



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

May 2, 2022

Mr. 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
05000443/2022001

Dear Mr. Coffey:

On March 31, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Seabrook Station. On April 21, 2022, the NRC inspectors discussed the results of this inspection with Mr. 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* 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
05000443/2022001 DATED MAY 2, 2022

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

Docket Number: 05000443

License Number: NPF-86

Report Number: 05000443/2022001

Enterprise Identifier: I-2022-001-0055

Licensee: NextEra Energy Seabrook, LLC

Facility: Seabrook Station

Location: Seabrook, New Hampshire

Inspection Dates: January 1, 2022 to March 31, 2022

Inspectors: C. Newport, Senior Resident Inspector
T. Daun, Resident Inspector

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

Enclosure

SUMMARY

The 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 and remained at or near full power for 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 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

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (4 Samples)

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

- (1) 'B' emergency diesel generator after monthly surveillance run on March 1
- (2) DC distribution system during transfer of 'D' 125VDC bus to its alternate battery supply and back to its normal battery supply on March 1
- (3) 'A' safety injection after quarterly flow and valve test on March 23
- (4) 'A' turbine driven emergency feedwater pump after quarterly surveillance run on March 24

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) Primary auxiliary building (PAB-F-3A-Z) on January 4
- (2) 'A' emergency diesel generator building (DG-F-2A-A) on February 14
- (3) Cable spreading room (CB-F-2A-A) on March 1
- (4) Unit 1 service water cooling tower (CT-F-2B-A) on March 20
- (5) Primary auxiliary building electrical chase (PAB-F-1G-A) on March 28

Fire Brigade Drill Performance Sample (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated the on-site fire brigade training and performance during an unannounced drill on March 22

71111.06 - Flood Protection Measures

Inspection Activities - Internal Flooding (IP Section 03.01) (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the:

- (1) 'A' and 'B' essential switchgear rooms on February 24

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 of the following activities in the control room:
 - Main turbine valve testing on February 11
 - Safety injection accumulator back leakage seating evolution on February 14
 - Control rod operability testing on February 17

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

- (1) The inspectors observed and evaluated a licensed operator requalification examination conducted in the plant-reference simulator on January 28

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (1 Sample)

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

- (1) Radiation monitoring system and associated a(1) action plan on March 8

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (5 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) Elevated risk during unit auxiliary transformer and reserve auxiliary transformer relay calibrations on January 13
- (2) Yellow risk during 'B' emergency diesel generator semi-annual surveillance and inspection on January 25
- (3) Elevated risk during service water tower actuation logic testing on March 1

- (4) Elevated risk during 345kV line 369 outage on March 15
- (5) Yellow risk during 'A' turbine driven emergency feedwater pump surveillance and switchyard work on March 24

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (5 Samples)

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

- (1) SB-V-5 failed to stroke within expected range (AR 02418461) on February 10
- (2) 'A' safety injection accumulator back leakage (AR 02418795) on February 14
- (3) Control building air trouble alarm (AR 02394323) on March 4
- (4) 'B' containment building spray pump decreasing discharge differential pressure trend (AR 02418551) on March 17
- (5) 'B' emergency diesel generator starting air system failure (AR 02426043) on March 30

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) Swap of vital 125VDC power panel PP-113A breaker to new panel position
- (2) Replacement of 25Y1 relay with new style relay for the 'A' emergency diesel generator

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (6 Samples)

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

- (1) 'C' primary component cooling water pump and motor following oil changes on January 11
- (2) 'B' emergency diesel generator semi-annual fast start following inspection on January 25
- (3) 'B' centrifugal charging pump coupling lubrication and testing on February 3
- (4) Safety injection discharge cross connect valve (SI-V-112) following motor-operated valve inspection and lubrication on February 17
- (5) 'A' essential switchgear ventilation fan CBA-FN-19 belt replacement on March 29
- (6) 'B' emergency diesel generator following replacement of barring device relay on March 31

71111.22 - Surveillance Testing

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

Surveillance Tests (other) (IP Section 03.01) (4 Samples)

- (1) 'A' emergency diesel generator monthly surveillance on January 10
- (2) Supplemental emergency power system quarterly surveillance on January 20
- (3) Bus 6 unit auxiliary transformer synch check relay calibration on January 26
- (4) Service water cooling tower makeup pump operability 18-month surveillance on March 10

