



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

August 22, 2011

Mr. Paul Freeman
Site Vice President
c/o Michael O'Keefe
Seabrook Station
NextEra Energy Seabrook, LLC
P.O. Box 300
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 - ISSUANCE OF AMENDMENT RE:
REMOVAL OF TECHNICAL SPECIFICATION 3.4.10, "STRUCTURAL
INTEGRITY" (TAC NO. ME5315)

Dear Mr. Freeman:

The Commission has issued the enclosed Amendment No. 126 to Facility Operating License No. NPF-86 for the Seabrook Station, Unit No. 1 (Seabrook). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated December 29, 2010.

The amendment deletes TS 3.4.10, "Structural Integrity." Additionally, the amendment relocates Surveillance Requirement 4.4.10, which governs inspection of the reactor coolant pump flywheel, to TS 6.7.6.m.

A copy of our 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 "G. Edward Miller", is positioned above the typed name.

G. Edward Miller, 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. 126 to NPF-86
2. Safety Evaluation

cc w/encls: 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. 126
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 December 29, 2010, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this 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.

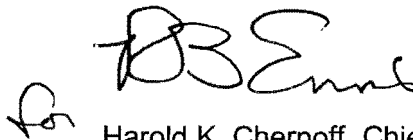
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-86 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No.126 , 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 "H. Chernoff", is written over a printed name.

Harold K. Chernoff, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the License and
Technical Specifications

Date of Issuance: August 22, 2011

ATTACHMENT TO LICENSE AMENDMENT NO.126

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 pages of the Appendix A, Technical Specifications, with the attached revised pages as indicated. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove
vi
3/4 4-31
6-14a

Insert
vi
3/4 4-31
6-14a

- (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.126* , 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".

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
FIGURE 3.4-1 DOSE EQUIVALENT I-131 REACTOR COOLANT SPECIFIC ACTIVITY LIMIT VERSUS PERCENT OF RATED THERMAL POWER WITH THE REACTOR COOLANT SPECIFIC ACTIVITY > 1 μ Ci/gram DOSE EQUIVALENT I-131.....	3/4 4-20
TABLE 4.4-3 REACTOR COOLANT SPECIFIC ACTIVITY SAMPLE AND ANALYSIS PROGRAM.....	3/4 4-21
3/4.4.9 PRESSURE/TEMPERATURE LIMITS	
General.....	3/4 4-22
FIGURE 3.4-2 REACTOR COOLANT SYSTEM HEATUP LIMITATIONS – APPLICABLE UP TO 11.1 EFPY.....	3/4 4-23
FIGURE 3.4-3 REACTOR COOLANT SYSTEM COOLDOWN LIMITATIONS – APPLICABLE UP TO 11.1 EFPY.....	3/4 4-24
Pressurizer.....	3/4 4-25
Overpressure Protection Systems.....	3/4 4-26
FIGURE 3.4-4 RCS COLD OVERPRESSURE PROTECTION SETPOINTS.....	3/4 4-29
3/4.4.10 DELETED.....	3/4 4-30
3/4.4.11 REACTOR COOLANT SYSTEM VENTS.....	3/4 4-31
3/4.5 <u>EMERGENCY CORE COOLING SYSTEMS</u>	
3/4.5.1 ACCUMULATORS	
Hot Standby, Startup, and Power Operation.....	3/4 5-1
Shutdown.....	3/4 5-3
3/4.5.2 ECCS SUBSYSTEMS – T _{avg} GREATER THAN OR EQUAL TO 350°F.....	3/4 5-4
3/4.5.3 ECCS SUBSYSTEMS - T _{avg} LESS THAN 350°F.....	3/4 5-8
ECCS SYBSYSTEMS - T _{avg} Equal To or Less Than 200°F.....	3/4 5-10
3/4.5.4 REFUELING WATER STORAGE TANK.....	3/4 5-11
3/4.6 <u>CONTAINMENT SYSTEMS</u>	
3/4.6.1 PRIMARY CONTAINMENT	
Containment Integrity.....	3/4 6-1
Containment Leakage.....	3/4 6-2

