April 20, 2004

Mr. Mark E. Warner
Site Vice President
FPL Energy Seabrook, LLC
Seabrook Station
c/o Mr. James M. Peschel
P.O. Box 300
Seabrook, NH 03874

SUBJECT: SEABROOK STATION - NRC INTEGRATED INSPECTION REPORT 05000443/2004002

Dear Mr. Warner:

On March 31, 2004, the Nuclear Regulatory Commission (NRC) completed an inspection at the Seabrook Nuclear Power Station. The enclosed report documents the inspection findings which were discussed on April 7, 2004, with Mr. G. St. Pierre and other members of your staff.

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

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

Since the terrorist attacks on September 11, 2001, NRC has issued five Orders and several threat advisories to licensees of commercial power reactors to strengthen licensee capabilities, improve security force readiness, and enhance controls over access authorization. In addition to applicable baseline inspections, the NRC issued Temporary Instruction 2515/148, "Inspection of Nuclear Reactor Safeguards Interim Compensatory Measures," and its subsequent revision, to audit and inspect licensee implementation of the interim compensatory measures required by order. Phase 1 of TI 2515/148 was completed at all commercial power nuclear power plants during calender year 2002 and the remaining inspection activities for Seabrook Station were completed during calendar year 2003. The NRC will continue to monitor overall safeguards and security controls at Seabrook Station."

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm.html

Sincerely,

/RA/

James Trapp, Chief
Projects Branch 6
Division of Reactor Projects

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

Enclosure: Inspection Report No. 05000443/2004002
w/ Attachment: Supplemental Information

cc w/encl:
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J. M. Peschel, Manager - Licensing
G. F. St. Pierre, Station Director - Seabrook Station
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REGION I

Docket No.:	05000443
License No.:	NPF-86
Report No.:	05000443/2004002
Licensee:	Florida Power & Light Energy Seabrook, LLC (FPL)
Facility:	Seabrook Station, Unit 1
Location:	Post Office Box 300 Seabrook, New Hampshire 03874
Dates:	January 1 to March 31, 2004
Inspectors:	Glenn Dentel, Senior Resident Inspector Steve Shaffer, Resident Inspector Neil Perry, Senior Project Engineer Shriram Iyer, Project Engineer Roy Fuhrmeister, Senior Reactor Engineer Nancy McNamara, Emergency Preparedness Inspector Barry Norris, Senior Reactor Inspector, Team Leader Tim O'Hara, Reactor Engineer David Werkheiser, Reactor Engineer
Approved by:	James M. Trapp, Chief Projects Branch 6 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000443/2004002; 01/01/2004-03/31/2004; Seabrook Station, Unit 1; Routine Integrated Report.

The report covered a 13-week period of inspection by resident inspectors and regional inspectors supporting the residents. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

The plant began the period at full rated thermal power and operated at or near full power for the entire report period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 - 1 Sample)

a. Inspection Scope

The inspectors performed walkdowns of several systems during extreme cold weather conditions in January 2004 to ensure equipment was adequately protected against possible cold induced failure. The inspectors reviewed whether compensatory measures taken by Seabrook during the cold weather were sufficient to maintain equipment operability. The inspectors also verified that small instrument lines including the refueling water storage tank level instruments remained well above freezing through independent readings using a contact pyrometer.

b. Findings

No findings of significance were identified.

1R02 Evaluation of Changes, Tests, or Experiments (71111.02 - 20 Samples)

a. Inspection Scope

The inspectors reviewed selected safety evaluations associated with the initiating event, mitigating system, and barrier integrity cornerstones to verify changes to the facility or procedures, as described in the Updated Final Safety Analysis Report (UFSAR), were reviewed and documented in accordance with 10 CFR 50.59. The inspectors also verified that the safety issues pertinent to the changes were properly resolved or adequately addressed. The safety evaluations were completed during the past two years, and were selected based on the safety significance of the changes and the risk to structures, systems and components. The inspectors reviewed seven evaluations. The inspectors also reviewed selected screen-out evaluations for changes and tests for which Seabrook determined that safety evaluations were not required. The inspectors reviewed 13 issues that were screened out. This review was performed to verify that Seabrook's threshold for performing safety evaluations was consistent with 10 CFR 50.59. In addition, the inspectors reviewed Seabrook's administrative procedures that control the screening, preparation, and issuance of the safety evaluations to ensure that the procedure adequately covered the requirements of 10 CFR 50.59. The inspectors also reviewed selected Condition Reports (CRs), engineering self-assessments reports,

and nuclear oversight audits and surveillances reports associated with the 10 CFR 50.59 process. The documents reviewed are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

