



January 29, 2016

10 CFR 54

SBK-L-16003

Docket No. 50-443

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Seabrook Station
LRA Commitments Update
NextEra Energy Seabrook License Renewal Application

References:

1. NextEra Energy Seabrook, LLC letter SBK-L-10077, "Seabrook Station Application for Renewed Operating License," May 25, 2010. (Accession Number ML101590099)

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.

At the request of the Staff, NextEra has reviewed the current status of commitments and is providing updates as appropriate. Provided in Enclosure 1 are changes to the License Renewal Application (LRA) Table A.3 License Renewal Commitment List. To facilitate understanding, the changes are explained, and where appropriate, portions of the LRA are repeated with the change highlighted by strikethroughs for deleted text and bolded italics for inserted text.

Enclosure 2 provides the revised LRA Appendix A - Updated Final Safety Analysis Report Supplement Table A.3, License Renewal Commitment List. This letter contains four revised Commitments; 63, 65, 67 and 68.

If there are any questions or if additional information is needed, please contact Mr. Edward J. Carley, Engineering Supervisor - License Renewal, at (603) 773-7957.

If you have any questions regarding this correspondence, please contact Mr. Michael H. Ossing, Licensing Manager, at (603) 773-7512.

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NRR

I declare under penalty of perjury that the foregoing is true and correct.
Executed on January 28, 2016.

Sincerely,

NextEra Energy Seabrook, LLC



Dean Curtland
Site Vice President

Enclosure 1 - Changes to the LRA Associated with Revised and Completed Commitments.

Enclosure 2 - LRA Appendix A - Final Safety Report Supplement Table A.3, License Renewal
Commitment List Updated to Reflect Revised and Completed Commitments.

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Enclosure 1 to SBK-L-16003

**Seabrook Station License Renewal Application
Changes to the LRA Associated with Revised and Completed Commitments.**

Enclosure 1 to SBK-L-16003

Changes to the LRA Associated with Revised and Completed Commitments

Commitment #63 – Flow Induced Erosion

Commitment #63 previously had an LRA Appendix A - Final Safety Report Supplement Table A.3, UFSAR LOCATION of "N/A". The Staff presented a concern on whether or not the "N/A" designation is appropriate for this Commitment. Seabrook evaluated the concern, and modified the UFSAR LOCATION for this Commitment to appropriately reflect Seabrook's response from RAI 3.2.2.2.6-02. The new UFSAR LOCATION has been changed to A.2.1.2.

Background -

SRP-LR, Section 3.2.2.2.6 discusses stainless steel miniflow orifices in the high pressure safety injection pumps' minimum flow lines. The SRP-LR references LER 50-275 / 94-023 which documents operating experience where extended use of a centrifugal high pressure safety injection pump for charging caused erosion in the miniflow orifice and resulted in lower than required flow being available through the injection line.

The SRP-LR also states that a plant-specific AMP should be evaluated for erosion of the orifice due to extended use of the centrifugal HPSI pump for normal charging.

Seabrook Station addressed the evaluation criteria of the SRP-LR, by stating that the Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components Program is adequate to manage the aging effect in these components.

RAI 3.2.2.2.6-01 –

Requested Seabrook to explain whether opportunities for inspection of the charging pump bypass orifices are routinely available. The staff also asked Seabrook to justify how the Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components Program will be capable of detecting degradation in these components before failure of their intended function if routine opportunities for inspection are not available. (Reference 1)

RAI 3.2.2.2.6-01 Response -

Seabrook's response stated that the CVCS high-pressure pump minimum flow orifices are welded in place and are not routinely available for internal visual inspection. The applicant further stated that the minimum flow orifices have multiple internal plates with multiple orifice holes and that these design features of the minimum flow orifices make volumetric examination for dimensional comparison impractical. Seabrook proposed to manage loss of material due to erosion in minimum flow orifices with the Water Chemistry Program. Seabrook also stated that its Technical Specifications require quarterly in service testing of the CVCS high-pressure pumps and that this testing can provide early indication of orifice degradation. (Reference 2)

RAI 3.2.2.2.6-02 –

The staff asked Seabrook to include in the AMP(s) for these components an inspection or testing activity to confirm effectiveness of the Water Chemistry Program to mitigate or prevent unacceptable loss of material due to erosion in the stainless steel CVCS high-pressure pump minimum flow orifices. (Reference 3)

