UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

November 14, 2012

Mr. Kevin Walsh
Site Vice President
Seabrook Nuclear Power Plant
NextEra Energy Seabrook, LLC
c/o Mr. Michael O'Keefe
P.O. Box 300
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 - NRC INTEGRATED INSPECTION REPORT 05000443/2012004

Dear Mr. Walsh:

On September 30, 2012, 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 3, 2012 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.

This report documents one self-revealing and two NRC-identified findings of very low safety significance (Green). These findings were determined to involve violations of NRC requirements. Additionally, a licensee-identified violation, which was determined to be of very low safety significance, is listed in this report. However, because of the very low safety significance, and because it was entered into your corrective action program (CAP), the NRC is treating the finding as a non-cited violation (NCV), consistent with Section 2.3.2 of the NRC's Enforcement Policy. If you contest any NCVs in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Seabrook Station. In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Resident Inspector at Seabrook Station.

In accordance with 10 Code of Federal Regulations (CFR) 2.390 of the NRCs "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 by Leonard Cline Acting for/

Arthur L. Burritt, Chief
Reactor Projects Branch 3
Division of Reactor Projects

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

Enclosure: Inspection Report No. 05000443/2012004
w/ Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	50-443
License No.:	NPF-86
Report No.:	05000443/2012004
Licensee:	NextEra Energy Seabrook, LLC
Facility:	Seabrook Station, Unit No.1
Location:	Seabrook, New Hampshire 03874
Dates:	July 1, 2012 to September 30, 2012
Inspectors:	J. Greives, Acting Senior Resident Inspector W. Raymond, Senior Resident Inspector K. Dunham, Acting Resident Inspector M. Jennerich, Resident Inspector J. Noggle, Sr. Health Physicist T. Burns, Reactor Inspector J. Furia, Sr. Health Physicist P. Cataldo, Senior Resident Inspector
Approved by:	Arthur Burritt, Chief Reactor Projects Branch 3 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000443/2012004; 07/01/2012 - 09/30/2012; Seabrook Station, Unit No. 1; Mitigating System, Emergency Preparedness, Occupational Radiation Safety.

This report covered a three-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. Inspectors identified three non-cited violations (NCVs) of very low safety significance (Green). The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). The cross-cutting aspects for the findings were determined using IMC 0310, "Components Within Cross-Cutting Areas." Findings for which the SDP does not apply may be Green, or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Cornerstone: Mitigating System

- Green. The inspectors identified an NCV of 10 CFR 50, Appendix B, Criterion V, "Procedures," because NextEra did not ensure that adequate separation was maintained between temporary scaffolding and safety-related equipment. Specifically, the inspectors identified numerous scaffolds installed in the plant with less than the minimum standoff distance to safety-related equipment specified in NextEra procedures and no engineering evaluation to support the deviation. NextEra entered this NCV into their CAP as CR 1804255.

  This performance deficiency was considered more than minor because it affected the protection against external factors attribute of the Mitigating Systems cornerstone and its objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, NextEra routinely did not evaluate scaffold installations when insufficient separation to safety-related equipment was provided. Additionally, it was similar to example 4.a in IMC 0612, Appendix E, "Examples of Minor Issues," which states that the issue of failing to appropriately evaluate scaffold installation as required by procedures is more than minor if the licensee routinely failed to perform engineering evaluations. The issue was evaluated in accordance with IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power" and determined to be of very low safety significance (Green) since it did not involve the loss or degradation of equipment or function specifically designed to mitigate a seismic event. This finding is related to the cross-cutting area of Human Performance - Work Practices because NextEra personnel did not follow scaffold installation procedures when they routinely installed scaffold within one-half inch of safety-related equipment without an engineering evaluation. [H.4.(b)]. (Section 1R20)

Cornerstone: Emergency Preparedness

- Green. A self-revealing NCV of 10 CFR 50.47(b)(5) and the requirements of Section IV.D.3 of Appendix E to 10 CFR 50 was identified on June 13, 2012, because NextEra did not notify the state of Massachusetts within 15 minutes of declaring an emergency at the Seabrook Station. Specifically, the inspectors determined that NextEra did not maintain the site's off-site notification process in a manner that ensured that the RSPS function described by 10 CFR 50.47(b)(5) could be met with the multiple equipment malfunctions that occurred

between June 12 and June 14, 2012. The issue was entered into NextEra's corrective action program as CR 1775909.

The performance deficiency was considered more than minor because it was associated with the Emergency Preparedness (EP) cornerstone attributes of Procedure Quality and Facilities and Equipment, and affected the cornerstone objective of ensuring that a licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Specifically, EP equipment was not treated as equipment important to safety and thus marginal equipment performance with regard to the NAS was tolerated, and the notification process implementing procedure was cumbersome such that it did ensure timely notification when presented with equipment failures. The inspectors assessed the issue, related to the notification process, using the Emergency Preparedness Significance Determination Process (Appendix B to IMC 0609) and determined the finding to be of very low safety significance (Green). This finding is related to the cross-cutting area of Problem Identification and Resolution - CAP because NextEra did not consistently enter issues with communications equipment necessary for EP purposes into the station's CAP such that immediate corrective actions could be taken to ensure the RSPS function was met [P.1(a)] (Section 1EP6)

Cornerstone: Occupational Radiation Safety

- Green. Inspectors identified an NCV of Technical Specification (TS) 6.7.1.a, "Procedures and Programs," which requires that written procedures be established and implemented, to include administrative procedures, which includes radiation protection procedures. Specifically, procedure HD 0965.10, "Respirator Fit Testing Using TSI Portacount Plus," Revision 10, did not specify a calibration frequency requirement for the respirator fit test equipment. The equipment vendor recommended annual calibration frequency, which was exceeded by over two years, and the current as-found condition of the specified equipment when tested was found out of calibration. This issue was entered into NextEra's CAP as CR 1785134.

  This performance deficiency was determined to be more than minor, because it was associated with program and process attribute of the Occupational Radiation Safety cornerstone and affected its objective to ensure adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Specifically, the respirator fit testing was being used to certify respirator protection factors of workers which were relied upon to provide protection of workers due to airborne radioactivity during the previous refueling outage. Additionally, it was similar to example 6.b in IMC 0612, Appendix E, "Examples of Minor Issues," which states that failing to calibrate radiation instruments was more than minor if the as-found condition was not within the acceptance criteria for the calibration and did not provide a conservative measurement. The issue was evaluated using IMC 0609, "Significance Determination Process" (SDP), and was determined to be of very low safety significance. Specifically, when evaluated with IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the performance deficiency was not an ALARA issue, did not involve an overexposure or a potential overexposure, and did not impact NextEra's ability to assess dose. The inspectors determined that this finding had a cross-cutting aspect in the area of Problem Identification and Resolution - CAP because NextEra did not identify that vendor recommended calibration requirements had not been met or evaluated when this equipment was returned by the vendor for routine cleaning. [P.1(a)] (Section 2RS3)

Other Findings

A violation of very low safety significance identified by NextEra was reviewed by the inspectors. Corrective actions taken or planned by NextEra have been entered into their CAP. This violation and corrective action tracking number are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Seabrook operated at 85% power at the start of the period and experienced a reactor trip on September 14, 2012, following a failure of the 'C' main feedwater regulating valve controller. Following the reactor trip, Unit 1 remained shutdown for a planned refueling outage.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 – 1 sample)

.1 Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

The inspectors performed a review of NextEra's readiness for heavy rains and high winds on September 18, 2012. The review focused on site housekeeping and its potential impact on off-site power and the supplemental emergency power system (SEPS) diesel generators. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), technical specifications, the shutdown risk profile, and the CAP to determine what systems were most risk significant given plant conditions, and to ensure NextEra personnel had adequately prepared for any potential challenges due to adverse weather. The inspectors reviewed station procedures, including NextEra's severe weather procedure and applicable operating procedures. The inspectors performed walkdowns of the selected systems to ensure station personnel identified issues that could challenge the operability of the systems during adverse weather conditions. Documents reviewed for each section of this inspection report are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04Q – 3 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- Diesel generator (DG) train 'B' during planned maintenance activities on DG train 'A' on July 05, 2012
- Residual heat removal (RHR) train 'A' during planned maintenance activities on RHR train 'B' on July 11, 2012
- Spent fuel pool cooling during full core offload on September 26, 2012

The inspectors selected these systems based on their risk-significance for the current plant configuration or following realignment. The inspectors reviewed applicable operating procedures, system diagrams, the UFSAR, technical specifications, work orders, 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.

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.

