NEXTera ENERGY POINT BEACH

April 22, 2010

NRC 2010-0044
10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Point Beach Nuclear Plant, Units 1 and 2
Dockets 50-266 and 50-301
Renewed License Nos. DPR-24 and DPR-27

License Amendment Request 261
Extended Power Uprate
Implementation of New Auxiliary Feedwater System
at Current Licensed Power Level

References:
(1) FPL Energy Point Beach, LLC letter to NRC, dated April 7, 2009, License Amendment Request 261, Extended Power Uprate (ML091250564)
(2) NextEra Energy Point Beach, LLC letter to NRC dated September 11, 2009, License Amendment Request 261, Extended Power Uprate, Expedited Review Request (ML092570205)
(3) NextEra Energy Point Beach, LLC, letter to NRC dated February 11, 2010, License Amendment Request 261, Extended Power Uprate, Withdrawal of Expedited Review Request (ML100470786)

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

In Reference (2), NextEra submitted a request for expedited review for the Point Beach Nuclear Plant (PBNP) extended power uprate (EPU). In Reference (3), NextEra withdrew the expedited review request and revised the schedule for the PBNP EPU. Reference (3) stated that:

- NextEra would submit a letter requesting Commission approval for implementation of proposed auxiliary feedwater (AFW) license basis changes at current licensed power levels;

- The changes would be implemented for both PBNP units no later than the spring 2011 Unit 2 refueling outage; and

- The changes may be completed by the end of 2010.

This letter provides the above referenced information. Enclosure 1 provides documentation to assure that analyses associated with the current licensed power levels are bounding in order to implement the new AFW system prior to EPU conditions. This enclosure also evaluates changes to the new AFW system test plan for implementation at the current licensed power levels as requested by the NRC staff.

NextEra has determined that the proposed loss of voltage relay time delay setting changes for Technical Specification (TS) 3.3.4 must be addressed. Reference (1) provides a description of the proposed TS 3.3.4 changes for which approval is being requested and the AFW-related TS changes needed for AFW implementation at current licensed power levels.

Enclosure 2 provides a regulatory evaluation of the previously submitted TS changes to support implementation of the new AFW system at the current licensed power level.

The Plant Operations Review Committee has reviewed the proposed changes.

This letter contains no new regulatory commitments and no revisions to existing commitments.

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

I declare under penalty of perjury that the foregoing is true and correct.
Executed on April 22, 2010.

Very truly yours,

NextEra Energy Point Beach, LLC

Larry Meyer
Site Vice President

Enclosures

cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC
PSCW

ENCLOSURE 1

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

LICENSE AMENDMENT REQUEST 261
EXTENDED POWER UPRATE
IMPLEMENTATION OF NEW AUXILIARY FEEDWATER
SYSTEM AT CURRENT LICENSED POWER LEVEL

8 pages follow

INTRODUCTION

After initial review of License Amendment Request (LAR 261) (Reference 1) and Supplements 1 and 2 (References 2 and 3), the NRC accepted the auxiliary feedwater (AFW) portion of the extended power uprate (EPU) LAR for review (Reference 4).

Via letter dated September 11, 2009 (Reference 5), NextEra submitted a request for expedited review of the PBNP EPU. The expedited review request was withdrawn by NextEra via letter dated February 11, 2010 (Reference 6). This letter also stated:

- NextEra would submit a letter requesting Commission approval for implementation of proposed auxiliary feedwater (AFW) license basis changes at current licensed power levels,
- The changes would be implemented for both PBNP units no later than the spring 2011 Unit 2 refueling outage, and
- The changes may be completed by the end of 2010.

To support the revised PBNP EPU schedule (Reference 6) related to the new AFW system implementation and to address loss of voltage relay time delay setting changes, NextEra is providing a description of the proposed Technical Specification (TS) changes for which approval is being requested. Approval of these TS changes would allow implementation of the AFW and loss of voltage relay time delay setting changes for both units at the same time, with either or both units at current licensed power levels under the current licensing basis.

SCOPE

The modifications requiring approval of TS changes for Units 1 and 2 are:

- New auxiliary feedwater (AFW) system (TS 3.7.5)
- Revised condensate storage tank (CST) requirements (TS 3.7.6)
- New automatic AFW pump suction transfer and associated setpoint (TS 3.3.2)
- Loss of voltage relay time delay setting changes (TS 3.3.4)

Implementation of the new AFW system and loss of voltage relay time delay settings may be implemented on both units by the end of 2010 or during the spring 2011 Unit 2 refueling outage. Operation of either or both units at the current licensed power level under the current licensing basis is acceptable with the new AFW system and loss of voltage relay time delay setting changes. No other EPU modifications, TS changes or licensing basis changes are required for implementation of these changes at current licensed power levels. The TS changes and supporting Licensing Report (LR) sections required to support installation of these modifications and subsequent operation at the current licensed power levels are discussed below.

TECHNICAL SPECIFICATIONS

The following TS changes are required to support implementation of the AFW modifications and loss of voltage relay time delay setting changes following the Unit 1 spring 2010 refueling outage. These TS changes support operation of the units at the current licensed power levels under the current licensing basis following installation of the changes. The pertinent LAR 261 (Reference 1) LR sections and LAR supplements (References 2 and 7) that support the required TS changes are also listed.

- TS 3.3.2, Engineered Safety Feature Actuation System (ESFAS) Instrumentation, Function 6.e - AFW Pump Suction Transfer on Suction Pressure Low, Item 7k, Attachment 1 of Reference 1), LAR Supplement 1 (Reference 2), and LAR Supplement 3 (Reference 7)

- TS 3.3.4, Loss of Power Diesel Generator Start Instrumentation (Item 8, Attachment 1 of Reference 1)

- TS 3.7.5, Auxiliary Feedwater (Item 16, Attachment 1 of Reference 1)

- TS 3.7.6, Condensate Storage Tank (Item 17, Attachment 1 of Reference 1) and LAR Supplement 1 (Reference 2),

The following LR sections support changes to TS 3.3.2 (Function 6.e), TS 3.3.4, TS 3.7.5, and TS 3.7.6:

Systems & Components

LR Section 2.2.4 - Safety Related Valves and Pumps
LR Section 2.3.3 - AC Onsite Power System
LR Section 2.3.4 - DC Onsite Power System
LR Section 2.4.1 - Reactor Protection, Safety Features Actuation, and Control Systems
LR Section 2.5.4.2 - Station Service Water System
LR Section 2.5.4.5 - Auxiliary Feedwater
LR Section 2.5.7.1 - Emergency Diesel Fuel Oil Storage and Transfer
LR Section 2.7.5 - Auxiliary and Radwaste Area and Turbine Areas Ventilation Systems
LR Section 2.11.1 - Human Factors
LR Section 2.3.1 - Environmental Qualification of Electrical Equipment
LR Section 2.5.1.4 - Fire Protection
Appendix E, Supplement to LR Section 2.4.1

