



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

January 30, 2009

Mr. Gene St. Pierre
Vice President, North Region
FPL Energy Seabrook, LLC
Seabrook Nuclear Power Plant
c/o Mr. Michael O'Keefe
P.O. Box 300
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 -
NRC INTEGRATED INSPECTION REPORT 05000443/2008005

Dear Mr. St. Pierre,

On December 31, 2008, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at Seabrook Station, Unit No. 1. The enclosed report documents the inspection findings discussed on January 9, 2009, with Mr. P. Freeman and other members of your staff.

These inspections 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.

One licensee-identified violation, that was determined to be of very low safety significance, is listed in this report. The NRC is treating this violation as a non-cited violation consistent with Section VI.A.1 of the NRC's Enforcement Policy because of the very low safety significance of the violation and because it is entered into your corrective action program. If you contest any NCV 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 the Seabrook Station.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure, and your response (if any), will be available electronically for public inspection in the

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Sincerely,

/RA/

Arthur Burritt, Chief
Projects Branch 3
Division of Reactor Projects

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

Enclosure: Inspection Report No. 05000443/2008005
w/ Attachment: Supplemental Information

cc w/encl:

J. Stall, Executive Vice President, Nuclear and Chief Nuclear Officer
M. Nazar, Senior Vice President and Nuclear Chief Operating Officer
A. Khanpour, Vice President, Engineering Support
M. Warner, Vice President, Nuclear Plant Support
M. Mashhadi, Senior Attorney, Florida Power & Light Company
M. Ross, Managing Attorney, Florida Power & Light Company
M. O'Keefe, Manager, Licensing Manager
P. Freeman, Plant General Manager
K. Wright, Manager, Nuclear Training, Seabrook Station
R. Poole, FEMA, Region I
Office of the Attorney General, Commonwealth of Mass
K. Ayotte, Attorney General, State of NH
O. Fitch, Deputy Attorney General, State of NH
P. Brann, Assistant Attorney General, State of Maine
R. Walker, Director, Radiation Control Program, Dept. of Public Health, Commonwealth of MA
C. Pope, Director, Homeland Security & Emergency Management, State of NH
R. Hughes, Director, Licensing and Performance Improvement
J. Giarrusso, MEMA, Commonwealth of Mass
D. O'Dowd, Administrator, Radiological Health Section, DPHS, DHHS, State of NH
J. Roy, Director of Operations, Massachusetts Municipal Wholesale Electric Company
T. Crimmins, Polestar Applied Technology
R. Backus, Esquire, Backus, Meyer and Solomon, NH
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Sincerely,
/RA/
Arthur Burritt, Chief
Projects Branch 3
Division of Reactor Projects

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S. Campbell, RI OEDO
H. Chernoff, NRR
R. Nelson, NRR
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R. Ennis, NRR, Backup
N. Valentine, NRR
ROPreports@nrc.gov

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U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-443

License No.: NPF-86

Report No.: 05000443/2008005

Licensee: FPL Energy Seabrook, LLC (FPLE)

Facility: Seabrook Station, Unit No.1

Location: Seabrook, New Hampshire 03874

Dates: October 1, 2008, through December 31, 2008

Inspectors: W. Raymond, Senior Resident Inspector
J. Johnson, Resident Inspector
H. Balian, Resident Inspector (Salem)
S. Chaudhary, Reactor Inspector
M. Balazik, Reactor Inspector
O. Ayegbusi, Reactor Inspector
F. Jaxheimer, Senior Resident Inspector (Susquehanna)
P. Presby, Operations Engineer
T. A. Moslak, Health Physicist

Approved by: Arthur Burritt, Chief
Projects Branch 3
Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000443/2008005; 10/01/2008-12/31/2008; Seabrook Station, Unit No. 1; Routine Integrated Report.

The report covered a three-month period of inspection by resident and regional specialist inspectors. 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.

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

A violation of very low safety significance that was identified by FPLE was reviewed by the inspectors. Corrective actions taken or planned by FPLE were entered into FPLE's corrective action program. The violation and corrective actions are listed in section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Seabrook, Unit No. 1 (Seabrook), operated at or near full power for the entire period, except for brief periods at reduced power for test and maintenance activities.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Preparation (71111.01 - 1 sample)

.1 Readiness for Seasonal Extreme Weather Conditions

a. Inspection Scope

The inspectors completed one seasonal extreme weather conditions inspection sample. The inspectors assessed FPLE's readiness for the onset of cold weather conditions. The inspectors reviewed the updated final safety analysis report (UFSAR) descriptions for related design features and verified the adequacy of the station procedures for adverse weather protection. The inspectors reviewed FPLE's actions per procedure ON1490.09 for seasonal readiness, and procedure OS1200.03 for severe weather. The inspectors also conducted walkdowns of susceptible systems, specifically the service water, emergency feedwater and 4 KV electrical systems. The inspectors reviewed deficiencies related to extreme weather preparation and verified the issues were entered into the corrective action program. The references used for this review are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04 - 2 samples)

.1 Partial System Walkdown

a. Inspection Scope

The inspectors completed two partial system walkdown inspection samples for the plant systems listed below. The inspectors verified that valves, switches, and breakers were correctly aligned in accordance with Seabrook's procedures and that conditions that could affect system operability were appropriately addressed. The inspectors verified that selected portions of redundant or backup systems or trains were available while certain system components were out-of-service. The inspectors reviewed applicable piping and instrumentation drawings and system operational lineup procedures. Documents reviewed for this inspection are listed in the Attachment.

- Division I, 125Vdc batteries and chargers during maintenance on the Division II 125Vdc system
- Control building air alignment during damper modifications per 08MMOD500

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q - 2 samples)

.1 Fire Protection

a. Inspection Scope

The inspectors completed two quarterly fire protection inspection samples. The inspectors reviewed Seabrook's fire protection program to evaluate the required fire protection design features, fire area boundaries, and combustible loading requirements for selected areas. The inspectors walked down those areas to assess the licensee's control of transient combustible material and ignition sources, fire detection and suppression capabilities, fire barriers, compensatory measures, and fire mitigation procedures to assess the fire protection program for the following areas:

- Electric and diesel fire pump rooms, FPH-F-1C-A, FPH-F-1B-A, and FPH-F-1A-A
- Service water pump house, SW-F-IA, IC, ID, IE

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11 Q- 2 samples, 71111.11B – 1 sample)

.1 Quarterly Resident Inspector Review

a. Inspection Scope

The inspectors completed two quarterly licensed operator requalification program inspection samples. Specifically, the inspectors observed simulator examination of licensed operators on October 2 and 16, 2008. The inspectors reviewed operator actions to implement the abnormal and emergency operating procedures. The inspectors examined the operators' ability to perform actions associated with high-risk activities, the Emergency Plan, previous lessons learned items, and the correct use and implementation of procedures. The inspectors observed and reviewed the training evaluator's critique of operator performance and verified that deficiencies were adequately identified, discussed, and entered into the corrective action program, as needed. The inspectors reviewed the simulator's physical fidelity in order to verify similarities between the Seabrook control room and the simulator. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 Review of Requalification Program Exam Results

a. Inspection Scope

On December 22, 2008, a region-based inspector conducted an in-office review of the results of the licensee-administered annual operating tests for 2008. Results from the comprehensive written exams were not included in this review because those exams were part of the 2007 testing cycle. The inspection assessed whether pass rates were consistent with the guidance of NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)." The inspector verified that:

- Crew failure rate was less than 20%. (Crew failure rate was 0%)
- Individual failure rate on the dynamic simulator test was less than or equal to 20%. (Individual failure rate was 0%)
- Individual failure rate on the walk-through test was less than or equal to 20%. (Individual failure rate was 2.3%)
- Overall pass rate among individuals for all portions of the exam was greater than or equal to 75%. (Overall pass rate was 97.7%)

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12Q - 2 samples)

a. Inspection Scope

The inspectors completed two maintenance effectiveness inspection samples. The inspectors reviewed performance-based problems or performance and condition history reviews involving selected in-scope structures, systems or components (SSCs) to assess the effectiveness of the maintenance program. Reviews focused on: proper Maintenance Rule (MR) scoping in accordance with 10 CFR 50.65; characterization of reliability issues; tracking system and component unavailability; 10 CFR 50.65 (a)(1) and (a)(2) classifications; identifying and addressing common cause failures, trending key parameters, and the appropriateness of performance criteria for SSCs classified (a)(2) as well as the adequacy of goals and corrective actions for SSCs classified (a)(1). The inspectors reviewed system health reports, maintenance backlogs, and MR basis documents. Other documents reviewed for the inspection are listed in the Attachment. The following samples were reviewed:

- Class 1E and Non-class 1E 4.16/13.8 kV electrical system performance; and,
- Reactor vessel level instrumentation system performance.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation (71111.13 - 1 sample)

a. Inspection Scope

The inspectors completed one maintenance assessment and emergent risk evaluation inspection sample. The inspectors reviewed the scheduling and control of the emergent work activity listed below to evaluate the effect on plant risk. The inspectors conducted interviews with operators, risk analysts, maintenance technicians, and engineers to assess their knowledge of the risk associated with the work, and to ensure that appropriate risk management actions were implemented. The actions taken were evaluated using the following Seabrook procedures: Maintenance Manual 4.14, "Troubleshooting," Revision 0 and Work Management Manual 10.1, "On-Line Maintenance," Revision 3. Specific risk assessments were conducted using Seabrook's "Safety Monitor." The inspectors reviewed FPLE actions and risk assessments to address deficiencies related to operation of the moisture separators and verified the issues were entered into the corrective action program. The inspectors reviewed the following work activities:

- Emergent maintenance to troubleshoot and repair main turbine stop valve (SV-3) when it failed to move during testing (WO 0842133)

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15 - 2 samples)

a. Inspection Scope

The inspectors completed two operability evaluation inspection samples. The inspectors reviewed operability evaluations and condition reports to verify that identified conditions did not adversely affect safety system operability or overall plant safety. The evaluations were reviewed using criteria specified in NRC Regulatory Issue Summary 2005-20, "Revision to Guidance formerly contained in NRC Generic Letter 91-18, Information to Licensees Regarding two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and on Operability" and Inspection Manual Part 9900, "Operability Determinations and Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety." In addition, where a component was determined to be inoperable, the inspectors verified that TS limiting condition for operation implications were properly addressed. The inspectors also performed field walk downs and interviewed personnel involved in identifying, evaluating or correcting the identified conditions. The following items were reviewed:

- CC Loop A Operability Following CC-P11C Motor Failure, CR200815919
- Vital Battery ID Battery charger control switch intermittent contact, CR200815347

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18 - 1 Sample)

.1 Temporary Modifications

a. Inspection Scope

The inspectors completed one plant modification inspection sample. The inspectors reviewed a temporary plant modification documented in Temporary Change 07-012, "Auxiliary Boiler Fuel Oil Supply System." This modification changed the normal operating configuration of system components by adding two temporary 30,000 gallon fuel oil storage tanks and associated piping and instrumentation. The inspectors reviewed the change to ensure that it did not adversely affect systems important to safety. The inspectors compared the temporary change with the UFSAR to verify that the modification did not affect system operability or availability. The inspectors ensured that station personnel implemented the modification in accordance with the issued design documents and the temporary configuration change process. Inspectors verified that the condition monitoring actions that were specified in the modification were performed at the appropriate frequency and in accordance with procedures or authorized work documents. The inspectors also reviewed the impact on existing system procedures to verify the appropriate revisions were made to reflect this temporary configuration change. The documents reviewed for this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 - 4 samples)

a. Inspection Scope

The inspectors completed four post-maintenance testing (PMT) inspection samples. The inspectors reviewed PMT activities to ensure: that the specified PMT was appropriate for the scope of the work completed and was in accordance with the guidance provided in procedure MA 3.5, "Post Maintenance Testing;" that the acceptance criteria were clear and demonstrated operability of the component; and that operators and technicians performed the testing in accordance with plant procedures. The inspectors reviewed the following PMT activities:

- Retest of B 125 Vdc Battery Charger following 480 Vac MCC Cubicle replacement.
- LX0557.03, "Thermal Overload Protection Relay Replacement for Motor Operated Valves," Rev. 02, Chg. 09.
- LX0558.01, "4.16 Kv Breaker Inspection Testing and PM," Rev. 01, Chg. 14.
- Retest of C component cooling water pump CC-p-11C following motor replacement per WO's 0843782 and 0843788

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 – 2 samples)

a. Inspection Scope

The inspectors completed two surveillance testing inspection samples. The inspectors observed portions of surveillance testing activities for safety-related systems to verify that the system and components were capable of performing their intended safety function, to verify operational readiness, and to ensure compliance with the technical specifications and surveillance procedures. The inspectors attended selected pre-evolution briefings, performed system and control room walkdowns, observed operators and technicians perform test evolutions, reviewed system parameters, and interviewed the applicable system engineers and field operators. The test data recorded was compared to procedural and technical specification requirements, and to prior test results to identify any adverse trends. The following surveillance procedures were reviewed.

- OX1456.21, "Train A ESFAS Slave Relay K601 Quarterly Go Test," Rev. 9, performed on October 21, 2008
- OS1402.04, "Train B CCP Oil Cooler Alternate Cooling Supply Flow Test," Rev. 0, performed on November 4, 2008

The inspectors reviewed deficiencies related to surveillance testing and verified that the issues were entered into the corrective action program. Documents reviewed for this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06 - 1 sample)

.1 Annual Licensed Operator Requalification

a. Inspection Scope

The inspectors completed one drill evaluation inspection sample. On October 2, 2008, the inspectors observed a drill from the control room simulator during annual licensed operator requalification training. The inspectors evaluated the drill performance relative to developing event classifications and notifications. The inspectors reviewed the Seabrook Emergency Initiating Condition Matrix. The inspectors referenced Nuclear Energy Institute 99-02, "Regulatory Assessment PI Guideline", Revision 5, and verified that FPLE correctly counted the drill's contribution to the NRC PI for drill and exercise performance.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03 - 9 samples)

a. Inspection Scope

During the period November 3 - 6, 2008, the inspectors conducted the following activities to evaluate the operability and accuracy of radiation monitoring instrumentation and the adequacy of the respiratory protection program related to maintaining and issuing self-contained breathing apparatus (SCBA). Implementation of these programs was reviewed against the criteria contained in 10 CFR 20, applicable industry standards, and FPPE procedures.

The inspectors reviewed the UFSAR to identify area, process, and emergency monitors that were installed at Seabrook for the protection of workers. The inspectors reviewed the current calibration records for the following instruments: the volume control tank area monitor (RM-6540), the incore seal table radiation monitor (RM 6534), spent fuel area monitor (RM-6549), and the waste gas process area monitor (RM-6551). The inspectors discussed with the system engineer the area monitoring system health reports, instrument reliability trends, and status of system modifications.

The inspectors selected hand-held radiation instruments, contamination monitors, and electronic dosimeters currently in use in the plant, and reviewed the associated calibration records. Included in this review were the calibration records for selected electronic dosimeters (DMC-2000), radiation survey instruments (ASP-2, E-140N, 451B, Telepoles), contamination monitors (RM-14, SAM-9, ARGOS 4AB-Zeus 46, SPM-906), and the FastScan whole body counting system.

The inspectors observed a technician performing the pre-use safety checks on the Shepherd Model 81 beam irradiator, reviewed the source(s) current activity/dose rate data, and observed the technician perform a calibration of a Fluke 451B ion chamber. The inspectors evaluated the licensee's program for assuring quality in the radiation monitoring instrumentation and respiratory protection programs by reviewing the results of Nuclear Oversight audit No. SBK -08-01, Nuclear Assurance Respiratory Protection Program assessment (07-0086), selected Daily Quality Summary reports and Management Observation Reports for the period of September 2007 to September 2008, a Health Physics instrumentation self-assessment report (07-0212), and seventeen condition reports related to these program areas. The inspectors verified that problems were identified in a timely manner, that extent of condition and cause evaluations were performed, that previous radiation surveys remained valid, and that corrective actions were appropriate to preclude repetitive problems.

The inspectors determined that there were no incidents of personnel internal exposure resulting in a CEDE > 50 mrem that would require an in-depth evaluation of whole body counting and bioassay techniques. However, the inspectors reviewed whole body counting instrument calibration and daily quality control data to confirm that the instrumentation was operable and available for use. Additionally, the inspectors reviewed the most current Part 61 analysis of the site's dry active waste stream for difficult-to-measure radioisotopes and determined that the isotopic mix did not significantly change from past analyses and that current whole body counting system parameters do not need to be changed.

