May 10, 2005

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 05000443/2005004

Dear Mr. Warner:

On March 31, 2005, the NRC completed an inspection at the Seabrook Nuclear Power Station. The enclosed report documents the inspection findings which were discussed on April 13, 2005, with you 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.

This report documents one NRC-identified finding and two self-revealing findings of very low safety significance (Green). These findings were determined to involve violations of NRC requirements. However, because of their very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCVs), in accordance with Section VI.A of the NRC Enforcement Policy.

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 Seabrook.

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 <u>http://www.nrc.gov/reading-rm.html</u>

Sincerely,

/**RA**/

Paul G. Krohn, Chief Projects Branch 6 Division of Reactor Projects

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

Enclosure: Inspection Report No. 05000443/2005004 w/ Attachment: Supplemental Information

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REGION I

Docket No.:	05000443
License No.:	NPF-86
Report No.:	05000443/2005004
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, 2005 to March 31, 2005
Inspectors:	Glenn Dentel, Senior Resident Inspector Steve Shaffer, Resident Inspector Thomas Moslak, Senior Health Physics Inspector N. McNamara, Emergency Preparedness Specialist
Approved by:	Paul G. Krohn, Chief Projects Branch 6 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000443/2005004; 01/01/2005-03/31/2005; Seabrook Station, Unit 1; Personnel Performance Related to Non-Routine Plant Evolutions and Events, Operability Evaluations, Post-Maintenance Testing.

The report covered a 13-week period of inspection by resident inspectors and an announced inspection by a regional senior health physics inspector. Three green non-cited violations were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. <u>NRC-Identified and Self-Revealing Findings</u>

Cornerstone: Initiating Events

C <u>Green</u>. A non-cited violation of Technical Specification (TS) 6.7.1.a, "Procedures and Programs," was self-revealed when the reserve auxiliary transformer supply breaker to the 'A' emergency bus failed to remain closed on demand. The licensee failed to properly address grease hardening in Seabrook's 4.16 kilovolt breaker maintenance program which resulted in the failure. The breaker was inoperable from February 14 to February 22, 2005.

This finding was more than minor because it affected the Initiating Events cornerstone objective to limit the likelihood of events that upset plant stability due to unreliable equipment performance. The finding was determined to be of very low safety significance since, while there was an increase in the probability of an initiating event, it did not impact mitigating systems resulting in a total loss of safety function, reactor coolant system leakage, or external event initiators. (Section 1R14)

C <u>Green</u>. The inspectors identified a non-cited violation of TS 3.8.1.1, "AC [Alternating Current] Sources - Operating." In March 2005, Seabrook failed to properly implement TS Limiting Condition for Operation (LCO) action statement 3.8.1.1.a during a period when one of two AC power sources was removed from safety-related electrical bus six to support on-line maintenance of a Unit Auxiliary Transformer. Based on a historical review, the inspectors identified that on August 21, 2003, Seabrook had also failed to properly apply TS LCO action statement 3.8.1.1.a and had exceeded the allowed outage time of 72 hours by approximately 12 hours. This issue was more than minor because it affected the equipment performance attribute of the Initiating Events Cornerstone and the objective to limit the likelihood of those events that upset plant stability. Reducing the availability of offsite power to the Class 1E electrical distribution system resulted in a greater likelihood that the components powered by the Class 1E electrical distribution system would not be able to perform the intended safety function during an event. This finding was determined to be of very low safety significance since, while there was an increase in the likelihood of the loss of an emergency bus, it did not impact mitigating systems resulting in a total loss of safety function, reactor coolant system leakage, or external event initiators. (Section 1R15)

Cornerstone: Mitigating Systems

C <u>Green</u>. A non-cited violation of TS 6.7.1.a, "Procedures and Programs," was self-revealed when Seabrook failed to properly implement an equipment tagging and isolation procedure resulting in the unplanned and rapid loading of the 'A' emergency diesel generator, an event which could have damaged the engine. This finding was associated with the cross-cutting area of organizational human performance since not only was the tagging procedure improperly implemented and licensed operators continued to load the EDG despite not having received the expected response; but other licensee programs, including the work control process, failed to prevent the emergency diesel generator transient.

The finding was more than minor because failure to properly implement the tagging program, if left uncorrected, would result in a more safety significant safety concern. The finding was determined to be of very low safety significance since there was no loss of function of safety-related equipment. (Section 1R19)

B. <u>Licensee-Identified Violations</u>

None.

REPORT DETAILS

Summary of Plant Status

The plant began the inspection period at full rated thermal power and operated at or near full power through March 22, 2005, when operators completed an unplanned plant shutdown in accordance with Technical Specifications for an inoperable reactor trip breaker (see Section 1R20). The plant returned to power operations on March 24 following modifications to the reactor trip breaker testing circuit. Seabrook began a planned shutdown on March 31, 2005, in preparation for the 10th refueling outage starting on April 1, 2005.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

- 1R01 Adverse Weather Protection (71111.01 One Sample)
- a. Inspection Scope

The inspectors reviewed Seabrook's process for addressing degraded tornado seals. The inspectors reviewed Seabrook's compensatory measures and the tracking of degraded seals. Additionally, the inspectors verified the adequacy of OS1200.03 "Severe Weather Conditions," Revision 12 and MA 5.7, "Station Barriers, Penetration Seals and Fire Barrier Wrap," Revision 4 relative to adverse weather protection.

b. Findings

No findings of significance were identified.

- 1R04 Equipment Alignment (71111.04)
- a. Inspection Scope

<u>Partial System Walkdowns</u>. (71111.04Q - Two Samples) The inspectors performed the following partial system walkdowns:

- C On February 1, 2005, the inspectors performed a walkdown of the 'B' safety injection system following maintenance on the 'B' safety injection motor and valves.
- C On February 15, 2005, the inspectors performed a walkdown of the condensate polishing system with focus on the connections to the condensate system prior to initial system testing.

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

could affect operability. The inspectors reviewed applicable piping and instrumentation drawings and operational lineup procedures to support the walkdowns and to verify proper system alignment.

b. Findings

No findings of significance were identified.