RAI 3.2.2.2.6-02 Response-

Seabrook stated that it will credit its high-pressure SI pump (CVCS charging pump) TS Performance Monitoring Program to detect loss of material due to erosion in the minimum flow orifices and to confirm effectiveness of the Water Chemistry Program for this component. (Reference 4)

SER 3.2.2.2.6 – Loss of Material Due to Erosion

“The staff noted that SRP-LR Appendix A, Section A.1.1, states that a Performance Monitoring Program, which tests the ability of a structure or component to perform its intended function, is an acceptable method for aging management. The staff also noted that the applicant will use its existing quarterly TS Performance Monitoring Program for the CVCS high-pressure SI pump (charging pump) to confirm effectiveness of the Water Chemistry Program in mitigating or preventing unacceptable loss of material due to erosion in the stainless steel minimum flow orifices exposed to treated borated water. The staff further noted that the applicant added a new commitment (Commitment No. 63) to ensure that quarterly CVCS charging pump testing is continued during the period of extended operation. The staff finds that the applicant has met the further evaluation criteria and that the applicant’s proposal to manage aging using the Water Chemistry Program and performance monitoring of the CVCS charging pump is acceptable.” (Reference 5)

As a result of the information presented above, the UFSAR Location for Commitment #63 has been modified from N/A to A.2.1.2, as shown below.

63	Flow Induced Erosion	Ensure that the quarterly CVCS Charging Pump testing is continued during the PEO. Additionally, add a precaution to the test procedure to state that an increase in the CVCS Charging Pump mini flow above the acceptance criteria may be indicative of erosion of the mini flow orifice as described in LER 50-275/94-023.	N/A A.2.1.2	Prior to the period of extended operation.
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References

1. NRC Letter “Request for Additional Information Related to the Review of the Seabrook Station License Renewal Application (TAC NO. ME4028) – Aging Management Review – Set 6,” January 5, 2011 (Accession Number ML103420585)
2. NextEra Energy Seabrook, LLC letter SBK-L-11015, “Seabrook Station Response to Request for Additional Information, NextEra Energy Seabrook License Renewal Application Sets 6,7 and 8,” February 3, 2011. (Accession Number ML110380081)

3. NRC Letter “Request for Additional Information Related to the Review of the Seabrook Station License Renewal Application (TAC NO. ME4028) – Request for Additional Information Set 11,” March 7, 2011. (Accession Number ML110550920)
4. NextEra Energy Seabrook, LLC letter SBK-L-11062, “Seabrook Station Response to Request for Additional Information, NextEra Energy Seabrook License Renewal Application, Request for Additional Information – Set 11,” April 5, 2011. (Accession Number ML110960647)
5. NRC Letter “Safety Evaluation Report with Open Items Related to the License Renewal of Seabrook Station,” June 8, 2012. (Accession Number ML12053A192)

Commitment #65 – Flux Thimble Tubes

This commitment was to complete design changes that prevent the insertion of a moveable detector into the bottom mounted instrument tubes. To date 38 of 58 Thimble Tubes have been replaced with new detectors that do not have a hollow annulus to accept a Moveable In core Detector (MID). The remaining 20 are scheduled for OR18 replacement in the spring of 2017.

In the current configuration, the number of available MID’s does not meet the requirements of the Technical Requirement and would not be able to be used for the designed flux mapping purpose, even if the MID’s equipment (hardware and software) were usable. The new, solid design does not allow for a Moveable In core Detector in these locations.

As the modification to replace the remaining 20 detectors in the spring of 2017 is in progress, Commitment #65 has been changed to In Progress.

65.	Flux Thimble Tube	Implement measures to ensure that the movable in core detectors are not returned to service during the period of extended operation.	N/A	Prior to the period of extended operation. – <i>In Progress</i>
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Commitment #67 – Structures Monitoring Program

Commitment #67 has been completed and the appropriate section within Table A.3 has been updated as shown below. Removal of the core and exposure of the rebar showed no evidence of damage from boric acid exposure. The core did show early indications of ASR progression.

67.	Structures Monitoring Program	Perform one shallow core bore in an area that was continuously wetted from borated water to be examined for concrete degradation and also expose rebar to detect any degradation such as loss of material. The removed core will also be subjected to petrographic examination for concrete degradation due to ASR per ASTM Standard Practice C856.	A.2.1.31	No later than December 31, 2015. <i>Complete</i>
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Commitment #68 – Structures Monitoring Program

NextEra has established a routine preventative maintenance activity to perform quarterly leak off collections and chemical testing as of 01/29/2014. Due to meeting the intent of Commitment #68, the status of this commitment has been updated to “Complete”.

