



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
475 ALLENDALE RD, STE 102
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

February 4, 2025

Bob Coffey
Executive Vice President, Nuclear Division
and Chief Nuclear Officer
Florida Power & Light Company
700 Universe Blvd.
Mail Stop EX/JB
Juno Beach, FL 33408

SUBJECT: SEABROOK STATION – INTEGRATED INSPECTION REPORT
05000443/2024004

Dear Bob Coffey:

On December 31, 2024, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Seabrook Station. On January 16, 2025, the NRC inspectors discussed the results of this inspection with David Sluzska, Site Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

No findings or violations of more than minor significance were identified during this inspection.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* (CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Matt R. Young, Chief
Projects Branch 2
Division of Operating Reactor Safety

Docket No. 05000443
License No. NPF-86

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV

SUBJECT: SEABROOK STATION – INTEGRATED INSPECTION REPORT
05000443/2024004 DATED FEBRUARY 4, 2025

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**U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report**

Docket Number: 05000443

License Number: NPF-86

Report Number: 05000443/2024004

Enterprise Identifier: I-2024-004-0041

Licensee: NextEra Energy Seabrook, LLC

Facility: Seabrook Station

Location: Seabrook, New Hampshire

Inspection Dates: October 1, 2024 to December 31, 2024

Inspectors: T. Daun, Senior Resident Inspector
E. Allen, Resident Inspector
S. Flanagan, Resident Inspector
P. Cataldo, Senior Reactor Inspector
N. Eckhoff, Health Physicist
N. Floyd, Senior Reactor Inspector
P. Koch, Civil Engineer
G. Thomas, Senior Civil Engineer

Approved By: Matt R. Young, Chief
Projects Branch 2
Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Seabrook Station, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information.

List of Findings and Violations

No findings or violations of more than minor significance were identified.

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
LER	05000443/2023-002-00	Licensee Event Report (LER) 2023-002-00 for Seabrook Station, Unit 1, Automatic Actuation of Emergency Service Water During Testing Due to a Defective Relay	71153	Closed
LER	05000443/2024-001-00	LER 2024-001-00 for Seabrook Station, Unit 1, Condition Prohibited by Technical Specifications - Transformer Bushing Failure - Offsite AC Sources	71153	Closed

PLANT STATUS

Seabrook Station began the inspection period operating at or near 100 percent rated thermal power. On October 4, 2024, the plant commenced down power in preparation for refueling outage 23 (OR23). Following completion of OR23 on November 10, 2024, plant start-up was performed and the station returned to 100 percent rated thermal power on November 15, 2024. On November 19, 2024, operators inserted a manual reactor trip due to the loss of the 'B' main feed pump. On November 20, 2024, the reactor was restarted and on November 22, 2024, reached 100 percent rated thermal power. On December 18, 2024, power was reduced to 50 percent rated thermal power to perform a software change associated with the 'B' main feed pump control system. Following the software upgrade, Seabrook Station returned to 100 percent rated thermal power on December 25, 2024, where it remained for the duration of the inspection period.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed activities described in IMC 2515, Appendix D, "Plant Status," observed risk-significant activities, and completed on-site portions of IPs. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Seasonal Extreme Weather Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of seasonal low temperatures for the following systems: service water, primary component cooling water, emergency feedwater, and offsite power on December 11, 2024

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (2 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) 'B' cooling tower service water system during ocean service water maintenance on October 11, 2024
- (2) Reactor coolant system level instrumentation during reactor coolant system drain down and evacuation and fill on October 28, 2024

Complete Walkdown Sample (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated system configurations during a complete walkdown of the residual heat removal system between October 16, 2024 and November 14, 2024

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

- (1) Containment operating deck (C-F-3-Z) on October 22, 2024
- (2) Containment middle level (C-F-2-Z) October 22, 2024
- (3) Containment lower level (C-F-1-Z) on October 23, 2024
- (4) 'A' essential switchgear room (C-F-1-Z) on November 25, 2024
- (5) East main steam and feedwater pipe enclosure (MS-F-1A-Z, MS-F-2A-Z, MS-F-3A-Z, MS-F-4A-Z, MS-F-5A-Z) on December 12, 2024

71111.08P - Inservice Inspection Activities (PWR)

The inspectors verified that the reactor coolant system boundary, reactor vessel internals, risk-significant piping system boundaries, and containment boundary are appropriately monitored for degradation and that repairs and replacements were appropriately fabricated, examined and accepted by reviewing the following activities during OR23 from October 15, 2024, to November 14, 2024.

