



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

March 27, 2019

Mr. Mano Nazar
President and Chief Nuclear Officer
Nuclear Division
NextEra Energy Point Beach, LLC
Mail Stop: NT3/JW
15430 Endeavor Drive
Jupiter, FL 33478

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF
AMENDMENTS TO ADOPT TSTF-547, "CLARIFICATION OF ROD POSITION
REQUIREMENTS" (EPID L-2018-LLA-0207)

Dear Mr. Nazar:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment Nos. 264 and 267 to Renewed Facility Operating License Nos. DPR-24 and DPR-27 for the Point Beach Nuclear Plant (PBNP), Units 1 and 2. The amendments consist of changes to the Renewed Facility Operating Licenses for PBNP in response to your application dated July 30, 2018.

The amendments revise the PBNP Unit 1 and 2 technical specifications (TS) to provide time to repair rod movement failures, that do not affect rod operability, correct conflicts between the TS, increase consistency between the subject TS, and improve the format and presentation. The changes are consistent with NRC-approved Technical Specifications Task Force (TSTF) Change Traveler TSTF-547, Revision 1, "Clarification of Rod Position Requirements."

A copy of the 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, appearing to read "Chawla M".

Mahesh Chawla, Project Manager
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-266 and 50-301

Enclosures:

1. Amendment No. 264 to DPR-24
2. Amendment No. 267 to DPR-27
3. Safety Evaluation

cc: ListServ



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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NEXTERA ENERGY POINT BEACH, LLC

DOCKET NO. 50-266

POINT BEACH NUCLEAR PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

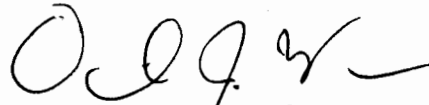
Amendment No. 264
Renewed License No. DPR-24

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 July 30, 2018 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. 264, are hereby incorporated in the renewed operating license. NextEra Energy Point Beach shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 90 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



David J. Wrona, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of issuance: March 27, 2019



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. 267
Renewed 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 July 30, 2018, 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. 267, are hereby incorporated in the renewed operating license. NextEra 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 90 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read 'D. J. Wrona', with a long horizontal flourish extending to the right.

David J. Wrona, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License

Date of issuance: March 27, 2019

ATTACHMENT TO LICENSE AMENDMENT NO. 264
TO RENEWED FACILITY OPERATING LICENSE NO. DPR-24
AND LICENSE AMENDMENT NO. 267
TO RENEWED FACILITY OPERATING LICENSE NO. DPR-27

FOR

POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-266 AND 50-301

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

LICENSE PAGES

<u>REMOVE</u>	<u>INSERT</u>
3	3
3	3

TECHNICAL SPECIFICATIONS

<u>REMOVE</u>	<u>INSERT</u>
3.1.4-1	3.1.4-1
3.1.4-2	3.1.4-2
3.1.4-3	3.1.4-3
3.1.4-4	3.1.4-4
3.1.5-1	3.1.5-1
3.1.5-2	3.1.5-2
3.1.6-1	3.1.6-1
3.1.6-2	3.1.6-2
3.1.6-3	3.1.6-3
3.1.7-1	3.1.7-1
3.1.7-2	3.1.7-2
3.1.7-3	3.1.7-3

- 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. 264, 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 1800 megawatts thermal.
 - B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 267, 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.

3.1 REACTIVITY CONTROL SYSTEMS

3.1.4 Rod Group Alignment Limits

LCO 3.1.4 All shutdown and control rods shall be OPERABLE, with individual rod positions within limits.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more rod(s) inoperable.	A.1.1 Verify SDM to be within the limits provided in the COLR.	1 hour
	<u>OR</u>	
	A.1.2 Initiate boration to restore SDM to within limit.	1 hour
	<u>AND</u>	
	A.2 Be in MODE 3.	6 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One rod not within alignment limits.</p>	<p>B.1.1 Verify SDM to be within the limits provided in the COLR.</p> <p style="text-align: center;"><u>OR</u></p> <p>B.1.2 Initiate boration to restore SDM to within limit.</p> <p style="text-align: center;"><u>AND</u></p> <p>B.2 Reduce THERMAL POWER to $\leq 75\%$ RTP.</p> <p style="text-align: center;"><u>AND</u></p> <p>B.3 Verify SDM to be within the limits provided in the COLR.</p> <p style="text-align: center;"><u>AND</u></p> <p>B.4 Perform SR 3.2.1.1, 3.2.1.2, and 3.2.2.1.</p> <p style="text-align: center;"><u>AND</u></p> <p>B.2.5 Re-evaluate safety analyses and confirm results remain valid for duration of operation under these conditions.</p>	<p>1 hour</p> <p>1 hour</p> <p>2 hours</p> <p>Once per 12 hours</p> <p>72 hours</p> <p>5 days</p>
<p>C. Required Action and associated Completion Time of Condition B not met.</p>	<p>C.1 Be in MODE 3.</p>	<p>6 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. More than one rod not within alignment limit.	D.1.1 Verify SDM to be within the limits provided in the COLR.	1 hour
	<u>OR</u>	
	D.1.2 Initiate boration to restore required SDM to within limit.	1 hour
	<u>AND</u>	
	D.2 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.1.4.1 ----- NOTES-----</p> <ol style="list-style-type: none"> 1. Not required to be performed for rods associated with inoperable rod position indicator or demand position indicator. 2. Not required to be performed until 1 hour after associated rod motion. <p>-----</p> <p>Verify position of individual rods within the following alignment limits:</p> <ol style="list-style-type: none"> a. ± 18 steps of demanded position (as allowed by Table 3.1.4-1) in MODE 1 > 85 percent RTP when bank demand position is < 215 steps; <p><u>AND</u></p> <ol style="list-style-type: none"> b. ± 24 steps of demanded position (as allowed by Table 3.1.4-2) in MODE 1 > 85 percent RTP when bank demand position is ≥ 215 steps; <p><u>AND</u></p> <ol style="list-style-type: none"> c. ± 24 steps of demanded position in MODE 1 ≤ 85 percent RTP or in MODE 2. 	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.1.4.2 Verify rod freedom of movement (trippability) by moving each rod not fully inserted in the core ≥ 10 steps in either direction.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.1.4.3 Verify rod drop time of each rod, from the fully withdrawn position, is ≤ 2.2 seconds from the beginning of decay of stationary gripper coil voltage to dashpot entry, with:</p> <ol style="list-style-type: none"> a. $T_{avg} \geq 500^{\circ}\text{F}$; and b. All reactor coolant pumps operating. 	<p>Prior to reactor criticality after each removal of the reactor head</p>

