



July 20, 2012

SBK-L-12146
Docket No. 50-443

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852

Seabrook Station
NextEra Energy Seabrook License Renewal Application
Comments on NRC Safety Evaluation Report with Open Items and
Editorial Corrections to Supplement #25

References:

1. NextEra Energy Seabrook, LLC letter SBK-L-10077, "Seabrook Station Application for Renewed Operating License," May 25, 2010. (Accession Number ML101590099)
2. NRC Letter, "Safety Evaluation Report with Open Items Related to the License Renewal of Seabrook Station," dated June 8, 2012 (Accession Number ML12053A192)
3. NextEra Energy Seabrook, LLC letter SBK-L-12123, "NextEra Energy Seabrook License Renewal Application Supplement #25," June 19, 2012. (Accession Number ML12178A405)

In Reference 1, NextEra Energy Seabrook, LLC (NextEra) submitted an application for a renewed facility operating license for Seabrook Station Unit 1 in accordance with the Code of Federal Regulations, Title 10, Parts 50, 51, and 54.

Reference 2 contains the NRC "Safety Evaluation Report with Open Items Related to the License Renewal of Seabrook Station." Enclosure 1 provides NextEra's comments on this report.

Reference 3 contains Supplement #25, LRA changes associated with LR-ISG-2011-01, "Aging Management of Stainless Steel Structures and Components in Treated Borated Water." Enclosure 2 contains editorial corrections to the LRA changes contained in Supplement #25 to the LRA.

There are no new or revised regulatory commitments contained in this letter.

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NRR

If there are any questions or additional information is needed, please contact Mr. Richard R. Cliche, License Renewal Project Manager, at (603) 773-7003.

If you have any questions regarding this correspondence, please contact Mr. Michael O'Keefe, Licensing Manager, at (603) 773-7745.

Sincerely,
NextEra Energy Seabrook, LLC.

 for

Kevin T. Walsh
Site Vice President

Enclosures:

- Enclosure 1- NextEra Comments on NRC Safety Evaluation Report with Open Items
- Enclosure 2- Editorial Corrections to Information Contained in SBK-L-12123

cc:

W.M. Dean,	NRC Region I Administrator
J. G. Lamb,	NRC Project Manager, Project Directorate I-2
W. J. Raymond,	NRC Resident Inspector
A.D. Cunanan,	NRC Project Manager, License Renewal
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I, Thomas A. Vehec, Plant General Manager of NextEra Energy Seabrook, LLC hereby affirm that the information and statements contained within are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

Sworn and Subscribed

Before me this

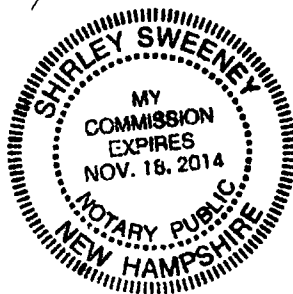
20 day of July, 2012

A handwritten signature of Thomas A. Vehec, written in black ink, positioned above a horizontal line.

Thomas A. Vehec
Plant General Manager

A handwritten signature of Shirley Sweeney, written in black ink, positioned above a horizontal line.

Notary Public



Enclosure 1 to SBK-L-12146

NextEra Comments on NRC Safety Evaluation Report with Open Items

Comments Regarding Seabrook Station License Renewal Safety Evaluation with Open Items

