PBNP), by replacing non-conservative values for five operating limits to more conservative values that incorporate measurement uncertainty.

NextEra is currently controlling the non-conservative values in accordance with the guidance provided in U.S. Nuclear Regulatory Commission (NRC) Administrative Letter 98-10, "Dispositioning of Technical Specifications that Are Insufficient to Assure Plant Safety," dated December 29, 1998 (ADAMS Accession No. ML031110108). By incorporating measurement uncertainty in these operating limits, the proposed changes correct non-conservative values that have been previously documented in the licensee's corrective action program.

The license amendment request revises the TS Limiting Condition for Operation (LCO) and Surveillance Requirement (SR) setpoint values to conform to the measurement uncertainty values as currently addressed in the TS Bases. A description of the proposed changes is discussed below.

A. Steam Generator Level - Narrow Range

- SR 3.4.5.2,

Replace

Enclosure

"Verify steam generator secondary side water levels are  $\geq 30\%$  narrow range for required RCS loops."

with

"Verify steam generator secondary side water levels are  $\geq 35\%$  narrow range for required RCS loops."

- SR 3.4.6.2,

Replace

"Verify SG secondary side water levels are  $\geq 30\%$  narrow range for required RCS loops."

with

"Verify SG secondary side water levels are  $\geq 35\%$  narrow range for required RCS loops."

- LCO 3.4.7.b,

Replace

"The secondary side water level of at least one steam generator (SG) shall be  $\geq 30\%$  narrow range."

with

"The secondary side water level of at least one steam generator (SG) shall be  $\geq 35\%$  narrow range."

- SR 3.4.7.2,

Replace

"Verify SG secondary side water level is  $\geq 30\%$  narrow range in required SG."

with

"Verify SG secondary side water level is  $\geq 35\%$  narrow range in the required SG."

#### B. Refueling Water Storage Tank (RWST) Temperature

- SR 3.5.4.1,

Replace

"Verify RWST borated water temperature is  $\geq 40^{\circ}\text{F}$  and  $\leq 100^{\circ}\text{F}$ ."

with

"Verify RWST borated water temperature is  $\geq 42.5^{\circ}\text{F}$  and  $\leq 97.5^{\circ}\text{F}$ ."

C. Containment Pressure - Low Range

- LCO 3.6.4,

Replace

"Containment pressure shall be  $\geq -2.0$  psig and  $\leq +2.0$  psig."

with

"Containment pressure shall be  $\geq -1.0$  psig and  $\leq +1.0$  psig."

D. Containment Air Temperature

- LCO 3.6.5,

Replace

"Containment average air temperature shall be  $\leq 120^{\circ}\text{F}$ ."

with

"Containment average air temperature shall be:

- a.  $\leq 116.3^{\circ}\text{F}$  based on three averaged temperature channels,
- b.  $\leq 115.7^{\circ}\text{F}$  based on two averaged temperature channels, or
- c.  $\leq 112.5^{\circ}\text{F}$  based on a single temperature channel."

E. Spray Additive Tank (SAT) Level

- SR 3.6.7.2,

Replace

"Verify spray additive tank solution volume is  $\geq 2675$  gal." <sup>1</sup>

with

<sup>1</sup> The licensee indicates in its March 31, 2011, application that an SAT physical volume of 2675 gallons corresponds to approximately 38.37 percent indicated level.

"Verify spray additive tank solution volume is  $\geq 43\%$ ."

## 2.0 REGULATORY EVALUATION

The NRC staff reviewed the proposed TS changes in the licensee's application against the regulatory requirements and guidance as discussed in Sections 2.1, 2.2, and 2.3, of this Safety Evaluation Report (SER) to ensure that there is reasonable assurance that the systems and components affected by the proposed TS changes will continue to perform their safety functions.

### 2.1 Regulatory Requirements

The NRC staff considered the following regulatory requirements:

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 establishes, in part, the necessary design, fabrication, construction, testing, and performance requirements for structures, systems, and components important to safety.

The regulations 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."