3.1 REACTIVITY CONTROL SYSTEMS

3.1.5 Shutdown Bank Insertion Limits

LCO 3.1.5 Each shutdown bank shall be within insertion limits specified in the COLR.

-----NOTE-----
Not applicable to shutdown banks inserted while performing SR 3.1.4.2.

APPLICABILITY: MODES 1 and 2

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One shutdown bank inserted \leq 10 steps beyond the insertion limits specified in the COLR	A.1 Verify all control banks are within the insertion limits specified in the COLR.	1 hour
	<u>AND</u>	
	A.2.1 Verify SDM is within the limits specified in the COLR.	1 hour
	<u>OR</u>	
	A.2.2 Initiate boration to restore SDM to within limit.	1 hour
	<u>AND</u>	24 hours
	A.3 Restore the shutdown bank to within the insertion limits specified in the COLR.	

(continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One or more shutdown banks not within limits for reasons other than Condition A.	B.1.1 Verify SDM to be within the limits provided in the COLR.	1 hour
	<u>OR</u>	
	B.1.2 Initiate boration to restore SDM to within limit.	1 hour
	<u>AND</u>	
	B.2 Restore shutdown banks to within limits.	2 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.1.5.1 ----- NOTE ----- Not required to be performed until 1 hour after associated rod motion. ----- Verify each shutdown bank is within the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program

3.1 REACTIVITY CONTROL SYSTEMS

3.1.6 Control Bank Insertion Limits

LCO 3.1.6 Control banks shall be within the insertion, sequence, and overlap limits specified in the COLR.

-----NOTE-----
Not applicable to control banks inserted while performing SR 3.1.4.2.

APPLICABILITY: MODE 1,
MODE 2 with $k_{eff} \geq 1.0$.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Control bank A, B, or C inserted ≤ 10 steps beyond the insertion, sequence, or overlap limits specified in the COLR.	A.1 Verify all shutdown banks are within the insertion limits specified in the COLR.	1 hour
	<u>AND</u>	
	A.2.1 Verify SDM is within the limits specified in the COLR.	1 hour
	<u>OR</u>	
	A.2.2 Initiate boration to restore SDM to within limit.	1 hour
	<u>AND</u>	
	A.3 Restore the control bank to within the insertion, sequence, and limits specified in the COLR.	24 hours

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.6.1	Verify estimated critical control bank position is within the limits specified in the COLR.	Within 4 hours prior to achieving criticality
SR 3.1.6.2	<p>----- NOTE ----- Not required to be performed until 1 hour after associated rod motion. -----</p> <p>Verify each control bank insertion is within the limits specified in the COLR.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.1.6.3	<p>----- NOTE ----- Not required to be performed until 1 hour after associated rod motion. -----</p> <p>Verify sequence and overlap limits specified in the COLR are met for control banks not fully withdrawn from the core.</p>	In accordance with the Surveillance Frequency Control Program

3.1 REACTIVITY CONTROL SYSTEMS

3.1.7 Rod Position Indication

LCO 3.1.7 Individual control rod position indication (RPI) and bank demand indication shall be OPERABLE.

----- NOTE -----
Individual RPIs are not required to be OPERABLE for 1 hour following movement of the associated rods.

APPLICABILITY: MODES 1 and 2.

ACTIONS

----- NOTE -----
Separate Condition entry is allowed for each inoperable RPI per group and each bank demand position indicator per bank.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more RPI(s) per group inoperable in one or more groups.	A.1.1 Verify the position of the rods with inoperable RPIs by using movable incore detectors.	8 hours
	<u>AND</u>	
	A.1.2 Verify the position of the rods with inoperable RPIs.	Once per 8 hours
	<u>OR</u>	
	A.2 Reduce THERMAL POWER to ≤ 50% RTP	8 hours

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.1.7.1</p> <p>-----NOTE----- Not required to be met for RPIs associated with rods that do not meet LCO 3.1.4. -----</p> <p>Perform CHANNEL CALIBRATION of each RPI.</p>	<p>Once prior to criticality after each removal of the reactor head.</p>



UNITED STATES
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 264 and 267

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

NEXTERA ENERGY POINT BEACH, LLC

POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-266 AND 50-301

1. INTRODUCTION

By letter dated July 30, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18214A730), NextEra Energy Point Beach, LLC submitted a license amendment request to revise the technical specifications (TS) for Point Beach Nuclear Plant (PBNP), Units 1 and 2, to the U.S. Nuclear Regulatory Commission (NRC, the Commission).

