UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE RD, STE 102
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

November 6, 2023

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 05000443/2023003

Dear Bob Coffey:

On September 30, 2023, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Seabrook Station. On October 11, 2023, the NRC inspectors discussed the results of this inspection with Brian Booth, 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* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Matthew R. Young

Digitally signed by Matthew R. Young
Date: 2023.11.06 06:48:54 -05'00'

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 05000443/2023003 DATED NOVEMBER 6, 2023

DISTRIBUTION:
MYoung, DORS
NWarnek, DORS
AChristiano,DORS
SBruneau, DORS
TDaun, DORS, SRI
ACass, DORS, AA
JJosey, RI OEDO
RidsNrrPMSeabrook Resource
RidsNrrDorlLpl1 Resource

DOCUMENT NAME: https://usnrc.sharepoint.com/teams/Region-I-Branch-2/Shared Documents/Inspection Reports/Seabrook/2023/SB IR2023003.docx
ADAMS ACCESSION NUMBER: ML23307A018

x SUNSI Review		x Non-Sensitive ☐ Sensitive		x Publicly Available ☐ Non-Publicly Available	
OFFICE	RI/DORS	RI/DORS	RI/DORS		
NAME	TDaun	NWarnek	MYoung		
DATE	11/2/2023	11/3/2023	11/2/2023		

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number:	05000443
License Number:	NPF-86
Report Number:	05000443/2023003
Enterprise Identifier:	I-2023-003-0035
Licensee:	NextEra Energy Seabrook, LLC
Facility:	Seabrook Station
Location:	Seabrook, New Hampshire
Inspection Dates:	July 1, 2023 to September 30, 2023
Inspectors:	T. Daun, Senior Resident Inspector K. Mooney, Acting Resident Inspector P. Cataldo, Senior Reactor Inspector J. DeBoer, Sr Emergency Preparedness Inspector N. Eckhoff, Health Physicist S. Flanagan, General Engineer N. Floyd, Senior Reactor Inspector S. Mercurio, Emergency Preparedness Inspector G. Thomas, Senior Civil Engineer
Approved By:	Matt R. Young, Chief Projects Branch 2 Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. 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

None

PLANT STATUS

Seabrook Station began the inspection period operating at 100 percent rated thermal power. On July 30, 2023, the plant experienced a manual reactor trip due to an unexpected loss of electro-hydraulic control to the main turbine. Following repairs to the electro-hydraulic control system, the plant returned to 100 percent rated thermal power on August 8, 2023, 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," conducted routine reviews using IP 71152, "Problem Identification and Resolution," observed risk significant activities, and completed onsite 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

71111.04 - Equipment Alignment

Partial Walkdown (IP Section 03.01) (2 Samples)

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

(1) 'A' emergency diesel generator during 345 kilovolt transmission line out-of-service for switchyard modifications on September 12, 2023
(2) 'A' vital battery while 'C' vital battery removed from service for service testing on September 13, 2023

71111.05 - Fire Protection

Fire Area Walkdown and Inspection (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) 'A' electrical tunnel (ET-F-1A-A and ET-F-1B-A) on August 31, 2023
(2) 'B' electrical tunnel (ET-F-1C-A and ET-F-1D-A) on August 31, 2023
(3) Emergency feedwater pumphouse (EFP-F-1-A) on August 31, 2023
(4) 'A' diesel generator room (DG-F-2A-A) on September 25, 2023
(5) 'B' essential switchgear room (CB-F-1B-A) on September 25, 2023

71111.06 - Flood Protection Measures

Flooding (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated internal flooding mitigation protections in the diesel generator buildings on September 28, 2023

71111.11Q - Licensed Operator Requalification 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 the following activities:
- Plant stabilization following manual reactor trip due to unexpected loss of electro-hydraulic control to main turbine on July 30, 2023
- Power ascension on August 6, 2023

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

(1) The inspectors observed and evaluated licensed operator requalification training conducted in the plant-reference simulator on September 19, 2023

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (2 Samples)