Partial System Walkdowns. (71111.04Q - 3 Samples)
The inspectors performed the following partial system walkdowns:

- The inspectors performed a walkdown of the "A" and "B" residual heat removal (RHR) system prior to the March 17th surveillance of the "A" train.

- On February 2 - 5, 2004, the inspectors performed walkdowns of the condenser steam dump valves. The condenser steam dump valves are a part of the main steam system.

- On March 24 - 26, 2004, the inspectors performed a walkdown of startup feedwater system following planned maintenance on the system. The startup feedwater system acts as a backup to the emergency feedwater system.

The inspectors conducted a walkdown of each system to verify that the critical portions of selected systems, such as valve positions, switches, and breakers, were correctly aligned in accordance with Seabrook's procedures and to identify any discrepancies that may have had an effect on operability.

The inspectors reviewed the following documents to support the walkdowns and to verify proper system alignment:

- Applicable piping and instrumentation drawings;
- Applicable operational lineup procedures;
- Residual heat removal and main steam system performance reports.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope (71111.05Q - 8 Samples)

The inspectors examined several areas of the plant to assess: 1) the control of transient combustibles and ignition sources; 2) the operational status and material condition of the fire detection, fire suppression, and manual fire fighting equipment; 3) the material condition of the passive fire protection features (fire doors, fire dampers, fire penetration seals, etc.) and 4) the compensatory measures for out-of-service or degraded fire protection equipment. The following areas were inspected:

- Switchgear Room, Control Building, 21’ 6" elevation;
- “A” Battery Room, Control Building 21' 6" elevation;
- Main Steam Feedwater Pipe Enclosure, 3' elevation;
- Refueling Water Storage Tank Farm, -3' elevation;
- Fuel Storage Building, 7', 10', 21' 6", and 64' elevations.
- Cable Spreading Room and Mechanical Rooms, 50' elevation
- Emergency Feedwater Pump House, 27' elevation
- Cooling Tower - Mechanical Equipment Rooms, 46' elevation

The inspectors verify that the fire areas were in accordance with portions of the following documents:

- Fire Protection Pre-Fire Strategies and Fire Hazard Analysis;
- Compensatory List of Fire Protection Equipment out-of-service.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

Quarterly Resident Inspector Review (71111.11Q - 1 Sample)

a. Inspection Scope

On January 14, 2004, the inspectors observed an operator training session focusing on human performance of time critical tasks. The inspectors reviewed the operators' ability to correctly evaluate the training scenario and implement the emergency plan. The inspectors also evaluated whether deficiencies were identified and discussed during critiques.

b. Findings

No findings of significance were identified

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope (71111.12Q - 2 Sample)

The inspectors completed two maintenance rule samples including one system review and one specific issue review.

The inspectors evaluated Maintenance Rule (MR) implementation for the residual heat removal system. The inspectors reviewed the effectiveness of maintenance through the review of deficiencies identified, historical performance, and overall system performance. The following documents were reviewed:

- Condition reports for the past year, selected items were reviewed in greater detail;
- MR scoping document and MR performance criteria;
- System Health and System Walkdown Reports;
- MR performance data including maintenance rule function failures and unavailability data;
- Vibration, Oil Analysis and Inservice Testing Data.

Based on issues identified in the review of the above documents, the inspectors assessed: 1) the application for MR scoping and MR reliability/availability performance criteria; 2) the corrective actions for deficient conditions; 3) the extent of condition reviews for common cause issues; and 4) the contribution of deficient work controls or work practices to any degraded conditions.