PWR Inservice Inspection Activities Sample - Nondestructive Examination and Welding Activities (IP Section 03.01) (1 Sample)

The inspectors verified that the following nondestructive examination and welding activities were performed appropriately:

- (1)
 - Manual ultrasonic testing of two, Class 1 pipe-to-pipe welds, CS-0365-02-12 (Nondestructive Examination (NDE) Report SB1-UT-24-033) and CS-0365-02-24 (NDE Report SB1-UT-24-032)
 - Repair and replacement activity, including an enhanced visual examination on H4 control rod drive mechanism housing canopy seal weld, following replacement of control rod drive mechanism motor and re-welding of the middle canopy seal weld, (NDE Report/Traveler No. QAT-919963-01 and 02)
 - Augmented (WCAP-16913-P) VT-2 examination of the Class 1 pressurizer heater sleeves (NDE Report SB1-VT-24-003)
 - Visual examination of the containment liner and associated moisture barrier (NDE Reports SB1-IWE-24-065, SB1-IWE-24-090, and SB1-IWE-24-091)
 - Relevant indications from previous outage OR22 that were evaluated and accepted for continued service, included liner deficiencies and six leak chase channels that contained water, which were documented in Westinghouse letter LTR-SEE-23-17, and Action Requests (ARs) 02454986, 02454877, 02455440, 02454650, and 02454594

- Augmented bare metal visual exam (ASME XI Code Case N-722-1, B15.80) of reactor pressure vessel bottom mounted instrumentation penetrations (NDE Report SB1-VE-24-001)
- Augmented bare metal visual exam (ASME XI Code Case N-722-1, B15.100) of reactor pressure vessel bottom mounted instrumentation connections (socket welds) (NDE Report SB1-VE-24-002)
- Manual ultrasonic welding of Class 1 reactor coolant (pressurizer) piping-to-reducer weld RC-0048-02-21 (NDE Report SB1-UT-24-021)

PWR Inservice Inspection Activities Sample - Vessel Upper Head Penetration Inspection Activities (IP Section 03.02) (1 Sample)

The inspectors verified that the licensee conducted the following vessel upper head penetration inspections and addressed any identified defects appropriately:

- (1) Visual examination based on American Society of Mechanical Engineers Code Case N-729-6, of penetrations 4, 23, 48, 56, 64, and 69 (NDE Report SB1-VE-24-003)

PWR Inservice Inspection Activities Sample - Boric Acid Corrosion Control Inspection Activities (IP Section 03.03) (1 Sample)

The inspectors verified the licensee is managing the boric acid corrosion control program through a review of the following evaluations:

- (1)
 - Boric acid evaluation and corrective actions for SI-V-3 (AR02497589)
 - Boric acid evaluation for SI-V-17 (AR02497590)
 - Boric acid evaluation for CS-PT-152 Fitting (AR02497725)
 - Boric acid evaluation for RC-V-364 (AR02498318)
 - Boric acid evaluation and corrective actions for CS-V-1 (AR02498411)

PWR Inservice Inspection Activities Sample - Steam Generator Tube Inspection Activities (IP Section 03.04) (1 Sample)

The inspectors verified that the licensee is monitoring the steam generator tube integrity appropriately through a review of the following examinations:

- (1)
 - Several eddy current testing results of inservice tubes in all four steam generators ('A,' 'B,' 'C' and 'D' steam generators) including remote evaluations with a qualified data analyst for the following tubes: 'A' steam generator tube R22C61; 'B' steam generator tube R11C3; 'C' steam generator tube R40C92; and 'D' steam generator tube R40C66
 - In-situ pressure testing of 'B' steam generator tube R4C119 and 'C' steam generator tube R28C57
 - Secondary side visual examinations of steam generator components, tube sheet and tubes, including evaluation of foreign object search and retrieval activities, as well as upper bundle flushing and sludge lance activities
 - Tube plug installation results following eddy current testing for 'A' steam generator tube R22C66 and 'D' steam generator tube R40C66