- DG train 'A' building on July 08, 2012
- Emergency feedwater pump house on July 13, 2012
- SEPS on July 16, 2012
- Containment building on September 15, 2012
- Fuel handling building on September 26, 2012

1R06 Flood Protection Measures (71111.06 – 1 sample)

.1 Internal Flooding Review

a. Inspection Scope

The inspectors reviewed the UFSAR, the site internal flooding analysis, and plant procedures to verify that NextEra's flooding mitigation plans and equipment are consistent with the design requirements and the risk analysis assumptions. The inspectors also reviewed the CAP to determine if NextEra identified and corrected flooding problems and whether operator actions for coping with flooding were adequate. The inspectors focused on the 'A' RHR vault and mechanical penetration room to verify the adequacy of equipment seals located below the flood line, floors and water penetration seals, watertight door seals, common drain lines and sumps, sump pumps, level alarms, control circuits, and temporary or removable flood barriers.

b. Findings

No findings were identified.

1R07 Heat Sink Performance (711111.07A – 1 sample)

a. Inspection Scope

The inspectors reviewed the 'A' primary component cooling water (PCCW) heat exchanger's thermal performance to determine its readiness and availability to perform its safety functions. The inspectors reviewed the design basis for the component, and assessed results of inspections of the heat exchangers. The inspectors discussed the results of the most recent inspection with engineering staff and assessed documentation of the as-found condition. The inspectors observed actual performance tests for heat exchanger/sinks or reviewed the data/reports from the performance tests for any obvious problems or errors. The inspectors verified that NextEra initiated appropriate corrective actions for identified deficiencies. The inspectors also verified, if any tubes were plugged, the number of tubes plugged within the heat exchanger did not exceed the maximum amount allowed.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (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 July 26, 2012, which included a response to an inadvertent phase 'A' containment isolation coincident with steam generator feed flow instrument failure. 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 licensed operations personnel. 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 licensed operator performance in the main control room during plant cool down on September 15, 2012. The inspectors observed operations staff transition to cooling the plant using 'A' RHR in preparation for a planned refueling outage. The inspectors evaluated operator performance relative to control board manipulations, response to off-normal conditions and the use of operating procedures and verified all actions were in accordance with NextEra's Conduct of Operations procedure OP-AA-100-1000, Revision 5. The inspectors assessed the clarity and effectiveness of communications, use of error prevention techniques, implementation of actions in response to alarms and degrading plant conditions, and the oversight and direction provided by the control room supervisor.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12 – 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, maintenance backlogs, and maintenance rule (MR) basis documents to ensure that NextEra was identifying and properly evaluating performance problems within the scope of the MR. As applicable, 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; for SSCs classified as (a)(1), the inspectors assessed the adequacy of goals and corrective actions to return these SSCs to (a)(2); and, the inspectors independently verified that appropriate work practices were followed for the SSCs reviewed. Additionally, the inspectors ensured that NextEra staff was identifying and addressing common cause failures that occurred within and across MR system boundaries.

- Engineered safety features actuation system (ESFAS) performance on September 12, 2012
- DG maintenance activities review on August 20-24, 2012

b. Findings

A Green NCV of TS 6.7, "Procedures and Programs," associated with an inadequate ESFAS surveillance implementing procedure was identified by NextEra and is documented in section 4OA7 of this report.

1R13 Maintenance Risk Assessments and Emergent Work Control (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. As applicable for each

activity, the inspectors verified that NextEra personnel performed risk assessments as required by 10 CFR 60.65(a)(4) and applicable station procedures, 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 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.

- Planned maintenance associated with ESFAS and service water (SW) valve testing on July 12, 2012
- Planned maintenance associated with SEPS on August 21-22, 2012
- Planned maintenance associated with ESFAS and RHR valve testing on August, 29 2012
- Planned maintenance associated with reduced inventory and reactor head lift on September 21, 2012

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 4 samples)

a. Inspection Scope

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

- CR 01782530, operability of rod deviation monitor with inaccurate display parameter on July 11, 2012
- CR 01785593, missed surveillance for low-low steam generator level to emergency feedwater actuation on July 19, 2012
- CR 01789615, 'A' pressure-operated relief valve (PORV) with auto open permissive alarms on July 31, 2012
- CR 01803149, inaccurate position indication of containment isolation valves on loss of power to emergency bus on September 5, 2012

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 technical specifications 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 assumptions in the evaluations.

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 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.

- DG 'B' power pill replacement on July 5, 2012
- 'A' PORV auto open permissive card replacement on August 1, 2012
- EDE-BC-1C battery charger capacity test on August 13, 2012
- Motor operated valve CS-V460 preventative maintenance on August 14, 2012
- SEPS DG maintenance on August 22, 2012
- IA-531 local leak rate test corrective maintenance on September 17, 2012

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope

The inspectors reviewed the station's work schedule and outage risk plan for the maintenance and refueling outage (OR15), which was conducted September 15 through September 30, 2012, the end of the inspection period. The inspectors reviewed NextEra's development and implementation of outage plans and schedules to verify that risk, industry experience, previous site-specific problems, and defense-in-depth were considered. During the outage, the inspectors observed portions of the shutdown and cooldown processes and monitored controls associated with the following outage activities:

- Configuration management, including maintenance of defense-in-depth, commensurate with the outage plan for the key safety functions and compliance with the applicable technical specifications 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

- Installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication and instrument error accounting
- Status and configuration of electrical systems and switchyard activities to ensure that technical specifications were met
- Monitoring of decay heat removal operations
- Impact of outage work on the ability of the operators to operate the spent fuel pool cooling system
- Reactor water inventory controls, including flow paths, configurations, alternative means for inventory additions, and controls to prevent inventory loss
- Activities that could affect reactivity
- Maintenance of containment as required by technical specifications
- Refueling activities, including fuel handling and fuel receipt inspections
- Fatigue management
- Identification and resolution of problems related to refueling outage activities

The refueling outage remained in progress at the end of this inspection period.

b. Findings

Introduction. Inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion V, "Procedures," because NextEra did not ensure that adequate separation was maintained between temporary scaffolding and safety-related equipment. Specifically, the inspectors identified numerous scaffolds installed in the plant with less than the minimum standoff distance to safety-related equipment specified in NextEra procedures and no engineering evaluation to support the deviation.

Description. 10 CFR 50 Appendix B, Criterion V, requires that activities affecting quality be prescribed by documented procedures and be accomplished in accordance with those procedures. When used in the plant, the design and installation of temporary scaffold must be controlled to ensure that it is not installed too close to safety-related equipment. During a seismic event, scaffold installed too close to safety-related equipment can come in contact with that equipment, cause damage to it and affect its safety function. NextEra procedures control the installation of temporary scaffold at Seabrook by specifying a minimum separation between scaffold and safety related equipment and by requiring an engineering evaluation in cases when the minimum separation cannot be met.

NextEra uses multiple procedures to control the design and installation of scaffold at Seabrook. NextEra administrative procedure, MA 4.8, "Control of Scaffolding," Revision 9, states that scaffold member separation from plant equipment should be a minimum of two inches whenever practicable and that scaffold member separation from plant equipment that is one-half inch or less requires an engineering evaluation.

While performing plant walkdowns on August 30 and October 1, 2012, the inspectors identified several temporary scaffolds installed in close proximity to safety-related equipment. The inspectors noted that the majority of scaffolds installed in safety-related areas were installed within two inches of safety-related equipment and that several scaffolds were also installed within one-half inch of safety-related equipment. This included three installations where scaffold poles were actually in contact with the safety-related components. In all cases, the installations within one half inch of safety related

equipment did not include an engineering evaluation that provided acceptance of separation at less than one-half inch. Having identified many instances where NextEra personnel had not complied with the temporary scaffold installation procedures, the inspectors concluded that NextEra was not adequately controlling the design and installation of temporary scaffolds.

Following inspector identification of the issue, NextEra performed independent walkdowns of all scaffolding and entered any discrepancies into the CAP. All discrepancies were corrected and assessed for any potential impact to the operability or functionality of the system. The inspectors reviewed the CRs and determined that the safety function of each system potentially impacted by temporary scaffolding, which included those identified by the inspectors and by NextEra, would not have been degraded during a seismic event.

Analysis. Inspectors determined that not providing adequate separation between temporary scaffold and safety-related equipment, without an engineering basis, was a performance deficiency within NextEra's ability to foresee and correct. Specifically, several scaffolds were observed within one-half inch of safety-related equipment without an engineering evaluation as specified by current procedural requirements. This performance deficiency was considered more than minor because it affected the protection against external factors attribute of the Mitigating Systems cornerstone and its objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, NextEra routinely did not evaluate scaffold installations when insufficient separation to safety-related equipment was provided. Additionally, it was similar to example 4.a in IMC 0612, Appendix E, "Examples of Minor Issues," which states that the issue of failing to appropriately evaluate scaffold installation as required by procedures is more than minor if the licensee routinely failed to perform engineering evaluations. The issue was evaluated in accordance with IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power" and determined to be of very low safety significance (Green) since it did not involve the loss or degradation of equipment or function specifically designed to mitigate a seismic event.

This finding is related to the cross-cutting area of Human Performance- Work Practices because NextEra did not ensure that personnel work practices support human performance (H.4.b). Specifically, NextEra personnel did not follow scaffold installation procedures when they routinely installed scaffold within one-half inch of safety-related equipment without an engineering evaluation.

