

UNITED STATES NUCLEAR REGULATORY COMMISSION

REGION I 2100 RENAISSANCE BLVD., SUITE 100 KING OF PRUSSIA, PA 19406-2713

November 6, 2014

Mr. Dean Curtland Site Vice President Seabrook Nuclear Power Plant NextEra Energy Seabrook, LLC c/o Mr. Michael Ossing P.O. Box 300 Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 - NRC INTEGRATED INSPECTION REPORT

05000443/2014004

Dear Mr. Curtland:

On September 30, 2014, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at Seabrook Station, Unit No. 1. The enclosed inspection report documents the inspection results, which were discussed on October 10, 2014, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings were identified.

In accordance with Title 10 of the *Code of Federal Regulations* (CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records component of the NRC's Agencywide Documents Access Management System (ADAMS). ADAMS is accessible from the NRC website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Glenn T. Dentel, Chief Reactor Projects Branch 3 Division of Reactor Projects

Docket No. 50-443 License No: NPF-86

Enclosure: Inspection Report No. 05000443/2014004

w/ Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

Mr. Dean Curtland Site Vice President Seabrook Nuclear Power Plant NextEra Energy Seabrook, LLC c/o Mr. Michael Ossing P.O. Box 300 Seabrook, NH 03874

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NAME	PCataldo/ RSB for	RBarkley/ RSB	GDentel/ GTD		
DATE	10/29/14	10/29/14	11/06/14		

Letter to Dean Curtland from Glenn T. Dentel, dated November 6, 2014

SUBJECT: SEABROOK STATION, UNIT NO. 1 - NRC INTEGRATED INSPECTION

REPORT 05000443/2014004

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RidsNrrPMSeabrook Resource

RidsNrrDorlLpl1-2 Resource

ROPreports Resource

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-443

License No.: NPF-86

Report No.: 05000443/2014004

Licensee: NextEra Energy Seabrook, LLC

Facility: Seabrook Station, Unit No.1

Location: Seabrook, New Hampshire 03874

Dates: July 1, 2014 through September 30, 2014

Inspectors: P. Cataldo, Senior Resident Inspector

C. Newport, Resident Inspector

D. Orr, Reactor Inspector

J. Furia, Senior Health Physicist

Approved by: Glenn T. Dentel, Chief

Reactor Projects Branch 3 Division of Reactor Projects

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SUMMARY

IR 05000443/2014004; 7/1/2014-9/30/2014; Seabrook Station, Unit No. 1; Routine Integrated Inspection Report.

This report covered a three-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

No findings were identified.

REPORT DETAILS

Summary of Plant Status

Seabrook operated at full power for the quarter, with the exception of a down-power to 94 percent power to support main turbine control valve testing. Documents reviewed for each section of this inspection report are listed in the Attachment.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 – 1 sample)

Readiness for Impending Adverse Weather Conditions

a. <u>Inspection Scope</u>

The inspectors reviewed NextEra's preparations for the solar magnetic disturbance from September 12 to 13, 2014. The inspectors reviewed the implementation of adverse weather preparation procedures before the onset of and during this adverse weather condition. The inspectors walked down the switchyard and verified generator transformer direct current neutral ground currents were below threshold levels that would have required mitigating measures. The inspectors verified that activities defined in NextEra's adverse weather procedure maintained the readiness of essential systems, which in this case, included the main generator step-up transformers. The inspectors discussed readiness and staff availability for adverse weather response with operations and work control personnel.

b. Findings

No findings were identified.

1R04 Equipment Alignment

Partial System Walkdowns (71111.04Q – 3 samples)

a. <u>Inspection Scope</u>

The inspectors performed partial walkdowns of the following systems:

- Chemical and volume control system during 'B' train flow transmitter replacement on July 30, 2014
- 'A' service water (SW) cooling tower (CT) while 'B' is out of service for maintenance on September 9, 2014
- 'A' safety injection (SI) system return to service on September 27, 2014

The inspectors selected these systems based on their risk-significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors reviewed applicable operating procedures, system diagrams, the Updated Final Safety Analysis Report (UFSAR), technical specifications (TSs), work orders (WOs), condition reports (CRs), and the impact of ongoing work activities on redundant trains of equipment in

order to identify conditions that could have impacted system performance of their intended safety functions. The inspectors also performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and were operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. The inspectors also reviewed whether NextEra staff had properly identified equipment issues and entered them into the corrective action program (CAP) for resolution with the appropriate significance characterization.

b. Findings

No findings were identified.