71111.11Q - Licensed Operator Regualification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

- (1) The inspectors observed and evaluated licensed operator performance in the control room during power reduction and plant shutdown on October 5, 2024

Licensed Operator Regualification Training/Examinations (IP Section 03.02) (1 Sample)

- (1) The inspectors observed and evaluated licensed operator annual regualification exams conducted in the plant reference simulator on December 20, 2024

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (3 Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components remain capable of performing their intended function:

- (1) Steam generator level transmitters following various out-of-tolerances on October 19, 2024
- (2) 10 CFR 50.65(a)(1) actions associated with power supply failures of the 7300 system on November 7, 2024
- (3) Alkali-silica reaction (ASR) monitoring portion of the Structures Monitoring Program on November 13, 2024

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed:

- (1) Yellow risk and risk management actions associated with reduced reactor coolant system inventory on October 10, 2024
- (2) Yellow risk and risk management actions associated with spent fuel pool cooling following reactor core offload to spent fuel pool on October 15, 2024
- (3) Yellow risk and risk management actions associated with reactor coolant system drain down and vacuum evacuation and fill of the reactor coolant system on October 28, 2024
- (4) Risk management actions associated with mode change without the unit auxiliary transformers available on October 29, 2024

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (4 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

- (1) 'A' main steam isolation valve (AR02498822) on October 21, 2024
- (2) 'B' emergency feedwater pump (AR02502210) on November 21, 2024
- (3) 'A' safety injection pump suction isolation valve (AR02497562) on December 6, 2024
- (4) 'B' primary component cooling water (AR02499081) on December 27, 2024

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (1 Sample)

The inspectors evaluated the following temporary or permanent modifications:

- (1) Engineering change to leave temporary scaffold installed on polar crane for operating cycle on November 7, 2024

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated OR23 activities from October 4, 2024 through November 9, 2024

71111.24 - Testing and Maintenance of Equipment Important to Risk

The inspectors evaluated the following testing and maintenance activities to verify system operability and/or functionality:

Post Maintenance Testing (IP Section 03.01) (7 Samples)

- (1) Post maintenance testing of 3B reserve auxiliary transformer on October 6, 2024
- (2) Post maintenance testing of service water valve 20 following replacement on October 23, 2024
- (3) Post maintenance testing of service water valve 34 following replacement on October 24, 2024
- (4) Post maintenance testing of emergency feedwater system following motor inspection on October 28, 2024
- (5) Post maintenance testing of 'A' diesel generator following relay replacement on October 30, 2024
- (6) Post maintenance testing of 'E' vital inverter following replacement on November 6, 2024
- (7) Post maintenance testing of main steam valve 90 solenoid replacement on November 7, 2024

Surveillance Testing (IP Section 03.01) (4 Samples)

- (1) Containment enclosure ventilation area drawdown test on October 4, 2024
- (2) Diesel fuel receipt sampling on October 17, 2024
- (3) 10-year simultaneous start of 'A' and 'B' emergency diesel generators on November 1, 2024

- (4) Emergency diesel generator 1A 36-month operability and engineered safeguards surveillance on November 5, 2024

Inservice Testing (IP Section 03.01) (2 Samples)

- (1) Main steam safety valve setpoint pressure test on October 4, 2024
- (2) 'A' charging pump comprehensive surveillance on October 10, 2024

Containment Isolation Valve Testing (IP Section 03.01) (1 Sample)

- (1) Leak rate test of the 'B' residual heat removal pump suction isolation from loop four hot leg (RC-V-87, RC-V-88, RC-V-479) on October 17, 2024

RADIATION SAFETY

71124.01 - Radiological Hazard Assessment and Exposure Controls

Radiological Hazard Assessment (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated how the licensee identifies the magnitude and extent of radiation levels and the concentrations and quantities of radioactive materials and how the licensee assesses radiological hazards

Instructions to Workers (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated how the licensee instructs workers on plant-related radiological hazards and the radiation protection requirements intended to protect workers from those hazards

Contamination and Radioactive Material Control (IP Section 03.03) (2 Samples)

The inspectors observed/evaluated the following licensee processes for monitoring and controlling contamination and radioactive material:

- (1) Licensee surveys of potentially contaminated material leaving the Unit 1 radiologically controlled area
- (2) Workers exiting the Unit 1 radiologically controlled area at the alternative control point