REACTOR COOLANT SYSTEM

DELETED

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS

6.7.6 (Continued)

- d. Measurement, at designated locations, of the CRE pressure relative to all external areas adjacent to the CRE boundary during the pressurization mode of operation by one train of the CREMAFS, operating at a flow rate of less than or equal to 600 CFM at a Frequency of 18 months on a STAGGERED TEST BASIS. The results shall be trended and used as part of the 18 month assessment of the CRE boundary.
- e. The quantitative limits on unfiltered air in-leakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air in-leakage measured by the testing described in paragraph c. The unfiltered air in-leakage limit for radiological challenges is the in-leakage flow rate assumed in the licensing basis analyses of DBA consequences. Unfiltered air inleakage limits for hazardous chemicals must ensure that exposure of CRE occupants to these hazards will be within the assumptions in the licensing basis.
- f. The provisions of SR 4.0.2 are applicable to the Frequencies for assessing CRE habitability, determining CRE unfiltered in-leakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.

m. Reactor Coolant Pump Flywheel Inspection Program

In addition to the requirements of Specification 4.0.5, each reactor coolant pump flywheel shall be inspected at least once every 10 years. This inspection shall be by either of the following examinations:

- a. An in-place examination, utilizing ultrasonic testing, over the volume from the inner bore of the flywheel to the circle of one-half the outer radius; or
- b. A surface examination, utilizing magnetic particle testing and/or penetrant testing, of the exposed surfaces of the disassembled flywheel.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 126

TO FACILITY OPERATING LICENSE NO. NPF-86

SEABROOK STATION, UNIT NO. 1

DOCKET NO. 50-443

1.0 INTRODUCTION

By letter dated December 29, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML110070067), NextEra Energy Seabrook, LLC (NextEra or the licensee) submitted license amendment request (LAR) LAR 10-05 to revise the technical specifications (TSs) for Seabrook Station, Unit No. 1 (Seabrook). The proposed amendment would delete TS 3/4.4.10, "Structural Integrity."

Specifically, the change requests the removal of the provisions contained in TS 3/4.4.10, which specifies requirements relating to the structural integrity of American Society of Mechanical Engineers (ASME) Code Class 1, 2 and 3 components. This specification is redundant to the requirements contained within Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a, "Codes and standards." With this proposed change, the pressure boundary structural integrity of ASME Code Class 1, 2 and 3 components will continue to be maintained by compliance with 10 CFR 50.55a, as implemented through the Seabrook, In-service Inspection (ISI) Program. The proposed change would relocate Surveillance Requirement (SR) 4.4.10, which governs inspection of the reactor coolant pump flywheel, to TS 6.7.6.m.

2.0 REGULATORY EVALUATION

The Nuclear Regulatory Commission's (NRC's or the Commission's) regulatory requirements related to the content of the TSs are set forth in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36, "Technical specifications." This regulation requires that the TSs include items in the following five specific categories: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements (SRs); (4) design features; and (5) administrative controls. The regulation does not specify the particular requirements to be included in a plant's TSs.

On July 22, 1993 (58 FR 39132), the Commission published a "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (Final Policy Statement) which discussed the criteria to determine which items are required to be included in the TSs as LCOs. The criteria were subsequently incorporated into the regulations by an amendment to 10 CFR 50.36 (60 FR 36953, July 19, 1995). Specifically, 10 CFR 50.36(c)(2)(ii) requires that a TS LCO be established for each item meeting one or more of the following criteria:

Enclosure

Criterion 1

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

Criterion 2

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

Criterion 3

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

Criterion 4

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

As discussed in the *Federal Register* (FR) notice for the final rule dated July 19, 1995 (60 FR 36955):

LCOs that do not meet any of the criteria, and their associated actions and surveillance requirements, may be proposed for relocation from the technical specifications to licensee-controlled documents, such as the FSAR [Final Safety Analysis Report]. The criteria may be applied to either standard or custom technical specifications.