- 1R05 Fire Protection (71111.05)
- a. <u>Inspection Scope</u> (71111.05Q Six 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 such as fire doors, fire dampers, and fire penetration seals; and 4) the compensatory measures for out-of-service or degraded fire protection equipment. The following areas were inspected:

- C Computer room-control building, 75' elevation;
- C 'B' safety injection pump room-residual heat removal vault, -31' elevation;
- C East main steam/feedwater pipe enclosure, all elevations;
- C 'B' electrical cable tunnel, -20' and -26' elevations;
- C Primary component cooling pump room, 25' elevation;
- C Containment building, 26' elevation.

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

- C Fire Protection Pre-Fire Strategies and Fire Hazard Analysis and
- C ON0443.30, "Annual Halon 1301 Inspection and Test," Revision 3
- b. <u>Findings</u>

No findings of significance were identified.

1R11 Licensed Operator Regualification Program (71111.11)

<u>Quarterly Resident Inspector Review</u> (71111.11Q - One Sample)

a. Inspection Scope

The inspectors observed the conduct of licensed operators during a simulator training session on January 13, 2005. The inspectors reviewed the physical fidelity of the simulator in order to verify its likeness to the Seabrook control room. The inspectors

examined the operators' ability to perform actions associated with high-risk activities, the Emergency Plan, and the correct use and implementation of procedures. The inspectors observed the training evaluator's critique of the operators performance and verified that deficiencies were adequately identified and discussed.

b. Findings

No findings of significance were identified

1R12 <u>Maintenance Effectiveness</u> (71111.12)

a. <u>Inspection Scope</u> (71111.12Q - One Sample)

The inspectors reviewed the application of the maintenance rule for two failures of Appendix R emergency lights documented in condition report (CR) 04-04559. The inspectors reviewed the failures against maintenance rule functional failure requirements in Seabrook's procedures and in NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 2. The inspectors examined the performance criteria and whether the emergency lighting failures would require additional monitoring and goal setting as required by 10 CFR 50.65(a)(1). The inspectors also reviewed past emergency lighting failures and the impact on the overall assessment of the emergency lighting maintenance rule program.

b. Findings

No findings of significance were identified.

- 1R13 <u>Maintenance Risk Assessments and Emergent Work Evaluation</u> (71111.13 Four Samples)
- a. Inspection Scope

The inspectors reviewed the scheduling and control of one planned maintenance activity and three emergent work troubleshooting activities in order to verify that Seabrook had properly evaluated the effect of the activity 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 assessments were conducted using Seabrook's "Safety Monitor." The inspectors reviewed the following items:

- C On January 19, 2005, the inspectors reviewed the troubleshooting plan and actions taken following an 'A' emergency diesel generator (EDG) maintenance test in which the EDG was loaded without proper indication of loading. The inspectors reviewed the impact of the additional outage time on the risk evaluation, the actions taken to examine the EDG for damage (see Section 1R15), and additional compensatory measures.
- C On January 27 and 28, 2005, the inspectors reviewed the operational decision making for a piece of foreign material found in the motor bearing housing of the 'B' safety injection pump. The inspectors reviewed WO's 0430932 and 0442013, and interviewed maintenance technicians, engineering personnel, and the work control supervisor. The inspectors also reviewed CR 05-01073 which evaluated the issue of the foreign material in the bearing housing.
- C On March 1, 2005, the inspectors reviewed the plant risk configuration during maintenance on a unit auxiliary transformer breaker, and surveillance tests which impacted the 'B' emergency diesel generator breaker, solid state protection system, and the turbine-driven emergency feedwater system. The inspectors reviewed the sequence of the activities and controls established to reduce risk. The inspectors also reviewed the risk evaluations and mitigating actions with respect to the adverse weather conditions experienced at the site on February 28 through March 1, 2005.
- C On March 22, 2005, the inspectors reviewed the troubleshooting actions taken following the unexpected opening of the 'A' reactor trip breaker during actuation logic testing. The inspectors reviewed the troubleshooting cause evaluation, extent of condition determination, and various maintenance activities. The activities were evaluated against Seabrook's troubleshooting procedure and the potential impact on the safe operation of the plant. Additional inspection activities were conducted using inspection procedures, refueling and other outage activities (see Section 1R20) and surveillance testing (see Section 1R22).

b. Findings

No findings of significance were identified.

- 1R14 <u>Personnel Performance Related to Non-Routine Plant Evolutions and Events</u> (71111.14 - Two Samples)
- 1. Failure to Properly Maintain 4.16 KV Breaker Maintenance Procedure
- a. Inspection Scope

In February 2005, the inspectors reviewed Seabrook's response to a failure of the reserve auxiliary transformer (RAT) breaker to close during a transfer from the unit

auxiliary transformer (UAT) to the RAT. The inspectors observed operator response and interviewed engineers and troubleshooting staff.

b. <u>Findings</u>

Introduction. The licensee failed to properly address grease hardening in Seabrook's 4.16 kilovolt breaker maintenance program which resulted in the failure of the reserve auxiliary transformer supply breaker to the 'A' emergency bus. The breaker was inoperable from February 14 to February 22, 2005. This self-revealing finding was determined to be of very low safety significance (Green) and was characterized as a NCV of TS 6.7.1.a, "Procedures and Programs."

<u>Description</u>. On February 22, 2005, the RAT breaker failed to close when power was transferred to the RAT to support planned maintenance. The RAT breaker failure reduced the number of off-site AC power sources from two to one. Seabrook confirmed that the UAT breaker was operable and switched back to the normal off-site power configuration. The bus was supplied by the 'A' emergency diesel generator in the interim.

Seabrook determined that one of the apparent causes of the breaker's failure to close was a hardening of grease on a locking pin that secures the racking mechanism when racking in the breaker. The hardening of the grease slowed the motion of the pin which degraded the function of the locking pin. Therefore, the locking pin did not prevent the racking mechanism from over rotating. The over rotation of the racking mechanism partially re-engaged the mechanical trip mechanism which prevented the RAT breaker from properly closing. This condition existed from February 14 when the improper racking of the breaker occurred until it was discovered on February 22, 2005, when the RAT breaker on the "A" emergency bus failed to remain closed on demand.

