NEXTera® ENERGY SEABROOK

December 11, 2014
SBK-L-14184
Docket No. 50-443
10 CFR 50.90

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

Seabrook Station

Supplement to NextEra Energy Seabrook, LLC's LAR 13-05, LAR 14-01, LAR 14-02 and LAR 14-03 in Response to Issuance of Amendment 141, Risk-Informed Justifications for the Relocation of Specific Surveillance Frequency Requirements to the Seabrook Surveillance Frequency Control Program (SFCP)

References:

1. NextEra Energy Seabrook, LLC License Amendment Request (LAR) 13-05, Fixed Incore Detector System Analysis Methodology, dated August 8, 2013 (ML13260A160)
2. NextEra Energy Seabrook, LLC License Amendment Request (LAR) 14-01, Application to Revise Technical Specifications to Adopt Technical Specifications Task Force (TSTF) Traveler -523, "Generic Letter 2008-01, Managing Gas Accumulation," Using the Consolidated Line Item Improvement Process, dated June 24, 2014 (ML14177A503)
3. NextEra Energy Seabrook, LLC LAR 14-02, Proposed Change to Increase Voltage Limit for Diesel Generator Load Rejection Surveillance Requirement, dated July 24, 2014 (ML14209A918)
4. NextEra Energy Seabrook, LLC LAR 14-03, Changes to Technical Specification 3.3.3.1, Radiation Monitoring for Plant Operations , dated July 24, 2014 (ML14209A919)
5. NRC letter, Issuance of Amendment Regarding the Risk-Informed Justifications for the Relocation of Specific Surveillance Frequency Requirements to a Licensee-Controlled Program, dated July 24, 2014 (ML13212A069)

Subsequent to the submittal of the above license amendment requests (LARs) (References 1-4), the NRC issued License Amendment 141 (LA 141) (Reference 5) to the Seabrook Station Operating License. LA 141 incorporated relocation of specific surveillance frequency requirements from the Seabrook Technical Specifications (TS) to the Seabrook Surveillance Frequency Control Program (SFCP).

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This letter is being submitted to provide revised, marked-up TS pages for LAR 13-05, LAR 14-01, and LAR 14-02 that include the changes made in LA 141. No revised, marked-up TS pages are required for LAR 14-03 as LA 141 eliminated in its entirety, Table 4.3.3 (on Page 3/4 3-39).

LA 141 had no direct impact on the proposed changes in LAR 13-05, LAR 14-02 and LAR 14-03 in that surveillance frequencies were not affected by those LARs. The revised marked-up pages for LAR 13-05 and LAR 14-02 (Attachments 1and 3, respectively) now include the revised wording regarding surveillance frequencies approved in LA 141. The mark-ups indicate the changes made by LA 141.

Consistent with TSTF-523, "Generic Letter 2008-01, Managing Gas Accumulation," LAR 14-01 revised and added new surveillance requirements that require verification that locations susceptible to gas accumulation in the Emergency Core Cooling, Residual Heat Removal, and Containment Spray systems are sufficiently filled with water. At the time LAR 14-01 was submitted, NextEra did not have a Surveillance Frequency Control Program (SFCP); therefore, LAR 14-01 proposed surveillance frequencies of 31 days. However, subsequent to submittal of LAR 14-01, NextEra implemented a SFCP as approved in LA 141.

This supplement revises the frequencies for the proposed new and revised surveillance requirements included in LAR 14-01 from 31 days to "in accordance with the Surveillance Frequency Control Program." TSTF-523 discusses that for licensees without a SFCP, the frequency will be 31 days. For licensees with a SFCP, the frequency will be "In accordance with the Frequency Control Program." NextEra has implemented a SFCP; therefore, the modifications to the proposed frequencies for the surveillance requirements in LAR 14-01 are appropriate and consistent with TSTF-523. The revised marked-up pages for LAR 14-01 are provided in Attachment 2.

The modifications to the proposed changes are administrative in nature and do not alter the conclusions in References 1, 2, 3 and 4 that the proposed changes do not involve a significant hazard consideration pursuant to 10 CFR 50.92.