Related Correspondence

LAR 261, Supplement 1 (Reference 2)
LAR 261, Supplement 2 (Reference 3)
LAR 261, Supplement 3 (Reference 7)
Response to Acceptance Review Questions dated October 9, 2009 (Reference 8)
Response to Request for Additional Information (RAI) dated September 25, 2009 (Reference 9)
Response to RAI dated November 20, 2009 (Reference 10)
Response to RAI dated November 21, 2009 (Reference 11)
Clarification of Response to RAI dated January 7, 2010 (Reference 12)
Response to RAI dated November 21, 2009 (Reference 13)

Response to RAI dated November 20, 2009 (Reference 14)
Auxiliary Feedwater System Pipe Stress Analysis Information dated January 8, 2010 (Reference 15)
Appendix E, Supplement to LR Section 2.4.1
Response to RAI dated January 13, 2010 (Reference 16)
Response to RAI dated January 22, 2010 (Reference 17)
Response to RAI dated March 3, 2010 (Reference 18)
Response to RAI dated March 24, 2010 (Reference 19)
Transmittal of Proposed TS dated February 25, 2010 (Reference 20)

METHODS AND CODES

LAR 261 was submitted with revised safety analyses that in some cases involve a change from the current licensing basis methods and codes for PBNP. Since implementation of the AFW modifications and loss of voltage relay time delay setting changes is being requested via this letter at the current licensed power levels under the current licensing basis methods and codes for PBNP, the revised safety analyses for EPU are not applicable to this request.

EVALUATION OF AFW AND LOSS OF VOLTAGE RELAY TIME DELAY SETTING CHANGES AT CURRENT LICENSED POWER LEVEL

An evaluation of the AFW and loss of voltage relay TS applicability to operation at current licensed power level is provided below. The TS sections listed above identified the TS changes that require review to implement the AFW modifications and loss of voltage relay time delay setting changes on Units 1 and 2. Both units were evaluated for operation at current licensed power levels and it was concluded the changes are acceptable. The results of the evaluations are provided below.

- LR Section 2.2.4 - Safety Related Valves and Pumps (Reference 1)
  LAR 261 Supplement 1 (Reference 2)

  The AFW system is being reconfigured as discussed in LR Section 2.5.4.5, "Auxiliary Feedwater." The AFW pump flow rate requirements increase at EPU conditions and new motor-driven (MD) AFW pumps are being installed. The system will be unit-specific with new piping and several new valves. A revision to the in-service testing (IST) requirements for these changes, including changing the MDAFW pump curve and flow control valves for Units 1 and 2 is necessary to support the proposed changes to TS 3.7.5, Auxiliary Feedwater.

- LR Section 2.3.1 - Environmental Qualification of Electrical Equipment (Reference 1)
  LAR 261 Supplement 1 (Reference 2)

  The EPU impact on environmental qualification (EQ) of electrical components (including those for the new AFW system) is discussed in LR Section 2.3.1.

  The EQ evaluation provided in LR Section 2.3.1 for high energy line breaks (HELBs) outside containment is based upon the EPU operating conditions and mass and energy releases at EPU power levels, which bound the conditions at the current licensed power level.

The EQ radiation dose evaluations are based on the higher EPU power level resulting in increased EQ doses, which bound the dose at the current licensed power level.

The evaluations above apply to Units 1 and 2 at the current licensed power levels.

- LR Section 2.3.3 - AC Onsite Power System (Reference 1)
  LAR 261 Supplement 1 (Reference 2)
  LAR 261 Supplement 2 (Reference 3)
  Response to Request for Additional Information (RAI) dated September 25, 2009 (Reference 9)

  The evaluations of the AC onsite power system provided in LR Section 2.3.3, LAR 261 Supplement 1, LAR 261 Supplement 2, and Reference (9) apply at the current licensed power level with regard to the modifications for the loss of voltage relay time delay changes supporting the proposed change to TS 3.3.4. Operation of the system at the current licensed power level will continue to be within the bounding evaluations for the proposed TS 3.3.4 changes.

- LR Section 2.3.4 - DC Onsite Power System (Reference 1)

  The evaluations of the DC onsite power system provided in LR Section 2.3.4 apply at the current licensed power level, since the operation of the system at the current licensed power level will continue to be within the bounding evaluation at the EPU power level.

- LR Section 2.4.1 - Reactor Protection, Engineered Safety Features Actuation, and Control Systems, LAR Supplement 3 (Reference 7)
  LAR 261 Supplement 1 (Reference 2)
  Response to RAI dated November 20, 2009 (Reference 10)
  Response to RAI dated November 21, 2009 (Reference 11)
  Clarification of Response to RAI dated January 7, 2010 (Reference 12)

  LR Section 2.4.1 covers instrumentation and controls (I&C) required for approval of the EPU. The sections of the LR Section 2.4.1 that address ESFAS Function 6.e (AFW suction switchover) were reviewed. It was concluded that operation with these modifications installed is acceptable using the methodology contained in Appendix E (Reference 7). The modifications and associated TS changes apply to the new AFW system at the current licensed power levels.

- LR Section 2.5.1.4 - Fire Protection (Reference 1)
  Response to RAI dated November 21, 2009 (Reference 11)

  The evaluation of fire protection provided in LR Section 2.5.1.4 bounds the current licensed power conditions and is based upon the upgraded AFW system.

- LR Section 2.5.4.2 - Station Service Water System (Reference 1)
  Response to RAI dated September 25, 2009 (Reference 9)

  Component cooling water heat exchangers are primarily affected at the proposed EPU power level by increased reactor decay heat transferred by the residual heat removal heat exchangers to the component cooling water system during cooldown and accidents. The current service water flow rates are capable of removing the required heat loads from the

component cooling water heat exchangers at the proposed EPU power level and bound operation at the current licensed power levels.

As discussed in LR Section 2.5.4.2, Generic Letter 96-06 questioned whether the higher heat loads at accident conditions could cause voiding and subsequent water hammer during the assumed coincident loss of offsite power transient. Reduced flow was evaluated, particularly for the containment fan coolers, as a result of two-phase flow due to boiling in the service water cooling flow to heat exchangers. This analysis was reviewed against the EPU containment environment, service water flow rates, and heat removal from the containment fan coolers. The evaluation was performed at the EPU power level and bounds operation at the current licensed power level. The above evaluations apply to both units.