68.	Structures Monitoring Program	Perform sampling at the leak off collection points for chlorides, sulfates, pH and iron once every three months.	A.2.1.31	Quarterly Preventive Maintenance Activity Implemented <i>Complete</i>
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Enclosure 2 to SBK-L-16003

**LRA Appendix A - Final Safety Report Supplement Table A.3, License Renewal
Commitment List Updated to Reflect Revised and Completed Commitments**

A.3 LICENSE RENEWAL COMMITMENT LIST

No.	PROGRAM or TOPIC	COMMITMENT	UFSAR LOCATION	SCHEDULE
1.	PWR Vessel Internals	Provide confirmation and acceptability of the implementation of MRP-227-A by addressing the plant-specific Applicant/Licensee Action Items outlined in section 4.2 of the NRC SER.	A.2.1.7	Complete
2.	Closed-Cycle Cooling Water	Enhance the program to include visual inspection for cracking, loss of material and fouling when the in-scope systems are opened for maintenance.	A.2.1.12	Prior to the period of extended operation.
3.	Inspection of Overhead Heavy Load and Light Load (Related to Refueling) Handling Systems	Enhance the program to monitor general corrosion on the crane and trolley structural components and the effects of wear on the rails in the rail system.	A.2.1.13	Prior to the period of extended operation.
4.	Inspection of Overhead Heavy Load and Light Load (Related to Refueling) Handling Systems	Enhance the program to list additional cranes for monitoring.	A.2.1.13	Prior to the period of extended operation.
5.	Compressed Air Monitoring	Enhance the program to include an annual air quality test requirement for the Diesel Generator compressed air sub system.	A.2.1.14	Prior to the period of extended operation.
6.	Fire Protection	Enhance the program to perform visual inspection of penetration seals by a fire protection qualified inspector.	A.2.1.15	Prior to the period of extended operation.
7.	Fire Protection	Enhance the program to add inspection requirements such as spalling, and loss of material caused by freeze-thaw, chemical attack, and reaction with aggregates by qualified inspector.	A.2.1.15	Prior to the period of extended operation.

8.	Fire Protection	Enhance the program to include the performance of visual inspection of fire-rated doors by a fire protection qualified inspector.	A.2.1.15	Prior to the period of extended operation.
9.	Fire Water System	Enhance the program to include NFPA 25 (2011 Edition) guidance for "where sprinklers have been in place for 50 years, they shall be replaced or representative samples from one or more sample areas shall be submitted to a recognized testing laboratory for field service testing".	A.2.1.16	Prior to the period of extended operation.
10.	Fire Water System	Enhance the program to include the performance of periodic flow testing of the fire water system in accordance with the guidance of NFPA 25 (2011 Edition).	A.2.1.16	Prior to the period of extended operation.
11.	Fire Water System	Enhance the program to include the performance of periodic visual or volumetric inspection of the internal surface of the fire protection system upon each entry to the system for routine or corrective maintenance to evaluate wall thickness and inner diameter of the fire protection piping ensuring that corrosion product buildup will not result in flow blockage due to fouling. Where surface irregularities are detected, follow-up volumetric examinations are performed. These inspections will be documented and trended to determine if a representative number of inspections have been performed prior to the period of extended operation. If a representative number of inspections have not been performed prior to the period of extended operation, focused inspections will be conducted. These inspections will commence during the ten year period prior to the period of extended operation and continue through the period of extended operation	A.2.1.16	Within ten years prior to the period of extended operation.

12.	Aboveground Steel Tanks	Enhance the program to include 1) In-scope outdoor tanks, except fire water storage tanks, constructed on soil or concrete, 2) Indoor large volume storage tanks (greater than 100,000 gallons) designed to near-atmospheric internal pressures, sit on concrete or soil, and exposed internally to water, 3) Visual, surface, and volumetric examinations of the outside and inside surfaces for managing the aging effects of loss of material and cracking, 4) External visual examinations to monitor degradation of the protective paint or coating, and 5) Inspection of sealant and caulking for degradation by performing visual and tactile examination (manual manipulation) consisting of pressing on the sealant or caulking to detect a reduction in the resiliency and pliability.	A.2.1.17	Within 10 years prior to the period of extended operation.
13.	Fire Water System	Enhance the program to perform exterior inspection of the fire water storage tanks annually for signs of degradation and include an ultrasonic inspection and evaluation of the internal bottom surface of the two Fire Protection Water Storage Tanks per the guidance provided in NFPA 25 (2011 Edition).	A.2.1.16	Within ten years prior to the period of extended operation.
14.	Fuel Oil Chemistry	Enhance program to add requirements to 1) sample and analyze new fuel deliveries for biodiesel prior to offloading to the Auxiliary Boiler fuel oil storage tank and 2) periodically sample stored fuel in the Auxiliary Boiler fuel oil storage tank.	A.2.1.18	Prior to the period of extended operation.
15.	Fuel Oil Chemistry	Enhance the program to add requirements to check for the presence of water in the Auxiliary Boiler fuel oil storage tank at least once per quarter and to remove water as necessary.	A.2.1.18	Prior to the period of extended operation.

