UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

April 27, 2006

Southern Nuclear Operating Company, Inc.
ATTN: Mr. H. L. Sumner
Vice President - Hatch Project
P. O. Box 1295
Birmingham, AL 35201-1295

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT 05000321/2006002 AND 05000366/2006002

Dear Mr. Sumner:

On March 31, 2006, the 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 12, 2006, with Mr. Dennis Madison and other members of your staff.

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

This report documents one NRC-identified finding of very low safety significance (Green) which was determined to involve a violation of NRC requirements. Because this violation is of very low safety significance and was entered into your corrective action program, the NRC is treating this violation as a non-cited violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy. If you contest this NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the United States Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Hatch Nuclear Plant.

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

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, Acting 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 05000321/2006002 and
05000366/2006002
w/Attachment: Supplemental Information

cc w/encl: (See page 2)

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).

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NAME	C. Rapp	D. Simpkins	J. Hickey	J. Fuller	T. Nazario	S. Rose	
DATE	4/27/2006	4/27/2006	4/27/2006	4/26/2006	4/26/2006	4/27/2006	
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REGION II

Docket Nos.:	50-321, 50-366
License Nos.:	DPR-57 and NPF-5
Report Nos.:	05000321/2006002 and 05000366/2006002
Licensee:	Southern Nuclear Operating Company, Inc.
Facility:	Edwin I. Hatch Nuclear Plant
Location:	P.O. Box 2010 Baxley, Georgia 31515
Dates:	January 1, 2006 - March 31, 2006
Inspectors:	D. Simpkins, Senior Resident Inspector J. Hickey, Resident Inspector J. Fuller, Reactor Inspector (Section 1R08) T. Nazario, Reactor Inspector (Section 1R08) S. Rose, Senior Operations Engineer (Section 1R11)
Approved by:	Scott M. Shaeffer, Acting Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000321/2006-002, 05000366/2006-002; 01/01/2006-03/31/2006; Edwin I. Hatch Nuclear Plant, Units 1 and 2, Maintenance Effectiveness.

The report covered a three-month period of inspection by resident inspectors, reactor inspectors, and an operations engineer. One Green non-cited violation (NCV) was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using 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. NRC Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. An NRC-identified Non-Cited Violation (NCV) of 10 CFR 50.65 (Maintenance Rule) was identified for failing to demonstrate that the performance of the Traveling Water Screens (TWS) was being effectively controlled through the performance of appropriate preventive maintenance such that the system remained capable performing its intended function to provide adequate water quality to the safety-related Residual Heat Removal Service Water (RHRSW) pumps. As a result, after the Maintenance Rule (a)(2) performance criteria was exceeded, the licensee had neither established goals nor monitored the performance of the TWS per 10 CFR 50.65 (a)(1). The licensee entered their failure to monitor the performance of the TWS into their Corrective Action Program for resolution. This finding affected the Problem Identification and Resolution Cross-Cutting Area.

  This finding was more than minor because it adversely affected the equipment performance attribute associated with the Mitigating Systems cornerstone objective in that debris were able to bypass the TWS which degraded RHRSW pump flow. This finding was of very low safety significance because redundant RHRSW pumps were operable and the affected RHRSW pumps were returned to operable status within the Technical Specification allowed outage times. This finding directly involved the cross-cutting aspect of Problem Identification and Resolution, in that, the licensee failed to identify that each of the RHRSW pump degraded flow events were maintenance preventable functional failures of the TWS. (Section 1R12)

B. Licensee-Identified Violations

None

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at or near 86% Rated Thermal Power (RTP) due to capacity limitations of the main transformer. On February 13, Unit 1 began a scheduled refueling outage and remained shutdown through the end of the reporting period.

Unit 2 began the inspection period at or near 100% RTP. On January 16, a load reduction to 45% RTP was performed to repair a feedwater heater. Unit 2 was returned to 100% RTP on January 23 and remained at 100% RTP through the end of the reporting period.

1. REACTOR SAFETY
Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment

a. Inspection Scope

Partial Walkdowns. The inspectors performed partial walkdowns of the following three systems when the opposite trains were removed from service. 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.