Enforcement. 10 CFR 50, Appendix B, Criterion V, requires, in part, that activities affecting quality shall be prescribed by documented procedures and shall be accomplished in accordance with those procedures. Contrary to this requirement, between August 30, 2012, and October 1, 2012, the inspectors identified that certain activities affecting quality at Seabrook were not accomplished in accordance with documented procedures. Specifically, NextEra personnel installed scaffold without the separation required with safety-related equipment and did not request an engineering evaluation as required by procedures. Installation of temporary scaffold in the vicinity of safety-related equipment has the potential to adversely affect that equipment's performance during a seismic event because it was installed with insufficient standoff distance. After the issue was identified by the inspectors, NextEra performed independent walkdowns of all scaffolding and all identified discrepancies were corrected

or evaluated as adequate. Because this violation is of very low safety significance (Green) and NextEra entered this into their CAP as CR 1804255, this violation is being treated as an NCV consistent with the NRC Enforcement Policy. **(NCV 05000443/2012004-01: Scaffold Installed with Insufficient Separation to Safety-Related Equipment)**

1R22 Surveillance Testing (71111.22 – 6 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 technical specifications, 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:

- OX1430.02, main steam isolation valve quarterly test on August 12, 2012
- OX1426.01, DG 1A monthly operability surveillance on August 13, 2012
- OX1456.43, train 'B' ESFAS slave relay K601 quarterly go test on August 28, 2012
- OX1416.05, SW cooling tower pumps quarterly and two year comprehensive test on August, 30 2012 (IST)
- EX1803.003, local leak rate testing of penetration X-36C, reactor makeup water on September 18, 2012 (PCIV)
- EX1803.003, local leak rate testing of penetration X-23, PCCW loop 'B' supply on September 23, 2012 (PCIV)

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06 – 1 sample)

.1 Emergency Preparedness Training Observations

a. Inspection Scope

The inspectors observed a simulator training evolution for licensed operators on July 26, 2012, which required emergency plan implementation by an operations crew. NextEra planned for this evolution to be evaluated and included in performance indicator (PI) data regarding drill and exercise performance. The inspectors observed event classification and notification activities simulated by the crew. The inspectors also reviewed the post-evolution critique for the scenario. The focus of the inspectors'

activities was to note any weaknesses and deficiencies in the crew's emergency response performance and ensure that NextEra evaluators noted the same issues and entered them into the CAP.

The inspectors also reviewed root cause evaluation (RCE) 1775909 for an untimely notification to the Commonwealth of Massachusetts during an actual unusual event (UE) on June 13, 2012. Inspectors reviewed the causes identified and corrective actions to ensure actions taken were appropriate.

b. Findings

Introduction. A self-revealing Green NCV of 10 CFR 50.47(b)(5) and the requirements of Section IV.D.3 of Appendix E to 10 CFR 50 was identified on June 13, 2012, because NextEra did not notify the state of Massachusetts within 15 minutes of declaring an emergency at the Seabrook Station. Specifically, the inspectors determined that NextEra did not maintain the site's off-site notification process in a manner that ensured that the RSPS function described by 10 CFR 50.47(b)(5) could be met with the multiple equipment malfunctions that occurred between June 12 and June 14, 2012.

Description. The nuclear alert system (NAS) is the offsite notification system used by Seabrook Station to notify the New Hampshire (NH) and Massachusetts (MA) emergency response agencies in the event of a declared emergency. The system consists of a primary COM LABS phone and the backup Zetron/Nextel phone. Additionally, in the event that both of these lines fail, Seabrook emergency plan implementing procedure ER 1.2, "Emergency Plan Activation," provides a third option for contacting these off-site response organizations (OROs) via the commercial telephone.

Seabrook emergency plan implementing procedure ER 1.2E, "Emergency Action Checklist," details how state notifications were to be made. The procedure was prescriptive in both the order of equipment preference and method of contact. Specifically, the procedure directed that the first attempt be made using the primary system (COM LABS) in the group mode (a simultaneous call to both NH and MA). If that attempt was unsuccessful, the procedure directed that the primary system be used again in private mode (individual calls to NH and MA). If this attempt was also unsuccessful, the backup (Zetron/Nextel) system was to similarly first be used in group mode and then private mode, if needed. After all of these attempts, if contact has still not been made, the procedure directs the individual to use the commercial phone system.

On June 13, 2012, an Unusual Event (UE) was declared at Seabrook Station by NextEra due to a spill of a hazardous chemical within the protected area (PA). In accordance with NRC requirements and the Seabrook Emergency Plan, the OROs were required to be notified of the UE declaration within 15 minutes. The notification to NH was made within the required time frame; however, attempts to notify MA were unsuccessful. Ultimately, contact with MA was made 18 minutes after the declaration.

NextEra completed a root cause evaluation and concluded that the root cause for the untimely notification was "an inadequate, cumbersome and inflexible notification process" that did not ensure timely notification of OROs if multiple equipment failures or malfunctions occurred before or during an event. The RCE documentation also included a contributing cause that the NAS was not treated as equipment "important to safety," specifically system health was not monitored, condition reports (CRs) were not

generated to report issues, notification to the control room of system problems was not expected, and performance monitoring and trending was not performed.

Based on a review of the root cause and its supporting documentation, the inspectors concluded that between June 12, 2012 at 1047 and June 14, 2012 at 1047, NextEra did not maintain the Seabrook nuclear alert system in a condition that ensured it remained capable of performing all required notifications. However, the inspectors also determined, based on subsequent assessment of the Seabrook offsite notification process performed by NextEra and reviewed by the inspectors, that Seabrook had not lost the capability of alerting all OROs due to these performance deficiencies.

In this assessment, NextEra reviewed the specific circumstances that led to the late notification on June 13 and re-enacted the event in the simulator assuming the same failures of both the COMLabs and ZETRON phone systems. The re-enactment did not include other factors that occurred during the actual event, such as responding to specific questions posed by the state of NH dispatcher. In the re-enactment, the Seabrook operations crew completed the Massachusetts notification within 14 minutes. Based on this result, combined with the fact that NextEra only missed the 15-minute notification requirement by 3 minutes on June 13, the inspectors concluded that the NAS degradation caused by the identified performance deficiencies was not significant enough to cause NextEra to lose the capability to complete the required notifications within 15 minutes.

NextEra entered the performance problems identified by the RCE into the corrective action program under CR 1804255. NextEra's immediate corrective actions for these issues included revising site procedures to require that a CR to be generated for EP process/equipment issues and that the control room to be immediately notified of NAS system issues so verification of the emergency plan effectiveness can be promptly performed.

Analysis. The inspectors determined that NextEra did not maintain the site's off-site notification process equipment and procedures in a manner that ensured that the RSPS function described by 10 CFR 50.47(b)(5) could be met with multiple equipment malfunctions and that this was a performance deficiency within NextEra's ability to foresee and correct. The performance deficiency was considered more than minor because it was associated with the Emergency Preparedness (EP) cornerstone attributes of Procedure Quality and Facilities and Equipment, and affected the cornerstone objective of ensuring that a licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Specifically, EP equipment was not maintained as equipment important to safety and the notification process implementing procedure was cumbersome such that it did ensure timely notification when presented with equipment failures.

The inspectors assessed the issue, related to the notification process, using the Emergency Preparedness Significance Determination Process (Appendix B to IMC 0609) and determined the finding to be of very low safety significance (Green). Section 4 of IMC 0609, Appendix B, requires the Failure to Implement (FTI) branch of the SDP be used to assess the significance of a finding that occurs during an actual emergency. Attachment 1 of Appendix B screens the finding to very low safety significance (Green) because the FTI occurred during an actual UE, the lowest level event classification, which presents the lowest level of risk to the public. However, Section 4.2(c)(2) of the

FTI branch states that if delays in notification were caused by factors that were reasonably within the licensee's ability to foresee and prevent, the finding is likely to represent a failure to comply (FTC) and should also be assessed by the FTC branch. Section 4.3(f) (page B-10) states that if this evaluation results in a higher significance, treat the finding as an FTC. The inspectors considered that the performance deficiency was reasonably within NextEra's ability to foresee and prevent, therefore the FTC branch of the SDP was used to assess the issue. Section 5.0.3 provides direction for determining the significance of FTC findings. 5.0.3(c) states that the finding should be compared to example findings provided in the SDP. Section 5.5 provides the example findings related to emergency notifications. Table 5.5-1 lists an example of a White finding as "the notification process (e.g., procedures, systems, and resources) is not capable of alerting all responsible OROs of the declared emergency within 15 minutes after declaring an emergency." Inspectors determined that, based on the results of a re-enactment of the event that was performed by NextEra and reviewed by the NRC, the issue did not result in a loss of capability to notify both OROs within 15 minutes and therefore did not represent a degradation of the RSPS function. Ultimately, inspectors determined that the FTC and FTI branches both screened the issue to very low safety significance (Green).

