



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

June 17, 2013

Mr. Kevin Walsh, 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  
REGARDING THE ADMINISTRATIVE CHANGES AND CORRECTIONS TO  
THE TECHNICAL SPECIFICATIONS (TAC NO. MF1033)

Dear Mr. Walsh:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 137 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 March 1, 2013.

The amendment deletes the TS Index and makes corrections to Seabrook TS 3.4.8, "Reactor Coolant System Specific Activity," and TS 6.8.1.6.a, "Core Operating Limits Report."

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 "John G. Lamb".

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. 137 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. 137  
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 March 1, 2013, 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.

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\*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.

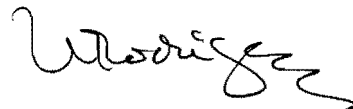
2. Accordingly, the license is amended by changes to paragraphs 2.C.(2) of Facility Operating License No. NPF-86 is hereby amended to read as follows:

- (2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 137 , 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 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Veronica Rodriguez, Acting Chief  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the License and TS

Date of Issuance: June 17, 2013

ATTACHMENT TO LICENSE AMENDMENT NO. 137

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 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 area of change.

Remove

Insert

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- (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. 137 \*, 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".

TABLE 4.4-3

REACTOR COOLANT SPECIFIC ACTIVITY SAMPLE AND ANALYSIS PROGRAM

| <u>TYPE OF MEASUREMENT AND ANALYSIS</u>                           | <u>SAMPLE AND ANALYSIS FREQUENCY</u>  | <u>MODES IN WHICH SAMPLE AND ANALYSIS REQUIRED</u> |
|---|---|--|
| 1. Gross Radioactivity Determination                              | At least once per 72 hours.   | 1, 2, 3, 4   |
| 2. Isotopic Analysis for DOSE EQUIVALENT I-131 Concentration      | 1 per 14 days.  | 1  |
| 3. Radiochemical for $\bar{E}$ Determination*                     | 1 per 6 months**  | 1  |
| 4. Isotopic Analysis for Iodine Including I-131, I-133, and I-135 | a) Once per 4 hours, whenever the specific activity exceeds 1 $\mu\text{Ci}/\text{gram}$ DOSE EQUIVALENT I-131 or 100/ $\bar{E}$ microCi/gram of gross radioactivity, and | 1#, 2#, 3#, 4#, 5#                                 |
|   | b) One sample between 2 and 6 hours following a THERMAL POWER change exceeding 15% of the RATED THERMAL POWER within a 1-hour period.                                     | 1, 2, 3  |

\* A radiochemical analysis for  $\bar{E}$  shall consist of the quantitative measurement of the specific activity for each radionuclide, except for radionuclides with half-lives less than 10 minutes and all radioiodines, which is identified in the reactor coolant. The specific activities for these individual radionuclides shall be used in the determination of  $\bar{E}$  for the reactor coolant sample. Determination of the contributors to  $\bar{E}$  shall be based upon those energy peaks identifiable with a 95% confidence level.

\*\* Sample to be taken after a minimum of 2 EFPD and 20 days of POWER OPERATION have elapsed since reactor was last subcritical for 48 hours or longer.

#Until the specific activity of the Reactor Coolant System is restored within its limits.

## ADMINISTRATIVE CONTROLS

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### CORE OPERATING LIMITS REPORT

6.8.1.6.a Core operating limits shall be established and documented in the CORE OPERATING LIMITS REPORT prior to each reload cycle, or prior to any remaining portion of a reload cycle, for the following:

1. Cycle dependent Overpower  $\nearrow T$  and Overtemperature  $\nearrow T$  trip setpoint parameters and function modifiers for operation with skewed axial power profiles for Table 2.2-1 of Specification 2.2.1.
2. Cycle dependent maximum allowable combination of thermal power, pressurizer pressure and the highest operating loop average temperature ( $T_{avg}$ ) for Specification 2.1.1.
3. SHUTDOWN MARGIN and minimum boron concentration limits for MODES 1, 2, 3, and 4 for Specification 3.1.1.1.
4. SHUTDOWN MARGIN and minimum boron concentration limits for MODE 5 for Specification 3.1.1.2.
5. Moderator Temperature Coefficient BOL and EOL limits, and 300 ppm surveillance limit for Specification 3.1.1.3.
6. The minimum boron concentration for Modes 4, 5, and 6 for Specification 3.1.2.7.
7. Shutdown Rod Insertion limit for Specification 3.1.3.5.
8. Control Rod Bank Insertion limits for Specification 3.1.3.6.
9. AXIAL FLUX DIFFERENCE limits for Specification 3.2.1
10. Heat Flux Hot Channel Factor,  $F_Q^{RTP}$  and  $K(Z)$  for Specification 3.2.2.
11. Nuclear Enthalpy Rise Hot Channel Factor, and  $F_{\Delta H}^{RTP}$  for Specification 3.2.3.
12. Cycle dependent DNB-related parameters for reactor coolant system average temperature ( $T_{avg}$ ), and pressurizer pressure for Specification 3.2.5.
13. The boron concentration limits for MODES 1, 2 and 3 for Specification 3.5.1.1.
14. The boron concentration limits for MODES 1, 2, 3 and 4 for Specification 3.5.4.
15. The boron concentration limits for MODE 6 for Specification 3.9.1.