The regulations in 10 CFR 50.36(c)(2)(ii) set forth four criteria to be used in determining whether an LCO is required to be included in the TSs:

Criterion 1 – Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

Criterion 2 – A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

Criterion 3 – A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

Criterion 4 – A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

The regulations in 10 CFR 50.36(c)(3) state, "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 PBNP General Design Criteria (GDC) 12 requires, in part, that "Instrumentation and controls shall be provided as required to monitor and maintain within prescribed operating ranges essential reactor facility operating variables."

## 2.2 Regulatory Guidance

The NRC staff considered the regulatory guidance provided in Regulatory Guide (RG) 1.105, "Setpoints for Safety-Related Instrumentation," Revision 3, issued December 1999, (ADAMS Accession No. ML993560062). 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.

RG 1.105 endorses Part I of Instrument Society of America Standard 67.04-1994, "Setpoints for Nuclear Safety-Related Instrumentation," subject to NRC staff clarifications. The NRC staff used this guidance to establish the adequacy of the licensee's setpoint calculation methodologies and the related plant surveillance procedures.

In Regulatory Issue Summary (RIS) 2006-17, "NRC Staff Position on the Requirements of 10 CFR 50.36, 'Technical Specifications,' regarding Limiting Safety System Settings during Periodic Testing and Calibration of Instrument Channels," dated August 24, 2006 (ADAMS Accession No. ML051810077), the NRC addresses requirements on limiting safety system settings that are assessed during the periodic testing and calibration of instrumentation. RIS 2006-17 discusses issues that could occur during the testing of limiting safety system settings, and that may have an adverse effect on equipment operability.

The NRC staff considered the regulatory guidance provided in NRC Administrative Letter 98-10, addressing the staff's expectations regarding correction of facility TSs when they are found to contain non-conservative values or specify incorrect actions.

## 2.3 Spray Additive Tank Level

The spray additive tank is required to have a sufficient volume of sodium hydroxide solution to provide a means to adjust the pH of containment sump water and containment spray solution under accident conditions. The sodium hydroxide solution neutralizes boric acid and converts post-accident iodine to the nonvolatile iodate form. The staff has reviewed the licensee's proposed change to the SAT minimum volume to determine if the change is acceptable. Point Beach Nuclear Plant, Units 1 and 2 are not licensed to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix A, General Design Criteria (GDC); rather, they are licensed to plant-specific GDC. The NRC's acceptance criteria for the SAT technical specification limit are based on plant-specific PBNP GDC 12, "Instrumentation and Control Systems," as it requires that instrumentation and controls be provided as required to monitor and maintain essential reactor facility operating variables.

### 3.0 TECHNICAL EVALUATION

#### 3.1 Consideration of Measurement Uncertainty

The NRC staff in the Instrumentation and Controls Branch (EICB) of the Office of Nuclear Reactor Regulation (NRR) reviewed the proposed TS changes in Section 1.0. The licensee stated that the TS setpoints provided in Section 1.0 of this SER currently do not include measurement uncertainties. The NRC staff observed that corresponding values, including measurement uncertainties, are currently listed in the corresponding TS Bases sections. The licensee proposes to replace the current TS values (without the measurement uncertainties) with those values specified in the current TS Bases that include measurement uncertainty.

Additionally for SR 3.6.7.2, the current TS requires that the SAT contain a minimum of 2675 gallons of solution. The SAT level indicator provides a reading in percent level. To facilitate the operator verification of the required volume directly from the instrument reading, the licensee converted the SAT solution volume from gallons to a volume percentage.

The licensee provided two setpoint calculations as examples of calculations supporting the license amendment request: 1) Calculation 2006-0035, Revision 1, "RWST Temperature, Containment Average Air Temperature and Spray Additive Tank Level Uncertainty/Setpoint Calculation," and 2) Calculation No. PBNP-IC-17, Revision 3, "Low Range Containment Pressure Instrument Loop Uncertainty/Setpoint Calculation." The licensee provided the calculations to demonstrate how the appropriate magnitude of measurement uncertainty using a total loop uncertainty analysis process was determined.

