



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

May 10, 2016

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 – INTEGRATED INSPECTION REPORT
05000443/2016001

Dear Mr. Curtland:

On March 31, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Seabrook Station, Unit No. 1. The enclosed report documents the inspection results, which were discussed on April 22, 2016, with you and other members of your staff.

NRC inspectors 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.

No NRC-identified or self-revealing findings were identified during this inspection.

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 and 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/

Fred L. Bower, III, Chief
Reactor Projects Branch 3
Division of Reactor Projects

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

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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/RA/

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Reactor Projects Branch 3
Division of Reactor Projects

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

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D. Curtland

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Enclosure:

Inspection Report 05000443/2016001

w/Attachment: Supplementary Information

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D. Curtland

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Letter to D. Curtland from F. L. Bower

SUBJECT: SEABROOK STATION, UNIT NO. 1 – INTEGRATED INSPECTION REPORT
05000443/2016001

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-443

License No.: NPF-86

Report No.: 05000443/2016001

Licensee: NextEra Energy Seabrook, LLC

Facility: Seabrook Station, Unit No.1

Location: Seabrook, New Hampshire 03874

Dates: January 1, 2016 through March 31, 2016

Inspectors: P. Cataldo, Senior Resident Inspector
C. Newport, Resident Inspector
J. Vazquez, Resident Inspector

Approved by: Fred L. Bower, Chief
Reactor Projects Branch 3
Division of Reactor Projects

Enclosure

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SUMMARY

IR 05000443/2016001; 01/01/2016-03/31/2016; 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 began the assessment period operating at full power (100 percent). On January 17, 2016, the plant performed a downpower to 55 percent power, to investigate and repair leaking main condenser tubes, and returned to full power on January 21, 2016. On March 2, 2016, a turbine and reactor trip occurred, due to failures associated with non-safety related inverters and associated elements of the turbine control system (TCS). Seabrook remained shutdown during investigation and recovery from the event until reactor criticality and grid synchronization were achieved on March 6, 2016. Subsequently, Seabrook achieved full power on March 7th, and operated at full power for the remainder of the assessment period. 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. Inspection Scope

The inspectors reviewed NextEra's preparations for the onset of extreme cold weather on February 13-14, 2016. 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 emergency feedwater pumphouse, the cooling tower, and turbine building to ensure system availability. The inspectors verified that operator actions defined in NextEra's adverse weather procedure maintained the readiness of essential systems. 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 (71111.04 – 4 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- 'A' containment building spray return to service on January 12
- 'B' emergency diesel generator (EDG) return to service on January 27
- 'A' EDG return to service on March 16
- Motor-driven emergency feedwater (EFW) pump during steam-driven EFW surveillance test on March 25

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, condition reports (CRs), and the impact of ongoing work activities on redundant trains of equipment to identify conditions that could have impacted the system's performance of its 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

.1 Resident Inspector Quarterly Walkdowns (71111.05Q – 5 samples)

a. Inspection Scope

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.

- 'B' train electrical tunnels (ET-F-1C-A, ET-F-1D-A) on January 7
- Control building control room complex (CB-F-3A-A, CB-F-3B-A) on January 20
- 'A' residual heat removal (RHR) vault (RHR-F-1B-Z, RHR-F-2B-Z, RHR-F-3B-Z) on February 19
- 'A' RHR vault (RHR-F-4B-Z, RHR-F-4B-Z1, RHR-F-4B-Z2) on February 23
- 'A' EDG building (DG-F-1A-A, DG-F-2A-A, DG-F-3E-A, DG-F-3C-A, DG-F-3A-Z) on March 16

b. Findings

No findings were identified.