Section/Page	Comment	Suggested Resolution (Changes shown in bold and strikethrough.)
iii	Editorial	The unit is a 4-loop pressurized-water reactor (PWR) design. <i>Westinghouse General Electric Company</i> supplied the nuclear steam supply system. <i>Westinghouse United Engineers and Constructors</i> constructed the plant.
TABLE OF CONTENTS	Editorial	Add T of C page numbers (e.g. viii) and make sectional page number corrections.
2.1.4.7.2 /2-30	LRA	The staff noted that, after the scoping of electrical and I&C components was performed, the in-scope electrical components were categorized into electrical component types. Component types include similar electrical and I&C components with common characteristics. Component-level intended functions of the component types were identified—such as cable, connections, fuse holders, terminal blocks, high-voltage transmission conductor , connections and insulators, metal enclosed bus, switchyard bus, and connections.
2.3.2.3.1/2-45	LRA	<ul style="list-style-type: none"> • PID-1-CBS-LR20233 • PID-1-RC-LR20841 • PID-1-RH-LR20663 • PID-1-VSL-LR20776 • PID-1-CS-LR20722 • PID-1-RC-LR20844 • PID-1-CS-LR20725 • PID-1-SI-LR20446 PID-1-RH-LR20662 • <i>PID-1-SI-LR20446</i> <i>PID-1-SI-LR20449</i> • <i>PID-1-RH-LR20661</i> <i>PID-1-RH-LR20662</i> • PID-1-WLD-LR20221 • PID-1-SI-LR20450
2.3.3 /2-48	Editorial	The applicant described stated components such as instrumentation and components found on vendor drawings were already included within the scope of license renewal but not depicted on the LRA drawings.
2.3.3.6.2 /2-54	LRA	The containment enclosure cooling units maintain the first six areas (charging pump areas, SI pump areas, RHR equipment areas, containment spray pump and heat exchanger equipment areas, mechanical penetration area, containment enclosure ventilation equipment area, and H2 analyzer room and electrical room areas) at, or below the safety-related equipment's maximum design operating temperatures during normal operation and following a LOCA, loss of offsite power, high and moderate pipe breaks, SSE, and tornados.

Section/Page	Comment	Suggested Resolution (Changes shown in bold and strikethrough.)
		The H2 analyzer and electrical room supply fans maintain area 7 at or below the safety-related equipment's maximum design operating temperatures during normal operation and following a LOCA, loss of offsite power, high and moderate pipe breaks, and an SSE.
2.3.3.17.1/ 2-69	Editorial	The fuel oil system provides fuel to the two diesel driven fire pumps—1- FPP-FP-P -20A and 1- FPP-FP-P -20B. There are two fuel tanks, each dedicated to a diesel driven fire pump.
2.3.3.19.1/ 2-70	Editorial	In addition to providing heating to buildings not within the license renewal boundary, such as the administration building, turbine building and waste process building, the HW system provides the functions described below.
2.3.3.19.2 /2-72	SBK-L-11015	In its response dated February 3, 2011, the applicant clarified that the 1/2 in. vent lines are within the scope of license renewal for 10 CFR 54.4(a)(2). The applicant also described the 1/2 in. vent lines as 1/2 in. carbon steel piping with threaded plugs at the end. Based on its review, the staff finds the applicant's response to RAI 2.3.3.19-01 acceptable because the staff confirmed that the 1/2 in. vent lines are already included within the scope of license renewal under 10 CFR 54.4(a)(2). Therefore, the staff's concern described in RAI 2.3.3.19-01 is resolved.
2.3.3.26.1 /2-78	Editorial	The floor drains in this system are located outside any area with a potential for contamination. The plant floor drain system is located in those areas where automatic sprinkler and spray systems are installed.
2.3.3.31.1 /2-85	Editorial	The reactor makeup water system consists of one reactor makeup water storage tank, two redundant, full capacity reactor makeup water pumps, and associated piping, valves, instrumentation, and controls.
2.3.3.34.2 2-87	Editorial	In RAI 2.3.3.34-01, dated January 5, 2011, the staff noted on LRA drawing, PID-1-DR-LR20633, that the applicant depicts 6 in. lines that continue onto LRA drawing PID-1-SD- LR 20402. On LRA drawing PID-1-DR-LR20633, the applicant depicts 6 in. piping that enters the continuation flag marked "B" as being included within scope of license renewal under 10 CFR 54.4(a)(2). The applicant depicts the other 6 in. piping that enters the continuation flag, marked "C," as being excluded from scope of license renewal. However, the applicant depicts on the continuation LRA drawing, PID-1-SD- LR 20402, the 6 in. piping for "B" as being excluded from scope of license renewal, while the other 6 in. piping for "C" is shown as being included within scope of license renewal. The applicant was asked to clarify the scoping classifications of both 6 in. piping sections on both LRA drawings.
2.3.3.37.1 /2-90	Editorial	The four service water pumps take suction from a common bay in the service water pumphouse. Seawater flow is supplied to the service water pumphouse from the Atlantic Ocean due to the static head of the ocean above the elevation of the service water pump suctions pumps .

