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

October 21, 2005

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 05000321/2005004, 05000366/2005004, AND 072000036/2005002

Dear Mr. Sumner:

On September 30, 2005, 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 October 12, 2005, with Mr. George Frederick 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, no findings of significance were identified.

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/

Malcolm T. Widmann, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos. 50-321, 50-366, 72-36
License Nos. DPR-57 and NPF-5

Enclosure: Inspection Report 05000321/2005004,
05000366/2005004, and 072000036/2005002
w/Attachment: Supplemental Information

cc w/encl: (see page 2)

cc w/encls:

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DATE	10/13/2005	10/18/2005	10/18/2005	10/13/2005	10/ /2005	10/ /2005	10/ /2005
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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-321, 50-366, 72-36
License Nos:	DPR-57, NPF-5
Report No:	05000321/2005004, 05000366/2005004, and 072000036/2005002
Licensee:	Southern Nuclear Operating Company, Inc.
Facility:	Edwin I. Hatch Nuclear Plant
Location:	P.O. Box 2010 Baxley, Georgia 31515
Dates:	July 1, 2005 - September 30, 2005
Inspectors:	D. Simpkins, Senior Resident Inspector J. Hickey, Resident Inspector J. Baptist, Resident Inspector, Farley Nuclear Plant
Approved By:	Malcolm T. Widmann, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000321/2005-004, 05000366/2005-004, 72000036/2005-002; 07/01/2005 - 09/30/2005; Edwin I. Hatch Nuclear Plant; Unit 1 and Unit 2; Routine Integrated Report.

The report covered a three-month period of inspection by resident inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, “Reactor Oversight Process,” Revision 3, dated July, 2000.

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None.

Enclosure

REPORT DETAILS

Summary of Plant Status

Units 1 and 2 operated at or near full rated thermal power (RTP) except for a brief reduction to 90% RTP due to a loss of the Baxley loop on September 20.

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

1R04 Equipment Alignment

a. Inspection Scope

Partial System Walkdowns. The inspectors performed partial walk-downs of the following four systems when the redundant trains were removed from service. The inspectors checked system valve positions, electrical breaker positions, and operating switch positions to evaluate the operability of the redundant trains or components by comparing the position listed in the system operating procedure to the actual position. Documents reviewed are listed in the Attachment.

- Unit 2 Division 2 Plant Service Water (PSW) System during a 2C PSW Pump Outage
- 1A train of Standby Liquid Control (SBLC) during a 1B train of SBLC Outage
- 1B Emergency Diesel Generator (EDG) Battery Charger 1D during a 1B Battery Charger outage.
- 1B train of the Residual Heat Removal (RHR) System during a 1A train of RHR outage

Complete System Walkdown. The inspectors performed a complete walkdown of the following system. The inspectors performed a detailed check of valve positions, electrical breaker positions, and operating switch positions to evaluate the operability of the redundant trains or components by comparing the required position in the system operating procedure to the actual position. The inspectors also interviewed personnel, reviewed control room logs and condition reports (CRs) to verify that alignment and equipment discrepancies were being identified and appropriately resolved. Documents reviewed are listed in the Attachment.

- 1A train of EDG's

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Fire Area Tours. The inspectors toured 12 risk significant areas to assess the material condition of the fire protection and detection equipment and to verify fire protection

equipment was not obstructed. The inspectors reviewed licensee procedure 40AC-ENG-008-OS, Fire Protection Program, and conducted area walk-downs to assess the licensee's control of transient combustibles. The inspectors also reviewed the Site Fire Hazards Analysis and applicable Pre-fire Plan drawings 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 General Area 112'
- Station Battery Rooms
- AC Inverter Rooms
- Reactor Protection System (RPS) Battery Rooms
- Control Building General Area 130'
- RPS and Cable Tray Rooms
- Annunciator Rooms
- East Cableways
- 600 Volt Switchgear Rooms
- DC Switchgear Rooms
- Cable Spreading Room 147'
- CD Transformer Rooms

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

External Flooding Review. The inspectors reviewed the Final Safety Analysis Report (FSAR) and Individual Plant Examination for plant design features that protect against external flooding and licensee procedure 10AC-MGR-013-00, Inclement Weather Policies, to verify the licensee's flood mitigation plans and equipment were consistent with the design requirements and risk analysis assumptions. The inspectors reviewed the material condition of flood protection barriers and exterior walls to verify they would perform their intended function.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

Quarterly Resident Observation. The inspectors observed the performance of simulator scenario LR-SE-00021-10. The scenario included a fault on the 2F 4160 volt bus, a

failed open safety relief valve, and a steam leak in the drywell which degraded to the point of requiring a scram and drywell spray. The inspectors reviewed licensee procedures 10AC-MGR-019-0S, Procedure Use and Adherence, and DI-OPS-59-0896N, Operations Management Expectations, to assess operator performance for the following: formality of communication; procedure usage; alarm response; control board manipulations; group dynamics; and supervisory oversight. In addition, the inspectors reviewed the critique results from previous training sessions to assess performance improvement. The inspectors attended the licensee's critique of operator performance to assess if the licensee identified issues comparable to issues identified by the inspectors. The inspectors compared their observations of licensee performance to the requirements in licensee procedure DI-TRN-24-0885N, Simulator Documentation Requirements.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the following two 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. The inspectors reviewed operator logs, associated CRs, Maintenance Work Orders, 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.