The inspectors reviewed relevant condition reports that were initiated since the last inspection, to determine if radiation worker and radiation protection technician errors that resulted from training deficiencies or human factors were evident. The inspectors also verified that the resulting corrective actions were adequate to prevent recurrence.

The inspectors verified calibration dates and observed a technician perform daily operational checks on a variety of survey instruments including telepoles, an RM-14, ASP-2, Fluke 451B, E-140N, and small article monitors (SAM).

The inspectors evaluated the adequacy of the respiratory protection program regarding the maintenance and issuance of self-contained breathing apparatus (SCBA) to emergency response personnel. The inspectors reviewed training and qualification records for licensed operators from all operating shifts, radiation protection personnel, and fire brigade members, who would be required to wear SCBAs in the event of an emergency. Three SCBAs staged for use in the control room and two SCBAs staged in the turbine building were physically checked and the maintenance and hydrostatic/regulator test records for other selected SCBA's that were staged in other plant areas were reviewed.

The inspectors reviewed the calibration records of the SCBA regulator testing equipment, verified that technicians were qualified to maintain and test regulators, reviewed the testing procedure, and observed a technician performance test five regulators/flow alarms. The inspectors also verified that air used to fill the SCBAs met the Grade D quality criteria of the Compressed Gas Association.

b. Findings

No findings of significance were identified.
Cornerstone: Public Radiation Safety

2PS2 Radioactive Material Processing and Transportation (71122.02 – 6 samples)

a. Inspection Scope

During the period September 29 – October 2, 2008, the inspectors conducted the following activities to verify that the licensee's radioactive material processing and transportation programs complied with the requirements of 10 CFR 20, 61, and 71; and Department of Transportation (DOT) regulations 49 CFR 170-189.

Radioactive Waste Systems Walkdown

The inspectors walked down accessible portions of the radioactive liquid processing systems with the senior technical specialist-radwaste, and a site systems engineer. During this tour, the inspectors verified that systems and facilities were consistent with the descriptions contained in the updated final safety analysis report (UFSAR) and the process control program (PCP), evaluated general material conditions of systems and facilities, and identified changes to these systems. The inspectors evaluated recently completed, and pending changes, made to solid and liquid radwaste processing systems including their potential radiological impact, the current processes for transferring radioactive resin/ sludge to shipping containers, and the subsequent de-watering process.

The inspectors, with a system engineer, walked down portions of laid-up systems that may be retired in-place including components of the boron recovery system, steam generator blowdown system, and asphalt solidification system. The inspectors discussed the status of administrative and physical controls for these systems.

The inspectors inspected various radioactive material storage locations, with the supervisor, radiological waste services, including the waste processing building, the radioactive materials storage building (RMSB), the Unit 2 cooling tower, and sea vans stored on site. The inspectors confirmed that inventories were current, that material was properly labeled, and that containers were in satisfactory material condition.

Waste Characterization and Classification

The inspection included a review of the waste characterization and classification program for regulatory compliance, including;

- the radio-chemical sample analysis results for various radioactive waste streams, including spent resins, dry active waste, and mechanical filters.
- the development of scaling factors for hard-to-detect radionuclides.
- methods and practices to detect changes in waste streams.
- characterization and classification of waste relative to 10 CFR 61.55 and determination of DOT shipment subtype per 49 CFR 173.

Shipment Preparation

The inspection included a review of radioactive waste program records, shipment preparation procedures, and observations of in-progress activities for regulatory compliance, including:

- Verified compliance with the relevant Certificates of Compliance and related cask handling procedures for shipping casks used for past shipments.
- Verified that FPLE had the current amendment for NRC (or agreement state) license authorization for the shipment recipients for six shipments
- Verified that training was provided to personnel responsible for classifying, handling, and shipping radioactive materials in accordance with NRC Bulletin 79-19, and 49 CFR 172 Subpart H.

Shipment Records

The inspectors selected and reviewed records associated with six non-excepted shipments of radioactive materials completed since the last inspection of this area. The shipments were Nos.08-075, 08-007, 08-002, 07-040, 07-038, and 08-053. The following aspects of the radioactive waste packaging and shipping activities were reviewed:

- implementation of applicable shipping requirements including proper completion of manifests;
- implementation of specifications in applicable certificates-of-compliance, for the approved shipping casks, including limits for package contents;
- classification of radioactive materials related to 10 CFR 61.55 and 49 CFR 173;
- labeling of containers relative to container dose rate;
- radiation and contamination surveys of packages;
- placarding of transport vehicles;
- conduct of vehicle checks;
- providing of emergency instructions to the driver;
- completion of shipping papers;
- notification by the recipient that the radioactive materials had been received.

Problem Identification and Resolution

The inspectors reviewed the 2006 Annual Radioactive Effluent Release Report, 25 condition reports, a Quality Assurance Audit Report, and Seabrook Daily Quality Summary Reports related to radioactive material control and shipping. The inspectors assessed FPLE's threshold for identifying problems and the promptness and effectiveness of corrective actions. This review was conducted using the criteria contained in 10 CFR 20.11(c), the technical specifications, and FPLE procedures.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151- 2 samples)

.1 Occupational Exposure Control Effectiveness

a. Inspection Scope

The inspectors reviewed implementation of FPLE's Occupational Exposure Control Effectiveness Performance Indicator (PI) Program. Specifically, the inspectors reviewed condition reports, and associated documents, for occurrences involving locked high radiation areas, very high radiation areas, and unplanned exposures against the criteria specified in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," to verify that all occurrences that met the NEI criteria were identified and reported. The review covered the period from August 2007 through October 2008.

b. Findings

No findings of significance were identified.

.2 RETS/ODCM Radiological Effluent Occurrences

a. Inspection Scope

The inspectors reviewed relevant effluent release reports for the period August, 2007 through October 2008, for issues related to the public radiation safety performance indicator, which measures radiological effluent release occurrences that exceed 1.5 mrem/qtr whole body or 5.0 mrem/qtr organ dose for liquid effluents; 5 mrad/qtr gamma air dose, 10 mrad/qtr beta air dose, and 7.5 mrad/qtr for organ dose for gaseous effluents.

The inspectors reviewed the monthly performance indicator reports, and the following documents, to ensure the licensee met all requirements for evaluating the performance indicator from the third quarter 2007 through the third quarter 2008:

- Monthly projected dose assessment results for radioactive liquid and gaseous effluent releases.
- Quarterly projected dose assessment results for radioactive liquid and gaseous effluent releases
- Effluent dose assessment procedures

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152 - 4 samples)

.1 Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the Seabrook corrective action program (CAP). This review was accomplished by accessing FPLE's computerized database. The inspectors also reviewed FPLE actions to address the control of heavy loads per Nuclear Energy Institute initiative NEI 08-05, as described in condition reports 200712475 and 200804903.

b. Findings

No findings of significance were identified.

.2 Semi-annual Review to Identify Trends

a. Inspection Scope

As required by Inspection Procedure 71152, "Problem Identification and Resolution," the inspectors performed a review of the Seabrook CAP and associated documents to identify trends that may indicate existence of safety significant issues. The inspectors' review was focused on repetitive equipment and corrective maintenance issues, but also considered the results of daily CAP item screening. The inspectors compared and contrasted their results with the results contained in the Seabrook CAP Quarterly Trend Reports.

b. Assessment and Observations

No findings of significance were identified. The inspectors did not identify any appreciable trends that FPLE had not already identified.

.3 Annual Sample: Air operated valve Bailey positioner feedback linkage failures

a. Inspection Scope

The inspectors reviewed the actions FPLE had taken to prevent recurrence of air operated valve (AOV) Bailey positioned feedback linkage failures. The inspectors reviewed problem identification for timely determination commensurate with risk significance and ease of discovery; resolution of operability and reportability; extent of condition, common cause, and previous occurrences; classification of problem resolution with respect to safety significance; identification of appropriate corrective actions; and completion of corrective actions, including interim and permanent corrective actions. The inspectors walked down 25% of similarly equipped AOVs that were randomly

selected from two populations. The first sample consisted of AOV actuators that FPLE found degraded and subsequently corrected. The second sample consisted of AOV actuators that FPLE found correctly configured.

b. Findings and Observations

No findings of significance were identified. In November 2007, Seabrook Generating Station experienced a primary component cooling water (PCCW) transient caused by failure of the Bailey positioner feedback linkage of temperature control valve 1-CC-TV-2271-1. This valve was designed to fail open. However, this particular failure caused the AOV actuator to close the valve. Operators intervened manually to arrest and reverse the PCCW transient.

