



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION II
MARQUIS ONE TOWER
245 PEACHTREE CENTER AVENUE, NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

April 29, 2010

Mr. Dennis R. Madison
Vice President
Southern Nuclear Operating Company, Inc.
Edwin I. Hatch Nuclear Plant
11028 Hatch Parkway North
Baxley, GA 31513

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC INTEGRATED INSPECTION
REPORT 05000321/2010002 AND 05000366/2010002

Dear Mr. Madison:

On March 31, 2010, U. S. Nuclear Regulatory Commission (NRC) completed an inspection at your Edwin I. Hatch Nuclear Plant, Units 1 and 2. The enclosed integrated inspection report documents the inspection results, which were discussed on April 16, 2010, with you and other members of your staff.

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

Based on the results of this inspection one self-revealing finding of very low safety significance (Green) was identified. The finding did not involve a violation of NRC requirements. If you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region II, and the NRC Resident Inspector at the Hatch facility. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the

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NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Scott M. Shaeffer, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos.: 50-321, 50-366
License Nos.: DPR-57 and NPF-5

Enclosure: Inspection Report 05000321/2010002, 05000366/2010002
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

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Letter to Dennis R. Madison from Scott M. Shaeffer dated April 29, 2010

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC INTEGRATED INSPECTION
REPORT 05000321/2010002 AND 05000366/2010002

Distribution w/encl:

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-321, 50-366

License Nos.: DPR-57 and NPF-5

Report Nos.: 05000321/2010002 and 05000366/2010002

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Edwin I. Hatch Nuclear Plant

Location: Baxley, Georgia 31513

Dates: January 1 – March 31, 2010

Inspectors: E. Morris, Senior Resident Inspector
P. Niebaum, Resident Inspector
S. Rose, Senior Project Engineer
L. Pressley, Project Engineer
B. Collins, Reactor Inspector (Section 1R08)
W. Loo, Senior Health Physicist (Sections 2RS5, 2RS6, 4OA1)
L. Mahlahla, Health Physicist (Section 2RS5)
A. Nielsen, Health Physicist (Sections 2RS5, 2RS7)
H. Gepford, Senior Health Physicist (Sections 2RS1, 4OA1)

Approved by: Scott M. Shaeffer, Chief
Reactor Projects Branch 2
Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000321/2010-002, 05000366/2010-002; 01/01/2010-03/31/2010; Edwin I. Hatch Nuclear Plant, Units 1 and 2, Event Follow-up

The report covered a three-month period of inspection by two resident inspectors, two project engineers, one reactor inspector, and four health physicists. One self-revealing Green finding was 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). The cross-cutting aspect was determined using IMC 0305, Operating Reactor Assessment Program. Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

Green. A self-revealing finding was identified for the licensee's failure to create, implement, and make available to maintenance personnel, quality processes or documents for configuration control. Specifically, the licensee failed to maintain the correct configuration of the stator water cooling (SWC) temperature control instrument loop air-operated valve, 2N43-F100, as required by licensee procedure NMP-ES-014, Air Operated Valve Program. The failure to implement adequate configuration control on the SWC temperature control instrument loop directly resulted in a Unit 2 reactor scram on June 20, 2009. The licensee has addressed this issue in their Corrective Action Program (CAP) and developed corrective actions in CR 2009106326. As part of the licensee's immediate corrective actions the Unit 2 SWC instrument loop was reconfigured to the correct alignment, and changes were made to procedure NMP-ES-014.

This performance deficiency was more than minor because it was associated with the Configuration Control attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability. Specifically, inadequate configuration control resulted in a Unit 2 reactor scram on June 20, 2009. The significance of this finding was screened using the Phase 1 of the Significance Determination Process (SDP) in accordance with NRC Inspection Manual Chapter 0609 Attachment 4. Because the finding contributed to a reactor scram, but did not affect mitigation equipment availability, the finding screened as Green. This finding had a cross-cutting aspect in the Resources component of the Human Performance area, because the licensee did not provide complete, accurate and up-to-date design documentation, procedures, and work packages, and correct labeling of components. Specifically, the licensee did not implement a means of configuration control of the SWC temperature control instrument loop. (H.2(c)). (Section 4OA3.1)

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REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at or near 100% Rated Thermal Power (RTP) and shutdown for a refueling outage on February 8, 2010. A reactor startup began on March 18 and the main generator was placed online on March 21. Unit 1 returned to 100% on March 27.

Unit 2 began the inspection period at or near 100% RTP. On February 16, a load reduction to approximately 60% was necessary to replace a main generator stator water cooling valve. Unit 2 returned to 100% on February 20 and remained at or near 100% for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather

a. Inspection Scope

Readiness for Impending Adverse Weather Conditions: Freezing. The inspectors performed a review of licensee readiness to cope with freezing weather experienced at the site January 1 - 8. The inspectors performed walk downs to verify that equipment was in place to mitigate the potential impacts from freezing conditions. The inspectors reviewed licensee procedure DI-OPS-36-0989, Cold Weather Checks, to verify actions were taken by the licensee to cope with freezing conditions. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial Walkdowns. The inspectors performed partial walkdowns of the following three systems when the opposite train was removed from service, a remaining operable system/train with high risk significance for the plant configuration exists, or a system/train that was recently realigned following an extended system outage or a risk significant single train system exists. The inspectors checked system valve positions, electrical breaker positions, and operating switch positions to evaluate the operability of the opposite trains or components by comparing the position listed in the system operating procedure to the actual position. Documents reviewed are listed in the Attachment.

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- Unit 1 Reactor Core Isolation Cooling (RCIC) while Unit 1 High Pressure Cooling Injection (HPCI) was out of service (OOS) on January 5.
- Unit 2A Emergency Diesel Generator (EDG) while the 1B Swing EDG was OOS on February 26.
- Common Main Control Room (MCR) 1A and 1B Air Handling Units (AHU) while the 1C MCR AHU was OOS on March 22.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Fire Area Tours. The inspectors toured the following five risk significant plant areas to assess the material condition of the fire protection and detection equipment, verify fire protection equipment was not obstructed and that transient combustibles were properly controlled. The inspectors reviewed the site Fire Hazards Analysis to verify that the necessary fire fighting equipment, such as fire extinguishers, hose stations, ladders, and communications equipment, was in place. Documents reviewed are listed in the Attachment.

- Unit 1/Unit 2 600V switchgear rooms
- Unit 1/Unit 2 Annunciator rooms
- Unit 1/Unit 2 Station Service Battery Rooms 112'
- Unit 1/Unit 2 RPS and Cable Tray Rooms
- Unit 1 Torus Room and Steam Chase

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection Activities

From February 15, 2010 through February 19, 2010, the inspectors conducted a review of the implementation of the licensee's Inservice Inspection (ISI) Program for monitoring degradation of the reactor coolant system, steam generator tubes, emergency feedwater systems, risk-significant piping and components and containment systems.

The inspections described in Sections 1R08.1 and 1R08.2 below constituted one inservice inspection sample as defined in Inspection Procedure 71111.08-05.

.1 Piping Systems ISI

a. Inspection Scope

The inspectors evaluated the following non-destructive examinations mandated by the ASME Code Section XI to verify compliance with the ASME Code Section XI and Section V requirements and, if any indications and defects were detected, to evaluate if they were dispositioned in accordance with the ASME Code or an NRC-approved alternative requirement.

- Ultrasonic Testing (UT) examination of weld 1C11-1CRD-3-R-18A-OL, ASME Class 1, Reactor Coolant System, 6-inch diameter overlay weld (Nozzle N9) – Direct Observation
- UT examination of weld 1B21-1MS-24B-14, ASME Class 2, Main Steam System, 24-inch Category B-J weld – Direct Observation
- Phased Array UT exam of weld 1B31-1RC-12BR-D-5, ASME Class 1, Reactor Coolant System, 12-inch Category B-F dissimilar metal weld – Direct Observation

The inspectors reviewed the following examination records (volumetric or surface) with recordable indications that were analytically evaluated and accepted for continued service against the ASME Code Section XI or an NRC-approved alternative.

- Indication found during UT of weld 1B21-1MS-24B-14, Main Steam System pipe-to-valve weld

The inspectors reviewed documentation for the following pressure boundary welds completed for risk-significant systems during the outage to evaluate if the licensee applied the pre-service non-destructive examinations and acceptance criteria required by ASME Code Section XI. In addition, the inspectors reviewed the welding procedure specification, welder qualifications, welding material certification and supporting weld procedure qualification records, to evaluate if the weld procedures were qualified in accordance with the requirements of Construction Code and the ASME Code Section IX.

- Work Order 1081999513, 20-inch hemispherical end cap-to-pipe weld #12797-1-1 for assembly of Residual Heat Removal (RHR) Acoustic Resonator
- Work Order 1081999513, 3-inch flange-to-pipe weld #12797-3A for assembly of RHR Acoustic Resonator

b. Findings

No findings of significance were identified.

.2 Identification and Resolution of Problems

a. Inspection Scope

The inspectors performed a review of ISI-related problems entered into the licensee's corrective action program and conducted interviews with licensee staff to determine if;

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- the licensee had established an appropriate threshold for identifying ISI-related problems;
- the licensee had performed a root cause (if applicable) and taken appropriate corrective actions; and
- the licensee had evaluated operating experience and industry generic issues related to ISI and pressure boundary integrity.