Seabrook maintained a routine preventative maintenance program on their 4.16 KV breakers as described in Seabrook procedure LX02588.01, "4.16 KV Breaker Inspection, Testing, and PM [Preventive Maintenance]," Revision 1. The program did not address a full inspection and/or cleaning of the locking pin and its associated spring. Proper cleaning of the locking pin and its spring would have prevented the slow operation of the locking pin. The impact of grease hardening on 4.16 KV breakers was documented in various industry documents including NRC Information Notices 95-22 and 96-43.

<u>Analysis</u>. Seabrook's failure to properly maintain a preventative maintenance program for their 4.16 KV breakers was considered a performance deficiency. Traditional enforcement does not apply because the issue did not have any actual safety consequences or potential for impacting the NRC's regulatory function and was not the result of any willful violation of NRC requirements or Seabrook procedures.

This finding was more than minor because it affected the Initiating Events cornerstone objective to limit the likelihood of events that upset plant stability due to unreliable equipment performance. The failure of the RAT breaker to remain closed reduced the reliability of off-site power to supply the emergency bus. Using Appendix A, Phase 1 of Manual Chapter 0609, "Determining the Significance of Reactor Inspection Findings for At-Power Stations," dated December 1, 2004, the finding was determined to be of very low safety significance (Green) since, while there was an increase in the probability of the loss of an emergency bus initiating event; it did not impact mitigating systems resulting in a total loss of safety function, reactor coolant system leakage, or external event initiators. The issue was entered into Seabrook's corrective action program as CR 05-02108.

<u>Enforcement</u>. Technical Specification 6.7.1.a, "Procedures and Programs," requires that written procedures be maintained covering the activities in Regulatory Guide 1.33, "Quality Assurance Program Requirements," Revision 2, Appendix A. Regulatory Guide 1.33 requires procedures for performing maintenance on safety-related equipment. Seabrook procedure LX02588.01, "4.16KV Breaker Inspection, Testing, and PM," Revision 1 covered the maintenance program for 4.16 KV breakers.

Contrary to the above, between February 14 and 22, 2005, procedure LX02588.01 failed to adequately address grease hardening issues associated with the racking of the RAT breaker on the 'A' emergency bus such that the breaker failed to remain closed on February 22, 2005. Because this finding was of very low safety significance and Seabrook entered this finding into their corrective action program (CR 05-02108), this finding is being treated as an NCV consistent with Section VI.A.1 of the Enforcement Policy (NCV 05000443/2005004-01, Failure to Properly Maintain 4.16 KV Breaker Maintenance Procedure).

- 2. Moisture Separator Reheater (MSR) Pull Table Lift
- a. <u>Inspection Scope</u>

On January 7, 2005, the inspectors observed the lifting of a 14000 pound MSR pull table up to the turbine deck. The inspectors verified that personnel not involved with the lift were kept out of the lift path and that the lift followed the intended safe load path. The inspectors observed that the rigging was properly inspected and that the rigger and the crane operator remained in constant communication during the actual lift. The inspectors reviewed work order (WO) 0446233 authorizing the heavy lift.

b. Findings

1R15 <u>Operability Evaluations</u> (71111.15 - Five Samples)

1. Failure to Comply with Technical Specification LCO Action Statement 3.8.1.1.a during On-Line Maintenance

a. Inspection Scope

The inspectors reviewed operability evaluations, operator logs, engineering assessments 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," Institute of Electrical and Electronic engineers (IEEE) 308, "IEEE Standard for Class 1E Power Systems for Nuclear Power Generating Stations" (various revisions), Seabrook Final Safety Analysis Report (FSAR); and Inspection Manual Part 9900, "Operable/Operability - Ensuring the Function Capability of a System or Component." The inspectors also interviewed operators, electricians, and system engineers; and reviewed the availability history of the two RATs and two UATs.

b. Findings

Introduction. The inspectors identified that Seabrook failed to comply with a technical specification allowed outage time requirement when one of two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system was inoperable. This finding was determined to be of very low safety significance (Green) and was characterized as a NCV of TS LCO action statement 3.8.1.1.a.

<u>Description</u>. In March 2005, Seabrook failed to properly implement and enter TS LCO action statement 3.8.1.1.a during a period when electrical bus six was transferred to the associated RAT to support on-line maintenance of the UAT. Based on this determination, the inspectors discussed the issue with licensee management. Following the discussion, operations personnel entered TS LCO action statement 3.8.1.1.a. The inspectors conducted a historical review and identified that on August 21, 2003, Seabrook had also failed to properly apply TS LCO 3.8.1.1.a and had exceeded the allowed outage time of 72 hours by approximately 12 hours. The inspectors determined that Seabrook had historically failed to enter this TS LCO action statement when it was performing certain on-line maintenance activities.

In addition, the inspectors referenced FSAR Section 8.1.5.2, "Institute of Electrical and Electronic Engineers Standards" which stated that the design of the Seabrook electrical power system was in conformance with IEEE Standard 308 - 1971, "Standard Criteria for Class 1E Electric Systems for Nuclear Power Generating Stations." Section 5.2.1(1) of the Standard required Class 1E electrical loads to be separated into two or more redundant load groups, a reference to Class 1E electrical loads at the bus or train level. Standard Section 5.2.1(3) stated that each of the redundant load groups shall have

access to both a preferred and a standby power supply, another reference to evaluation of the Class 1E electrical distribution system at the bus or train level. Section 5.2.2(1) of the Standard defined the distribution system as consisting of all equipment in the distribution circuit from the supply breaker or breakers to the loads. Finally, IEEE 308-1971, Figure 1, "Example Class 1E Electric System for a Single Unit," reinforced the previous definitions and requirements by illustrating two separate trains in the Class IE distribution system, each with its own preferred and standby power source. Following consultation with Regional and Nuclear Reactor Regulation (NRR) staff including Project Manager, Technical Specification, and Electrical branch personnel; the resident inspector, Regional, and NRR staff concluded that the LCO action statement needed to be entered when one of the two offsite power supplies was removed from either safeguards bus.