- Emergency Diesel Generator (EDG) Battery Charger 1T during EDG Battery Charger 1G maintenance
- Unit 2 High Pressure Coolant Injection (HPCI) during Unit 2 Reactor Core Isolation Cooling (RCIC) maintenance
- Unit 1 RCIC during Unit 1 HPCI maintenance

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Fire Area Tours. The inspectors toured the following 12 risk significant plant areas to assess the material condition of the fire protection and detection equipment and verify that fire protection equipment was not obstructed and that transient combustibles were properly controlled. The inspectors reviewed the Fire Hazards Analysis drawings H-11846 and H-11847 to verify that the necessary fire fighting equipment, such as fire extinguishers, hose stations, ladders, and communications equipment, were in place. Documents reviewed are listed in the Attachment.

- Control Building 112'
- Station Battery Rooms 112'
- AC Inverter Rooms 112'
- RPS Battery Rooms 112'
- Water Analysis Rooms 112'
- Control Building 130'
- RPS and Cable Tray Rooms 130'
- Annunciator Rooms 130'
- East Cableways 130'
- Cable Spreading Room 147'
- 600 Volt Switchgear Rooms 130'
- Unit 1 Torus Area and Main Steam Chase

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

Annual Resident Review. The inspectors reviewed the results of the licensee inspection of the 1B Residual Heat Removal (RHR) Heat Exchanger to verify proper implementation of licensee procedure 52PM-E11-009-1, RHR Heat Exchanger Preventive Maintenance. Specifically, the inspectors observed the as-found condition of the heat exchangers and that the licensee properly assessed the condition of the heat exchangers. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection (ISI) Activities

a. Inspection Scope

The inspectors observed and reviewed the implementation of the licensee's ISI program for monitoring degradation of the reactor coolant system boundary and the risk significant piping system boundaries for Hatch Unit 1. The inspectors selected a sample of American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code, Section XI, required examinations and code components in order of risk priority. The inspectors also reviewed a sample of inspection activities associated with components that are outside the scope of ASME Section XI requirements which were performed in accordance with commitments to follow industry guidance documents, such as the Boiling Water Reactor Vessel and Internals Project (BWRVIP). The inspectors reviewed Owner's Activity Report 1-3-3-1, dated June 7, 2004, for ISI activities conducted during the last Unit 1 refueling outage.

The inspectors conducted an on-site review of the following nondestructive examination (NDE) activities to evaluate the licensee's compliance with Technical Specifications (TSs); ASME Section XI, and Section V, 2001 Edition through the 2003 Addenda for Class 1, 2, and 3 systems; and BWRVIP documents for the inspection of Reactor Vessel Internals. For Hatch Unit 1, this was the last outage of the third period of the third interval, and also was considered the first outage of the first period of the fourth interval for certain components. The inspectors reviewed the outage examination scope to ensure that no ISI examinations would be counted for both intervals. The inspectors observed the following examinations:

Manual Ultrasonic Testing (UT)
- B21-1FW-18A-15, Feed Water, Elbow to Tee Ferritic Weld, ASME Class 1
- 1B21-1FW-12AA-1, Feed Water, Tee to Elbow Ferritic Weld, ASME Class 1

Automated UT
- 1B31-1RC-28B-1, Recirculation System, 28" Nozzle to Safe End, ASME Class 1, Z30 Scan, 85% Code Required Coverage Obtained
- N3A (N-SH), Main Steam Nozzle to Reactor Pressure Vessel Shell Weld, ASME Class 1, P1 and TL Scans
- H7, Core Shroud Horizontal Weld, Safety-Related, BWRVIP Component

Liquid Penetrant Examination (PT)
- 1B31-1RC-28B-9BC, Recirculation System, Pipe to Branch Connection, ASME Class 1

Specifically, the inspectors reviewed the following examination records:

Automated UT
- 1B31-1RC-12BR-A-5, Recirculation System, Safe End to Nozzle, ASME Class 1
- 1E11-1RHR-24A-R-13, Residual Heat Removal (RHR) System, Pipe to Pipe Overlay, Examination of Weld Overlay and Upper 25% of Base Metal, Non-Code Component, Requirements from NUREG-0313E-BWRVIP-75

