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

July 8, 2005

EA-05-134

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 05000321/2005003 AND 05000366/2005003, PRELIMINARY WHITE FINDING

Dear Mr. Sumner:

On June 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 findings, which were discussed on July 1, 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.

During the inspection period, the NRC reviewed the circumstances involving removal of the Technical Support Center (TSC) from service on April 25, 2005, to perform ventilation system modifications. These modification activities were scheduled to proceed over a five week period during normal working hours with a normal maintenance staff contingent. Because of questions raised by the NRC, the modification activities were expedited such that the TSC was actually removed from service for the ten day period of April 25 to May 4, 2005. Based on the NRC's review of this issue, the removal of the TSC from service for this period represents a performance deficiency and an apparent violation of 10 CFR 50.54(q) and 10 CFR 50.47(b)(8), because facilities and equipment to support the emergency response were not provided and maintained. This apparent violation is identified as AV 05000321,366/2005003-01, Failure to Maintain Facilities and Equipment to Support Emergency Response.

This finding was assessed using the applicable Emergency Preparedness Significance Determination Process (SDP) and was preliminarily determined to be of low-to-moderate safety significance (White) because the failure to maintain adequate facilities and equipment to support emergency response represents a loss of a non-risk significant planning standard (PS), as discussed in NRC Manual Chapter 0609, Section 4.8. Additional details associated with this determination are discussed in Section 1R17 of the enclosed inspection report.

Before we make a final decision on this matter, we are providing you an opportunity to: (1) present to the NRC your perspectives on the facts and assumptions, used by the NRC to arrive at the finding and its significance, at a Regulatory Conference or (2) submit your position on the finding to the NRC in writing. If you request a Regulatory Conference, it should be held within 30 days of the receipt of this letter and we encourage you to submit supporting documentation at least one week prior to the conference in an effort to make the conference more efficient and effective. If a Regulatory Conference is held, it will be open for public observation. The NRC will also issue a press release to announce the conference. If you decide to submit only a written response, such submittal should be sent to the NRC within 30 days of the receipt of this letter.

Please contact Mr. Malcolm Widmann at (404) 562-4550 within 10 business days of the date of your receipt of this letter to notify the NRC of your intentions. If we have not heard from you within 10 days, we will continue with our significance determination decision and you will be advised by separate correspondence of the results of our deliberations on this matter.

Since this finding is an apparent violation of NRC requirements, escalated enforcement action is being considered in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at *www.nrc.gov*; select **What We Do, Enforcement**, then **Enforcement Policy**.

This report also 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 by K. Landis for/

Charles A. Casto, Director
Division of Reactor Projects

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

Enclosure: Inspection Report 05000321/2005003, and
05000366/2005003
w/Attachment: Supplemental Information

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SIGNATURE	CWR2	DSS	DSS for	MTW	LRM	DCP	CFE
NAME	CRapp	DSimpkins	JHickey	MWidmann	LMiller	CPayne	CEvans
DATE	07/08/2005	07/08/2005	07/08/2005	07/08/2005	07/08/2005	07/08/2005	07/08/2005
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-321, 50-366
License Nos:	DPR-57, NPF-5
Report No:	05000321/2005003, 05000366/2005003
Licensee:	Southern Nuclear Operating Company, Inc.
Facility:	Edwin I. Hatch Nuclear Plant
Location:	P.O. Box 2010 Baxley, Georgia 31515
Dates:	April 1 - June 30, 2005
Inspectors:	D. Simpkins, Senior Resident Inspector J. Hickey, Resident Inspector N. Staples, Reactor Inspector (Section 4OA5)
Approved Thru:	Malcolm T. Widmann, Chief Reactor Projects Branch 2 Division of Reactor Projects
Approved By:	Charles A. Casto, Director Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000321/2005-003, 05000366/2005-003; 04/01/2005 - 06/30/2005; Edwin I. Hatch Nuclear Plant Unit 1 and Unit 2; Permanent Plant Modifications, Other.

The report covered a three-month period of inspection by resident inspectors. One preliminary White violation was identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after 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. The inspectors identified a non-cited violation of Technical Specification 5.4.1.a because Abnormal Operating Procedure 34AB-X43-001-2, "Fire Procedure," was not adequate to preclude spurious opening of all eleven safety relief valves (SRVs) during plant fires. In lieu of protecting the cables, a local manual operator action was directed to preclude spurious opening of the SRVs as a result of fire damage to cables in the SRV control circuitry. The inspectors determined that the local manual operator action would not be performed in sufficient time to be effective.