Radiological Hazards Control and Work Coverage (IP Section 03.04) (4 Samples)

The inspectors evaluated the licensee's control of radiological hazards for the following radiological work:

- (1) Steam generator nozzle dam placement
- (2) Reactor head H-4 latch assembly repair
- (3) Controls established during reactor internals lift
- (4) Controls for reactor head lift, RWP 21-0140

High Radiation Area and Very High Radiation Area Controls (IP Section 03.05) (3 Samples)

The inspectors evaluated licensee controls of the following high radiation areas and very high radiation areas:

- (1) Unit 1 reactor head stand
- (2) Unit 1 demineralizer alley south entry
- (3) Unit 1 thimble tunnel with access to under vessel

Radiation Worker Performance and Radiation Protection Technician Proficiency (IP Section 03.06) (1 Sample)

- (1) The inspectors evaluated radiation worker and radiation protection technician performance as it pertains to radiation protection requirements

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

BI01: Reactor Coolant System Specific Activity Sample (IP Section 02.10) (1 Sample)

- (1) For the period October 1, 2023 through September 30, 2024

BI02: Reactor Coolant System Leak Rate Sample (IP Section 02.11) (1 Sample)

- (1) For the period October 1, 2023 through September 30, 2024

OR01: Occupational Exposure Control Effectiveness Sample (IP Section 02.15) (1 Sample)

- (1) For the period October 1, 2023 through September 30, 2024

PR01: Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual Radiological Effluent Occurrences Radiological Effluent Occurrences Sample (IP Section 02.16) (1 Sample)

- (1) For the period October 1, 2023 through September 30, 2024

71152A - Annual Follow-up Problem Identification and Resolution

Annual Follow-up of Selected Issues (IP Section 03.03) (2 Samples)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

- (1) Reserve auxiliary transformer bushing failure (AR02480310)
- (2) Review of NextEra's corrective actions to re-evaluate the condensate storage tank (CST) enclosure for the effects of ASR

71152S - Semiannual Trend Problem Identification and Resolution

Semiannual Trend Review (IP Section 03.02) (1 Sample)

- (1) The inspectors reviewed the licensee’s corrective action program for potential adverse trends that might be indicative of a more significant safety issue

71153 – Follow-Up of Events and Notices of Enforcement Discretion

Event Report (IP Section 03.02) (2 Samples)

The inspectors evaluated the following licensee’s event reporting determinations to ensure it complied with reporting requirements:

- (1) LER 05000443/2023-02-00 for Seabrook Station, Automatic Actuation of Emergency Service Water During Testing Due to a Defective Relay (ADAMS Accession Number ML23181A085). The inspectors determined that the cause of the condition described in the LER was not reasonably within the licensee's ability to foresee and correct, and therefore was not reasonably preventable. No performance deficiency nor violation of NRC requirements was identified. This LER is Closed.
- (2) LER 05000443/2024-001-00 for Seabrook Station, Condition Prohibited by Technical Specifications - Transformer Bushing Failure - Offsite AC Sources (ADAMS Accession Number ML24110A087). The inspectors determined that the cause of the condition described in the LER was not reasonably within the licensee's ability to foresee and correct, and therefore was not reasonably preventable. A Notice of Enforcement Discretion EA-24-027 was granted on March 5, 2024, and is documented in Inspection Report 05000443/2024001 (ADAMS Accession Number ML24134A006) concerning the violation of Technical Specification 3.8.1.1.a and an emergency license amendment was issued on March 8, 2024 (ADAMS Accession Number ML24067A262) granting a one-time extension of the allowed outage time for the 3B reserve auxiliary transformer. This LER is Closed.

