



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

January 29, 2008

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

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC INTEGRATED INSPECTION  
REPORT 05000321/2007005, 05000366/2007005 AND RELEASE OF OFFICE  
OF INVESTIGATION SYNOPSIS

Dear Mr. Madison:

On December 31, 2007, 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 January 22, 2008, with yourself 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. The enclosed inspection report documents one self-revealing finding of very low safety significance which did not involve a violation of NRC requirements.

Also, enclosed for your information are two synopses of NRC Office of Investigations' (OI) completed reports. The first regarded failure to comply with radiation protection procedures. OI determined that there was insufficient evidence to substantiate the allegation that a contract worker willfully failed to comply with the applicable radiation protection procedure while exiting the Radiation Controlled Area with hand carried items. The second regarded a Hatch Nuclear Plant employee assisting workers with taking General Employee Training (GET) tests. OI could not substantiate that an employee assisted workers taking the GET tests. We plan no further action with regard to these matters.

SNC

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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, Chief  
Reactor Projects Branch 2  
Division of Reactor Projects

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

Enclosures: 1. Inspection Report 05000321/2007005,  
05000366/2007005  
w/Attachment: Supplemental Information  
2. Investigative Synopsis, OI Case No. 2-2007-016  
3. Investigative Synopsis, OI Case No. 2-2007-020

cc w/encl: (See page 3)

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cc w/encl: (See page 3)

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Letter to Dennis R. Madison from Scott M. Shaeffer dated January 29, 2008

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC INTEGRATED INSPECTION  
REPORT 05000321/2007005, 05000366/2007005 AND RELEASE OF OFFICE  
OF INVESTIGATION SYNOPSIS

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**U. S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket Nos.: 50-321, 50-366

License Nos.: DPR-57 and NPF-5

Report Nos.: 05000321/2007005, 05000366/2007005

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Edwin I. Hatch Nuclear Plant

Location: Baxley, Georgia 31515

Dates: October 1, 2007 - December 31, 2007

Inspectors: J. Hickey, Senior Resident Inspector  
P. Niebaum, Resident Inspector  
C. Stancil, Resident Inspector  
R. Chou, Reactor Inspector (Section 1R07)

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

## SUMMARY OF FINDINGS

IR 05000321/2007-005, 05000366/2007-005; 10/1/2007-12/31/2007; Edwin I. Hatch Nuclear Plant, Units 1 and 2, Event Followup

The report covered a three-month period of inspection by resident inspectors and one DRS inspector. One Green finding was identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 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.

### A. NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

- Green. A Green self-revealing finding was identified for the licensee's failure to follow proper work practices during construction of two test leads in accordance with skill of the craft training. The failure of the test leads resulted in an abrupt speed decrease in the Unit 2 'B' Recirculation Pump and a reactor power reduction.

The inspectors determined that a performance deficiency existed because work practices were not followed in accordance with skill-of-the-craft training. This finding is greater than minor because it is associated with the human performance attribute of the Initiating Event Cornerstone and affected the objective in that it resulted in a rapid 2B recirculation pump speed reduction and reactor power transient. This finding was determined to be of very low safety significance because there were no complications associated with this transient and all mitigation systems remained available. The inspectors did not identify a specific cross-cutting aspect associated with this issue. (Section 4OA3)

### B. Licensee-Identified Violations

None.

## REPORT DETAILS

### Summary of Plant Status

Unit 1 operated at or near 100% RTP for the inspection period.

Unit 2 began the inspection period at 100% RTP. On October 26, a reduction to 62% RTP occurred while removing test equipment from the 2B Recirc MG set. Power was restored to 100% RTP on October 27. The unit operated at or near 100% RTP for the remainder of the inspection period.

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 licensee cold weather preparations. The inspectors reviewed licensee procedure DI-OPS-36-0989, Cold Weather Checks, and walked down the completed portions of the procedure. In addition, the inspectors reviewed the Technical Specifications (TS), Final Safety Analysis Report (FSAR) and drawings H-13395, H-23395 and H-12613 to verify the following three systems would remain operable during cold weather.