.2 Fire Protection – Drill Observation (71111.05A – 1 sample)

a. Inspection Scope

The inspectors observed a fire drill scenario conducted on March 16, 2016, that involved a fire in the cable spreading room, as well as a simulated injured person. The inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that NextEra personnel identified deficiencies, openly discussed them in a self-critical manner at the debrief, and took appropriate corrective actions as required. The inspectors evaluated the following specific attributes of the drill:

- Proper wearing of turnout gear and self-contained breathing apparatus
- Proper use and layout of fire hoses
- Employment of appropriate fire-fighting techniques
- Sufficient fire-fighting equipment brought to the scene
- Effectiveness of command and control
- Search for victims and propagation of the fire into other plant areas
- Smoke removal operations
- Utilization of pre-planned strategies
- Adherence to the pre-planned drill scenario
- Drill objectives met

The inspectors also evaluated the fire brigade's actions to determine whether these actions were in accordance with NextEra's fire-fighting strategies.

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification Program and Licensed Operator Performance
(71111.11Q – 2 samples)

.1 Quarterly Review of Licensed Operator Regualification Testing and Training

a. Inspection Scope

The inspectors observed licensed operator simulator training on January 25, 2016, which included various instrument failures, a reactor coolant system leak, an ATWS event, as well as actions associated with a loss of heat sink utilizing functional recovery procedures. 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 manager. 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 infrequently performed test or evolution briefings, pre-shift briefings, and reactivity control briefings to verify that the briefings met the criteria specified in NextEra's Administrative Procedure OP-AA-100-1000, "Conduct of Operations," Revision 16. For example, the inspectors observed the TS entry for EFW testing, alarm response and follow-up actions for HF system differential pressure perturbations, and operator response to closed stroke times identified outside

acceptance criteria for valve 1-MS-V-393 (EFW steam supply), on January 13, 2016. Additionally, the inspectors conducted control room observations during the reactor downpower for main condenser tube leak repair on January 17, 2016. On March 2, 2016, inspectors observed startup feed pump trip recovery and the inadvertent EFW actuation, following the unexpected turbine and reactor trip. The inspectors, as applicable, observed operator 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 (71111.12Q – 2 samples)

a. Inspection Scope

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 work orders (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 Title 10 of the *Code of Federal Regulations* (10 CFR) 50.65 and verified that the (a)(2) performance criteria established by NextEra staff were 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.

- Several fire protection and CEVA seal degradation history and repair activities
- RC-V-22 packing leak from OR17, and subsequent repair activities during forced outage in March 2016

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 5 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 technical specification requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

- 'A' EFW and 'A' ASDV operability testing on January 13
- 'B' EDG fast start operability surveillance on January 26
- 'B' service water cooling tower quarterly pump and discharge valve resting on March 10
- Turbine driven EFW pump quarterly operability test on March 24
- ISO-NE issued grid threat, existing downpower contingency, and degraded grid abnormal procedure entry on March 30

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 6 samples)

a. Inspection Scope

The inspectors reviewed operability determinations for the following degraded or non-conforming conditions based on the risk significance of the associated components and systems:

- RC-V-22 packing leakage on January 4
- 'A' EDG jacket water keep warm system relay CHT-1 broken varistor on January 11
- Primary auxiliary building low pressure alarms on January 12
- MS-V-393 failed stroke time on January 13
- CEVA seal No. 7601 degradation on February 4
- EFW building damper No. 373 failure to open and subsequent troubleshooting in March 2016

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. The inspectors confirmed, where appropriate, compliance with bounding limitations associated with the evaluations. 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.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 – 1 sample)Temporary Modificationsa. Inspection Scope

The inspectors reviewed the temporary modifications listed below to determine whether the modifications affected the safety functions of systems that are important to safety. The inspectors reviewed 10 CFR 50.59 documentation and post-modification testing results, and conducted field walkdowns of the modifications to verify that the temporary modifications did not degrade the design bases, licensing bases, and performance capability of the affected systems.

- Temporary code repair of steam generator blowdown cooler, 1-SB-E-88A, on March 30

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 6 samples)a. Inspection Scope

The inspectors reviewed the post-maintenance tests for the maintenance activities listed below to verify that procedures and test activities adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure were consistent with the information in the applicable licensing basis and/or design basis documents, and that the test results were properly reviewed and accepted and problems were appropriately documented. The inspectors also walked down the affected job site, observed the pre-job brief and post-job critique where possible, confirmed work site cleanliness was maintained, and witnessed the test or reviewed test data to verify quality control hold point were performed and checked, and that results adequately demonstrated restoration of the affected safety functions.