The inspectors performed these reviews to evaluate compliance with 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requirements. The corrective action documents reviewed by the inspectors are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification

a. Inspection Scope

Resident Quarterly Observation

The inspectors observed the performance of licensee simulator scenario conducted on January 13 which included damage to irradiated fuel during core offload, an un-isolable steam break on the "C" main steam line, an anticipated transient without scram, trip of the reactor core isolation cooling, and failure of an emergency diesel to start. The inspectors reviewed the classification in accordance with the Emergency Plan and licensee procedures 10AC-MGR-019-0, Procedure Use and Adherence, and DI-OPS-59-0896, Operations Management Expectations, to verify formality of communication, procedure usage, alarm response, control board manipulations, group dynamics, and supervisory oversight. The inspectors attended the post-exercise critique of operator performance to assess if the licensee identified performance issues were comparable to those identified by the inspectors. In addition, the inspectors reviewed the critique results from previous training sessions to assess performance improvement.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the following sample associated with structures, systems, and components to assess the licensee's implementation of the Maintenance Rule (10 CFR 50.65) with respect to the characterization of failures and the appropriateness of the associated (a) (1) or (a) (2) classification. The inspectors reviewed operator logs, associated Condition Reports (CRs), Maintenance Work Orders (MWO), and the licensee's procedures for implementing the Maintenance Rule to determine if equipment

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failures were being identified, properly assessed, and corrective actions established to return the equipment to a satisfactory condition. Documents reviewed are listed in the Attachment.

- Unit 1 and 2 CRD Pumps

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the following five Plan of the Day (POD) documents listed below to verify that risk assessments were performed prior to components being removed from service. The inspectors reviewed the risk assessment and risk management controls implemented for these activities to verify they were completed in accordance with licensee procedure 90AC-OAM-002-0, Scheduling Maintenance, and 10 CFR 50.65 (a)(4). For emergent work, the inspectors assessed whether any increase in risk was promptly assessed and that appropriate risk management actions were implemented.

- January 2 - 8, 1A EDG OOS for corrective maintenance, U1 HPCI OOS for planned maintenance, U1/U2 MCR exhaust damper corrective maintenance, U2 reactor manual scram functional test
- January 16 - 22, 2A EDG OOS for temperature switch replacement, 2B Plant Service Water Pump OOS for preventative maintenance, 2A Station Service Battery charger OOS for corrective maintenance, 1A CRD Pump replacement
- January 30 - February 5, 1A RHR train OOS for surveillance, 2A Plant Service Water OOS for preventative maintenance, 1A Train of Main Control Room A/C system for maintenance
- February 16 - 19, Unit 1 B RHR shutdown cooling with A RHR out of service, switchyard maintenance activities, HPCI pump testing, and control rod drive exercises, 1A EDG out of service
- March 8 - 12, Unit 1 outage safety assessments with transition from Mode 5 to Mode 4

b. Findings

No findings of significance were identified.

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1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following six operability evaluations and compared the evaluations to the system requirements identified in the TS and the FSAR to ensure operability was adequately assessed and the system or component remained available to perform its intended function. Also, the inspectors assessed the adequacy of compensatory measures implemented as a result of the condition. Documents reviewed are listed in the Attachment.

- Unit 1 condensate storage tank level switches with heat trace unavailable and temperatures below 32F
- Unit 1A EDG low jacket cooling water pressure
- Reduced plant service water flows to 1A, 1B and 1C MCR A/C units
- 2A station service battery charger output with an AC voltage ripple
- 1B EDG 'A' start circuit inoperable
- 2A EDG air coolant heat exchanger pipe vibration

b. Findings

No findings of significance were identified.

1R18 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following plant temporary modifications (TM) to ensure that safety functions of important safety systems have not been affected. Also, the inspectors verified that the design bases, licensing bases and performance capability of risk significant structures, systems and components have not been degraded through modifications. The inspectors verified that any modifications performed during increased risk-significant configurations did not place the plant in an unsafe condition. Documents reviewed are listed in the Attachment.

- U1 RHRSW flume discharge to Unit 2 circulating water flume

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

For the following five post maintenance tests, the inspectors reviewed the test scope to verify the test demonstrated the work performed was completed correctly and the affected equipment was functional and operable in accordance with TS requirements. The inspectors also reviewed equipment status and alignment to verify the system or component was available to perform the required safety function. Documents reviewed are listed in the Attachment.

- 34SV-E41-002-1, "HPCI Pump Operability," replacement of the Unit 2 HPCI electro-mechanical EG-R hydraulic actuator, January 19
- 34SV-R43-001-2, "Diesel Generator 2A Monthly Test," replace 2A EDG lube oil temperature switch, January 19
- WO 1100014501, "1Z41-F018A repair," repair MCR exhaust damper 1Z41-F018A, January 20
- WO 1100475801, "1A residual heat removal service water pump," repair high indicated bearing temperature, March 10
- 34SV-T22-001-0, "Secondary Containment Test," repairs to U2 Reactor building air-lock door, February 10

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities

.1 Unit-1 Refueling Outage

a. Inspection Scope

The inspectors reviewed the licensee's shutdown risk monitoring program and the outage schedule to verify the licensee's use of risk management techniques, incorporation of operating experience, and past lessons learned for the refueling outage beginning February 8, 2010. Additionally, the inspectors reviewed the shutdown safety assessment to verify the licensee had contingency plans and these plans included sufficient equipment to maintain a defense-in-depth approach to safety. The inspectors routinely verified the licensee was correctly maintaining required equipment in service in accordance with the overall outage safety assessment. During the refueling outage, the inspectors monitored licensee control over the outage activities listed below. Documents reviewed are listed in the Attachment.

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- Reactor Coolant System cooldown following shutdown
- 3 clearances to verify implementation of the clearance process and the associated equipment was properly configured to support the function of the clearance
- Fuel movement during core reload
- Technical Specifications (TS) and licensee procedures to verify mode change requirements were met
- Walkdown of the torus proper and other areas to verify material conditions supported plant operations
- Shutdown Margin determination
- Drywell containment closeout inspection activities and performed an independent walkdown prior to closeout
- Licensee identification and resolution of problems related to outage activities
- Outage work hour controls
- Reactor startup and power ascension

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed eight licensee surveillance test procedures and either witnessed the test or reviewed test records for the following surveillances to determine if the scope of the test adequately demonstrated the affected equipment was operable. The inspectors reviewed these activities to assess for preconditioning of equipment, procedure adherence, and equipment alignment following completion of the surveillance. The inspectors reviewed licensee procedure AG-MGR-21-0386, Evolution and Pre-and Post-Job Brief Guidance, and attended selected briefings to determine if procedure requirements were met. Documents reviewed are listed in the Attachment.

Surveillance Tests

- 34SV-R43-011-2, Diesel Generator 2A 24 Month Operability Test, Rev. 2.20
- 42SV-T46-003-1, Testing of SGT Filter Trains, Ver. 9.23
- 57IT-MIC-004-2, Testing of the LOCA/LOSP Timer Cards, Ver. 1.9

Reactor Coolant System Leak Detection Test

- 34SV-SUV-019-2, Surveillance Checks, Ver. 34.23

Containment Isolation Valves

- 42SV-TET-001-0, Local Leak Rate Test (LLRT) Testing Methodology for 1B21-F010A
- 42SV-TET-001-0, Local Leak Rate Test (LLRT) Testing Methodology for 1E41-F049

In-Service Test

- 34SV-E41-002-2, High Pressure Coolant Injection Pump Operability, Rev. 30.21
- 34SV-E51-002-1, RCIC Pump Operability, Ver. 20.14

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluationa. Inspection Scope

The inspectors observed the following emergency plan evolution. The inspectors observed licensee activities in the simulator and Technical Support Center to verify implementation of licensee procedure 10AC-MGR-006-0, Hatch Emergency Plan. The inspectors reviewed the classification of the simulated events and the development of protective action recommendations to verify these activities were conducted in accordance with licensee procedure 73EP-EIP-001-0, Emergency Classification and Initial Actions. The inspectors also reviewed licensee procedure 73EP-EIP-073-0, Onsite Emergency Notification, to verify the proper offsite notifications were made. The inspectors attended the post-exercise critique to assess the licensee's effectiveness in identifying areas of improvement. Documents reviewed are listed in the Attachment.

- Emergency Preparedness (EP) drill on January 13

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstones: Occupational Radiation Safety and Public Radiation Safety

2RS1 Radiological Hazard Assessment and Exposure Controla. Inspection Scope

Radiological Hazard Assessment. The inspectors reviewed a number of radiological surveys, including those performed for airborne areas, of locations throughout the facility including the Unit 1 (U1) drywell, U1 and Unit 2 (U2) reactor buildings, and the independent spent fuel storage installation (ISFSI). The inspectors also walked down those same areas and radioactive material storage locations with a survey instrument, evaluating material condition, postings, and radiological controls. The inspectors observed jobs in radiologically risk-significant areas including high radiation areas and

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areas with, or with the potential for, airborne activity. The inspectors determined that the surveys were adequate in thoroughness and frequency for the identified hazards.

Instructions to Workers. During plant walk downs, the inspectors observed labeling and radiological controls on containers of radioactive material. The inspectors also reviewed radiation work permits (RWP) used for accessing high radiation areas and airborne areas, verifying that appropriate work control instructions and electronic dosimeter (ED) setpoints had been provided and to assess the communication of radiological control requirements to workers. For selected tasks, the inspectors attended pre-job briefings that reviewed RWP details with the workers. The inspectors reviewed selected ED dose and dose rate alarms, to verify workers properly responded to the alarms and that the licensee's review of the events was appropriate. Through observation of pre-job RWP briefings and health physics technician coverage of workers, the inspectors determined the licensee had established adequate means to notify workers of changing radiological conditions.

Contamination and Radioactive Material Control: The inspectors observed the release of potentially contaminated items from the radiologically controlled area (RCA) and from contaminated areas such as the drywell. The inspectors also reviewed the procedural requirements for, and equipment used to perform, the radiation surveys for release. During plant walk downs, the inspectors evaluated radioactive material storage areas and containers, including satellite RCAs, assessing material condition, posting/labeling, and control of materials/areas. In addition, the inspectors reviewed the sealed source inventory and verified labeling, storage conditions, and leak testing of selected sources.