Specifically, the application requests changes consistent with NRC-approved Technical Specifications Task Force (TSTF) Change Traveler TSTF-547, Revision 1, "Clarification of Rod Position Requirements." By letter dated December 31, 2015 (ADAMS Accession No. ML15365A610), the TSTF submitted to the NRC Revision 1 to Change Traveler TSTF-547. Change Traveler TSTF-547 proposes changes to Volumes 1 and 2 of NUREG-1431, Revision 4, "Standard Technical Specifications [STS]: Westinghouse Plants," dated April 2012 (ADAMS Accession Nos. ML12100A222 and ML12100A228, respectively). The proposed changes would revise the TS to provide time to repair rod movement failures that do not affect rod operability, correct conflicts between the TS, and increase consistency between the subject TS and improve the format and presentation.

2.0 REGULATORY EVALUATION

2.1 Description of Rod Cluster Control Assemblies

The rod cluster control assemblies (RCCA), or rods, are moved by their control rod drive mechanisms (CRDM). There are 33 RCCAs in each unit, divided into two groups: a shutdown group comprising one bank of 8 rod clusters and one bank of 4 rod clusters and a control group comprising of 4 control banks (A, B, C, and D), which contain 8, 4, 5, and 4 rod clusters, respectively.

The shutdown banks are maintained either in the fully inserted or fully withdrawn position. The control banks are driven by the same variable speed rod drive control unit which moves the subgroups sequentially one step at a time. The sequence of motion is reversible, that is, a withdrawal sequence is the reverse of the insertion sequence. The variable speed sequential

rod control affords the ability to insert a small amount of reactivity at low speed to accomplish fine control of T_{avg} about a small temperature deadband. The operator is able to select either automatic or manual control. In either case, significant motion of the control banks can only be accomplished in their normal sequence, but with some overlap as one bank approaches its fully withdrawn position and the next bank begins to withdraw.

The overlap between successive control banks is provided to compensate for low differential rod worth near the top and bottom of the core. The control group rod insertion limits ensure that the control rods are withdrawn far enough to provide the necessary shutdown margin to achieve hot shutdown following a reactor trip at any time, assuming that the highest worth control rod remains fully withdrawn.

Two separate systems are provided to measure and display control rod position. The first system is an analog system that derives the position signal directly from measurements of the drive rod position utilizing a linear variable differential transmitter (LVDT) as a detector. An analog signal is produced for each RCCA by the LVDT. An electrical coil stack is placed above the stepping mechanisms of the control rod magnetic jacks and is external to the pressure housing. Direct, continuous, readout of every RCCA position is presented to the operator by individual meters. Since each RCCA is provided with a separate indication, no manipulation is required to determine rod position. In addition, the individual rod position signals are provided to the plant computer, which provides additional indication and alarms. The analog rod position indication displayed on the plant computer may be used to satisfy TS surveillance requirements.

The second system is a digital system. The bank demand position signal counts pulses generated in the rod drive control system. Readout of the bank demand position is provided from an add-subtract pulse counter, which measures the number of steps that the rods are withdrawn. One bank demand counter is associated with each group (or subgroups) of RCCAs. These readouts are mounted on the control panel. The reactor operator can compare the digital and analog readings upon receiving a rod deviation alarm. Since the digital and analog systems are separate systems, with each serving as a backup for the other, a single failure in rod position indication does not, in itself, lead the operator to take erroneous action in the operation of the reactor.

The shutdown margin (SDM) is defined in the technical specifications for PBNP, Units 1 and 2, as the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming:

- a. All RCCAs are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. However, with all RCCAs verified fully inserted by two independent means, it is not necessary to account for a stuck RCCA in the SDM calculation;
- b. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM, and
- c. In MODES 1 and 2, the fuel and moderator temperatures are changed to the nominal zero power design level.

The core operating limits report (COLR) is defined in the technical specifications for PBNP, Units 1 and 2, as the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific parameter limits must be determined for each reload

cycle in accordance with TS 5.6.4. Plant operation within these limits is addressed in individual Specifications.

2.2 Description of Changes

PBNP, Units 1 and 2, use Improved STS, NUREG-1431, Revision 4, for Westinghouse-designed plants. In some cases, the PBNP approved TS requirements differ from NUREG-1431.

This safety evaluation (SE) addresses changes to the licensee's TS governing rod group alignment limits in TS 3.1.4, "Rod Group Alignment Limits," shutdown bank insertion limits in TS 3.1.5, "Shutdown Bank Insertion Limits," control bank insertion limits in TS 3.1.6, "Control Bank Insertion Limits," and rod position indication instrumentation in TS 3.1.7, "Rod Position Indication." The specific changes are described in the following subsections.

2.2.1 Provide Time to Correct Rod Movement Failures that Do Not Affect Operability

The limiting condition for operation (LCO) 3.1.5 requires that each shutdown bank be within insertion limits specified in the COLR. Current Condition A for one or more shutdown banks not within limits, states:

A.1.1 Verify SDM to be within the limits provided in the COLR within 1 hour.

OR

A.1.2 Initiate boration to restore SDM to within limit within 1 hour.

AND

A.2 Restore shutdown banks to within limits within 2 hours.

LCO 3.1.6 requires that each control bank be within insertion, sequence, and overlap limits specified in the COLR. Current Condition A for control bank insertion limits not met requires:

A.1.1 Verify SDM to be within the limits provided in the COLR within 1 hour.

OR

A.1.2 Initiate boration to restore SDM to within limit within 1 hour.

AND

A.2 Restore control bank(s) to within limits within 2 hours.

The proposed change would add a new Condition A to LCO 3.1.5 that would require, with one shutdown bank inserted ≤ 10 steps beyond the insertion limits specified in the COLR:

- A.1 Verify all control banks are within the insertion limits specified in the COLR within 1 hour.