- LR Section 2.5.4.5 - Auxiliary Feedwater (Reference 1)
  LAR 261 Supplement 1 (Reference 2)
  LAR 261 Supplement 2 (Reference 3)
  LAR 261 Supplement 3 (Reference 7)
  Response to Acceptance Review Questions dated October 9, 2009 (Reference 8)
  Response to RAI dated September 25, 2009 (Reference 9)
  Response to RAI dated November 20, 2009 (Reference 10)
  Response to RAI dated November 20, 2009 (Reference 14)
  Response to RAI dated November 21, 2009 (Reference 11)
  Response to RAI dated November 21, 2009 (Reference 13)
  Auxiliary Feedwater System Pipe Stress Analysis Information dated January 8, 2010 (Reference 15)
  Response to RAI dated January 13, 2010 (Reference 16)
  Response to RAI dated January 22, 2010 (Reference 17)
  Response to RAI dated March 3, 2010 (Reference 18)
  Response to RAI dated March 24, 2010 (Reference 19)
  Transmittal of Proposed TS dated February 25, 2010 (Reference 20)

  The AFW system evaluations provided in LR Section 2.5.4.5 (Reference 1) and Supplement 1 response to acceptance questions (Reference 2) apply to Units 1 and 2 and bound operation at the current licensed power level.

  Implementation of the AFW modifications requires revisions to TS 3.3.2 (ESFAS Instrumentation - Function 6.e, AFW Pump Suction Transfer on Suction Pressure Low), TS 3.3.4 (Loss of Power Diesel Generator Start Instrumentation), TS 3.7.5 (Auxiliary Feedwater (AFW), and TS 3.7.6 (Condensate Storage Tank).

  The AFW changes required to support operation at the EPU power level requires an increase in the minimum AFW flow to mitigate the limiting accident events for loss of non-emergency AC power to the station auxiliaries (LOAC) and loss of normal feedwater (LONF) at EPU conditions and bound operation at the current licensed power level as discussed under LR Section 2.8.5.2.2 and LR Section 2.8.5.2.3 (Reference 1).

  The AFW system changes also result in changes to the maximum AFW flow to the steam generators following main steam line break (MSLB) and steam generator tube rupture (SGTR) accident conditions. These accidents were reanalyzed for the increased AFW flows at current licensed power levels with current licensing basis methods. The results are acceptable with the revised minimum and maximum AFW flow rates and pump start timing.

An increase in the minimum CST inventory is required to support the EPU. The required inventory bounds the inventory required for operation at the current licensed power level. Approval of TS 3.7.6 is required to support implementation of the AFW system modifications since the required inventory is calculated based on the new AFW system configuration and flow rates.

- LR Section 2.5.7.1 - Emergency Diesel Fuel Oil Storage and Transfer (Reference 1)
  LAR 261 Supplement 1 (Reference 2)
  Response to RAI dated September 25, 2009 (Reference 9)
  Response to RAI dated March 3, 2010 (Reference 18)

  The emergency diesel generator (EDG) fuel oil storage and transfer evaluation applies to EPU conditions and bounds operation at the current licensed power levels. The EDG loading and fuel oil impacts are primarily due to the implementation of the new AFW motor-driven pumps and the AST LAR 241 changes.

- LR Section 2.7.5 - Auxiliary and Radwaste Area and Turbine Areas Ventilation Systems (Reference 1)
  LAR 261 Supplement 1 (Reference 2)
  Response to RAI dated September 25, 2009 (Reference 9)
  Response to RAI dated November 20, 2009 (Reference 10)

  The impact to the primary auxiliary building (PAB) ventilation is the installation of the new MDAFW pumps. The evaluation is based on the maximum motor horsepower demand and bounds operation at EPU and current licensed power levels.

- LR Section 2.11.1 - Human Factors (Reference 1)
  Response to RAI dated November 21, 2009 (Reference 11)

  The Human Factors evaluations provided in LR Section 2.11.1 for the AFW upgrade apply to the changes being implemented at the current licensed power levels.

IMPLEMENTATION REQUIREMENTS

Redesign of the AFW system and changes in settings to the loss of voltage relay time delays are such that the changes on both units must be made at the same time. The AFW system and loss of voltage relay setting changes are being requested to be implemented together following the Unit 1 spring 2010 outage.

To support implementation of the new AFW system, NRC approval of TS 3.7.5, TS 3.7.6, TS 3.3.2 ESFAS Function 6e, and TS 3.3.4, is requested at the current licensed power levels.

The testing for the implementation of the new AFW system was described in NextEra's response to AFW Acceptance Review Question 8 (Reference 2). This testing included pre-modification, construction, pre-operational, and operational testing. The required testing was reviewed for implementation at the current licensed power level on either or both units. It was concluded that for the tests described in the Question 8 response, implementation at current licensed power level has no impact on the planned testing.

The evaluations contained above address Unit 1 and Unit 2 at the current licensed power level with the AFW and loss of voltage relay time delay modifications installed. The conclusion of

these evaluations is that operation of both units at current licensed power levels is acceptable with the redesigned AFW system and loss of voltage relay setting changes.

CONCLUSION

Operation of Unit 1 and Unit 2 at current licensed power level following the implementation of the AFW system modifications and the required TS changes, based on the appropriate LR sections, is acceptable.

REFERENCES

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

(2) NextEra Energy Point Beach, LLC, letter to NRC dated June 17, 2009, License Amendment Request 261, Supplement 1, Extended Power Uprate (ML091690090)

(3) NextEra Energy Point Beach, LLC, letter to NRC dated June 17, 2009, License Amendment Request 261, Supplement 2, Extended Power Uprate (ML091690087)

(4) NRC letter to NextEra Energy Point Beach, LLC, dated June 29, 2009, Deferral of the Extended Power Uprate Acceptance Review and Acceptance Review of the Auxiliary Feedwater Modifications and Non Conservative Setpoint Technical Specifications (TAC NOS. ME1044, ME1045, ME1081, ME1082, ME1083 and ME1084) (ML091760338)

(5) NextEra Energy Point Beach, LLC letter to NRC dated September 11, 2009, License Amendment Request 261, Extended Power Uprate, Expedited Review Request (ML092570205)

(6) NextEra Energy Point Beach, LLC, letter to NRC dated February 11, 2010, License Amendment Request 261, Extended Power Uprate, Withdrawal of Expedited Review Request (ML100470786)