The Station Operation Review Committee has reviewed this supplement to LAR 13-05, LAR 14-01, LAR 14-02, and LAR 14-03.

This letter contains no new regulatory commitments.

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

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 11, 2014.

Sincerely,

NextEra Energy Seabrook, LLC

R Dodds III for

Dean Curtland
Site Vice President
AS ACTING SITE VP

cc: NRC Region I Administrator
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Attachment 1 to SBK-L-14184

Revised Marked-Up Technical Specification Pages for LAR 13-05, Fixed Incore Detector System Analysis Methodology, dated August 8, 2013

SURVEILLANCE REQUIREMENTS

4.2.2.1 The provisions of Specification 4.0.4 are not applicable.

4.2.2.2 $F_Q(Z)$ shall be evaluated to determine if $F_Q(Z)$ is within its limits by:

a. Using the incore detectors to obtain a power distribution map at any THERMAL POWER greater than 5% of RATED THERMAL POWER.

b. Increasing the measured $F_Q(Z)$ component of the power distribution map by 3% to account for manufacturing tolerances and further increasing the value by 5% ~~when using the moveable incore detectors or 5.21% when using the fixed incore detectors~~ to account for measurement uncertainties.

c. Satisfying the following relationship:

$$F_Q^M(Z) \leq \frac{F_Q^{RTP} \times K(Z)}{P \times W(Z)} \quad \text{for } P > 0.5$$

$$F_Q^M(Z) \leq \frac{F_Q^{RTP} \times K(Z)}{0.5 \times W(Z)} \quad \text{for } P \leq 0.5$$

where $F_Q^M(Z)$ is the measured $F_Q(Z)$ increased by the allowances for manufacturing tolerances and measurement uncertainty, F_Q^{RTP} is the F_Q limit, K(Z) is the normalized $F_Q(Z)$ as a function of core height, P is the relative THERMAL POWER, and W(Z) is the cycle dependent function that accounts for power distribution transients encountered during normal operation. F_Q^{RTP}, K(Z), and W(Z) are specified in the COLR.

d. Measuring $F_Q^M(Z)$ according to the following schedule:

1) Upon achieving equilibrium conditions after exceeding by 20% or more of RATED THERMAL POWER, the THERMAL POWER at which $F_Q(Z)$ was last determined*, or

2) In accordance with the Surveillance Frequency Control Program, whichever occurs first.

Revised by LA 141

* During power escalation at the beginning of each cycle, power level may be increased until a power level for extended operation has been achieved and a power distribution map obtained.

Attachment 2 to SBK-L-14184

Revised Marked-Up Technical Specification Pages for LAR 14-01, Application to Revise Technical Specifications to Adopt Technical Specifications Task Force (TSTF) Traveler -523, "Generic Letter 2008-01, Managing Gas Accumulation," Using the Consolidated Line Item Improvement Process

SURVEILLANCE REQUIREMENTS

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

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

Revised by LA 141

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

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

REACTOR COOLANT SYSTEM

REACTOR COOLANT LOOPS AND COOLANT CIRCULATION

COLD SHUTDOWN - LOOPS FILLED

LIMITING CONDITION FOR OPERATION

3.4.1.4.1 At least one residual heat removal (RHR) loop shall be OPERABLE and in operation*, and either:

a. One additional RHR loop shall be OPERABLE**, or

b. The secondary-side water level of at least two steam generators shall be greater than 14%.

APPLICABILITY: MODE 5 with reactor coolant loops filled***.

ACTION:

a. With one of the RHR loops inoperable and with less than the required steam generator water level, immediately initiate corrective action to return the inoperable RHR loop to OPERABLE status or restore the required steam generator water level as soon as possible.

b. With no RHR loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR loop to operation.

SURVEILLANCE REQUIREMENTS

4.4.1.4.1.1 The secondary side water level of at least two steam generators when required shall be determined to be within limits in accordance with the Surveillance Frequency Control Program.

4.4.1.4.1.2 At least one RHR loop shall be determined to be in operation and circulating reactor coolant in accordance with the Surveillance Frequency Control Program.