3.0 TECHNICAL EVALUATION

3.1 NextEra's Justification for Proposed Change

The licensee, in its application, stated that the purpose of LCO 3.4.10, "Reactor Coolant System (RCS) structural integrity," is to specify the requirements of maintaining the structural integrity of the ASME Boiler and Pressure Vessel Code (Code) Class 1, 2, and 3 components. This specification was originally intended to support assurance that structural integrity and operational readiness of these components are maintained at an acceptable level throughout the life of the facility. The specification is applicable in all operational modes. However, the specification does not provide actions for a plant shutdown if its LCO is not met. In addition, as stated by the licensee, the specification contains no SRs. According to the licensee, this is because the specification addresses the passive pressure boundary function of ASME Code Class 1, 2, and 3 components as established under the ISI program. In addition to the above, the licensee states that the ISI program is required pursuant to 10 CFR 50.55a, thereby addressing the inspections necessary to maintain structural integrity.

The licensee purports that the specification wording could be misconstrued to conflict with normal outage-related activities, including removal of RCS manways and the reactor vessel head in preparation for refueling, which would make the pressure boundary no longer

structurally intact. The licensee states that maintaining a program-type requirement within an LCO creates significant interpretation issues for operations personnel. The RCS structural integrity TS was part of the original TS and the TS basis history regarding its intent is not documented. According to the licensee, LCO 3.4.10 appears to have been included to help ensure that plant heat up and start up would not occur until all required portions of the RCS were verified to meet ISI acceptance criteria following inspections performed during a plant outage. Meeting these acceptance criteria helps ensure the integrity of the RCS pressure boundary during all modes of operation, including accident events. Furthermore, the licensee states that LCO 3.4.10 contains no action suggesting it was designed to accommodate integrity concerns once plant heat up has commenced. According to the licensee, RCS structural integrity ISI activities are performed only during plant outages when conditions exist that permit access to the RCS pressure boundary and are not monitored or controlled through application of the ISI program during the operational cycles.

The licensee stated that other TSs are designed to monitor the structural integrity of the RCS during operation and provide actions to shut down the unit if compliance is not maintained. For example, RCS heat up and cooldown rates protect against applying undue stresses as a result of pressure/temperature transients on RCS components and piping. The RCS leakage TSs provide a means of evaluating the RCS structural integrity by detecting and monitoring leakage. Therefore, the licensee stated it is not necessary to apply a TS when integrity issues become evident during normal plant operation. According to the licensee, because LCO 3.4.10 is redundant to other regulations, it is acceptable to remove LCO 3.4.10 from the TSs. Finally, the licensee states that the removal of this specification does not reduce the controls that are necessary to ensure compliance with the ASME Code or the need to maintain the RCS pressure boundary. Structural integrity is maintained by compliance with 10 CFR 50.55a, as implemented through the Seabrook ISI Programs.

3.2 NRC Staff Evaluation of Proposed Changes

3.2.1 Deletion of LCO 3.4.10

The deletion of LCO 3.4.10 proposed in this LAR is required to be evaluated to confirm compliance with the regulatory requirements in Section 2.0 of this safety evaluation and the basis for each finding is discussed in the following paragraphs.

For 10 CFR 50.36(c)(2)(ii), Criterion 1, the ASME Code Class 1, 2, and 3 components generally do not include any instrumentation used to detect and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary. Any such instrumentation is covered by existing TSs, such as 3/4.3 and/or TS 3/4.4.6. Therefore, the staff finds that the TS proposed for deletion does not meet Criterion 1.

For Criterion 2, structural integrity is neither a process variable, design feature, or operating restriction that is an initial condition of a design-basis analysis (DBA) or transient analysis. Structural integrity is a passive aspect of plant operation that is verified during periodic inspections. Therefore, the NRC staff finds that this TS does not meet Criterion 2.

For Criterion 3, ASME Code Class 1, 2, and 3 components that are part of the primary success path and function to mitigate DBAs or transients that either assume the failure of, or present a challenge to, the integrity/operability of these components are included in the individual

specification that covers these components. This TS addresses only the passive pressure boundary function of these components. Therefore, the NRC staff finds that this TS does not meet Criterion 3.