The NRC staff observed that the TS changes are not limiting safety system settings (i.e., neither Allowable Value nor Limiting Trip Setpoints). The NRC staff did not perform an evaluation of the appropriateness of the calculations during its evaluation because the licensee affirmed in its application that the magnitude of the measurement uncertainty included in the TS tables and had already been included within the values presented in the current TS Bases section corresponding to those values in the TS tables.

The NRC staff views the proposed TS changes as administrative and an enhancement to the current TS presentation. Based on the above, the NRC staff in EICB concludes that the changes to the proposed TS setpoint values to include measurement uncertainty are acceptable.

#### 3.2 Steam Generator Level (Narrow Range) and RWST Level

The NRC staff in the Reactor Systems Branch (SRXB) of NRR reviewed the proposed TS changes in Section 1.0.A and 1.0.B. The NRC staff confirms that cooling capability can be provided when steam generator secondary side water levels are greater than or equal to 30 percent in the narrow range. The SRXB staff completed an audit of the Westinghouse Steam Line Break (SLB) calculations on October 19, 2011, and confirmed that the temperature of safety injection for the RWST is 40°F. The NRC staff considers this temperature to be consistent with the proposed TS change and to be an acceptable analytical value for the SLB analysis.

The proposed 2.5°F change is based on measurement uncertainties that were evaluated by the NRC staff in EICB, and confirms that the maximum temperature of 100°F is associated with the amount of containment cooling provided from the RWST.

Based on the above, the NRC staff in SRXB concludes that the changes to the steam generator narrow range level and RWST temperature are acceptable.

### 3.3 Containment Pressure and Containment Air Temperature

The NRC staff in the Containment and Ventilation Branch (SCVB) of NRR reviewed the proposed TS changes in Section 1.0.C and 1.0.D. For the operating limits addressed in this license amendment request, the current TS values are analysis values that represent a process condition assumed at the start of the event, or a value that would maintain a system, structure, or component in an operable condition to mitigate an event. Since instrument uncertainty is inherent in monitoring process parameters, these TS values should be revised to account for instrument uncertainty.

The licensee performed a calculation to determine the proposed values and to determine the technical adequacy of those values. As discussed in Section 3.1 of this safety evaluation, the NRC staff in EICB views the proposed TS changes as administrative and an enhancement to the current TS presentation, and concludes that the changes to the proposed TS setpoint values to include measurement uncertainty are acceptable.

#### 3.3.1 TS 3.6.4, Containment Pressure

Containment internal pressure is an initial condition used in the accident analyses (AA) to establish the maximum peak containment internal pressure. The initial pressure used in the containment loss-of-coolant accident analysis (LOCA) and steam line break containment analysis was 16.7 pounds per square inch absolute (2.0 pounds per square inch gauge (psig)). With an initial pressure of +2.0 psig, the maximum peak calculated containment pressure does not exceed the containment design pressure.

The proposed TS values were determined by the licensee by adjusting the current TS limits to incorporate the pressure indicator uncertainties and conservative rounding. Maintaining low range containment pressure within the TS range ensures the initial containment pressure assumed in the AA will be maintained. The staff has verified that the initial containment pressure assumed in the AA has not changed and therefore the proposed change will continue to ensure that the maximum peak calculated containment pressure does not exceed the containment design pressure.

Based on the above, the NRC staff concludes that the proposed setpoint change to TS 3.6.4 is acceptable since the proposed change does not affect the value assumed in the accident analyses.

### 3.3.2 TS 3.6.5, Containment Air Temperature

The initial containment average air temperature assumed in the accident analysis is the current TS limit of 120°F. The results of the analyses demonstrate that the calculated transient containment air temperature is acceptable for the design basis accident LOCA.

The proposed TS values were determined by the licensee by adjusting the current TS limits to incorporate the pressure indicator uncertainties and conservative rounding. The number of channels used to determine average containment air temperature impacts the magnitude of measurement uncertainty that must be applied to ensure the input assumption is preserved. The proposed TS limits ensure containment average temperature is maintained below the value assumed in the accident analysis and provides operator flexibility when one or two containment temperature channels are unavailable. The NRC staff has verified that the initial containment air temperature assumed in the accident analysis has not changed and, therefore, finds that the proposed change to TS 3.6.5 is acceptable since the proposed change does not affect the value assumed in the accident analyses.