In-Vessel Visual Inspection (IVVI)
- SD TB #06, Steam Dryer Tie Bar Weld, BWRVIP Component

The inspectors reviewed the following examination records that contained recordable indications:

- UT: 1B21-1FW-18A-15, Feed Water, Elbow to Tee Ferritic Weld, ASME Class 1
- UT: N3A (N-SH), Main Steam Nozzle to Reactor Pressure Vessel Shell Weld, ASME Class 1
- IVVI: SD TB #06, Steam Dryer Tie Bar Weld, BWRVIP Component
- IVVI: End Brackets of Feed Water Spargers C and D, BWRVIP Component
- VT-3: 1N11-TBH-22, Constant Pipe Support on Main Steam Bypass, Non-Safety Related

Qualification and certification records for examiners, inspection equipment, and consumables along with the applicable NDE procedures for the above ISI examination activities were reviewed and compared to requirements stated in ASME Section V, ASME Section XI, BWRVIP documents, and other industry standards.

The inspectors reviewed the licensee's operating experience assessment for Information Notice (IN) 2006-01, Torus Cracking in a BWR Mark I Containment. The inspectors held discussions with cognizant licensee personnel and conducted an independent walkdown of both the inside and outside of the Hatch Unit 1 Torus to ensure that the licensee had considered the information described in the IN for applicability to their Torus design.

The inspectors reviewed welding activities associated with Minor Design Change (MDC) 1041564401, Deletion of High Pressure Coolant Injection (HPCI) Hydrogen Hideout Piping. This MDC included the fabrication of two new ASME Section XI, Class 2 welds, and the deletion of four welds from the current ISI inspection plan. The inspectors reviewed the welding procedures, applicable procedure qualification records, welder performance qualification records, and welding data sheets for compliance to ASME Section XI requirements. The following welds were reviewed by the inspectors:

- FW01/M012, 10" Pipe Cap to Tee, HPCI System Piping Modification
- FW01/M013, 10" Pipe Cap to Tee, HPCI System Piping Modification

The inspectors completed a review of ISI related problems that were identified by the licensee and entered into the corrective action program to verify that the licensee had appropriately described the scope of the problems, had an adequate threshold for identifying issues, and had implemented appropriate corrective actions. Specifically, the inspectors reviewed the licensee's corrective actions and disposition of indications identified on core shroud tie rod repair assemblies. The inspectors reviewed the licensee's evaluations for these indications, past operability assessment for Unit 1, the operability assessment for Unit 2, the crack growth evaluation, and the licensee's preliminary root cause evaluation. The inspectors observed and reviewed a sample of the licensee's corrective action activities and compared these actions to applicable industry guidance documents such as BWRVIP-76, BWR Core Shroud Inspection and Flaw Evaluation Guidelines. The inspectors also reviewed the licensee's replacement activities associated with one of the core shroud tie rod repair upper support assemblies through review of the Certified Material Test Reports (CMTRs) for the replacement tie rod upper support assembly. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified

1R11 Licensed Operator Requalification

a. Inspection Scope

Resident Quarterly Observation. The inspectors observed the performance of licensee simulator scenario LT-SG-51066-01 which included degrading condenser vacuum caused by air inleakage, failure of all rods to insert following a scram, loss of the circulating water system, main steam isolation valve closure, and standby liquid control injection. The inspectors reviewed licensee procedures 10AC-MGR-019-0S, Procedure Use and Adherence, and DI-OPS-59-0896N, 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.

Annual Operating Test Results. On December 31, 2005, the licensee completed the comprehensive requalification biennial written examinations and annual operating tests, required to be given to all licensed operators by 10 CFR 55.59(a)(2). The inspectors performed an in-office review of the overall pass/fail results of the written examinations, individual operating tests, and the crew simulator operating tests. These results were compared to the thresholds established in Manual Chapter 609 Appendix I, Operator Requalification Human Performance Significance Determination Process.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the following three maintenance activities 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. For the equipment issues identified below, the inspectors reviewed operator logs, associated Condition Reports (CRs), Maintenance Work Orders (MWOs) and the licensee's procedures for implementing the Maintenance Rule. The review was to determine if equipment 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.