In-service Testing (IP Section 03.01) (1 Sample)

- (1) 'A' residual heat removal quarterly flow and valve stroke test on January 11

71114.06 - Drill Evaluation

Select Emergency Preparedness Drills and/or Training for Observation (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated the conduct of a routine, full participation emergency planning drill on February 9

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

IE01: Unplanned Scrams per 7000 Critical Hours Sample (IP Section 02.01) (1 Sample)

- (1) For the period January 1, 2021 through December 31, 2021

IE03: Unplanned Power Changes per 7000 Critical Hours Sample (IP Section 02.02) (1 Sample)

- (1) For the period January 1, 2021 through December 31, 2021

IE04: Unplanned Scrams with Complications (USwC) Sample (IP Section 02.03) (1 Sample)

- (1) For the period January 1, 2021 through December 31, 2021

71152A - Annual Follow-up Problem Identification and Resolution

Annual Follow-up of Selected Issues (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 licensed reactor operator staffing levels

- (2) Evaluation of preventative maintenance schedule changes and work planning processes

INSPECTION RESULTS

Observation: Licensed Reactor Operator Staffing Levels	71152A
<p>The inspectors performed a review of staffing levels of licensed reactor operators after the unexpected retirement and departure of several licensed reactor operators. The inspectors reviewed NextEra’s plans for restoration of the desired number of licensed reactor operators and NextEra’s plans for the use of licensed senior reactor operators to stand reactor operator watch positions when necessary, and verified that NextEra’s plan is currently maintaining minimum required licensed operator staffing levels.</p>	

Observation: Evaluation of Preventative Maintenance Schedule Changes and Work Planning Processes	71152A
<p>The inspectors performed a review of NextEra’s work control processes and efforts to streamline their preventative maintenance schedules and periodicity. As part of this review, the inspectors attended daily and weekly work planning meetings, reviewed corrective action documents, reviewed planning and justification documents for preventative maintenance schedule changes, and discussed these items with site work planning staff.</p> <p>The inspectors noted three examples of preventative maintenance items that were improperly classified with a functional importance determination of “non-critical” (FID-N), a classification that allows for planned preventative maintenance work to not be completed if no deficiencies have been noted against the system. The three examples involved components that were not normally energized or actuated and as such, would not manifest a deficiency that would be documented in the corrective action program and trigger preventative maintenance to be performed. Each of these three components were used to either mitigate the impacts of a flooding event or by operators to take action in the event of a flooding event in various spaces in the plant. Each of the three FID-N classified maintenance items passed their associated surveillance tests when subsequently tested. The inspectors also noted an example of preventative maintenance important to safety and/or with risk significance being extended with insufficient justification. In 2019, the four pump discharge and suction pressure gauge calibration preventative maintenance activities for both trains of containment building spray were extended from a periodicity of 18 months to 4 years. NextEra justified the change after a review of the last four completions of each of the preventative maintenance activities noted only one case of instrument drift. While these instruments are not used by operations during normal or emergency plant operations, they do provide data used to justify operability during scheduled system surveillance testing.</p> <p>Finally, the inspectors noted that site daily work planning meetings and communications often lacked clarity. Examples included, in several cases, daily planned work added or cancelled with short notice, daily site PRA risk classified as yellow when the primary risk driver for the yellow risk categorization not planned or performed and several instances where daily PRA risk increased on short notice, even though the drivers for the increase in risk consisted of planned maintenance activities known to the organization well in advance.</p> <p>No findings were identified.</p>	