- 'A' supplemental emergency power system radiator vent line replacement on January 14
- 'A' EFW and 'A' ASDV nitrogen regulator repair on January 14
- 'A' PORV breaker inspection, circuit no. 4 on MCC-521, on January 20
- 'D' MSIV solenoid replacement on February 4
- 'A' residual heat removal valve RC-V-22 repack on March 4
- 'A' thermal barrier pump discharge check valve inspection on March 23

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20 – 1 sample)Forced Outage for Turbine Control System (TCS) Investigation and Repairs, Repack of RC-V22, and Condenser Tube Repairsa. Inspection Scope

The inspectors reviewed the station's daily work schedules and outage risk assessments for the Unit 1 forced outage, following the unexpected plant trip on March 2, 2016, and verified that risk, industry experience, previous site-specific problems, and defense-in-depth were considered. During the outage, the inspectors observed operator performance and other attributes associated with portions of the shutdown and cooldown processes, and compliance with cooldown rates associated with TS. Further, the inspectors reviewed multiple surveillance and other critical evolutions in the control room, and monitored controls associated with the following outage activities:

- Configuration, risk, and outage management, including monitoring of key shutdown safety functions, and compliance with the applicable TSs when taking equipment out of service;
- Implementation of clearance activities and confirmation that tags were properly hung and that equipment was appropriately configured to safely support the associated work or testing;
- Status and configuration of electrical systems and switchyard activities to ensure that TSs were met;
- Monitoring of decay heat removal operations, during initial onset into shutdown cooling;
- Reactor water makeup and inventory controls, including appropriate flow paths, configurations, alternative means for inventory additions, and controls to prevent inventory loss;
- Activities that could affect reactivity;
- Fatigue management that involved covered workers, and review of work hour controls and waivers;
- Prioritization and completion of mode hold CRs and work orders, and review of operating mode transition checklists;
- Performed a final containment closeout/walk-down to verify that debris or equipment had not been left inside, particularly in areas that could impact operability of the containment recirculation sumps; additionally, performed condition assessment of debris interceptor screens, scuppers and doorways that contribute to overall operability of the containment sumps and emergency core cooling systems and component;
- Reactor start-up, plant heat-up, and power ascension activities; and
- Problem identification and resolution actions related to Forced Outage 16-01 activities.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 5 samples)a. Inspection Scope

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:

- Reactor coolant system vent path block valve quarterly surveillance test on January 22 (in-service test)
- Main steam isolation valve quarterly test on January 28
- Alert surveillance run of 'B' charging pump on March 8
- 'A' EDG fast start operability surveillance with slave relay test on March 15
- 'A' train EFW pumphouse ventilation surveillance test on March 24

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness1EP6 Drill Evaluation (71114.06 – 2 samples).1 Emergency Preparedness Drill Observationa. Inspection Scope

The inspectors evaluated the conduct of a routine NextEra emergency drill on February 10, 2016, to identify any weaknesses and deficiencies in the classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the simulator, the technical support center, and the emergency operations facility, to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the station drill critique to compare inspector observations with those identified by NextEra staff in order to evaluate NextEra's critique and to verify whether NextEra staff was properly identifying weaknesses and entering them into the CAP.

b. Findings

No findings were identified.

.2 Emergency Preparedness Training Observations

a. Inspection Scope

The inspectors observed a simulator training evolution for Unit 1 licensed operators on January 25, 2016, 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 corrective action program.

b. Findings

No findings were identified.

4. **OTHER ACTIVITIES**

4OA1 Performance Indicator Verification (71151)

Unplanned Scrams, Unplanned Power Changes, and Unplanned Scrams with Complications (3 samples)

a. Inspection Scope

The inspectors reviewed NextEra's submittals for the following Initiating Events Cornerstone performance indicators for the period of January 1, 2015 to December 31, 2015.