- Emergency Diesel Generators (EDG)
- Plant Service Water System at Intake Structure
- Fire Protection System

##### 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.

- Unit 2 Standby Gas and HVAC Rooms RB 185'
- Unit 2 Working Floor and Stack Monitoring Rooms RB 203'
- Unit 2 EDG Area 130'

- Unit 2 Switchgear Rooms EDG 130'
- Condensate Storage Tanks Unit 1 and Unit 2
- Service Water Valve Pits
- Intake Structure
- Diesel Fuel Oil Storage Tanks
- Railroad Airlock
- Unit 1 RWCU Equipment Room RB 185'
- Unit 1 EDG Area 130'
- Unit 1 Switchgear Rooms DG 130'

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

Biennial Heat Sink Performance. The inspectors reviewed inspection records, test results, and other documentation to ensure that heat exchanger (HX) deficiencies that could mask or degrade performance were identified and corrected. The test procedures and records were also reviewed to verify that these were consistent with Generic Letter 89 -13 licensee commitments, and industry guidelines. Risk significant HXs reviewed included the EDG HXs and Safeguard Equipment Area Room, the B/D Residual Heat Removal (RHR) & Core Spray Pump Area, the High Pressure Coolant Injection (HPCI), and Reactor Core Isolation Cooling room coolers. In addition, the inspectors also performed a walkdown of the intake channel and discharge outlet structures for the cooling water inlet and outlet to assess general material condition and to identify any degraded conditions of the structures. The inspectors also observed the performance testing for the Safeguard Equipment Area Room Coolers.

The inspectors reviewed site and corporate HX programs, procedures, minimum flow requirements, testing, inspections, cleaning, calculations, drawings, modifications, condition reports (CRs), and system health reports. The inspectors reviewed performance testing procedures, data collections, analyses, and acceptance criteria for Safeguard Equipment room coolers and Plant Service Water (PSW) and RHR Service Water (RHRSW) pump motor oil coolers. The inspectors reviewed HX and component inspection reports and Work Orders for EDG HXs, Intake Structures, Intake Traveling Screens, and the Intake Suction Pit. The reports and work orders included cleaning, debris removal, inspections, tube plugging, data sheets, evaluations, verification sign-off sheets, and operations clearance/release forms. For the EDG HX bundle replacements (jacket coolant, lube oil, and air), Eddy Current Tests were performed and the reports were reviewed. These documents were reviewed to verify inspection methods were consistent with industry standards, to verify HX design margins were being maintained, and to verify performance of the HXs under the current maintenance frequency was adequate.

The inspectors also reviewed general health of the PSW system via review of design basis documents, system health reports, annual intake structure diver inspections and cleaning, water sampling results, and corrosion monitoring. These documents were reviewed to verify design basis were being maintained and to verify adequate PSW system performance under current preventive maintenance, inspections and frequencies.

The inspector discussed the results of cleaning and inspection of HXs, Intake Structures, Intake Suction Pit, and water sampling with the PSW system engineer and a plant chemist for the presence of macroscopic biologic fouling such as Asiatic Clams and Zebra Mussels. The inspectors also reviewed modification packages to ensure components, system repairs, or replacements met the design requirements.

Condition report and corrective maintenance history were reviewed for potential common cause problems and problems which could affect system performance to confirm that the licensee was entering problems into the corrective action program and initiating appropriate corrective actions.

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-50904-06, which included power at 60% and restoration of the 2B Reactor Feed Pump Turbine following maintenance, an Safety Relief Valve (SRV) fails open, the operating Control Rod Drive (CRD) flow control valve fails, Instrument Air header leaks that cause the scram discharge volume (SDV) isolation valves to close, a manual reactor scram, an anticipated trip without scram condition, Main Steam Isolation Valves (MSIVs) drifting closed, and entry into the Emergency Operating Procedures. The inspectors reviewed licensee procedures 10AC-MGR-019-0, Procedure Use and Adherence, and DI-OPS-59-0896, Operations Management Expectations, to verify formality of communication, procedure usage, alarm response, control board manipulations, group dynamics, and supervisory oversight. The inspectors attended the post-exercise critique of operator performance to assess if the licensee identified performance issues were comparable to those identified by the inspectors. In addition, the inspectors reviewed the critique results from previous training sessions to assess performance improvement.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectivenessa. Inspection Scope