1R05 Fire Protection

Resident Inspector Quarterly Walkdowns (71111.05Q – 5 samples)

a. <u>Inspection Scope</u>

The inspectors conducted tours of the areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that NextEra controlled combustible materials and ignition sources in accordance with administrative procedures. The inspectors verified that fire protection and suppression equipment was available for use as specified in the area pre-fire plan, and passive fire barriers were maintained in good material condition. The inspectors also verified that station personnel implemented compensatory measures for out of service, degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

- SW CT 22' (CT-F-1A-A, CT-F-1B-A, CT-F-1C-A, CT-F-1D-A) on August 7, 2014
- SW CT 46' (CT-F-2A-A, CT-F-2B-A) on August 8, 2014
- Fuel storage building (FSB-F-1-A) on August 11, 2014
- Fire pump house (FPH-F-1A-A, FPH-F-1B-A, FPH-F-1C-A) on September 3, 2014
- Turbine building 50' (TB-F-2-Z, TB-F-2-0) on September 17, 2014

1R07 Heat Sink Performance (71111.07A – 1 sample)

a. Inspection Scope

The inspectors reviewed the 'A' residual heat removal (RHR) heat exchanger to determine its readiness and availability to perform its safety functions. The inspectors reviewed the design basis for the component and verified NextEra's commitments to NRC Generic Letter 89-13. The inspectors reviewed the results of previous inspections of the 'A' RHR heat exchanger, reviewed performance data obtained during recent operation of the 'A' RHR heat exchanger, and discussed the results of the most recent inspection with NextEra staff. The inspectors also verified that NextEra initiated appropriate corrective actions for identified deficiencies.

b. Findings

No findings were identified.

1R11 <u>Licensed Operator Requalification Program</u> (71111.11 – 2 samples)

.1 Quarterly Review of Licensed Operator Requalification Testing and Training

a. Inspection Scope

The inspectors observed licensed operator simulator training on August 4, 2014, which included turbine building flooding coincident with a reactor trip, main steam isolation valve closure, and a loss of primary component cooling water. The inspectors evaluated operator performance during the simulated event and verified completion of risk significant operator actions, including the use of abnormal and emergency operating procedures. The inspectors assessed the clarity and effectiveness of communications, implementation of actions in response to alarms and degrading plant conditions, and the oversight and direction provided by the control room supervisor. The inspectors verified the accuracy and timeliness of the emergency classification made by the shift manager and the technical specification action statements entered by the shift technical advisor. Additionally, the inspectors assessed the ability of the crew and training staff to identify and document crew performance problems.

b. Findings

No findings were identified.

.2 Quarterly Review of Licensed Operator Performance in the Main Control Room

a. Inspection Scope

The inspectors observed general control room activities on September 27, 2014. Additionally, the inspectors observed quarterly rod testing on September 19, 2014, as well as quarterly slave relay, and SI valve stroke testing on September 24, 2014. The inspectors observed test performance to verify that procedure use, crew communications, and coordination of activities between work groups similarly met established expectations and standards.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12 – 2 samples)

a. <u>Inspection Scope</u>

The inspectors reviewed the samples listed below to assess the effectiveness of maintenance activities on structure, system, and component (SSC) performance and reliability. The inspectors reviewed system health reports, CAP documents, maintenance WOs, and maintenance rule (MR) basis documents to ensure that NextEra was identifying and properly evaluating performance problems within the scope of the MR. For each sample selected, the inspectors verified that the SSC was properly scoped into the MR in accordance with 10 CFR 50.65 and verified that the (a)(2) performance criteria established by NextEra staff was reasonable. As applicable, for SSCs classified as (a)(1), the inspectors assessed the adequacy of goals and corrective actions to return these SSCs to (a)(2). Additionally, the inspectors ensured that NextEra

staff was identifying and addressing common cause failures that occurred within and across MR system boundaries.