  The finding is greater than minor because it affects the Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, spurious operation of all SRVs during certain fire scenarios could complicate post-fire recovery actions. The finding is associated with the protection against external factors attribute. The finding was evaluated using the Fire Protection SDP and was determined to be a finding of very low safety significance because the likelihood of starting a fire in Fire Area 2104 was very low and equipment needed to mitigate the transient caused by all SRVs opening would be unaffected by the fire. In addition, the inspectors verified the systems and equipment required to achieve and maintain hot shutdown conditions would remain free of fire damage and that safe shutdown capability could be achieved even with all SRVs open. (Section 4OA5)

Cornerstone: Emergency Preparedness

- White. The NRC identified an apparent violation associated with emergency preparedness planning standard 10 CFR 50.47(b)(8).

  This finding is greater than minor because it is associated with the Facilities and Equipment attribute of the Emergency Preparedness (EP) Cornerstone and impacts the objective of the Hatch TSC to maintain facilities and equipment to support emergency response in that the TSC was inoperable during the modification activities and could not be returned to operable within a short period. Based upon IMC 0609, Appendix B, Emergency Preparedness Significance Determination Process, Sheet 1, and the examples provided in Section 4.8, this finding was determined to be of low to

moderate safety significance (White) because the PS function was lost in that the TSC was inoperable for greater than seven days due to a planned outage in which activities were not scheduled to proceed with high priority for completion. (Section 1R17)

REPORT DETAILS

Summary of Plant Status

Unit 1 operated at or near 100% Rated Thermal Power (RTP) during the inspection period, except for some three power reductions related to equipment issues. On April 8, power was reduced to 90% RTP in response to the Moisture Separator Reheater AB Drain Tank high level control valve failing open. On April 10, power was reduced from 65% to 38% RTP to support replacement of two main turbine steam supply snubbers. On May 20 reactor power was reduced to about 65% RTP to repair an extraction steam line leak on a feedwater heater.

Unit 2 operated at or near 100% RTP during the inspection period, except for a load reduction on April 2 to 47% RTP to repair a condenser tube leak and a six-day maintenance shutdown on May 23 to repair a condenser tube leak.

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

1R01 Adverse Weather

a. Inspection Scope

Seasonal Readiness Review. The inspectors performed a seasonal review of the licensee hot weather preparations. The inspectors reviewed licensee procedure DI-OPS-56-0293, Hot Weather Operation, and walked down the completed portions of the procedure. The inspectors reviewed licensee document HNEL-WP-59, Drought Contingency Actions, and licensee procedure 34AB-Y22-002-0, Naturally Occurring Phenomena, to verify that the ultimate heat sink would remain operable for known summer related conditions. In addition, the inspectors reviewed the Technical Specifications (TS) and Final Safety Analysis Report (FSAR) to verify the four following systems would remain operable during peak high temperature summer months.

- Unit 1 Reactor Building Component Cooling Water (CCW)
- Unit 2 Reactor Building CCW
- Unit 1 Turbine Building CCW
- Unit 2 Turbine Building CCW

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial Walkdowns. The inspectors performed partial walkdowns of the following four 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) 2A during EDG 2C testing
- EDG 1B during EDG 1A testing
- Unit 2 Division I Plant Service Water (PSW) during 2D PSW pump motor replacement
- A and C Main Control Room Environmental Control (MCREC) system during a B MCREC outage

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, verify 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.

- Refueling Floor
- Unit 2 High Pressure Core Injection (HPCI) pump room
- Unit 2 Standby Gas and Reactor Building 185' level
- Unit 2 Reactor Core Isolation Cooling (RCIC) pump and turbine room
- Unit 2 Control Rod Drive (CRD) area 130' level
- Unit 2 Working Floor and Stack Monitoring Reactor Building 204' level
- Unit 2 Southeast Residual Heat Removal (RHR) and Core Spray (CS) room
- Unit 2 Reactor Building Working Floor 158' level
- Unit 1 and Unit 2 Condensate Storage Tanks
- Unit 2 CRD pump room
- Unit 2 Chiller Room Reactor Building 164' level
- Unit 2 Northeast RHR and CS room

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

Internal Flooding. The inspectors reviewed the FSAR and the individual plant examination to determine the plant areas that were susceptible to internal flooding events. The inspectors performed a detailed walkdown of the following two areas to

determine potential sources of internal flooding, the condition of penetrations in the rooms, and the condition of the sumps in the rooms. Documents reviewed are listed in the Attachment.