Section/Page	Comment	Suggested Resolution (Changes shown in bold and strikethrough.)	
2.3.3.45.2 /2-101	Editorial	<p>In RAI 2.32.3.45-02, dated January 5, 2011, the staff noted on LRA drawing PID-1-WLD-LR20218, at location H-5, that the applicant depicts a relief valve tailpipe connected to relief valve V83 as not being within scope of license renewal.</p> <p>.....</p> <p>Based on its review, the staff finds the applicant's response to RAI 2.32.3.45-02 acceptable because the applicant revised its position regarding the relief valve tailpipe to include it within the scope of license renewal under 10 CFR 54.4(a)(2) for spatial interaction. Therefore, the staff's concern described in RAI 2.32.3.45-02 is resolved.</p>	
T3.0-1/3-9, -10	SBK-L-10204	ASME Code Section XI, Subsection IWE Program	Consistent <i>with</i> <i>enhancements</i>
	LRA	Inaccessible Power Medium Voltage -Cables Not Subject to 10 CFR 50.49 EQ Requirements Program	
	Editorial	345 kV sulfur hexafluoride (SF6) Bus Program	A.2.1.1 2.2.1 B.2.2.1
3.0.3.1.2 /3-15	Editorial	The applicant further stated that during the April 2008 refueling outage, it replaced the faulty floating lid seal, and since this time, the specific conductivity has remained below the 0.1 siemens (S)/cm micro siemens (μS) limit.	
3.0.3.1.13 /3-41	SBK-L-10192	The applicant also stated that this program applies to sensitive instrumentation cable and connection circuits with low-level signals in the in-scope portions of the in-core neutron flux monitoring cable in the nuclear instrumentation system.	
3.0.3.2 /3-49	LRA	<ul style="list-style-type: none"> Inaccessible Medium Voltage Power Cables Not Subject to 10 CFR 50.49 EQ Requirements Program 	
3.0.3.2.3 /3-62	SBK-L-12084	With respect to corrective actions taken in response to this event, the applicant stated that a design change will be developed to replace the PVC-lined piping in 2012 with a corrosion-resistant, unlined material, and that the associated service water piping will be periodically inspected to verify adequate pipe wall thickness, until replaced .	
3.0.3.2.18 /3-133	SBK-L-10204	From 2000–2004, testing and inspection continued in the spent fuel pool, the spent fuel transfer canal, and the cask handling area to identify the source of the leak. In 2004 2002 , the applicant installed a nonmetallic liner in an attempt to stop the leakage.	
3.0.3.2.21 /3-155	Editorial	In addition, in order to support the 60-year TLAs associated with metal fatigue of the RCS pressure boundary, the applicant analyzed the projected CUF, incorporating	