- Hydrogen/Oxygen Sampling System Availability
- Traveling Water Screen (TWS) Reliability
- Unit 1 Mode Switch Replacement

b. Findings

Introduction. A Green NRC-identified NCV of 10 CFR 50.65 was identified for the licensee's failure to demonstrate that the performance or condition of the TWS was effectively controlled through appropriate preventive maintenance. As a result, the licensee did not establish goals or monitor the performance of the TWS per 10 CFR 50.65 (a)(1).

Description. Through reviews of operating logs and CRs, the inspectors noted the three following occasions where RHRSW pump flow was degraded.

- On November 10, 2005, the flow from the running 1D RHRSW pump was abnormally low and could not be increased above approximately 3000 gallons per minute (gpm). Reference flow values for RHRSW pumps are approximately 4000 gpm.

- On November 12, 2005, the flow from the 1A RHRSW pump was abnormally low and could not be increased above approximately 2500 gpm.

- On November 20, 2005, during a 2A RHRSW pump in-service operability test, flow decreased from the reference value of 4000 gpm to 3500 gpm and could not be restored.

For each of these events, the licensee used abnormal operating procedure 34AB-E11-001-0AS, RHRSW Pump Degradation, to respond to RHRSW pump degraded flow and then performed the in-service test to demonstrate operablility. The licensee did not consider these functional failures based on written procedural guidance in the abnormal operating procedure that allowed for responding to RHRSW pump flow degradation.

The function of the TWS was to prevent debris from entering the RHRSW system. Accordingly, on November 16, 2005, the licensee visually inspected the screens from above the water line and no apparent paths for debris intrusion were noted. On November 21 - 23, the licensee inspected the underwater portions of the TWS and identified worn or torn seals allowing debris to bypass the TWS. The licensee attributed the worn or torn seals to be the result of inadequate preventive maintenance. The functional failure criteria for the TWS was a failure that results in the loss of an RHRSW pump train. The performance monitoring criteria for the TSW system was less than or equal to one functional failure in a 36-month rolling period.

The inspectors discussed with the licensee if each of the RHRSW events should be considered functional failures of the TWS due to debris bypassing the TWS causing degraded pump flow. Following a review of the three RHRSW events, the licensee determined the events were maintenance preventable functional failures of the TWS and that the TWS had exceeded its performance monitoring criteria. The licensee placed the TWS system in 10CFR65 (a)(1) status on March 10. The inspectors concluded that the licensee failed to recognize that debris bypassing the TWS was a maintenance preventable functional failure and that the TWS should have been in 10CFR65 (a)(1) status since November 12, 2005.

Analysis. This finding was more than minor because it adversely affected the equipment performance attribute associated with the Mitigating Systems cornerstone objective in that debris were able to bypass the TWS which degraded RHRSW pump flow. This finding was of very low safety significance because redundant RHRSW pumps were operable and the affected RHRSW pumps were returned to operable status within the TS allowed outage times. This finding directly involved the cross-cutting aspect of Problem Identification and Resolution, in that, the licensee failed to identify that each of the RHRSW pump degraded flow events were maintenance preventable functional failures of the TWS.

Enforcement. 10 CFR 50.65, Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, (a)(2) states, "Monitoring as specified in paragraph (a)(1) of this section is not required where it has been demonstrated that the performance or condition of a structure, system, or component is being effectively controlled through the performance of appropriate preventive maintenance, such that the structure, system, or component remains capable of performing its intended function." Paragraph (a)(1) states, in part, the licensee "... shall monitor the performance or condition of structures, systems, or components against licensee-established goals, in a manner sufficient to provide reasonable assurance that such structures, systems, or components...are capable fulfilling their intended functions." Contrary to the above, prior to November 12, 2005, the licensee failed to demonstrate the performance or condition of the TWS was being effectively controlled through the performance of appropriate preventive maintenance such that the system remained capable of performing its intended function. Therefore, between November 12, 2005, and March 10, 2006, the licensee failed to establish goals and monitor the TWS under 10 CFR 50.65(a)(1) or demonstrate monitoring was not required. Because this violation is of low safety significance and documented in CR 2006104896, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy and is identified as NCV 05000321/2006002-01: Failure to Demonstrate that the Traveling Water Screen System Was Effectively Controlled per 10 CFR 50.65 (a)(2).