- Unit 1 Northeast diagonal - Loop A RHR/CS
- Unit 1 Southeast diagonal - Loop B RHR/CS

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-50618-01 which included a steam leak in the Turbine Building, Reactor Scram, Trip of the Reactor Feed Pumps, Loss of HPCI, and RCIC flow oscillations in automatic control. 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.

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. For the equipment issues identified below, the inspectors reviewed operator logs, associated Condition Reports (CR), Maintenance Work Orders (MWO) 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.

- MWO 1042371101 1B RHR Service Water Pump replacement
- Unit 2 HPCI Pump System outage.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the following six 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 4/25-29
- POD for Week of 5/7-13
- POD for Week of 5/14-20
- POD for Week of 5/21-27
- POD for Week of 6/4-10
- POD for Week of 6/11-17

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-routine Plant Evolutions

a. Inspection Scope

For the three events 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 power reduction to repair a condenser tube leak
- Unit 1 power reduction as a result of the Moisture Separator/Reheater Drain Tank AB High Level Control Valve failing open.
- Unit 2 rapid shutdown from high chlorides in the Main Condenser

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following five 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 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.

- Sealant contamination of the Unit 1 HPCI Booster Pump bearing oil
- Unit 1 Start-Up Auxiliary Transformer oil leak
- High reactor coolant boron concentration
- Jet pump integrity check failure
- Standby Liquid Control low level alarm calculations incorrect

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

a. Inspection Scope

Cumulative Review. The inspectors reviewed cumulative conditions on both units during the report period that required compensation by the operators. The inspectors reviewed the licensee's operator workarounds to assess the increase in plant risk due to the cumulative effects of all the items combined. The inspectors focused on the ability of operators to operate equipment affected by the workarounds during a plant event. The inspectors also reviewed the Operations Burdens and Needs list to verify no actions that could be an operator workaround existed. The inspectors reviewed licensee procedure DI-OPS-61-1196N, Control and Tracking of Operator Work-Arounds. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed the modifications to the Technical Support Center (TSC) ventilation system to determine whether they adversely affected the reliability or functional capability of the systems within the TSC. The inspectors reviewed the 10 CFR 50.59 and 10 CFR 50.54(q) evaluations to determine whether any of the changes decreased the effectiveness of the Emergency Plan. Documents reviewed are listed in the Attachment.

b. Findings

Introduction. The NRC identified an apparent violation associated with emergency preparedness planning standard 10 CFR 50.47(b)(8).

Description. On April 25, 2005, the licensee removed the designated TSC from service to perform ventilation system modifications which disabled both the normal and emergency modes of operation. The modification activities were scheduled to proceed during normal working hours with a normal maintenance staff contingent for a period of five weeks. To facilitate these modification activities, the licensee relocated the TSC to the control room as an alternate TSC location.

The inspectors reviewed the licensee's Emergency Plan and found that the control room could serve as an alternate TSC location "…in the event the TSC becomes uninhabitable during an emergency." The inspectors determined this provision was not applicable to the planned TSC modification activities. The inspectors also questioned if the TSC could be returned to service during the planned five-week outage duration. The licensee could not demonstrate that the TSC could be restored to operable status within a short period (approximately 30 minutes) in the event of an emergency requiring activation of the licensee's emergency response facilities. The licensee expedited the modification activities after the inspectors raised questions about the licensee meeting the requirements of 10 CFR 50.54(q) and 10 CFR 50.47(b)(8). The TSC was removed from service for the ten day period of April 25 to May 4, 2005.