The inspectors walked-down the ISFSI facility, observing the physical condition of the casks, radiological postings, and barriers. The inspectors performed independent gamma radiation surveys of the area and reviewed gamma radiation surveys of the ISFSI facility performed by licensee personnel. Inspectors compared the independent survey results to previous surveys and against procedural and Technical Specification (TS) limits. The inspectors evaluated implementation of radiological controls, including labeling and posting, and discussed controls with health physics staff. Environmental monitoring results for direct radiation from the ISFSI were reviewed and inspectors observed the placement and physical condition of thermoluminescent dosimeters around the facility.

Radiological Hazards Control and Work Coverage. The inspectors evaluated licensee performance in controlling worker access to radiologically significant areas and monitoring jobs in-progress associated with the U1 refueling outage. Established radiological controls were evaluated for selected tasks including main steam isolation valve work, safety-relief valve work, scaffolding, and control rod drive hydraulic control unit maintenance. The inspectors evaluated the effectiveness of radiation exposure controls, including air sampling, barrier integrity, engineering controls, and postings through a review of both internal and external exposure results.

During walk downs with a radiation survey meter, the inspectors independently verified ambient radiological conditions were consistent with licensee performed surveys, RWPs, and pre-job briefings; observed the adequacy of radiological controls; and observed

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controls for radioactive materials stored in the spent fuel pool. The inspectors also reviewed the procedural guidance for multi- and extremity badging. Select multi-badge packets were reviewed to verify consistency with procedural and regulatory guidance. For high radiation area tasks involving significant dose rate gradients, the inspectors evaluated the use and placement of whole body and extremity dosimetry to monitor worker exposure. The inspectors also reviewed and discussed selected whole-body count analyses conducted during 2009 and the current U1 refueling outage. The inspectors reviewed RWPs for use in airborne areas, ensuring the prescribed controls were appropriate for the conditions as identified in radiological surveys and air samples. ED alarm set points and worker stay times were evaluated against area radiation survey results for drywell and refueling floor activities.

Risk-Significant High Radiation Area and Very High Radiation Area Controls. The inspectors discussed the controls and procedures for locked-high radiation areas (LHRAs) and very high radiation areas (VHRAs) with health physics supervisors and the radiation protection manager. The inspectors observed the issuance of LHRA keys and evaluated the storage, inventory, and handling of LHRA/VHRA keys. During plant walk downs, the inspectors verified the posting/locking of LHRA/VHRA areas.

Radiation Worker Performance and Radiation Protection Technician Proficiency. The inspectors observed radiation worker performance through direct observation and in the remote monitoring center. Jobs observed included main steam isolation valve work, safety-relief valve work, scaffolding, and control rod drive hydraulic control unit maintenance. These jobs were performed in high radiation, airborne, and/or contaminated areas. The inspectors also observed health physics technicians providing field coverage of jobs and providing remote coverage from the central monitoring center.

Problem Identification & Resolution. Licensee Corrective Action Program (CAP) documents associated with access control to radiologically significant areas were reviewed and assessed. This included review of selected Condition Reports (CRs) related to radworker and health physics technician performance. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with procedure NMP-GM-002, Corrective Action Program, Ver. 9.0. The inspectors also evaluated the scope of the licensee's internal audit program and reviewed recent assessment results. Licensee CAP documents reviewed are listed in Section 2RS1 of the report Attachment.

Radiation protection activities were evaluated against the requirements of Updated Final Safety Analysis Report (UFSAR) Section 12; TS Sections 5.4 and 5.7; 10 Code of Federal Regulations (CFR) Parts 19 and 20; and approved licensee procedures. Radiological control activities for ISFSI areas were evaluated against 10 CFR Part 20, 10 CFR Part 72, and TS details. Records reviewed are listed in Section 2RS1 of the Attachment.

The inspectors completed 1 sample, as described in Inspection Procedure (IP) 71124.01. The inspectors also completed the radiation protection line-item sample activities specified in IP 60855.1.

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b. Findings

No findings of significance were identified.

2RS5 Radiation Monitoring Instrumentation

a. Inspection Scope

Radiation Monitoring Instrumentation. During tours of the Unit 1 (U1) and Unit 2 (U2) Reactor Buildings, Spent Fuel Pool Areas, U2 Turbine Building and Radwaste Building, the inspectors observed installed radiation detection equipment including the following instrument types: Area Radiation Monitors (ARMs), Continuous Air Monitors (CAMs), Personnel Contamination Monitors (PCMs), Portal Monitors (PMs), Small Article Monitors (SAMs). The inspectors observed the physical location of the components, noted the material condition, and compared sensitivity ranges with UFSAR requirements. Select ARMs with local readouts were compared with actual radiological conditions for consistency.

In addition to equipment walk-downs, the inspectors observed functional checks and alarm set point testing of various fixed and portable detection instruments, including portable ion chambers, AMP-100s, teletectors, PCMs, PMs and small article monitors (SAMs). Select calibration records for PCMs, PMs, SAMs, portable survey instruments, air samplers, ARMs and electronic personnel dosimeters were reviewed.

The inspectors reviewed calibration records, source check data and the material condition of instruments in the licensee's radiation protection instrument issue area, including portable ion chambers, underwater survey meters, neutron survey meters and portable GM detectors. The inspectors reviewed records of portable survey instruments that failed to meet the source acceptance criteria to verify the appropriateness of corrective actions. Daily performance checks and calibration data for HP laboratory equipment used for alpha and beta counting were reviewed.

The most recent 10 CFR Part 61 analyses and Whole Body Counter Calibration were reviewed to determine if calibration and check sources were representative of the plant isotopic mix. The inspectors reviewed records for the licensee's portable survey and ARM instrument calibrator and verified measuring devices were calibrated with NIST traceable sources. The last two calibration records for the U1 low range (1D11-K622) and the U1 High-range (1D11-K621) post accident monitors were reviewed.

The inspectors reviewed performance records and calibration results for selected process and effluent radiation monitors. The inspectors verified that the channel calibration and functional tests were performed consistent with radiological effluent technical specifications and National Institute of Standards and Technology (NIST) traceable standards. During the inspection, the inspectors observed the calibration of POST-LOCA monitors 1D11-K624, 1D11-K625, and 1D11-K626.

The inspectors reviewed selected laboratory analytical instruments used for radiological analysis in the chemistry lab areas. The inspectors observed the daily performance checks of those counting instruments used in the chemistry lab areas and discussed those results with cognizant licensee representatives.

Operability and reliability of selected radiation detection instruments were reviewed against 10 CFR Part 20; TS Section 5.4, Procedures; UFSAR Chapters 11 and 12; and applicable licensee procedures. Documents reviewed during the inspection are listed in Section 2RS5 of the Attachment.

Electronic Dosimetry. The inspectors reviewed the licensee's calibration methodology for Electronic Personal Dosimeters (EPDs) that included the radioactive sources, traceable standards, and tolerance levels used during EPD calibration.

Problem Identification and Resolution. Selected Condition Reports (CRs) associated with effluent release activities and radiation protection instrumentation were reviewed and assessed. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve selected issues in accordance with procedure NMP-GM-002, Corrective Action Program, Rev 9.0. The inspectors also evaluated the scope of the licensee's internal audit program and reviewed recent assessment results. Reviewed documents are listed in Section 2RS5 of the Attachment.

The inspectors completed 1 of the 1 required samples detailed in IP 71124.05. All samples have now been completed for this IP.

b. Findings

The inspectors reviewed calibration records for EPDs at the licensee's facility. The licensee's EPDs were found to be capable of measuring Deep Dose Equivalent (DDE) and Shallow Dose Equivalent (SDE). The SDE feature was disabled and not used during routine radiological monitoring. EPDs were primarily used to estimate worker exposure for DDE, but were also used as a method of controlling worker exposure for entries in High Radiation Areas in accordance with TS 5.7.1b.

The inspectors identified three different methods used to calibrate EPDs. New EPDs purchased directly from the manufacturer were calibrated to a tolerance level of +/-10% of a known Cs-137 source traceable to a United Kingdom National Standard. Subsequent calibrations were performed by the licensee's Environmental Laboratory to respond to a tolerance level of +/- 15% of a known Cs-137 source traceable to NIST. EPDs that required repair were sent to a calibration vendor located in West Columbia, South Carolina for repair and subsequently calibrated at that facility to a tolerance level of +/-10% using an Am-241 source traceable to NIST.

Licensee procedure 60AC-HPX-017-0, Radiation Protection Instrumentation Program, required radiation survey instruments used to assign or control worker exposure be initially and subsequently calibrated to read within +/-10% of the actual calibration source dose rates using radiation sources traceable to NIST. Additionally, 10 CFR 20.1501 (b) requires licensees to ensure that instruments and equipment used for

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quantitative radiation measurements (e.g., dose rate and effluent monitors) are calibrated periodically for the radiation measured. Although the EPD is not generally used as a substitute for typical dose rate survey meters, it is used to initiate worker actions in lieu of a survey meter in accordance with TS 5.7.1.b which requires incorporation of the EPD into the routine instrument calibration program. From a review of licensee records and discussions with cognizant licensee representatives, the inspectors determined that the licensee had not established a site specific standard for calibrating EPDs or compared the response of the EPDs using the different sources. The use of an Am-241 source, a low level gamma emitter was not representative of the energy ranges in the licensee's isotopic mix. In addition, the inspectors determined that the calibrations performed by the licensee's environmental laboratory were not consistent with the licensee's calibration methods for other instruments used to control worker exposure.