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the following seven 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.

- POD for Week of 1/7-13
- POD for Week of 1/14-20
- POD for Week of 2/4-10

- POD for Week of 2/11-17
- POD for Week of 2/25-3/3
- POD for Week of 3/11-17
- POD for Week of 3/18-24

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-routine Plant Evolutions

a. Inspection Scope

For the event described below, the inspectors observed operator actions and reviewed operator logs and computer data to verify proper operator actions were taken. Documents reviewed are listed in the Attachment.

- Unit 1 Shutdown for the refueling outage

b. Findings

No findings of significance were identified.

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 TSs and the Final Safety Analysis Report (FSAR) to ensure that operability was adequately assessed and the system or component remained available to perform it's 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.

- Low Pressure Coolant Injection Auto Start Time Delay Setpoint
- Foreign Material in the 1B EDG Battery
- Unit 2 Hydrogen/Oxygen System leakage post-accident
- Unit 1 HPCI turbine high steam line differential pressure trip relay out of calibration
- Cable Tray Insulation Soaked and Falling Apart
- Unit 2 Condensate Storage Tank Level Decreases

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed the following permanent plant modification to determine if it adversely affected the reliability or functional capability of the associated system. The inspectors reviewed the applicable FSAR sections and the 10CFR50.59 assessment associated with the modification to determine if the design basis of the system was affected. The inspectors also reviewed the implementing procedures and calculations to verify the modification was properly installed. Documents reviewed are listed in the Attachment.

- DCP 1040048801, Unit 1 Main Turbine EHC Digital Upgrade

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

For the following six 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. Following the maintenance activities, the inspectors 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.

- Unit 1 RHR to Radwaste Valve 1E11F049 Operator Grease Inspection
- Unit 1 Plant Service Wate Pump 1P41C001B replacement
- Unit 1 HPCI Steam Supply MOV limit switch 1E41F001 adjustment
- Unit 1 Core Spray Jockey Pump Discharge Check Valve 1E21F071B inspection
- Unit 1 A Inboard Main Steam Isolation Valve 1B21F022A seat repair
- Unit 2 HPCI System Following a System Outage

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities

a. Inspection Scope

The inspectors reviewed procedure DI-OPS-57-0393, Outage Safety Assessment, 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

which began February 13. Additionally, the inspectors reviewed the outage 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 reviewed procedure DI-OPS-57-0393 to verify 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.

- Reactor Coolant System cooldown following shutdown to verify the cooldown rate did not exceed TS limits
- Six clearances to verify implementation of the clearance process and the associated equipment was properly configured to support the function of the clearance
- Calibration of reactor instrumentation used to monitor reactor water within surveillance requirements
- Fuel movement
- TS and licensee procedures to verify mode change requirements were met
- Walkdown of the drywell and torus proper and other areas to verify material conditions supported plant operations
- Plant startup, heatup, and power ascension
- Shutdown Margin determination
- Licensee identification and resolution of problems related to forced outage activities

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed licensee surveillance test procedures and either witnessed the test or reviewed test records for the following seven 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-21-0386N, 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-E11-002-2, RHR Valve Operability
- 34SV-C11-003-2, Control Rod Weekly Exercise
- 52SV-E41-003-0, HPCI Turbine Mechanical Overspeed Trip Functional Test and Calibration

- 34GO-OPS-066-0, One Rod Out Interlock and RPIS Functional Test
- 34SV-R43-002-1, Diesel Generator 1B Monthly Test

In-Service Test
- 34SV-E51-002-1, RCIC Pump Operability

Primary Containment Isolation Valve Test
- 42SV-TET-001-0 1B21-F028A Outboard MSIV LLRT

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the following three temporary modifications (TMM) and assessed each evaluation using criteria defined in licensee procedure 40AC-ENG-018-0S, Temporary Modification Control. In addition, the 10 CFR 50.59 screenings and evaluations were assessed using the design basis information provided in the FSAR to verify the modifications did not affect the safety functions of these systems. The inspectors also reviewed the TMM requirements to verify the modifications were properly installed. Documents reviewed are listed in the Attachment.