- Unplanned scrams per 7,000 critical hours
- Unplanned power changes per 7,000 critical hours
- Unplanned scrams with complications

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

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152)

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 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 CR screening meetings. The inspectors also confirmed, on a sampling basis, that, as applicable, for identified defects and non-conformances, NextEra performed an evaluation in accordance with 10 CFR Part 21.

b. Findings

No findings were identified.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153 – 1 sample)

Plant Events

a. Inspection Scope

For the plant events listed below, the inspectors reviewed and/or observed plant parameters, reviewed personnel performance, and evaluated performance of mitigating systems. The inspectors communicated the plant events to appropriate regional personnel, and compared the event details with criteria contained in Inspection Manual Chapter 0309, "Reactive Inspection Decision Basis for Reactors," for consideration of potential reactive inspection activities. As applicable, the inspectors verified that NextEra made appropriate emergency classification assessments and properly reported the event in accordance with 10 CFR Parts 50.72 and 50.73. The inspectors reviewed NextEra's follow-up actions related to the events to assure that NextEra implemented appropriate corrective actions commensurate with their safety significance.

- Turbine and reactor trip due to the unexpected loss of non-safety related Inverter No. 11 and resultant TCS perturbation on March 2

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On April 22, 2016, 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

Licensee Personnel

D. Curtland, Site Vice President
R. Dodds, Plant General Manager
V. Brown, Senior Licensing Engineer
K. Douglas, Maintenance Director
D. Strand, Radiation Protection Manager
M. Ossing, Licensing Manager
D. Ritter, Site Operations Director
D. Robinson, Chemistry Manager

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

Opened

None

Closed

None

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

OS1090.09, Station Cold Weather Operations, Revision 3
OP-AA-102-1002, Seasonal Readiness, Revision 10

Condition Reports

2075786 2075788

Maintenance Orders/Work Orders

40334413 40363048

Section 1R04: Equipment Alignment

Procedures

OS1006.04, Operation of the Containment Spray System, Revision 25
OS1026.05, Operating the DG 1A Fuel Oil System, Revision 18
OS1026.10, Operation of the DG 1B Lube Oil System, Revision 12
OS1026.12, Operation of the DG 1B Starting Air System, Revision 16
OS1026.13, Operation of the DG 1B Fuel Oil System, Revision 15

Condition Reports

02102114 02105789 02108743 02110450

Maintenance Orders/Work Orders
40375327

Drawings

1-FW-B20688, Emergency Feedwater System Details, Revision 21

Section 1R05: Fire Protection

Condition Reports

02111575 02111600 02114332 02116297

Miscellaneous

MS-MISC-43, Verification of Combustibles, Fire Loading, Temperature in Fire Zones of the Control Building, Revision 6

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, 'A' EDG Bldg, DG-F-1A-A

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, 'A' EDG Bldg, DG-F-2A-A

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, 'A' EDG Bldg, DG-F-3E-A

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, 'A' EDG Bldg, DG-F-3C-A

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, 'A' EDG Bldg, DG-F-3A-Z

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, 'A' RHR Vault, RHR-F-1B-Z

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, 'A' RHR Vault, RHR-F-2B-Z

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, 'A' RHR Vault, RHR-F-3B-Z

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, 'A' RHR Vault, RHR-F-4B-Z

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, 'A' RHR Vault, RHR-F-4B-Z1

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, 'A' RHR Vault, RHR-F-4B-Z2

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, Control Building Cable Spreading Room, CB-F-2A-A

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, Control Building Control Room Complex, CB-F-3A-A

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, Control Building Control Room Complex, CB-F-3B-A

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, Electrical Tunnels "B" Train, ET-F-1C-A

Seabrook Station Fire Protection Pre-Fire Strategies, Volume I, Electrical Tunnels "B" Train, ET-F-1D-A