16.	Fuel Oil Chemistry	Enhance the program to require draining, cleaning and inspection of the diesel fire pump fuel oil day tanks on a frequency of at least once every ten years.	A.2.1.18	Prior to the period of extended operation.
17.	Fuel Oil Chemistry	Enhance the program to require ultrasonic thickness measurement of the tank bottom during the 10-year draining, cleaning and inspection of the Diesel Generator fuel oil storage tanks, Diesel Generator fuel oil day tanks, diesel fire pump fuel oil day tanks and auxiliary boiler fuel oil storage tank.	A.2.1.18	Prior to the period of extended operation.
18.	Reactor Vessel Surveillance	Enhance the program to specify that all pulled and tested capsules, unless discarded before August 31, 2000, are placed in storage.	A.2.1.19	Prior to the period of extended operation.
19.	Reactor Vessel Surveillance	Enhance the program to specify that if plant operations exceed the limitations or bounds defined by the Reactor Vessel Surveillance Program, such as operating at a lower cold leg temperature or higher fluence, the impact of plant operation changes on the extent of Reactor Vessel embrittlement will be evaluated and the NRC will be notified.	A.2.1.19	Prior to the period of extended operation.
20.	Reactor Vessel Surveillance	Enhance the program as necessary to ensure the appropriate withdrawal schedule for capsules remaining in the vessel such that one capsule will be withdrawn at an outage in which the capsule receives a neutron fluence that meets the schedule requirements of 10 CFR 50 Appendix H and ASTM E185-82 and that bounds the 60-year fluence, and the remaining capsule(s) will be removed from the vessel unless determined to provide meaningful metallurgical data.	A.2.1.19	Prior to the period of extended operation.
21.	Reactor Vessel Surveillance	Enhance the program to ensure that any capsule removed, without the intent to test it, is stored in a manner which maintains it in a condition which would permit its future use, including during the period of extended operation.	A.2.1.19	Prior to the period of extended operation.
22.	One-Time Inspection	Implement the One Time Inspection Program.	A.2.1.20	Within ten years prior to the period of extended operation.

23.	Selective Leaching of Materials	Implement the Selective Leaching of Materials Program. The program will include a one-time inspection of selected components where selective leaching has not been identified and periodic inspections of selected components where selective leaching has been identified.	A.2.1.21	Within five years prior to the period of extended operation.
24.	Buried Piping And Tanks Inspection	Implement the Buried Piping And Tanks Inspection Program.	A.2.1.22	Within ten years prior to the period of extended operation
25.	One-Time Inspection of ASME Code Class 1 Small Bore-Piping	Implement the One-Time Inspection of ASME Code Class 1 Small Bore-Piping Program.	A.2.1.23	Within ten years prior to the period of extended operation.
26.	External Surfaces Monitoring	Enhance the program to specifically address the scope of the program, relevant degradation mechanisms and effects of interest, the refueling outage inspection frequency, the training requirements for inspectors and the required periodic reviews to determine program effectiveness.	A.2.1.24	Prior to the period of extended operation.
27.	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components	Implement the Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components Program.	A.2.1.25	Prior to the period of extended operation.
28.	Lubricating Oil Analysis	Enhance the program to add required equipment, lube oil analysis required, sampling frequency, and periodic oil changes.	A.2.1.26	Prior to the period of extended operation.
29.	Lubricating Oil Analysis	Enhance the program to sample the oil for the Reactor Coolant pump oil collection tanks.	A.2.1.26	Prior to the period of extended operation.
30.	Lubricating Oil Analysis	Enhance the program to require the performance of a one-time ultrasonic thickness measurement of the lower portion of the Reactor Coolant pump oil collection tanks prior to the period of extended operation.	A.2.1.26	Prior to the period of extended operation.
31.	ASME Section XI, Subsection IWL	Enhance procedure to include the definition of "Responsible Engineer".	A.2.1.28	Prior to the period of extended operation.