(7) NextEra Energy Point Beach, LLC, letter to NRC, dated December 8, 2009, License Amendment Request 261, Supplement 3, Extended Power Uprate (ML093430114)

(8) NextEra Energy Point Beach, LLC, letter to NRC dated October 9, 2009, License Amendment Request 261, Extended Power Uprate, Response to Acceptance Review Questions (ML092860098)

(9) NextEra Energy Point Beach, LLC, letter to NRC dated September 25, 2009, License Amendment Request 261, Extended Power Uprate, Response to Request for Additional Information (ML092750395)

(10) NextEra Energy Point Beach, LLC, letter to NRC dated November 20, 2009, License Amendment Request 261, Extended Power Uprate, Response to Request for Additional Information (ML093270030)

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

(12) NextEra Energy Point Beach, LLC, letter to NRC dated January 7, 2010, License Amendment Request 261, Extended Power Uprate, Clarification of Response to Request for Additional Information (ML100080013)

(13) NextEra Energy Point Beach, LLC, letter to NRC dated November 21, 2009, License Amendment Request 261, Extended Power Uprate, Response to Request for Additional Information (ML093270035)

(14) NextEra Energy Point Beach, LLC, letter to NRC dated November 20, 2009, License Amendment Request 261, Extended Power Uprate, Response to Request for Additional Information (ML093270079)

(15) NextEra Energy Point Beach, LLC, letter to NRC dated January 8, 2010, License Amendment Request 261, Extended Power Uprate, Auxiliary Feedwater System Pipe Stress Analysis Information (ML100110037)

(16) NextEra Energy Point Beach, LLC, letter to NRC dated January 13, 2010, License Amendment Request 261, Extended Power Uprate, Response to Request for Additional Information (ML100140163)

(17) NextEra Energy Point Beach, LLC, letter to NRC dated January 22, 2010, License Amendment Request 261, Extended Power Uprate, Response to Request for Additional Information (ML100250011)

(18) NextEra Energy Point Beach, LLC, letter to NRC dated March 3, 2010, License Amendment Request 261, Extended Power Uprate, Response to Request for Additional Information (ML100630133)

(19) NextEra Energy Point Beach, LLC, letter to NRC dated March 24, 2010, License Amendment Request 261, Extended Power Uprate, Response to Request for Additional Information (ML100830332)

(20) NextEra Energy Point Beach, LLC, letter to NRC dated February 25, 2010, License Amendment Request 261, Extended Power Uprate, Transmittal of Proposed Technical Specifications for Reactor Protection System and Engineered Safety Features Setpoints Not Associated with Extended Power Uprate (ML100600576)

ENCLOSURE 2

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

LICENSE AMENDMENT REQUEST 261
EXTENDED POWER UPRATE
IMPLEMENTATION OF NEW AUXILIARY FEEDWATER SYSTEM AT CURRENT LICENSED POWER LEVEL

EVALUATION OF PREVIOUSLY SUBMITTED CHANGES TO TECHNICAL SPECIFICATIONS 3.3.2 (FUNCTION 6.e), 3.3.4, 3.7.5 AND 3.7.6 AT CURRENT LICENSED POWER LEVEL

Changes to Technical Specification (TS) 3.7.5, TS 3.3.4, TS 3.3.2 (Function 6.e only), and TS 3.7.6 were previously submitted as part of the Point Beach Nuclear Plant (PBNP) extended power uprate (EPU) License Amendment Request (LAR) 261 (Reference 3.1), and LAR 261 Supplements 1 and 3 (References 3.2 and 3.3, respectively). NRC approval of these TS changes is being requested to allow NextEra Energy Point Beach, LLC (NextEra) to implement auxiliary feedwater (AFW) changes and loss of voltage relay time delay setting changes for either or both units at the current licensed power level.

NextEra is requesting NRC approval to implement the new AFW system described in LAR 261 (Reference 3.1) with either or both units at the current licensed power level under the current licensing basis. The proposed AFW changes require TS changes to (1) TS 3.7.5, Auxiliary Feedwater (AFW), (2) TS 3.3.4, Loss of Power Diesel Generator Start Instrumentation (Surveillance Requirement 3.3.4.3 for loss of voltage relay time delay settings), (3) TS 3.3.2, Engineered Safety Features Actuation System (ESFAS) Instrumentation (Function 6.e – AFW Pump Suction Transfer on Suction Pressure Low), and (4) TS 3.7.6, Condensate Storage Tank (CST). Changes to TS 3.7.5 and TS 3.3.4 are described in Reference 3.1. Changes to TS 3.3.2 are described in References 3.2 and 3.3. Changes to TS 3.7.6 are described in Reference 3.2. The changes have been evaluated to determine whether applicable regulations and requirements continue to be met, when implemented at the current licensed power level for either or both plant units. The conclusion is that operation of Units 1 and 2 at the current licensed power level is acceptable with the new AFW system and loss of voltage relay time delay changes.

1.0 REGULATORY EVALUATION

1.1 Applicable Regulatory Requirements / Criteria

NextEra has determined that the proposed TS changes do not require any exemptions or relief from regulatory requirements and do not affect conformance with any General Design Criterion (GDC) differently than described in the PBNP Final Safety Analysis Report (FSAR).

PBNP was designed and constructed to comply with the intent of the draft AEC General Design Criteria (GDC) for Nuclear Power Plant Construction Permits, as proposed on July 10, 1967 (ML003674718). PBNP was licensed prior to the 1971 publication of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR 50. As such PBNP was not licensed to 10 CFR 50, Appendix A.

1.1.1 TS 3.7.5, Auxiliary Feedwater (AFW)

In conjunction with a Seismic Category I water source, the auxiliary feedwater system functions as an emergency system for the removal of heat from the primary system when the main feedwater system is not available. The auxiliary feedwater system is also used to provide decay heat removal capability necessary for withstanding or coping with a station blackout. The PBNP review of the proposed EPU focused on the system's continued ability to provide sufficient emergency feedwater flow at the expected conditions (e.g., steam generator pressure) to ensure adequate cooling with the increased decay heat. The PBNP review also considered the effects of the proposed EPU on the likelihood of creating fluid flow instabilities (e.g., water hammer) during normal plant operation, as well as during upset or accident conditions.

PBNP GDC 1: Those systems and components of reactor facilities which are essential to the prevention, or the mitigation of the consequences of nuclear accidents which could cause undue risk to the health and safety of the public shall be identified and then designed, fabricated, and erected to quality standards that reflect the importance of the safety function to be performed. Where generally recognized codes and standards pertaining to design, materials, fabrication, and inspection are used, they shall be identified. Where adherence to such codes or standards does not suffice to assure a quality product in keeping with the safety function, they shall be supplemented or modified as necessary. Quality assurance programs, test procedures, and inspection acceptance criteria to be used shall be identified. An indication of the applicability of codes, standards, quality assurance programs, test procedures, and inspection acceptance criteria used is required. Where such items are not covered by applicable codes and standards, a showing of adequacy is required.