The inspectors also reviewed the MR functional failure review for the "C" inverter failure on January 22, 2004. The inspectors interviewed system engineers, reviewed condition reports (CR 04-00598 and 03-00631), and examined vendor technical manuals. The inspectors reviewed the past inverter problems on the "B" inverter to determine if this was a repetitive maintenance rule functional failure and whether a maintenance rule category (a) (1) should be entered for the system. The inspectors examined these items against the criteria in NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Rev. 2 and 10 CFR 50.65.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation (71111.13 - 5 Samples)

a. Inspection Scope

The inspectors reviewed the scheduling and control for three planned maintenance activities and two emergent work troubleshooting activities in order 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 other equipment was properly protected. The inspectors evaluated the compensatory measures against Seabrook procedures,

Maintenance Manual 4.14, “Troubleshooting,” and Work Management Manual 10.1, "On-Line Maintenance." Specific risk assessment was conducted using Seabrook's "Safety Monitor." The inspectors reviewed the following items.

- On January 22, the inspectors reviewed troubleshooting activities associated with the "C" vital bus inverter and the "A" emergency diesel generator (EDG). The inspectors reviewed various actions taken to evaluate and correct the degraded conditions. The inspectors also verified that the interactions of the two conditions were evaluated and mitigating actions were taken to reduce the cumulative effect on operators and the plant.

- On February 17 - 18, 2004, the inspectors reviewed troubleshooting activities associated with the “A” turbine EHC hydraulic fluid pump. The inspectors reviewed various actions taken to evaluate and correct the degraded condition.

- On February 19, the inspectors reviewed plant risk configuration for work on the “A” battery surveillance, “A” charging pump maintenance, and “C” steam generator atmospheric steam dump valves.

- On March 17, the inspectors reviewed a plant risk configuration for severe weather conditions (heavy snowfall), "A" containment building spray pump maintenance, "A" battery charger maintenance, "A" emergency diesel generator surveillance, "A" residual heat removal pump surveillance, and various surveillances that impact the reactor trip frequency.

- On March 24, the inspectors reviewed plant risk configuration for work on the startup feedwater pump and a switchyard breaker.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance Related to Non-Routine Plant Evolutions and Events (71111.14 - 1 Sample)

a. Inspection Scope

The inspectors reviewed operator response to one non-routine evolution.

The inspectors reviewed operator performance in response to ground alarm indications on vital instrument panel 1C. The inspectors verified that operators evaluated the alarm and took appropriate actions to address the condition in accordance with procedures. The inspectors also verified that potential operator human performance challenges, resulting from multiples actions in response to ongoing emergency diesel generator emergent maintenance and the vital bus inverter activities, were identified and addressed.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15 - 4 Samples)

a. Inspection Scope

The inspectors reviewed operability evaluations and/or condition reports in order to verify that the identified conditions did not adversely affect safety system operability or plant safety. The evaluations were reviewed using criteria specified in Generic Letter 91-18, "Resolution of Degraded and Nonconforming Conditions" and Inspection Manual Part 9900, "Operable/Operability - Ensuring the Function Capability of a System or Component." In addition, where a component was determined to be inoperable, the inspectors verified the Technical Specifications (TS) limiting condition for operation implications were properly addressed. The inspectors performed field walkdowns, interviewed personnel, and reviewed the following items:

- CR 04-00798, which evaluated the impact of a possible inadvertent start of the auxiliary lube oil pump on the operability of the emergency diesel generator (EDG). The inspectors reviewed the operability evaluation, examined logic diagrams, reviewed purchase specifications for the control circuitry for the auxiliary pump, and interviewed design and system engineers.

- CR 04-02042, which evaluated the impact of the VAS Alarm D5043 Rod Stop PR High Flux C2 received on March 8 during the start of operational testing. The inspectors reviewed the operability evaluation and interviewed the system engineer. The inspectors also reviewed the results of IX 1656.944, “Operational Test and Overpower Trip High Range Bistable Adjustment for Power Range Channel N44.”