For Criterion 4, the requirements covered by this TS that are being removed have not been shown to be risk significant to public health and safety by either operating experience or probabilistic safety assessment. Furthermore, the requirements of this TS do not affect the risk review/unavailability monitoring of applicable structures, systems or components. Therefore, the NRC staff finds that this specification does not meet Criterion 4.

The analysis shows that none of the four criteria from 10 CFR 50.36(c)(2)(ii) are applicable to the specification proposed for deletion. The NRC staff agrees that other TS requirements as well as 10 CFR 50.55a adequately address RCS structural integrity. Since LCO 3.4.10 does not fulfill any of the 10 CFR 50.36 criteria for items for which TSs must be established, the NRC staff finds that removing LCO 3.4.10 is acceptable. Further, the NRC staff agrees that the removal of LCO 3.4.10 and its associated references to structural integrity eliminates the redundancy of structural integrity requirements that are already covered under 10 CFR 50.55a.

Normally in applying the Commission Final Policy Statement on TSs for Nuclear Power Reactors, the NRC staff would require that a licensee identify both the licensee-controlled document receiving a relocated TS and the change control mechanism that governs that document. However, in this instance, the licensee proposes deletion without relocation of the TS. The NRC staff finds this proposed deletion without relocation to be acceptable because the ASME Code Class 1, 2, and 3 structural integrity requirements continue to be covered under 10 CFR 50.55a, which the licensee must comply with.

3.2.1 Relocation of SR 4.4.10

The licensee has proposed to relocate the requirement to inspect the reactor coolant pump flywheels from SR 4.4.10 to TS 6.7.6.m. There are no changes proposed to the frequency or method of inspection, or the area to be inspected. Moving this requirement to another section of the TSs will not change the method in which it is met. The NRC staff, therefore, finds this change to be acceptable.

4.0 STATE CONSULTATION

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

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no

significant hazards consideration, and there has been no public comment on such finding (76 FR 31375). 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 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: G. E. Miller

Date: August 22, 2011

August 22, 2011

Mr. Paul Freeman
Site Vice President
c/o Michael O'Keefe
Seabrook Station
NextEra Energy Seabrook, LLC
P.O. Box 300
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 - ISSUANCE OF AMENDMENT RE:
REMOVAL OF TECHNICAL SPECIFICATION 3.4.10, "STRUCTURAL
INTEGRITY" (TAC NO. ME5315)

Dear Mr. Freeman:

The Commission has issued the enclosed Amendment No. 126 to Facility Operating License No. NPF-86 for the Seabrook Station, Unit No. 1 (Seabrook). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated December 29, 2010.

The amendment deletes TS 3.4.10, "Structural Integrity." Additionally, the amendment relocates Surveillance Requirement 4.4.10, which governs inspection of the reactor coolant pump flywheel, to TS 6.7.6.m.

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

Sincerely,

/ra/

G. Edward Miller, 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. to NPF-86
2. Safety Evaluation

cc w/encls: Distribution via Listserv

DISTRIBUTION:

PUBLIC

RidsNrrDoriDpr Resource

RidsNrrDirsltsb Resource

RidsOgcRp Resource

LPLI-2 R/F

RidsNrrDoriLpl1-2 Resource

RidsNrrPMSeabrook Resource

RidsNrrCvib Resource

RidsAcrsAcnw_MailCTR Resource

RidsRgn1MailCenter Resource

RidsNrrLAABaxter Resource

REnnis, NRR/DORL

ADAMS Accession No.: ML111250388

OFFICE	LPL1-2/PM	LPL1-2/LA	CPNB/BC	ITSB/BC	OGC	LPL1-2/BC
NAME	GEMiller	ABaxter	TLupold	RElliott	MSmith	HChernoff (REnnis for)
DATE	8/12/11	7/6/11	7/18/11	8/2/11	8/12/11	8/22/11

Official Record Copy