FPLE determined that the failure occurred because a positioner linkage rod was not secured with adequate thread engagement following preventive maintenance. In response, FPLE inspected all AOVs equipped with a similar positioner and found other deficiencies with AOV positioner feedback linkage including missing jam nuts and diverse use of washers at all connection points. FPLE identified 17 AOVs that required corrective maintenance to restore an acceptable configuration and 59 AOVs that did not require corrective maintenance.

FPLE determined that the apparent cause of this deficiency was inadequate procedural guidance and insufficient understanding by maintenance technicians. FPLE developed recurring technical training for instrumentation and controls (I&C) technicians to remedy the insufficient understanding of maintenance technicians. FPLE is revising procedures and maintenance instructions to provide adequate written guidance.

.4 Annual Sample: Review of Switchyard Disconnect Switch 1101 Epoxy Drive Rod Failure

a. Inspection Scope

The inspectors selected condition report (CR) 08-00894 for detailed follow-up and review. CR 08-00894 documented a fault in the 345 kV switchyard that resulted in a reactor trip on January 19, 2008. The fault was due to the failure of an epoxy drive rod in switchyard disconnect switch (DS) 1101 north. The inspectors assessed FPLE's problem identification threshold, root cause analyses, extent of condition review, and the prioritization and timeliness of corrective actions to determine whether FPL was appropriately identifying, characterizing, and correcting problems associated with these issues and whether the planned or completed corrective actions were appropriate to prevent recurrence. Additionally, the inspectors performed a switchyard walkdown and discussed the issue with the switchyard system engineer. Specific documents reviewed are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified. During the inspection, the inspectors observed that procedure LN0560.11, "SF₆ SO₂ and Purity Sampling" did not require that FPLE review the sampling results. FPLE's procedure only required that the switchyard system engineer was informed when the procedure was completed. FPL documented this observation in CR 08-14600 to enhance the procedure to require that the switchyard

system engineer review the sampling results for anomalies. During the switchyard walkdown, the inspectors also observed that the gas sample valve was lower in elevation than the disconnect switches. Because the SF₆ gas being sampled was denser than the partial discharge byproduct SO₂, the inspectors could not determine the adequacy of sampling for byproduct SO₂ from this low elevation. FPLE documented this observation in CR 08-14600 to determine the adequacy of the sampling point and evaluate sampling in close proximity to the disconnect switches.

The inspectors determined that FPLE adequately implemented the corrective action process regarding the initial discovery of the above issue. The CR packages were complete and included root cause evaluation, extent of condition reviews, completed corrective actions and planned corrective actions. Additionally, the elements of the CR packages were detailed and thorough.

Specifically, the inspectors determined that corrective actions included replacement of DS 1101 north epoxy drive rod with a new style rod. Also, during refueling outage 12, FPLE replaced 21 epoxy drive rods with the potential to cause a plant trip or place the plant in a 72-hour shutdown action statement upon failure. The inspectors noted that the 52 remaining epoxy rods that were non-critical to plant operations were replaced or scheduled for replacement by refueling outage 13. In addition, the inspectors determined that FPLE increased the frequency of gas sampling to a weekly basis for the remaining rods until they were replaced. FPLE conducted ultra high frequency (UHF) monitoring to inspect the new epoxy rods to detect early partial discharge. The inspectors determined that the results of the UHF monitoring showed no significant partial discharge.

The inspectors determined that corrective actions were timely and appeared appropriate to prevent recurrence for the issue. The corrective actions addressed immediate equipment concerns as well as the extent of condition for the failure. The inspectors determined that adequate tracking mechanisms were in place to ensure all corrective actions will be completed.

.5 Annual Sample: Low Strength bolts in Residual Heat Removal (RHR) System

a. Inspection Scope

The inspectors reviewed the actions taken by FPLE at Seabrook to initiate a program to address the use of low strength bolts in class 150 and class 300 piping applications in the RHR system. The deficiency was identified and documented in the NRC IR 200705 as NCV 2007-05-02. The scope of the review included the FPLE's extent of condition and effectiveness of follow-up actions to resolve the discrepancy.

b. Findings and Observations

No findings of significance were identified. This condition was first identified in 1987 during a review of the containment building spray system to assess the effects of check valve leakage. Later, similar deficiencies were identified in 1989, and 2000 but FPLE did not change or update the applicable specification for these affected bolting. CR 06-13980 also documented that a non-conformance existed in the class 150 and 300 pipe flange installed bolting application specification. As follow-up, CR 07-13981 was initiated to document that the implementation of design change control and corrective

action process were not satisfactory related to this issue. In addition to a prompt operability review FPLE initiated an investigation and in-depth review of these deficiencies. The review disclosed that the engineering evaluation performed in 1987 did not cause the revision of the specification 248-01, because the engineering evaluation indicated that the use of low strength bolts was technically acceptable in the application. Also, the engineering evaluation process implemented at that time was neither part of, nor was linked to the corrective action process. In response FPLE revised the applicable specification and initiated a program of review for bolting applications in ASME systems in order to identify and replace the low strength bolts. The applicable bolts were replaced in RHR systems and replacement will continue in other systems as those systems become available for maintenance. The inspectors determined that the FPLE's follow-up for this deficiency was extensive and the corrective action technically adequate and effective.

4OA5 Other Activities

.1 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with FPLE security procedures and regulatory requirements related to nuclear plant security. These observations took place during both normal and off-normal plant working hours. These observations did not constitute an additional inspection sample. Rather, they were considered an integral part of the inspectors' normal plant status reviews and inspection activities.

b. Findings

No findings of significance were identified.

.2 Independent Spent Fuel Storage Installation (ISFSI)(60855)

a. Inspection Scope

An ISFSI inspection was conducted on September 30, 2008, under the NMSS inspection program. Using Inspection Procedure 60855, the inspectors reviewed the ongoing maintenance and surveillance activities for the onsite storage of spent fuel and toured the ISFSI with the project engineer. The ISFSI licensing basis documents and implementing procedures were reviewed as the standards for the inspection. The inspection consisted of observing the condition of the Nuclear Horizontal Modular Storage (NUHOMS) system; performing independent radiation surveys of the storage modules; and review of the surveillance records, including air vent inspections and recent daily air vent outlet temperature readings.

b. Findings

No findings of significance were identified.

.3 Temporary Instruction (TI) 2515/176. Emergency Diesel Generator Technical Specification Surveillance Requirements Regarding Endurance and Margin Testing

a. Inspection Scope

The objective of TI 2515/176, "Emergency Diesel Generator Technical Specification Surveillance Requirements Regarding Endurance and Margin Testing," was to gather information to assess the adequacy of nuclear power plant emergency diesel generator (EDG) endurance and margin testing as prescribed in plant-specific TS. The inspectors reviewed emergency diesel generator ratings, design basis event load calculations, surveillance testing requirements, and emergency diesel generator vendor's specifications and gathered information in accordance with TI 2515/176.

The inspectors' assessment and information gathered while completing this TI was discussed with FPLE personnel. This information was forwarded on to the Office of Nuclear Reactor Regulation for further review and evaluation.

b. Findings

No findings of significance were identified.

.4 (Closed) URI 07200063/2008001-001, Acceptability of Allowing a Non-Qualified Individual to Manipulate the Automated Welding Controls During a Production Weld.

During welding of the first dry shielded canister (DSC) at Seabrook, it was observed that a welder who was qualified to the American Society of Mechanical Engineers (ASME) Code Section IX requirements was assisted during production welding by a weld technician who had expertise in the weld machine control functions but was not documented as having taken the ASME welder performance qualification test. To determine if that situation met the requirements of the ASME Code, a written inquiry was submitted to the ASME Code requesting a review and formal reply. The ASME Code response, file number 08-1607 dated November 26, 2008, confirmed that a person making adjustments to welding equipment settings while under the supervision and control of a qualified welder was not required by QW-301.2 of ASME Section IX to be a qualified welder or welding operator.