- SW on August 11, 2014
- Chemical and volume control system on September 23, 2014

b. <u>Findings</u>

No findings were identified.

1R13 <u>Maintenance Risk Assessments and Emergent Work Control</u> (71111.13 – 4 samples)

a. Inspection Scope

The inspectors reviewed station evaluation and management of plant risk for the maintenance and emergent work activities listed below to verify that NextEra performed the appropriate risk assessments prior to removing equipment for work. The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that NextEra personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When NextEra performed emergent work, the inspectors verified that operations personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work and discussed the results of the assessment with the station's probabilistic risk analyst to verify plant conditions were consistent with the risk assessment. The inspectors also reviewed the TS requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

- 'A' train solid state protection system (SSPS) testing on July 24, 2014
- Extension of charging pump P-2B flow transmitter replacement on July 31, 2014
- 'A' emergency diesel generator (EDG) semiannual maintenance on August 12, 2014
- Supplemental emergency power system (SEPS) annual maintenance outage on August 18, 2014

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 3 samples)

a. <u>Inspection Scope</u>

The inspectors reviewed operability determinations for the following degraded or non-conforming conditions:

- 'A' reactor coolant pump (RCP) lower radial bearing high temperatures on July 19, 2014
- SEPS alternator failures on August 22, 2014
- SW CT safety rail installation fastener material on September 15, 2014

The inspectors selected these issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the operability determinations to assess whether technical specification operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TSs and UFSAR to NextEra's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled by NextEra. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations.

b. Findings

No findings were identified.

1R18 <u>Plant Modifications</u> (71111.18 – 1 sample)

Permanent Modifications

a. <u>Inspection Scope</u>

The inspectors evaluated a modification to the reactor coolant system pressurizer safety valves implemented by Engineering Change (EC) 278177, "Pressurizer Safety Relief Valves (1-RC-V-115, -116, -117) New Disc Design and Inlet Gasket Substitution." The inspectors verified that the design bases, licensing bases, and performance capability of the affected systems were not degraded by the modification. In addition, the inspectors reviewed modification documents associated with the upgrade and design change, including associated ECs, calculations, communication with the vendor, and industry operating experience.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 6 samples)

a. <u>Inspection Scope</u>

The inspectors reviewed the post-maintenance tests for the maintenance activities listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors reviewed the test procedure to verify that the procedure adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure was consistent with the information in the applicable licensing basis and/or design basis documents, and that the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed test data to verify that the test results adequately demonstrated restoration of the affected safety functions.

- Cooling tower fan, CT-FN-51A maintenance on July 17, 2014
- Startup feedwater pump, FW-P113 electrical bus No. 4 trip checks on July 23, 2014
- Power panel, EDE-PP-1F, current injection testing on breaker Nos. 2 and 11 on July 29, 2014

- 'B' charging pump flow transmitter replacement on July 30, 2014
- Steam dump valve, 1-MS-V-3020, positioner replacement on September 4, 2014
- Safety injection pump, SI-P-6A, static breaker testing on September 9, 2014

b. Findings

No findings were identified.

1R22 <u>Surveillance Testing</u> (71111.22 – 4 samples)

a. <u>Inspection Scope</u>

The inspectors observed performance of surveillance tests and/or reviewed test data of selected risk-significant SSCs to assess whether test results satisfied TSs, the UFSAR, and NextEra procedure requirements. The inspectors verified that test acceptance criteria were clear, tests demonstrated operational readiness and were consistent with design documentation, test instrumentation had current calibrations and the range and accuracy for the application, tests were performed as written, and applicable test prerequisites were satisfied. Upon test completion, the inspectors considered whether the test results supported that equipment was capable of performing the required safety functions. The inspectors reviewed the following surveillance tests:

- 'C' RCP undervoltage/underfrequency quarterly surveillance on August 7, 2014
- 'A' EDG semiannual fast start operability surveillance on August 12, 2014
- 'A' EDG interlock testing on September 16, 2014
- 'A' charging pump quarterly flow and valve stroke testing on September 19, 2014 (inservice testing)

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06 –1 sample)

Emergency Preparedness Training Observations

a. <u>Inspection Scope</u>

The inspectors observed a simulator training evolution for Unit 1 licensed operators on August 20, 2014, which required emergency plan implementation by an operations crew. NextEra planned for this evolution to be evaluated and included in performance indicator data regarding drill and exercise performance. The inspectors observed event classification and notification activities performed by the crew. The inspectors also attended the post-evolution critique for the scenario. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the crew's performance and ensure that NextEra evaluators noted the same issues and entered them into the CAP.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2RS8 <u>Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation</u> (71124.08 – 1 sample)

a. Inspection Scope

During the period of August 18 to 22, 2014, the inspectors verified the effectiveness of the licensee's programs for processing, handling, storage, and transportation of radioactive material. This area was inspected to verify the effectiveness of the licensee's programs for processing, handling, storage, and transportation of radioactive material. The inspectors used the requirements of 10 CFR Parts 20, 61, and 71, and 10 CFR 50, Appendix A, Criterion 63, and licensee procedures required by the TSs/Process Control Program (PCP) as criteria for determining compliance.

Inspection Planning

The inspectors reviewed the solid radioactive waste system description in the UFSAR, PCP, and the recent radiological effluent release report for information on the types, amounts, and processing of radioactive waste disposed.

The inspectors reviewed the scope of quality assurance (QA) audits performed for this area since the last inspection. The inspectors also reviewed the results of the audits performed and evaluated the adequacy of the licensee's corrective actions for issues identified during those audits.

Radioactive Material Storage

The inspectors inspected areas where containers of radioactive waste were stored. The inspectors verified that the radioactive materials storage areas were controlled and posted as appropriate.

The inspectors verified that the licensee had established a process for monitoring the impact of long-term storage sufficient to identify potential unmonitored, unplanned releases, or nonconformance with waste disposal requirements. The inspectors verified that there were no signs of swelling, leakage, or deformation of waste containers.

Radioactive Waste System Walkdown

The inspectors walked down accessible portions of liquid and solid radioactive waste processing systems to verify and assess that the current system configuration and operation agree with the descriptions in the UFSAR, offsite dose calculation manual, and PCP.

The inspectors identified radioactive waste processing equipment that was not operational and abandoned in place, and verified that the licensee had established administrative and physical controls to ensure protection of personnel.

The inspectors reviewed the adequacy of any changes made to the radioactive waste processing systems since the last inspection. The inspectors verified that changes from what was described in the UFSAR were reviewed and documented.

The inspectors identified processes for transferring radioactive waste resin and/or sludge discharges into shipping/disposal containers. The inspectors verified that the waste stream mixing, sampling procedures, and methodology for waste concentration averaging were consistent with the PCP, and provided representative samples of the waste product for the purposes of waste classification.

For those systems that provide tank recirculation, the inspectors verified that the tank recirculation procedure provided sufficient mixing. The inspectors verified that the licensee's PCP correctly described the current methods and procedures for dewatering waste.

Waste Characterization and Classification

The inspectors identified radioactive waste streams, and verified that the licensee's radiochemical sample analysis results were sufficient to support radioactive waste characterization. The inspectors verified that the licensee's use of scaling factors and calculations account for difficult-to-measure radionuclides. For these waste streams, the inspectors verified that changes to plant operational parameters were taken into account to (1) maintain the validity of the waste stream composition data between the annual or biennial sample analysis update, and (2) verified that waste shipments continued to meet applicable requirements. The inspectors verified that the licensee had established and maintained an adequate QA program to ensure compliance with applicable waste classification and characterization requirements.