<u>Analysis</u>. Seabrook's failure to comply with the requirements of TS LCO action Statement 3.8.1.1.a pertaining to Class 1E AC power supplies was considered a performance deficiency. Traditional enforcement does not apply because the issue did not have any actual safety consequence or potential for impacting the NRC's regulatory function and was not the result of any willful violation of NRC requirements or Seabrook's procedures.

This finding was more than minor because it affected the equipment performance attribute of the Initiating Events Cornerstone and the objective to limit the likelihood of those events that upset plant stability. Reducing the availability of offsite power to the Class 1E electrical distribution system resulted in a greater likelihood of the loss of an emergency bus initiating event. Using Appendix A, Phase 1 of IMC 0609, "Determining the Significance of Reactor Inspection Findings for At-Power Stations," dated December 1, 2004," the finding was determined to be of very low safety significance (Green) since the finding did not affect reactor coolant system leakage, mitigating systems resulting in a total loss of safety function, or external events.

<u>Enforcement</u>. Technical Specification LCO 3.8.1.1.a, "AC Sources - Operating," requires two independent circuits between the offsite transmission network and the onsite Class 1E distribution system. Technical Specification LCO action statement 3.8.1.1.a requires restoration of at least two offsite circuits to operable status within 72 hours when one offsite circuit becomes inoperable.

Contrary to this requirement, between August 18 to August 21, 2003, one independent circuit was inoperable due to UAT maintenance on Bus 6 for 84 hours, exceeding the allowed outage time of 72 hours. Because this violation was of very low safety significance and Seabrook entered this finding into its corrective action program (CR 05-03265), this violation is being treated as a NCV consistent with section VI.A.1 of the NRC Enforcement Policy (05000443/2005004-02, Failure to Comply with Technical Specification LCO Action Statement 3.8.1.1.a, Electrical Distribution during On-Line Maintenance).

2. <u>Other Operability Evaluations</u>

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 that the TS limiting condition for operation implications were properly addressed. The inspectors performed field walkdowns, interviewed personnel, and reviewed the following items:

- C CR 05-03247, which evaluated an excess letdown valve with a body to bonnet leak. The inspectors reviewed the condition of the valve through examination of photographs of the valve and boric acid on the valve, interviewed engineers and operators, and examined the recent unidentified leak rate trends. The inspectors evaluated Seabrook's actions against TS 3.4.6.2, "Reactor Coolant System Leakage," and Seabrook procedure SM 7.18, "Operational Decision Making," Revision 0.
- C CR 05-00669, which evaluated loose caulking material found in the 'A' EDG Air Filter housing. The loose material was removed and the filter housing inspected by maintenance technicians. The inspectors reviewed the CR, the engineering evaluation of the EDG ingestion of the caulk, and the Plant Nonconformance/Degraded Condition Evaluation which evaluated potential bypass flow around the filters due to the lost caulking material. The inspectors also interviewed the system engineer and maintenance supervisor.
- C CR 05-00722, which covered the rapid loading of the 'A' EDG due to a pulled fuse which provided power to the generator output indicators (See Section 1R19). The inspectors reviewed the CR and the engineering evaluation of the rapid loadings effect on the engine. The inspectors also interviewed the engineers involved in the evaluation.
- C CR 05-01888, which evaluated the effect on the emergency core cooling system of a portion of elastomeric seal material which could potentially have entered the system through the 'D' accumulator. The inspectors reviewed the CR and the operability determination. The inspectors also interviewed the engineering and maintenance staff involved in the evaluation and equipment repair.

b. Findings

1R16 Operator Workarounds (71111.16 - Two Samples)

a. Inspection Scope

The inspectors completed one inspection of the cumulative impact of operator workarounds and reviewed in detail one specific operator workaround.

The inspectors reviewed Seabrook'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 NAP-402, "Conduct of Operations, Attachment K, Operator Workarounds and Burdens," Revision 0 and verified that this procedure provided the necessary guidance to the licensee to adequately address the cumulative effects the workarounds had on the operation, reliability, and availability of affected systems. The inspectors also reviewed selected CRs and quarterly assessments completed under WOs 0423050 and 0423051. The workarounds were verified to be tracked and scheduled for completion based on the priority and impact on the plant.

The inspectors reviewed in detail an operator workaround associated with manual actions required to maintain condenser vacuum following a reactor trip. The operator action involved opening a main steam valve to maintain steam seal supply to the turbine. The inspectors reviewed operator actions taken to ensure that the non-licensed operators were trained and understand their responsibility. The inspectors verified that corrective actions were identified and planned to address the workaround. The inspectors also reviewed CR 05-02576 which was initiated to address compensatory measures deficiencies. The inspectors verified that the additional actions taken were appropriate for the workaround.

b. Findings

No findings of significance were identified.

- 1R19 <u>Post-Maintenance Testing</u> (71111.19 Eight Samples)
- 1. <u>Failure to Properly Implement Equipment Tagging and Isolation Procedure for the 'A'</u> <u>Emergency Diesel Generator</u>
- a. Inspection Scope

In January 2005, the inspectors reviewed post maintenance testing activities following the completion of various maintenance and clearance activities on the 'A' EDG including removal of load indication fuses. The inspectors reviewed compliance with technical specifications and interviewed engineers and work control staff.

b. <u>Findings</u>

Introduction. Seabrook failed to properly implement an equipment tagging and isolation procedure which resulted in the rapid loading of 'A' EDG and could have potentially damaged the EDG. This self-revealing finding was determined to be of very low safety significance (Green) and was characterized as an NCV of TS 6.7.1.a, "Procedures and Programs."

<u>Description</u>. On January 19, 2005, a maintenance run was performed on the 'A' EDG following various maintenance and clearances activities. The diesel engine was loaded by the operator; however, the loading circuitry did not provide indication that the engine was loading. The operator, after discussion with a senior rector operator, continued to load the engine despite not having received the expected indication following the initial loading attempt. Operators subsequently terminated the maintenance run due to the indication discrepancy.