This item is unresolved pending NRC review of the licensee's evaluation of the EPDs response using NIST traceable sources representative of the energy spectrum of radiation fields at the licensee's facility and a review of the licensee's specific calibration method for EPDs. URI 05000321, 366/2010002-01, Review Licensee's EPD Calibration Methodology.

2RS6 Radioactive Gaseous and Liquid Effluent Treatment

Effluent Monitoring and Radwaste Equipment. During inspector walkdowns, accessible sections of the U1 and U2 liquid and gaseous radioactive waste (radwaste) and effluent systems were assessed for material condition and conformance with the UFSAR. The inspection included the Waste Sample Tanks, Floor Drain Sample Tanks, Chemical Waste Sample Tanks, Liquid Radwaste Discharge Monitors (1/2D11-N007), U1 Off-gas System Post-Treatment Monitor (1D11-K615A and B), U1 Recombiner Building Vent Monitor (1D11-R763A and B), Reactor Building Vent Monitors (D11-K619A and B / 2D11-K636A and B), Main Stack Monitor (D11-K600A and B), and associated airborne effluent sample lines. The inspectors interviewed chemistry and engineering staff regarding radwaste effluent monitor operation and equipment configuration requirements for representative sampling. The inspectors observed collection of particulate, iodine, and tritium samples from the main stack and recombinder release pathway, and assessed those activities for procedural adherence.

The inspectors reviewed out-of-service monitors from December 2008 to December 2009, and verified that required compensatory sampling was performed. The most recent surveillances on the Off-Gas High-Efficiency Particulate Air Filter Systems were reviewed. Performance and operations of the systems were reviewed and discussed with cognizant licensee personnel.

Current licensee programs for monitoring, tracking, and documenting the results of both routine and abnormal liquid releases to onsite and offsite surface environs were reviewed and discussed in detail. Current licensee capabilities and routine surveillances to minimize and rapidly identify abnormal leaks from liquid radioactive waste tanks, processing lines, and spent fuel pools were reviewed and discussed in detail.

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Installed configuration, material condition, operability, and reliability of selected effluent sampling and monitoring equipment were reviewed against details documented in the following: 10 CFR Part 20; RG 1.21, Measuring, Evaluating and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials In Liquid and Gaseous Effluents from Light-Water Cooled Nuclear Power Plants; TS, Section 5.0; the Offsite Dose Calculation Manual (ODCM), Rev. 17; and UFSAR. Procedures and records reviewed during the inspection are listed in Section 2RS6 of the Attachment.

Effluent Release Processing and Quality Control (QC) Activities. The inspector evaluated the methods used to determine the isotopes that are included in the source term to ensure all applicable radionuclides are included, within detectability standards. The inspector reviewed the Part 61 analyses to ensure hard-to-detect radionuclides are included in the source term.

The inspector reviewed the results of the inter-laboratory comparison program to verify the quality of radioactive effluent sample analyses. The inspector reviewed assessments of any identified bias in the sample analysis results and the overall effect on calculated projected doses to members of the public.

The inspector verified that the licensee was maintaining adequate effluent sampling records [sampling locations, sample analyses results, flow rates, and source term for radioactive liquid and gaseous effluent (i.e., information needed to satisfy the requirements of 10 CFR 20.1501)].

Selected portions of procedures for effluent sampling, processing, and release were evaluated for consistency with licensee actions. Selected gaseous release permits were reviewed against ODCM specifications for pre-release sampling and effluent monitor setpoints. The inspectors discussed performance of pre-release sampling and analysis, release permit generation, and radiation monitor setpoint adjustment with chemistry technicians and radwaste control room operators. The inspectors reviewed the 2007 and 2008 Annual Radiological Effluent Release Reports to evaluate reported doses to the public and ODCM changes. Public dose calculations were reviewed and discussed with cognizant licensee personnel.

Observed task evolutions, count room activities, and offsite dose results were evaluated against details and guidance documented in the following: 10 CFR Part 20 and Appendix I to 10 CFR Part 50; ODCM; RG 1.21; RG 1.109, Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50 Appendix I; RG 1.33, Quality Assurance Program Requirements; and TS Section 5.0. Procedures and records reviewed during the inspection are listed in Section 2RS6 of the Attachment.

Problem Identification and Resolution. Selected CRs and self-assessments associated with effluent release activities were reviewed. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve selected issues in accordance with NMP-GM-002-GL02. Reviewed documents are listed in Section 2RS6 of the Attachment.

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Groundwater Monitoring. The inspectors will evaluate the licensee's groundwater monitoring program during performance of Temporary Instruction (TI) 2515/173, "Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative". This TI is scheduled to be completed prior to August 30, 2010.

The inspectors completed 1 of the required 1 sample for IP 71124.06. All samples have now been completed for this IP.

b. Findings

No findings of significance were identified.

2RS7 Radiological Environmental Monitoring Program (REMP)

a. Inspection Scope

REMP Implementation. The inspectors observed routine sample collection and surveillance activities as required by the licensee's environmental monitoring program. The inspectors noted the material condition and operability of airborne particulate filter and iodine cartridge sample stations and observed collection of weekly air samples, vegetation, and milk at selected monitoring locations. Environmental thermoluminescent dosimeters at selected sites were checked for material condition. In addition, an automatic water sampler on the Altamaha River was inspected for material condition upstream of the plant (control location). The inspectors determined the current location of selected sample points using NRC global positioning system instrumentation. Land use census results, changes to the ODCM, and sample collection/processing activities were discussed with environmental technicians and licensee staff.

The inspectors reviewed the last two calibration records for selected environmental air sample flowmeters and the 2009 maintenance log for automated water samplers. The inspectors also reviewed the 2008 Radiological Environmental Operating Report, the 2008 Annual Radioactive Effluent Report, an audit of the Georgia Power Environmental Laboratory, results of the 2008 interlaboratory cross-check program, and procedural guidance for environmental sample collection and processing. Selected environmental measurements were reviewed for consistency with licensee effluent data, evaluated for radionuclide concentration trends, and compared with detection level sensitivity requirements.

Procedural guidance, program implementation, and environmental monitoring results were reviewed against: 10 CFR Part 20; Appendix I to 10 CFR Part 50; TS Section 5.0; ODCM; RG 4.15, "Quality Assurance for Radiological Monitoring Programs (Normal Operation) - Effluent Streams and the Environment," and the Branch Technical Position, "An Acceptable Radiological Environmental Monitoring Program" - 1979. Documents reviewed are listed in Section 2RS7 of the Attachment.

Meteorological Monitoring Program. The inspectors observed a weekly surveillance on the primary meteorological tower and local data collection equipment. The inspectors observed the physical condition of the tower and its instrumentation and discussed

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equipment operability and maintenance history with licensee staff. The inspectors evaluated transmission of locally generated meteorological data to other licensee groups such as emergency operations personnel and main control room operators. For the meteorological measurements of wind speed, wind direction, and temperature, the

inspectors reviewed the last two calibration records for applicable tower instrumentation. The inspectors also evaluated measurement data recovery for 2008.

Licensee procedures and activities related to meteorological monitoring were evaluated against: ODCM; UFSAR Chapter 2; and proposed revision 1 to RG 1.23, Meteorological Programs in Support of Nuclear Power Plants (1980). Documents reviewed are listed in Section 2RS7 of the Attachment.

Contaminated Leak Monitoring Program. The inspectors will evaluate the licensee's leak monitoring program during performance of Temporary Instruction (TI) 2515/173, "Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative". This TI is scheduled to be completed prior to August 30, 2010.

Problem Identification and Resolution. The inspectors reviewed selected CRs in the areas of radiological environmental monitoring and meteorological tower maintenance. The inspectors evaluated the licensee's ability to identify and resolve the issues in accordance with procedure NMP-GM-002, "Corrective Action Program," Ver. 9.0. Documents reviewed are listed in Section 2RS7 in the Attachment.

The inspectors completed 1 of the required 1 sample for IP 71124.07. All samples have now been completed for this IP.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope

The inspectors sampled licensee submittals for the Performance Indicators (PI) documented below. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 6, were used to verify the basis in reporting for each data element.

Occupational Radiation Safety Cornerstone. The inspectors reviewed PI data collected from January 1, 2009, through December 31, 2009, for the Occupational Exposure Control Effectiveness PI. For the reviewed period, the inspectors assessed CAP records to determine whether high radiation area, VHRA, or unplanned exposures, resulting in TS or 10 CFR 20 non-conformances, had occurred during the review period. In addition,

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the inspectors reviewed selected personnel contamination event data, internal dose assessment results, and ED alarms for cumulative doses and/or dose rates exceeding established set-points. The reviewed data were assessed against guidance contained in NEI 99-02. The reviewed documents relative to these PI reviews are listed in Sections 2RS01 and 4OA1 of the Attachment.

Public Radiation Safety Cornerstone. The inspectors reviewed the Radiological Effluent Technical Specification/Offsite Dose Calculation Manual Radiological Effluent Occurrences PI results from February through December 2009. The inspectors reviewed CAP documents, effluent dose data, and licensee procedural guidance for classifying and reporting PI events. The inspectors also interviewed licensee personnel responsible for collecting and reporting the PI data. Reviewed documents are listed in Section 4OA1 of the Attachment.