Shipment Preparation

The inspectors reviewed the records of shipment packaging, surveying, labeling, marking, placarding, vehicle checks, emergency instructions, disposal manifest, shipping papers provided to the driver, and licensee verification of shipment readiness. The inspectors verified that the requirements of any applicable transport cask certificate of compliance had been met. The inspectors verified that the receiving licensee was authorized to receive the shipment packages.

The inspectors determined that the shippers were knowledgeable of the shipping regulations and that shipping personnel demonstrated adequate skills to accomplish the package preparation requirements for public transport. The inspectors verified that the licensee's training program provided training to personnel responsible for the conduct of radioactive waste processing and radioactive material shipment preparation activities.

Shipping Records

The inspectors identified non-excepted package shipment records and verified that the shipping documents indicate the proper shipper name; emergency response information and a 24-hour contact telephone number; accurate curie content and volume of material; and appropriate waste classification, transport index, and shipping identification number. The inspectors verified that the shipment placarding was consistent with the information in the shipping documentation.

Identification and Resolution of Problems

The inspectors verified that problems associated with radioactive waste processing, handling, storage, and transportation, were being identified by the licensee at an appropriate threshold, were properly characterized, and were properly addressed for resolution in the licensee CAP. The inspectors verified the appropriateness of the corrective actions for a selected sample of problems documented by the licensee that involve radioactive waste processing, handling, storage, and transportation. The licensee generated six condition reports to document material condition deficiencies identified during this inspection.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

Mitigating Systems Performance Index (3 samples)

a. <u>Inspection Scope</u>

The inspectors reviewed NextEra's submittal of the Mitigating Systems Performance Index for the following systems for the period of July 1, 2013 through June 30, 2014:

- Emergency alternating current system (MS06)
- High pressure injection system (MS07)
- Heat removal system (MS08)

To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7. The inspectors also reviewed NextEra's operator narrative logs, mitigating systems performance index derivation reports and basis documents, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 2 samples)

.1 Routine Review of Problem Identification and Resolution Activities

a. Inspection Scope

As required by Inspection Procedure 71152, "Problem Identification and Resolution," the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that NextEra entered issues into the CAP at an appropriate threshold, gave adequate attention to timely corrective actions, and identified and addressed adverse trends. In order to assist with the identification of repetitive

equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the CAP and periodically attended condition report screening meetings.

b. Findings

No findings were identified.

.2 Annual Sample: Review of the Operator Workaround Program

a. Inspection Scope

The inspectors reviewed the cumulative effects of the existing operator workarounds, operator burdens, existing operator aids and disabled alarms, and open main control room deficiencies to identify any effect on emergency operating procedure operator actions, and any impact on possible initiating events and mitigating systems. The inspectors evaluated whether station personnel had identified, assessed, and reviewed operator workarounds as specified in NextEra's procedure, OP-AA-108, "Oversight and Control of Operator Burdens," Revision 2.

The inspectors reviewed NextEra's process to identify, prioritize and resolve main control room deficiencies to minimize operator burdens. The inspectors reviewed the system used to track these operator workarounds and recent NextEra self assessments of the program. The inspectors also toured the control room and discussed the current operator workarounds with the operators to ensure the items were being addressed on a schedule consistent with their relative safety significance.

b. Findings and Observations

No findings were identified.

The inspectors determined that the issues reviewed did not adversely affect the capability of the operators to implement abnormal or emergency operating procedures. The inspectors also verified that NextEra Seabrook entered operator workarounds and burdens into the corrective action program at an appropriate threshold and planned or implemented corrective actions commensurate with their safety significance.

.3 Annual Sample: 'B' Reactor Trip Breaker Failure to Close During Surveillance Testing

a. <u>Inspection Scope</u>

The inspectors performed an in-depth review of NextEra's apparent cause evaluation (ACE) and corrective actions associated with condition report AR01893730. AR01893730 was initiated on August 1, 2013, and documented that the 'B' reactor trip breaker (RTB) failed to remain closed during SSPS surveillance testing.