- CR 04-00598, which evaluated a ground alarm indication associated with vital instrument panel 1C. The inspectors reviewed the initial operability assessment and the ongoing assessment as additional information was obtained through thermography inspections. Following the analysis of the additional information, the 1C vital bus inverter was declared inoperable. The inspectors verified that operators performed the required actions in accordance with Technical Specification. The inspectors also reviewed the potential cumulative impact of this activity with ongoing work on the "A" emergency diesel generator (see Section 1R13)

- CR 04-02357, which evaluated under rated gaskets installed in valves 1-MS-PV-3001, 1-MS-PV-3002, and 1-SI-V-139. The inspectors reviewed the initial operability assessment and the additional modifications to the initial operability assessment. The inspectors also reviewed CR 04-02730 which examines the timeliness of the evaluation of the issue.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (71111.16 - 1 Sample)

a. Inspection Scope

The inspectors completed one inspection of the cumulative impact of operator workarounds.

The inspectors reviewed the licensee's current listing of operator workarounds and operator burdens to determine whether the workarounds adversely impacted the ability of the operators to implement emergency procedures or respond to plant transients. The inspectors examined the Operations Administrative Instruction OAI.20 "Operations Workarounds and Operator Burdens," Rev. 20 and verified that this procedure provided the necessary guidance to the licensee to adequately address the cumulative effects these workarounds had on the operation, reliability, and availability of affected systems. The inspectors also reviewed selected CRs and a self assessment completed under CR 03-0048, "Semi Annual Aggregate Impact of Operator Workarounds/Burdens." The inspectors also reviewed CR 04-1966, which addressed failure to complete quarterly reviews of the workarounds.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17 - 12 samples)

a. Inspection Scope

The inspectors reviewed selected risk significant permanent plant modification packages to verify that: (1) the design bases, licensing bases, and performance capability of risk significant structures, systems or components had not been degraded as a result of the modification; and (2) modifications performed during increased risk configurations did not place the plant in an unsafe condition. The modification packages were selected from among the design changes that were closed within the past two years. The plant modifications were distributed among the initiating event, mitigating system, and barrier integrity cornerstones. The inspectors reviewed twelve modifications; ten of the modifications were detailed and two procedure changes were minor.

For the modifications selected, the inspectors reviewed the design inputs, assumptions, and design calculations. The inspectors also reviewed design change notices that were issued during the installation to confirm that the problems associated with the installation were adequately resolved. In addition, the inspectors reviewed the post-modification testing, functional testing, and instrument calibration records to determine readiness for operations. Finally, the inspectors reviewed the affected procedures, drawings, design

basis documents, and relevant UFSAR sections to verify that the affected documents were appropriately updated. For some of the accessible components associated with the modifications, the inspectors walked-down the systems to detect possible abnormal installation conditions. The inspectors reviewed selected CRs, engineering self-assessments, and nuclear oversight audits and surveillances associated with the modification process. The documents reviewed are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 - 6 Samples)

a. Inspection Scope

The inspectors reviewed post-maintenance testing (PMT) activities to ensure: 1) the PMT was appropriate for the scope of the maintenance work completed; 2) the acceptance criteria were clear and demonstrated operability of the component; and 3) the PMT was performed in accordance with procedures. The following PMTs were reviewed:

- On January 22, OX1426.01, "DG 1A Monthly Operability Surveillance," Rev. 9 and OX1426.26, "DG 1A Semiannual Operability Surveillance," Rev. 0, following replacement of a relay in the EDG governor slow start circuitry. The inspectors reviewed the test data from surveillance tests and interviewed system engineers.

- On January 30, OX1431.03, "Main Control Valve Monthly Test," Rev. 8, following replacement of a limit switch associated with control valve-1. The inspectors observed portions of the maintenance activities, reviewed test results and WO 0402221, interviewed maintenance technicians and system engineers, and reviewed the troubleshooting plan.

- On March 31, OX 1426.05, “DG 1B Monthly Operability Surveillance,” Rev 9, following replacement of the engine driven lube oil pump for the "B" EDG. The inspectors observed portions of the maintenance activities, post-maintenance testing, reviewed test results and WO 0406598. The inspectors also interviewed the system engineers, the work control supervisor, and maintenance technicians.

- On March 31, the post-maintenance testing conducted following modification and replacement of the engine driven lube oil pump discharge check valve for the "B" EDG. The inspectors reviewed maintenance support evaluation 03MSE160, "EDG Engine Driven Lube Oil Pump Discharge Check Valve - Disc Bypass Orifice," Rev. 1, WO 0401815, and MS 0539.52, "DG 1B Engine Lube Oil System Draining, Filling, and Venting," Rev. 0. The inspectors also interviewed system engineers and operators.