This finding is related to the crosscutting area of PI&R - CAP because NextEra did not implement a corrective action program with a low threshold for identifying issues (P.1.a). Specifically, NextEra failed to consistently enter issues with communications equipment necessary for EP purposes into the station's CAP such that immediate corrective actions could be taken to ensure the RSPS function was maintained.

Enforcement. 10 CFR 50.54(q)(2) requires, in part, that a licensee shall follow and maintain the effectiveness of an emergency plan that meets the requirements in Appendix E to this part and, for nuclear power reactor licensees, the planning standards of 10 CFR 50.47(b).

10 CFR 50.47(b)(5) requires, in part, that procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations.

Section IV.D.3 of Appendix E to 10 CFR 50 requires, in part, that a licensee shall have the capability to notify responsible State and local governmental agencies within 15 minutes of declaring an emergency.

Contrary to the above, between June 12, 2012 at 1047 and June 14, 2012 at 1047, NextEra did not maintain its NAS in a condition that ensured that all responsible State governmental agencies were notified within 15 minutes of declaring an emergency. Specifically:

- The Seabrook procedural guidance that implemented the notification process did not allow flexibility when nuclear alert system challenges occurred; and
- The nuclear alert system equipment performance was not monitored in a manner that ensured timely and effective corrective actions for identified degraded performance in the primary and back-up nuclear alert system.

Upon discovery, NextEra took action to restore the degraded communication equipment and corrected the procedure to make it more flexible such that successful notification

could be ensured when faced with equipment challenges. Because this violation is of very low safety significance (Green) and NextEra entered this into their CAP as CR 1804255, this violation is being treated as an NCV consistent with the NRC Enforcement Policy. **(NCV 05000443/2012004-002, Inadequate Process Necessary for Notification of OROs during an Emergency Declaration)**

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01 – 1 sample)

This area was inspected to: (1) review and assess licensee's performance in assessing the radiological hazards in the workplace associated with licensed activities and the implementation of appropriate radiation monitoring and exposure control measures for both individual and collective exposures, (2) verify the licensee is properly identifying and reporting Occupational Radiation Safety Cornerstone PIs, and (3) identify those performance deficiencies that were reportable as a PI and which may have represented a substantial potential for overexposure of the worker.

During the week of July 16, 2012, inspectors interviewed the radiation protection manager (RPM), radiation protection supervisors, and radiation workers. The inspectors performed walk-downs of various portions of the plant, performed independent radiation dose rate measurements, observed work activities in Radiological Control Areas and reviewed licensee documents. The inspectors used the requirements in 10 CFR 20 and guidance in Regulatory Guide (RG) 8.38, "Control of Access to High and Very High Radiation Areas for Nuclear Plants," the TS, and the licensee's procedures required by TS as criteria for determining compliance.

a. Inspection Scope

Risk-Significant High Radiation Area and Very High Radiation Area Controls

The inspectors discussed with the RPM the controls and procedures for high radiation areas and very high radiation areas (VHRAs). The inspectors assessed whether any changes to licensee relevant procedures substantially reduced the effectiveness and level of worker protection.

The inspectors discussed with a first-line health physics supervisor the controls in place for special areas that have the potential to become VHRAs during certain plant operations. The inspectors assessed whether these plant operations require communication beforehand with the health physics group, so as to allow corresponding timely actions to properly post, control, and monitor the radiation hazards including re-access authorization.

The inspectors evaluated licensee controls for VHRAs and areas with the potential to become a VHRA to ensure that an individual was not able to gain unauthorized access to these VHRAs.

b. Findings

No findings were identified.

2RS3 In-Plant Airborne Radioactivity Control and Mitigation (71124.03 - 1 sample)

This area was inspected during the week of July 16, 2012, to verify in-plant airborne concentrations are being controlled consistent with ALARA principles and the use of respiratory protection devices on-site does not pose an undue risk to the wearer. The inspectors used the requirements in 10 CFR 20, the guidance in RG 8.15, "Acceptable Programs for Respiratory Protection," RG 8.25, "Air Sampling in the Workplace," NUREG-0041, "Manual of Respiratory Protection Against Airborne Radioactive Material," the TSs, and the licensee's procedures required by TSs as criteria for determining compliance.

a. Inspection Scope

Inspection Planning

The inspectors reviewed the UFSAR to identify areas of the plant designed as potential airborne radiation areas and any associated ventilation systems or airborne monitoring instrumentation. This review included instruments used to identify changing airborne radiological conditions such that actions to prevent an overexposure may be taken. The review included an overview of the respiratory protection program and a description of the types of devices used. The inspectors reviewed the UFSAR, TSs, and emergency planning documents to identify location and quantity of respiratory protection devices stored for emergency use. The inspectors reviewed NextEra's procedures for maintenance, inspection, and use of respiratory protection equipment including self-contained breathing apparatus (SCBA), as well as, procedures for air quality maintenance.

The inspectors reviewed reported PIs to identify any related to unintended dose resulting from intakes of radioactive material.

Engineering Controls

The inspectors reviewed NextEra's use of permanent and temporary ventilation to determine whether the licensee uses ventilation systems as part of its engineering controls to control airborne radioactivity. The inspectors reviewed procedural guidance for use of installed plant systems to reduce dose and assessed whether the systems are used, to the extent practicable, during high-risk activities.

The inspectors selected two installed ventilation systems used to mitigate the potential for airborne radioactivity: the primary auxiliary building exhaust and the fuel storage building emergency air cleaning system. The inspectors evaluated whether the ventilation system operating parameters were consistent with maintaining concentrations of airborne radioactivity in work areas below the concentrations of an airborne radioactive material area.

There were no temporary ventilation system setups in use for review during the inspection period. The inspectors reviewed filter leak test records for three high

efficiency particulate air (HEPA) units in storage for in-plant use to support work in contaminated areas.

The inspectors reviewed airborne monitoring protocols by selecting two installed continuous air monitor systems used to monitor and warn of changing airborne concentrations in the plant. The inspectors evaluated whether the alarms and setpoints were sufficient to prompt licensee/worker action to ensure that doses are maintained within the limits of 10 CFR 20 and ALARA.

The inspectors assessed whether NextEra had established threshold criteria for evaluating levels of airborne beta-emitting and alpha-emitting radionuclides.

Use of Respiratory Protection Devices

The inspectors selected work activities during the previous refueling outage in 2011 in which respiratory protection devices were used to limit the intake of radioactive materials, and assessed whether NextEra performed an evaluation concluding that further engineering controls were not practical and that the use of respirators is ALARA. The inspectors also evaluated whether NextEra had established means (such as routine bioassay) to determine if the level of protection (protection factor) provided by the respiratory protection devices during use was at least as good as that assumed in NextEra's work controls and dose assessment.

The inspectors assessed whether respiratory protection devices used to limit the intake of radioactive materials were certified by the National Institute for Occupational Safety and Health/Mine Safety and Health Administration or have been approved by the NRC. The inspectors selected four work activities where respiratory protection devices were used. The inspectors evaluated whether the devices were used consistent with their National Institute for Occupational Safety and Health/Mine Safety and Health Administration certification or NRC approval.

The inspectors reviewed records of air testing for supplied-air devices and SCBA bottles to assess whether the air used in these devices meets or exceeds Grade D quality. The inspectors reviewed plant breathing air supply systems to determine whether they meet the minimum pressure and airflow requirements for the devices in use.

The inspectors selected five control room operators and four radiation protection technicians that were qualified to use respiratory protection devices, and assessed whether they were deemed qualified to use the devices by successfully passing an annual medical examination, respirator fit-test and relevant respiratory protection training.

The inspectors reviewed training curricula for users of respiratory protection devices to determine its adequacy.

The inspectors chose ten respiratory protection devices staged and ready for use in the plant. The inspectors assessed the physical condition of the device components and reviewed records of equipment inspection for each type of equipment. The inspectors selected several of the devices and reviewed records of maintenance on the vital components. The inspectors verified that onsite personnel assigned to repair respiratory protection equipment have received vendor-provided training.

SCBA for Emergency Use

The inspectors reviewed the status and surveillance records of selected SCBA staged in-plant for use during emergencies. The inspectors reviewed NextEra's capability for refilling and transporting SCBA air bottles to and from the control room and the operations support center during emergency conditions.

The inspectors selected five individuals on control room shift crews and five individuals from the RP department currently assigned emergency duties to assess whether control room operators and RP personnel were trained and qualified in the use of SCBA. The inspectors evaluated whether personnel assigned to refill bottles were trained and qualified for that task.

The inspectors determined whether appropriate mask sizes and types are available for use. The inspectors determined whether on-shift operators and radiation protection personnel had any facial hair that would interfere with the sealing of the mask to the face and whether vision correction mask inserts were available, as appropriate.