The inspectors reviewed the following three samples 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 (MWO), and the licensee's procedures for implementing the Maintenance Rule 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 1 and 2 Neutron Monitoring System
- Unit 1 and Unit 2 Traveling Water Screen System
- Unit 2 Analog Trip & Transmitter System

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluationa. Inspection Scope

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

- October 8 through 12, Switchyard breaker 179480 replacement, 1C PSW Pump Motor replacement, Unit 2 SDV Functional Test & Calibration.
- October 27 through November 2, Intake Structure cleaning, Upstream Traveling Water Screen preventive maintenance, Unit 2 Alternate Reactor Protection System Power Supply preventive maintenance.
- November 10 through 16, Switchyard Breaker 179470 replacement, Unit 1 1B21N081A Analog Trip & Transmitter Calibration, Unit 2 CDR Pump "B" replacement
- November 19 through 22, 1B EDG Battery Charger calibration, Unit 2 CRD Pump "B" replacement, Unit 2 Reactor Manual Scram functional test
- November 3 through 9, Switchyard Breaker 179470 replacement, 1C RHR Pump Discharge Check Valve repair, 1A CRD Pump maintenance

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

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

- Unit 1 Replacement of the 1B EDG Batteries
- 1C RHRSW Pump Motor varnish flaking
- EDG Minimum Water Jacket and Lube Oil Temperatures

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, as well as the implementing procedures and calculations. Documents reviewed are listed in the Attachment.

- Unit 2 MSIV Limit Switch Replacement

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

For the following seven post maintenance tests, the inspectors reviewed the test scope to verify the test demonstrated the work performed was completed correctly and the affected equipment was functional and operable in accordance with TS requirements.

The inspectors also reviewed equipment status and alignment to verify the system or component was available to perform the required safety function. Documents reviewed are listed in the Attachment.

- 2P42C001C 2C, Reactor Building Closed Cooling Water (RBCCW) Pump/Motor Coupling Replacement
- 2R24S012, Motor Control Center door handle repair
- 2E11F119A , RHRSW System Cross-tie Motor Operated Valve operator inspection
- 1E11C001D, RHRSW Pump Seismic Support repair
- 1E11C002C, RHR Pump Cooler Inlet Valve disassembly/repair
- 1E11F031C, 1C RHR Pump Discharge Check Valve disassembly/repair
- 2P41F035B, HPCI Cooler Outlet Valve diagnostic test

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

Surveillance Tests

- 34SV-C41-002-1, 1A Standby Liquid Control Pump Operability Test
- 34SV-T22-001-0, Secondary Containment Test
- 34SV-R43-002-2, 1B EDG Monthly Run

In-Service Test

- 34SV-E41-001-1, Unit 1 HPCI Valve Operability

b. Findings

No findings of significance were identified.

## 1R23 Temporary Modifications

### a. Inspection Scope

The inspectors reviewed the following temporary modification (TMM) and assessed each evaluation using criteria defined in licensee procedure 40AC-ENG-018-0, Temporary Modification Control. In addition, the 10 CFR 50.59 screening and evaluation 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 1-06-026, 125VDC Battery 1R42-S002B Replacement

### b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

## 1EP6 Drill Evaluation

### a. Inspection Scope

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

- Emergency Plan Drill conducted on November 11

### b. Findings

No findings of significance were identified.

#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator (PI) Verification

###### a. Inspection Scope

The inspectors reviewed a sample of the licensee submittals for the PIs listed below to verify the accuracy of the data reported. The PI definitions and the guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Rev. 2 and licensee procedure 00AC-REG-005-0S, Preparation And Reporting Of NRC PI Data, were used to verify procedure and reporting requirements were met.