- TMM 1-05-029, Redirect Unit 1 RHRSW Flume Discharge to the Unit 2 Flume
- TMM 1-06-002, Troubleshooting the Unit 2 Tornado Vents
- TMM 1-06-001, Temporary Diesel Generator Power Supply to 1R22-S003 (1C 4160V Bus)

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

.1 Daily Screening of Corrective Action Items

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.

4OA3 Event Followup

.1 (Closed) LER 05000321/2005-001, Failure to Use an Appendix J, Option B, Type C Tested Component to Isolate Primary Containment Penetration. On June 29 2005, a valve used to isolate primary containment during work on 1P70-N003 was not tested in accordance with Technical Specification 3.6.1.3, Condition C. The use of a non-tested valve for a primary containment barrier resulted in a condition prohibited by Technical Specifications for containment penetration number 22. The work on 1P70-N003 was completed and the clearance restored on June 30, 2005. This condition was documented in CR 2005106750. No findings of significance were identified.

.2 (Closed) LER 05000366/2005-002, Secondary Bypass Leakage Requirements Exceeded. On March 2, 2005, with Unit 2 in the Refuel mode, it was discovered that two Reactor Core Isolation Cooling valves had failed the associated LLRT. Both valves were located in the same penetration and were associated with Secondary Bypass Leakage. The valves were subsequently repaired and a successful LLRT was performed. This condition was documented in CR 2005103579. This condition constituted a violation of minor safety significance and is not subject to enforcement. No additional findings of significance were identified.

4OA6 Meetings, Including Exit

.1 Exit Meeting

On April 12, the inspectors presented the inspection results to Mr. Dennis Madison and other members of his staff who acknowledged the observations. The inspectors confirmed that all proprietary information examined during the inspection was controlled in accordance with appropriate guidelines.

.2 Annual Assessment Meeting Summary

On April 12, the NRC's Acting Chief of Reactor Projects Branch 2 and the Resident Inspectors assigned to the Edwin I. Hatch Nuclear Plant (HNP) met with Southern Nuclear Operating Company to discuss the NRC's Reactor Oversight Process (ROP) and the NRC's annual assessment of HNP safety performance for the period of January 1, 2005 - December 31, 2005. The major topics addressed were: the NRC's assessment program and the results of the HNP assessment. This meeting was open to the public. A listing of meeting attendees and information presented during the meeting are available from the NRC's document system (ADAMS) as accession number ML061150533. ADAMS is accessible from the NRC Web site at *www.nrc.gov/reading-rm/adams.html*.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel
M. Ajluni, Assistant General Manager - Plant Support
J. Dixon, Health Physics Manager
S. Douglas, Assistant General Manager - Plant Operations
M. Googe, Maintenance Manager
J. Hammonds, Operations Manager
J. Lewis, Training and Emergency Preparedness Manager
D. Madison, General Manager - Nuclear Plant
J. Thompson, Nuclear Security Manager
R. Varnadore, Engineering Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

05000321/2005-001	LER	Failure to Use an Appendix J, Option B, Type C Tested Component to Isolate Primary Containment Penetration (Section 4OA3.1)
05000366/2005-002	LER	Secondary Bypass Leakage Requirements Exceeded (Section 4OA3.2)

Opened and Closed

05000321/2006002-01	NCV	Failure to Demonstrate the Traveling Water Screen System Was Effectively Controlled per 10 CFR 50.65 (a)(2) (Section 1R12)

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment
34SO-R42-001-1 125 VDC and 125/250 VDC System
34AB-R43-001-1, Diesel Generator Recovery
34SO-R43-001-1, Diesel Generator Standby AC System
34SO-E41-001-2, High Pressure Coolant Injection (HPCI) System
34SO-E51-001-1, Reactor Core Isolation Cooling (RCIC) System
Drawings: H-16334, 16335, 26020, 26021, 27664, 27665, 27666, 27667, 27668, 27669, 27670, 27671, 27672
CR's: 2006100292, 2006100273, 2006100265, 2006100267