The inspectors reviewed the past two years of maintenance records for three SCBA units to assess whether any maintenance and repairs on any self-contained breathing apparatus units were performed by an individual, or individuals, certified by the manufacturer of the device to perform the work. For those self-contained breathing apparatuses that were ready for use, the inspectors verified the required, periodic air cylinder hydrostatic testing was documented and up to date.

Problem Identification and Resolution

The inspectors evaluated whether problems associated with the control and mitigation of in-plant airborne radioactivity were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee corrective action program. The inspectors assessed whether the corrective actions were appropriate for a selected sample of problems involving airborne radioactivity and were appropriately documented by NextEra.

b. Findings

Introduction. Inspectors identified a Green NCV of Technical Specification (TS) 6.7.1.a, "Procedures and Programs," which requires that written procedures be established and implemented, to include administrative procedures, which includes radiation protection procedures. Specifically, procedure HD 0965.10, "Respirator Fit Testing Using TSI Portacount Plus," Revision 10, did not specify a calibration frequency requirement for the respirator fit test equipment. The equipment vendor recommended annual calibration frequency, which was exceeded by over two years, and the current as-found condition of the specified equipment when tested was found out of calibration.

Description. The respirator fit test equipment used at Seabrook Station, specifically, the TSI Portacount Plus, is used, as specified in 10 CFR Part 20, to ensure that an adequate protection factor is provided to each respirator wearer for protection from airborne radioactivity. To ensure accurate measurement is performed according to the vendor, the respirator fit test equipment requires periodic calibration. The two TSI Portacount Plus instruments used for this purpose at Seabrook were last calibrated on December 30, 2008 and April 29, 2009, which is in excess of two years ago. Despite the equipment vendor technical manual recommendation of an annual calibration, the inspectors determined that NextEra procedure HD 0965.10, "Respirator Fit Testing Using TSI Portacount Plus," did not specify a calibration frequency.

On July 17, 2012, after inspectors identified this discrepancy, NextEra issued AR1785134, and sent one of the respirator fit test instruments to the equipment vendor for calibration. The instruments as-found condition was 23.8 percent higher than actual, which was outside the ±15 percent calibration tolerance and was non-conservatively indicating higher than actual protection factor values.

The inspectors reviewed the use of respiratory equipment during the preceding two year time period when the vendor recommended fit test equipment calibration period had been exceeded. During the April 2011 refueling outage, there were at least four work activities where full face negative pressure respiratory protection was issued to radiation workers and positive air samples directed that these devices for radiological protection of the workers. Although there were no internal exposure consequences for these cases, respirator fit testing was important because it ensured that the worker facial seal to the respirators was sufficient for their protection during exposure to airborne radioactivity. The fit test equipment used for this purpose is required to certify the protection factor that the respirator provides for each worker.

The inspectors also reviewed the applicability to SCBA qualifications and determined that the full face negative pressure respirator testing was the only respiratory equipment actually affected by the inaccurate fit testing equipment. NextEra's immediate corrective actions included immediate calibration of the Portacount Plus equipment and revision of the implementing procedure to reflect an annual calibration requirement.

Analysis. The inspectors determined that not specifying a calibration frequency and by exceeding the equipment vendor's annual calibration frequency by more than two years was a performance deficiency. NextEra failed to meet a standard that could have been identified and corrected. This issue was determined to not be willful and, therefore, traditional enforcement did not apply. This performance deficiency was determined to be more than minor, because it was associated with program and process attribute of the Occupational Radiation Safety cornerstone and affected its objective to ensure adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Specifically, the respirator fit testing was being used to certify respirator protection factors of workers which were relied upon to provide protection of workers due to airborne radioactivity during the previous refueling outage. Additionally, it was similar to example 6.b in IMC 0612, Appendix E, "Examples of Minor Issues," which states that failing to calibrate radiation instruments was more than minor if the as-found condition was not within the acceptance criteria for the calibration and did not provide a conservative measurement. The issue was evaluated using IMC 0609, "Significance Determination Process" (SDP), and was determined to be of very low safety significance (Green). Specifically, when

evaluated with IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the performance deficiency (failure to properly calibrate the respirator fit test equipment) was not an ALARA issue, did not involve an overexposure or a potential overexposure, and did not impact NextEra's ability to assess dose.

The inspectors determined that this finding had a cross-cutting aspect in the area of Problem Identification and Resolution - CAP because NextEra did not identify issues completely, accurately, and in a timely manner commensurate with their safety significance. Specifically, NextEra did not identify that vendor recommended calibration requirements had not been met or evaluated when this equipment was returned by the vendor for routine cleaning. (P.1.a)

Enforcement. Technical Specification 6.7.1.a, "Procedures and Programs," requires that written procedures be established, implemented and maintained as recommended in RG 1.33, Revision 2, Appendix A, February 1978. RG 1.33, Appendix A, requires procedures for radiation protection, including respiratory protection. Contrary to this, NextEra procedure HD 0965.10, "Respirator Fit Testing Using TSI Portacount Plus," Revision 10, did not specify calibration frequency, despite the equipment vendor technical manual recommendation of an annual calibration. As a result, calibrations conducted in response to this violation identified that at least one of the two respirator fit test instruments used during the last refueling outage was out of calibration by 23.8%. This deficiency had the potential to adversely affect the radiation protection for plant workers who had used respirators during the conduct of maintenance in airborne radioactivity areas. NextEra's immediate corrective actions included immediate calibration of the Portacount Plus equipment and revision of the implementing procedure to reflect an annual calibration requirement. Because the finding was of very low safety significance (Green) and was entered into NextEra's CAP as CR 1785134, this violation is being treated as a NCV, consistent with Section 2.3.2.a of the NRC Enforcement Policy. **(NCV 05000443/2012004-03, Inadequate Calibration of Respirator Fit Test Equipment)**

2RS8 Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation (71124.08 - 1 sample)

a. Inspection Scope

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, "Monitoring Fuel and Waste Storage," and licensee procedures required by the Technical Specifications/Process Control Program as criteria for determining compliance.

The inspectors reviewed the solid radioactive waste system description in the UFSAR, the Process Control Program (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 audits performed for this area since the last inspection. The inspectors reviewed the results of the audits performed since the last inspection of this program and evaluated the adequacy of the licensee's corrective actions for issues identified during those audits.

The inspectors inspected areas where containers of radioactive waste were stored, and verified that the containers were labeled in accordance with 10 CFR 20.1904, “Labeling Containers,” or controlled in accordance with 10 CFR 20.1905, “Exemptions to Labeling Requirements,” as appropriate. This included containers stored in the base of the Unit 2 cooling tower.

The inspectors verified that the radioactive materials storage areas were controlled and posted in accordance with the requirements of 10 CFR 20, “Standards for Protection Against Radiation.” For materials stored or used in the controlled or unrestricted areas, the inspectors verified that they were secured against unauthorized removal and controlled in accordance with 10 CFR 20.1801, “Security of Stored Material,” and 10 CFR 20.1802, “Control of Material not in Storage,” as appropriate.

The inspectors verified that the licensee had established a process for monitoring the impact of long-term storage (e.g., buildup of any gases produced by waste decomposition, chemical reactions, container deformation, loss of container integrity, or re-release of free-flowing water) 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.

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/or was abandoned in place, and verified that the licensee had established administrative and/or physical controls to ensure that the equipment would not contribute to an unmonitored release path and/or affect operating systems or be a source of unnecessary personnel exposure. The inspectors verified that the licensee had reviewed the safety significance of systems and equipment abandoned in place in accordance with 10 CFR 50.59, “Changes, Tests, and Experiments.”

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 in accordance with 10 CFR 50.59, as appropriate.

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 as described in 10 CFR 61.55, “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.

The inspectors identified radioactive waste streams, and verified that the licensee's radiochemical sample analysis results were sufficient to support radioactive waste characterization as required by 10 CFR 61, "Licensing Requirements for Land Disposal of Radioactive Waste." The inspectors verified that the licensee's use of scaling factors and calculations to account for difficult-to-measure radionuclides was technically sound and based on current 10 CFR 61 analyses.

For the waste streams identified above, 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 the requirements of 10 CFR 61. The inspectors verified that the licensee had established and maintained an adequate quality assurance program to ensure compliance with the waste classification and characterization requirements of 10 CFR 61.55, "Waste Classification" and 10 CFR 61.56, "Waste Characteristics."

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 with respect to the licensee's response to NRC Bulletin 79-19, "Packaging of Low-Level Radioactive Waste for Transport and Burial," dated August 10, 1979, and 49 CFR 172, "Hazardous Materials Table, Special Provisions, Hazardous Materials Communication, Emergency Response Information, Training Requirements, and Security Plans." 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.

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.