- On March 31, the inspectors reviewed various post-maintenance tests following completion of 24 work orders on the "B" EDG (see appendix for list). The inspectors examined the documentation and interviewed the applicable personnel to verify the adequacy of the tests.

The inspectors also reviewed post-maintenance testing activities associated with a main generator hydrogen leak which resulted in an Unusual Event declaration on November 10, 2003 (See NRC Inspection Report 50-443/03-06 Section 4OA3). The hydrogen leak was caused by a 1/4 inch tapered brass plug which completely backed out of its threaded opening. Plant personnel concluded that the plug backed out due to incomplete or incorrect installation. Corrective actions included reinstallation of the plug per work order 0338220, and checking the remaining plugs for tightness. The inspectors reviewed the work order and corrective actions, conducted walkdowns of the plugs, and interviewed plant personnel to verify the adequacy of the post-maintenance tests in October 2003 and actions to prevent future failures.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 - 5 Samples)

a. Inspection Scope

The inspectors observed portions of surveillance testing activities of 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 required Technical Specifications and surveillance procedures.

The inspectors attended some of the pre-evolution briefings, performed system and control room walkdowns, observed operators and technicians perform test evolutions, reviewed system parameters, and interviewed the system engineers and field operators. The test data recorded was compared to procedural and technical specification requirements, and to prior tests to identify any adverse trends. The following surveillance procedures were reviewed.

- On February 26, OX1405.07, "Safety Injection Quarterly and 18 Month Pump Flow and Valve Test," Rev. 8.
- On March 10, IS1689.220, “WLD-L-1403 RCDT (1-WLD-TK-55) Level Calibration,” Rev. 2.
- On March 10, IX1668.317, "P-967 Safety Injection Accumulator 9D Pressure Calibration," Rev. 6.
- On March 17, OX1413.01, "Train "A" RHR Quarterly Flow and Valve Stroke Test and 18 Month Valve Stroke Observation," Rev. 10.
- LS0569.16, “Testing Rising Stem MOV’s Using the Seabrook Method,” Rev. 4. The inspectors reviewed previous occurrences of this surveillance following an

observation of oil leaking from Motor Operated Valve (MOV) 1-CS-LCV-112-C during a plant walkdown.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23 - 1 Sample)

a. Inspection Scope

The inspectors reviewed a plant modification to determine if it met the criteria of a temporary modification or temporary alteration. The modification involved the installation of a sump pump in the Cooling Tower Vertical Pipe Chase Room to remove ground water seepage into the room and prevent the pipe heat tracing from being submerged.

The inspectors interviewed engineers and operators, completed field walkdowns, and reviewed the following documents:

- Maintenance Manual, MA 4.3A, “Temporary Modifications and Temporary Alterations,” Rev. 16;
- Maintenance Manual, MA 4.10, “Control of Temporary Equipment, Temporary Power, Job Setup and Plant Storage” Rev. 10.

The inspectors verified that the equipment was installed in accordance with NRC requirements and plant procedures. The inspectors also examined the combined effect of the modification with the outstanding temporary modifications.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness (EP)

1EP4 Emergency Action Level (EAL) and Emergency Plan Changes

a. Inspection Scope (IP 71114.04)

A regional in-office review was conducted of licensee-submitted revisions to the emergency plan, implementing procedures and EALs which were received by the NRC during the period of January to March 2004. A thorough review was conducted of plan aspects related to the risk significant planning standards (RSPS), such as classifications, notifications and protective action recommendations. A cursory review was conducted for non-RSPS portions. These changes were reviewed against 10 CFR 50.47(b) and the requirements of Appendix E and they are subject to future inspections to ensure that the combination of these changes continues to meet NRC regulations. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 4, and the applicable requirements in 10 CFR 50.54(q) were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06 - 1 Sample)

a. Inspection Scope

The inspectors reviewed the operators' emergency classification and notification completed during requalification training on January 14 (See Section 1R11). The inspectors evaluated the results against Seabrook's Emergency Response Manual 1.1, "Classification of Emergencies" and NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Rev. 2.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 - 4 Samples)

a. Inspection Scope

The inspectors sampled licensee submittals for the performance indicators (PIs) listed below for the period from January 2003 through December 2004. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Rev. 2 were used to verify the basis in reporting for each data element. The following PIs were reviewed.