Revised by LA 141

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

*The RHR pump may be deenergized for up to 1 hour provided: (1) no operations are permitted that would cause dilution of the Reactor Coolant System boron concentration and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

**One RHR loop may be inoperable for up to 2 hours for surveillance testing provided the other RHR loop is OPERABLE and in operation.

***A reactor coolant pump shall not be started unless the secondary water temperature of each steam generator is less than 50°F above each of the Reactor Coolant System cold-leg temperatures.

REACTOR COOLANT SYSTEM

REACTOR COOLANT LOOPS AND COOLANT CIRCULATION

COLD SHUTDOWN - LOOPS NOT FILLED

LIMITING CONDITION FOR OPERATION

3.4.1.4.2 Two residual heat removal (RHR) loops shall be OPERABLE* and at least one RHR loop shall be in operation.**

APPLICABILITY: MODE 5 with reactor coolant loops not filled.

ACTION:

a. With less than the above required RHR loops OPERABLE, immediately initiate corrective action to return the required RHR loops to OPERABLE status as soon as possible.

b. With no RHR loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR loop to operation.

SURVEILLANCE RQUIREMENTS

Revised by LA 141

4.4.1.4.2 At least one RHR loop shall be determined to be in operation and circulating reactor coolant in accordance with the Surveillance Frequency Control Program.

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

*One RHR loop may be inoperable for up to 2 hours for surveillance testing provided the other RHR loop is OPERABLE and in operation.

**The RHR pump may be deenergized for up to 1 hour provided: (1) no operations are permitted that would cause dilution of the Reactor Coolant System boron concentration and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

EMERGENCY CORE COOLING SYSTEMS

ECCS SUBSYSTEMS - T_{avg} GREATER THAN OR EQUAL TO 350°F

SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

a. In accordance with the Surveillance Frequency Control Program by verifying that the following valves are in the indicated positions with power to the valve operators removed:

Valve Number	Valve Function	Valve Position
SI-V-3	Accumulator Isolation	Open*
SI-V-17	Accumulator Isolation	Open*
SI-V-32	Accumulator Isolation	Open*
SI-V-47	Accumulator Isolation	Open*
SI-V-114	SI Pump to Cold-Leg Isolation	Open
RH-V-14	RHR Pump to Cold-Leg Isolation	Open
RH-V-26	RHR Pump to Cold-Leg Isolation	Open
RH-V-32	RHR to Hot-Leg Isolation	Closed
RH-V-70	RHR to Hot-Leg Isolation	Closed
SI-V-77	SI to Hot-Leg Isolation	Closed
SI-V-102	SI to Hot-Leg Isolation	Closed

Revised by LA 141

b. In accordance with the Surveillance Frequency Control Program by:

1) ~~Verifying that the ECCS piping is full of water, and~~ , AND

2) Verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position. **

c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suctions during LOCA conditions. This visual inspection shall be performed:

1) For all accessible areas of the containment prior to establishing primary CONTAINMENT INTEGRITY, and

2) At least once daily of the areas affected within containment by containment entry and during the final entry when primary CONTAINMENT INTEGRITY is established.

Verifying ECCS locations susceptible to gas accumulation are sufficiently filled with water.

*Pressurizer pressure above 1000 psig.

**Not required to be met for system vent flow paths opened under administrative control.

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent Containment Spray Systems shall be OPERABLE with each Spray System capable of taking suction from the RWST* and automatically transferring suction to the containment sump.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one Containment Spray System inoperable, restore the inoperable Spray System to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable Spray System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each Containment Spray System shall be demonstrated OPERABLE:

a. In accordance with the Surveillance Frequency Control Program by ~~verifying~~ : ~~that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position;~~

INSERT 1
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b. By verifying OPERABILITY of each pump when tested pursuant to Specification 4.0.5;

Revised by LA 141

c. In accordance with the Surveillance Frequency Control Program during shutdown, by:

1) Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure-Hi-3 test signal, and

2) Verifying that each spray pump starts automatically on a Containment Pressure-Hi-3 test signal.

INSERT 2
Next Page

d. By verifying each spray nozzle is unobstructed following activities that could result in nozzle blockage.

*In MODE 4, when the Residual Heat Removal System is in operation, an OPERABLE flow path is one that is capable of taking suction from the refueling water storage tank upon being manually realigned.