###### Cornerstone: Initiating Events

- Unplanned Scrams per 7000 Critical Hours
- Unplanned Scrams with Complications
- Unplanned Power Changes per 7000 Critical Hours

###### Cornerstone: Mitigating Systems

- Mitigating Systems Performance Index (MSPI), Emergency AC Power System
- MSPI, High Pressure Coolant Injection System
- MSPI, Heat Removal System
- MSPI, Residual Heat Removal System
- MSPI, Cooling Water Systems
- Safety System Functional Failures

###### Cornerstone: Barrier Integrity

- Reactor Coolant System Leakage
- Reactor Coolant System Activity

The inspectors reviewed raw PI data collected since May 2006 for the Barrier Integrity indicators identified, since September 2006 for the Initiating Events indicators identified and since December 2006 for the Mitigating Systems indicators identified. The inspectors compared graphical representations from the most recent PI report to the raw data to verify the data was included in the report. The inspectors also examined a sampling of operations logs and procedures to verify the PI data was appropriately captured for inclusion into the PI report, and the individual PIs were calculated correctly. Licensee event reports issued during the referenced time frame were also reviewed for safety system functional failures and are listed in Attachment.

###### b. Findings

No findings of significance were identified.

## 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.

### .2 Annual Sample Review

#### a. Inspection Scope

The inspectors performed a detailed review of the following CR and Operator Work Arounds (OWA) to verify the full extent of the issues were 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.

- 2007107640, Continuous operation of three RBCCW Pumps
- Operations Work Arounds, Burdens, and Needs list dated November 11, 2007

#### b. Findings and Observations

No findings of significance were identified. The inspectors had the following observations:

- The inspectors determined the disposition of CR 2007107640 was narrowly focused on developing a section in the operating procedure to allow continuous operation of three RBCCW pumps. The inspectors identified additional weaknesses in the operators use of procedures and decision making. Following questioning by the inspectors, the licensee took action to brief the operating crews on procedural usage and decision making expectations.
- The inspectors evaluated the cumulative impact of the OWAs identified as of November 11, 2007. They included recirc MG set step speed changes, load reductions required due to elevated condensate temperatures during the summer, and 1A RHR pump vibration when operating in certain flow values. The inspectors determined the licensee's compensatory measures and corrective action plans were adequate.

### .3 Semi-Annual Trend Review

#### a. Inspection Scope

The inspectors performed a review of the licensee's Corrective Action Program and associated documents to identify trends which could indicate the existence of a more significant safety issue. The review was focused on repetitive equipment issues, but also considered the results of inspector daily CR screening, licensee trending efforts, and licensee human performance results. The review nominally considered the six month period of July 2007 through December 2007 although some examples extended beyond those dates when the scope of the trend warranted. The 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 licensee's two latest Integrated Performance Assessments (IPAs). 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. Documents reviewed are listed in the Attachment.

#### b. Assessment and Observations

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

### 4OA3 Event Followup

#### a. Inspection Scope

On October 26, a rapid speed reduction of the 2B Recirculation Pump caused reactor power to decrease from 100% to 62%. The speed reduction occurred while workers were preparing to remove data recorders connected to the scoop tube positioner circuit. Reactor power momentarily traversed into the "Immediate Exit" region of the Power/Flow Map as expected, and operators manually reduced power to the "Analyzed Region" of the Power/Flow Map. Power was later restored in a controlled manner to 100%.

As part of the follow up to this event, the inspectors reviewed operator logs, plant computer data, and strip charts to determine what occurred and how the operators responded, and to determine if the response was in accordance with plant procedures. Additionally, the inspectors attended the human performance board meeting and discussed the event with operations and maintenance to gain an understanding of the event and assess information leading up to the transient. The inspectors later reviewed the root cause determination to assess the detail of review and adequacy of the root cause and proposed corrective actions. The documents reviewed are listed in the Attachment.

b. Findings

Introduction: A Green self-revealing finding was identified for the licensee's failure to follow proper work practices during construction of two test leads in accordance with skill of the craft training. The failure of the test leads resulted in an abrupt speed decrease in the Unit 2 'B' Recirculation Pump and a reactor power reduction.

Description: The 2B recirculation pump experienced a rapid speed decrease during removal of test leads associated with the scoop tube positioner data recorder. When a technician was removing tape from the test leads, two test leads were inadvertently pulled from the data recorder due to improperly crimped lugs that attached the test leads to the recorder. The other end of the test leads remained connected to the scoop tube positioner terminal board. This condition resulted in the test leads shorting which caused a reduction in the positioner input signal. The scoop tube changed position to match the reduced input signal which caused a rapid speed reduction of the 2B recirculation pump from 96% to approximately 38%. Subsequently, a reactor power reduction to 62% occurred which coincided with the 'Immediate Exit' region of the power/flow map. Operators entered the appropriate annunciator response procedure and initiated action to further reduce reactor power to exit the 'Immediate Exit' region. After stabilizing reactor power and the recirculation loop flows were matched, power was restored to 100%.