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

(1) Maintenance rule functional failure determination and a1 action plan for 'B' heater drain pump mechanical seal failure on August 24, 2023
(2) Maintenance rule functional failure determination and a1 action plan for electro-hydraulic control system failure on September 29, 2023

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management (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) Emergent risk during failure of 'B' main feed pump alternating current oil pump on August 14, 2023
(2) Yellow risk during supplemental emergency power system work window on August 23, 2023
(3) Yellow risk during 345 kilovolt line outage to support switchyard modifications on September 13, 2023
(4) Emergent risk during tropical storm warning on September 15, 2023

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) Emergency feedwater steam supply check valve cycling and seat leakage (action request (AR) 02458869) on July 28, 2023
(2) Control and diesel generator building and emergency feedwater pumphouse revised operability determination limits for alkali-silica reaction expansion monitoring (AR 02276197) on August 28, 2023
(3) 'A' emergency diesel generator jacket water keep-warm pump seal leak (AR 02464562) on August 15, 2023
(4) Containment building spray following gas voiding in piping greater than acceptance criteria (AR 02467135) on September 19, 2023

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (2 Samples)

The inspectors evaluated the following temporary or permanent modifications:

(1) Emergency feedwater steam line venting modification
(2) Containment boundary change to include embedded liner leak chase plugs in addition to the containment liner leak chase system

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) Vent gas-flow valve following trouble shooting on July 20, 2023
(2) 'B' residual heat removal following calibration of flow control valve on July 23, 2023
(3) 'B' charging pump following inspection of cooling water supply valve on July 27, 2023
(4) 'B' charging pump following replacement of Agastat relay on July 28, 2023
(5) 'A' diesel generator emergency power sequencer following replacement of failed driver card on August 8, 2023
(6) Supplemental emergency power system following maintenance window on August 24, 2023
(7) 'B' primary component cooling water pump following work window on September 8, 2023

71114.02 - Alert and Notification System Testing

Inspection Review (IP Section 02.01-02.04) (1 Sample)

(1) The inspectors evaluated the licensee's maintenance and testing of the Seabrook Station alert and notification system on August 7 through August 10, 2023, for the period of August 2022 through July 2023.

71114.03 - Emergency Response Organization Staffing and Augmentation System

Inspection Review (IP Section 02.01-02.02) (1 Sample)

(1) The inspectors evaluated the readiness of the licensee's Emergency Preparedness Organization on August 7 through August 10, 2023.

71114.04 - Emergency Action Level and Emergency Plan Changes

Inspection Review (IP Section 02.01-02.03) (1 Sample)

(1) The inspectors evaluated the following submitted Emergency Action Level and Emergency Plan changes:

- Change Review Committee #2391, ER 1.1, Classification of Emergencies, Revision 60
- Change Review Committee #2398, ER 1.1, Classification of Emergencies, Revision 60
- Change Review Committee #2378, ER 3.3, Emergency Operations Facility Operations, Revision 67
- Change Review Committee #2381, ER 3.3, Emergency Operations Facility Operations, Revision 67
- Change Review Committee #2383, SSREP, Seabrook Station Radiological Emergency Plan, Revision 78
- Change Review Committee #2396, Solar Field Project
- Change Review Committee #2399, Browns River Station - Capacitor Switchyard Project

This evaluation does not constitute NRC approval

71114.05 - Maintenance of Emergency Preparedness

Inspection Review (IP Section 02.01 - 02.11) (1 Sample)

(1) As a result of the 2020 COVID-19 Public Health Emergency, the licensee requested and received an exemption to reschedule their biennial emergency preparedness exercise from 2020 to 2021. The inspectors performed the emergency preparedness program inspection scheduled for 2021 in its place, then performed emergency preparedness exercise inspections in 2021 and 2022.

The inspectors evaluated the maintenance of the emergency preparedness program on August 7 through August 10, 2023, for the period of December 2020 through July 2023.