The AFW system is designated a Seismic Class I system. The condensate storage tanks (CST) (normal suction source to AFW pumps) are not Seismic Class I. The quality requirements of each AFW component are controlled by the Quality Assurance Program.

PBNP GDC 2: Those systems and components of reactor facilities which are essential to the prevention or to the mitigation of the consequences of nuclear accidents which could cause undue risk to the health and safety of the public shall be designed, fabricated, and erected to performance standards that enable such systems and components to withstand, without undue risk to the health and safety of the public, the forces that might reasonably be imposed by the occurrence of an extraordinary natural phenomenon such as earthquake, tornado, flooding condition, high wind, or heavy ice. The design bases so established shall reflect: (a) appropriate consideration of the most severe of these natural phenomena that have been officially recorded for the site and the surrounding area and (b) an appropriate margin for withstanding forces greater than those recorded to reflect uncertainties about the historical data and their suitability as a basis for design.

The AFW system is designated a Seismic Class I system. As a Class I system, AFW system components are designed so there is no loss of function in the event of the maximum hypothetical earthquake. Measures are also taken in the design to protect against high winds, flooding and other phenomena, such as the effects of a tornado.

PBNP GDC 4: Reactor facilities may share systems or components if it can be shown that such sharing will not result in undue risk to the health and safety of the public.

This criterion is applicable to portions of the AFW system which are shared between Unit 1 and Unit 2. Since the new AFW system will no longer share motor-driven auxiliary feedwater pumps, this criterion will only be applicable to the shared condensate storage tanks..

PBNP GDC 11: The facility shall be provided with a control room from which actions to maintain safe operational status of the plant can be controlled. Adequate radiation protection shall be provided to permit continuous occupancy of the control room under any credible post accident condition or as an alternative, access to other areas of the facility as necessary to shut down and maintain safe control of the facility without excessive radiation exposures of personnel.

AFW system instruments and controls are located in the control room.

PBNP GDC 12: Instrumentation and controls shall be provided as required to monitor and maintain within prescribed operating ranges essential reactor facility operating variables.

This criterion is applicable to the instrumentation and control systems provided to monitor and maintain within prescribed operating ranges the temperatures, pressures, flows, and levels in the reactor coolant systems, steam systems, containments, and other auxiliary systems.

PBNP GDC 37: Engineered safety features shall be provided in the facility to back up the safety provided by the core design, the reactor coolant pressure boundary, and their protection systems. Such engineered safety features shall be designed to cope with any size reactor coolant piping break up to and including the equivalent of a circumferential rupture of any pipe in that boundary, assuming unobstructed discharge from both ends.

Although the AFW system is not classified as an engineered safety feature, it is required to provide high pressure feedwater to the steam generators in the event of an accident.

PBNP GDC 38: All engineered safety features shall be designed to provide such functional reliability and ready testability as is necessary to avoid undue risk to the health and safety of the public.

As an ESF-equivalent system, the AFW system components are tested and inspected in accordance with Technical Specification surveillance criteria and frequencies. Testing verifies MDAFW pump operability, TDAFW pump operability including a cold start, and operability of all required MOVs. Control circuits, starting logic, and indicators are verified operable by their respective functional test.

PBNP GDC 40: Adequate protection for those engineered safety features, the failures of which could cause an undue risk to the health and safety of the public, shall be provided against dynamic effects and missiles that might result from plant equipment failures other than a rupture of the Reactor Coolant System piping. An original design basis for protection of equipment against the dynamic effects of a rupture of the Reactor Coolant System piping is no longer applicable.

This criterion is applicable to the AFW system Class I components both inside and outside containment. The AFW system safety-related functions will not be impaired as a result of a missile.

PBNP GDC 41: Engineered safety features, such as the emergency core cooling system and the containment heat removal system, shall provide sufficient performance capability to accommodate the failure of any single active component without resulting in undue risk to the health and safety of the public.

As an ESF-equivalent system, the AFW system is designed with sufficient mechanical and electrical redundancy such that a single failure of an active component, either in the system or in a supporting system, can be accommodated without loss of the overall AFW system safety-related functions.

PBNP GDC 42: Engineered safety features shall be designed so that the capability of these features to perform their required function is not impaired by the effects of a loss of coolant accident to the extent of causing undue risk to the health and safety of the public.

As an ESF-equivalent system, the AFW system is designed to function following a loss-of-coolant accident. AFW system safety-related functions can be accomplished in the harsh environments resulting from the loss-of-coolant accident.

The AFW system also performs the following augmented quality functions:

- As discussed in FSAR, Appendix A.1, Station Blackout (SBO), in the event of a station blackout, the AFW system is capable of automatically supplying sufficient feedwater to remove decay heat from both units without reliance on AC power for one hour. To support this capability, the minimum required volume in the condensate storage tank was determined to be adequate, the temperature in the AFW pump rooms would not increase above the maximum temperature for equipment reliability, and there is sufficient capacity in the safety-related batteries to support operation of the safety-related loads.

- In the event of plant fires, including those requiring evacuation of the control room, the AFW system shall be capable of manual initiation to provide feedwater to a minimum of one steam generator per unit at sufficient flow and pressure to remove decay and sensible heat from the reactor coolant system over the range from hot shutdown to cold shutdown conditions. The AFW system shall support achieving cold shutdown within 72 hours.

- In the event of an Anticipated Transient Without Scram (ATWS), the AFW system shall be capable of automatic actuation by use of equipment that is diverse from the reactor trip system. This is accomplished by the ATWS Mitigation System Actuation Circuitry (AMSAC) system described in FSAR Section 7.4, Other Actuation Systems. As required by 10 CFR 50.62, AMSAC trips the main turbine and starts both the new unit-specific motor-driven AFW pumps and the unit-specific turbine driven AFW pump on loss of main feedwater when the main turbine is above 40% nominal power.

An automatic safety-grade low suction pressure trip of each AFW pump is provided. This protects any operating AFW pumps following a sudden failure of the condensate storage tank due to a seismic event or tornado missile and failure of the new auto transfer of the of the AFW pump suction to service water. Following the auto-trip, the pumps can be restarted after the operators transfer the suction source to the safety-grade SW system.