Analysis: The inspectors determined that a performance deficiency existed because work practices were not followed in accordance with skill-of-the-craft training. This finding is greater than minor because it is associated with the human performance attribute of the Initiating Event Cornerstone and affected the objective in that it resulted in a rapid 2B recirculation pump speed reduction and reactor power transient. This finding was determined to be of very low safety significance because there were no complications associated with this transient and all mitigation systems remained available. The inspectors did not identify an applicable cross-cutting aspect.

Enforcement: Enforcement action does not apply because the performance deficiency did not involve a violation of a regulatory requirement. This finding is identified as FIN 05000366/2007005-01, Improper Test Lead Construction Results in Plant Transient.

4OA5 Other

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

a. Inspection Scope

The inspectors reviewed selected ISFSI operations to verify that the licensee performed ISFSI activities safely and in compliance with approved procedures. The inspectors reviewed records to verify that the licensee had properly identified the parameters of each fuel assembly loaded, and that a physical inventory had been performed on all spent fuel in the ISFSI on a frequency of at least every 12 months.

- Licensing Document Change Request 2006-046DC, Revision of the HNP 10 CFR 72.212 Report to incorporate CoC 1014, Amendment 2 and HI-STORM 100 FSAR 3

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On January 22, 2008, the inspectors presented the inspection results to Mr. Dennis Madison 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



Miscellaneous

System Health Reports for Plant Service Water, Emergency generators, and residual heat removal systems, 2nd Quarter 2007

Work Order (WO) 1052048201, Perform 52PM-MME-006-06S on Unit 1 and 2 Intake Suction Pit Inspection, 11/2006, 10/2007

WO 1060599501, Perform External Underwater inspection Per Applicable Procedure on 1W33-E003B (Down River Traveling Water Screen), 11/2006

WO 1060599301, Perform External Underwater inspection Per Applicable Procedure on 1W33-E003A (Upstream Traveling Water Screen), 11/2006

WO 1062224601, Perform External Underwater inspection Per Applicable Procedure on 1W33-E003B (Down River Traveling Water Screen), 10/2007

WO 1062224501, Perform External Underwater inspection Per Applicable Procedure on 1W33-E003A (Upstream Traveling Water Screen), 10/2007

Design Change Package (DCP) DCR-01-018, MCR HVAC Condenser Water Regulation Valves DCP C019003301, Intake Structure Supports

Minor Design Change Package 2052973501, Unit 2 Condensate Motor Hanson Quick Disconnect Isolation Valves

Structural Monitoring 2005, 2006, 2007

Calibration report Packet for Resistance Thermometer Devices and Material and Service Provided by Sensor Tec Inc.

Cleaning History Charts for 1T41-B003A, B/D RHR & B CS Pump Area Cooler, 2T41-B005A, HPCI Area Cooler, and 1T41-B004A, RCIC Area Cooler

Record of Eddy Current Inspection of replacement Diesel Bundles 1C, 11/2004

Preliminary report of Eddy Current Inspection for Emergency Diesel Generator 1B replacement Bundles by Integrated Technologies, Inc., Dated 06/2006

Eddy Current Inspection Report for Diesel Bundles 1A, Dated 04/2007

Drawing H-12192, Piping – Service Water at River Intake Structure, Unit 1, Rev.10.0

Drawing H-11142, Piping – Service Water at River Intake Structure, Unit 1, Rev.33.0

Condition Reports (CRs) 2007111024, 2007102031, 2007104138, 2007108931, 2007102947, 2007100953, 2006108008, 2006111848, 2006107057, 2006102098, 2006110354, and 2005111775

Unit 1 Plant Service Water Measurements – Sample point, Analysis, and Sample date, from June 01 to December 13, 2007