Personnel Performance (IP Section 03.03) (1 Sample)

- (1) The inspectors evaluated a manual reactor trip caused by the loss of the 'B' main feedwater pump and licensee’s performance on November 19, 2024

INSPECTION RESULTS

Observation: Reserve Auxiliary Transformer Bushing Failure	71152A
The inspectors reviewed NextEra’s corrective action program to verify that the licensee identified, evaluated, and implemented corrective actions, as needed, for issues involving the reserve auxiliary power transformer. The inspectors reviewed condition reports, an issue investigation, forensic testing, maintenance rule functional failure determinations, and an LER. Inspectors questioned the post maintenance testing performed following replacement of the 3B reserve auxiliary transformer in Inspection Report 05000443/2024001 and utilized the very low safety significance resolution process (ADAMS Accession Number ML24134A006). Inspectors noted that the bus 5 offsite power supply transfer operability test was performed on October 6, 2024, to demonstrate the manual and automatic transfer of the safety-related 4160-volt emergency bus from the unit auxiliary transformer to the reserve auxiliary	

transformer to demonstrate the full operation sequence that brings the 3B reserve auxiliary transformer into operation. This surveillance test was documented under section 71111.24 of this report.

Based on the overall results of this review, the inspectors determined that issues were appropriately evaluated by NextEra staff and resolved within the scope of the corrective action program and other requisite procedures.

Observation: Review of NextEra's Corrective Actions to Re-evaluate the CST Enclosure for the Effects of ASR	71152A
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An NRC inspector accompanied by two civil engineers (structural) from the NRC Office of Nuclear Reactor Regulation completed an on-site inspection at the Seabrook Station from November 12, 2024 through November 15, 2024 to review NextEra's performance to monitor reinforced concrete structures affected by ASR and to provide corrective actions for those structures in accordance with their Structures Monitoring Program, NRC-approved methodology document, and their corrective action program procedures. Specifically, the inspectors reviewed NextEra's evaluations and corrective actions associated with ARs 02441887, 02484746, 02491028, 02491389, and 02501207 for the re-baseline and re-evaluation of the reinforced concrete CST enclosure structure.

NextEra re-evaluated the CST enclosure and established new threshold monitoring limits for this structure prior to it exceeding the previously established threshold limits. NextEra described this process as a "re-baseline" where collected ASR monitoring data and trends from other monitoring locations are utilized to revise the conservative assumptions for ASR expansion in the original structural evaluation. The re-baseline effort is targeted for structures with low margin from their original evaluations to systematically re-evaluate and prevent the need for emergent prompt operability determinations. The inspectors selected the CST enclosure due to high-risk components located within the enclosure.

The inspectors reviewed the re-evaluation of the CST enclosure structure documented in SGH calculation SGH 160268-CA-03, Revision 1, dated November 8, 2024, to verify the licensee performed the analysis in accordance with the Structures Monitoring Program and NRC-approved methodology document. The inspectors also reviewed whether the analysis addressed potential impacts of ASR on the steel CST located within the concrete enclosure. The inspectors performed independent walkdowns of accessible portions of the CST enclosure structure to verify the inputs used in the structural re-evaluation and reviewed monitoring data to determine whether any expansion had occurred contrary to the re-evaluation. The inspectors also reviewed reports of collected measurement data to verify that there were no adverse conditions that would invalidate conclusions documented in the re-evaluation. In addition, the inspectors conducted interviews with responsible NextEra staff and their contractors to understand the approach used in performing re-baselining of structures at the Seabrook Station and to verify the justified assumptions used for the CST re-evaluation were appropriately supported.

The inspectors observed that the re-evaluation was a stage 2 analysis (i.e., finite element models developed based on original design drawings) performed in accordance with the methodology document using ASR expansion data collected through June 2024 and then projected to August 2024. NextEra documented that the CST enclosure met the evaluation criteria of American Concrete Institute 318-71 as amended by License Amendment 159 for all Updated Final Safety Analysis Report load combinations with the ASR load amplified by a threshold factor of 1.15 to account for potential future ASR expansion. The inspectors noted

that the controlling load combinations were the normal static load combination (referred to as LC1 in the calculation) and the unusual load combination with tornado load (referred to as LC2 in the calculation) in the licensing basis (Updated Final Safety Analysis Report Table 3.8-16). Using this approach, the re-evaluation calculation determined that the controlling demand to capacity ratios in the critical section cuts were 0.84 (axial – out-of-plane interaction in east wall of south vault room) and 0.80 (axial-flexure interaction about vertical axis in CST enclosure east wall) which met the American Concrete Institute 318-71 acceptance criteria of less than 1.0. The inspectors noted that the calculation established revised threshold monitoring limits for applicable ASR grids and for specific vertical crack widths, all with a three-month monitoring frequency that NextEra will incorporate into the Structures Monitoring Program.