Analysis. This finding is greater than minor because it is associated with the Facilities and Equipment attribute of the Emergency Preparedness (EP) Cornerstone and it impacts the objective of the Hatch TSC to maintain facilities and equipment to support emergency response in that the TSC was inoperable during the modification activities and could not be returned to operable within a short period. Based upon IMC 0609, Appendix B, Emergency Preparedness Significance Determination Process, Sheet 1, and the examples provided in Section 4.8, this finding was determined to be of low to moderate safety significance (White) because the planning standard (PS) function was lost in that the TSC was inoperable for greater than seven days due to a planned outage in which activities were not scheduled to proceed with high priority for completion.

Enforcement. 10 CFR 50.54(q) requires, in part, that a licensee authorized to operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in Section 50.47(b). 10 CFR 50.54(q) also states that a licensee may make changes to these plans without Commission approval only if the changes do not decrease the effectiveness of the plans, and the plans, if changed, continue to meet the standards of Part 50.47(b). 10 CFR 50.47(b)(8) requires that adequate emergency facilities and equipment to support the emergency response is provided and maintained. Section H of Revision 18 of the Edwin I. Hatch Nuclear Plant Emergency Plan, which implements the requirements of 10 CFR 50.47(b)(8), states that in the event that the TSC becomes "uninhabitable during an emergency," the control room will serve as an alternate TSC location.

Contrary to the above, between April 25 and May 4, 2005, the licensee failed to maintain in effect a provision of its emergency plan in that adequate emergency facilities and equipment to support the emergency response were not provided, and the licensee

failed to obtain prior Commission approval for a change to its plan. In this case, the licensee failed to follow and maintain in effect its emergency plan when the TSC was removed from service during this period to allow for modification activities. The removal of the TSC for the modification did not represent a condition in which the TSC was uninhabitable during an emergency. Additionally, the removal of the TSC from service during this period also represented a decrease in the effectiveness of the plan, for which the licensee did not obtain prior Commission approval.

This finding is identified as Apparent Violation (AV) 05000321, 05000366/2005003-01, Failure to Maintain Facilities and Equipment to Support Emergency Response. This issue has not yet been entered into the licensee's corrective action system. Corrective actions were taken, however, to restore the TSC to service on May 4, 2005, after the NRC became aware of and questioned the licensee's activities to remove the TSC from service.

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-2 RCIC Steam Supply Inboard Isolation Valve seat leakage 2E51F007
- Unit-1 Main Steam Isolation Valve Limit Switch remove/replace 1B21F028D
- Unit-2 RCIC Steam Supply to T&T Valve seat leakage 2E51F045
- Unit-1 PSW Supply Valve seat leakage 1P41F067
- Unit-2 Drywell Floor Drain Isolation Valve seat leakage 2G11F003
- Unit-1 1B RHR Service Water Pump replacement

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 six 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-B21-001-2, Main Steam Isolation Valve Exercise and 10% Closure Instrumentation Functional Test
- 34SV-P41-001-2, Plant Service Water Pump Operability
- 34SV-E51-002-2, RCIC Pump Operability

In-Service Tests
- 34SV-E11-002-1, RHR Valve Operability

Reactor Coolant System Leakage Tests
- 34SV-SUV-019-2, Surveillance Checks

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed and assessed the following temporary modification using criteria as defined in licensee procedure 40AC-ENG-018-0, Temporary Modification Control. The inspectors also verified the modification was installed in accordance with the temporary modification requirements.

- TMM 2-05-11, 2D PSW Pump Bypass Valve Internals Removed

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 6/22/05. The inspectors observed licensee activities in the simulator and TSC 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 73EIP-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.

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 NRC 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 the licensee's computerized database.

2. Annual Sample Review

a. Inspection Scope

The inspectors performed a detailed review of the following CR to verify the full extent of the issue was identified, an appropriate evaluation was performed, and appropriate corrective actions were specified and prioritized. The inspectors evaluated the CR against the licensee's corrective action program as delineated in licensee procedure NMP-GM-002, Corrective Action Program, and 10 CFR 50, Appendix B. Documents reviewed are listed in the Attachment.

- 2004107050, Switchyard PCB failure and Recirculation Pump Runback

b. Findings and Observations

No findings of significance were identified.

