



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

October 6, 2015

Mr. Dean Curtland, Site Vice President
c/o Mr. Michael Ossing
Seabrook Station
NextEra Energy Seabrook, LLC
P.O. Box 300
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 - ISSUANCE OF AMENDMENT
REGARDING NOTE FOR REACTOR COOLANT SYSTEM SURVEILLANCE
REQUIREMENTS (TAC NO. MF6478)

Dear Mr. Curtland:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 150 to Facility Operating License No. NPF-86 for the Seabrook Station, Unit No. 1 (Seabrook). This amendment consists of changes to the facility technical specifications (TSs) in response to your application dated July 13, 2015.

The amendment adds a note to the Seabrook TS Surveillance Requirements (SRs) 4.4.1.3, "Reactor Coolant System, Reactor Coolant Loops and Coolant Circulation, Hot Shutdown."

By letter dated February 6, 2015, the NRC issued Amendment No. 144 that modified Seabrook's TSs to address NRC Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems." The changes were consistent with the NRC-approved Technical Specifications Task Force (TSTF) Traveler TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation," for plant-specific adoption using the Consolidated Line Item Improvement Process. The *Federal Register* notice published on January 15, 2014 (79 FR 2700), announced the availability of this TS improvement.

In a submittal dated June 24, 2014, the licensee requested to have the note added to Seabrook TS SRs 4.4.1.3. In a later submittal dated December 11, 2014, the licensee inadvertently left out the note on the TS page. On February 6, 2015, the NRC approved the licensee's request, in Amendment No. 144 to the operating license. Amendment No. 144 inadvertently omitted the note; however, the omitted note was due to the licensee's letter dated December 11, 2014. The current amendment corrects the inadvertent omission of the note.

D. Curtland

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A copy of the related safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in black ink, appearing to read "John G. Lamb". The signature is fluid and cursive, written over the typed name below.

John G. Lamb, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosures:

1. Amendment No. 150 to NPF-86
2. Safety Evaluation

cc w/enclosures: Distribution via Listserv



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

NEXTERA ENERGY SEABROOK, LLC, ET AL.*

DOCKET NO. 50-443

SEABROOK STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 150
License No. NPF-86

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by NextEra Energy Seabrook, LLC, et al., (the licensee) dated July 13, 2015, 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.

*NextEra Energy Seabrook, LLC is authorized to act as agent for the: Hudson Light & Power Department, Massachusetts Municipal Wholesale Electric Company, and Taunton Municipal Light Plant and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

2. Accordingly, the license is amended by changes to paragraphs 2.C.(2) of Facility Operating License No. NPF-86 is hereby amended to read as follows:


- (2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 15D, and the Environmental Protection Plan contained in Appendix B are incorporated into the Facility License No. NPF-86.

NextEra Energy Seabrook, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION


A handwritten signature in black ink, appearing to read 'D. Broaddus', with a small arrow pointing to the left below the signature.

Douglas A. Broaddus, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications
and Facility Operating License

Date of Issuance: October 6 , 2015

ATTACHMENT TO LICENSE AMENDMENT NO. 150

FACILITY OPERATING LICENSE NO. NPF-86

DOCKET NO. 50-443

Replace the following page of Facility Operating License No. NPF-86 with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove
3

Insert
3

Replace the following page of Appendix A, Technical Specifications, with the attached revised page. The revised page is identified by amendment number and contain marginal lines indicating the area of change.

Remove
3/4 4-5

Insert
3/4 4-5

- (4) NextEra Energy Seabrook, LLC, pursuant to the Act and 10 CFR 30, 40, and 70, to receive, possess, and use at any time any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) NextEra Energy Seabrook, LLC, pursuant to the Act and 10 CFR 30, 40, and 70, 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;
- (6) NextEra Energy Seabrook, LLC, pursuant to the Act and 10 CFR 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein; and
- (7) DELETED

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I 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; is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

NextEra Energy Seabrook, LLC, is authorized to operate the facility at reactor core power levels not in excess of 3648 megawatts thermal (100% of rated power).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 150*, and the Environmental Protection Plan contained in Appendix B are incorporated into the Facility License No. NPF-86. NextEra Energy Seabrook, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) License Transfer to FPL Energy Seabrook, LLC**