The inspectors reviewed Hampton Beach, New Hampshire, and Amesbury, Massachusetts, areas for potential changes in the emergency planning zone populations from the 2010 Census to the 2020 Census. Both areas had an increase in population, but that population increase did not have an impact on evacuation capabilities, and therefore the licensee made no changes to their Protective Action Recommendation procedure based upon these changes.

RADIATION SAFETY

71124.08 - Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation

Radioactive Material Storage (IP Section 03.01) (2 Samples)

The inspectors evaluated the licensee's performance in controlling, labeling and securing the following radioactive materials:

(1) South side wall sea-van storage location
(2) Unit 2 cooling tower

Radioactive Waste System Walkdown (IP Section 03.02) (2 Samples)

The inspectors walked down the following accessible portions of the solid radioactive waste systems and evaluated system configuration and functionality:

(1) Resin sluice and transfer system
(2) Drum storage and resin transfer

Waste Characterization and Classification (IP Section 03.03) (2 Samples)

The inspectors evaluated the following characterization and classification of radioactive waste:

(1) Classification of the 2021 reactor cooling system filter analysis
(2) Classification of the cycle 22-23 dry active waste analysis

Shipping Records (IP Section 03.05) (4 Samples)

The inspectors evaluated the following non-excepted radioactive material shipments through a record review:

(1) Radioactive waste shipment number 23-029, UN3321, Radioactive Material 7, Low Specific Activity (LSA-II)
(2) Radioactive waste shipment number 23-031, UN3321, Radioactive Material 7, Low Specific Activity (LSA-II)
(3) Radioactive waste shipment number 23-021, UN2913, Radioactive Material 7, Surface Contaminated Objects (SCO-II)
(4) Radioactive waste shipment number 23-034, UN2915, Radioactive Material 7, Type A

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS08: Heat Removal Systems (IP Section 02.07) (1 Sample)

(1) For the period July 1, 2022 through June 30, 2023

MS09: Residual Heat Removal Systems (IP Section 02.08) (1 Sample)

(1) For the period July 1, 2022 through June 30, 2023

MS10: Cooling Water Support Systems (IP Section 02.09) (1 Sample)

(1) For the period July 1, 2022 through June 30, 2023

EP01: Drill/Exercise Performance (IP Section 02.12) (1 Sample)

(1) For the period January 1, 2022 through March 31, 2023

EP02: Emergency Response Organization Drill Participation (IP Section 02.13) (1 Sample)

(1) For the period January 1, 2022 through March 31, 2023

EP03: Alert and Notification System Reliability (IP Section 02.14) (1 Sample)

(1) For the period January 1, 2022 through March 31, 2023

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) Evaluation of the 'A' coolant charging pump following replacement of the rotating assembly due to performance issues on September 28, 2023
(2) Review of NextEra's evaluation and corrective actions of safety-related structures affected by alkali-silica reaction on August 31, 2023

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

Personnel Performance (IP Section 03.03) (1 Sample)

(1) The inspectors evaluated a reactor trip and licensee’s performance on July 30, 2023

INSPECTION RESULTS

Observation: 'A' Coolant Charging Pump Performance Issues	71152A
The inspectors reviewed NextEra's evaluation and corrective actions associated with the 'A' centrifugal charging pump, due to an adverse trend of performance issues related to high vibrations and reduced flow rates. Specifically, the inspectors focused on the corrective action program evaluation associated with AR 02437962, and the corrective actions taken by the licensee which included replacing the rotating assembly and establishing new in-service test performance criteria following the replacement. The inspectors reviewed the evaluation, extent of condition review, procedures, manufacturer's failure analysis, relevant issue reports and interviewed the licensee subject matter expert on the topic. Based on the documents reviewed and discussions with personnel, inspectors did not identify any findings or violations of more than minor significance.	