Section 1R11: Licensed Operator Regualification Program

Miscellaneous

Simulator Demonstrative Examination #25, Revision 14

Section 1R12: Maintenance Effectiveness

Procedures

MS0519.21, Valve Packing Maintenance, Revision 17

Condition Reports

2090440	2090822	2099091	2106623	2112843	2113394
2114330	2116024	2117035			

Maintenance Orders/Work Orders

40306829 40425261 40427463

Miscellaneous

FP 4497R-02, Penetration Seal Design, Bisco Seal No. PB-021-EV101-7602

Valve Packing Datasheet: 1-RC-V-22, Revisions 1 and 2

Work Request 94134345

Section 1R13: Maintenance Risk Assessments and Emergent Work ControlProcedures

ODI.101, Guarded Equipment Recommendations for Refueling Outages, Revision 16

OP-AA-102-1003, Guarded Equipment, Revision 11

OX1416.05, Service Water Cooling Tower Pumps' Quarterly and 2 Year Comprehensive Test,
Revision 24OX1436.02, Turbine Driven Emergency Feedwater Pump Quarterly And Monthly Valve
Alignment, Revision 24

WM-100-AA-1000, Work Activity Risk Management, Revision 5

Condition Reports

2121663 2121679

Maintenance Orders/Work Orders

40392794 40392897 40386200

Miscellaneous

Instructions for Determining Risk for an Emergent Condition using Phoenix

Maintenance Rule a(4) Risk Profile for Work Week 1602-01

Maintenance Rule a(4) Risk Profile for Work Week 1613-01

Section 1R15: Operability Determinations and Functionality AssessmentsProcedures

EN-AA-203-1001, Operability Determinations/Functionality Assessments, Revision 17

OS1023.56, Primary Auxiliary Building Ventilation System Operation, Revision 16

OX1430.04, Main Steam System Valve operability Tests, Revision 9

Condition Reports

01636221	01659605	01699396	01814056	01953629	01953635
02078472	02090155	02090440	02090708	02090822	02091755
02091800	02092166	02094832	02098877	02099091	02100232
02100311	02101311	02101312	02101314	02101317	02101826
02102315	02102316	02102565	02103429	02107678	

Maintenance Orders/Work Orders

40306829 40312145 40425374 40441213 40441336

Miscellaneous

F8144 PAB Exhaust Air Pressure Low Alarm Response Procedure
 MS-PV-3001 Maintenance Rule Function Failure Evaluation
 MS-V-393 Troubleshooting Control Form
 NUREG-1022, Event Report Guidelines 10CFR 50.72(b)(3)(xiii), Revision 3, Supplement 1
 Operational Decision Making Bulletin dated December 23, 2015
 Valve Packing Datasheet: 1-RC-V-22, Revision 1

Drawings

D-99930, Motor Op Gate Valve, Sh 10, Revision 1
 1-MAH-B20494, Miscellaneous Air Handling PAB El. 53'-0" & 81'-0" Detail, Revision 18
 1-MAH-B20495, Miscellaneous Air Handling PAB & Containment Enclosure Ventilation Area Detail, Revision 18
 1-MAH-B20496, Miscellaneous Air Handling PAB & RHR Vaults Detail, Revision 12
 1-NHY-250000, Valve Data Sheet, Revision 81

Section 1R18: Plant ModificationsProcedures

ES1807.002, Liquid Penetrant Examination - Solvent Removable, Revision 11

Condition Reports

2120678 2121002 2121026

Maintenance Orders/Work Orders

40457125

Miscellaneous

EC286116
 Specification 9763-006-258-5

Section 1R19: Post-Maintenance TestingProcedures

IS0652.955, Main Steam Isolation Valve Maintenance, Revision 10
 EX1804.047, Reactor Coolant System Pressure Isolation Valve Leakage Rate Tests (Containment), Revision 9
 LX0557.15, Inspection and PM of Single and Double Pole Molded Case Breakers, Revision 6
 MS0519.84, Velan Bolted Bonnet Check Valve Style I Hanger Type Maintenance, Revision 7
 OX1461.01, SEPS Full Load Testing Surveillance, Revision 6
 OX1436.02, Turbine Driven Emergency Feedwater Pump Quarterly And Monthly Valve Alignment, Revision 24
 OX1436.81, Operability Testing OF IST Valves, Revision 24
 OX1430.02, Main Steam Isolation Valve Quarterly Test, Revision 16

Condition Reports

02087598	02091258	02101238	02102028	02102315	02102565
02102782	02103403	02103429	02105931	02106397	02109568
02113003	02113082	02113089	02115337		