The auxiliary feedwater system has no functional requirements during normal, at power, plant operation. This system is used during plant startup and shutdown and during hot shutdown or hot standby conditions when chemical additions or small feedwater flow requirements do not warrant the operation of the main feedwater and condensate systems.

The seismic qualification of the AFW system was evaluated in the NRC Safety Evaluation based upon the PBNP response to Generic Letter 81-14 (Reference 3.4). The conclusion of that safety evaluation was that the PBNP AFW system provides a reasonable assurance that it will perform its required safety function following a safe shutdown earthquake. (Reference 3.5)

The AFW system is described in the FSAR Section 5.2, Containment Isolation System, Section 7.4, Other Actuation Systems, Section 10.1, Steam and Power Conversion System, Section 10.2, Auxiliary Feedwater System, Section 14.1.10, Loss of Normal Feedwater, Section 14.1.11, Loss of All AC Power to Station Auxiliaries, Section 14.2.4, Steam Generator Tube Rupture, Section 14.2.5, Rupture of a Steam Pipe, Appendix A.1, Station Blackout, Appendix A.2, High Energy Pipe Failure, and Appendix A.6, Shared Systems Analysis.

1.1.2 TS 3.3.4, Loss of Power Diesel Generator Start Instrumentation (Surveillance Requirement 3.3.4.3 for loss of voltage relay time delay settings)

The alternating current (AC) onsite power system includes those standby power sources, distribution systems, and auxiliary supporting systems to supply power to safety-related equipment. The PBNP review covered the descriptive information, analyses, and referenced documents for the AC onsite power system. The PBNP specific GDC for the AC Onsite Power System is as follows:

PBNP GDC 39: An emergency power source shall be provided and designed with adequate independency, redundancy, capacity, and testability to permit the functioning of the engineered safety features and protection systems required to avoid undue risk to the health and safety of the public. This power source shall provide this capacity assuming a failure of a single active component.

As described in FSAR Chapter 8, Introduction of the Electrical Distribution Systems, independent alternate power systems are provided with adequate capacity and testability to supply the required engineered safety features and protection systems.

Additional information is provided in LR Section 2.3.5, Station Blackout (Reference 3.1).

1.1.3 TS 3.3.2, Engineered Safety Features Actuation System (ESFAS) Instrumentation (Function 6.e – AFW Pump Suction Transfer on Suction Pressure Low) and TS 3.7.6, Condensate Storage Tank (CST)

The PBNP specific GDCs for ESFAS Instrumentation and the CST are as follows:

PBNP GDC 1: Those systems and components of reactor facilities which are essential to the prevention, or the mitigation of the consequences of nuclear accidents which could cause undue risk to the health and safety of the public shall be identified and then designed, fabricated, and erected to quality standards that reflect the importance of the safety function to be performed. Where generally recognized codes and standards pertaining to design, materials, fabrication, and inspection are used, they shall be identified. Where adherence to such codes or standards

does not suffice to assure a quality product in keeping with the safety function, they shall be supplemented or modified as necessary. Quality assurance programs, test procedures, and inspection acceptance criteria to be used shall be identified. An indication of the applicability of codes, standards, quality assurance programs, test procedures, and inspection acceptance criteria used is required. Where such items are not covered by applicable codes and standards, a showing of adequacy is required.

The AFW system is designated a Seismic Class I system, but the CSTs (normal suction source to AFW pumps) are not Seismic Class I. The quality requirements of each AFW component are controlled by the Quality Assurance Program.

PBNP GDC 2: Those systems and components of reactor facilities which are essential to the prevention or to the mitigation of the consequences of nuclear accidents which could cause undue risk to the health and safety of the public shall be designed, fabricated, and erected to performance standards that enable such systems and components to withstand, without undue risk to the health and safety of the public, the forces that might reasonably be imposed by the occurrence of an extraordinary natural phenomenon such as earthquake, tornado, flooding condition, high wind, or heavy ice. The design bases so established shall reflect: (a) appropriate consideration of the most severe of these natural phenomena that have been officially recorded for the site and the surrounding area and (b) an appropriate margin for withstanding forces greater than those recorded to reflect uncertainties about the historical data and their suitability as a basis for design.

The AFW system is designated a Seismic Class I system. As a Class I system, AFW system components are designed so there is no loss of function in the event of the maximum hypothetical earthquake. Measures are also taken in the design to protect against high winds, flooding and other phenomena, such as the effects of a tornado.

PBNP GDC 12: Instrumentation and controls shall be provided as required to monitor and maintain within prescribed operating ranges essential reactor facility operating variables.

This criterion is applicable to the instrumentation and control systems provided to monitor and maintain within prescribed operating ranges the temperatures, pressures, flows, and levels in the reactor coolant systems, steam systems, containments, and other auxiliary systems.

PBNP GDC 37: Engineered safety features shall be provided in the facility to back up the safety provided by the core design, the reactor coolant pressure boundary, and their protection systems. Such engineered safety features shall be designed to cope with any size reactor coolant piping break up to and including the equivalent of a circumferential rupture of any pipe in that boundary, assuming unobstructed discharge from both ends.

The AFW system is required to provide high pressure feedwater to the steam generators in the event of an accident.

PBNP GDC 38: All engineered safety features shall be designed to provide such functional reliability and ready testability as is necessary to avoid undue risk to the health and safety of the public.

The AFW system components are tested and inspected in accordance with Technical Specification surveillance criteria and frequencies. Testing verifies MDAFW pump operability,

TDAFW pump operability including a cold start, and operability of all required MOVs. Control circuits, starting logic, and indicators are verified operable by their respective functional test.

PBNP GDC 40: Adequate protection for those engineered safety features, the failures of which could cause an undue risk to the health and safety of the public, shall be provided against dynamic effects and missiles that might result from plant equipment failures other than a rupture of the Reactor Coolant System piping. An original design basis for protection of equipment against the dynamic effects of a rupture of the Reactor Coolant System piping is no longer applicable.

This criterion is applicable to the AFW system Class I components both inside and outside containment. The AFW system safety-related functions will not be impaired as a result of a missile or dynamic effects of a pipe rupture.

PBNP GDC 41: Engineered safety features, such as the emergency core cooling system and the containment heat removal system, shall provide sufficient performance capability to accommodate the failure of any single active component without resulting in undue risk to the health and safety of the public.

The AFW system is designed with sufficient mechanical and electrical redundancy such that a single failure of an active component, either in the system or in a supporting system, can be accommodated without loss of the overall AFW system safety-related functions.

PBNP GDC 42: Engineered safety features shall be designed so that the capability of these features to perform their required function is not impaired by the effects of a loss of coolant accident to the extent of causing undue risk to the health and safety of the public.