AND

- A.2.1 Verify SDM is within the limits specified in the COLR within 1 hour.

OR

- A.2.2. Initiate boration to restore SDM to within limit within 1 hour.

AND

- A.3 Restore the shutdown bank to within the insertion limits specified in the COLR within 24 hours.

The existing Condition A would be renumbered as Condition B and would be modified to apply for one or more shutdown banks not within limits for reasons other than Condition A. The existing required actions (RA) A.1.1, A.1.2, and A.2, would be renumbered B.1.1, B.1.2, and B.2. The existing Condition B and RA B.1 would be renumbered Condition C and RA C.1.

The proposed change would add a new Condition A to LCO 3.1.6 that would require, if control bank A, B, or C is inserted ≤ 10 steps beyond the insertion, sequence, or overlap limits specified in the COLR, that:

- A.1 Verify all shutdown banks are within the insertion limits specified in the COLR within 1 hour.

AND

- A.2.1 Verify SDM is within the limits specified in the COLR within 1 hour.

OR

- A.2.2. Initiate boration to restore SDM to within limit within 1 hour.

AND

- A.3 Restore the control bank to within the insertion, sequence, and overlap limits specified in the COLR within 24 hours.

The existing Condition A would be renumbered as Condition B and would be modified to apply for control bank insertion limits not met for reasons other than Condition A. The existing RAs A.1.1, A.1.2, and A.2 would be renumbered B.1.1, B.1.2, and B.2. The existing Condition B and RAs B.1.1, B.1.2, and B.2 would be renumbered as Condition C and RAs C.1.1, C.1.2, and C.2. Existing Condition C and RA C.1 would be renumbered as Condition D and RA D.1.

The shutdown banks must be within their insertion limits any time the reactor is critical or approaching criticality. This ensures that a sufficient amount of negative reactivity is available to shut down the reactor and maintain the required SDM following a reactor trip.

The limits on control banks sequence, overlap, and physical insertion, as defined in the COLR, must be maintained because they serve the function of preserving power distribution, ensuring that the SDM is maintained, ensuring that ejected rod worth is maintained, and ensuring adequate negative reactivity insertion is available on a reactor trip.

2.2.2 Allow Time for Thermal Equilibrium of Analog Rod Position Indication (RPI)

The accuracy of the analog RPI system is affected by rod temperatures. With this effect, movement of associated rods may make the indications of the analog RPI system inaccurate. The proposed revision would allow a 1-hour period for the drive shaft to reach thermal equilibrium following rod movement to ensure the accuracy of the RPI analog indications, prior to requiring verification of compliance with TS limits. This change affects surveillance requirements (SRs) 3.1.4.1, 3.1.5.1, 3.1.6.2 and 3.1.6.3, and LCO 3.1.7.

SR 3.1.4.1 requires verification that the position of individual rods are within the alignment limits in accordance with the surveillance frequency control program (SFCP). The proposed change adds a note to the surveillance "Not required to be performed until 1 hour after associated rod motion."

SR 3.1.5.1 requires verification that each shutdown bank is within the limits specified in the COLR in accordance with the SFCP. The proposed change adds a note to the surveillance, "Not required to be performed until 1 hour after associated rod motion."

SR 3.1.6.2 requires verification that each control bank is within the insertion limits specified in the COLR in accordance with the SFCP. The proposed change adds a note to the surveillance "Not required to be performed until 1 hour after associated rod motion."

SR 3.1.6.3 requires verification that each control bank that is not fully withdrawn from the core is within the sequence and overlap limits specified in the COLR in accordance with the SFCP. The proposed change adds a note to the surveillance, "Not required to be performed until 1 hour after associated rod motion."

LCO 3.1.7 requires that the individual control RPI and the bank demand indication be operable during startup (Mode 2) and power operation (Mode 1). LCO 3.1.7 is revised to add a note that states "Individual RPIS are not required to be OPERABLE for 1 hour following movement of the associated rods."

2.2.3 Clarify SRs in TS 3.1.4 and TS 3.1.7

SR 3.1.4.1 requires verification that individual rod positions are within the alignment limits in accordance with the SFCP. The proposed change is the addition of a note to SR 3.1.4.1 stating that the SR is "Not required to be performed for rods associated with inoperable rod position indicator or demand position indicator." This note is being added because SR 3.1.4.1 cannot be performed for rods with an inoperable demand position indicator.

LCO 3.1.4 specifies that all shutdown and control rods shall be operable and individual rod positions shall be within their group step counter demand position limits. SR 3.1.7.1 requires

that channel calibration of each RPI be performed once prior to criticality after each removal of the reactor head. The proposed change is the addition of a note to SR 3.1.7.1 stating that the SR is "Not required to be met for RPIs associated with rods that do not to meet LCO 3.1.4."

2.2.4 Other Proposed Changes

The proposed changes described in this section are either administrative or editorial in nature and do not change the technical content.