The inspectors assessed NextEra's problem identification threshold, causal analyses, technical analyses, extent of condition reviews, and the prioritization and timeliness of corrective actions to determine whether NextEra was appropriately identifying, characterizing, and correcting problems associated with this issue. The inspectors reviewed the circumstances of earlier reactor trip breaker equipment issues and operating experience to ascertain previous opportunities for NextEra to have identified

and corrected the issue. The inspectors also assessed NextEra's corrective actions to prevent recurrence. The inspectors compared the actions taken to the requirements of NextEra's CAP and 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. In addition, the inspectors reviewed documentation associated with this issue, including condition and failure analysis reports, and interviewed engineering personnel to assess the effectiveness of the implemented corrective actions.

b. Findings and Observations

No findings were identified.

On August 1, 2013, the 'B' RTB failed to remain closed and tripped free during SSPS surveillance testing. The failed RTB was removed from service and quarantined for failure analysis with outside vendor support. The RTB was a Westinghouse DS-416 breaker. The 'B' train of SSPS was returned to service with a replacement RTB and surveillance testing was completed satisfactorily.

NextEra promptly initiated an ACE, maintenance rule functional failure evaluation, and past operability review. The ACE included a tree diagram to determine the apparent causes. The ACE was presented to NextEra's management review committee on September 17, 2013, and was approved with one minor administrative comment. The inspectors judged that the ACE evaluators appropriately considered all potential failure mechanisms and each potential cause was methodically evaluated. The ACE concluded that marginal voltage at the reactor trip switchgear was the apparent or most probable cause for the RTB to trip free during closing. The ACE considered the vendor's failure analysis report, which did not identify any anomalies or failure mechanism in the breaker or its accessories. The vendor's failure analysis report considered the breaker to be in acceptable working order. The apparent cause was consistent with industry operating experience of the same and like breakers, and documented in a vendor technical bulletin. A Pressurized Water Reactor Owner's Group project was also in progress to provide a generic design to recover voltage margin within the RTB undervoltage trip circuit.

NextEra promptly initiated an EC to raise the SSPS power supply voltage for both 'A' and 'B' trains. The EC and associated WOs were intended to be completed in the next refueling outage, OR16, in spring 2014. The inspectors verified that NextEra completed the associated WOs and established a higher SSPS power supply voltage.

NextEra established timely corrective actions to address the apparent cause. The inspectors determined that NextEra's overall response to the 'B' RTB failure to remain closed issue was commensurate with the safety significance, was timely, and the actions taken were reasonable to prevent recurrence.

4OA6 Meetings, Including Exit

On October 10, 2014, the inspectors presented the inspection results to Mr. Dean Curtland, Site Vice President, and other members of the Seabrook Station staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

<u>Licensee Personnel</u>

- D. Curtland. Site Vice President
- T. Vehec, Site Director
- R. Dodds, Plant General Manager
- P. Brangiel, System Engineer
- V. Brown, Senior Licensing Engineer
- M. Ossing, Licensing Manager
- K. Shea, System Engineer

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

Opened/Closed None Opened None Closed None

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

ON1246.03, GSU Trouble, Revision 6

Condition Reports

1990907 1990972

Section 1R04: Equipment Alignment

Procedures

OS1005.05, Safety Injection System Operation, Revision 26

Maintenance Orders/Work Orders

40269521 40327675

<u>Drawings</u>

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*NRC identified

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LIST OF ACRONYMS

ACE apparent cause evaluation

ADAMS Agencywide Document Access and Management System

AR action request

CAP corrective action program
CFR Code of Federal Regulations

CR condition report CT cooling tower

EC Engineering Change

EDG emergency diesel generator

IST inservice test MR maintenance rule

NRC Nuclear Regulatory Commission

PCP process control program
QA quality assurance
RCP reactor coolant pump
RHR residual heat removal
RTB reactor trip breaker

SEPS supplemental emergency power system

SI safety injection

SSC structure, system, and component sSPS solid state protection system

SW service water

TS technical specification

UFSAR Updated Final Safety Analysis Report

UV undervoltage WO work order