3. Semi-Annual Trend Review

a. Inspection Scope

As required by Inspection Procedure 71152, Identification and Resolution of Problems, the inspectors performed a review of the licensee's CAP and associated documents to identify trends which could indicate the existence of a more significant safety issue. The inspector's review was focused on repetitive equipment issues, but also considered the results of daily inspector CR item screening discussed in section 4OA2.1, licensee trending efforts, and licensee human performance results. The inspector's review nominally considered the six month period of January 2005 through June 2005, although some examples extended beyond those dates when the scope of the trend warranted. Inspectors also reviewed several CRs associated with operability determinations which occurred during the period. The inspectors compared and contrasted their results with the results contained in the licensees two latest quarterly trend reports. Corrective actions associated with a sample of the issues identified in the licensee's trend reports were reviewed for adequacy. The inspectors also evaluated the trend reports against

the requirements of the licensee's corrective action program as specified in licensee procedure NMP-GM-002, Corrective Action Program, and 10 CFR 50, Appendix B.

b. Assessment and Observations

No findings of significance were identified. The inspectors compared the licensee Quarterly Trend Report with the results of the inspectors' daily screening and did not identify any discrepancies or potential trends in the data the licensee had failed to identify.

4OA3 Event Followup

1. (Opened) NRC Bulletin 2005-01, Material Control and Accounting at Reactors and Wet Spent Fuel Storage Facilities

As a result of inventories conducted under NRC Bulletin 2005-01, Material Control and Accounting at Reactors and Wet Spent Fuel Storage Facilities, licensee personnel located three metal fragments in a bucket in the Unit 1 Spent Fuel Pool. Although the fragments appear to be fuel pin fragments, the licensee will conduct further analysis with offsite vendors to determine if the fragments actually contain fuel, and to determine the extent, if any, of additional special nuclear materials in the spent fuel pool. Pending the results of the evaluation, this issue will be opened as Unresolved Item (URI) 05000321, 366/2005005-02, Special Nuclear Material Accountability.

4OA5 Other

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

a. Inspection Scope

During the previous reporting period, inspectors collected data from licensee maintenance records, event reports, corrective action documents and procedures, and through interviews of station engineering, maintenance, and operations staff, as required by TI 2515/163. Appropriate documentation of the results was provided to headquarters staff for further analysis. This completes the Region II inspection requirements for this TI for the Edwin I. Hatch Nuclear Plant.

b. Findings

No findings of significance were identified.

2. (Closed) URI 05000366/2003006-02: Untimely and Unapproved Manual Operator Action for Post-Fire SSD

Introduction. A Green non-cited violation (NCV) of Technical Specification (TS) 5.4.1.a was identified because Abnormal Operating Procedure (AOP) 34AB-X43-001-2, Fire Procedure, was not adequate to preclude spurious opening of all eleven safety relief valves (SRVs) during plant fires. In lieu of protecting the cables, a local manual operator action was directed to preclude spurious opening of the SRVs that could result from fire damage to cables in the SRV control circuitry. The inspectors determined that the local manual operator

action would not be performed in sufficient time to be effective while mitigating a fire in Fire Area (FA) 2104.

Description. During the Hatch 2003 triennial fire protection inspection (IR 05000321,366/2003006), the team performed a circuit analysis review of the Group A SRVs for which the licensee took credit during a fire in Fire Area 2104 (Unit 2 East Cableway). The team identified that during a fire in Fire Area 2104, fire damage to two reactor pressure instrument cables, which were located in the same cable tray, could cause all eleven SRVs to spuriously open. The team noted that AOP 34AB-X43-001-2, Step 9.3.2.1, stated: "To prevent all eleven SRVs from opening simultaneously, open links BB-10 in Panel 2H11-P927 and BB-10 in Panel 2H11-P928." The team determined that Step 9.3.2.1 was sufficiently far back in the procedure that it may not be completed in time to prevent potential fire damage to cables from causing all eleven SRVs to spuriously open. Licensee operators estimated that it could take approximately 30 minutes to accomplish Step 9.3.2.1 during a fire event. The licensee had not done a calculation for the estimated completion time for this step during a fire event, nor was there an operator training job performance measure. NRC fire models indicated that fires could potentially cause damage to the cables in a period as short as five to ten minutes.

The team also determined that the opening of terminal board links was not in compliance with the plant's licensing basis. Current licensing basis documents, specifically Georgia Power request for exemption dated May 16, 1986, and a subsequent NRC Safety Evaluation Report (SER) dated January 2, 1987, characterized the opening of links as a repair activity that was not permitted as a means of complying with 10 CFR 50, Appendix R, Section III.G. The licensee had not obtained an exemption from Appendix R requirements to use a local manual operator action in lieu of protecting the cables.