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SAFETY EVALUATION

BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 137

TO FACILITY OPERATING LICENSE NO. NPF-86

SEABROOK STATION, UNIT NO. 1

DOCKET NO. 50-443

1.0 INTRODUCTION

By application dated March 1, 2013, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13070A010), NextEra Energy Seabrook, LLC (NextEra, the licensee) requested changes to the technical specifications (TSs) for Seabrook Station, Unit 1 (Seabrook). The amendment deletes Seabrook TS Index and makes corrections to Seabrook TS 3.4.8, "Reactor Coolant System Specific Activity," and TS 6.8.1.6.a, "Core Operating Limits Report."

2.0 REGULATORY EVALUATION

The NRC'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. However, 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:

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* 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 Delete TS Index

The TS Index is not formally listed as being part of the TS. However, past submittals by NextEra have included the TS Index pages to supplement the TS changes. The U.S. Nuclear Regulatory Commission (NRC) staff agrees that the TS Index is similar to the TS Bases in that they provide information about the TS, but need not be considered part of the TS. Also, the NRC staff reviewed the remainder of 10 CFR 50.36 for any potential safety impacts due to the removal of the TS Index from all subsequent license amendment submittals and found no adverse safety issues with the removal of the TS Index.

NextEra stated that the TS Index will be maintained and revised in a similar manner as the TS Bases under the Administrative Controls section of the TSs. The licensee's current distribution process requires that each time the licensee receives an approved change to the TSs (including a change to an index page) from the NRC or makes a change to the TS Bases under the TS Bases Control program, a transmittal form with the accompanying changes is sent to all controlled copy holders, which includes offsite organizations that maintain controlled copies of the TSs. The NRC staff agrees that the licensee's distribution process is sufficient to keep all stakeholders informed of any changes to the TS Index. Since the TS Index does not include any technical information that is required by 10 CFR 50.36(a) to be reviewed by the NRC staff, the proposed change is found to be acceptable.

### 3.2 TS 3.4.8, Reactor Coolant System Specific Activity

Item 4.a in TS Table 4.4-3, "Reactor Coolant Specific Activity Sample and Analysis Program," currently specifies the following sample and analysis frequency for isotopic analysis for iodine:

Once per 4 hours, whenever the specific activity exceeds 1  $\mu\text{Ci}/\text{gram DOSE EQUIVALENT 1-131}$  or 100/E Ci/gram of gross radioactivity

The proposed change is to provide the correct units of activity for 100/E as indicated below:

Once per 4 hours, whenever the specific activity exceeds 1  $\mu\text{Ci}/\text{gram DOSE EQUIVALENT 1-131}$  or 100/E microCi/gram of gross radioactivity

The LCO in TS 3.4.8 limits reactor coolant system (RCS) specific activity to less than or equal to 100/E microCuries per gram of gross radioactivity. If the LCO is not met, the Action requires:

With the specific activity of the reactor coolant greater than 1 microCurie per gram DOSE EQUIVALENT 1-131 or greater than 100/E, microCuries per gram, perform the sampling and analysis requirements of Item 4.a) of Table 4.4-3 until the specific activity of the reactor coolant is restored to within its limits.

However, item 4.a) of Table 4.4-3 referred to in the Action does not identify the correct threshold at which sampling and analysis is required. The value specified in the table, 100/E Ci/gram of gross radioactivity, is much greater than the LCO limit and is inconsistent with the value of 100/E microCuries specified in the Action.

The intent of the Action is to require increased sampling when RCS activity exceeds the limit of 100/E microCuries per gram established in the LCO. Therefore, the proposed change revises the units in TS Table 4.4-3, item 4.a) from 100/E Curies per gram to 100/E- microCuries per gram. This change is of an administrative nature to correct an error that was inadvertently introduced into TS Table 4.4-3 at some time in the past.

The NRC staff concludes that this change is corrective in nature, and therefore is acceptable.

### 3.3 TS 6.8.1.6.a, Core Operating Limits Report (COLR)

TS 6.8 requires that core operating limits shall be established and documented in the COLR for certain parameters prior to each reload cycle. TS 6.8.1.6.a, "Core Operating Limits Report," item 2, requires operating limits for:

2. Cycle dependent maximum allowable combination of thermal power, pressurizer pressure and the highest operating loop average temperature ( $T_{avg}$ ) for Specifications 2.1.1 and 2.1.2.

The reference to TS 2.1.2, "Reactor Coolant System Pressure Safety Limit," is incorrect and is proposed to be removed as shown below.

2. Cycle dependent maximum allowable combination of thermal power, pressurizer pressure and the highest operating loop average temperature (Tavg) for Specifications 2.1.1 and ~~2.1.2~~.

Specification 2.1.2 (see below) is related to the Reactor Coolant System (RCS) pressure safety limit and is not a cycle dependent value.

#### 2.1.2 REACTOR COOLANT SYSTEM PRESSURE SL

In MODES 1, 2, 3, 4, and 5, the RCS pressure shall be maintained less than or equal to 2735 psig.

Specification 2.1.1, which requires the combination of THERMAL POWER, RCS highest loop average temperature, and pressurizer pressure shall not exceed the limits specified in the COLR, is the only TS section 2.1 requirement applicable to this COLR requirement. Therefore, this proposed change removes from TS 6.8.1.6.a.2, the reference to Specification 2.1.2. This change is administrative in nature, as it removes an incorrect reference to a TS that is not applicable.

The NRC staff concludes that this change is corrective in nature, and therefore is 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 relates to changes in recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). 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.

## 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: J. Lamb

Date: June 17, 2013

June 17, 2013

Mr. Kevin Walsh  
Site Vice President  
c/o Michael O'Keefe  
Seabrook Station  
NextEra Energy Seabrook, LLC  
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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

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- 2. Safety Evaluation

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