Initiating Events Cornerstone

- Unplanned Scrams per 7,000 Critical Hours
- Unplanned Scrams with Loss of Normal Heat Removal
- Unplanned Power Changes per 7,000 Critical Hours

Mitigating Systems Cornerstone

- Safety System Unavailability, Residual Heat Removal System

The inspectors reviewed plant records such as Licensee Event Reports (LERs), operating logs, procedures, and interviewed applicable licensee personnel to verify the accuracy and completeness of Seabrook's PI data. The inspectors also reviewed the accuracy of the number of required/critical hours reported.

b. Findings

The inspectors identified on October 27 - 28, 2004, operators conducted a greater than 20 percent power reduction. This unplanned transient was not included in the PI data. Seabrook does not consider this to be an unplanned power change since the power change occurred at the end of a refueling outage during troubleshooting activities associated with turbine rotor replacement. Seabrook has submitted a frequently asked question (FAQ) to address the issue. The inspectors determined that this issue would not result in crossing the white/green threshold; therefore, the issue is minor. Seabrook's current number of unplanned power changes was less than one and the white/green threshold is five. The open FAQ will be addressed in accordance with NRC Inspection Manual Chapter 0608, "Performance Indicator Program."

4OA2 Identification and Resolution of Problems (71152)

1. Routine Condition Report Screening

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’s corrective action program. This review was accomplished by accessing Seabrook's computerized database.

b. Findings

No findings of significance were identified.

4OA3 Event Follow-Up (71153 - 1 Sample)

(Closed) LER 50-443/03-002, Reactor Trip Following the Loss of a Main Feed Pump

On October 31, 2003, the reactor automatically tripped from 100 percent power following transfer of the "A" main feedwater pump from the manual to automatic mode of operation. The plant trip occurred due to loss of the "A" main feedwater pump caused by a degraded circuit board in the pump's governor speed controller. This event was discussed in NRC Inspection Report 50-443/03-006.

The inspectors reviewed the root cause analysis and corrective actions described in CR 03-09823. The inspectors interviewed system engineers, examined the failed components, evaluated related CR 03-09736 on pump overhaul work practices, and reviewed the Licensee Event Report (LER). The inspectors verified that the LER was properly reported in accordance with 10 CFR 50.73. The inspectors did not identify any violation of NRC requirements nor any findings of significance for the event.

4OA5 Other Activities

1. Temporary Instruction 2515/TI-154, “Spent Fuel Material Control and Accounting at Nuclear Power Plants”

a. Inspection Scope (2515/TI-154)

Temporary Instruction 2515/TI-154, “Spent Fuel Material Control and Accounting at Nuclear Power Plants." Phase I and Phase II of the inspection was completed during this inspection period. Appropriate documentation was provided to NRC management as required.

b. Findings

No findings of significance were identified.

2. Pilot Inspection Procedures

The inspectors completed several of the inspections using inspection procedures 71111.EP, "Equipment Availability, Reliability, and Functional Capability - Pilot," and 71111.ST, "Post-Maintenance and Surveillance Testing - Pilot." The resident staff utilized these new procedures as part of the Efficiency Focus Group to determine if the new procedures improve the effectiveness and efficiency of the inspection program. This pilot program is expected to be a one year program.

4OA6 Meetings, including Exit

On April 7, 2004, the resident inspectors presented the inspection results to Mr. G. St. Pierre and other members of his staff who acknowledged the findings. The licensee did not indicate that any of the information presented at the exit meeting was proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