The team concluded that during a fire event, the licensee's procedures would not ensure that Step 9.3.2.1 would be accomplished in sufficient time to prevent potential spurious opening of all eleven SRVs. In response to this issue, the licensee initiated CR 2003008203 and promptly revised AOP 34AB-X43-001-2 before the end of the inspection by moving the actions of Step 9.3.2.1 to the beginning of the procedure. The procedure change enabled the actions to be accomplished earlier during a fire in the Unit 2 East Cableway.

Analysis. The finding is greater than minor because it affects the Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, spurious operation of all SRVs during certain fire scenarios could complicate post-fire recovery actions. The finding is associated with the protection against external factors attribute. The finding was evaluated using the Fire Protection SDP and was determined to be a finding of very low safety significance because the likelihood of starting a fire in Fire Area 2104 was very low and equipment needed to mitigate the transient caused by all SRVs opening would be unaffected by the fire. In addition, the inspectors verified the systems and equipment required to achieve and maintain hot shutdown conditions would remain free of fire damage and that safe shutdown capability could be achieved even with all SRVs open.

Enforcement. TS 5.4.1.a requires written procedures be established, implemented and maintained covering the activities specified in Regulatory Guide 1.33, Appendix A. Regulatory Guide 1.33, Appendix A, Item 6v, requires procedures be implemented for fire events. Contrary to the above, AOP 34AB-X43-001-2, was not adequately implemented, in

that the performance of Step 9.3.2.1 would not be performed in a timely manner to prevent the spurious opening of all eleven SRVs. Because the procedure inadequacy is of very low safety significance, has been entered into the Licensee's Corrective Action Program (CR 2003008203, SRV Manual Action Steps in Fire Procedure), and has been corrected, this violation is being treated as an NCV, consistent with section VI.A of the NRC Enforcement Policy: NCV 05000366/2005003-03: Untimely and Unapproved Manual Operator Action for Post-Fire SSD.

4OA6 Meetings, Including Exit

On July 1, 2005, the inspectors presented the inspection results to Mr. George Frederick and the other members of his staff who acknowledged the observations. The inspectors confirmed proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel
R. Dedrickson, Former Assistant General Manager - Plant Support
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
J. Thompson, Nuclear Security Manager
R. Varnadore, Engineering Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000321, 366/2005003-01	AV	Failure to Maintain Facilities and Equipment to Support Emergency Response (Section 1R17)
05000321, 366/2005003-02	URI	Special Nuclear Material Control and Accountability (Section 4OA3)

Closed

2515/163	TI	Operational Readiness of Offsite Power
05000366/2003006-02	URI	Untimely and Unapproved Manual Operator Action for Post-Fire SSD (Section 4OA5)

Opened and Closed

05000366/2005003-03	NCV	Untimely and Unapproved Manual Operator Action for Post-Fire SSD (Section 4OA5)

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment
Drawings: H-21074, H-11037, H-11038, H-11631, H-11638, H-21033, H-26080, H-26081, H-26025, H-26008
34AB-R43-001-1, Diesel Generator Recovery
34SO-R43-001-1, Diesel Generator Standby AC System
34SO-P41-005-2, Standby Diesel Service Water System
34SO-P41-001-2, Plant Service Water System
34SO-R43-001-2 Diesel Generator Standby AC System

Section 1R05: Fire Protection
Drawings: A-43965 sheets 074B, 123B, 099B, 100B, 101B, 102B, 103B, 106B, 107B, 109B, 110B, 112B, 115B, 118B, 119B, 120B, 121B, 122B, A-43966 Sheets 043B, 044B

Section 1R06: Flood Protection Measures
CRs: 2004110096, 2004110289, 2004110398, 2004110690, 2005100537, 2005101287, 2005101859, 2005102081, 2005102293, 2005103457

Section 1R12: Maintenance Effectiveness
CRs: 2004107110, 2004104914, 2005105639, 2005105743, 2004102600, 2003006958, 2003006959, 2003005966
Purchase Order 6055810
MWOs: 1042371101, 2040629404, 2040923501, 2040628201, 2030404101, 2040629601, 2030152004, 2040630201, 2030082601
Unit 1 System Health Summary Matrix
Unit 2 System Health Summary Matrix