1. LCO 3.1.4, Condition B, is revised to eliminate RA B.1 and to combine RAs B.2.4 and B.2.5. Condition B applies when one rod is not within the alignment limits and RA B.1 requires restoring the rod to within limits within 1 hour. An alternative set of RAs is provided in the RA section, and will continue to be required when Condition B is applicable. RA B.1 requires restoration of equipment such that the condition does not apply. Restoring equipment to operable status is understood to be an option. Therefore, stating this as an RA is not necessary.
2. TS 3.1.4, TS 3.1.5, and TS 3.1.6 contain a note that modifies the "ACTIONS" to allow 1 hour following rod motion prior to verifying rod operability and group alignment, or bank insertion limits. These TSs are different from the STS. The licensee determined that the note is misplaced and should be associated with the various surveillance requirements that verify rods are positioned within the allowable limits. The proposed change would delete the note that modifies the "ACTIONS" in TS 3.1.4, TS 3.1.5, and TS 3.1.6. As discussed above in section 2.2.3, consistent with the TSTF-547 traveler, the proposed change would add a note to SR 3.1.4.1, SR 3.1.5.1, SR 3.1.6.2, SR 3.1.6.3, and LCO 3.1.7 to allow a 1-hour period for the drive shaft to reach thermal equilibrium following rod movement prior to requiring verification of compliance with TS limits.
3. LCO 3.1.5 and LCO 3.1.6 contain a note modifying their Applicability that states "This LCO is not applicable while performing SR 3.1.4.2." The proposed change moves the note from "Applicability" to "LCO" and revises it to state, "Not applicable to control banks inserted while performing SR 3.1.4.2" for LCO 3.1.5 and "Not applicable to shutdown banks inserted while performing SR 3.1.4.2" for LCO 3.1.6. This change clarifies the note and does not alter its meaning.
4. TS 3.1.7 is revised to use the defined abbreviation "RPI" consistently. This affects the LCO title, Actions Note, RA A.1.1, RA A.1.2, and RA B.1.
5. TS 3.1.7, Condition A and Condition C, are revised from "**for** one or more groups" to the more standard terminology "**in** one or more groups," so that both conditions are consistent.
6. TS 3.1.7, Condition B is revised to contain similar terminology to Condition A. The existing Condition B states, "One or more rods with inoperable position indicators have been moved in excess of 24 steps in one direction since the last determination of the rod's position." Condition A is worded such that the condition describing the inoperable equipment (e.g., "One or more RPI(s) per group inoperable...") is listed first. The proposed change rewords Condition B to state, "One or more RPIs inoperable in one or more groups and associated rod has been moved >24 steps in one direction since the last determination of the rod's position."

2.2.5 Variations from TSTF-547

TSTF-547 and its associated SE discuss that LCO 3.1.4, "Rod Group Alignment Limits," requires that individual rod positions must be within 12 steps of their group demand position. However, the PBNP TS specify different alignment limits (± 18 steps and ± 24 steps of demanded position) depending on bank demand position and power level.

LCO 3.1.7 in TSTF-547 contains Condition A for one RPI per group inoperable in one or more groups and Condition B for more than one RPI inoperable in one or more groups. TSTF-547 modifies Condition A by adding new RA that provide an alternative to frequent verification of rod position using movable incore detectors. The licensee is not adopting this alternative.

TSTF-547 deletes RA B.2 in TS 3.1.7. This change is not applicable to the PBNP TS, which does not contain this RA.

TSTF-547 discusses the applicable regulatory requirements and guidance, including the regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix A, General Design Criteria (GDC). PBNP was not licensed under GDC requirements. The Atomic Energy Commission published GDCs for public comment in 1967, and the Atomic Industrial Forum (AIF) reviewed these proposed criteria and recommended changes. The PBNP GDCs, which are documented in Table 1.3-1 of the Updated Final Safety Analysis Report (USFAR), are similar in content to the AIF version of the proposed GDCs.

TSTF-547 revises Condition D in TS 3.1.7 to address one or more demand position indicators per bank inoperable in one or more banks. Corresponding Condition C in the current PBNP TS already includes the provision "or more," so this portion of the change is not needed for PBNP. In addition, the letter designators for the Conditions in the PBNP TS 3.1.7 differ from TSTF-547, so the changes to Condition C in TSTF-547 apply to Condition B.

2.3 Regulatory Review

The categories of items required to be in the TSs are provided in 10 CFR, Section 50.36(c). As required by 10 CFR 50.36(c)(2)(i), the TSs will include LCOs, which are the lowest functional capability or performance levels of equipment required for safe operation of the facility. Per 10 CFR 50.36(c)(2)(i), when an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the condition can be met. The regulation at 10 CFR 50.36(c)(3) requires TSs to include items in the category of SRs, which 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 LCOs will be met. Also, 10 CFR 50.36(a)(1) states that a summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the TSs.

The NRC staff's guidance for review of TSs is in Chapter 16, "Technical Specifications," of NUREG-0800, Revision 3, Standard Review Plan (March 2010) (ADAMS Accession No. ML100351425). As described therein, as part of the regulatory standardization effort, the NRC staff has prepared STS for each of the light-water reactor nuclear designs. NUREG-1431 contains the STS for Westinghouse-designed plants (ADAMS Accession No. ML12100A222.)

3.0 TECHNICAL EVALUATION

The NRC staff reviewed the changes proposed by the licensee and the technical justification for the changes provided in TSTF-547. The NRC staff reviewed the technical justification for the proposed changes to ensure the reasoning was logical, complete and clearly written as described in Chapter 16 of NUREG-0800. The NRC staff also reviewed the proposed changes for continued compliance with the requirements of 10 CFR 50.36 and for consistency with conventional terminology and with the format and usage rules embodied in the STS.

Although the TS bases are not part of the TS, the licensee also submitted TS Bases changes that corresponded to the proposed TS changes

3.1 Provide Time to Correct Rod Movement Failures that Do Not Affect Operability Review

The proposed new Condition A of TSs 3.1.5 and 3.1.6 for shutdown and control bank insertion limits would allow 24 hours to restore a single bank to be within its insertion limit when inserted below the insertion limit. With one shutdown or control bank inserted a maximum of 10 steps below the rod insertion limit, the RAs associated with new Condition A also require verification that all other control and shutdown banks are within the insertion limits; and verification that the reactor can be shutdown using control rods or boration. The Completion Time for these RAs is 1 hour.