Section/Page	Comment	Suggested Resolution (Changes shown in bold and strikethrough.)
		environmental effects for seven locations specified in NUREG/CR-6260, and found that the CUFs <i>when including environmental effects</i> for the surge line hot-leg nozzle and the charging nozzle will exceed 1.0 for 60 years of service.
3.0.3.3.1 /3-161		<ul style="list-style-type: none"> test the pressure-retaining capability of the piping system by an elevated pressure test which can detect current or near-term leaks
T3.0.3.3.1-1/3-162	Editorial	See page 7
3.0.3.3.2 /3-168	SBK-L-11173 (Annual Update)	<ul style="list-style-type: none"> The first path includes the SF6 bus from 345 kV Power Circuit Breakers 11 and 12 163 to the generator step-up transformer and to the unit auxiliary transformers via the isolated phase bus.
3.0.3.3.3 /3-173	LRA	The applicant stated that the standard coupons are placed in the spent fuel pool for monitoring of the aging effects and control coupons were supplied, in addition to standard coupons, to benchmark coupon initial conditions, to monitor possible <i>uncontrolled changes in Boral material that are unrelated to the spent fuel</i> pool conditions, and to demonstrate comparisons between different examination techniques and service contractors. The
3.0.3.3.4 / 3-179, 3-183	Editorial	<p><u>Page 3-179</u> SRP-LR GALL Report Table 3.1-1, IDs 31 and 34, and their subordinate items, are unique in the GALL Report in that they do not recommend that aging be managed through the use of an AMP contained in the SRP-LR GALL Report. Rather, they recommend specific aging management activities. For nickel-alloy materials addressed by these AMR items, the recommended aging management activities consist of the following:</p> <ul style="list-style-type: none"> • use of Inservice Inspection (IWB, IWC, and IWD) AMP • use of Water Chemistry AMP • compliance with all NRC Orders • commitment to implement applicable bulletins and generic letters • commitment to implement staff accepted industry guidelines <p>The approach taken by the SRP-LR GALL Report for these AMR items permits license renewal applicants to demonstrate consistency with the GALL Report by citing these aging management activities in their LRA AMR items. Alternatively, as has been done in this case, consistency with the GALL Report may be demonstrated for these items by developing an AMP and citing it for each applicable AMR item, which is consistent with SRP-LR Section A.1.2.3 and which addresses all of the recommended aging management activities listed above. The staff's review of this AMP is, therefore, designed to verify consistency with SRP-LR Section A.1.2.3 and to ensure that the aging management activities listed for nickel-alloy components included in SRP-LR GALL Report Table 3.1-1, IDs 31 and 34, are addressed by the AMP.</p> <p><u>Page 3-183</u> The staff finds this response acceptable because the applicant committed to the</p>

Section/Page	Comment	Suggested Resolution (Changes shown in bold and strikethrough.)
		implementation of applicable bulletins, generic letters, and staff-accepted industry guidelines, and is consistent with SRP-LR GALL Report Table 3.1-1, IDs 31 and 34, and their subordinate items. The staff's concern described in RAI B.2.2.3-1 is resolved.
3.0.3.3.5/3-183	Editorial	<u>Summary of Technical Information in the Application</u> . LRA Section B.2.1.7 describes the PWR Vessel Internals Program as plant-specific. The applicant stated that the PWR Vessel Internals Program is a new program which manages the aging effect of cracking due to irradiation-assisted stress corrosion cracking (IASCC), PWSCC, intergranular stress corrosion cracking (IGSCC), reduction in fracture toughness due to radiation and thermal embrittlement, void swelling, and loss of preload in RVI components.
3.4.2.1.7/3-413	Editorial	The staff agrees with the applicant's observation that SRP-LR Table 3.1-1, ID 84, applies specifically only to once through steam generators (Table IV.D2).
3.5.2.2.1 /3-469	Editorial	The concrete and the moisture barrier where the liner becomes embedded are monitored under the ASME Code Section XI, Subsection IWE IWL Program.
T3.6-1/3-489	LRA	Inaccessible Medium-Voltage Power Cables Not Subject to 10 CFR 50.49 EQ Requirements
3.6.2.1 /3-491	LRA	<ul style="list-style-type: none"> Inaccessible Power Medium-Voltage Cables Not Subject to 10 CFR 50.49 EQ Requirements Program
SECTION 4/1-86	Editorial	Change pages 1 through 86 to 4-1 through 4-86
4.2.2.2 /11	Editorial	The staff confirmed the applicant's projected USE values at the end of the period of extended operation for beltline and extended beltline materials by using Position 1.2 of RG 1.99, Revision 2. The staff's analysis verified that the lower shell plate B1808-2 was the limiting material with a projected USE value of 59 ft-lbs after 56 55 EFPY.
4.2.4.2 /14	This letter was a draft	During its review of the LAR, the staff, requested by letter dated April 25, 2012, that the applicant provide additional information related to whether the methodology used to develop the P-T limits is consistent with the requirements in 10 CFR 50, Appendix G.
4.3.2.2.1 /23	Editorial	The applicant dispositioned the "NRC Bulletin 88-11, Pressurizer Surge Line Thermal Stratification," related ASME Section III, Class 1, fatigue TLAAs (without environmental effects) for the PSL, PSN, and HSLN HLSN in accordance with 10 CFR 54.21(c)(1)(i), that the analyses remain valid for the period of extended operation.
TA-1/ A-5, -9, -10		See page 8