32.	Structures Monitoring Program	Enhance procedure to add the aging effects, additional locations, inspection frequency and ultrasonic test requirements.	A.2.1.31	Prior to the period of extended operation.
33.	Structures Monitoring Program	Enhance procedure to include inspection of opportunity when planning excavation work that would expose inaccessible concrete.	A.2.1.31	Prior to the period of extended operation.
34.	Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements	Implement the Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements program.	A.2.1.32	Prior to the period of extended operation.
35.	Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Used in Instrumentation Circuits	Implement the Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Used in Instrumentation Circuits program.	A.2.1.33	Prior to the period of extended operation.
36.	Inaccessible Power Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements	Implement the Inaccessible Power Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements program.	A.2.1.34	Prior to the period of extended operation.
37.	Metal Enclosed Bus	Implement the Metal Enclosed Bus program.	A.2.1.35	Prior to the period of extended operation.
38.	Fuse Holders	Implement the Fuse Holders program.	A.2.1.36	Prior to the period of extended operation.

39.	Electrical Cable Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements	Implement the Electrical Cable Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements program.	A.2.1.37	Prior to the period of extended operation.
40.	345 KV SF6 Bus	Implement the 345 KV SF6 Bus program.	A.2.2.1	Prior to the period of extended operation.
41.	Metal Fatigue of Reactor Coolant Pressure Boundary	Enhance the program to include additional transients beyond those defined in the Technical Specifications and UFSAR.	A.2.3.1	Prior to the period of extended operation.
42.	Metal Fatigue of Reactor Coolant Pressure Boundary	Enhance the program to implement a software program, to count transients to monitor cumulative usage on selected components.	A.2.3.1	Prior to the period of extended operation.
43.	Pressure –Temperature Limits, including Low Temperature Overpressure Protection Limits	Seabrook Station will submit updates to the P-T curves and LTOP limits to the NRC at the appropriate time to comply with 10 CFR 50 Appendix G.	A.2.4.1.4	The updated analyses will be submitted at the appropriate time to comply with 10 CFR 50 Appendix G, Fracture Toughness Requirements.

<p>44.</p>	<p>Environmentally-Assisted Fatigue Analyses (TLAA)</p>	<p>NextEra Seabrook will perform a review of design basis ASME Class 1 component fatigue evaluations to determine whether the NUREG/CR-6260-based components that have been evaluated for the effects of the reactor coolant environment on fatigue usage are the limiting components for the Seabrook plant configuration. If more limiting components are identified, the most limiting component will be evaluated for the effects of the reactor coolant environment on fatigue usage. If the limiting location identified consists of nickel alloy, the environmentally-assisted fatigue calculation for nickel alloy will be performed using the rules of NUREG/CR-6909.</p> <p>(1) Consistent with the Metal Fatigue of Reactor Coolant Pressure Boundary Program Seabrook Station will update the fatigue usage calculations using refined fatigue analyses, if necessary, to determine acceptable CUFs (i.e., less than 1.0) when accounting for the effects of the reactor water environment. This includes applying the appropriate Fen factors to valid CUFs determined from an existing fatigue analysis valid for the period of extended operation or from an analysis using an NRC-approved version of the ASME code or NRC-approved alternative (e.g., NRC-approved code case).</p> <p>(2) If acceptable CUFs cannot be demonstrated for all the selected locations, then additional plant-specific locations will be evaluated. For the additional plant-specific locations, if CUF, including environmental effects is greater than 1.0, then Corrective Actions will be initiated, in accordance with the Metal Fatigue of Reactor Coolant Pressure Boundary Program, B.2.3.1. Corrective Actions will include inspection, repair, or replacement of the affected locations before exceeding a CUF of 1.0 or the effects of fatigue will be managed by an inspection program that has been reviewed and approved by the NRC (e.g., periodic non-destructive examination of the affected locations at inspection intervals to be determined by a method accepted by the NRC).</p>	<p>A.2.4.2.3</p>	<p>At least two years prior to the period of extended operation.</p>
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45.	Number Not Used			
46.	Protective Coating Monitoring and Maintenance	Enhance the program by designating and qualifying an Inspector Coordinator and an Inspection Results Evaluator.	A.2.1.38	Prior to the period of extended operation.
47.	Protective Coating Monitoring and Maintenance	Enhance the program by including, "Instruments and Equipment needed for inspection may include, but not be limited to, flashlight, spotlights, marker pen, mirror, measuring tape, magnifier, binoculars, camera with or without wide angle lens, and self sealing polyethylene sample bags."	A.2.1.38	Prior to the period of extended operation.
48.	Protective Coating Monitoring and Maintenance	Enhance the program to include a review of the previous two monitoring reports.	A.2.1.38	Prior to the period of extended operation.
49.	Protective Coating Monitoring and Maintenance	Enhance the program to require that the inspection report is to be evaluated by the responsible evaluation personnel, who is to prepare a summary of findings and recommendations for future surveillance or repair.	A.2.1.38	Prior to the period of extended operation.
50.	ASME Section XI, Subsection IWE	Perform UT of the accessible areas of the containment liner plate in the vicinity of the moisture barrier for loss of material. Perform opportunistic UT of inaccessible areas.	A.2.1.27	Baseline inspections were completed during OR16. Repeat containment liner UT thickness examinations at intervals of no more than five (5) refueling outages.
51.	Number Not Used			
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	Complete
53.	Reactor Head Closure Studs	Replace the spare reactor head closure stud(s) manufactured from the bar that has a yield strength > 150 ksi with ones that do not exceed 150 ksi.	A.2.1.3	Prior to the period of extended operation.