The inspectors completed one of the required samples for IP 71151. One sample for the Public Radiation Safety Cornerstone PI.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

Daily Screening of Corrective Action Items

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 licensee's corrective action program. This review was accomplished by either attending daily screening meetings that briefly discussed major CRs, or accessing the licensee's computerized corrective action database and reviewing each CR that was initiated.

b. Findings and Observations

No findings of significance were identified

4OA3 Event Follow-up

(Closed) LER 05000366/2009-003 Main Generator Runback Due to High Stator Cooling Water Temperature

a. Inspection Scope

On June 20, 2009, a Unit 2 automatic reactor scram was initiated on high reactor pressure when a main generator runback due to high stator water cooling outlet temperature occurred. The licensee identified that the cause of the main generator high

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stator cooling outlet temperature was due to improper set-up of the stator cooling water temperature control instrument loop. The inspectors reviewed this LER, the licensee's root cause report and associated corrective actions.

b. Findings

Introduction:

A Green self-revealing finding was identified for the licensee's failure to create, implement, and make available to maintenance personnel, quality processes or documents for configuration control. Specifically, the licensee failed to maintain the correct configuration of the stator water cooling (SWC) temperature control instrument loop air-operated valve, 2N43-F100, as required by licensee procedure NMP-ES-014, Air Operated Valve Program. The failure to implement adequate configuration control on the SWC temperature control instrument loop directly resulted in a Unit 2 reactor scram on June 20, 2009. (LER 05000366/2009-003)

Description:

On June 20, 2009, Unit 2 was in mode 1 at approximately 100% reactor power. Protective circuitry initiated a main generator runback due to high SWC outlet temperature. As a result, the electro-hydraulic control (EHC) processor began reducing turbine load by closing the turbine control valves and subsequently opening the turbine bypass valves. Operations personnel immediately began reducing reactor power in response to the main generator runback by reducing recirculation flow. The reactor power was reduced to approximately 66% reactor thermal power and could not be reduced any further without the insertion of control rods. As a result of turbine load reducing faster than the manual actions taken to reduce reactor power, reactor pressure began to increase. Pressure reached the setpoint to actuate the Reactor Protection System, and an automatic reactor scram was initiated due to high reactor pressure.

The cause of high SWC outlet temperature on the main generator was a result of improper set-up of the SWC temperature control instrument loop during the previous outage, (2R20). Air Operated Valve (AOV) 2N43-F100, which controls temperature by directing flow to the SWC heat exchangers, was on full bypass when it should have been providing flow through the heat exchanger given the system operating temperature at the time. Since Unit 1 SWC positioner is configured the same, Unit 1 was inspected to ensure that the positioner and controller were set up correctly.

During the 2R20 refueling outage on Unit 2, maintenance personnel performed preventive maintenance (PM) on the SWC temperature control instrument loop. This PM consisted of a calibration of 2N43-R310 (temperature controller), performed every 2 years and refurbishment of 2N43-F100 (actuator), performed every 12 years. AOV 2N43-F100 was a reverse design, spring return, three way valve. The proper configuration should have been "Direct" action for the temperature controller (2N43-R310) and "Reverse" action for the actuator (2N43-F100). Under a "Direct/Reverse" configuration set-up, the temperature controller (2N43-R310) would have sent maximum "open signal" to the actuator (2N43-F100). During the 2R20 PM's, the actuator (2N43-

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F100) was incorrectly set-up as “Direct” action. The “Direct/Direct” configuration would not allow the valve to function per design, essentially increasing the bypass flow around the heat exchanger.

Southern Nuclear Operating Company, NMP-ES-014, Air Operated Valve Program, Version 5.0, provides program requirements for all AOV’s onsite. Per this program all AOV’s are to be categorized as either 1, 2, or 3 based upon its contribution to safe plant operation or accident mitigation. Depending on the category this program will define the extent of design review and testing activities to be performed. Contrary to the requirements of NMP-ES-014 the licensee failed to create, implement, and make available to maintenance, quality processes or documents that would control and identify the correct configuration of the SWC temperature control instrument loop as required for CAT 3 AOV’s such as 2N43-F100. The licensee has addressed this issue in their Corrective Action Program (CAP) and developed corrective actions in CR 2009106326. As part of the licensee’s immediate corrective actions the Unit 2 SWC instrument loop was reconfigured to the correct alignment, and changes were made to procedure NMP-ES-014.

Analysis:

Failure to implement adequate configuration control of the SWC temperature control instrument loop as required per licensee procedure NMP-ES-014, was a performance deficiency. This performance deficiency was more than minor because it was associated with the Configuration Control attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability. Specifically inadequate configuration control resulted in a Unit 2 reactor scram on June 20, 2009. The significance of this finding was screened using the Phase 1 of the Significance Determination Process (SDP) in accordance with NRC Inspection Manual Chapter 0609 Attachment 4. Because the finding contributed to a reactor scram, but did not affect mitigation equipment availability, the finding screened as Green.

The inspectors determined this performance deficiency was indicative of current licensee performance, in that this event occurred during the last refueling outage (2R20). Also, as indicated in the Root Cause Investigation for CR 2009106326, work packages that controlled the set-up of the SWC temperature control instrument loop have been inconsistent or incorrect since 2000. Therefore, this finding had a cross-cutting aspect in the Resources component of the Human Performance area, because the licensee failed to provide complete, accurate and up-to-date design documentation, procedures, work packages, and correct labeling of components. Specifically, the licensee failed to implement a means of configuration control of the SWC temperature control instrument loop (H.2(c)).

Enforcement:

Enforcement action did not apply because the performance deficiency did not involve a violation of regulatory requirements due to it being associated with the non-safety related Main Generator Stator Water Cooling system. Because this finding did not involve a

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violation of regulatory requirements and had very low safety significance, it was identified as FIN 05000366/2010002-02, "Failure to implement adequate configuration control on Unit 2 main generator stator water cooling temperature control instrument loop, 2N43-F100."

4OA5 Other Activities

.1 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted the following observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings of significance were identified.

.2 (Closed) Temporary Instruction (TI) 2515/180 Inspection of Procedures and Processes for Managing Fatigue

a. Inspection Scope

The objective of this TI was to determine if licensees' implementation procedures and processes required by 10 CFR 26, Subpart I, "Managing Fatigue" are in place to reasonably ensure the requirements specified in Subpart I are being addressed. The TI applies to all operating nuclear power reactor licensees but is intended to be performed for one site per utility. The inspector interfaced with the appropriate staff to obtain and review station policies, procedures, and processes necessary to complete all portions of this TI.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On April 16, 2010, the resident inspectors presented the inspection results to you and other members of your staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

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SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

S. Barger, Plant Manager
G. Brinson, Operations Manager
D. Cordes, Southern Nuclear NDE Level III
J. Dixon, Health Physics Manager
G. Fechter, Site Welding/Repair & Replacement Coordinator
B. Hulett, Engineering Design Manager
G. Johnson, Engineering Director
J. Lewis, Site Support Manager
D. Madison, Hatch Vice President
S. Soper, Engineering Support Manager
J. Merritt, Nuclear Security Manager
S. Tipps, Licensing
R. Varnadore, Maintenance Manager
L. Wells, Southern Nuclear Corporate ISI Owner
T. Wells, Project Lead
K. White, Southern Nuclear NDE Level III
D. Willyard, Programs Supervisor

NRC

Eddie Morris, Senior Resident Inspector
Phil Niebaum, Resident Inspector

LIST OF ITEMS OPENED AND CLOSED

Opened

05000321,366/2010002-01	URI	Review Licensee's EPD Calibration Methodology (Section 2RS5)
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Closed

05000321,366/2515/180	TI	Inspection of Procedures and Processes for Managing Fatigue (Section 4OA5.2)
05000366/2009-003	LER	Main Generator Runback Due to High Stator Cooling Water Temperature (Section 4OA3)

Opened & Closed

05000366/2010002-02	FIN	Failure to implement adequate configuration control on Unit 2 main generator stator water cooling temperature control instrument loop, 2N43-F100 (Section 4OA3)
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Discussed

None

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather

Condition Reports:

2010100090, 2010100081, 2010100101

Procedures:

DI-OPS-36-0989, Cold Weather Checks, Ver. 19.0

Other:

Individual Plant Examination of External Events

Section 1R04: Equipment Alignment

Procedures:

34SO-E51-001-01, Reactor Core Isolation Cooling, Ver. 24.17

42SV-TET-001-01, Primary Containment Type B and Type C Leak Rate Testing, Ver. 25.0

34SO-Z41-001-1, Control Room Ventilation System, Ver. 18.11

34SO-R43-001-2, Diesel Generator Standby AC System, Ver. 24.7

Drawings:

H-16334, Ver. 44.0

S-15066, Rev. D

H-16042, Ver. 34.0

Condition Reports:

2009100501

Other:

Unit 1 IST Component Basis Information for 1E51-F001 and 1E51-F040

Section 1R05: Fire Protection

Procedures:

40AC-ENG-008-0, Fire Protection Program, Ver. 9.9

42FP-FPX-018-0, Use, Control and Storage of Flammable/Combustible Materials, Ver. 1.2

42SV-FPX-007-0, Cable Tray Surveillance – Kaowool Material, Rev. 2.2

Condition Reports:

2010103686, 2010103653

Drawings:

H-19630, Rev. 5

H-19631, Rev. 6

H-19636 Sht. 1, Rev. 9

H-19636 Sht. 2, Rev. 2

Section 1R08: Inservice Inspection Activities

Procedures:

52SV-SUV-001-0, Hydraulic Snubber Visual Inspection and Functional Test, Rev. 11.1
 52SV-SUV-002-0, Mechanical Snubbers Inspection and Functional Test, Rev. 5.3
 GEH-UT-247, GE/Hitachi Phased Array Ultrasonic Examination of Dissimilar Metal Welds, Ver. No. 1
 NMP-ES-024-502, PDI Generic Procedure for the Ultrasonic Examination of Ferritic Pipe Welds (Appendix VIII), Ver. 2.0
 NMP-ES-024-509, PDI Generic Procedure for the Ultrasonic Examination of Weld Overlays (Appendix VIII), Ver. 1.0
 NMP-ES-024-203, Visual Examination (VT-3), Ver. 3.0