Table 3.0.3.3.1-1 Buried Piping Inspections (Page 3-162)

System	Code Class or Safety Related	Contains Hazardous Materials	Material	Committed Inspections	
Control Building Air Handling	Yes	No	Steel, with no cathodic protection	4/6/8 ²	4/6/8 ²
Fire Protection	No	No	Steel, with no cathodic protection	4/6/8 ²	
Diesel Generator	No	No	Steel, with no cathodic protection	4/6/8 ²	
Plant Floor Drains (not safety related)	No	No	Steel, with no cathodic protection	4/6/8 ²	
Condensate	No	No	Steel, with no cathodic protection	4/6/8 ²	
Feedwater	Yes	No	Steel, with no cathodic protection	4/6/8 ²	
Control Building Air Handling	Yes	No	Steel, with cathodic protection	1/NA/4 ²	1/NA/4 ²
Instrument Air	No	No	Steel, with cathodic protection	1/NA/4 ²	
Fire Protection	No	No	Steel, with cathodic protection	1/NA/4 ²	
Service Water	Yes	No	Steel, with cathodic protection	1/NA/4 ²	
Condensate	No	No	Stainless Steel	+	1
Diesel Generator – Cooling Water ¹	Yes	Yes	Stainless Steel	+	
Fire Protection	No	No	Fiberglass	1/NA/2 ²	

Table A-1. Seabrook Station License Renewal Commitments (Pages A-5, -9, -10)

				Reference
29) Lubricating Oil Analysis	Enhance the program to sample the oil for the Switchyard SF6 compressors and the Reactor Coolant pump oil collection tanks.	A.2.1.26	Prior to the period of extended operation.	SBK-L-11207, 11/2/2011
31) ASME Section XI Xi, Subsection IWL	Enhance procedure to include the definition of "Responsible Engineer".	A.2.1.28	Prior to the period of extended operation.	Editorial
50) ASME Section XI, Subsection IWE	Perform UT testing of the containment liner plate in the vicinity of the moisture barrier for loss of material.	A.2.1.27	No later than December 31, 2015 and repeated at intervals of no more than five refueling outages <i>Within the next two refueling outages, OR15 or OR16, and repeated at intervals of no more than five refueling outages</i>	SBK-L-11154, 8/11/2011
52) ASME Section XI, Subsection IWL	Implement measures to maintain the exterior surface of the Containment Structure, from elevation -30 feet to +20 feet, in a dewatered state.	A.2.1.28	By 2013 <i>By December 31, 2012</i>	SBK-L-12084, 4/26/2012
60) Buried Piping and Tanks Inspection	Implement the design change replacing the buried Auxiliary Boiler supply piping with a pipe-within-pipe configuration with leak indication <i>detection</i> capability.	A.2.1.22	Prior to entering the period of extended operation	SBK-L-12084, 4/26/2012
62) Water Chemistry	Enhance the program to include a statement that sampling frequencies are increased when chemistry action levels are exceeded.	A.2.1.2	Prior to entering the period of extended operation.	SBK-L-12084, 4/26/2012

Enclosure 2 to SBK-L-12146

Editorial Corrections to Information Contained in SBK-L-12123

a) On page 15 of 48 of in SBK-L12123/Enclosure 1, Item 58 is revised as follows:

58. In Table 3.2.2-3, on page 3.2-69, the 1st row is revised as follows:

Valve Body	Pressure Boundary	CASS	Treated Borated Water >140° F (Internal)	Valve Body <i>Cracking</i>	Water Chemistry Program One-Time Inspection Program	V.D1-31 (E-12)	3.2.1-48	A A
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b) On page 26 of 48 of in SBK-L12123/Enclosure 1, Item 99 is revised as follows:

99. In Table 3.3.2-3, on page 3.3-155, the 7th row is revised as follows:

Heat Exchanger Components (CS-E-7 <i>Channel Head</i> Tube Sheet)	Pressure Boundary	Stainless Steel	Treated Borated Water (Internal)	Loss of Material	Water Chemistry Program One-Time Inspection Program	VII.E1-17 (AP-79)	3.3.1-91	C C
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