The NRC inspectors determined that the CST enclosure re-evaluation, overall, provided reasonable assurance that the structure is capable of performing its intended functions. Furthermore, the inspectors determined the re-evaluation specified appropriate threshold monitoring locations and limits, which will be implemented at a more frequent monitoring interval compared to the interval for stage 2 structures as stated in the Structures Monitoring Program. The inspectors noted NextEra's structural calculation 160268-CA-03, Revision 1, as well as FP 101104, Revision 0, for the CST enclosure states that "ASR expansion in the base mat and tank enclosure wall would result in separation forming between the steel tank and enclosure wall, not imparting demands on the steel tank." However, the inspectors observed the CST is directly anchored to the CST enclosure base mat, and therefore, ASR expansion in the base mat is expected to result in applied stresses to the embedded anchors and welded CST shell. The inspectors determined that not evaluating the potential loads as a result from ASR expansion in the concrete enclosure base mat where the tank base is anchored was a performance deficiency. In response to the observation, NextEra documented a written justification demonstrating acceptable loads and stated the design basis of the concrete enclosure is to contain water in the event of a tank failure. NextEra also discussed their plans to address the interactions in a planned future revision to the CST enclosure structural evaluation. The inspectors determined the performance deficiency was minor because the justification demonstrated adequate margin after accounting for the interactions between the tank and the enclosure.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On October 25, 2024, the inspectors presented the radiological hazards inspection results to David Sluszka, Site Vice President, and other members of the licensee staff.
- On November 14, 2024, the inspectors presented the inservice inspection results to Donna Slivon, Inservice Inspection Program Owner, and other members of the licensee staff.
- On November 15, 2024, the inspectors presented the ASR problem identification and resolution inspection results to David Sluszka, Site Vice President, and other members of the licensee staff.
- On January 16, 2025, the inspectors presented the integrated inspection results to David Sluszka, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Corrective Action Documents	02477924		
		02482679		
		02486723		
	Procedures	OP-AA-102-1002	Seasonal Readiness	Revision 43
	Work Orders	40949345		
40956344				
71111.04	Corrective Action Documents	02500237		
	Procedures	OS1001.11	Reactor Coolant System Shutdown Level Instrumentation	Revision 18
		OX1413.01	A Train RHR Quarterly Flow and Valve Stroke Test and 18 Month Valve Stroke Observation	Revision 32
		OX1456.02	ECCS Monthly System Verification	Revision 25
71111.08P	Corrective Action Documents	02498339		
		02498650		
		02499194		
		02499600		
		02499602		
		02499604		
		02502200		
	Miscellaneous	2013 ASME Boiler and Power Vessel Code Section XI	Rules for Inservice Inspection of Nuclear Power Plant Components	July 1, 2013
		4th Interval-ISI-SBK-1-Program Plan	Fourth Inservice Inspection Interval Program Plan for Seabrook Station Unit 1	Revision 0
	Procedures	ER-AP-116-1000	Boric Acid Corrosion Control Program	Revision 9
	Work Orders	40807329		
		40857707		
		40879666		
71111.11Q	Procedures	OP-AA-1000	Conduct of Infrequent Performed Test or Evolutions	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		OS100.03	Plant Shutdown from Minimum Load to Hot Standby	Revision 40
		OS1000.06	Power Decrease	Revision 30
		TR-AA-220-1002	NRC Licensed Operator Exam Security	Revision 6
		TR-AA-220-1004	Licensed Operator Continuing Training Annual Operating and Biennial Written Exams	Revision 9
		TR-AA-230-1007	Conduct of Simulator Training and Evaluation	Revision 19
71111.12	Corrective Action Documents	02436188		
		02446011		
		02461697		
		02462988		
		02468533		
		02468678		
	Work Orders	40803162		
		40958336		
		40958338		
		40958339		
		40958340		
		40958341		
		40958342		
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		94254489		
		94254490		
94254491				
94254492				
94254493				
71111.13	Corrective Action Documents Resulting from Inspection	02497637		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Miscellaneous Procedures		OR23 Safety Review	
		SM7.31	Shutdown Safety Review and Safety Assessment	Revision 2
71111.15	Corrective Action Documents	02497562		
		02498822		
		02499081		
		02502210		
	Miscellaneous Work Orders	DBD-EFW-01	Design Basis Document - Emergency Feedwater System	Revision 10
		40994320		
		40995703		
71111.20	Corrective Action Documents Resulting from Inspection	02497637		
	Procedures	ES1801.008	Containment Leakage Reduction Program Surveillance	Revision 2
		OS1000.14	Reactor Coolant System Evacuation and Fill	Revision 40
		OX1406.12	18 Month Containment and Containment Spray Recirculation Sump Surveillance	Revision 17
		RS1737	Post Refueling Power Physics Testing	Revision 15
		SM7.31	Shutdown Safety Review and Safety Assessment	Revision 2
71111.24	Corrective Action Documents	02477573		
		02495833		
		02497026		
		02497035		
		02498048		
		02498234		
		02498428		
		02498607		
		02500043		
	Drawings	1-NHY-310102	Diesel Generator 1A Annunciator Auxiliary Relays	Revision 9
	Procedures	CS0924.04	Fuel Oil Sampling	Revision 32
		CX0901.22	Diesel Generator Fuel Oil Tank Surveillance	Revision 23
		EX1804.047	Reactor Coolant System Pressure Isolation Valve Leakage Rate Tests (Containment)	Revision 16