Condition Reports:

CR 2008102741, Condition Report: Snubber 1N11-MSH-59B SN Hatch 317 Failed Initial Drag Test, dated 2/29/2008
 CR 2008103670, Condition Report: NRC Requested CMTR for Weld Cap Material for 1C11-1CRD-3-R-18A, dated 3/14/2008
 CR 2009101425, Condition Report: Surface Contour of Various ISI Welds Inadequate for UT Exam, dated 2/16/2009
 CR 2009101549, Condition Report: Inadequate Surface Condition for ISI Weld Exam, dated 2/18/2009
 CR 2009101587, Condition Report: Inadequate Surface Contour of ISI Weld, dated 2/19/2009
 CR 2009101640, Condition Report: Unacceptable Surface Contour of various ISI Welds, dated 2/20/2009
 CR 2010102080, Condition Report: RT Exams Reveal Four Unacceptable Welds, dated 2/17/2010
 CR 2010102086, Condition Report: RT Film Requirements Not Met for Resonator Exams, dated 2/16/2010
 CR 2008101920, Condition Report: RHR HX Weld Indication Exceeded Acceptance Standards, dated 2/16/2008
 CR 2008102381, Condition Report: Heat Input Examinations Not Performed, dated 2/23/2008
 CR 2008102774, Snubber 1B21MVVH37 Exceeded Drag Test Value, dated 2/29/2008
 CR 2008104150, Supply Paperwork Does Not Provide Adequate Traceability, dated 4/1/2008
 CR 2008104154, Recurring Problem with Component Traceability for Repair/Replacement Items, dated 4/1/2008
 CR 2008104316, Loss of Material Traceability for MSIV Stem/Disc Assembly, dated 4/7/2008
 CR 2008104317, Material Traceability Issue for MSIV 1B21-F028C, dated 4/7/2008
 CR 2008104394, Material Traceability Issue for MSIV 1B21-F022B, dated 4/9/2008
 CR 2008104397, Material Traceability Issue for MSIV 1B21-F028B, dated 4/9/2008
 CR 2008105316, Inappropriate Classification of Piping Leak, dated 5/6/2008
 CR 2008105796, Inadequate Material Certification Documentation, dated 5/19/2008
 CR 2008106942, Serial # and Heat # Not Recorded on Supply Issue Documentation, dated 6/25/2008
 CR 2009103695, Incomplete Material Certification Documentation, dated 4/6/2009
 CR 2009106241, No ASME Code Data Report (Form N-2) for RHRSW Top Pump Column, dated 6/19/2009

CR 2009111947, Inadequate Verification of Material Traceability, dated 12/18/2009
 CR 2010100356, Failure of Square Root Converter 1B21-K600P, dated 1/13/2010

Other:

386HA480, GE/Hitachi Certification of Nondestructive Test Personnel, Rev. 22
 A05100050, Jackson & Associates, Inc. Certificate of Calibration for Krautkramer USN 60 Flaw Detector, Serial # 010C8F, dated January 05, 2010
 LMT, Inc. Certification of Visual Acuity and Color Vision (Thomas), dated 07/14/09
 LMT, Inc. Certification of Visual Acuity and Color Vision (Van Ruler), dated 7/14/09
 LMT, Inc. Personnel Certification Statement (Thomas, PDI-UT-1), dated 09/21/2009
 LMT, Inc. Personnel Certification Statement (Van Ruler, PDI-UT-1), dated 09/21/2009
 MEGASONICS, Inc. Transducer Performance Documentation for UT Transducer, Serial #V0229, dated 2/29/08
 MEGASONICS, Inc. Transducer Performance Documentation for UT Transducer, Serial #V0230, dated 2/29/08
 PQR 081, Procedure Qualification Record, Rev. 1
 PQR 116A, Procedure Qualification Record, Rev. 0
 SII006-09-08-24822-1, Laboratory Testing Inc. Certified Test Report for Ultragel II-09225 Couplant, dated 8/25/2009
 T11CA-1, Weld Procedure Specification, Rev. 3
 TS11OA-13, Weld Procedure Specification, Rev. 3
 WPS 1MC-GTAW-1, Weld Procedure Specification, Rev. 6
 WPS 1MN-GTAW-spc, Weld Procedure Specification, Rev. 2
 WPS 1MN-SMAW-1, Weld Procedure Specification, Rev. 4
 NL-10-0246, SNC Letter: ISI Program Alternative HNP-ISI-ALT-09, dated February 16, 2010
 508, Procedure Qualification Record, dated 1-26-84
 511, Procedure Qualification Record, dated 2-7-84
 516, Procedure Qualification Record, dated 3/29/84
 547, Procedure Qualification Record, dated 5-7-84
 562, Procedure Qualification Record, dated 8-22-84
 563, Procedure Qualification Record, dated 9-6-84
 Weldstar Certificate of Compliance for PO5408, dated January 4, 2010
 GE/Hitachi NDE Certification Summary (Healey), dated 11/25/09
 GE/Hitachi Visual Acuity Record (Healey), dated 01/08/10
 S10H1U015, UT Calibration/Examination Report for 1B21-1MS-24B-14 Weld, dated 2-18-2010
 DCP 1081999501, Design Change Package: RHR Vibration, Rev. 1.0
 S10H1U011, UT Calibration/Examination Report for 1C11-1CRD-3-R-18A-OL Weld, dated 2-17-2010

Section 1R11: Licensed Operator Regualification

Drill Scenario: Hatch Nuclear Emergency Preparedness 2010 Exercise 01
 34AB-J11-001-2, Irradiated Fuel Damage During Handling, Rev. 2.0
 34AB-T22-003-2, Secondary Containment Control, Rev. 3.9
 34AB-D11-001-2, Radioactivity Release Control, Rev. 1.4
 34SV-SUV-019-2, Surveillance Checks, Rev. 34.23
 EOP Flowcharts

73EP-RAD-001-0, Radiological Event, Rev. 2.0
 31GO-OPS-021-0, Manipulation of Controls and Equipment, Rev. 1.8

Section 1R12: Maintenance Effectiveness

Condition Reports:

2010100636, 2010100541, 2009112211, 2009112122, 2009112124

Maintenance Work Orders:

1100066901, 1081709911, 2092394401

Procedures:

40AC-ENG-020-0, Maintenance Rule (10CFR50.65) Implementation and Compliance, Ver. 6.0
 NMP-GM-002, Corrective Action Program, Ver. 9.0
 NMP-ES-002, System Monitoring and Health Reporting, Ver. 10.0

Other:

System Health Reports, CRD Hydraulic System 1C11-2C11, 4th Quarter 2009
 Maintenance Rule Performance Criteria
 Maintenance Rule Scoping Manual

Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation

Condition Reports:

2010100175, 2010102130

Maintenance Work Orders:

1080337101

Other:

MCR Logs
 31GO-OPS-024-0, Outage Safety Assessment, Rev 1.0, dated 3/8/10, 3/9/10, 3/10/10, 3/11/10, and 3/12/10.

Section 1R15: Operability Evaluations

Condition Reports:

2010100101, 2010100091, 201010158, 2010101222, 2010101228, 2010101229, 2010100617, 2010100885, 2010103466

Procedures:

NMP-AD-012, Operability Determinations and Functional Assessments, Ver. 7.0
 34SV-R43-001-1, Diesel Generator 1A Monthly Test, Ver. 21.19 performed on 1/5/2010
 34AR-652-901-1, ARP's for Control Panel 1H11-P652, Alarm Panel 1
 42SP-01-28-10-OV-1-0, PSW to MCR Air Conditioners Flow Measurement, Ver. 1.0
 42SV-Z41-005-0, Control Room Capacity Verification, Ver.3.2
 42SV-Z41-005-0, Control Room Capacity Verification, Ver.3.2 performed on 7/25/2007
 42SV-Z41-005-0, Control Room Capacity Verification, Ver.3.0 performed on 7/13/2005
 42SV-Z41-005-0, Control Room Capacity Verification, Ver.2.1 performed on 6/16/2003

Drawings:

H-13412, Ver. 46.0
 H-11631, Ver. 26.0, Sheets 1 and 2
 H-11609, Ver. 55.0
 H-16011, Ver. 64.0
 H-13413, Rev. 5
 H-23775, Rev. 13
 H-21074, Ver. 47.0

Other:

MCR Logs
 WO 1100423701, Rev. 1
 Prompt Determinations of Operability

Section 1R18: Plant Modifications

Temp Modification 1-10-001

Procedure:

NMP-AD-008, Applicability Determinations, Ver. 9.0

Section 1R19: Post Maintenance TestingMaintenance Work Orders:

1082525901
 1082525903
 1100014501
 1100475801
 1100330801
 2100332001
 2100332201

Procedures:

34SV-E41-002-1, HPCI Pump Operability, Ver. 25.18
 42SV-Z41-001-0, Main Control Room Pressurization LSFT, dated 1/6/2010.
 34SV-T22-001-0, Secondary Containment Test, Ver. 13.8
 34SV-T22-001-0, Secondary Containment Test Data Package performed on 2/09/2010
 34SV-T22-001-0, Secondary Containment Test Data Package performed on 2/10/2010

Drawings:

H-16402, Ver. 34.0

Other:

Required Action Sheet 1-10-001
 Required Action Sheet (RAS) 1-07-293
 Required Action Sheet (RAS) 2-10-032
 Required Action Sheet (RAS) 1R24-615

MCR logs
Clearance 1-DT-09-1E41-00377

Condition Reports:
2010100139, 2010100126, 2010100209, 2010103255, 2010101607, 2010101585