Seabrook determined that the engine was being loaded during the maintenance run; however, the loading circuitry had not been receiving an output signal because a fuse had not been replaced prior to the engine run. The result of the loading of the 'A' EDG without indication was that the engine was loaded from zero to 5900 kilowatts (KW) in 30 seconds. The peak loading of the engine was 7000 KW which exceeds the continuous and two hour ratings for the engine output, but is slightly below the instantaneous maximum engine output. This type of loading sequence could lead to uneven growth rates between the pistons and cylinder wall liners which could result in damage sufficient to prevent the engine from performing it's safety function. Seabrook completed inspections of the piston cylinders prior to restoring the EDG to service. The removed fuse was part of a work order which had been canceled, however the Operating Permit tags for the order were still hung. The fuse should have been replaced and the Operating Permit tags removed prior to starting the 'A' EDG.

Seabrook's equipment tagging program was described in procedure MA 4.2, "Equipment Tagging and Isolation," Revision 19. Procedure MA 4.2 required the Work Order Holder to assure equipment safety prior to operation of or energizing Operating Permit tagged equipment. The fuse needed to be replaced to assure safe operation of the 'A' EDG.

<u>Analysis</u>. Seabrook's failure to implement their Equipment Tagging and Isolation procedure, specifically the Operating Permit tags for the 'A' EDG work order, was considered a performance deficiency. Traditional enforcement does not apply because the issue did not have any actual safety consequences or potential for impacting the NRC's regulatory function and was not the result of a willful violation of NRC requirements or Seabrook procedures.

The finding was more than minor because, if left uncorrected, Seabrook's failure to properly implement the tagging program and licensed operator actions to continue loading a risk-significant, safety-related piece of equipment despite not having received the expected response would result in a more safety significant safety concern. Using

Appendix A, Phase 1 of the Mitigating Systems Cornerstone of IMC 0609, the finding was determined to be of very low safety significance (Green) since there were no design or qualification deficiency, actual loss of safety function, or seismic, flooding, or severe weather concerns associated with the issue. This finding was associated with the cross-cutting area of organizational human performance since not only was the tagging procedure improperly implemented and licensed operators continued to load the EDG despite not having received the expected response; but other licensee programs, including the work control process, failed to identify the tagging error prior to running the engine for testing. This issue was entered into Seabrook's corrective action program as CR 05-00722 and CR 05-00724.

<u>Enforcement</u>. Technical Specification 6.7.1.a, "Procedures and Programs," requires that written procedures be maintained covering the activities in Regulatory Guide 1.33, "Quality Assurance Program Requirements," Revision 2, Appendix A. Regulatory Guide 1.33 requires procedures for equipment control. Seabrook procedure MA 4.2, "Equipment Tagging and Isolation," Revision 19 requires the work order holder to assure equipment safety prior to the operation or energizing of Operating Permit tagged equipment.

Contrary to the above, the work order holder did not assure that load monitoring equipment had been restored prior to a maintenance run on the 'A' EDG on January 19, 2005. Because this finding was of very low safety significance and Seabrook entered this finding into their corrective action program (CRs 05-00722 and 05-00724), this finding is being treated as an NCV consistent with Section VI.A.1 of the Enforcement Policy (NCV 05000443/2005004-03, Failure to Properly Implement Equipment Tagging and Isolation Procedure for the 'A' Emergency Diesel Generator).

2. Other Post-Maintenance Tests

a. <u>Inspection Scope</u>

The inspectors reviewed post-maintenance testing (PMT) activities to ensure: 1) the PMT was appropriate for the scope of the maintenance work completed and in accordance with MA 3.5, "Post Maintenance Testing;" 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:

- C On January 19, 2005, the inspectors observed alarm testing, leak checks, and system performance following modification and installation of an EDG rocker arm lube oil tank. The inspectors reviewed WO 042405 and interviewed maintenance technicians and the system engineer.
- C On January 19 and 20, 2005, Seabrook completed the PMT for 41 work orders associated with the 'A' EDG. The work orders included preventive maintenance activities, corrective maintenance, and design modifications. The inspectors

reviewed each work order and interviewed maintenance technicians, operators, and the system engineer.

- C On January 28, Seabrook performed OX1405.07, "Safety Injection Quarterly and 18 Month Pump Flow & Valve Test," Revision 8 following removal of foreign material found during a routine bearing oil change. The inspectors reviewed WO's 0442013 and 0430932 and interviewed maintenance technicians and engineering personnel.
- During January 2005, the inspectors reviewed post-maintenance testing activities following maintenance activities on thermal barrier heat exchanger containment isolation valve, CC-V-1095. The inspectors reviewed compliance with technical specifications and the requirements specified in MA 3.5.
- C On February 7 through 11, 2005, Seabrook performed post maintenance testing on the 'A' Sierra station air compressor following the replacement of the compressor's controller. The testing identified the need to have the new controller upgraded. The inspectors reviewed WO 0428927 and interviewed instrument and controls technicians and the system engineer.
- C On February 14, 2005, Seabrook performed OX1406.02, "Containment Spray Pump and Valve Quarterly Operability, 18 Month Position Indication and Comprehensive Pump Testing," Revision 9, following maintenance on the pump and motor bearing for the 'A' containment spray pump. The inspectors reviewed the procedure and WO 0442713. The inspectors also interviewed the maintenance technicians.
- C On February 16, 2005, Seabrook performed post maintenance testing on a nitrogen supply valve to the safety accumulators following the replacement of the valve. The inspectors reviewed WO 0504866 and WO 0505498 and interviewed maintenance technicians.
- C On February 22, 2005, Seabrook performed post maintenance testing on the electrical Bus 5 reserve auxiliary transformer breaker following maintenance on the racking mechanism. The inspectors reviewed WO 0506246 and interviewed engineers associated with the activity.

b. Findings

1R20 Outage Activities (71111.20 - One Sample)

a. Inspection Scope

On March 22, 2005, Seabrook entered a forced outage due to a TS required shutdown for an inoperable reactor trip breaker caused by a faulty test switch. The inspectors reviewed the shutdown of the plant, control of the plant in hot standby, the start-up of the plant, and the synchronization of the turbine-generator to the grid. The inspectors reviewed applicable procedures, observed control room activities, conducted walkdowns, and interviewed key personnel. The inspectors evaluated the activities against Technical Specification requirements, Seabrook procedures, and other applicable requirements.

b. Findings

No findings of significance were identified.