54.	Steam Generator Tube Integrity	<p>NextEra will address the potential for cracking of the primary to secondary pressure boundary due to PWSCC of tube-to-tubesheet welds using one of the following two options:</p> <p>1) Perform a one-time inspection of a representative sample of tube-to-tubesheet welds in all steam generators to determine if PWSCC cracking is present and, if cracking is identified, resolve the condition through engineering evaluation justifying continued operation or repair the condition, as appropriate, and establish an ongoing monitoring program to perform routine tube-to-tubesheet weld inspections for the remaining life of the steam generators, or</p> <p>2) Perform an analytical evaluation showing that the structural integrity of the steam generator tube-to-tubesheet interface is adequately maintaining the pressure boundary in the presence of tube-to-tubesheet weld cracking, or redefining the pressure boundary in which the tube-to-tubesheet weld is no longer included and, therefore, is not required for reactor coolant pressure boundary function. The redefinition of the reactor coolant pressure boundary must be approved by the NRC as part of a license amendment request.</p>	A.2.1.10	Complete
55.	Steam Generator Tube Integrity	Seabrook will perform an inspection of each steam generator to assess the condition of the divider plate assembly.	A.2.1.10	Within five years prior to the period of extended operation.
56.	Closed-Cycle Cooling Water System	Revise the station program documents to reflect the EPRI Guideline operating ranges and Action Level values for hydrazine and sulfates.	A.2.1.12	Prior to the period of extended operation.
57.	Closed-Cycle Cooling Water System	Revise the station program documents to reflect the EPRI Guideline operating ranges and Action Level values for Diesel Generator Cooling Water Jacket pH.	A.2.1.12	Prior to the period of extended operation.
58.	Fuel Oil Chemistry	Update Technical Requirement Program 5.1, (Diesel Fuel Oil Testing Program) ASTM standards to ASTM D2709-96 and ASTM D4057-95 required by the GALL XLM30 Rev 1	A.2.1.18	Prior to the period of extended operation.

59.	Nickel Alloy Nozzles and Penetrations	The Nickel Alloy Aging Nozzles and Penetrations program will implement applicable Bulletins, Generic Letters, and staff accepted industry guidelines.	A.2.2.3	Prior to the period of extended operation.
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 detection capability.	A.2.1.22	Prior to the period of extended operation.
61.	Compressed Air Monitoring Program	Replace the flexible hoses associated with the Diesel Generator air compressors on a frequency of every 10 years.	A.2.1.14	Within ten years prior to the period of extended operation.
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 the period of extended operation.
63.	Flow Induced Erosion	Ensure that the quarterly CVCS Charging Pump testing is continued during the PEO. Additionally, add a precaution to the test procedure to state that an increase in the CVCS Charging Pump mini flow above the acceptance criteria may be indicative of erosion of the mini flow orifice as described in LER 50-275/94-023.	N/A A.2.1.2	Prior to the period of extended operation.
64.	Buried Piping and Tanks Inspection	Soil analysis shall be performed prior to entering the period of extended operation to determine the corrosivity of the soil in the vicinity of non-cathodically protected steel pipe within the scope of this program. If the initial analysis shows the soil to be non-corrosive, this analysis will be re-performed every ten years thereafter.	A.2.1.22	Prior to the period of extended operation.
65.	Flux Thimble Tube	Implement measures to ensure that the movable incore detectors are not returned to service during the period of extended operation.	N/A	Prior to the period of extended operation. – <i>In Progress</i>
66.	Number Not Used			