EXIT MEETINGS AND DEBRIEFS

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

- On April 21, 2022, the inspectors presented the integrated inspection results to Mr. 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	Corrective Action Documents	02420138		
		02420180		
	Miscellaneous	Operator Aid #93-021	Tr. B Vital DC Batteries and Chargers	09/13/2017
	Procedures	OS1048.16	Vital Bus 11D Operation	Revision 18
		OX1405.07	Safety Injection Quarterly and 18 Month Pump Flow and Valve Test	Revision 23
		OX1426.19	Aligning DG 1B Controls for Auto Start	Revision 7
		OX1436.02	Turbine Driven Emergency Feedwater Pump Quarterly and Monthly Valve Alignment	Revision 35
	Work Orders	40776798		
		40779667		
		40779680		
71111.05	Drawings	CB-F-2A-A	Control Building-Cable Spreading Rooms and Mechanical Rooms (Sheet 7 of 12)	04/04/2014
		PAB-F-1G-A	PAB Vertical Electrical Chase (Sheet 19 of 20)	04/20/2001
	Procedures	FP-AA-104	Fire Protection Program	Revision 6
		FP-AA-104-1003	Fire Response	Revision 3
		OS1200.00	Response to Fire or Fire Alarm Actuation	Revision 28
		OS1200.00A	Fire Hazards Analysis for Affected Area/Zone - Appendix A	Revision 26
71111.06	Corrective Action Documents	02418585		
		02420493		
	Miscellaneous	C-S-1-21805	CW System Seismic Indiced Flooding in TB and Impact on 'A' ESWGR	Revision 0
	Work Orders	40762974		
71111.12	Corrective Action Documents	02415013		
		02416319		
		02421536		
71111.13	Corrective Action Documents	02421502		
	Procedures	IS1672.902	Service Water Train B Tower Actuation Logic Test	Revision 1

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		OP-AA-102-1003	Guarded Equipment	Revision 40
		OP-AA-104-1007	Online Aggregate Risk	Revision 7
		WM-AA-100	Risk Management Program	Revision 3
		WM-AA-100-1000	Work Activity Risk Management	Revision 22
71111.15	Corrective Action Documents	02199973		
		02394323		
		02416196		
		02418461		
		02418551		
		02418795		
		02418881		
		02426043		
	Drawings	1-SI-B20450	Safety Injection System Low Head Injection (Accumulators) Detail	12/05/2007
	Procedures	OX1456.81	Operability Testing of IST Valves	Revision 41
	Work Orders	40773154		
40779376				
40816313				
71111.18	Corrective Action Documents	00195174		
		02360336		
	Engineering Changes	00144967	DG-1A Relay 25Y1 Replacement	Revision 002
	Work Orders	00294978		
71111.19	Corrective Action Documents	02417929		
		02419087		
		02423106		
		02426043		
	Drawings	1-NHY-310857-e94-8b	Emerg Diesel Gen 1-B Start Circuit No. 1 Schematic Diagram	Revision 7
		1-NHY-310857-e94-8c	Emerg Diesel Gen 1-B Start Circuit No. 2 Schematic Diagram	Revision 10
		11871652	Wiring Diagram Power Unit	Revision 14
	Procedures	LS0569.16	Diagnostic Testing of Rising Stem MOVs	Revision 29

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		MS0523.48	Sheave Alignment and Belt Tensioning	Revision 3
		OS1026.09	Operation of DG 1B	Revision 35
		OX1456.01	Charging Pump A & B Quarterly Flow and Valve Stroke Test and 18 Month Remote Position Indication Verification	Revision 18
	Work Orders	40738401		
		40770880		
		40802707		
		40821523		
		40821594-02		
		40821594-03		
		40821594-04		
71111.22	Corrective Action Documents	02415794		
		02416677		
		02416679		
		02416778		
		02419424		
		02420981		
	Procedures	LS0563.31	UAT Synchronism Check Relay PM	Revision 3
		OX1416.18	Portable Tower Makeup Pump Operability 18 Month Surveillance Test	Revision 0
	Work Orders	40764039		
		40766967		
		40770424		
		40770425		
	71151	Miscellaneous	LIC-21005	Documentation Supporting the Seabrook Station NRC 1st Quarter 2021 Performance Indicator Submittal
LIC-21006			Documentation Supporting the Seabrook Station NRC 2nd Quarter 2021 Performance Indicator Submittal	07/27/2021
LIC-22001			Documentation Supporting the Seabrook Station NRC 4th Quarter 2021 Performance Indicator Submittal	02/28/2022
LIC-22004			Documentation Supporting the Seabrook Station NRC 3rd Quarter 2021 Performance Indicator Submittal	02/17/2022
71152A	Corrective Action	02340882		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Documents	02390449		
		02401831		
		02418515		