Unit 2 Plant Service Water Measurements – Sample point, Analysis, and Sample date, from June 01 to December 13, 2007

PSW Corrosion Program, Untreated Corrosion Rates, and Trial Results by NALCO for 2006 & 2007

**Section 1R12: Maintenance Effectiveness**

System Health Report for the Unit 1 and Unit 2 Neutron Monitoring System

NMP-ES-002, System Monitoring and Health Reporting

System Health Report for the Unit 1 and Unit 2 EDGs

System Health Report for the Unit 2 Analog Trip and Transmitter System

NMP-ES-002, System Monitoring and Health Reporting

MWOs: 1051076501, 1041508601, 1051076501, 1061670001, 1061670101, 1061670201,

2070009401, 2070009601, 2061670301, 2061670401, 2062582201, 1042995701,

1071985501, 1060884901, 1060887301, 2070786901, 1051106901, 2061192201 1051106801,

1070820901, 2071490101, 1070414001

CRs: 2006111821, 2004111628, 2006106015, 2007106157, 2006100390, 2006104748, 2007104490, 2007104491, 2006109692, 2007105020, 2007103456, 2007108369, 2007103297, 2004107257, 2005101546, 2005101547, 2004108584, 2006104022, 2006104073  
Action Item: 2007203213

### **Section 1R15: Operability Evaluations**

TMM: 1-06-026

SPP: 42SP-10-10-06-OG-1-1, 125VDC Battery 1R42-S002B Replacement

Procedure: 34-SO-R42-001-1, 125VDC and 125/250 VDC System

MWO: 1051374114

Drawing: H-13611

Documentation of Engineering Judgement: DOEJ-SE-1062055301-001

CRs: 2006111132, 2006100316, 2005104562, 2007110370

RHR C060097901

Design Verification Summary SMNH-06-007

ABN 06-93

Annunciator Response Procedure 34AR-R43-103-1 and 105-1

### **Section 1R17: Permanent Plant Modifications**

Design Change Package 2051462201 Unit 2 MSIVs Limit Switch Replacement

### **Section 1R19: Post Maintenance Testing**

MWOs: 2070617001, 2042717701, 1042679301, 1041930901, 1071881401, 2050001701, 2072257101

Procedures:

NMP-ES-016-003, Identification and Control of 10 CFR 50.49 Work Activities

51GM-MNT-002-0S, Maintenance Cleanliness Inspection & Work Area Restoration

NMP-MA-009-F01, FME Checklist

52PM-R24-001-0, Allis Chalmers Low Voltage MCR Inspection

52PM-MNT-005-0, Limitorque Valve Operator Inspection

NMP-ES-024-203, Visual Examination (VT-3)

ENG-0478, Section XI Applicability Checklist

ENG-0479, Repair Replacement Plant

ENG-0943, Section XI Examination Plan

52PM-E11-005-1, Unit 1 RHR Service Water Pump and Motor Maintenance

57CP-CAL-250-0, Flow Scanner Data Acquisition

52CM-MM-024-0, Fisher Type 657 Actuators Sizes 30-70 and 87

52CM-MM-001-0, Packing Valves, Adjusting Packing, and Stroking Valves

52CM-MM-017-0, Fisher Control Design ED, EAD, ES, EAS, ET, EAT, EWD, & EWT. Valves

42IT-TET-012-1S, Plant Service Water and RHR Service Water Piping Inspection Procedure

51GM-MNT-033-0, Torque of Pressure Boundary Applications

42SV-SUV-040-1, Check Valve Internals Inspection Checklist

51GM-MNT-017-0, Control of Lubricants

52PM-P42-001-0, RBCCW System Maintenance

95IT-OTM-001-0 Maintenance Work Order Functional Test Guideline

51GM-MNT-032-0 Component Alignment of Rotating Equipment

CRs: 2007108957, 2007109095

**Section 1R22: Surveillance Testing**

Procedure: 57CP-CAL-029-0, GE/Westronics/Bailey Recorders  
 34SV-E41-001-1, HPCI Valve Operability  
 34SO-E41-001-1, High Pressure Coolant Injection (HPCI) System  
 31-GO-INS-001-0, Pump and Valve Inservice Testing (IST)  
 Drawing: H-16332, Sheets 01 and 02  
 CRs: 2007110920, 2007109786  
 Data Sheet A-26462-T46-A