- 1R22 <u>Surveillance Testing</u> (71111.22 Four 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 system engineers and field operators. The recorded test data was compared to procedural and technical specification requirements, and to prior tests to identify any adverse trends. The following surveillance procedures were reviewed:

- C In January and February 2005, LS0565.31, "8-Hour Emergency Light Inspections," Revision 3.
- C On February 3, 2005, IX1640.352, "FW-P-506 High Pressure Turbine Impulse Chamber Pressure Calibration," Revision 6.
- C On February 16, 2005, IX1656.944, "Operational Test and Overpower Trip High Range Bistable Adjustment for Power Range Channel N44," Revision 6.
- C On March 22, 2005, IX1680.921, "Solid State Protection System Train A Actuation Logic Test," Revision 9.

b. Findings

1R23 <u>Temporary Plant Modifications</u> (71111.23 - One Sample)

a. Inspection Scope

The inspectors reviewed temporary modification 05TMOD002, and associated implementing documents, to verify that Seabrook's design basis and affected system/component operability were maintained. The temporary modification involved installation of upgraded reactor coolant vibration monitoring equipment. The inspectors interviewed engineers and operators, completed field walkdowns, and reviewed the Maintenance Manual, MA 4.3A, "Temporary Modifications and Temporary Alterations," Revision 16 and OS1201.01, "RCP [Reactor Coolant Pump] Malfunction," Revision 10.

The inspectors verified that the temporary modification was completed in accordance with NRC requirements and plant procedures. The procedural requirements included modifications to plant drawings and tagging of plant equipment affected by the temporary modification. The inspectors verified 10 CFR 50.59 reviews and 10 CFR 50.65(a)(4) risk evaluations were completed correctly. The inspectors also examined the combined effect of the modification with other outstanding temporary modifications.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness [EP]

1EP4 Emergency Action Level and Emergency Plan (E-Plan) Changes

a. <u>Inspection Scope</u> (71114.04 - One Sample)

During the period of January 11 - March 31, 2005, the NRC received and acknowledged the changes made to Seabrook's E-Plan in accordance with 10 CFR 50.54(q), which the licensee had determined resulted in no decrease in effectiveness to the Plan and which have concluded to continue to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. The inspector conducted a sampling review of the Plan changes which could potentially result in a decrease in effectiveness. This review does not constitute an approval of the changes and, as such, the changes are subject to future NRC inspection. 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

1EP6 Drill Evaluation (71114.06 - One Sample)

a. Inspection Scope

The inspectors reviewed the operators' emergency classification and notification completed during requalification training on January 13, 2005 (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," Revision 2.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety [OS]

2OS1 Access to Radiologically Significant Areas (71121.01 - Eleven Samples)

a. Inspection Scope

During the period January 18 to 21, 2005, the inspectors conducted the following activities to verify that Seabrook was properly implementing physical, administrative, and engineering controls for access to locked high radiation areas, and other radiologically controlled areas during power operations, and that workers were adhering to these controls when working in these areas. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, Seabrook Technical Specifications, and Seabrook's procedures.

Plant Walkdown and Radiation Work Permit (RWP) Reviews

The inspectors identified exposure significant work areas including areas in the Waste Processing Building, Primary Auxiliary Building, and Calibration Facility. Tasks in the Waste Processing Building included transfer of a spent resin liner from the storage area into a shipping cask and preparing it for shipment (No. 05-003). Tasks in the Primary Auxiliary Building included filter replacement of a reactor coolant pump seal injection filter (CS-F-4B). Tasks in the Calibration Facility included pre-operational safety checks of the 400 Curie Sheperd Model 81 beam irradiator. The inspectors reviewed the RWPs and the radiation survey maps associated with these work areas to determine if the radiological controls were acceptable.

The inspectors toured accessible radiological control areas and, with the assistance of a radiation protection technician, performed independent radiation surveys of selected areas to confirm the accuracy of survey maps and the adequacy of postings.

In reviewing RWPs, the inspectors evaluated electronic dosimeter dose/dose rate alarm setpoints to determine if the setpoints were consistent with the survey locations and plant policy. The inspectors verified that the workers were knowledgeable of the actions to be taken when the electronic dosimeter alarms or malfunctions for tasks being conducted under selected RWPs. Work activities reviewed included spent resin liner handling (RWP 05-R-00051), seal injection filter replacement (RWP 05-R-00013), and pre-operational checks of the Model 81 beam irradiator (RWP 05-R-0004).

Problem Identification and Resolution

The inspectors reviewed elements of Seabrook's Correction Action Program related to controlling access to radiologically controlled areas, completed since the last inspection of this area, to determine if problems were being entered into the program for resolution. Details of this review are contained in Section 4OA2 of this report.

Jobs-In-Progress

The inspectors observed aspects of various maintenance activities being performed during the inspection period to verify that radiological controls, such as required surveys, area postings, job coverage, and pre-job RWP briefings were appropriately conducted; personnel dosimetry was properly worn; and that workers were knowledgeable of work area radiological conditions. Tasks observed included transferring a spent resin liner into a shipping cask, replacement of the seal injection filter (CS-F-4B), and pre-operational checks on a Model 81 beam irradiator.

High Risk Significant, High Dose Rate HRA and VHRA Controls

The inspectors discussed with the Health Physics Supervisor the controls and procedures for High Dose Rate areas and Very High Radiation Areas (VHRA). The inspectors verified that any changes to relevant Seabook procedures did not substantially reduce the effectiveness and level of worker protection. Controls for significant high risk areas reviewed included material movements in the spent fuel pool and controls for operating a 400 Curie beam irradiator.