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 corrective action program. 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.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 – 5 samples)

.1 Mitigating Systems Performance Index

a. Inspection Scope

The inspectors reviewed NextEra's submittal of the Mitigating Systems Performance Index for the following systems for the period of July 1, 2011 through June 30, 2012:

- Emergency AC system (MS06)
- High pressure injection system (MS07)
- Heat removal system (MS08)
- Residual heat removal system (MS09)
- Cooling water system (MS10)

To determine the accuracy of the PI data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5. The inspectors also reviewed licensee event reports, operating logs, procedures and interviewed applicable personnel to validate the accuracy of the submittals.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 1 sample)

.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 corrective action program 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 corrective action program 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 procedure OP-AA-108, “Oversight and Control of Operator Burdens,” Revision 0.

The inspectors reviewed NextEra’s process to identify, prioritize and resolve main control room distractions 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 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.

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

.1 Plant Events

a. Inspection Scope

On September 14, 2012, at approximately 8:25 p.m., Unit 1 experienced a reactor trip on 'C' steam generator low-low level when the feed water regulating valve failed closed due to a process cabinet card failure. For the automatic reactor trip, 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 IMC 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 50.72 and 50.73.

b. Findings

No findings were identified.

4OA5 Other Activities

.1 Buried Piping, Temporary Instruction 2515\182 Phase 1

a. Inspection Scope

NextEra's buried piping and underground piping and tanks program was inspected in accordance with paragraphs 03.01.a through 03.01.c of the Temporary Instruction (TI) 2515/182 and was found to meet all applicable aspects of the Nuclear Energy Institute (NEI) document 09-14, Revision 1, as set forth in Table 1 of the TI 2515/182.

b. Findings

No findings were identified.

.2 Temporary Instruction 2515/187 – Inspection of Near-Term Task Force Recommendation 2.3 – Flooding Walkdowns

On September 13 2012, inspectors commenced activities to independently verify that NextEra conducted external flood protection walkdown activities using NRC-endorsed walkdown methodology. These flooding walkdowns are being performed at all sites in response to Enclosure 4 of a letter from the NRC to licensees entitled, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012 (ADAMS Accession No. ML12053A340). The results of this temporary instruction will be documented in a future inspection report.

3 Temporary Instruction 2515/188 – Inspection of Near-Term Task Force Recommendation 2.3 – Seismic Walkdowns

On August 29, 2012, inspectors commenced activities to independently verify that NextEra conducted seismic walkdown activities using NRC-endorsed seismic walkdown methodology. These seismic walkdowns are being performed at all sites in response to Enclosure 3 of a letter from the NRC to licensees entitled, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012 (ADAMS Accession No. ML12053A340). When complete, the results of this temporary instruction will be documented in a future inspection report.

4OA6 Meetings, Including Exit

On October 3, 2012, the inspectors presented the inspection results to Mr. Kevin Walsh, 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.

4OA7 Licensee-Identified Violation

The following violation of very low safety significance (Green) was identified by NextEra and is a violation of NRC requirements which meets the criteria of the NRC Enforcement Policy for being dispositioned as an NCV.

- Seabrook TS SR 4.3.2.2, "Engineered Safety Features Actuation System Instrumentation," requires that the engineered safety features response time for each ESFAS function listed in Table 3.3-3 be verified to be within its limit at least once per 18 months. On July 19, 2012, NextEra identified that the full scope of response time testing for the emergency feedwater function had not been completed since initial licensing because the implementing procedure did not verify the response time for starting and loading the motor-driven emergency feedwater pump on a steam generator low-low water level. The issue was determined to be a violation of Seabrook TS 6.7, "Procedures and Programs," which requires that written procedures be established, implemented and maintained as recommended in RG 1.33, Revision 2, Appendix A, February 1978. RG 1.33, Appendix A, requires implementing procedures for each SR listed in TSs. Contrary to this requirement, since initial licensing, NextEra's procedure for implementing TS SR 4.3.2.2 did not test the response time for the emergency feedwater function at least once per 18 months, which resulted in a violation of TS 3.3.2, "Engineered Safety Features Actuation System Instrumentation," as described in LER 05000443/2012-001-00. The finding was associated with the Mitigating Systems cornerstone and was evaluated for significance using Exhibit 2 of IMC 0609, Appendix A. Since the finding was not a design or qualification deficiency, did not result in a loss of system safety function, did not result in loss of a single train for greater than its allowed outage time, and was not potentially risk significant due to external events, the finding was determined to be of very low safety significance (Green). The issue was entered into NextEra's CAP as CR 1785593.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel
B. Brown, Supervisor, Civil Engineering
V. Brown, Senior Licensing Analyst
J. Buyak, Respiratory Protection Technician
M. Collins, Manager, Design Engineering
J. Connolly, Site Engineering Director
D. Currier, Emergency Preparedness Manager
K. Douglas, Maintenance Director
D. Flahardy, Radiation Protection Manager
S. Fournier, Design Engineer
L. Hansen, Plant Engineering
F. Hannify, Radwaste Specialist
N. Levesque, Plant Engineering
V. McCafferty, System Engineering Manager
B. McAllister, Plant Engineering
W. Meyer, Radiation Protection Manager
M. O'Keefe, Licensing Manager
V. Pascucci, Nuclear Oversight Manager
D. Robinson, Chemistry Manager
M. Scannell, Radiation Protection Technical Specialist
R. Thurlow, Maintenance Manager
J. Tucker, Security Manager
T. Vehec, Plant General Manager
T. Waechter, Operations Director
K. Walsh, Site Vice President

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

Opened/Closed

NCV 05000443/2012004-01	NCV	Scaffold Installed with Insufficient Separation to Safety-Related Equipment (Section 1R20)
NCV 05000443/2012004-02	NCV	Inadequate Process Necessary for Notification of OROs during an Emergency Declaration (Section 1EP6)
NCV 05000443/2012004-03	NCV	Inadequate Calibration of Respirator Fit Test Equipment (Section 2RS3)

Opened
None

Closed
None

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

OS 1200.03, Severe Weather Conditions, Revision 19

Miscellaneous

Seabrook Station Shutdown Condition Status, September 18, 2012
TS 3.8.1.2, AC Sources
TS 3.8.3.2, Onsite Power Distribution
Technical Requirements Manual 2.31

Section 1R04: Equipment Alignment

Procedures

OS1013.04, Residual Heat Removal Train B Start up and Operation, Revision 23
OS1014.02, Operation of Spent Fuel Pool Cooling and Purification System, Revision 17
OX1426.18, Aligning DG 1A Controls for Auto Start, Revision 3
OX1426.34, Diesel Generator 1A 18 month operability Surveillance, Revision 4

Miscellaneous

UFSAR 6.3, Emergency Core Cooling Systems
UFSAR 8.3, Onsite Power Source

Drawings

PID-1-DG-B20459 Diesel Generator Fuel Oil System Train A Detail, Revision 15
PID-1-DG-B20460 Diesel Generator Starting Air System Train A Detail, Revision 24
PID-1-SF-B20482, Spent Fuel Pool Cooling and Clean-up System Detail, Revision 13

Section 1R05: Fire Protection

Procedures

SSFP Pre-Fire Strategies

Drawings

C-F-1-Z, Containment Elev. (-) 26’ 0”, SHT 1 of 3
C-F-2-Z, Containment Elev. 0’ 0”, SHT 2 of 3
C-F-3-Z, Containment Elev. 25’ 0”, SHT 3 of 3
DG-F-2A-A, Diesel Generator Building Train A Generator Room
EFP-F-1-A, Emergency Feedwater Pump House 27’-0”
FSB-F-1-A, Fuel Storage Building Elev. 7’-0” & 10’ 0”, SHT 1 of 3
FSB-F-2-A, Fuel Storage Building Elev. 21’-6”, SHT 2 of 3
SEPS-F-1-0, SEPS Floor Plan

Section 1R06: Flood Protection Measures

Condition Reports

203793, 578371, 01194182

Maintenance Orders/Work Orders

40071204

Miscellaneous
Report for Investigation of Loss of Capacity on the RHR 'B' Dewatering Flow

Drawings
RHR, Containment Spray, SI Equipment Vault General Arrangement, 9763-F-805078, Revision 7
RHR, Containment Spray, SI Equipment Vault General Arrangement, 9763-F-805060, Revision 11

Section 1R07: Heat Sink Performance
Procedures
ES1850.017, SW Heat Exchanger Program, Revision 0, Change 2

Condition Reports
1806567, 1807715

Maintenance Orders/Work Orders
1207924

Miscellaneous
'A' PCCW Heat Exchanger Operating Data, September 2011-September 2012

Drawings
PID-1-CC-B20205, Primary Component Cooling Loop A Detail, Revision 24
PID-1-CC-B20206, Primary Component Cooling Loop A Detail, Revision 16

Section 1R11: Licensed Operator Requalification Program
Procedures
OS1000.04, Plant Cooldown from Hot Standby to Cold Shutdown, Revision 38
OS1205.01, Inadvertent Phase A Containment Isolation, Revision 14