Section 1R05: Fire Protection
Drawings: A-43965 sheets 005B, 007B, 010B, 011B, 012B, 017B, 018B, 013B, 020B, 014B, 015B, 021B, 022B, 008B, 019B, 023B, 024B, 025B, 035B, 026B, 027B, 036B, 034B, 034D, 043B, 044B, 028B, 029B, 037B, 038B, 056B, 057B, 058B,

Section 1R07: Heat Sink Performance
42EN-CLN-001-0 Chemical Cleaning of Plant Service Water and RHR Service Water Piping
MWO 1050267601

Section 1R08: Inservice Inspection (ISI) Activities
Nondestructive Examination
Fourth Ten-Year Inservice Inspection Plan for E.I. Hatch Nuclear Power Plant Unit 1
Fourth Ten-Year Inservice Inspection Program for E.I. Hatch Nuclear Power Plant Unit 1
Inservice Inspection Program, Third 10-Year Interval for E.I. Hatch Nuclear Power Plant Unit 1
42SP-021406-OE-1-1, Unit 1 Tee-Quencher Bolts Inspection and Replacement, Rev. 1.0
NMP-ES-024-301, Liquid Penetrant Examination Color Contrast and Fluorescent, Version 2.0
NMP-ES-024-501, PDI Generic Procedure for the Ultrasonic Examination of Austenitic Pipe Welds (Appendix VIII), Version 1.0
NMP-ES-024-502, PDI Generic Procedure for the Ultrasonic Examination of Ferritic Pipe Welds (Appendix VIII), Version 1.0
NMP-ES-024-206, Visual Examination of the Reactor Pressure Vessel Internals, Version 1.0
GE-UT-209, Procedure for Automated Ultrasonic Examination of Dissimilar Metal Welds, and Nozzle to Safe end Welds, Version 18
GE-UT-244, Procedure for Automated Ultrasonic Examination and TOMOVIEW Analysis of Weld Overlaid Austenitic Piping Welds, Version 3.0
GE-UT-705, Procedure the Examination of Reactor Pressure Nozzle Inner Radius and Nozzle to Vessel Welds with the GERIS 2000 OD In Accordance With Appendix VIII, Version 5.0
GE-NE-0000-0051-8809-R0, Edwin I. Hatch Nuclear Plant - Unit 1 Shroud Repair Operability Assessment, March 2006
GE-NE-0000-0051-4010-R1, Plant Hatch Unit 1 Crack Growth Evaluation for Shroud Repair Bracket Cracking, Revision 1
GE-NE-0000-0052-3858-R0, Edwin I. Hatch Nuclear Plant - Unit 1 Evaluation with As-Found 225E Tie Rod, March 2006
GE-NE-0000-0051-8783-R0, Edwin I. Hatch Nuclear Plant - Unit 2 Shroud Tie Rod Repair - Operability Evaluation, March 2006
CRs: 2006101741, 2006101936, 2006102066, 2006102078, 2006102042, 2006102029, 2006102224, 2006103430

Self Assessments
H-MNT-2004, Item Numbers 15-21 (Welding, NDE, QC Inspection)
H-RFO-2004, Item Numbers 21-22 (ISI Pressure Testing, ISI Snubbers)
H-RFO-2005, Item Number 18 (ISI - Pipe Weld Inspection)
SA03-ENG-05, Plant Hatch Units 1 and 2, Inservice Inspection Program Self-Assessment

Section 1R12: Maintenance Effectiveness
Drawings: H-17168, 17786, 17789, 17790, 17791, 17792, 17794, 17810, 17826, 17828, 17832, 19781, 17949, 44705, 44706, 44707, 44708, 44718, 44720, 44721, 44722, 17811
CR's: 2005108342, 2005107641, 2005108788, 2005111378, 2006102117, 2005204262, 2006100204, 2005112130, 2005112049, 2005112050, 2005111247, 2005204263, 2005111406, 2005106286, 2005106980, 2005108999, 2005111316, 2005111302, 2005111333, 2005111378, 2005204264, 2005111006, 2006102098, 2006102100,