**Section 1R23: Temporary Plant Modifications**

SPP: 42SP-10-10-06-OG-1-1, 125VDC Battery 1R42-S002B Replacement  
 MWO: 1051374122  
 Drawing: H-13611  
 Documentation of Engineering Judgement: DOEJ-SE-1062055301-001

**Section 1EP6: Drill Evaluation**

Scenario for HNP Emergency Preparedness 2007 Exercise (November 11, 2007)  
 Southern Nuclear Emergency Notification Forms

**Section 4OA1: Performance Indicator Verification**

CRs: 2006111821, 2007100119, 2007101308, 2007101351, 2007103319, 2007103787,  
 2007105455, 2007101699, 2007100780, 2007101886, 2007101887, 2007110392,  
 2007104398,  
 Procedure: 64CH-SAM-025-0, Reactor Coolant Sampling and Analysis  
 Unit 2 Iodine-131 Equivalence Report for October 30, 2007  
 SNC Calculation NF-H-07-038 Version 1  
 LERs: Unit 1, 2006-004  
 Unit 2, 2007-001, 2007-002, 2007-003, 2007-006  
 Root Cause Determination Report for CR 2007104398  
 MSPI Basis Document Version B

**Section 4OA2: Identification and Resolution of Problems**

10AC-MGR-019-0, Procedure Use and Adherence  
 NMP-AD-010, 10CFR 50.59 Screenings and Evaluations  
 Apparent Cause Determination Grading Sheet  
 Quarterly Integrated Performance Assessment  
 Trend Evaluation File  
 Corrective Action Program Performance Indicators  
 Operation Decision-Making Issue Worksheets: Unit 1C RHR Discharge Check Valve not  
 seating properly, SAT 1S Oil Level Alarm

**Section 4OA3: Event Follow-up**

CR 2007109812  
 34AB-B31-001-2, Reactor Recirculation Pump(s) Trip or Recirculation Loops Flow Mismatch  
 34SO-B31-001-2S, Reactor Recirculation System  
 34SV-SUV-023-2S Jet Pump and Recirculation Flow Mismatch Operability

34-GO-OPS-005-2, Power Changes  
NMP-DP-001, Operational Risk Awareness  
52GM-MEL-003-0 Cable/Raceway Installation and Cable Termination  
Root Cause Determination Report for 2007109812  
Drawing H-27493, H-27494  
Lesson Plan: IC-LP-00103-01 Wire and Cable Terminations  
MWO 2071016701

**Section 4OA5: Other**

Forms: ENG-0124, ICA Transfer Authorization  
ENG-125, SNM Unit Physical Inventory  
CR 2007110185

## SYNOPSIS

This investigation was initiated on March 15, 2007, by the U.S. Nuclear Regulatory Commission (NRC), Office of Investigations (OI), Region II (RII), to determine whether a former Millwright employed by Williams Plant Services, LLC (Williams), and who performed contract work at Southern Nuclear Operating Company's (Southern Nuclear) Edwin L. Hatch Nuclear Plant (Hatch Plant) in March 2007, willfully failed to comply with the applicable radiation protection procedure while exiting the Radiation Controlled Area (RCA) with hand carried items.

Based on the evidence developed, this investigation did not substantiate the allegation that a former Millwright, employed by Williams and who performed contract work at Southern Nuclear's Hatch Plant in March 2007, willfully failed to comply with the applicable radiation protection procedure while exiting the RCA with hand carried items.

Approved for release 01/23/2008  
O. DeMiranda

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## SYNOPSIS

This investigation was initiated on April 4, 2007, by the U.S. Nuclear Regulatory Commission, (NRC), Office of Investigations (OI), Region II (RII) to determine if a Hatch Nuclear Plant (Hatch) employee (Training Instructor) assisted workers with taking the General Employee Training (GET) tests (Cheating).

Based upon the evidence developed during this investigation, it was not substantiated that a Hatch employee (Training Instructor) assisted workers with taking the GET tests (Cheating).

Approved for release 01/24/2008  
Oscar de Miranda

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