- a. On the closing date(s) of the transfer of any ownership interests in Seabrook Station covered by the Order approving the transfer, FPL Energy Seabrook, LLC**, shall obtain from each respective transferring owner all of the accumulated decommissioning trust funds for the facility, and ensure the deposit of such funds and additional funds, if necessary, into a decommissioning trust or trusts for Seabrook Station established by FPL Energy Seabrook, LLC**, such that the amount of such funds deposited meets or exceeds the amount required under 10 CFR 50.75 with respect to the interest in Seabrook Station FPL Energy Seabrook, LLC**, acquires on such dates(s).

* Implemented

** On April 16, 2009, the name "FPL Energy Seabrook, LLC" was changed to "NextEra Energy Seabrook, LLC".

- (4) NextEra Energy Seabrook, LLC, pursuant to the Act and 10 CFR 30, 40, and 70, to receive, possess, and use at any time any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) NextEra Energy Seabrook, LLC, pursuant to the Act and 10 CFR 30, 40, and 70, 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;
- (6) NextEra Energy Seabrook, LLC, pursuant to the Act and 10 CFR 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein; and
- (7) DELETED

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I 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; is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

NextEra Energy Seabrook, LLC, is authorized to operate the facility at reactor core power levels not in excess of 3648 megawatts thermal (100% of rated power).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 151*, and the Environmental Protection Plan contained in Appendix B are incorporated into the Facility License No. NPF-86. NextEra Energy Seabrook, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) License Transfer to FPL Energy Seabrook, LLC**

- a. On the closing date(s) of the transfer of any ownership interests in Seabrook Station covered by the Order approving the transfer, FPL Energy Seabrook, LLC**, shall obtain from each respective transferring owner all of the accumulated decommissioning trust funds for the facility, and ensure the deposit of such funds and additional funds, if necessary, into a decommissioning trust or trusts for Seabrook Station established by FPL Energy Seabrook, LLC**, such that the amount of such funds deposited meets or exceeds the amount required under 10 CFR 50.75 with respect to the interest in Seabrook Station FPL Energy Seabrook, LLC**, acquires on such dates(s).

* Implemented

** On April 16, 2009, the name "FPL Energy Seabrook, LLC" was changed to "NextEra Energy Seabrook, LLC".

REACTOR COOLANT SYSTEM

REACTOR COOLANT LOOPS AND COOLANT CIRCULATION

HOT SHUTDOWN

SURVEILLANCE REQUIREMENTS

4.4.1.3.1 The required reactor coolant pump(s), if not in operation, shall be determined OPERABLE in accordance with the Surveillance Frequency Control Program by verifying correct breaker alignments and indicated power availability.

4.4.1.3.2 The required steam generator(s) shall be determined OPERABLE by verifying secondary-side water level to be greater than or equal to 14% in accordance with the Surveillance Frequency Control Program.

4.4.1.3.3 At least one reactor coolant or RHR loop shall be verified in operation and circulating reactor coolant in accordance with the Surveillance Frequency Control Program.

4.4.1.3.4 Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water in accordance with the Surveillance Frequency Control Program.* |

*Not required to be performed until 12 hours after entering MODE 4. |



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 150

TO FACILITY OPERATING LICENSE NO. NPF-86

NEXTERA ENERGY SEABROOK, LLC, ET AL.

SEABROOK STATION, UNIT NO. 1

DOCKET NO. 50-443

1.0 BACKGROUND

By letter dated June 24, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14177A503), as supplemented by letter dated December 11, 2014 (ADAMS Accession No. ML14349A646), NextEra Energy Seabrook, LLC (NextEra, or the licensee) requested changes to the Technical Specifications (TSs) for Seabrook Station, Unit No. 1 (Seabrook). Specifically, the licensee requested to adopt U.S. Nuclear Regulatory Commission (NRC)-approved Technical Specifications Task Force (TSTF) Standard Technical Specifications (STS) Change Traveler TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation," dated February 21, 2013 (ADAMS Accession No. ML13053A075).