Section 1R20: Refueling and Outage Activities

Procedures:
31GO-OPS-024-0, Outage Safety Assessment, Ver. 1.0
NMP-OM-002, Shutdown Risk Management, Ver. 1.0
90AC-OAM-003-0, Outage Risk Management, Ver. 1.3
34GO-OPS-013-1, Normal Plant Shutdown Ver. 25.8
34GO-OPS-015-1, Maintaining Cold Shutdown and Refuel Parameters, Ver. 11.1
NMP-AD-003, Clearance and Tagging
34FH-OPS-001-0, Fuel Movement Operation, Ver. 22
42FH-ERP-014-0, Fuel Movement, Rev. 17.9
DI-OPS-37-0889, Fuel Movement Rules, Ver. 7.1
34GO-OPS-001-1, Reactor Startup, Ver. 33.5
42CC-ERP-010-0, Shutdown Margin Demonstration, Rev. 6

Others:
MCR logs
Outage Control Center logs
Intracompany Correspondence from E.B. Gibson to R.B. Hilton dated Feb. 24, 2010

Clearances:
1-DT-09-1B21-00006(002)
1-DT-09-1E11-00309
1-DT-09-1E21-00317

Section 1R22: Surveillance Testing

CRs:
2010100438, 2010100174, 2009111136, 2010101218, 2010102431, 2009110584, 2010102161, 2010102404

Procedures:
42SV-T46-003-1, Testing of SGT Filter Trains, Ver. 9.23
57IT-MIC-004-2, Testing of the LOCA/LOSP Timer Cards, Ver. 1.9
34SV-E51-002-1, RCIC Pump Operability, Ver. 20.14
34SV-SUV-019-2, Surveillance Checks, Ver. 34.23
34SO-G11-009-2, Drywell and Reactor Building Sump Systems, Ver. 10.5
42EN-INS-002-0, Containment Leakage Testing Plan, Ver. 6.0
42SV-TET-001-0, LLRT Testing Methodology, Ver. 3.0
42SV-TET-001-1, Primary Containment Type B and Type C Leak Rate Testing, Ver. 25.0
42SV-TET-001-0, Local Leak Rate Test Data Sheet for 1B21-F010A, dated 2/18/2010
42SV-TET-001-0, Local Leak Rate Test Data Sheet for 1B21-F032A, dated 2/19/2010

Attachment

42SV-TET-003-1, Primary Containment Integrated Leakage Rate Test, Ver. 5.0
 42SV-TET-001-0, Local Leak Rate Test Data Sheet for 1E41-F021 and 1E41-F049 dated
 2/22/2010

Drawing:

H-16020, Ver. 29.0
 H-16062, Ver. 48.0
 H-16332, Ver. 61.0

Other:

MCR Logs
 Code ASME-N510-1989
 Required Action Sheet 1-10-005
 Regulatory Guide 1.163, Performance-Based Containment Leak-Test Program
 NEI 94-01, Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50,
 Appendix J, Rev. 1j.
 American Nuclear Society-56.8-1994, Containment System Leakage Testing Requirements

Section 1EP6: Drill Evaluation

EP Exercise Narrative and Timeline for drill conducted 1/13/2010
 Drill ENN Forms from drill conducted 1/13/2010

Section 2RS1: Radiological Hazard Assessment and Exposure Control

Procedures, Guidance Documents, and Manuals:

62RP-RAD-006-0, RWP Processing, Rev. 11.7
 62RP-RAD-008-0, Radiation and Contamination Surveys, Rev. 12.0
 62RP-RAD-016-0, Control of High Radiation Areas, Rev. 26.5
 62RP-RAD-017-0, Release Surveys, Rev. 13.2
 62RP-RAD-047-0, Independent Spent Fuel Storage Installation and Radiological Controls
 62RP-RAD-055-0, Underwater Storage and Inventory of Radioactive Material in the Spent Fuel
 Pools, Rev. 3.1
 60AC-HPX-004, Radiation and Contamination Control, Rev. 19.5

Records and Data:

Investigative WBC, TLD 12887 (2/4/10, 2/19/10, 2/20/10)
 Alarming Dosimeter Investigation, TLD 7883, 9/1/09
 Alarming Dosimeter Investigation, TLD 11880, 3/13/09
 Alarming Dosimeter Investigation, TLD 6867, 10/22/09
 Alarming Dosimeter Investigation, TLD9217, 5/2/09
 Alarming Dosimeter Investigation, TLD 9436, 2/7/10
 Alarming Dosimeter Investigation, TLD 8453, 1/1/10
 Alarming Dosimeter Investigation, TLD 1937, 4/4/09

Radiation Work Permits:

10-1600, DW/SC: Minor mech/elec work and support
 10-1610, DW: I&C calibrations, Tip tubing, repairs and supporting activities

10-1611, DW: B21F022A-D, F028A-D, F010A&B valve inspection, PM, repair and support
 10-1010, RB: LLRT/ILRT/ISI and I&C work in radiation and unlocked high radiation areas
 10-1013, RB: Remove, replace torus proper hatches, HP initial entry torus, and diagonal painting
 10-1620, DW/SC: Install/remove shielding, tents, and scaffolds
 10-0004, Operations inspection, surveillance, and fire watch

Radiation Surveys:

65407, U1 RB 130, 3/4/10
 65293, U1 DW 127, 3/2/10
 65435, U1 DW 147, 3/4/10
 62383, ISFSI Annual, 1/6/10
 64307, U1 DW 147, 2/18/10
 65089, U1 DW 1237, 2/27/10
 64114, U1 RWCU HX, 2/16/10
 64443, U1 RWCU pump room B, 2/19/10
 58981, U1 RWCU pump room B, 9/6/09
 54314, U2 Reactor Building 158, 4/4/09

CAP Documents:

H-HP-2009, Audit of Health Physics, 8/7/09
 CR 2009107475, High Radiation Controls Self-Assessment, July 2009
 CR 2009110578, Two rad workers alarmed the PM7 at C52
 CR 2009107811, A temporary extension ladder provides access to the roof of the TIP room
 CR 2009108461, Incidences of high radiation area access control and RWP use
 CR 2009102721, Individual became contaminated, 50K dpm nasal smear
 CR 2009104127, Hot spot identified on 2" RWCU piping elbow
 CR 2009108711, Hot tool room worker entered hot tool room on wrong RWP
 CR 2009102949, Worker contaminated while performing LLRT in DW access
 CR 2009101722, CRD tech removing drives found to be contaminated, 150K dpm
 CR 2009103620, Worker enters HRA through swing gate without briefing or correct RWP

Section 2RS5: Radiation Monitoring Instrumentation

Procedures and Guidance Documents:

57CP-CAL-005-1, ARM System Calibration, Rev. 13.21
 57SV-CAL-005-0, GE NUMAC Logarithmic Radiation Monitor Calibration, Ver. No. 7.5
 57SV-CAL-008-1, ARM Calibration Rev. 3.17
 57SV-D11-006-1, Off Gas Post Treatment Radiation FT&C, Ver. 5.16
 57SV-D11-006-2, Off Gas Post Treatment Radiation FT&C, Ver. 6.11
 57SV-D11-010-1, Main Stack Off-Gas Radiation FT&C, Ver. No. 5.9
 57SV-D11-018-0, Accident Range Monitor FT&C, Ver. 8.10
 60AC-HPX-0170-0, Radiation Protection Instrumentation Program, Rev 3.1
 61CI-OCB-011-0, Post-LOCA Monitors, Ver. No. 3.9
 62HI-OCB-039-0, Daily Source Checks, Rev. 3.5
 62HI-OCB-052-0, Victoreen Electrometer Model 500, Rev. 3.1
 62 HI-OCB-017-OS, Gamma Calibrator Operation and Calibration
 62HI-OCB-090-0, SAM-9/SAM-11 Operation and Calibration, Rev. 4.5

62HI-OCB-112-0, Siemens MK2 Electronic Personnel Dosimetry, Rev. 2.3
 NMP-GM-002, Corrective Action Program, Rev 9.0
 NMP-HP-012, Calibration of the Small Article Monitor, Version 2.0
 NMP-HP-711, Operation and Calibration of the HandECOUNTER

Other:

1D11-K621A, Surveillance # 1082479301, Dated 05/20/09
 1D11-K621A, Surveillance # 1091024901, Dated 11/18/09
 1D11-K621B, Surveillance # 1082258801, Dated 02/20/09
 1D11-K621B, Surveillance # 1090361501, Dated 08/19/09
 1D11-K622A, B, C & D Surveillance # 1070500101, Dated 09/25/07
 1D11-K622A, B, C & D Work Order # 1082450601, Dated 10/15/09
 61CI-OCB-011-0, Post-LOCA Monitors, Source Calibrations of 1/2D11-K623 through K627, Ver. 3.9, Dated 01/28/10
 62HI-OCB-028-0, Whole Body Counter Calibration, Dated 06/30/09
 AMP-100, S/N 5006-141, Source Check Record, Dated 01/26/09
 AMP-100/200 #5006-106, Calibration Form/Data Sheet, Dated 09/28/09
 AMS-4 Detector Calibration, Dated 04/24/09
 ASP-2E, S/N 1469, Source Check Record, Dated 01/26/09
 Calibration Points, HPX-0874, Dated 01/30/09
 Control Building 130 C-52 Exit, Survey # 62944, Dated 01/24/10
 E-120 S/N 8754, Source Check Record, Dated 01/26/09
 Electra 1-B S/N 3541, Source Check Record, Dated 01/26/09
 Electrometer Model 500 Data Work Sheet, HPX-0178, Dated 01/30/09
 Fluke Biomedical, F550-3S-133-01-13-2009-Cs-137, Model 133 Certificate
 Fluke Biomedical, F550-3S-136-01-13-2009-Cs-137, Model 136 Certificate
 GE Reuter-Stokes Certificate of Calibration, Portable Calibration Unit S/N 2-19021186, Dated 12/28/05
 Georgia Power, Thermo Electronic Personal Dosimeter (EPD) Mark 2, Certificate of Calibration, Hatch 2008-7, Dated 12/19/08
 HandECount Calibration, S/N 554. Dated 09/30/09
 Multi-Scale Source, Annual Source Calibration, Dated 03/03/09
 PM-7 Calibration Report, S/N 621, Dated 10/23/09
 PCM-1B Set-up and Calibration, S/N 1480, Dated 04/20/09
 Plant Hatch Information, Survey # 62652, Dated 01/14/10
 Plant Hatch Information, Survey # 62736, Dated 01/17/10
 Plant Hatch Information, Survey # 62974, Dated 01/25/10
 RO-2A S/N 3485, Source Check Record, Dated 01/26/09
 RO-2A S/N 4558, Source Check Record, Dated 01/26/09
 RO-2A S/N 469 Calibration Form/Data Sheet, Dated 06/24/09
 SAM-11 Calibration and Set-up, S/N 108, Dated 01/05/09
 Teletector Serial # 106900, Source Check Record, Dated 01/26/09
 Thermo Fischer Scientific Certificate of Calibration EPD S/N 523254, Dated 12/14/09
 Thermo Electron Certificate of Calibration EPD S/N 54544, Dated 02/19/09
 U-1 Turbine Building 130, Survey # 62600, Dated 01/13/10

Corrective Action Program Documents:

CR 2009111156, Multiple errors identified on routine daily source checks
 CR 2010100370, New Electronic Dosimeters Received without calibration certificate
 CR 2010100853, Radioactive Source Cabinet discovered unlocked and unattended
 CR 2010100858, Background Investigations Not Completed for HP Instruments
 CR 2010100864, HP Technician used incorrect procedure while performing daily source check
 SAM-11 Article Monitor

Section 2RS6: Radioactive Gaseous and Liquid Effluent Treatment

Procedures and Guidance Documents:

64CI-OCB-001-0, Main Stack Radiation Monitoring, Ver. 5.8
 64CI-OCB-002-1, Unit One Reactor Building Vent Radiation Monitoring, Ver. 1.3
 64CI-OCB-002-2, Unit Two Reactor Building Vents Radiation Monitoring, Ver. 1.4
 64CI-OCB-003-1, Recombiner Building Vent Radiation Monitoring, Ver. No. 5.5
 64CH-RCL-006-0, Gamma Isotopics and Reports, Ver. No. 7.0
 64CH-RPT-005-0, Chemistry Environmental Permit Reports, Ver. 14.6
 64CH-RPT-006-0, Liquid Effluent Reports, Ver. 7.4
 64CH-RPT-007-0, Gaseous Effluent Reports, Ver. 3.3
 64CI-OCB-009-0, Liquid Radwaste Radiation Monitoring, Ver. 5.0
 NMP-GM-002, Corrective Action Program, Ver. 9.0

Records and Data:

61CI-OCB-003-1, Recombiner Building Vent Radiation Monitoring, Ver. No. 5.5, Dated 01/26/10
 64CI-OCB-001-0, Main Stack Radiation Monitoring, Ver. 5.8, Dated 01/26/10
 64CI-OCB-002-1, Unit One Reactor Building Vent Radiation Monitoring, Ver. 1.3, Dated 01/27/10
 64CI-OCB-002-2, Unit Two Reactor Building Vents Radiation Monitoring, Ver. 1.4, Dated 01/27/10
 Edwin I. Hatch Nuclear Plant Annual Radioactive Effluent Release Reports for CY 2007 and 2008
 Edwin I. Hatch Nuclear Plant Annual Radiological Environmental Operating Reports for 2007 and 2008
 Gaseous Effluents Discharge Permit Nos. G-20091215-201-C, Dated 12/33/09;
 G-20091222-205-C, Dated 12/33/09; G-20091222-206-C, Dated 12/33/09;
 G-20091222-207-C, Dated 12/33/09; and G-20091222-205-C, Dated 12/33/09
 Interlaboratory Cross-Check, Detectors 3 and 4, Dated 12/16/08 and 05/18/09; and Detectors 1, 2, 3 and 4, Dated 11/16/09
 Liquid Effluents Discharge Permit Nos. L-20091030-237-B, Dated 12/28/09; L-20091101-238-B, Dated 12/28/09; L-20091217-245-C, Dated 12/28/09
 Offsite Dose Calculation Manual for Edwin I. Hatch Nuclear Plant, Ver. 22, February 2009

Audits and CAP Documents:

CR 2009103578, While replacing the main stack turbine FE for 1D11-N025A a discrepancy was found in the flow indication between the original and the replacement turbine FE
 CR 2009103766, FDST is being discharged to river due to high conductivity of water in tank and that CST level is close to full capacity

CR 2009104876, Unit 1 Liquid Radwaste Effluent flowrate measurement device, 1G11R37/K023, has been inoperable for >30 days per tracking RAS 1-09-020
 CR 2009107299, The U1 Reactor Building Vent 7-Day Average Particulate Activity has been on an upward trend since July 1, 2009
 CR 2009110829, An increase in gaseous effluent release rates on U1 and u2 due to the recently discovered fuel leak on U2
 Southern Nuclear, Fleet Self Assessment, 2009 Fleet Count Room Program Self Assessment, Corporate CR2009100736

Section 2RS7: Radiological Environmental Monitoring Program (REMP)

Procedures and Guidance Documents:

ENV-936, collection and handling of milk samples, Rev. 9
 ENV-938, collection and handling of grass samples, Rev. 8
 ENV-940, collection and handling of air particulate and iodine cartridge samples, Rev. 10
 64CH-ENV-001-0, Meteorological Stations, Ver. 12.11
 NMP-GM-002, Corrective Action Program, Ver. 9.0

Records and Data:

2008 Annual Radiological Environmental Operating Report
 2008 Annual Radioactive Effluent Report
 2008 Annual Meteorology Report
 ABS Consulting, Review of Monitor Locations at Plants Farley, Hatch, and Vogtle, 9/24/09
 River Water Automatic Sampler Maintenance Schedule, 2/2/09 – 11/2/09
 Routine Air Pump Exchange Schedule, 4/13/09 – 12/21/09
 Air Flow Calibrations, Sample Locations 103, 107, 112, 116, 304, and 309; 4/27/09 and 10/12/09
 Primary Meteorological Tower Instrument Calibration Packages; 10m Wind Speed, 10m Wind Direction, 10m Ambient Temperature, 60m Wind Direction, 60m Wind Speed, 100m Wind Direction, 100m Wind Speed, Delta Temperature; 7/17/09 and 12/15/09
 Back-up Meteorological Tower Instrument Calibration Packages; 45m Wind Speed, 45m Wind Direction, 10m Ambient Temperature, Delta Temperature; 7/14/09 and 12/15/09

Audits and CAP Documents:

CFO 2009-059, Supplier Quality Audit Report of Georgia Power Company Environmental Laboratory, 5/18/09 – 5/21/09
 CR 2010100891, Trees surrounding met tower may need to be cut back
 CR 2009112046, Fall fish collection was not performed due to river flooding
 CR 2009104826, TLDs at station 104 were stolen mid-quarter
 CR 2008111151, Environmental TLD at station 110 destroyed in fire
 CR 2008111152, Environmental air sampler at station 304 lost sampling hours due to power failure
 CR 2008111153, Environmental air sampler at station 304 lost sampling hours due to power failure

Section 40A1: Performance Indicator Verification

Procedures and Guidance Documents:

00AC-REG-005-0, Preparation and Reporting of NRC PI Data, Ver. No. 6.0
 DI-HCH-05-0407, Generation of Performance Indicators, Ver. No. 1.0
 00AC-REG-005-1, Preparation and Reporting of NRC PI Data, Rev. 6.0

Records and Data:

Chemistry Composite Performance Indicator, February through November 2009
 Gaseous Effluents Discharge Permit Nos. G-20091215-201-C, Dated 12/33/09; G-20091222-205-C, Dated 12/33/09; G-20091222-206-C, Dated 12/33/09; G-20091222-207-C, Dated 12/33/09; and G-20091222-205-C, Dated 12/33/09
 Hatch Performance Indicator Database
 Liquid Effluents Discharge Permit Nos. L-20091030-237-B, Dated 12/28/09; L-20091101-238-B, Dated 12/28/09; L-20091217-245-C, Dated 12/28/09
 Occupational Exposure Control Effectiveness PI Reports, January 2009 – December 2009
 List of dosimeter alarms, January 2009 – February 2010

CAP Documents:

CR 2009103620, Unanticipated dose rate alarm
 CR 2010102007, VHRA downposted prior to gates on refueling floor being in place
 CR 2009108495, Accumulated dose alarm

Section 40A3: Event Follow-up

Procedures:

NMP-ES-014, Air Operated Valve Program, Ver 5.0

Records and Data:

31GO-OPS-010-0, Scram/Transient Data Collection, dated 6/21/09

Condition Report:

2009106326

Section 40A5: Other Activities

Procedures:

NMP-AD-016, Fatigue Management Program, Ver. 4.0
 NMP-AD-016-001, Self Declaration, Waivers and Fatigue Assessments, Ver. 3.0
 NMP-AD-016-003, Scheduling and Calculating Work Hours, Ver. 3.0
 NMP-AD-016-004, Reviews and Reporting, Ver. 5.0

SNC Computer Training Course:

Course S-BT-1002NN, SNC Generic Fitness for Duty – Non-Nuclear