### 3.3.3 Conclusion

Based on the above evaluations, the NRC staff in SCVB finds that the licensee's proposed changes to TS 3.6.4 and TS 3.6.5 values incorporate measurement uncertainty to ensure that the operating parameters are maintained within the limits assumed as initial conditions in the accident analysis, consistent with PBNP GDC 12, and the TS operating limits continue to meet Criterion 2 of 10 CFR 50.36(c)(2)(ii).

### 3.4 Spray Additive Tank Level

The NRC staff in the Steam Generator Tube Integrity and Chemical Engineering Branch (ESGB) of NRR reviewed the proposed TS change in Section 1.0.E. The current technical specification, surveillance requirement (SR) 3.6.7.2, requires that the SAT contain a minimum of 2675 gallons of sodium hydroxide solution. The licensee stated that the SAT level indication reads volume in percent level of tank filled as opposed to actual volume measurement. In addition, the licensee indicated that the TS operational limit does not include measurement uncertainties.

The licensee is proposing to change the TS surveillance requirement for minimum SAT volume to a percentage value limit. The change will replace the existing SR 3.6.7.2 to include verifying SAT solution volume is  $\geq 43$  percent. The proposed change is stated to be more conservative than the current TS requirement and includes measurement uncertainties.

The licensee performed calculations and determined that the 2675 gallon TS limit corresponds to a SAT volume of 38.37 percent. It was indicated that a 75 percent probability at a 75 percent confidence level loop uncertainty was calculated to be  $\pm 3.425$  percent of span. This uncertainty value was added to the 38.37 percent level to obtain a minimum indicated level of 41.795 percent.

The licensee stated that the SAT level indicator's span is 0-100 percent, with minor divisions of 2 percent and readability of one-half of a division, or 1 percent. Adjusting for readability and



including additional margin, the licensee added 1 percent and rounded conservatively to obtain a final SAT level of 43 percent. The licensee determined that a SAT level  $\geq 43$  percent is sufficient volume of sodium hydroxide solution for post-accident iodine removal requirements and adjusting containment sump water pH during recirculation, as assumed in the accident analysis.

The NRC staff reviewed the calculations provided by the licensee and found them to be acceptable, based on the proposed change being either equivalent or more conservative than the current TS operational limit for minimum SAT volume. In addition, the proposed TS change factors in uncertainties that are not included in the current TS value.

Based on the above, the NRC staff in ESGB concludes that the proposed change to the SAT volume TS requirement is acceptable.

## 5.0 SUMMARY

The NRC staff find that the proposed TS changes listed in Section 1.0 of this SER are updated to incorporate measurement uncertainty; correspond to the values in the current TS Bases; and that these values comply with the regulatory requirements specified in Section 2.0 of this SER. Therefore, the NRC staff concludes that the proposed changes are acceptable.

## 6.0 STATE CONSULTATION

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

## 7.0 ENVIRONMENTAL CONSIDERATION

The amendment changes requirements 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 May 17, 2011 (76 FR 28475). 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.

## 8.0 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Date of issuance: January 30, 2012

Mr. Larry Meyer  
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Point Beach Nuclear Plant  
6610 Nuclear Road  
Two Rivers, WI 54241

January 30, 2012

**SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENT TO REVISE TECHNICAL SPECIFICATION OPERATING LIMITS TO INCLUDE MEASUREMENT UNCERTAINTY (TAC NOS. ME5906 AND ME5907)**

Dear Mr. Meyer:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 246 and 250 to Renewed Facility Operating License Nos. DPR-24 and DPR-27 for the Point Beach Nuclear Plant, Units 1 and 2, respectively. These amendments consist of changes to the Technical Specifications in response to your application dated March 23, 2011.

These amendments revise non-conservative values for five Technical Specification operating limits with more conservative values that incorporate measurement uncertainty.

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. 246 to DPR-24
2. Amendment No. 250 to DPR-27
3. Safety Evaluation

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