By letter dated February 6, 2015 (ADAMS Accession No. ML14345A288), the NRC issued Amendment No. 144 to Facility Operating License No. NPF-86 for Seabrook, which modified Seabrook's TSs by revising the surveillance requirements (SRs) related to gas accumulation for the emergency core cooling system (ECCS). Amendment No. 144 also added new SRs related to gas accumulation for the residual heat removal (RHR) and containment spray (CS) systems.

In its letter dated June 24, 2014, the licensee requested a note be added to TS page 3/4 4-5, Reactor Coolant System (RCS), Reactor Coolant Loops and Coolant Circulation, Hot Shutdown, Surveillance Requirements (SRs). In its subsequent letter dated December 11, 2014, however, the licensee inadvertently left off the note on TS page 3/4 4-5. Therefore, Amendment No. 144 does not have the note on TS page 3/4 4-5.

2.0 INTRODUCTION

By letter dated July 13, 2015 (ADAMS Accession No. ML15198A027), the licensee requested that the note in NRC-approved TSTF-523 be added to TS page 3/4 4-5.

3.0 REGULATORY EVALUATION

3.1 Gas Accumulation Background

Gas accumulation in reactor systems can result in water hammer, pump cavitation, and pumping of non-condensable gas into the reactor vessel. These effects may result in the subject system being unable to perform its specified safety function. The NRC issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," in January 2008 to address the issue of gas accumulation in ECCS, RHR, and CS systems (ADAMS Accession No. ML072910759). The industry and NRC staff agreed that a change to the STS and plant-specific TS would be necessary to address some of the issues discussed in GL 2008-01. TSTF-523 contains changes to the TS SRs and TS Bases to address some of the concerns in GL 2008-01. The licensee proposed amending the Seabrook TSs using a plant-specific adoption of the TSTF-523 changes.

3.2 Technical Specification Changes

Changes were proposed for Seabrook TS SR 4.4.1.3, "Reactor Coolant Loops and Coolant Circulation – Hot Shutdown," to add the note in TSTF-523, which states, "Not required to be performed until 12 hours after entering MODE 4."

3.3 Regulatory Review

The regulations in Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50 or similar plant-specific principal design criteria provide design requirements. Appendix B to 10 CFR Part 50, the TSs, and the licensee quality assurance programs, provide operating requirements. The regulatory requirements of 10 CFR Part 50, Appendix A that are applicable to gas management in the subject systems include: General Design Criteria (GDC) 1, 34, 35, 36, 37, 38, 39, and 40. GDC 1 requires that the subject systems be designed, fabricated, erected, and tested to quality standards. GDC 34 requires an RHR system designed to maintain specified acceptable fuel design limits and to meet design conditions that are not exceeded if a single failure occurs and specified electrical power systems fail. GDC 35, 36, and 37 require an ECCS design that meets performance, inspection, and testing requirements. Additionally, the regulations in 10 CFR 50.46 provide specified ECCS performance criteria. GDC 38, 39, and 40 require a containment heat removal system design that meets performance, inspection, and testing requirements.

Appendix B to 10 CFR Part 50 provides quality assurance criteria that apply to gas management in the subject systems. Criteria III and V require measures to ensure that applicable regulatory requirements and the design basis, as defined in 10 CFR 50.2, "Definitions," and as specified in the license application, are correctly translated into controlled specifications, drawings, procedures, and instructions. Criterion XI requires a test program to ensure that the subject systems will perform satisfactorily in service and requires that test results shall be documented and evaluated to ensure that test requirements have been satisfied. Criterion XVI requires measures to ensure that conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected, and that significant conditions adverse

to quality are documented and reported to management. Criterion XVII requires maintenance of records of activities affecting quality.