Miscellaneous
Crew Simulator Evaluation, NT-5701-5, Crew A, July 26, 2012
ER 2.0B, Seabrook Station State Notification Fact Sheet, Revision 31
E-0, Reactor Trip or Safety Injection, Revision 49
ER 1.1A. Emergency Initiating Condition Matrix, Revision 46
Form No. EPDP-03A, EP Cornerstone Reporting and Information Form, Revision 24
Individual Simulator Evaluation, NT-5701-1, Crew A, July 26, 2012
Simulator Demonstrative Examination #03, Revision 14

Section 1R12: Maintenance Effectiveness
Procedures
EX1806.001, RPS and ESFAS Response time Summation Procedure, Revision 6
MS0519.42, Robert Shaw 3-Way Temperature Control Valve Maintenance, Revision 06
OX1426.34, Diesel Generator 1A 18 month operability Surveillance, Revision 6
OX1426.32, Diesel Generator 1B 18 month operability Surveillance, Revision 8
PEG-10, Form A, System Walkdown Report, Revision 19

Condition Reports
01608343, 01608578, 01667191, 01668211, 01688249, 01668392, 01668454, 01669358, 01671974, 01687847, 01689127, 01692058, 01692144, 01699006, 01699030, 01709928, 01710481, 01710553, 01710864, 01710905, 01712284, 01716727, 01716280, 01754140, 01764349, 01764360, 01764434, 01779502, 01780781, 01782945, 01785579, 01785583, 01785589, 01785592, 01785593, 01789108, 01789110, 01792438

Miscellaneous
Apparent Cause Evaluation, A/R 01710481
MMOD 97-0579
Maintenance Rule Performance and Scope Report
Maintenance Rule Electronic Database, Revision 6
Maintenance Rule Functional Failure Evaluation, A/R 01710481
System Health Report, Unit 1 DG System, 7/1/12 – 9/30/12
Technical Assessment Report, A/R 01710481
TS 3.3, Reactor Trip System Instrumentation
UFSAR 7.3, Engineered Safety Features Actuation System

Section 1R13: Maintenance Risk Assessments and Emergent Work Control
Procedures
PRA-301, M-Rule (a)(4) Process for Online Maintenance (OLM), Revision 0
SM7.10, Maintenance Rule Program, Revision 1
WM 10.1, Online Maintenance, Revision 8
WM-AA-1000, Work Activity Risk Management Process, Revision 11

Condition Reports
01805195

Maintenance Orders/Work Orders
40143331, 40143332

Miscellaneous
Outage PRA Risk Assessment, September 21, 2012

Section 1R15: Operability Determinations and Functionality Assessments
Procedures
EN-AA-203-1001, Operability Determinations/Functionality Assessments, Revision 6
IX1662.324, RC-P-458 Pressurizer Pressure Protection Channel IV Operational Test, Revision 10
PI-AA-204, Condition Identification and Screening Process, Revision 17

Condition Reports
01782530, 01789615

Maintenance Orders/Work Orders
40175841

Miscellaneous
Detailed Systems Text, Pressurizer Pressure and Level Control (PPLC), Revision 5
Part 9900: Technical Guidance-Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety

TS 3.1.3.2, Position Indication Systems-Operating
TS Bases 3.1.3.2
UFSAR 7.7, Control Systems not Required for Safety, Revision 14

Section 1R19: Post-Maintenance Testing

Procedures

IX1662.324, RC-P-458 Pressurizer Pressure Protection Channel IV Operational Test
EX1803.003, Reactor Containment Type B and C Leakage Rate Tests, Revision 11
LS0569.20, Lubrication PM and Starter Inspection for Motor Operated Valve Actuators, Revision 5
LX0556.06, Station Battery Charger Capacity Test, Revision 5
OX1426.27, DG 1B Semiannual Operability Surveillance, Revision 15
OX1461.03, SEPS operational Readiness Status Surveillance, Revision 1
OX1461.05, SEPS annual availability surveillance, Revision 5

Condition Reports (*NRC Identified)

01781919, 01782097, 01789615 01793752*, 01795915, 01803668, 01804027, 01982106

Maintenance Orders/Work Orders

401041159, 40112873, 40112874, 40141170, 40143330, 40170700, 40171846, 40175841

Miscellaneous

EDE-BC-1-C-BARC-E35 Tech Spec Battery Charger Capacity Test
Engineering Evaluation 95-17, Evaluation of CS-V460, CS-V461 & CS-V475 for On-Line Maintenance and Testing, June 15, 1995
M-Rule a(4) Risk Assessment Report for work week August 22, 2012
Risk Profile August 13, 2012
Technical Requirements 31 Supplemental Emergency Power System Availability, Revision 99
TS 3.3.1, Reactor Trip System Instrumentation
TS 3.8.1.1, AC Sources
TS 3.8.2.1, DC Sources
TS 3.8.3.1, Onsite Power Distribution
UFSAR 8.3, Onsite Power Sources

Drawings

PID-1-CS-B20725, Chemical & Volume Control Charging System Detail, Revision 29

Section 1R20: Refueling and Other Outage Activities

Procedures

MA 4.8, Control of Scaffolding, Revision 9
MS 0599.47, Erection of Scaffolding, Revision 1
OS1000.06, Power Decrease, Revision 16
OS1000.03, Plant Shutdown from Minimum Load to Hot Standby, Revision 21
OS1000.04, Plant Cooldown from Hot Standby to Cold Shutdown, Revision 39
OS1000.09, Refueling Operation, Revision 22
OS1000.13, Operation with the Reactor Defueled, Revision 3
OS1000.12, Operation with RCS at Reduced Inventory/Midloop Conditions, Revision 12

Condition Reports

1806488, 1806497, 1806504, 1806094, 1806123, 1806347, 1806397, 1806037, 1806073, 1804418, 1805832, 1804255

Miscellaneous
Benchmarking for Seismic Housekeeping at Nuclear Power Plants, EPRI 1018352, dated December 2008
EE-12-008, OR15 Outage Schedule Shutdown Risk Review, Revision 0
EE-98-019, Control of Temporary Loads in Seismic Areas, Revision 3
EDI 30550, Engineering Department Instruction- Scaffold and Temporary Equipment Engineering Evaluations, Revision 3
EDS 36420, Engineering Design Standard- Separation Criteria (TP-8), Revision 0

Section 1R22: Surveillance Testing
Procedures
EX1803.003, Reactor Containment Type B and C Leakage Rate Tests, Revision 11
OX 1413.03, B Train RHR Quarterly Flow and Valve Stroke Test, Revision 10
OX1416.05, Service Water Cooling Tower Pumps Quarterly and 2 Year Comprehensive Test, Revision 16
OX1416.06, Service Water Discharge Valves Quarterly Test and 18 Month Position Verification, Revision 9
OX1426.01, DG 1A Monthly Operability Surveillance, Revision 25
OX1430.02, Main Steam Valve Isolation Quarterly Test, Revision 15
OX1456.23, Train A ESFAS Slave Relay K603 Quarterly Go Test, Revision 8
OX 1456.43, Train B ESFAS Slave Relay K601 Quarterly Go Test, Revision 10
OX1456.86, Operability Testing of IST Pumps, Revision 7
Station Leakage Test Reference Manual, Revision 10

Condition Reports (*NRC Identified)
23942, 01791978, 01793078, 01081612*, 01799833, 01799843, 01804866

Maintenance Orders/Work Orders
40042685, 40112742, 40116338, 40138930, 40142141, 40142143, 40150463, 40138934

Miscellaneous
Information Notice 2007-27, Recurring Events Involving Emergency Diesel Generator Operability
Local Leak Rate Test Summary dated October 13, 2011
Seabrook Technical Specifications, Administrative Controls, 6.15 Containment Leakage Rate Testing Program
TS 3.3.2, Engineered Safety Features Actuation System Instrumentation
TS 3.5, Emergency Core Cooling Systems
UFSAR 6.2, Containment Systems, Revision 15
UFSAR 10.3, Main Steam Supply System, Revision 12

Drawings
1-NHY-310107, 125V DC Bus 1-SWG-11B Distr. Panel 1-PP-112B Schedule
1-NHY-310105, UPS 1-I-1F Vital Instrument Distr. Panel 1-PP-11F Schedule

Section 1EP6: Emergency Preparedness Training Observation

Procedures

ER 1.1, Classification of Emergencies, Revision 50
PI-AA-204, Condition Identification and Screening Process, Revision 17
ER 1.2, Emergency Plan Activation, Revision 57

Condition Reports

1775909, 1345

Miscellaneous

Form EPDP-03A, EP Cornerstone Reporting and Information Form, July 26, 2012
Form ER 2.0B, Seabrook Station State Notification Fact Sheet, July 26, 2012
Licensed Operator Requalification Training Simulator Demonstrative Examination #03, July 26, 2012
NT-5701-5, Crew Simulator Evaluation, July 26, 2012