Observation: Review of NextEra's Evaluation and Corrective Actions of Safety-Related Structures Affected by Alkali-Silica Reaction (ASR)	71152A
An NRC inspector accompanied by a senior structural engineer from the NRC Office of Nuclear Reactor Regulation completed an onsite inspection at the Seabrook Station from August 28 to August 31, 2023 to review NextEra's performance to monitor reinforced concrete structures affected by ASR and to provide for corrective actions. A senior technical advisor for civil/structural engineering from the NRC Office of Research also provided remote support and reviews. Specifically, the inspectors reviewed NextEra's evaluations and corrective actions associated with the control and diesel generator building (ARs 02442444, 02450292 and 02464041) and the emergency feed water pumphouse (AR 02442437). The inspectors considered whether NextEra's evaluations and corrective actions were in conformance with the applicable standards in their Structures Monitoring Program, NRC-approved methodology document and operability and corrective action program procedures. Additionally, the inspectors considered whether NextEra's evaluations, calculations and corrective actions were consistent with the current plant configuration and technically supported by consensus engineering standards. <u>Status of the Consolidated Prompt Operability Determination (POD)</u> Seabrook safety-related structures are required to meet the original concrete design code of record as modified by the NRC-approved methodology to include ASR loads as an additional demand on the structure. For those analyzed structural elements (walls, slabs or beams) that do not meet the demand-to-capacity ratio acceptance criteria in the modified licensing and design bases, NextEra staff combined the structures and their specific structural elements into one consolidated POD under AR 02276197 and documented the additional evaluations and calculations performed and their basis for concluding these structures remained functional, that is, capable of performing their intended safety functions. The inspectors reviewed Revision 31 of the POD, approved on June 30, 2023, which addressed nine structures. This revision reflected the removal of one structure, the Mechanical Penetration Area, because of completed physical modifications that restored margin. After the onsite portion of the inspection was completed, NextEra staff informed the inspectors of their approval of Revision 32 which removed electrical manholes W09 and W10 from the POD based on re-analysis that showed these structures were compliant with the design basis. As a result, the inspectors noted Revision 32 of the POD addressed seven structures.	

Evaluation of Two Structures in the POD

The inspectors selected the control and diesel generator building and the emergency feedwater pumphouse for review because NextEra staff had reanalyzed both structures multiple times due to monitored ASR expansion trends that exceeded the operability monitoring limits their staff had established. NextEra staff revised their POD to evaluate the demands resulting from additional ASR expansion and documented their conclusion that these impacted structures remained capable of performing their intended safety functions. NextEra staff established revised operability monitoring limits based on the most recent monitoring data from March 2023 and June 2023 for the control and diesel generator building and October 2022 for the emergency feedwater pumphouse.

The inspectors performed independent walkdowns of accessible portions of these structures and reviewed reports of collected measurement data to verify NextEra staff had fully identified and documented the structural conditions and to independently verify that there were no adverse conditions (i.e., significant structural cracks or deformations indicative of distress) that would call into question NextEra's conclusions. In addition, the inspectors conducted interviews with NextEra staff to determine their corrective action plans to address the affected structural elements and restore calculated demand-to-capacity ratios to within acceptance criteria and provide for future ASR load related margin. The inspectors further reviewed the POD and supporting structural evaluations and calculations to verify whether NextEra staff appropriately justified the capability for these two selected structures in the interim until completion of corrective actions.

The inspectors determined NextEra staff completed their POD evaluations in accordance with their site-specific operability determination procedure related to ASR. The inspectors ascertained that NextEra staff applied the controlling unusual load combination in the Seabrook Station licensing basis, including the safe shutdown earthquake loading, with inherent load factors of 1.0 for all associated loads including those resulting from ASR expansion. The inspectors further ascertained that the ASR induced loads were calculated using the most recent expansion measurements that were amplified by 10 percent (i.e., a factor of 1.1) to provide for future expansion that may occur. Using this approach, NextEra staff determined the affected elements in the two structures had calculated demand-to-capacity ratios less than 1.0 with margin. The inspectors further determined that operability limits were set within the POD to accommodate only the 10 percent expansion to keep close control of the margin within these structural elements.