P. Bergeron	Framatone Representative
N. Bhowmik	Electrical Designer
M. Collins	Senior Engineer
J. Connally	Senior Engineer
R. Dean	Senior Engineer
R. Faix	Supervisor, Design Engineering
P. Freeman	Director, Engineering
L. Hansen	System Engineer
R. Jamison	Principal Engineer
J. Klempa	System Engineer, Feed Water
G. Kotkowski	Supervisor, Electrical Engineering
R. Madea	Principal Engineer
D. Merrill	Unit Supervisor
K. Mullen	System Engineer - Electrical
G. Myers	Senior Engineer
M. O'Keefe	Supervisor, Regulatory Compliance
M. Ossing	Supervisor, Engineering
M. Palumbo	Senior Nuclear Analyst
R. Parry	Supervisor, Inservice Testing
J. Peschel	Manager, Regulatory Programs
E. Pigott	System Engineer, Diesel Generator
V. Robertson	Regulatory Affairs Analyst
T. Schulz	Senior Engineer
M. Sketchley	Operations Training Instructor
T. Trobaugh	Consultant Analyst
R. White	Manager, Design Engineering

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed:

50-443/03-002	LER	Reactor Trip Following the Loss of a Main Feed Pump (Section 4OA3)

LIST OF DOCUMENTS REVIEWED

Section 1R02: Evaluation of Changes, Tests, or Experiments; and Section 1R17 Permanent Plant Modification

Program Documents & Procedures:
10CFR50.59 Resource Manual, Rev. 5
Design Control Manual, Rev. 23
OE-3.6, Condition Reports, Rev. 4
OE-4.5, Operability Determination, Rev. 10
OE-4.9, Plant Nonconformance/Degraded Condition Evaluation, Rev. 8
Seabrook Updated Final Safety Analysis Report
Seabrook Technical Specifications & Technical Requirements Manual

Modifications:

1994-MMOD-559	Switchyard Relaying Setpoint, Revision1
2000-MMOD-531	EDG Turbocharger Cooling Water Piping Upgrade, Rev. 0
2001-DCR-020	EDG Loading Calculation Changes, Rev. 0
2001-MMOD-563	Battery Charger Switch and Potentiometer Substitution, Rev. 0
2002-DCR-013	CVCS Total Makeup Flow Control Enhancements, Rev. 1-11
2002-MSE-071	MSIV Hydraulic Solenoid Valve Qualified Life Evaluation, Rev.1
2003-MSE-015	Emergency Diesel Generator Internal Wiring Discrepancy, Rev. 0
2003-MSE-245	Set Screw for Coupling on Emergency Feedwater Pump, Rev. 1
Calc-C-S-1-20814	Emergency Feedwater System Up-Rate Project Analysis Input, Rev. 0
Calc-C-S-1-50030	Emergency Operating Procedure Setpoint Study "Z" Setpoint Uncertainty Determinations, Rev. 0
Calc-C-S-1-57051	Pressurizer Level and Steam Generator Level Instrument Loop Accuracies and Setpoints, Rev. 1
Proc-QA5.1	Quality Assurance Requirements for ATWS Mitigation Systems Actuation Circuitry, Rev. 5 and 6
1997-63-3-ED-00-34-F-CALC	Uninterruptible Power Supply Loading, Rev. 6

50.59 Evaluations:

2001-002	EDG Governor Replacement, Rev. 2
2001-003	Locked Throttle Valve 1-DF-V-156, Rev. 0
2002-002	Deletion of Refueling Pool CAP System Delay Ducts, Rev. 0
2002-004	Securing RCA Tunnel Ventilation During Refueling, Rev. 0
2002-005	Reduced ECCS Pump Head Requirements, Rev. 0
2003-004	Steam Generator Low Low Level Setpoint Change, Rev. 0
2003-005	Reactor Coolant System Evacuation & Fill, Rev. 0

50.59 Screens:

2003-013	PCCW Heat Exchanger Tube Plug Replacement, Rev. 0
2003-052	EDG Governor Replacement, Rev. 0
2003-161	Technical Requirements Manual - TR 3, 19, 23 Minor Clarification, Rev. 0
2003-176	UFSAR Change for Licensed Operator Experience Requirements, Rev. 0
2003-201	Monthly Positive Displacement Charging Pump 8 Hour Run Surveillance Elimination, Rev. 0
2003-227	03-227 EDG Lube Oil Heat Exchanger Tie-rod Material and Tube Plug, Rev. 0