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		EX1808.014	Containment Enclosure Building Integrity 18 Month Surveillance	Revision 11
		MA3.5	Post Maintenance Testing	Revision 28
		OS1046.06	4.16 KV Operation	Revision 10
		OX1426.28	Simultaneous Start of Both Emergency Diesel Generators 1A and 1B - Ten Year Operability Surveillance Test	Revision 10
		OX1426.34	Diesel Generator 1A 36 month Operability Surveillance	Revision 29
		OX1436.03	Electric EFW Pump Quarterly, 18 Month/30 Days Cold Shutdown and Comprehensive Pump Tests, and Monthly Valve Verification Surveillance	Revision 30
		OX1446.02	Bus E5 and E6 18 Month Offsite Power Supply Transfer Operability Test	Revision 7
		OX1456.81	Operability Testing of IST Valves	Revision 45
		OX1456.92	Centrifugal Charging Comprehensive Pump Test	Revision 21
	Work Orders	40803482		
		40855108		
		40857702		
		40857772-02		
		40858207		
		40879579		
		40884472		
		40884492		
		40884594		
		40884921		
40996981				
40997825				
94266570				
71152A	Calculations	02480310		
		FP101546	Re-Evaluation of Condensate Storage Tank Enclosure Structure	Revision 0
		United Engineers Calculation No. MT-21	Condensate Storage Tank Building, Mat and Wall Reinforcement	Revision 3

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Drawings	9763-F-101327	Condensate Storage Tank Concrete, Plan at EL 23' - 0", Sheet 1	Revision 9
		9763-F-101328	Condensate Storage Tank Concrete, Plan at EL 23' - 0", Sheet 2	Revision 5
		FP52320, Issue 12	2-42' Dia x 42'7-1/4" Condensate Storage Tanks, Seabrook Station, NH – Units 1 and 2, Bottom Plate and Anchor Bolt Layout	07/14/1983
	Miscellaneous	FP101196	Methodology for the Analysis of Seismic Category 1 Structures with Concrete Affected by Alkali-Silica Reaction for Developing Operability Support Determinations	Revision 3
		SMPM	Seabrook Station Structures Monitoring Program Manual	Revision 17
	Procedures	PI-AA-100-1007	Issue Investigation	Revision 35
		PI-AA-104-1000	Condition Reporting	Revision 40
	Work Orders	40861194	Condensate Storage Tank Threshold Inspection Summary Report	06/08/2023
		40861717		
		40869535	Condensate Storage Tank Threshold Inspection Summary Report	12/07/2023
		40884594		
		40947724	June 2024 Condensate Storage Tank Enclosure (CSTE) Threshold Inspection Data Evaluation	07/21/2024
		40966727		
71153	Corrective Action Documents	02502022		
		DBD-EFW-01	Design Basis Document - Emergency Feedwater System	Revision 10
	Procedures	E-0	Reactor Trip or Safety Injection	Revision 63
		ES-0.1	Reactor Trip Response	Revision 43
		OS1000.08	Event Investigation and Post Trip Review	Revision 31