The inspectors found that the POD evaluation and supporting calculations provided reasonable assurance that structural capability would be maintained through their next scheduled structural examination. The inspectors noted there was additional margin beyond the next scheduled exam based on the ASR expansion trends at the specific element exceedance locations. The NRC inspectors determined that NextEra's operability evaluations supported their conclusions that the two structures remained capable of performing their intended functions.

The inspectors further determined the POD evaluations considered impacts to rebar stress and concluded the rebar stress was either not approaching the yield limit or established enhanced monitoring consistent with ASR-related license conditions to show that rebar yielding would be detected. The inspectors noted that the POD identified compensatory or enhanced examination actions, with updated quantitative monitoring parameters and operability monitoring limits, that will be implemented on an increased frequency of 1 or 2 months until corrective actions are completed. The inspectors determined that these

compensatory measures were incorporated into NextEra's Structures Monitoring Program and verified on a sampling basis that the measures were being implemented.

Based on discussions with NextEra staff, the inspectors determined the planned corrective actions regarding the control and diesel generator building and the emergency feed water pumphouse were to physically modify (aka "retrofit") the structures and bring structural elements into conformance with the licensing and design basis. The inspectors noted the planned retrofit approaches and concepts were primarily targeted to increase the structural capacity for the exceeded limit state and were not based on increasing or altering the structural stiffness. The retrofit designs also considered the need for continued access to monitor for the effects of ASR after retrofit.

Adequacy of Approaches Used to Demonstrate Functionality for Operability

The NRC inspectors noted that one or more of the following technical approaches were used by NextEra staff to demonstrate functionality of the two selected structures. The inspectors found the technical approaches to be consistent with the current plant configuration and technically supported by consensus engineering standards to support NextEra's conclusions for structural functionality in their POD.

- Evaluated and demonstrated adequacy of the structure based on most recent monitoring data for at least the safe shutdown earthquake unusual load combination with a threshold factor of 1.1 for the ASR load. The safe shutdown earthquake unusual load combination was the controlling load combination for functionality that would assure that the structure maintained sufficient capacity such that required systems and components housed in the structure would remain functional to bring the plant to and maintain it in a safe shutdown condition. Additionally, the threshold factor of 1.1 (i.e., 10 percent additional expansion) provided for margin to allow for future ASR expansion that would be monitored and evaluated in the event an operability monitoring limit was approached. The inspectors noted that NextEra's standard practice of using only a 10 percent increase at a time ensured that the operability limits were closely monitored and re-evaluated based on the monitoring data most applicable when a limit was approached.

- Reduced conservatisms were credited regarding design basis water table level at elevation 20 feet (ground grade level) when out-of-plane shear marginally exceeded the concrete shear capacity. The inspectors noted that hydrostatic pressure is a major contributor to out-of-plane shear and, based on interviews of cognizant NextEra staff, the actual monitored water table at the site varied between elevation 7 feet to 10 feet. The lower water table resulted in lower shear loads.

- Structural damping for the safe shutdown earthquake unusual load combination increased from 7 percent in the licensing basis to 10 percent in the POD. The inspectors noted a damping level of 10 percent is allowed by the standard in American Society of Civil Engineers 43, Seismic Design Criteria for Structures Systems and Components in Nuclear Facilities, based on the corresponding level of cracking and high stress levels in the structure under the safe shutdown earthquake load.

- Crediting of the concrete shear friction capacity evaluation (interface shear transfer capability across an existing or assumed crack with rebar reinforcement) when the out-of-plane shear demands exceeded the concrete shear capacity. The inspectors

noted this evaluation is allowed by the code in American Concrete Institute 318, Building Code Requirements for Structural Concrete, as an alternative load path for resisting shear demands.

- When a monitoring limit was reached and re-analysis not performed, NextEra staff and their contractors performed an evaluation by modifying demand-to-capacity ratios from the previous analysis via scaling demands and capacities in localized areas. The ratios included higher demand loads based on expansion measurements. The inspectors noted the use of scaling was acceptable when the behavior of structural elements was well known and contained sufficient margin for capacity.