- Unit 2 Nuclear Boiler System
- Unit 1 Turbine Building Chilled Water System

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the following four Plan of the Day (POD) documents and one emergent maintenance activity listed below to verify that risk assessments were performed prior to components being removed from service. The inspectors reviewed 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 if any increase in risk was promptly assessed and that appropriate risk management actions were implemented. Documents reviewed are listed in the Attachment.

- POD for the week of 7/23-29
- POD for the week of 7/30-8/5
- POD for the week of 8/6-12
- POD for the week of 8/27-9/2
- Failure of Plant Circuit Breaker 179470

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 licensee procedures, operator logs, computer data, and strip chart data recordings as applicable to verify plant responded as expected and that proper operator actions were taken. Documents reviewed are listed in the Attachment.

- Loss of the Baxley Loop on September 20

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 Technical Specifications and the FSAR to ensure 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.

- CR 2005106564, Dropped Wrench into Intake Structure
- CR 2005107849, 2D PSW Pump Vibration readings in the Action Range
- CR 2005107083, Lower than normal PSW flow to the main control room condensing units
- CR 2005104424, 1A EDG turbo-charger oil leak
- CR 2005104663, 1C EDG room ventilation louver will not close

- CR 2005109393, 1B EDG Battery Cell #27 jumpered out

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors reviewed licensee procedures and observed selected personnel performance for the following five maintenance and testing activities to verify procedural requirements were met. The inspectors also reviewed the activities to determine if the scope of testing demonstrated that the work performed was correctly completed and the affected equipment was functional and operable. 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.

- 2B31F166B, 2B Recirc Motor Generator Fluid Drive Check Valve inspection
- 2P41F895, 2C PSW Pump Minimum Flow sense line weld repair
- 2E11F048B, RHR Heat Exchanger Bypass Valve limit switch adjustment
- 2P33R080A, Hydrogen/Oxygen Analyzer troubleshooting
- 1E21F015A, Core Spray Test Valve grease inspection

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed surveillance test procedures and either witnessed the test or reviewed test records for the following six surveillances to determine if the scope of the test adequately demonstrated that the affected equipment was operable. The inspectors reviewed the activities to assess for preconditioning of equipment, procedure adherence, and valve 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-E51-002-1, RCIC Pump Operability
- 34SV-T46-003-1, Standby Gas Treatment Ventilation and Operability Test
- 34SV-E41-002-2, HPCI Pump Operability
- 34SV-SUV-020-0, Core Parameters Surveillance

- 34SV-SUV-018-2, ECCS Status Checks

In-Service Tests
- 34SV-E41-002-1, HPCI Pump Operability

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the following two 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 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 verified the modifications were installed in accordance with the TMM requirements. Documents reviewed are listed in the Attachment.

- TMM 1-05-014, Refueling Interlock Rod Blocks
- TMM 1-05-020, Installation of an oil purifier on the Unit-1 Main Transformer

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed an emergency plan drill conducted on August 31. The inspectors observed licensee activities in the simulator, Technical Support Center, and Operations Support Center to verify implementation of licensee procedure 10AC-MGR-006-0, Hatch Emergency Plan. The inspectors reviewed the classification of the simulated event 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.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

.1 Daily Condition Report Review

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 reviewing hard copies of each condition report and accessing the licensee's computerized database.

.2 Annual Sample Review

a. Inspection Scope

The inspectors performed a detailed review of CR 2005106750 for a configuration control problem which occurred during maintenance on a containment boundary valve to verify that the CR was properly classified, prioritized for resolution, and that operability and reportability requirements were properly evaluated. The inspectors reviewed the CR to verify that the apparent cause determination was sufficiently thorough, extent of condition and generic implications were considered, and common causes and appropriate short term and long term corrective actions were implemented or planned. The inspectors evaluated the CR against the corrective action program requirements in licensee procedure NMP-GM-002, Corrective Action Program. Documents reviewed are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified. The inspectors determined that the CR was properly classified and prioritized, accurately described the adverse condition, the apparent cause was thorough including extent of condition and generic issues, and the corrective actions were appropriate and properly scheduled.