The ASME Code reply confirmed that the ASME welder qualification rules had been met for the observed DSC production welding conditions. **(URI 07200063/2008001-001 is closed.)**

4OA6 Meetings, including Exit

Exit Meeting Summary

The inspectors presented the inspection results to Mr. Paul Freeman on January 9, 2009. FPLE acknowledged the findings presented and indicated that none of the information presented at the exit meeting was proprietary.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Severity Level IV) was identified by FPLE. It was a violation of NRC requirements that met the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a non-cited violation (NCV).

TS 6.7.1.a requires that written procedures be established and implemented per Regulatory guide 1.33. Procedure OS1036.01 was written pursuant to the above and requires that steam admission valve MS-V-394 be closed with the control switch in the "auto" position to align the A emergency feedwater (EFW) pump 37A for standby operation during plant operations at power. Contrary to the above, plant operators did not maintain EFW pump 37A operable during plant operation at full power on October 6, 2008, when the control switch for MS-V-394 was inadvertently moved to open during control board activities. The inadvertent operation of MS-V-394 caused steam generator blowdown to isolate. The operators entered the action statement for TS 3.7.1.2, restored EFW pump 37A to the required standby alignment, and restored steam generator blowdown.

The finding was more than minor because the incorrect operation of EFW controls resulted in the unplanned inoperability of the A EFW system and impacted steam generator blowdown during plant operations. The finding had very low safety significance because it did not involve a loss of safety function or impact the safety function for a time greater than the allowed outage time in the TS. The inspectors determined that the violation was licensee-identified. The issue was entered into FPLE's CAP as CR 08-13779.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

R. Arns, Engineering
J. Ball, Maintenance Rule Coordinator
R. Belanger, Design Engineer
M. Bianco, Radiological Waste Services Supervisor
B. Brown, Plant Engineer
V. Brown, Senior Licensing Analyst
K. Browne, Assistant Operations Manager
B. Buerger, Nuclear Projects
J. Buyak, Senior Radiation Protection Technician, (Respiratory Protection)
R. Campione, Nuclear Oversight Supervisor
R. Campo, Plant Engineer
W. Cash, Chemistry Manager
D. Chang, Tagging Support
R. Couture, Reactor Engineer
W. Cox, Radiological Waste Services, Senior Technical Analyst
J. Crowley, I&C Superintendent
J. Esteves, Design Engineer Systems
D. Feeney, Mechanical Maintenance
D. Flahardy, RP Technical Supervisor
P. Freeman, Plant General Manager
R. Guthrie, Systems Engineer, Radiation Monitoring System
D. Hampton, Radiation Protection Specialist
F. Hannify, Radiological Waste Services, Senior Technical Analyst
D. Hickey, Radiation Protection Supervisor
M. Hansen, Maintenance Manager
R. Jamison, Design Engineer Electrical
G. Kann, Dry Cask Storage Project Engineer
S. Kessinger, Work Control Supervisor
R. Logue, Senior Radiation Protection Technician, (Instrumentation)
G. Kim, Risk Analyst
E. Metcalf, Operations Manager
M. Lipman, Plant Technician
T. Manning, Engineering
D. Master, Plant Engineer
B. McAllister, SW System Engineer
N. McCafferty, Plant Engineering Manager
W. Meyer, Radiation Protection Manager
D. Merrill, Maintenance Technical Superintendent
M. O'Keefe, Licensing Manager
K. Mahoney, Reactor Engineer
R. Noble, Engineering Manager
M. Ossing, Engineering Support Manager
V. Pascucci, Quality Assurance Manager

D. Perkins, Rad Services Supervisor
E. Piggot, Unit Supervisor
R. Plante, Maintenance Supervisor
B. Plummer, Nuclear Projects Manager
N. Pond, Tagging Coordinator
K. Purington, Reactor Operator
K. Randall, Reactor Engineer
T. Rossengal, RHR System Engineer
M. Russell, Operations Clerk
M. Scannell, Senior Health Physicist
W. Schmidt, Electrical Maintenance
G. Sessler, EDG System Engineer
J. Soucie, Nuclear Plant Operator
G. St. Pierre, Site Vice President
M. Taylor, Unit Supervisor
R. Thurlow, Corporate Radiation Protection Manager
J. Tucker, Security Manager
J. Varga, Reactor Operator
J. Walsh, CVCS System Engineer
N. Walts, Unit Supervisor
S. Wellhofer, Site Nurse
R. White, Security Supervisor
K. Wright, Training Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

07200063/2008001-001 URI Non-Qualified Welder Manipulated Automated Welding
Controls During Production Weld (Section 40A5)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

ON1490.06, Freeze Protection Control Surveillance, Revision 4
OS1200.03, "Severe Weather Conditions," Revision 14
OS1200.03, Attachment D, Severe Weather Actions, Revision 14
OS1090.09, Station Cold Weather Operations, Revision 0
ER1.1, Classification of Emergencies, Revision 46
UFSAR Section 2.4, 3.4, and 9.3.3, Revision 12
Station Operating Logs
UFSAR Section 9.4, Air Conditioning, Heating, Cooling and Ventilation Systems
Work Orders 0802095, 0808336, 0731620, 0811064, 0800024, 0702711
Preventive Maintenance 1-MM-ON002-000, 1-BM-MM-INSUL
Temporary Modification 08TMOD004
Quality Report QRNO 08-00652
Condition Reports 2007-2008
Condition Reports 200812362, 200814510

Section 1R04: Equipment Alignment

Main control Board and Main Computer Status Displays
Operations Logs – Various
LS0562.22, Rev 01 Chg. 05, DC Ground Detector Loop Calibration
LS0563.44, Rev 01 Chg. 08, DC Bus Undervoltage Relay PM
LS0577.22, Rev 01, Verification of Safety Related (1E) Overcurrent Protection (480V MCC)
OS1023.51, Form C: Control Room Ventilation System Lineup, Revision 14
OS1023.74, Maintenance of Safety Related HVAC Systems – Compensatory Ventilation
Procedure, Revision 1
Clearance WW05-45-01
Condition Report 200814374
Drawing B20303, Revision 19; B20304, Revision 14
WO08089916

Section 1R05: Fire Protection

Fire Protection System Description, Appendix A – Evaluation and Comparison to BTP 9.5-1
UFSAR Section 9.5.1, Fire Protection Systems
Fire Hazards Analysis
IM-PX09-38, Fire Protection Prefire Strategies FPH-F-1A-A, FPH-F-1B-A, and FPH-F-1C-A
IX1624.924, FP-CH-452 and FP-CP-512 West MS and Feedwater Pipe Chase Fire
Detection Testing, Rev. 4, Chg 6
IX1642.924, FP-CP-452 and FP-CP-512 West MS and FW Pipe Chase Fire Detection Testing,
Revision 04, Change 06
IM-PX09-38, Seabrook Fire Protection Pre-Fire Strategies
Work Order 0731634
Condition Report 08-13921

Section 1R11: Licensed Operator Regualification Program

OS1235.03, SG Level Instrument Failure, Rev. 12
OS1201.01, RCP Malfunction, Rev. 14
E-0, Reactor Trip or Safety Injection, Rev. 46
ES-0.1, Reactor Trip Response, Rev. 34
E-3, Steam Generator Tube Rupture, Rev. 39
NT-5701-5, Completed Crew Simulator Evaluation on 10/2/08
Simulator Examination, Demonstrative Examinations

Section 1R12: Maintenance Rule Implementation

System Health Reports – ED/EDE 4.16 and 13.8 KV
System Health Report – Reactor Vessel Level Instrumentation
Seabrook System and Performance Reports
Plant Engineering Guidelines, Maintenance Rule Program Monitoring Activities
Plant Engineering Action Plan Register
Maintenance Rule Failures Evaluated in the Condition Report System
Maintenance Preventable Functional Failures Evaluated the Condition Report System
Work Orders for 2007-2008
Condition Reports for 2007-2008