Maintenance Orders/Work Orders

40312145	40327454	40339187	40340584	40422473	40427463
40437995	40441306	40441336	40441339	40452304	

Section 1R20: Refueling and Other Outage ActivitiesProcedures

AD-AA-101-1004, Work Hour Controls, Revision 16
 ON1090.04, Containment Entry, Revision 32
 OP-AA-102-1003, Guarded Equipment, Revision 9
 OS1000.04, Plant Cooldown From Hot Standby To Cold Shutdown, Revision 52
 OS1201.02, RCS Leak, Revision 17
 OS1000.07, Approach To Criticality, Revision 13
 OS1007.01, Automatic And Manual Rod Control, Revision 12
 OX1406.12, 18 Month Containment And Containment Spray Recirculation Sump Surveillance,
 Revision 11
 RS1735, Reactivity Calculations, Revision 8

Condition Reports

02094832	02113506	02115432	02115484	02116500
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Miscellaneous

Form A, Supplemental Log Sheets, RCS Heatup and Cooldown Log, dated 3/2/16

Section 1R22: Surveillance TestingProcedures

MA-AA-100-1011-F01, Initial Troubleshooting Investigation, Revision 0
 OS1423.20, EFW Pumphouse Ventilation Quarterly Operability Surveillance, Revision 7
 OX1401.03, RCS Vent Path Block Valve Quarterly, Cold Shutdown, and 18 Month Surveillance
 Test, Revision 14
 OX1426.26, DG 1A Semiannual Operability Surveillance, Revision 21
 OX1430.02, Main Steam Isolation Valve Quarterly Test, Revision 16
 OX1456.01, Charging Pump A & B Quarterly Flow and Valve Stroke Test and 18 Month Remote
 OX1456.24, Train A ESFAS Slave Relay K608 Quarterly Go Test, Revision 8
 OX1456.81, Operability testing of IST Valves, Revision 24
 Position Indication Verification, Revision 22
 OX1456.86, Operability Testing of IST Pumps, Revision 11

Condition Reports

02099116	02099524	02100795	02104256	02104303	02105931
02107136	02110725	02111460	02119394	02120131	

Maintenance Orders/Work Orders

40352674	40374290	40392795	40395409	40450337
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Section 1EP6: Drill Evaluation

Procedures

CFD 16-01 Drill Scenario Guide

ER2.0B, Seabrook Station State Notification Fact Sheet, Revision 31

ER1.1A, Emergency Initiating Condition Matrix, Revision 46

Miscellaneous

Simulator Demonstrative Examination #25, Revision 14

Section 4OA1: Performance Indicator Verification

Procedures

NAP-206, NRC Performance Indicators, Revision 7

Miscellaneous

LIC-15015, Documentation Supporting the Seabrook Station NRC 1st Quarter 2015
Performance Indicator Submittal

LIC-15026, Documentation Supporting the Seabrook Station NRC 2nd Quarter 2015
Performance Indicator Submittal

LIC-15032, Documentation Supporting the Seabrook Station NRC 3rd Quarter 2015
Performance Indicator Submittal

LIC-16002, Documentation Supporting the Seabrook Station NRC 4th Quarter 2015
Performance Indicator Submittal

NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 7

Section 4OA3: Follow-up of Events and Notices of Enforcement Discretion

Procedures

E-0, Reactor Trip or Safety Injection, Revision 50

ES-0.1, Reactor Trip Response, Revision 37

OS1000.08, Post Trip Review, Revision 23

OS1000.11, Post Trip To Hot Standby, Revision 18

Condition Reports

02114330 02115380

Miscellaneous

Sequence of events report, main plant computer data logger for specific plant parameters

NRC Event Report Nos. 51762, 51765

LIST OF ACRONYMS

ADAMS	Agencywide Document Access and Management System
CAP	Corrective Action Program
CFR	<i>Code of Federal Regulations</i>
CR	Condition Report
EDG	Emergency Diesel Generator
EFW	Emergency Feedwater
MR	Maintenance Rule
NRC	Nuclear Regulatory Commission
RHR	Residual Heat Removal
SSC	Structure, System, and Component
TCS	Turbine Control System
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
WO	Work Order