The inspectors discussed with the senior radiation protection technicians the controls in place for special areas that have the potential to become VHRAs during certain plant operations. These special areas include under vessel areas in the Containment Building, irradiated hardware stored in the Spent Fuel Pool, and Chemical & Volume Control System demineralizers in the Primary Auxiliary Building. The inspectors evaluated the prerequisite communications, procedural authorizations, and operational controls that must be implemented prior to conducting activities in these plant areas.

Keys to locked high radiation areas (LHRA) and VHRA, which are maintained at the Health Physics (HP) control point and in the Control Room, were inventoried, and accessible LHRAs were verified to be properly secured and posted during plant tours.

Radiation Worker/Radiation Protection Technician Performance

The inspectors observed radiation worker and radiation protection technician performance by attending various pre-job RWP briefings and morning HP staff meetings, reviewing shift logs, and observing jobs in progress.

The inspectors reviewed Condition Reports related to radiation worker and radiation protection technician errors to determine if an observable pattern traceable to a common cause was evident.

b. <u>Findings</u>

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

Access Control to Radiologically Significant Areas (71121.01)

a. Inspection Scope

The inspectors reviewed fifteen Condition Reports, recent Radiation Safety Committee meeting minutes, a Health Physics Department self-assessment (04-0121), Daily Quality Summary Reports, and as-low-as-reasonably-achievable (ALARA) reviews for the upcoming refueling outage to evaluate Seabrook's threshold for identifying, evaluating, and resolving occupational radiation safety problems. This review included a check of possible repetitive issues such as radiation worker and radiation protection technician errors.

The review was conducted against the criteria contained in 10 CFR 20, Technical Specifications, and Seabrook's procedures.

b. Findings

No findings of significance were identified.

- 4OA3 Event Followup (71153 Four Samples)
- 1. <u>(Closed) Licensee event Report (LER) 50-443/04-001</u>: Accident Monitoring Instrumentation Inoperable Due to Inadequate Instrument Range

On June 22, 2004, Seabrook identified that the containment enclosure negative pressure monitor range was not sufficient to encompass worst case conditions and declared the associated monitors inoperable. This was an original design issue;

therefore the instruments were inoperable for a period longer than the 48 hours permitted by TS 3.3.3.6, "Accident Monitoring Instrumentation." The inspectors reviewed the accuracy of the licensee event report, examined the apparent cause evaluation, reviewed the corrective actions described in CR 04-05848, and verified compliance with the reportability requirements. No new findings were identified in the inspector's review. This finding constitutes a violation of TS 3.3.3.6 of minor significance that is not subject to enforcement action in accordance with Section IV of the NRC's enforcement Policy since the loss of this instrument would not have affected operator actions in response to an accident. This LER is closed.

2. <u>(Closed) LER 50-443/04-002</u>: Accident Monitoring Instrumentation Inoperable Due to Recorder Malfunction

On October 5, 2004, Seabrook identified that pressurizer level recorder 1-RC-LR-460 had been inoperable for a period longer than the seven days permitted by TS 3.3.3.6, "Accident Monitoring Instrumentation." Seabrook concluded that the instrument was inoperable for the following periods: 185 days from July 2, 2001 through January 3, 2002; 14 days from August 26, 2002 through September 9, 2002; and 60 days from April 5, 2004 through June 4, 2004. Inadequate corrective actions were previously reviewed and documented in NRC Inspection Report 50-443/2004-004 as a NCV of very low safety significance (Green). The inspectors reviewed the accuracy of the licensee event report, examined the root cause analysis and corrective actions described in CR 04-09749, and verified compliance with the reportability requirements. No new findings were identified in the inspector's review. This LER is closed.

3. (Closed) LER 50-443/04-003: Fire Scenario Results in Unanalyzed Condition - Potential Loss of Charging

On October 2, 2004, Seabrook identified that fires in four plant areas could disable both charging system trains. This design deficiency was previously reviewed and documented in NRC Inspection Report 50-443/2005-003 as a NCV of very low safety significance (Green). The inspectors reviewed the accuracy of the licensee event report and verified compliance with the reportability requirements. The licensee documented the issue in CR 04-09428. No new findings were identified in the inspector's review. This LER is closed.

4. <u>(Closed) LER 50-443/05-001</u>: Noncompliance with the Requirements of Technical Specification 3.6.3

On January 15, 2005, Seabrook identified that the containment isolation valve CC-V-1095, due to a delayed PMT, had been inoperable for approximately 42 hours, thereby exceeding the TS requirement of four hours. Operators and work control personnel had various opportunities to identify the required TS entry prior to, during, and following completion of the maintenance. The licensee documented the issue in

CR 05-00574. No new findings were identified in the inspector's review. In accordance with IMC 0612, the inspectors concluded that this was a minor violation since the final testing of the valve was successful, the breaker for the valve was deenergized for a limited time (four hours), and the containment isolation valve, if called upon, would have been able to perform the intended safety function. This minor violation is not subject to enforcement action in accordance with Section IV of the NRC's enforcement Policy. This LER is closed.

4OA4 Cross Cutting Aspects of Findings

Section 1R19.1 describes the failure of Seabrook to properly implement an equipment tagging and isolation procedure which resulted in the unplanned and rapid loading of the 'A' EDG which could have damaged the engine. This finding was associated with the cross-cutting area of organizational human performance since not only was the tagging procedure improperly implemented and licensed operators continued to load the EDG despite not having received the expected response; but other licensee programs, including the work control process, failed to prevent the emergency diesel generator transient.

4OA6 Meetings, including Exit

Exit Meeting Summary

The inspectors presented the inspection results to Mr. M. Warner on April 13, 2005, following the conclusion of the period. The licensee acknowledged the findings presented. The licensee did not indicate that any of the information presented at the exit meeting was proprietary.

Site Management Visit

On January 20, 2005, Mr. Brian Holian, Deputy Director, Division of Reactor Projects, Region I, toured the site and met with Mr. Mark Warner and other members of licensee management.