The AFW system is designed to function following a loss-of-coolant accident. AFW system safety-related functions can be accomplished in the harsh environments resulting from the loss-of-coolant accident.

The AFW system also performs the following augmented quality functions:

- As discussed in FSAR, Appendix A.1, Station Blackout (SBO), in the event of a station blackout, the AFW system is capable of automatically supplying sufficient feedwater to remove decay heat from both units without reliance on AC power for one hour. To support this capability, the minimum required volume in the condensate storage tank was determined to be adequate, the temperature in the AFW pump room would not increase above the maximum temperature for equipment reliability, and there is sufficient capacity in the safety-related batteries to support operation of the safety-related loads.

- In the event of plant fires, including those requiring evacuation of the control room, the AFW system shall be capable of manual initiation to provide feedwater to a minimum of one steam generator per unit at sufficient flow and pressure to remove decay and sensible heat from the reactor coolant system over the range from hot shutdown to cold shutdown conditions. The AFW system shall support achieving cold shutdown within 72 hours.

- In the event of an Anticipated Transient Without Scram (ATWS), the AFW system shall be capable of automatic actuation by use of equipment that is diverse from the reactor trip system. This is accomplished by the ATWS Mitigation System Actuation Circuitry (AMSAC) system required by 10 CFR 50.62 and is described in FSAR Section 7.4, Other

Actuation Systems. AMSAC trips the main turbine and will start the motor-driven AFW pump and the unit-specific turbine driven AFW pump on loss of main feedwater when the main turbine is above 40% nominal power. The auxiliary feedwater system has no functional requirements during normal, at power plant operation.

The FSAR provides that the service water system shall provide a long-term makeup water source to the suction of the auxiliary feedwater pumps when the normal makeup source (the CST) is not available.

10 CFR 50.63, "Loss of all alternating current power"

The applicable regulatory requirement for this supplement is 10 CFR 50.63, which includes requirements that "the reactor core and associated coolant, control, and protection systems, including station batteries and any other necessary support systems, must provide sufficient capacity and capability to ensure that the core is cooled and appropriate containment integrity is maintained in the event of a station blackout for the specified duration."

NUMARC 87-00, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors"

NUMARC 87-00, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors," provides the criteria that following an hour of station blackout, alternate ac power sources may be credited for supplying the power necessary to use service water as a long-term source of water to the suction of the auxiliary feedwater system to remove decay heat from the core.

NRC Regulatory Guide 1.155, "Station Blackout"

NRC Regulatory Guide 1.155, "Station Blackout," (ML003740034) provides the criteria that following an hour of station blackout, alternate ac power sources may be credited for supplying the power necessary to use service water as a long-term source of water to the suction of the auxiliary feedwater system to remove decay heat from the core.

The proposed changes have been evaluated to determine whether applicable regulations and requirements continue to be met.

NextEra has determined that the proposed changes do not require any exemptions or relief from regulatory requirements and do not affect conformance with any GDC differently than described in the FSAR.

Thus, with the changes proposed above, the plant Technical Specifications will continue to provide the basis for safe plant operation.

1.1.4 TS 3.3.2, Engineered Safety Features Actuation System (ESFAS) Instrumentation (Function 6.e – AFW Pump Suction Transfer on Suction Pressure Low)

The PBNP GDC comparable to Appendix A GDC 13, Instrumentation and Control, and GDC 20, Protection System Functions, are PBNP GDC 12 and GDC 20, respectively. Therefore, the applicable regulatory requirements are:

PBNP GDC 12: Instrumentation and controls shall be provided as required to monitor and maintain within prescribed operating ranges essential to reactor facility operating variables.

PBNP GDC 20 Redundancy and independence designed into protection systems shall be sufficient to assure that no single failure or removal from service of any component or channel of such a system will result in loss of the protection function. The redundancy provided shall include, as a minimum, two channels of protection function to be served.

10 CFR 50.36(c)(l)(ii)(A) states:

> *"Limiting safety system settings for nuclear reactors are settings for automatic protective devices related to those variables having significant safety functions. Where a limiting safety system setting is specified for a variable on which a safety limit has been placed, the setting must be so chosen that automatic protective action will correct the abnormal situation before a safety limit is exceeded. If, during operation, it is determined that the automatic safety system does not function as required, the licensee shall take appropriate action, which may include shutting down the reactor."*

The proposed change clarifies the TS requirements to ensure that the automatic protection action will correct the abnormal situation before a safety limit is exceeded. The proposed change also revises the TS to enhance the controls used to maintain the variables and systems within the prescribed operating ranges, in order to ensure that automatic protection actions occur as necessary to initiate the operation of systems and components important to safety as assumed in the accident analysis.

1.2 No Significant Hazards Consideration

The No Significant Hazards Consideration evaluation for the proposed TS 3.3.2 changes to Function 6.e, AFW Pump Suction Transfer on Suction Pressure Low, contained in Reference 3.2 for the proposed setpoint and contained in Reference 3.3 for proposed TS Table 3.3.2-1 changes to the two column format with the addition of the Nominal Trip Setpoint value and the added notes applicable to Channel Operational Test and Channel Calibration Surveillances, are still applicable, since the proposed new function and setpoint are independent of the licensed power level and do not affect the design basis accident analysis. The No Significant Hazards Consideration evaluation contained in Reference 3.1 for the proposed TS 3.3.4 changes to loss of voltage relay time delay settings are still applicable, since these changes are independent of the licensed power level and do not affect the design basis accident analysis.

The evaluation below addresses the new AFW system design and the associated changes to TS 3.7.5, Auxiliary Feedwater, and TS 3.7.6, Condensate Storage Tank, for implementation at the current licensed power level with the current licensing basis.

NextEra has evaluated whether or not a significant hazard consideration is involved with the proposed amendments to implement the new AFW System and associated TS changes with either or both units at the current licensed power level with the current licensing basis by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as discussed below.

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

   NextEra Response: No

   AFW System Design and TS 3.7.5, Auxiliary Feedwater: The proposed AFW system design will provide additional capacity and reliability for the system. In addition, an automatic switchover from a Condensate Storage Tank (CST) suction source of water to a safety-related service water source will be installed for actuation based upon the loss of suction pressure from the CST. A low suction pressure trip of the AFW pumps will be maintained to ensure pump protection, if the automatic suction transfer does not occur. Implementation of the new AFW system design and the proposed changes to TS 3.7.5, Auxiliary Feedwater (AFW), were evaluated against the current analysis of record for the current licensed power level of Point Beach Nuclear Plant (PBNP), Units 1 and 2. NextEra Energy Point Beach, LLC (NextEra) determined that the current analyses remain applicable or are unaffected by implementation of the new AFW system and associated TS changes, with the exception of the steam line break containment response and steam generator tube rupture (SGTR) radiological consequences. These two accidents were reanalyzed with the current licensing basis for the AFW modifications and the results are acceptable with the revised minimum and maximum AFW flow rates and pump start timing. Therefore, the consequences of accidents previously evaluated for the current licensed power level are not significantly increased.