67.	Structures Monitoring Program	Perform one shallow core bore in an area that was continuously wetted from borated water to be examined for concrete degradation and also expose rebar to detect any degradation such as loss of material. The removed core will also be subjected to petrographic examination for concrete degradation due to ASR per ASTM Standard Practice C856.	A.2.1.31	No later than December 31, 2015. <i>Complete</i>
68.	Structures Monitoring Program	Perform sampling at the leak off collection points for chlorides, sulfates, pH and iron once every three months.	A.2.1.31	Quarterly Preventive Maintenance Activity Implemented <i>Complete</i>
69.	Open-Cycle Cooling Water System	Replace the Diesel Generator Heat Exchanger Plastisol PVC lined Service Water piping with piping fabricated from AL6XN material.	A.2.1.11	Complete
70.	Closed-Cycle Cooling Water System	Inspect the piping downstream of CC-V-444 and CC-V-446 to determine whether the loss of material due to cavitation induced erosion has been eliminated or whether this remains an issue in the primary component cooling water system.	A.2.1.12	Within ten years prior to the period of extended operation.
71.	Alkali-Silica Reaction (ASR) Monitoring Program	Implement the Alkali-Silica Reaction (ASR) Monitoring Program. Testing will be performed to confirm that parameters being monitored and acceptance criteria used are appropriate to manage the effects of ASR.	A.2.1.31A	Prior to the period of extended operation.
72.	Flow-Accelerated Corrosion	Enhance the program to include management of wall thinning caused by mechanisms other than FAC.	A.2.1.8	Prior to the period of extended operation.
73.	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components	Enhance the program to include performance of focused examinations to provide a representative sample of 20%, or a maximum of 25, of each identified material, environment, and aging effect combinations during each 10 year period in the period of extended operation.	A.2.1.25	Prior to the period of extended operation.

74.	Fire Water System	<p>Enhance the program to perform sprinkler inspections annually per the guidance provided in NFPA 25 (2011 Edition). Inspection will ensure that sprinklers are free of corrosion, foreign materials, paint, and physical damage and installed in the proper orientation (e.g., upright, pendant, or sidewall). Any sprinkler that is painted, corroded, damaged, loaded, or in the improper orientation, and any glass bulb sprinkler where the bulb has emptied, will be evaluated for replacement.</p>	A.2.1.16	Prior to the period of extended operation.
75.	Fire Water System	<p>Enhance the program to a) conduct an inspection of piping and branch line conditions every 5 years by opening a flushing connection at the end of one main and by removing a sprinkler toward the end of one branch line for the purpose of inspecting for the presence of foreign organic and inorganic material per the guidance provided in NFPA 25 (2011 Edition) and b) If the presence of sufficient foreign organic or inorganic material to obstruct pipe or sprinklers is detected during pipe inspections, the material will be removed and its source is determined and corrected.</p> <p>In buildings having multiple wet pipe systems, every other system shall have an internal inspection of piping every 5 years as described in NFPA 25 (2011 Edition), Section 14.2.2.</p>	A.2.1.16	Prior to the period of extended operation.
76.	Fire Water System	<p>Enhance the Program to conduct the following activities annually per the guidance provided in NFPA 25 (2011 Edition).</p> <ul style="list-style-type: none"> • main drain tests • deluge valve trip tests • fire water storage tank exterior surface inspections 	A.2.1.16	Prior to the period of extended operation.