- Compensatory measures used for data collection, including quantitative and qualitative parameters, to closely monitor the established operability monitoring limits, address uncertainties, and inform the analysis by monitoring at increased frequencies. The inspectors noted the potential for rebar yielding was addressed through enhanced monitoring via additional monitoring lines at critical locations.

- Trending analysis of collected operability and threshold monitoring data conducted after each examination to identify the critical or controlling locations and to estimate the date at which the operability limit may be reached. The inspectors noted this approach by NextEra staff provided opportunity for additional evaluations and actions to be taken if a monitoring limit was approached.

Status of the Containment Internals Structure

The inspectors inquired on the status of the in-progress structural evaluation for the containment internals structure. Based on discussions with NextEra staff, the inspectors understood the evaluation was separated into two models to allow for an accurate representation of the as-built structure and should be available for review by the end of 2023. The inspectors did not identify preliminary results that challenged NextEra's previously documented operability determination conclusions that the containment internals structure remained capable to perform its intended safety functions.

Timing of Corrective Actions

The inspectors observed that implementation of corrective actions (i.e., physical structural modification/retrofit) had begun for the control and diesel generator building, and that NextEra staff initiated the preliminary design of the structural modification for the emergency feedwater pumphouse to bring these structures into compliance with the current licensing and design bases. Based on the current schedule, NextEra plans to complete the physical modifications, including retrofits for additional margin, by 2026. The inspectors observed that NextEra had allocated additional resources and made progress since the last NRC inspection in March 2023 to support completion of these planned corrective actions. Additionally, the inspectors found that NextEra's verification of structural capability within their POD process provided sufficient technical information to their staff to confirm and/or adjust their corrective action schedules to maintain structural functionality.