INSERT 1

1. **Verifying that each valve (manual, power operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position**, and**
2. **Verifying Containment Spray locations susceptible to gas accumulation are sufficiently filled with water.**

INSERT 2

****Not required to be met for system vent flow paths opened under administrative control.**

REFUELING OPERATIONS

3/4.9.8 RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION

HIGH WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.8.1 At least one residual heat removal (RHR) loop shall be OPERABLE and in operation.*

APPLICABILITY: MODE 6, when the water level above the top of the reactor vessel flange is greater than or equal to 23 feet.

ACTION:

With no RHR loop OPERABLE and in operation, suspend all operations involving an increase in the reactor decay heat load or a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR loop to OPERABLE and operating status as soon as possible. Close all containment penetrations providing direct access from the containment atmosphere to the outside atmosphere within 4 hours.

SURVEILLANCE REQUIREMENTS

4.9.8.1 At least one RHR loop shall be verified in operation and circulating reactor coolant at a flow rate of greater than or equal to 2750 gpm in accordance with the Surveillance Frequency Control Program.

Revised by LA 141

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

* The RHR loop may be removed from operation for up to 1 hour per 8-hour period during the performance of CORE ALTERATIONS in the vicinity of the reactor vessel hot legs.

REFUELING OPERATIONS

RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION

LOW WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.8.2 Two independent residual heat removal (RHR) loops shall be OPERABLE, and at least one RHR loop shall be in operation.*

APPLICABILITY: MODE 6, when the water level above the top of the reactor vessel flange is less than 23 feet.

ACTION:

a. With less than the required RHR loops OPERABLE, immediately initiate corrective action to return the required RHR loops to OPERABLE status, or to establish greater than or equal to 23 feet of water above the reactor vessel flange, as soon as possible.

b. With no RHR loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR loop to operation. Close all containment penetrations providing direct access from the containment atmosphere to the outside atmosphere within 4 hours.

SURVEILLANCE REQUIREMENTS

4.9.8.2 At least one RHR loop shall be verified in operation and circulating reactor coolant at a flow rate of greater than or equal to 2750 gpm in accordance with the Surveillance Frequency Control Program.

Revised by LA 141

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

* Prior to initial criticality, the RHR loop may be removed from operation for up to 1 hour per 8-hour period during the performance of CORE ALTERATIONS in the vicinity of the reactor vessel hot legs.

Attachment 3 to SBK-L-14184

Revised Mark-Up Technical Specification Pages for LAR 14-02, Proposed Change to Increase Voltage Limit for Diesel Generator Load Rejection Surveillance Requirement

4.8.1.1.2 (Continued)

f. In accordance with the Surveillance Frequency Control Program, during shutdown##, by:

Revised by LA 141

1) (NOT USED)

2) Verifying the generator capability to reject a load of greater than or equal to 671 kW while maintaining voltage at 4160 ± 420 volts and frequency at 60 ± 4.0 Hz;

3) Verifying the generator capability to reject a load of 6083 kW without tripping. The generator voltage shall not exceed ~~4784~~ 4992 volts during and following the load rejection;

4) Simulating a loss-of-offsite power by itself, and:

a) Verifying deenergization of the emergency busses and load shedding from the emergency busses, and

b) Verifying the diesel starts from standby conditions### on the loss of offsite power signal, energizes the emergency busses with permanently connected loads within 12 seconds, energizes the auto-connected shutdown loads through the emergency power sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz during this test.

5) Verifying that on an SI actuation test signal, without loss-of-offsite power, the diesel generator starts from standby conditions### on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be greater than or equal to 3740 volts and 58.8 Hz within 10 seconds after the auto-start signal; the steady-state generator voltage and frequency shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz during this test;

Selected surveillance requirements, or portions thereof, may be performed during conditions or modes other than shutdown, provided an evaluation supports safe conduct of that surveillance in a condition or mode that is consistent with safe operation of the plant. (Ref. NRC GL 91-04)

Starting of the diesel for Specifications 4.8.1.1.2f.4) and 4.8.1.1.2f.5) may be performed with the engine at or near normal operating temperature.