77.	Fire Water System	<p>The Fire Water System Program will be enhanced to include the following requirements related to the main drain testing per the guidance provided in NFPA 25 (2011 Edition).</p> <ul style="list-style-type: none"> • The requirement that if there is a 10 percent reduction in full flow pressure when compared to the original acceptance tests or previously performed tests, the cause of the reduction shall be identified and corrected if necessary. • Recording the time taken for the supply water pressure to return to the original static (nonflowing) pressure. 	A.2.1.16	Prior to the period of extended operation.
78.	External Surfaces Monitoring	<p>Enhance the program to include periodic inspections of in-scope insulated components for possible corrosion under insulation. A sample of outdoor component surfaces that are insulated and a sample of indoor insulated components exposed to condensation (due to the in-scope component being operated below the dew point), will be periodically inspected every 10 years during the period of extended operation.</p>	A.2.1.24	Prior to the period of extended operation.
79.	Open-Cycle Cooling Water System	<p>Enhance the program to include visual inspection of internal coatings/linings for loss of coating integrity.</p>	A.2.1.11	Within 10 years prior to the period of extended operation.
80.	Fire Water System	<p>Enhance the program to include visual inspection of internal coatings/linings for loss of coating integrity.</p>	A.2.1.16	Within 10 years prior to the period of extended operation.
81.	Fuel Oil Chemistry	<p>Enhance the program to include visual inspection of internal coatings/linings for loss of coating integrity.</p>	A.2.1.18	Within 10 years prior to the period of extended operation.
82.	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components	<p>Enhance the program to include visual inspection of internal coatings/linings for loss of coating integrity.</p>	A.2.1.25	Within 10 years prior to the period of extended operation.

83.	Alkali-Silica Reaction Monitoring	Enhance the ASR AMP to install extensometers in Tier 3 areas of structures to monitor expansion due to alkali-silica reaction in the out-of-plane direction. Monitoring expansion in the out-of-plane direction will commence upon installation of the extensometers in 2016 and continue through the period of extended operation.	A.2.1.31A	December 31,2016.
84.	ASME Section XI, Subsection IWL	Evaluate the acceptability of inaccessible areas for structures within the scope of ASME Section XI, Subsection IWL Program.	A.2.1.28	Prior to the period of extended operation.
85.	Fire Water System	Enhance the program to perform additional tests and inspections on the Fire Water Storage Tanks as specified in Section 9.2.7 of NFPA 25 (2011 Edition) in the event that it is required by Section 9.2.6.4, which states "Steel tanks exhibiting signs of interior pitting, corrosion, or failure of coating shall be tested in accordance with 9.2.7."	A.2.1.16	Prior to the period of extended operation.
86.	Fire Water System	Enhance the program to include disassembly, inspection, and cleaning of the mainline strainers every 5 years.	A.2.1.16	Prior to the period of extended operation.
87.	Fire Water System	Increase the frequency of the Open Head Spray Nozzle Air Flow Test from every 3 years to every refueling outage to be consistent with LR-ISG-2012-02, AMP XI.M27, Table 4a.	A.2.1.16	Prior to the period of extended operation.
88.	Fire Water System	Enhance the program to include verification that a) the drain holes associated with the transformer deluge system are draining to ensure complete drainage of the system after each test, b) the deluge system drains and associated piping are configured to completely drain the piping, and c) normally-dry piping that could have been wetted by inadvertent system actuations or those that occur after a fire are restored to a dry state as part of the suppression system restoration.	A.2.1.16	Within five years prior to the period of extended operation.

89.	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components	Incorporate Coating Service Level III requirements into the RCP Motor Refurbishment Specification for the internal painting of the motor upper bearing coolers and motor air coolers. All four RCP motors will be refurbished and replaced using the Coating Service Level III requirements prior to entering the period of extended operation.	A.2.1.25	Prior to the period of extended operation.
90.	PWR Vessel Internals	Implement the PWR Vessel Internals Program. The program will be implemented in accordance with MRP-227-A (Pressurized Water Reactor Internals Inspection and Evaluation Guidelines) and NEI 03-08 (Guideline for the Management of Materials Issues).	A.2.1.7	Prior to the period of extended operation
91	Alkali-Silica Reaction Monitoring	<p>Enhance the ASR Aging Management Program to require structural evaluations be performed on buildings and components affected by deformation as necessary to ensure that the structural function is maintained. Evaluations of structures will validate structural performance against the design basis, and may use results from the large-scale test programs, as appropriate. Evaluations for structural deformation will also consider the impact to functionality of affected systems and components (e.g., conduit expansion joints). NextEra will evaluate the specific circumstances against the design basis of the affected system or component.</p> <p>Enhance the ASR AMP to include additional parameters to be monitored based on the results of the CEB Root Cause, Structural Evaluation and walk downs. Additional parameters monitored will include: alignment of ducting, conduit, and piping; seal integrity; laser target measurements; key seismic gap measurements; and additional instrumentation.</p>	A.2.1.31A	March 15, 2020