4OA5 Other

.1 Operation of an Independent Spent Fuel Storage Installation (ISFSI)

a. Inspection Scope

Inspectors reviewed selected ISFSI operations records to verify that the licensee had properly identified each fuel assembly in the two latest casks placed on the ISFSI pad. The inspectors also reviewed Technical Specifications to verify that the fuel placed in

these casks met the requirements. The inspectors also reviewed ISFSI document control practices to verify that the required records were being retained and duplicate records were being kept at a separate location. The inspectors walked down both ISFSI pads to assess the material condition of the casks, the installation of security equipment, and the performance of the monitoring systems.

b. Findings

No findings of significance were identified.

.2 (Closed) Temporary Instruction (TI) 2515/163, Operational Readiness of Offsite Power

Completion of this TI was previously documented in NRC Inspection Report 05000321, 366/2005003. However, after an NRC headquarters' review of the data provided, additional information related to the TI was requested. The inspectors collected this information from licensee discussions, site procedures, and licensee documentation. The information was subsequently provided to the headquarters staff for further analysis.

.3 Institute of Nuclear Power Operations (INPO) Report Review

On July 1, the Branch Chief for Reactor Projects Branch 2 and the Senior Resident Inspector reviewed the final INPO Evaluation Report dated November, 2004. The report contained no safety issues which were not already known by the NRC.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On October 12, the inspectors presented the inspection results to Mr. George Frederick and the other members of his staff who acknowledged the results. The inspector confirmed that appropriate controls were implemented for proprietary information provided to the resident office during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel
J. Dixon, Health Physics Manager
S. Douglas, Assistant General Manager - Plant Support
G. Frederick, General Manager - Nuclear Plant
M. Googe, Maintenance Manager
J. Hammonds, Operations Manager
J. Lewis, Training and Emergency Preparedness Manager
D. Madison, Assistant General Manager - Plant Operations
R. Reddick, Site Emergency Preparedness Coordinator
J. Thompson, Nuclear Security Manager
C. Underwood, Performance Analysis Supervisor
R. Varnadore, Engineering Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

2515/163	TI	Operational Readiness of Offsite Power (Section 4OA5.2)

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment
Procedures: 34SO-E11-010-1, 34SO-C41-003-1, 34SO-P41-001-2, 34SO-X41-002-0, 34SO-R43-001-1, 34AB-R43-001-1
Drawings: H-16329, 16330, 11004, 16061, 21033, 13371, 26020, 26021
Condition Reports: 2005106237, 2005103026, 2004112171
Emergency Diesel Generators System Health Report 2nd Quarter 2005

Section 1R05: Fire Protection
Pre-Fire Plans: A-43965, Sheets 5B, 7B, 8B, 10B, 11B, 12B, 13B, 14B, 15B, 17B, 18B, 19B, 20B, 21B, 22B, 23B, 24B, 25B, 26B, 28B, 29B, 30B, 31B, 32B, 34B, 34D, 35B, 37B, 38B, 39B, 40B, 41B, 43B, 44B,

Section 1R12: Maintenance Rule Implementation
Procedures: NMP-ES-002 System Monitoring and Health Reporting, NMP-ES-008 Component Health Monitoring Program
MWOs: 2050858801
Condition Reports: 2002000065, 2004: 4283, 7120, 10221, 10195, 2005: 0597, 0760, 2200, 3537, 3595, 4036, 5407, 6002, 6024, 6070, 6092, 6170, 6244, 6375, 6877, 7060, 7070, 7152, 7167, 7168, 7171, 7172, 7173, 7175, 7180, 7181, 7182, 7266, 7598, 7775, 8109, 8976, 9188
System Health Reports: Nuclear Boiler System 2nd Quarter 2005, Turbine Building Chilled Water System 2nd Quarter 2005

Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation
Condition Reports: 2005100921, 2005104699, 2005104154, 2005100798, 2005101038

Section 1R14: Personnel Performance During Non-routine Plant Evolutions
Procedures: 34AB-R81-001-0, 34AB-N71-001-1, 34SO-N71-001-1, 34GO-OPS-005-2

Section 1R15: Operability Evaluations
Condition Reports: 2005105950, 2005107851, 2005105990, 2005106013, 2005107008, 2005100786, 2005101397, 2005102734, 2005102567, 2005107140
Engineering Evaluation #1045
Calculation # SENH 97-014

Section 1R19: Post Maintenance Testing
51GM-MNT-048-0, 42EN-ENG-014-0, 51GM-MNT-025-0, 34SV-E11-002-2, 52GM-MEL-022-0
Condition Reports: 2005103438, 2005105103, 2005102652, 2005103431, 2005103477

Section 1R22: Surveillance Testing
Drawings: H-26020, 26021
Condition Reports: 2005100320, 2005101985, 2005102615, 2005105360, 2005105009, 2005105877, 2005107456
Procedures: 34AB-T23-003-1, 34SV-SUV-019-1

Section 1R23: Temporary Plant Modifications
Condition Reports: 2005105376, 2005105375, 2005103144

Section 4OA2: Identification and Resolution of Problems
CRs: 2004111128, 2004109448, 2004109447, 2004109986, 2004101168, 2004101917