Section 1R14: Personnel Performance During Non-routine Plant Evolutions
CRs: 2005104174, 2005105574, 2005105575, 2005105576, 2005105577, 2005105578, 2005105616, 2005105592, 2005105593
34SP-09-18-03-BG-2-1, Unit 1 Feedwater Level Control Dynamic Test for Appendix K Uprate
34GO-OPS-005, Power Changes
34GO-OPS-014-2, Fast Reactor Shutdown
34AB-N71-001-2, Circulating Water System Failure
34AB-N61-001-2, Condenser Tube Leaks/Chemical Intrusion
Drawing H-13379, H-43108, H-44767

Section 1R15: Operability Evaluations
00AC-REG-006-0, Operability Determinations
34SV-SUV-023-3, Jet Pump and Recirculation Flow Mismatch Operability
CRs: 2005105358, 2005101375, 2005100853, 2005104830, 2005105778, 2005105284
General Electric Nuclear Energy Services Information Letter #637
Drawings:

Section 1R16 Operator Work-Arounds
CRs: 2005100182, 2005100183, 2005104036
MWO 1050695301

Section 1R17 Permanent Plant Modifications
Plant Hatch Response to Generic Letter 81-10, Conceptual Design Description of TSC and EOF
TSC Functional Requirements Assessment
May 17, 2005 SNC Briefing for NRC on TSC Functional Requirements
73EP-EIP-063-0, Technical Support Center Activation
73EP-EIP-073-0, Offsite Emergency Notifications
CRs: 2005104860, 2005104865, 2005105007
10 CFR 50.54(q) Evaluation for DCR 99-049
DCR 99-049, Unit 1 SPDS Replacement

Section 1R19: Post Maintenance Testing
CRs: 2004108352, 2005105743
34SV-E11-004-1, RHR Service Water Pump Operability
51GM-MNT-002-0S, Maintenance Housekeeping and Foreign Material Control
34SV-SUV-008-2, Primary Containment Isolation Valve Operability

42IT-TET-004-0, Operating Pressure Testing of Piping and Components
95IT-OTM-001-0 Maintenance Work Order Functional Test Guideline
53IT-TET-002-0 Valves Operation Test and Evaluation System
34IT-OPS-004-0 Dynamic MOV Testing
34SO-E51-001-2 Reactor Core Isolation Cooling (RCIC) System
34SV-SUV-016-2 Cold Shutdown Valve Operability
42IT-TET-006-2 ISI Pressure Test of the Class 1 System and Recirc Pump Runback Test
34SV-B21-001-1 MSIV Exercise and Closure Instrument Functional Test
MWOs: 1042371101, 2050546901, 1020111301, 2030497301, 2050511601, 1030075501
Drawings: H-16011

Section 1R22: Surveillance Testing
CRs: 2005101979, 2005104190, 2005104376, 2005104485, 2005104036, 2004106409, 2004109383, 2004106902, 2003110262, 2005104684, 2005104685, 2005104773

Section 1EP6: Drill Evaluation
CRs: 2005106477, 2005106460, 2005106457, 2005106454, 2005106455, 2005106456, 2005106453

Section 4OA2: Identification and Resolution of Problems
Action Items: 2004202909, 2004202911, 2004202912, 2004202913, 2004202914, 2004202915

Section 4OA5: Other
AOP 34AB-X43-001-2, Fire Procedure, Version 10.8
Drawings: H-11821, H-26014, H-26015, H-26018, H-11821
CR 2003008203

Calculations, Analyses, and Evaluations
E. I. Hatch Nuclear Plant Units 1 and 2 Safe Shutdown Analysis Report, Rev. 20.
Edwin I. Hatch Nuclear Plant Fire Hazards Analysis and Fire Protection Program, Rev. 20

License Basis Documents
Hatch UFSAR Section 6.3, Emergency Core Cooling System, Rev. 21
Safe Shutdown Analysis Report for E.I. Hatch Nuclear Plant Units 1 and 2, Rev. 26
Fire Hazards Analysis for E. I. Hatch Nuclear Plant Units 1 and 2, Rev.18 C, dated 7/00