Section 2RS01: Radiation Hazard Assessment and Exposure Controls

Procedures

HN 0958.25, High Radiation Area Controls, Revision 36
HN 0960.16, Radiological Requirements for Entry Beneath Reactor Vessel, Revision 26

Condition Reports

01764874, 01769045, 01769050, 01769923

Section 2RS03: In-Plant Airborne Radioactivity Control Mitigation

Procedures

HD 0965.01, Respiratory Protection Quality Assurance and Maintenance Program, Revision 18
HD 0965.02, Repair, Inspection, Inventory and Maintenance of Respiratory Protection Equipment, Revision 23
HD 0965.05, Cleaning of Respiratory Protection Equipment, Revision 12
HD 0965.07, Air Supplied Respiratory Protection Equipment and Distribution Systems, Revision 16
HD 0965.08, Breathing Air Certification, Revision 13
HD 0965.10, Respirator Fit Testing Using TSI Portacount Plus, Revision 14
HD 0965.12, Respiratory Equipment Issue and Use, Revision 34
HD 0965.13, Restoration of SCBA Break Out Areas After Use, Revision 13
HD 0965.14, Use of PosiChek 3, Revision 8
MS 0516.10, Nuclear Filter Testing, Revision 1
MX0516.09, Fuel Storage Building Emergency Air Cleaning System Filter Testing, Revision 2

Condition Reports

01770182, 01785134

Miscellaneous

Seabrook Station General Training Program, Respiratory Protection, GT10021-Respiratory Requirements Instructor Guide

Section 2RS08: In-Plant Airborne Radioactivity Control Mitigation

Procedures

CS0918.02, 10 CFR 50/61 Sample Analysis Methods, Revision 07
CP 3.1, Primary Chemistry Control Program, Revision 37
Process Control Program, Revision 58

RP 18.4, Isotopic Characterization of Radwaste, Revision 02
WD0598.079, Screening and Validation of Part 61 Data, Revision 02

Condition Reports
00205384, 00215301, 00220707, 00221302, 00578958, 00581483, 00581487, 00581700, 00585181, 00585183, 00585562, 01644362, 01661561, 01682241, 01694540, 01694546, 01744613, 01790612, 01797974

Miscellaneous
AREVA NP 10 CFR 50/61 Analysis Report Z28385, Spent Resin Storage Tank 'B'
NUPIC Audit #'s 22572; 22698; 22603; 22601; 22600, February 13-29, 2010, EnergySolutions
NUPIC Audit # 22683, July 13-15, 2010, Studsvik Processing Facility Memphis, LLC
NUPIC Audit # 22663, January 10-14, 2011, WMG, Inc.
RW1010C, DOT Shipping
RW1036C, Site Specific Radioactive Material Shipping
RW1022I, Packaging and Inspecting Radioactive Material Shipping Containers
Radioactive Material Shipments: 11-002; 11-032; 11-051; 12-003; 12-021
Seabrook Nuclear Oversight Report SBK 10-015, 6/17/10, Radioactive Waste Control
Seabrook Nuclear Oversight Report SBK 12-002, 2/23/12, Radiological Protection and Radwaste
Seabrook Daily Quality Summary, August 1, 2010 – August 16, 2012, Radwaste
Teledyne Brown Engineering Report of Analysis L43839, Spent Resin Storage Tank 'A'
Teledyne Brown Engineering Report of Analysis L43210, WL Filter; SF Filter; RC Filter
Teledyne Brown Engineering Report of Analysis L45155, Cycle 14-15 DAW
Teledyne Brown Engineering Report of Analysis L47399, RCS Filter; SFP Filter; WL Filter; Fuel Cleaning Filter; Liner L506725-8; Liner 002652-2

Section 4OA1: Performance Indicator Verification
Procedures
NEI 99-02, Regulatory Assessment Performance Indicators, Revision 6

Miscellaneous
Maintenance Rule Functional Failure List June 30, 2012
MSPI Derivation reports: High Pressure Injection, Emergency AC, Heat Removal, Residual Heat Removal and Cooling Water

Section 4OA2: Problem Identification and Resolution
Procedures
ES-0.1, Reactor Trip Response, Revision 37
OP-AA-101-1000, Clearance and Tagging, Revision 5
OP-AA-108, Oversight and Control of Operator Burdens, Revision 0

Condition Reports
1648243, 1644070, 1639603, 95404, 1644078, 204347, 17633, 1731377, 1745029, 215880, 567848, 203911, 219496

Drawings
PID-1-RC-B20840, Reactor Coolant System Overview, Revision 6

Section 4OA5: Other Activities: Buried Piping

Procedures

ER-AA-102, Buried Piping Program Providing a Structure for Common Approach to Resolution of Buried Pipe Issues, Revision 3

ER-AA-102-1000, Buried Piping Examination Procedure Provides Guidance for Monitoring External Corrosion Control and Mitigation, Revision 1

Condition Reports (*NRC-identified)

00213052, 01686639, 01686641, 01686662, 1805614, 1804495, 1804517, 1803194, 1803184*

Maintenance Orders/Work Orders

40111376

Miscellaneous

BP/Works Implementation of Software for Risk Ranking of ASME Class III Service Water Line 1 SW-1820-003

DBD-PB-01, Seabrook Station Plant Barriers Design Basis/Requirements, Revision 2

EPRI-2010-409 Inspection Methodologies for Buried Piping and Tanks

EPRI document, Recommendations for an Effective Program to Control the Degradation of Buried Pipe, December 2008

EPRI TR 1025286, Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic, dated June 2012

LN0565.15, Performance of Underground Cathodic Protection System Data Acquisition Revision 4

NEER-RSC-13513 Summary of Underground Cathodic Protection System Data Collected as Part of the Semiannual Electrical Maintenance Procedure at Seabrook Station (09/11)

NEI 09-14 (Initial Issue), November 2009 Guideline for the Management of Underground Piping and Tank Integrity

NEI 09-14, December 2010 Guideline for the Management of Underground Piping and Tank Integrity, Revision 1

NEI 12-07, Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features, Revision 0-A

NRC Temporary Instruction 2515/182, 11/17/11; Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks

Seabrook Station Flooding Features Walkdown List

Seabrook Station Underground Piping and Tank Inspection Program Rev 0, Dated 6/29/2011

Seabrook Station Underground Piping and Tank Inspection Program Rev 1, Implementation of the NEI 09-14, Rev 1 Guideline Dated 8/2/2012

Selection of the Seabrook Station Seismic Walkdown Equipment List (SWEL) for the Requirement 2.3 Walkdown, Revision 1

TI 2515/188, Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns, dated July 6, 2012

TI 2515/187, Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns, dated June 27, 2012

Drawings

1-SF-B20482, Spent Fuel Pool Cooling and Clean-up System Detail, Revision 13

9763-F-101354, Control & Diesel Generator Buildings Concrete Equipment Foundation Details, Sheet 1, Revision 10

9763-F-101566, RHR & Cont. Spray Equipment Vault Misc. Steel Equipment Support Details, Revision 2
9763-F-101525, Primary Aux Bldg, RHR & CS Equipment Vault Concrete Equipment Foundation Detail, Sheet 1, Revision 6
1-NHY-BD-2004, Control Building Switchgear Rooms Elevation 21'-6", Revision 4
CB-F-1F-A, Control Building Switchgear Rooms
PID-1-DW-B20601, Dewatering System Detail, Revision 1
9763-F-604100, Electrical Tunnels Upper & Lower Levels Drainage and Fire Protection Piping, Revision 7
9763-F-500091, Control Building Section "B-B", Revision 8

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
ALARA	As Low as is Reasonably Achievable
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CR	Condition Report
DG	Diesel Generator
EDG	Emergency Diesel Generator
EDS	Engineering Design Standard
EP	Emergency Planning
ESFAS	Engineered Safety Features Actuation System
FSAR	Final Safety Analysis Report
FTC	Failure to Comply
FTI	Failure to Implement
HEPA	High Efficiency Particulate Air
IMC	Inspection Manual Chapter
NEI	Nuclear Energy Institute
MEMA	Massachusetts Emergency Management Agency
MR	Maintenance Rule
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OROs	Off-site Response Organizations
PARS	Publicly Available Records
PCP	Process Control Program
PCCW	Primary Component Cooling Water
PCIV	Primary Containment Isolation Valve
PI	Performance Indicator
PORV	Pressure-Operated Relief Valve
RCE	Root Cause Evaluation
RFO	Refueling Outage
RG	Regulatory Guide
RHR	Residual Heat Removal
RP	Radiation Protection
RPM	Radiation Protection Manager
RSPS	Risk Significant Planning Standard
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process

SEPS	Supplemental Emergency Power System
SSC	Structure, System, and Component
SSREP	Seabrook Station Radiological Emergency Plan
SW	Service Water
TS	Technical Specifications
UE	Unusual Event
UFSAR	Updated Final Safety Analysis Report
VHRA	Very High Radiation Area
WO	Work Orders