Section 1R13: Maintenance Risk and Emergent Work

CR 08-10654 CC Pump Motor Failure and Ground Alarm on Bus 6
CR 08-10116 Feedwater Regulating Valve Positioner Linkage
CR 08-10421 DG B tripped on high lube oil temperature signal approximately 87 minutes after breaker closure
CR 08-10480 DG B crank case exhauster fan had high vibration following the high lube oil temperature engine trip
CR 08-15984, C MSR High Load Valve Went Closed for No Apparent Reason
Work Orders (WO) 0822133, 0834080, 0834093, 0831919, 0832057, 0832204, 0822133, 0843808, 0844373, 0846234
WO 0801836 Inspect Feed Regulating Valve A, dated July 9, 2008
WO 0821665 DG "B" Lube Oil HX Temperature Control Valve Rebuild
WO 0821666 #3 and #6 cylinder fuel injection pump dirty fuel oil return line
WO 0821668 T-OTHA [over temperature high alarm] diesel generator B lube oil heat exchanger inlet and outlet temperature calibration
WO 0821242, Unable to operate valve needed to take differential reading on lube oil filter (1DG-PI-7-B-6)
WO 0821704, 1DG-DG-1B crank case exhauster fan, 1-DG-FN-29B
WO 0821772, Ground relay was actuated on CC-P-11D causing fire alarm to actuate
WO 0821773, Component Cooling PP 4.16 KV Motor Inspection Motor Megger
WO 0821774, Component Cooling PP Motor Type IAC Relay and Ground Relay Inspection
OS1090.01, Manual Operation of Remove Operated Valves, Rev. 6, Section 4.1
OX1456.81, Operability Testing of IST Valves, Revision 6
OX1436.02, Form B, Independent Verification of EFW Valves, Revision 9 (WO 0834080)
IS1632.412, DGB-T-OTHA, DGB Lube Oil Temperature Switch Calibration, Rev. 06, Chg. 07
MS0539.52, DG 1B Engine Lube oil System Draining, Filling, and Venting, Rev. 00, Chg. 15
MS0519.42, Robertshaw 3-way Temperature Control Valve Maintenance, Rev. 04, Chg. 04
Plant Engineering Action Register for CCW system-CR 08-10654

Section 1R15: Operability Evaluations

Condition Reports 200813519, 200813602, 200813619, 200815347, 200815919, 200815916, 200815922, 200815953
Work Orders 0733404, 0733407, 0733651, 0800225, 0842755
Prompt Operability Determination for CR 200813519
03MMOD504
Drawing 1-FW-B20688, 1-NHY-310107
Battery Charger Vendor Manual
VRPO Alarm Response procedures
125VDC Distribution System System Description
Technical Specification 3.8.2.1

Section 1R18: Modifications

Temporary Modification Request 07-012
UFSAR Section 10.4.11.5, Instrumentation and Control (Auxiliary Steam System)
UFSAR Section 8.2.1.5, Compliance with General Design Criterion 17
ON1041.01, Auxiliary Boiler 30A Startup
Condition Report 07-15743

Section 1R19: Post Maintenance Testing

CR 08-12580, 07-08581, 08-14606, 08-14595
 WO 0621727, 0739018, 0734168, 0802745, 0801365, 0821665, 0821666, 0821668, 0832204,
 0831919, 0832057, 0809918, 0807198, 0232457, 0813870, 0714833, 0839710, 0813921
 OX1456.81, Operability Testing of IST Valves, Revision 6
 IS0603.057, NAMCE Limit switch Replacement, Revision 2
 IS1652.9, Recharging ASDV/EFW Backup Air supply, Revision 0
 LS0568.21, Wiring Verification and Functional Checks, Revision 2
 ES07-01-04, Performance Testing of SW-P-329, Revision 0
 05MSE218, Replacement Portable Cooling tower Makeup Pump, Revision 1
 WO 0821613, AC Power Source Weekly Operability Surveillance (1-EDE-OT003-000)
 WO 0802745, ESFAS Slave Relay Test (K608B) Train B
 WO 0801365, Aligning DG 1B Controls for Auto Start
 OX1446.01, AC Power Source Weekly Operability Surveillance (Mode 1 – 4)
 OX1426.23, Emergency Diesel Generator 1B 24 Hour Load Test and Hot Restart
 Surveillance, Revision 1
 OX1426.05, Diesel Generator 1B Monthly Operability Surveillance, Revision 9
 OX1456.46, Train B ESFAS Slave Relay K608 Quarterly Go Test, Revision 7
 OX1426.19, Aligning Diesel Generator 1B Controls for Auto Start, Revision 3
 OX1416.03, "Monthly Cooling Tower Fan Operability Test," Revision 7
 LX0558.01, "4.16KV Breaker Inspection Testing and PM," Revision 1
 OS1026.13, Operating the DG 1B Fuel Oil System,
 OS1026.10, Operating the DG 1B Lube Oil System
 OS1026.14, Operating the DG 1B Air Intake, Exhaust, and Vacuum System
 OS1026.12, Operating the DB 1B Starting Air System
 OS1026.11, Operating the DG 1B Jacket Cooling Water System
 OS1016.04, Train B Service Water Operation
 OS1023.54, Diesel Generator Building Ventilation System Operation
 ADMIN – 08 – 0165
 TS 3.8.1.1.a, c, and d (Bus 6 RAT DG Breakers)
 TS 3.8.1.7.b.2, TS 4.8.1.1.2a.1-7, TS 4.8.1.2e, TS 3.7.4
 LX0556.06, Revision 3, Station Battery Charger Capacity Test
 LX0557.03, "Thermal Overload Protection Relay Replacement for Motor Operated Valves,"
 Revision 2, performed on October 21, 2008.
 LX0558.01, "4.16KV Breaker Inspection Testing and PM," Rev. 01, Chg. 14, performed on
 October 23, 2008.
 FPLE ME 7 day Look Ahead

Section 1R22: Surveillance Testing

CR 08-08979, 08-12213,
 WO 0804577, 0804355, 0804496, 0804573, 0804495, 0801504, 0732952, 0737840, 0800212
 WO 0801780 1-EFW-OT008-00, EFW Pump A Quarterly Operability Test, Dated July 08, 2008
 WO 0805359 Startup Feed Pump Quarterly Operability Surveillance
 WO 0805397 Startup Feed Pump Lube Oil Sample
 RS0720, SNM Inventory and Control, Revision 7
 Calculation SBK-1FJF-08-072, Seabrook Station – Irradiated Fuel Assembly Selection for Initial
 Dry cask Loading Campaign, Revision 0
 RS0720, Form J: DSC/HSM Map for DSC 1 through 6
 Transnuclear UFSAR NUHOMS HD Horizontal Modular Storage system For Irradiated Nuclear

Fuel, Revision 1, September 2007
 Certificate of Compliance No 1030 For Spent Fuel Storage Casks, 1/10/07
 Engineering Evaluation 08-009, Dry Fuel Storage Rigging Plan, Revision 4
 Foreign Print Drawings 35974, 35800, 35808, 78445
 IMPULSE VG Series 3 Instruction Manual (FSB Main Hoist), 7/1/04
 FX3000.08, TC/DSC Handling Operations for Fuel Loading, Revision 2
 FX3000.14, DSC Transport from FSB to HSM, Revision 1
 FX3000.14, Form D, HSM Temperature Monitoring, Revision 0
 Seabrook VSDS Survey Map – Dry Fuel Storage Area and HSMs, 9/11/08
 CS0910.01, Primary System Sampling at SS-CP-166, Revision 10
 COC No 1030 Appendix A Technical Specifications
 OX 1436.08, Startup Feed Pump Quarterly Surveillance, Rev. 10
 OX 1433.02, Turbine Driven Emergency Feedwater Pump Quarterly and Monthly Valve Alignment, Rev., 09, Chg. 01
 OX 1456.21, Train A ESFAS Slave Relay K601 Quarterly Go Test, Rev., 09, Chg. 15
 OX 1413.01, A Train RHR Quarterly Flow and Valve Stroke Test and 18 Month Valve Stroke Observation, Rev. 10, Chg. 15
 OX 1456.85, Train A ESFAS Slave Relay K624 Quarterly Go Test, Rev., 00, Chg. 08
 OX 1456.81, Operability Testing of IST Valves, Rev. 6, Chg. 3
 OX 1456.86, Operability Testing of IST Pumps, Rev. 0, Chg. 18
 ODI.05, Residual Heat Removal Pump RH-P-8A (prestart check list)
 08-108 Chemistry recommendation for RHR “A” Surveillance, dated July 29, 2008
 P&ID 1-RH-B20662, 1-CO-B20426

Section 1EP6: Drill Evaluation

Procedures

ER 1.1, Classification of Emergencies, Rev. 46
 ER 1.1B, Emergency Initiating Condition Matrix, Rev. 4
 Other Documents
 Simulator Examination, Demonstrative Examination #9, Rev.12

Section 2OS3: Radiation Monitoring Instrumentation and Protective Equipment

Procedures:

HD0965.14, Rev 1	Use of the PosiCheck 3
HD0955.19, Rev 8	Use of the Model 81 Shepard Beam Irradiator
HD0958.11, Rev 5	Radiological Characterization of Irradiators
HD0955.31, Rev 3	Determination of Portable Instrument Response Check Data
HD0963.28, Rev 9	Calibration & Trouble Shooting of MGP Instruments DMC 2000 Dosimeters
HD0961.32, Rev 0	Canberra Whole Body Counting System Calibration
HD0965.02, Rev 15	Repair, Inspection, Inventory, and Maintenance of Respiratory Equipment
HD0963.02, Rev 14	Administrative Guidelines for Radiation Protection Instrumentation
HD0955.54, Rev 0	Operation of the TSA Model SPM-906 Portak Monitor
HD0961.29, Rev 24	Internal Dosimetry Assessment
HD0955.05, Rev 14	Operation of Portable Radiation and Contamination Survey Instruments
HD0955.62, Rev 0	Use of the ARGOS 4AB
HD0955.39, Rev 2	Use of the Shepard Model 89 Box Calibrator
HD0963.41, Rev 8	Calibration of the Nuclear Enterprises SAM 9
HD0963.52, Rev 0	Calibration of the MGPI DRM-1/DRM-2 Area Monitors

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HD0963.54, Rev 0 Calibration of the Fluke Biomedical 451B Victoreen Ion Chamber
JD0999.910, Rev 01 Reporting Key Performance Indicators Per NEI 99-02
CS0917.02, Rev 10, Gaseous Effluent Releases
CX0917.01, Rev 15 Liquid Effluent Releases
CS0908.01, Rev 13 Off-Site Dose Assessment

Condition Reports:

08-15179, 08-15183, 08-15186, 08-15195, 07-15399, 08-04679, 08-09806, 08-07146,
08-05641, 08-14506, 08-13095, 08-13503, 08-10301, 08-09790, 08-07421, 08-00827,
07-15399,

Nuclear Quality Assurance Reports:

Audit SBK-08-01, Radiation Protection, Process Control, Radwaste Programs
Respirator Protection Program Assessment (QRNO 07-0086)
Daily Quality Summary Reports: September 2007-September 2008

Instrument Calibration Records:

Volume Control Tank Area Monitor (1-RM-R-6540)
Waste Gas Process Area Monitor (1-RM-R-6551)
Incore Seal Table Area Monitor (1-RM-R-6534)
Spent Fuel Pool Area Monitor (1-RM-R-6549)
Whole Body Counting System (Fast Scan)
Electronic Dosimeters (Serial Nos. 064562, 063366, 063388)
ASP2 (Serial Nos. 1199, 0988, 0933)
Telepoles (Serial Nos. 6607-104, 6607-080)
E-140N (Serial Nos. 1693)
SAM-9 (Serial Nos. 48, 9A)
ARGOS (Serial Nos. 105, 106, 107)
RM-14 (Serial No. 7504)
SPM 906 (Serial Nos. 4, 5)
Fluke 451B (Serial Nos. 0063, 0050, 0045)
Air Monitoring System (AMS-4) (Serial No. 747)

Self-Contained Breathing Apparatus:

Control Room (Technical Support Center)
Bottle/Regulator: MV204069/4170, MW121050/57452, ABY054911/4089
Turbine Building (el 75'): Bottle/Regulator: MW129122/6229, MV206135/10339,
Regulators Flow Tested: MWU343261, MV018056, MV206131, MW128061, MW133322

Miscellaneous Documents:

- Health Physics Study/Technical Information Document (HPSTD 08-005), Verification of Shepherd Model 81 Beam Irradiator
- Radiation Monitor System 4th, Quarter 2007, and 1st and 2nd Quarter 2008 Health Reports
- Breathing Air Analysis for November 2008
- Health Physics Self-Assessment 07-0212, Radiation Survey instruments
- Job Performance Measure GT1074J, Rev 06, MMR Firehawk SCBA training and related Manager Observation & Coaching Cards
- Monthly and Quarterly liquid and gaseous effluent dose assessment reports for 2008

Section 2PS2: Radioactive Material Processing and Transportation

Procedures:

ES0825.001 Abandoned and Infrequently Used Equipment
RP 13.1 Radiological Controls for Material
WN0598.04 Spent Resin Recirc Transfer and Flush
WN0598.071 Instructions for Spent Resin Sampling
WN0598.072 Shipment of Radioactive Material
WN0598.077 Resin Transfer and De-watering
WN98-01-08 Bead Resin/Activated Carbon De-watering Procedure for Duratek 14-215 or Smaller Liners
WN98-01-02 Operating Guidelines for Use of Polyethylene High Integrity Containers
HD0958.38 Evaluation of Isotopic Mix
HD0958.32 Release of Material From Radiological Controls
HD0963.41 Calibration of Nuclear Enterprises SAM-9
HN0960.09 Radiological Controls for Resin Sluice and Transfer
RP 18.4 Isotopic Characterization of Radwaste
CS0918.02 Radwaste Analysis Methods
WD0598.064 Radioactive Material Shipment Vehicle Inspection
WD0598.078 Packaging of Radioactive Materials and Wastes
WN98-01-04 Operating Procedure for FILTRK software
WN98-01-06 Operating Procedure for RADMAN software
HD0958.33 Performance of Health Physics Supervisory Plant Walkdowns

Cask Handling Procedures:

Handling Procedure for Transport Cask Model CNS 8-120A
Handling Procedure for Transport Cask Model CNS 14-215H
Handling Procedure for Transport Cask Model CNS 6-80

Quality Assurance Surveillance Reports (QRNO)/Audits

SBK -08-01, Functional Area Audit of Radiation Protection/Process Control/Radwaste Program
QRNO: Nos. 08-0056, Radioactive Material Processing and Transportation
Daily Quality Summary Reports (Related to Radwaste Processing): for 2006, 2007, 2008

Condition Reports:

01-12516, 01-10701, 01-09889, 08-13240, 08-13500, 08-13543, 08-13542, 08-13540,
08-13476, 08-12587, 08-11427, 08-09895, 08-08817, 08-00873, 07-16258, 07-13243,
07-07354, 07-05006, 07-04174, 07-02075, 06-13602, 06-12861, 06-11222, 08-13221,
08-13632

UFSAR Change Requests:

Waste Liquid Processing Improvements
RWST Silica Reduction Project
Alternate Process Path for Chemical Drain Treatment Tanks
CVCS Mixed Bed Demineralizers Resin Loading
Recovery Test Tank Inconsistency

Shipping Manifests:

Ship No. 08-075, Source, Type B
Ship No. 08-007, Cartridge Filters, LSA II

Ship No. 08-002, Bead Resin LSA II
Ship No. 07-038, Bead Resin, LSA II
Ship No. 08-053, Split Pin Project Debris & Filters, LSA II,
Ship No. 07-040, Bead Resin, LSA II

Other:

Process Control Program, Rev 53
Radwaste Technician Training Program Description
Radiation Protection Technician Training Program Description
Updated Final Safety Analysis Report
HPSTID-02-005, Integrated Dose to Process Filters
HPSTID-02-001, FILTRK filter surveys
Modifications to the Waste Processing Building (07MMOD 5

Section 4OA2: Identification and Resolution of Problems

CAP Quarterly Trend Reports for First, Second and Third Quarter 2008
CAP Quarterly Trend Report for third Quarter 2007
Condition Reports for 2007-2008
Condition Reports 00-07191, 01-05311, 01-11973, 06-12432, 07-08561, 03-04733, 07-12618,
08-02848, 03-04132, 06-04343, 03-04564, 08-16667, 08-16190, 08-16735, 08-00894, 08-
00913, 08-14600, 08-14231, 08-14606, 08-14374, 07-12475, 08-13779, 07-12475, 08-04903
Alarm Response Procedure for MPCs points D6749, D6750
Standing Operating Order 08-007
P&ID 1-NHY-310897 Sh B1Da, B1Db and 310951 Sh EH9/3c, EH9/3Bc