The NRC's regulatory requirements related to the content of the TSs are contained in 10 CFR 50.36(c). Section 50.36 require that the TSs include items in the following categories: (1) safety limits, limiting safety systems settings, and limiting control settings; (2) limiting conditions for operation (LCO); (3) SRs; (4) design features; and (5) administrative controls. SRs are requirements relating to test, calibration, or inspection, to assure that the necessary quality of systems and components is maintained, facility operation will be within safety limits, and the LCOs will be met. Typically, TS Section 5 requires that licensees establish, implement, and maintain written procedures covering the applicable procedures recommended in Appendix A to Regulatory Guide (RG) 1.33, "Quality Assurance Program Requirements (Operation)." Appendix A to RG 1.33 identifies instructions for filling and venting the ECCS and RHR system, as well as for draining and refilling heat exchangers. Standard TSs and most licensee TSs include SRs to verify that at least some of the subject systems' piping is filled with water.

The NRC guidance for the format and content of licensee TSs can be found in NUREG-1431, "Standard Technical Specifications Westinghouse Plants."

4.0 TECHNICAL EVALUATION

The NRC staff evaluated the licensee's proposed change against the applicable regulatory guidance in the STS, as modified by TSTF-523. The proposed change adopted the TS format and content, to the extent practicable, contained in the changes made to NUREG-1431, "Standard Technical Specifications Westinghouse Plants," by TSTF-523. The Seabrook TS utilizes different numbering, format, and titles than NUREG-1431 on which TSTF-523 was based. The NRC staff found that the format, numbering, and titling of the proposed changes are consistent with guidance in the STS, as modified by TSTF-523, and the differences do not affect the applicability of TSTF-523 to Seabrook.

The NRC staff compared the proposed changes to the existing SRs, as well as the regulatory requirements of 10 CFR 50.36.

The licensee proposed the following TS changes:

- (1) Add a Note (*) for SR 4.4.1.3.4, which states, "**Not required to be performed until 12 hours after entering MODE 4."

SRs are normally performed prior to entering the Applicability. During a rapid shutdown, there may be insufficient time to verify all susceptible locations in the RHR System before entering the Applicability. It is safer for the licensee to attend to the rapid shutdown than to perform SR 4.4.1.3.4 immediately upon entering the Applicability. Therefore, the note provides the licensee time to perform SR 4.4.1.3.4.

The language for the note that states the SR does not have to be performed until 12 hours after entering Mode 4 for pressurized water reactors is acceptable, because the note provides a limited time to perform the SR 4.4.1.3.4 after entering the Applicability of the LCO. This is because there may be insufficient time to verify all susceptible locations prior to entering

Mode 4 in a rapid shutdown. However, under the STS usage rules (STS Section 1.4), the requirement to manage gas accumulation is not affected. Licensees must have confidence that the SR can be met or the LCO must be declared as not met.

The NRC staff finds that the proposed note meets the regulatory requirements of 10 CFR 50.36 because it provides assurance that the necessary quality of systems and components will be maintained and that the LCOs will be met. Therefore, the NRC staff finds the proposed change acceptable.

The regulation at 10 CFR 50.36(a)(1) states, in part, that, "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." The licensee may make changes to the TS Bases without prior NRC staff review and approval in accordance with the TS Bases Control Program described in TS 6.7.6.j. Accordingly, for information purposes, the licensee also submitted TS Bases changes corresponding to the proposed TS changes. The NRC staff determined that TS Bases changes are consistent with the proposed TS changes and provide the purpose for each requirement in the specification consistent with the Commission's Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors dated July 22, 1993 (58 FR 39132).

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Hampshire and Massachusetts State officials were notified on September 2, 2015, of the proposed issuance of the amendment. The State officials provided no comments.

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and SRs. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The NRC has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding published on August 4, 2015 (80 FR 46350). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

7.0 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 Contributor: J. Lamb

Date: October 6, 2015

D. Curtland

-2-

A copy of the related safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

John G. Lamb, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosures:

- 1. Amendment No. 150 to NPF-86
- 2. Safety Evaluation

cc w/enclosures: Distribution via Listserv

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ADAMS Accession No.: ML15231A144

OFFICE	LPL1-2/PM	LPL1-2/LA	STSB/BC	OGC	LPL1-2/BC	LPL1-2/PM
NAME	JLamb	LRonewicz	RElliott	STurk	REnnis for DBroaddus	JLamb
DATE	8/19/15	8/19/15	8/20/15	9/9/15	9/14/15	10/6/15

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