On March 16, 2005, Mr. A. Randolph Blough, Director, Division of Reactor Projects, Region I, toured the site and met with Mr. Art Stall and other members of licensee management.

ATTACHMENT: SUPPLEMENTAL INFORMATION

A-1

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

P. Allen M. Bianco L. Bladow	Senior Health Physics Technician Supervisor, Radiological Waste Services Manager, Nuclear Oversight
R. Campion	Nuclear Oversight Auditor
W. Cash	Health Physics Department Manager
M. Chevalier	Senior Health Physics Technician
R. Couture	Special Nuclear Materials Accountant
T. Date	Senior Health Physics Technician
D. Hampton	Supervisor, Health Physics
L. Johnson III	Senior Health Physics Technician
M. Kiley	Operations Manager
J. Kimball	Nuclear Oversight Auditor
P. Nardone	Reactor Engineer
V. Robertson	Licensing Engineer
M. Scannell	Supervisor, Health Physics
G. St. Pierre	Plant General Manager
M. Sullivan	Senior Health Physics Technician
R. Thurlow	Health Physics Technical Supervisor

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Close	d٠	
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05000443/2004001	LER	Accident Monitoring Instrumentation Inoperable Due to Inadequate Instrument Range (Section 4OA3.1)
05000443/2004002	LER	Accident Monitoring Instrumentation Inoperable Due to Recorder Malfunction (Section 4OA3.2)
05000443/2004003	LER	Fire Scenario Results in Unanalyzed Condition - Potential Loss of Charging (Section 4OA3.3)
05000443/2005001	LER	Noncompliance With the Requirements of Technical Specification 3.6.3 (Section 4OA3.4)

Opened and Closed		
05000443/2005004-01	NCV	Failure to Properly Maintain 4.16 KV Breaker Maintenance Procedure (Section 1R14.1)
05000443/2005004-02	NCV	Failure to Comply with Technical Specification LCO Action Statement 3.8.1.1.a Electrical Distribution during On-Line Maintenance (Section 1R15.1)
05000443/2005004-03	NCV	Failure to Properly Implement Equipment Tagging and Isolation Procedure (Section 1R19.1)

LIST OF DOCUMENTS REVIEWED

Section 20S1: Access to Radiologically Significant Areas

Procedures **Procedures**

HD0955.55, "Use of the TeleView Wireless Dosimeter System," Revision 01 HD0955.58, "Operation of the HP Centralized Monitoring System," Revision 00 HD0958.03, "Personnel Survey and Decontamination Techniques," Revision 23 HN0958.13, "Generation and Control of Radiation Work Permits," Revision 26 HD0958.17, "Performance of Routine Radiological Surveys," Revision 12 HD0958.19, "Evaluation of Dosimetry Abnormalities," Revision 27 HN0958.25, "High Radiation Area Controls," Revision 26 HD0958.30, "Inventory and Control of Locked or Very High Radiation Area Keys and Locksets," Revision 23 HD0958.48, "Health Physics Job Coverage Using Remote Monitoring," Revision 02 HD0958.51, "Health Physics Issuance of Stop Work Orders," Revision 00 HD0963.02, "Administrative Guidelines for Health Physics Instrumentation," Revision 13 HD0992.02, "Issuance and Control of Personnel Monitoring Devices," Revision 28 HN0951.04, Health Physics Repetitive Tasks, Revision 06 HN0958.30, "Inventory and Control of Locked or Very High Radiation Area Keys and Locksets," Revision 23 HN0958.39, "Multi-Badge Control & Exposure Tracking," Revision 04 JD0999.910, "Reporting Key Performance Indicators," Revision 0 RP 2.1, "General Radiation Worker Instruction and Responsibilities," Revision 18 RP 3.1, "Radiological Qualification Requirements," Revision 18 RP 4.1, Requirements for Issuing Personnel Dosimetry, Revision 19 RP 5.1, "Annual Occupational Exposure Control and Increased Radiation Exposure Approval," Revision 16 RP 9.1, "RCA Access/Egress Requirements," Revision 21 RP 9.2, "Radiological Access Requirements to Containment Area," Revision 8

Attachment

RP 13.1, "Radiological Controls for Materials," Revision 20 RP 13.2, "Storage of Highly Radioactive Material in the Reactor Cavity or Spent Fuel Pool," Revision 5 RP 15.1, "Job Pre-Planning and Review for Radiation Exposure Control," Revision 18 RP 15.2, "ALARA Recommendations," Revision 09 RP 15.4, "Use and Control of Temporary Shielding," Revision 11 RP 15.5. "Exposure Goals," Revision 03 OE 3.6, "Condition Reports," Revision 5 ON1090.04, "Containment Entry," Revision 3 WN0598.076, "Moving High Dose Rate Containers (>1R/Hr)," Revision 0

Quality Assurance Reports:

Daily Quality Summary Reports 12/06/2004 thru 01/12/2005

Condition Reports:

04-11089, 04-07495, 04-10323, 05-00048, 04-12154, 04-10807, 04-10381, 04-11217, 04-08978, 03-000559, 03-00658, 04-00364, 04-09712, 04-08954, 04-06775

Radiation Safety Committee Meeting Minutes

Meeting No. 04-04 dated December 28, 2004

LIST OF ACRONYMS

RAT Reserve Auxiliary Transformer	AC ADAMS ALARA CR EDG FSAR HP HRA IEEE IMC LCO LER LHRA MSR NCV NRC NRR PMT	Alternating Current Agencywide Documents Access and Management System as low as reasonably achievable Condition Report Emergency Diesel Generator Final Safety Analysis Report Health Physics High Radiation Areas Institute of Electrical and Electronic Engineers Inspection Manual Chapter Limiting Condition for Operation Licensee Event Report Locked High Radiation Areas Moisture Separator Reheater Non-Cited Violation Nuclear Regulatory Commission Nuclear Reactor Regulation Post-Maintenance Testing
	PMT	Post-Maintenance Testing

RWP	Radiation Work Permit
SDP	Significance Determination Process
TS	Technical Specifications
UAT	Unit Auxiliary Transformer
VHRA	Very High Radiation Areas
WO	Work Order