Procedures

OS1046.04, 345KV Operations, Revision 6
PEG-257, 345KV Switchyard System (SY-01) Performance Monitoring, Revision 0
LN 0560.10, SF6 Dewpoint Check, Revision 2
LN 0560.11, SF6 SO2 and Purity Sampling, Revision 2
LN 0561.08, 12 Month Gas Circuit Breaker Cold Weather Pre-Checks, Revision 3
LN 0561.09, Adding SF6 Gas to Circuit Breaker and Insulated Bus Duct Zone 1-7, Revision 1
OE 3.6, Condition Reports, Rev. 16
PI-AA-204, Condition Identification and Screening Process, Revision 0
PI-AA-205, Condition Evaluation and Corrective Action, Revision 0
IS1616.490, PCCW Temperature Valve Actuator Repair, Revision 2
EN-AA-203-1001, Operability Determinations / Functionality Assessments, Revision 1

Drawings

422-851, Gas System Schematic 345KV (1050 KV BIL) SF6, Revision 3
1-NHY-309716, 25KV Three Line Diagram Generator and GSU Transformer, Revision 4

Miscellaneous

FP 80471, SF6 Gas Insulated Substation, Revision 1
UFSAR Section 8, Electric Power, Revision 12
FPL SF6 SO2 Purity Sampling Trend Data 2004 – 2008
Nuclear Energy Institute NEI 08-05, Control of Heavy Loads
North Atlantic Lifting System (NALS) Manual, Revision 24
UFSAR Section 9.1.5, Overhead Heavy Load Handling Systems

NUREG 0896 dated March 1983, and Supplement 5 dated July 1986
UE&C Report "NUREG – 0612 Control of Heavy Loads" Revision 2 dated October 1985
Root Cause Analysis for CR 08-00894, Reactor Trip Due to Fault on 345KV Bus 3
Event Evaluation for CR 08-00894, Reactor Trip Following a Fault on 345KV Bus 3
IC1052C, I&C Training – 11/30/07 PCCW Valve Failure and Positioner Linkage Issues, dated
03/10/08
Seabrook OE 26212,
08 MSE 058, Maintenance Support Evaluation, Modify Bailey Positioner Linkages for Washers,
Revision 0
DCR 89-0045, Modify Bailey Positioner Linkage, CA1

Condition Reports:

CR 00-11778, Significance Level (SL) E, including associated documents (CR package)
07-15292, 07-15260, 07-15319, 07-15661, 07-15686, 07-15945, 08-00435
CR 07-13980, SL B
CR 07-13981, SL B, including Action Items 01 through 13
CR 07-14282, SL B, including Action Items 01 through 12
Work Orders : # 0738718, #0738616
Prompt Operability Determination for 1-RH-HCV-607 and 1RH-FCV-619
NRC IR 05000443/2007005-02

Work Orders

0738646, 0738647, 0738649, 0738650, 0738706, 0804882, 0805563, 0805673, 0805719,
0807252, 0809973, 0817476, 0820930, 0820931, 0820929, 0831166, 0602852, 0602849,
0528027

Section 40A5: Other Activities

Miscellaneous:

Operations Logs – Various
P&ID 1-DG-B20463, Diesel Generator Lube Oil System Train B Detail
P&ID 1-NHY-506402, DB – Diesel Generator 1B Lube Oil System Control Loop
Diagram
P&ID 1-NHY-504120, DG – Diesel Generator Temperature Scanner Logic Diagram
P&ID 1-NHY-310008, 4160 Bus E6 One Line Diagram
P&ID Schematic Diagrams 31102 Sh 87a and 310895 Sh A79a, A79b, A79c, A79d,
A79e, A79f, A79g, A79h
MMOD 98-0554, Replacement of DG Temperature Indicators
MA 4.14A, Troubleshooting Control Form dated July 16, 2008
MA 4.14A, Troubleshooting Control Form dated July 18, 2008
Drawing DG-V-29 A / Q
Condition Reports 08-14671, 03-05791

Calculations

9763-3-ED-00-83-F, Diesel Generator Loading Calculation, Rev. 8

Procedures

OX1426.22, Emergency Diesel Generator 1A 24 Hour Load Test and Hot Restart Surveillance,
Revision 1

OX1426.23, Emergency Diesel Generator 1B 24 Hour Load Test and Hot Restart Surveillance, Revision 1
OS1026.01, Operation of DG 1A, Revision 10
OS1026.09, Operation of DG 1B, Revision 9
OX1426.01, DG 1A Monthly Operability Surveillance, Revision 9
OX1426.05, DG 1B Monthly Operability Surveillance, Revision 9

Completed Surveillances:

WO 0437898, OX1426.22, Emergency Diesel Generator 1A 24 Hour Load Test and Hot Restart Surveillance dated 3/17/05
WO 0608371, OX1426.22, Emergency Diesel Generator 1A 24 Hour Load Test and Hot Restart Surveillance dated 12/1/06
WO 0736247, OX1426.22, Emergency Diesel Generator 1A 24 Hour Load Test and Hot Restart Surveillance dated 7/3/08
WO 0442818, OX1426.23, Emergency Diesel Generator 1B 24 Hour Load Test and Hot Restart Surveillance dated 3/31/05
WO 0608372, OX1426.23, Emergency Diesel Generator 1B 24 Hour Load Test and Hot Restart Surveillance dated 1/4/07
WO 0739018, OX1426.23, Emergency Diesel Generator 1B 24 Hour Load Test and Hot Restart Surveillance dated 9/11/08

Drawings

1-NHY-310002, Unit Electrical Distribution One Line Diagram, Rev. 40
1-NHY-310010, Diesel Generator DG-1A and DG-1B One Line Diagram Sh.1, Rev. 14
1-NHY-310010, Diesel Generator DG-1A and DG-1B One Line Diagram Sh.2, Rev. 4

Other Documents

C470-1, Operation and Maintenance Manual Emergency Diesel Generator System
Fairbanks Morse Owners' Group Maintenance Guidelines dated February 1, 2003, Rev. 0
Fairbanks Morse Owners' Group Recommended Maintenance for Pielstick Diesel Engines in Nuclear Standby Service dated November 4, 1997, Rev. 0
Fairbanks Morse Owners' Group Maintenance Guidelines – Pielstick Engines Detailed Guidance Section dated November 17, 2003, Rev. 1
Seabrook Station UFSAR Rev. 12
Seabrook Station Technical Specifications
Regulatory Guide 1.9, Rev. 4
IEEE 387-1984, Standard Criteria for Diesel-Generator Units Applied as Standby Power Supplies for Nuclear Power Generating Stations
NRC Bulletin 79-23, Potential Failure of Emergency Diesel Generator Field Exciter Transformer
Seabrook Station, Unit No. 1 – Issuance of Amendment Re: Changes to Electrical Power Systems Technical Specifications (TAC No. MB1292)

Section 4OA7: Licensee-Identified Violations

Condition Report 200813779
Technical Specifications 6.7.1.a and 3.7.1.2
OS1036.01, Aligning the Emergency Feedwater System for Automatic Initiation, Revision 8

LIST OF ACRONYMS

ADAMS	Agency-wide Documents Access and Management System
ALARA	As Low As Is Reasonable Achievable
AR	ALARA Reviews
ASME	American Society of Mechanical Engineers
DAW	Dry Active Waste
DCR	Design Change Request
DSC	Dry storage canister
DS	Disconnect Switch
ED	Electronic Dosimeter
EDG	Emergency Diesel Generator
ESFAS	Engineered Safety Feature Actuation System
FME	Foreign Material Exclusion
FPLE	Florida Power & Light Energy
HRA	High Radiation Areas
IMC	Inspection Manual Chapter
ISFSI	Independent Spent Fuel Storage Installation
ISI	In-service Inspection
LERs	Licensee Event Reports
MPCS	Main Plant Computer System
MS	Main Steam
NCV	Non-Cited Violation
NDE	Non-Destructive Examination
NRC	U.S. Nuclear Regulatory Commission
NRR	Nuclear Reactor Regulation
PAB	Primary Auxiliary Building
PARS	Publicly Available Records
PCP	Process Control Plan
PMT	Post-Maintenance Testing
PWR	Pressurized Water Reactor
RCA	Radiological Controlled Area
RCS	Reactor Coolant System
RMSB	Radioactive Materials Storage Building
RV	Reactor Vessel
RWP	Radiation Work Permit
SDP	Significance Determination Process
SFP	Spent Fuel Pool
SG	Steam Generator
TI	Temporary Instruction
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report
UHF	Ultra High Frequency
UT	Ultrasonic Testing
VHRA	Very High Radiation Areas
WO	Work Order