The new conditions define limits of both duration and insertion if a bank is immovable due to failures external to the CRDM. A maximum of one control or shutdown bank may be inserted beyond the limits for a maximum of 24 hours provided all other banks are within the insertion limits and that the reactor could be shut down using control rods or boration. The new Condition A imposes a limit of ≤ 10 steps beyond the insertion limit. The value of 10 steps corresponds to the minimum number of steps that the rods must be moved to ensure successful performance of SR 3.1.4.2.

The NRC staff reviewed the justification for the proposed addition of Condition A to TS 3.1.5 and TS 3.1.6 provided in the technical evaluation section of TSTF-547, to ensure the reasoning is logical, complete and clearly written. The justification in TSTF-547 states:

1. All control and shutdown rod assemblies are required to be Operable. If a rod is untrippable (i.e., inoperable), then a plant shutdown is required in accordance with LCO 3.1.4, Condition A.
2. Only one control bank and shutdown bank may be inserted beyond insertion limits by no more than 10 steps. If one or more control banks or shutdown banks exceed the insertion limit, a brief time period is permitted to correct the condition and then a plant shutdown is required.
3. If one rod is not within the alignment limits, adequate SDM is verified and a power reduction is required by LCO 3.1.4, Condition B. If more than one rod is not within the alignment limit as defined in LCO 3.1.4, adequate SDM is verified and a plant shutdown is required.

The insertion limits are established to ensure a sufficient amount of negative reactivity can be rapidly inserted to shutdown the reactor. The NRC staff finds that allowing continued full-power operations for 24 hours with a rod movement failure is acceptable for the following reasons:

- (1) the shutdown margin continues to be met;
- (2) all control and shutdown rods are trippable (i.e., capable of being rapidly inserted into the core)
- (3) only one bank may exceed insertion limits by no more than a specified number of steps;
- (4) all immovable rod assemblies are aligned; and
- (5) the rods must be restored to within the insertion limits within 24 hours.

The change to TSs 3.1.5 and 3.1.6 allow time to correct rod movement failures that do not affect operability and will allow sufficient time for diagnosis and repairs while maintaining the safety function of the control rods since the affected rods are still trippable. The thermal margins may be affected by power distribution changes due to control rod bank insertion, both during the insertion and during the resulting local xenon transient. However, insertions at or near the typical value of 10 steps from fully withdrawn, as provided in the proposed changes to TSs 3.1.5 and 3.1.6, would result in a very small negative reactivity impact at the top of active fuel. The resulting effect on the axial power distribution is not expected to be significant. In addition, alignment of all rods with the rod bank position (as per LCO 3.1.4) must be maintained and it will be verified that the reactor can still be shutdown. Therefore, the NRC staff finds that the proposed 24-hour completion time for Condition A in LCO 3.1.5 and 3.1.6 specifying shutdown bank and control bank insertion limits is acceptable.

The NRC staff concludes that TS 3.1.5 and TS 3.1.6, as modified by the addition of Condition A, continue to specify the minimum performance level of equipment needed for safe operation of the facility as a LCO; and continue to specify the appropriate remedial measures if the LCO is not met. SRs are not being changed by the addition of Condition A. The NRC staff finds that the requirements of 10 CFR 50.36(c)(2) continue to be met because the minimum performance level of equipment needed for safe operation of the facility is contained in the LCO and the appropriate remedial measures are specified if the LCO is not met.

3.2 Allow Time for Thermal Equilibrium of Analog RPI Review

Several changes are proposed to allow a 1-hour period for the drive shaft to reach thermal equilibrium following rod movement to ensure accuracy of the RPI analog indications to verify TS limits. LCO 3.1.7 would be revised with a note that individual RPIS are not required to be operable for 1 hour following rod motion. SRs 3.1.4.1, 3.1.5.1, 3.1.6.2, and 3.1.6.3 would be revised to not be required to be performed until 1 hour after the associated rod motion.

The 1-hour period is based on the necessary time to allow the rod drive shaft to reach thermal equilibrium following rod motion. There are thermal effects which cause the analog position indicators to drift following rod motion. During this period prior to establishment of thermal equilibrium, the indicators could be unstable and could indicate an inaccurate rod position. The provision to allow a 1-hour period to reach thermal equilibrium ensures that actions are not taken based on an inaccurate indication of rod position, which could lead to unnecessary transients. During this 1-hour period, the demand position indication system would be available to indicate the demand position of the rods.

Since the shutdown banks are positioned manually by the control room operator, a verification of shutdown bank position at a frequency established by the SFCP, after the reactor is taken

critical, is adequate to ensure that they are within their insertion limits. Also, the SFCP takes into account other information available in the control room for the purpose of monitoring the status of shutdown rods.

When control banks are maintained within their insertion limits as verified by SR 3.1.6.2, it is unlikely that their sequence and overlap will not be in accordance with requirements provided in the COLR. A SR frequency established by the SFCP is consistent with the insertion limit verification in SR 3.1.6.2.

The NRC staff reviewed the technical justification provided in the TSTF-547 to ensure the reasoning is logical, complete, and clearly written as described in Chapter 16 of NUREG-0800.

The NRC staff concludes that TS 3.1.7, as modified by the addition of a note, continues to specify the minimum performance level of equipment needed for safe operation of the facility, and continues to specify the appropriate remedial measures if the LCO is not met. The changes to the SRs ensure the SRs are performed when the position indication system has achieved thermal stability following rod motion. The SRs would continue to ensure the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and the limiting conditions for operation will be met. The NRC staff finds that the requirements of 10 CFR 50.36(c)(2) continue to be met.