2003-240 Changes to Prerequisites for the RHR Operating Procedure, Rev. 0
2003-267 SI Pump NPSH, Rev. 0
2003-351 OS1021.01 Procedure Change, in Response to CR 03-06472, Rev. 0
2003-457 OS1000.03 Procedure Change: PZR Level Setpoint Correction to 50%, Rev. 0
2003-498 DG Replacement Parts out of Tolerance, Rev. 0
2003-533 Set Screw for Coupling on Emergency Feedwater Pump 1-FW-P-37-B, Rev. 1
2003-577 10CFR50.54(f) Review Modifications, Rev. 0

Vendor Manuals:
E-356-1, Instruction Manual for 25 kVA UPS System, Rev. 0
E-356-3, Instruction Manual for 75 kVA UPS, Rev. 1
E209-1, Uninterruptible Power Systems, Rev. 0
F180-5, Electronic Indicating Recorders, Rev. 0
G063-2, Radiation Monitoring System, Rev. 2
W120-28, Solid State Protection System, Rev. 0
W120-32, Nuclear Instrument System, Rev. 0
W120-9, Instrument Power Supply Inverters, Rev. 2

Audits, Surveillances & Self-Assessments:
Audit-2002-A05-01 Refueling Outage OR08 (including design change & TS program)
QASR-2001-0170 Design Change Records Review
QRNO-2003-0034 DCR/MMOD Closeout
QRNO-2003-0062 CVCS Make-Up System Modification Follow-Up Status
QRNO-2003-0068 Diesel Generator 1A Governor Modification
QRNO-2003-0083 Partial Operability of Design Changes
QRNO-2003-0176 10CFR50.59 Reviews and Screenings
SA-2002-0294 OR08 Design Change Effectiveness and Lateral Organization
SA-2002-0304 Engineering Operational Excellence Objectives
SA-2003-0041 Assessment of the NADC Design Change Closeout Process
SA-2003-0052 Effectiveness Review of Changes Being Made to the NADC

Miscellaneous Documents :
FP34186, Appendix N, Elgar UPS Acceptance Test Procedure
License Amendment Request 02-01, Relocation of Certain Engineered Safety Features Pump Values From Technical Specifications To The Technical Requirements Manual, Requests 1 & 2

Condition Reports (* denotes a CR generated as a result of this inspection):

1996-03709	2001-07406	2002-02456	2002-09086	2002-14259	2003-04311
1997-29013	2001-09333	2002-02488	2002-09567	2003-00969	2003-05045
1998-07022	2001-10662	2002-02573	2002-09878	2003-01560	2003-09423
1998-11501	2002-00539	2002-03606	2002-10488	2003-01561	2003-09452
2000-11344	2002-00541	2002-06087	2002-10489	2003-01809	2004-00261*
2000-12803	2002-01316	2002-08502	2002-12207	2003-02847	2004-00413*

Section 1R12: Maintenance Effectiveness

Documents:
Plant Engineering Guidelines- System Walkdowns (PEG-10, Rev. 9)
Lube Oil Analysis: Herguth Laboratories, Inc. (No: R73745, R52045, R52046, R73743)

Condition Reports:

2003-02512	2003-02895	2003-00087	2003-01268	2003-01781	2001-01781
2004-01700	2004-00980	2003-10392	2003-09428	2003-09239	2003-09207
2003-09206	2003-08621	2003-08621	2003-07769	2003-05790	2003-04933
2003-04933	2003-04709	2003-01433	2003-00933	2002-14693	2001-13539
2001-05368	2001-03590				

Section 1R19: Post-Maintenance Testing

Work Orders:

0329230	0401815	0324387	0324411	0404740	0340647
0211597	0324545	0334220	0233902	0339319	0324422
0307742	0406684	01C3480	0324386	0400141	0329386
0329390	0233903	0337773	0324536	0324537	0243689

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
CR	Condition Report
EAL	Emergency Action Level
EDG	Emergency Diesel Generator
FAQ	Frequently Asked Questions
IMC	Inspection Manual Chapter
LER	Licensee Event Report
MOV	Motor Operated Valve
MR	Maintenance Rule
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
NUMARC	Nuclear Management and Resources Council
PARS	Publicly Available Records
PI	Performance Indicator
PMT	Post Maintenance Testing
RCDT	Reactor Coolant Drain Tank
RHR	Residual Heat Removal
RSPS	Risk Significant Planning Standards
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report