   The proposed changes to the AFW system design and associated TS changes will not significantly affect initiators or precursors to accidents previously evaluated for the current licensed power level. Therefore, the probability of accidents previously evaluated is not significantly increased.

   TS 3.7.6, Condensate Storage Tank: TS 3.7.6, Condensate Storage Tank (CST), contains a surveillance requirement to verify $\geq$ 13,000 gallons of water inventory be maintained to supply AFW pump suction in the event of a Station Blackout, when the safety-related AFW suction source from the service water system is not available. The proposed TS 3.7.6 surveillance requirement increases the current minimum required inventory and accounts for different combinations of CSTs and plant units operating. The changes in the required CST surveillance requirement also account for the increased flow rates from the new AFW system design, suction piping losses, instrument uncertainties, vortex prevention, net positive suction head requirements, and the unusable volumes in the CSTs to ensure adequate cooling water is being maintained to the suction of the AFW pumps under various combinations of CSTs and plant units operating. The increase in required CST inventory will not increase the consequences of previously evaluated accidents for the current licensed power level. Since the proposed TS change does not impact accident initiators or precursors, there is no increase in the probability of a previously evaluated accident for the current licensed power level.

Therefore, the proposed AFW system design and associated TS changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Do the proposed changes create the possibility of a new or different kind of accident from any accident previously evaluated?

   NextEra Response: No

   AFW System Design and TS 3.7.5, Auxiliary Feedwater: The proposed AFW system design will provide additional capacity and reliability for the system. In addition, an automatic switchover from a CST suction source of water to a safety-related service water source will be installed for actuation based upon the loss of suction pressure from the CST. A low suction pressure trip of the AFW pumps will be maintained to ensure pump protection, if the automatic suction transfer does not occur. Implementation of the AFW system design and the proposed changes to TS 3.7.5, Auxiliary Feedwater (AFW), are not significant accident initiators or precursors. These proposed changes will not create the possibility of a new or different kind of accident or event.

   TS 3.7.6, Condensate Storage Tank: TS 3.7.6, Condensate Storage Tank (CST), contains a surveillance requirement to verify $\geq$ 13,000 gallons of water inventory be maintained to supply AFW pump suction in the event of a Station Blackout, when the safety-related AFW suction source from the service water system is not available. The proposed TS 3.7.6 surveillance requirement increases the current minimum required inventory and accounts for different combinations of CSTs and plant units operating. The changes in the required CST surveillance requirement account for the increased flow rates from the new AFW system design, suction piping losses, instrument uncertainties, vortex prevention, net positive suction head requirements, and the unusable volumes in the CSTs to ensure adequate cooling water is being maintained to the suction of the AFW pumps under various combinations of CSTs and plant units operating. This increase in required CST inventory is not an accident initiator or precursor, so this proposed TS change will not create the possibility of a new or different kind of accident or event.

   Therefore, the proposed AFW system design and associated TS changes do not create the possibility of a new or different kind of accident from any previously evaluated.

3. Do the proposed changes involve a significant reduction in the margin of safety?

   NextEra Response: No

   AFW System Design and TS 3.7.5, Auxiliary Feedwater: The proposed AFW system design will provide additional capacity and reliability for the system. In addition, an automatic switchover from a CST suction source of water to a safety-related service water source will be installed for actuation based upon the loss of suction pressure from the CST. A low suction pressure trip of the AFW pumps will be maintained to ensure pump protection, if the automatic suction transfer does not occur. Implementation of the new AFW system design and the proposed changes to TS 3.7.5, Auxiliary Feedwater (AFW), were evaluated against the current analysis of record for the current licensed power level of PBNP Units 1 and 2. NextEra determined that the current analyses remain applicable or are not affected by implementation of the new AFW system and

associated TS changes, with the exception of the steam line break containment response and steam generator tube rupture (SGTR) radiological consequences. These two accidents were reanalyzed using the current licensing basis for the AFW modifications. The results are acceptable with the revised minimum and maximum AFW flow rates and pump start timing. Therefore, the margin to safety in the accident analysis for the current licensed power level is not significantly reduced by these proposed changes.

TS 3.7.6, Condensate Storage Tank: TS 3.7.6, Condensate Storage Tank (CST), contains a surveillance requirement to verify $\geq$ 13,000 gallons of water inventory be maintained to supply AFW pump suction in the event of a Station Blackout, when the safety-related AFW suction source from the service water system is not available. The proposed TS 3.7.6 surveillance requirement increases the current minimum required inventory and accounts for different combinations of CSTs and plant units operating. The changes in the required CST surveillance requirement account for the increased flow rates from the new AFW system design, suction piping losses, instrument uncertainties, vortex prevention, net positive suction head requirements, and the unusable volumes in the CSTs to ensure adequate cooling water is being maintained to the suction of the AFW pumps under various combinations of CSTs and plant units operating. This increase in required CST inventory does not adversely impact the current analysis of record for the current licensed power level. Therefore, the proposed change does not result in a significant reduction in the margin of safety.

Therefore, the proposed AFW system design and associated TS changes do not involve a significant reduction in the margin of safety.

1.3 Conclusions

In conclusion, based on the considerations discussed above, (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.

The Plant Operations Review Committee has reviewed the proposed changes and concurs with this conclusion.

2.0 ENVIRONMENTAL CONSIDERATIONS

NextEra has evaluated the proposed changes and has concluded that the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22 (b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

3.0 REFERENCES

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

3.2 NextEra Energy Point Beach, LLC, letter to NRC dated June 17, 2009, License Amendment Request 261, Supplement 1, Extended Power Uprate (ML091690090)

3.3 NextEra Energy Point Beach, LLC, letter to NRC, dated December 8, 2009, License Amendment Request 261, Supplement 3, Extended Power Uprate (ML093430114)

3.4 NRC Generic Letter 81-14, Seismic Qualifications for Auxiliary Feedwater Systems, dated February 1981

3.5 NRC Safety Evaluation, Seismic Qualification of the Auxiliary Feedwater, Point Beach Nuclear Plants Units 1 and 2, dated September 16, 1986