3.3 Clarify SRs in TS 3.1.4 and TS 3.1.7 Review

3.3.1 Clarification of SR 3.1.4.1

LCO 3.1.4 requires that all shutdown and control rods shall be operable and individual indicated rod positions shall be within limits. SR 3.1.4.1 requires verification of the individual rod positions within the alignment limit periodically. SR 3.1.4.1 cannot be performed for rods with an inoperable bank demand position indicator. Failure to meet an SR is considered a failure to meet an LCO requirement. Therefore, if SR 3.1.4.1 cannot be performed, entry into LCO 3.1.4 Condition D is required. LCO 3.1.4 Condition D applies when more than one rod is not within the alignment limit. The RA associated with Condition D requires, in part, that the reactor be in Hot Standby within 6 hours.

LCO 3.1.7 requires the RPI and bank demand position indication to be operable. LCO 3.1.7 Condition C applies if one demand position indicator(s) per bank is inoperable for one or more banks. The Condition C RAs require verification that all RPIs for the affected banks are operable and require verification that the most withdrawn rod and least withdrawn rod of the affected banks are less than or equal to 12 steps apart when RTP is greater than 85 percent and less than or equal to 24 steps apart when RTP is less than or equal to 85 percent and once per 8 hours. Alternatively, thermal power must be reduced to less than or equal to 50 percent RTP.

A note is being added to SR 3.1.4.1 stating that this SR is not required to be performed for rods associated with an inoperable rod position indicator or demand position indicator. The alignment limit is based on the demand position indicator. If the bank demand position indicator is inoperable, the SR cannot be performed.

Following modification of SR 3.1.4.1, Condition C of LCO 3.1.7 would be the applicable Condition to be entered in the event of inoperable demand position indicators. The RAs associated with Condition C of LCO 3.1.7 provide the appropriate actions in this situation by

requiring that the RPIs are operable and that the individual rods in the bank are not misaligned by more than 12 steps when RTP is greater than 85 percent and less than or equal to 24 steps apart when RTP is less than or equal to 85 percent.

3.3.2 Clarification of SRs 3.1.4.1 and 3.1.7.1

LCO 3.1.4 requires that all shutdown and control rods shall be operable and individual rod positions shall be within limits.

LCO 3.1.7 requires the RPI and bank demand position indication to be operable.

SR 3.1.7.1 requires that channel calibration of each RPI be performed once prior to criticality after each removal of the reactor head. Failure to meet an SR is considered a failure to meet the LCO per SR 3.0.1. The requirements of SRs must be satisfied both during the performance of the surveillance and between performances of the surveillance. If a control or shutdown rod is not within defined limits of its bank demand position indication, then the requirements of both LCO 3.1.4 and LCO 3.1.7 are not met.

A note is being added to SR 3.1.7.1 stating that this SR is not required to be performed for rods that are known not to meet LCO 3.1.4. If a rod is known to be not within limits of the group demand position, LCO 3.1.4 provides the appropriate RAs. With one rod not within the alignment limit, Condition B requires (1) verification of shutdown margin or initiation of boration until SDM is met, (2) a reduction in RTP; (3) periodic re-verification of shutdown margin; (4) verification that hot channel factors are within limits; and (5) that the safety analyses be re-evaluated to confirm continued operation is permissible. If more than one rod is misaligned, the SDM must be determined by verifying that the shutdown margin is within limits or by initiating boration to restore required SDM and shutdown of the plant.

The NRC staff reviewed the technical justification for the proposed changes provided in the TSTF-547 for logical reasoning, completeness, and clarity. The purpose of the changes is to prescribe the appropriate actions to be followed when equipment is inoperable.

TS 3.1.4 provides limits on rod alignment to ensure acceptable power peaking factors and local linear heat rates and an acceptable shutdown margin, all of which are initial conditions in the applicable safety analyses. It is appropriate to consolidate requirements associated with rod misalignments in this TS. TS 3.1.7 provides requirements for instrumentation to monitor rod position. The instrumentation is used to verify that the rod alignment limits in TS 3.1.4 are satisfied. Similarly, it is appropriate to consolidate requirements associated with instrumentation operability in this TS.

The NRC staff concludes that the clarifications to SRs 3.1.4.1 and 3.1.7.1 to specify configurations in which performance of the SRs is not required are appropriate. The TSs, as modified, continue to specify the minimum performance level of equipment needed for safe operation of the facility as an LCO, and continue to specify the appropriate remedial measures if the LCO is not met. The revised SRs 3.1.4.1 and 3.1.7.1 continue to be appropriate, because they ensure the necessary quality of systems is maintained. The NRC staff finds that the requirements of 10 CFR 50.36(c)(2) and 10 CFR 50.36(c)(3) continue to be met.

3.4 Other Proposed Changes

The NRC staff found that the following changes are either administrative or editorial in nature and do not change the TS requirements, and are therefore acceptable.