EXIT MEETINGS AND DEBRIEFS

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

- On July 20, 2023, the inspectors presented the radiation safety inspection results to Brian Booth, Site Vice President, and other members of the licensee staff.
- On August 10, 2023, the inspectors presented the emergency preparedness program inspection results to Chris Robinson, Organizational Effectiveness Site Director, and other members of the licensee staff.
- On August 31, 2023, the inspectors presented the ASR inspection results to Brian Booth, Site Vice President, and other members of the licensee staff.
- On October 11, 2023, the inspectors presented the integrated inspection results to Brian Booth, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04	Procedures	WM-AA-100-1000-F01	Work Activity Risk Management Plan	Revision 3
	Work Orders	40796914		
		40800836		
		40835090		
		40847065		
		40851706		
		P0001685		
71111.05	Drawings	CB-F-1B-A		
		DG-F-2A-A		
		EFP-F-1-A		
		ET-F-1A-A		
		ET-F-1B-A		
		ET-F-1D-A		
71111.06	Miscellaneous	DBD-PB-01	Design Basis Document Plant Barriers	Revision 5
		TP-7	Moderate Energy Line Brake Study	Revision 5
71111.12	Corrective Action Documents	02457473		
		02457572		
		02463450		
	Work Orders	40948301		
71111.13	Corrective Action Documents	02464528		
	Procedures	ON1090.13	Response to Natural Phenomena Affecting Plant Operations	Revision 27
		OS1200.03	Severe Weather Conditions	Revision 32
	Work Orders	40849816		
		40849817		
		40946398		
		94250466		
71111.15	Corrective Action Documents	02447144		
		02456085		
		02458869		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		02459800		
		02462220		
		02464562		
	Miscellaneous	EC0000298710		
	Procedures	OX1456.02	ECCS Monthly System Verification	Revision 25
	Work Orders	40878876		
		40946440		
		40947667		
		94248123		
71111.18	Corrective Action Documents	02447144		
		02459800		
	Drawings	9763-F-101402	Containment Concrete Mat Sections	Revision 14
		9763-F-101462	Containment Liner Bottom Plate	Revision 8
		9763-F-805139	Containment Liner Floor Leak Chase Piping System Piping Arrangement	Revision 10
		FP01925-06	Seabrook Station Unit No. 1 Bottom Leak Chase - Erection	Revision 0
	Engineering Changes	298541	Design Change Package for Containment Boundary Change to Include Embedded Liner Leak Chase System	Revision 0
	Miscellaneous	445860-SBSAG-7CS2-CALC	Containment Shell Structure Axisymmetric Analysis	Revision 0
		9763.006-80-1	Containment Design Specification	Revision 8
		C-S-1-28142-CALC	Containment Embedded Liner Leak Chase System Structural Evaluation	Revision 0
		Safety Evaluation by the Office of Nuclear Reactor Regulation (ML20248A010)	Containment Liner Leak Chase Channel Venting	09/1989
		CS-23-CALC	Containment Liner Strain Calculation for Design Basis Loading	Revision 1
71111.24	Corrective Action Documents	02461642		
		02462536		
		02462816		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		02463047		
		02463930		
		02463939		
	Drawings	1-NHY-310887	Control Wiring Diagram RHR Pump to Hot Leg Isolation Valve	Revision 1
		1-NHY-310891	Charging PMP 1-P-2B	Revision 4
		1-NHY-503762	RH Test Line Iso/Bypass Valves	Revision 7
		1-NHY-506655	RH Heat Exchanger E-9B Bypass Valve	Revision 11
		PID-1-CC-B20211	Primary Component Cooling Loop B	Revision 22
	Miscellaneous	FP32365	Three Phase Thyristor Controlled Battery Charger Instruction Manual	Revision 16
	Procedures	IS0603.057	NAMCO Limit Switch Replacement	Revision 7
		IX1605.013	IST Solenoid Valve Time Response Testing	Revision 6
		LS0550.09	Timing Relay Acceptance Testing and Maintenance	Revision 35
		LS0563.11	Testing of Agastat Relay 125 VDC	Revision 11
		LX0556.06	Station Battery Charger Capacity Test	Revision 11
		MA-AA-100-1018	Information for the Setup and Use of the Flow Scanner AOV Diagnostic Test System	Revision 3
		MS0519.117	Velan Bolted Bonnet Piston Check Valve Maintenance	Revision 9
		OS1002.02	Operability of Letdown, Charging and Seal Injection	Revision 60
		OS1090.05	Component Configuration Control	Revision 83
		OX1426.03	Emergency Power Sequencer 18 Month Operability Test	Revision 11
		OX1456.81	Operability Testing of IST Valves	Revision 44
	Work Orders	40819968		
		40821632		
		40821639		
		40825942		
		40829221		
		40834161		
		40847523		
		40849823		
		40850312		
		40905576		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		40908015		
		40908262		
		40908371		
		94249603		
		94250213		
71114.02	Miscellaneous	Design Report	NextEra Energy Seabrook Station Nuclear Power Plant Alert and Notification System Design Report	09/2022
71114.04	Procedures	EP-AA-100-1007	Evaluation of Changes to the Emergency Plan, Supporting Documents and Equipment (10 CFR 50.54(Q)	Revision 10
71114.05	Corrective Action Documents Resulting from Inspection	02464521		
		02464522		
	Miscellaneous		Seabrook Station Radiological Emergency Plan	Revision 80
			KLD TR - 1282, Seabrook Station Development of Evacuation Time Estimates	09/09/2022
71152A	Corrective Action Documents	02315042		
		02341422		
	Miscellaneous	FP 101196	Methodology for the Analysis of Seismic Category I Structures with Concrete Affected by Alkali-Silica Reaction	Revision 3
		FP 101318	Evaluation of Emergency Feedwater Pump Building Structure	Revision 0
		FP 101371	POD Evaluation of the Emergency Feedwater Pump Building	Revision 4
		FP 101384	ASR Susceptibility Evaluation of the Control and Diesel Generator Building (CDGB) Structure	Revision 5 & 6
		FP101329	Evaluation of Control and Diesel Generator Building	Revision 0
		FP101484	Methodology for the Evaluation of Other Seismic Category 1 Structures for Developing Operability Support Determinations	Revision 0
		SMPM	Seabrook Station Structures Monitoring Program Manual	Revision 14