2005110955, 2006102595, 2006101695, 2005110539, 2006102594, 2006102596, 2006101678
MWO's: 1019002803, 1019002804, 1030224201, 1052271501, 1052358201, 2042138201, 2052432701, 1060578501,
Clearances: 1-DT-05-1P33-00516, 2-DT-05-2P33-00268, 2-DT-2P33-00371
40AC–ENG-020-0S Maintenance Rule (10 CFR 50.65) Implementation
WD-1H11P603-001.PD, ED for Mode Switch
FWEDSC-04-1-005.RTI, ED Clarification
34SP-02-23-06-PK-1-1, Special Purpose Procedure for Reactor Mode Switch
OPS-1359, One Rod Out Interlock and RPIS Functional Test
Southern Nuclear Operating Company Performance Criteria for RHRSW Pumps and TWS

Section 1R14: Personnel Performance During Non-routine Plant Evolutions
34GO-OPS-013-1, Normal Plant Shutdown
34GO-OPS-005-1, Power Changes
34GO-OPS-065-0, Control Rod Movement
34SO-R22-00101, 4160 VAC System Operations
34SO-E11-010-1, Residual Heat Removal System
57SV-C51-014-1, SRM Functional Test
CR's: 2006101323, 2006101029, 2005110558, 2004101643, 2006101312

Section 1R15: Operability Evaluations
CR's: 2005107994, 20051100089, 2005110306, 2005110567, 2005110783, 2005111004, 2006100982, 2005108342, 2006101351, 2006100303, 2005112183, 2006100292, 2006100273, 200610265, 2006100265
42SV-FPX-007-0, Cable tray Surveillance - Kaowool Material

Section 1R17 Permanent Plant Modifications
CR's: 2006103753, 2006103690, 2006103660, 2006102615, 2006102587, 2006103127
EHC Mark VI Turbine Controls Upgrade - Phase 1
DCP 1040048801, Main Turbine EHC Digital Upgrade 10 CFR 50.59 Screening/Evaluation
Calculation Number MC-H-05-0068, Loading for Vital AC Panel 1R25-S063
Calculation Number MC-H-05-0069, Evaluate Class-1E Station Auxiliary System

Section 1R19: Post Maintenance Testing
CR's: 2006102920, 2005111775, 2005110920, 2005111955, 2005111734, 2006100592, 2004103487
MWO's: 1042648901, 1052393201, 1060212001, 1042076601, 1060704001, 105210501, 1050269301, 1051257801, 105860601, 1-02-2179, 1050210201
34SV-E11-002-1 RHR Valve Operability
52PM-P41-036-1 Unit-1 Plant Service Water Pump & Motor Major Inspection/Overhaul
52PM-P41-009-0 Plant Service Water Pump Mechanical Seal Maintenance
42IT-TET-004-0S Operating Pressure Testing of Piping and Components
42IT-TET-012-1S Plant Service Water and RHR Service Water Piping Inspection Procedure
34SV-E41-001-1 HPCI Valve Operability
52GM-MEL-022-0 Limitorque Valve Operator Electrical Maintenance
51GM-MNT-058-0 Piston Lift Check Valve Maintenance

95IT-OTM-001-0 Maintenance Work Order Functional Test Guideline
52CM-MME-001-0 Packing Valves Adjusting Packing Stroking Valves
42-SV-TET-001-0 LLRT Testing Methodology
52CM-B21-001-1 Main Steam Isolation Valves Corrective Maintenance
34SV-E41-002-1, HPCI Pump Operability

Section 1R20: Refueling and Outage Activities
Clearances: 1-DT-05-1C51-00183, 1-DT-05-1C71-00443, 1-DT-06-1E11-00127, 1-DT-05-1B21-00371, 1-OP-06-1E51-00058, 1-DT-06-1R42-00078

Section 1R22: Surveillance Testing
CR's: 2005111140, 2005109148, 2005110223, 2005110472, 2005110704, 2005110667
MWO: 1050209401
34SV-F15-001-1 Refueling Interlocks and Hoist Limit Checks
34SV-C71-003-1 Reactor Mode Switch in Shutdown Functional Test

Section 1R23: Temporary Plant Modifications
Drawings: H-11139, 16329, 16330, D-11004
CR's: 2006102708, 2006102569, 2006102563, 2006102564, 2006102583, 2006102819, 2006102785