1. LCO 3.1.4, Condition B, is revised to eliminate RA B.1 and to combine RAs B.2.4 and B.2.5. Condition B applies when one rod is not within the alignment limits and RA B.1 requires restoring the rod to within limits within 1 hour. An alternative set of RAs is provided in the RA section, and will continue to be required when Condition B is applicable. RA B.1 requires restoration of equipment and given that restoring equipment to operable status is understood to be an option, this RA is not necessary.
2. TS 3.1.4, TS 3.1.5, and TS 3.1.6 contain a note that modifies the actions to allow 1 hour following rod motion prior to verifying rod operability and group alignment. These TSs are different from the standard TS. The licensee determined that the note is misplaced and should be associated with the various surveillance requirements that verify rods are positioned within the allowable limits. The proposed change would delete the note that modifies the actions in TS 3.1.4, TS 3.1.5, and TS 3.1.6. As discussed above in section 2.2.3, consistent with the TSTF-547 traveler, the proposed change would add a note to SR 3.1.4.1, SR 3.1.5.1, SR 3.1.6.2, SR 3.1.6.3, and LCO 3.1.7 to allow a 1-hour period for the drive shaft to reach thermal equilibrium following rod movement prior to requiring verification of compliance with TS limits.
3. LCO 3.1.5 and LCO 3.1.6 contain a note modifying their Applicability that states "This LCO is not applicable while performing SR 3.1.4.2." The proposed change is to move the note from below the "Applicability" section to below the "LCO" and revise it to state, "Not applicable to shutdown banks inserted while performing SR 3.1.4.2" for LCO 3.1.5 and "Not applicable to control banks inserted while performing SR 3.1.4.2" for LCO 3.1.6. This change clarifies the note and does not alter its meaning.
4. TS 3.1.7 is revised to consistently use the abbreviation "RPI." This affects the LCO title, Actions Note, RA A.1.1, RA A.1.2 and RA B.1.
5. TS 3.1.7, Condition A, is revised from "for one or more groups" to the more standard terminology "in one or more groups," and TS 3.1.7, Condition C is revised to include the phrase "in one or more groups" to be more consistent with the wording of Condition A.
6. TS 3.1.7, Condition B, is revised to contain similar terminology to Condition A. The existing Condition B states, "One or more rods with inoperable position indicators have been moved in excess of 24 steps in one direction since the last determination of the rod's position." Condition A is worded such that the condition describing the inoperable equipment (e.g., "One or more RPI(s) per group inoperable...") is listed first. The proposed change rewords Condition B to state, "One or more RPIs inoperable in one or more groups and associated rod has been moved >24 steps in one direction since the last determination of the rod's position."

3.5 Variations from TSTF-547

TSTF-547 and its associated safety evaluation discuss that LCO 3.1.4, "Rod Group Alignment Limits," requires that individual rod positions must be within 12 steps of their group demand position. However, the PBNP TS specify different alignment limits (± 18 steps and ± 24 steps of

demanded position) depending on bank demand position and power level. The NRC staff has determined that this difference in alignment limits does not affect the applicability of TSTF-547.

LCO 3.1.7, in TSTF-547 contains Condition A for one RPI per group inoperable in one or more groups and Condition B for more than one RPI inoperable in one or more groups. The traveler modifies Condition A by adding new RA that provide an alternative to frequent verification of rod position using movable incore detectors. The licensee is not adopting this alternative. The staff has determined that excluding this change does not affect the applicability of the other changes in TSTF-547.

TSTF-547 deletes RA B.2 in TS 3.1.7 (monitor and record reactor coolant system temperature). This change is not applicable to the PBNP TS, which does not contain this RA. The NRC staff has determined that this variation does not affect the applicability of TSTF-547.

TSTF-547 and its associated SE discuss the applicable regulatory requirements including 10 CFR Part 50, Appendix A, GDC. PBNP was not licensed to the 10 CFR 50, Appendix A, GDC. The Atomic Energy Commission published GDCs for public comment in 1967, and the AIF reviewed these proposed criteria and recommended changes. The PBNP GDCs, which are documented in Table 1.3-1 of the UFSAR, are similar in content to the AIF version of the Proposed 1967 GDCs. Therefore, the staff has determined that this variation does not affect the applicability of TSTF-547.

TSTF-547 revises Condition D in TS 3.1.7 to address one or more demand position indicators per bank inoperable in one or more banks. Corresponding Condition C in the current PBNP TS already includes the provision "or more," so this portion of the change is not needed. In addition, the letter designators for the Conditions in the PBNP TS 3.1.7 differ from TSTF-547, so the changes to Condition C in TSTF-547 apply to Condition B. The NRC staff has determined that these administrative differences do not affect the applicability of TSTF-547.

The regulation at 10 CFR 50.36(a)(1) states, in part: "A summary statement of the bases or reasons for such specifications ... shall also be included in the application, but shall not become part of the technical specifications." Accordingly, along with the proposed TS changes, the licensee also submitted TS Bases changes that corresponded to the proposed TS changes.

3.6 Summary of NRC Staff Conclusions

The regulations at 10 CFR 50.36 require that TSs will include items in specified categories, including LCOs and SRs. The proposed changes modify the LCOs, Conditions, RAs, Completion Times, and SRs applicable to control rod and shutdown rod insertion and alignment limits and the instrumentation to monitor rod position and alignment. The proposed PBNP TSs continue to specify the LCOs and remedial measures to be taken if the requirements are not satisfied. The proposed PBNP TSs continue to specify the appropriate SRs for tests and inspections to ensure the necessary quality of affected structures, systems and components is maintained. Therefore, NRC staff finds that the proposed LCOs and SRs meet the requirements of 10 CFR 50.36(c)(2) and 50.36(c)(3), respectively.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Wisconsin State official was notified of the proposed issuance of the amendments on February 7, 2019. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

These amendments change requirements with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20, or change surveillance requirements. The NRC staff has determined that the amendments involve 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 published a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding (83 FR 55575). Accordingly, these amendments meet 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 these amendments.

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) there is reasonable assurance that 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.

Principal Contributors: M. Bales, R. Beaton, NRR

Date of issuance: March 27, 2019

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS TO ADOPT TSTF-547, "CLARIFICATION OF ROD POSITION REQUIREMENTS" (EPID L-2018-LLA-0207) DATED MARCH 27, 2019

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