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

January 27, 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 05000321/2004005 and 05000366/2004005

Dear Mr. Sumner:

On December 31, 2004, 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 January 21, 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.

This report documents one self-revealing finding of very low safety significance (Green) which was determined to involve a violation of NRC requirements. Also, one licensee-identified violation which was determined to be of very low safety significance (Green) is listed in Section 4OA7. Because these violations are of very low safety significance and were entered into your corrective action program, the NRC is treating these violations as non-cited violations (NCVs) consistent with Section VI.A of the NRC Enforcement Policy. If you contest these NCVs, 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/

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

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

Enclosure: Inspection Report 05000321/2004005 and 05000366/2004005
w/Attachment: Supplemental Information

cc w/encl:
J. T. Gasser
Executive Vice President
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

George R. Frederick
General Manager, Plant Hatch
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

Raymond D. Baker
Manager Licensing - Hatch
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

Arthur H. Domby, Esq.
Troutman Sanders
Electronic Mail Distribution

Laurence Bergen
Oglethorpe Power Corporatioln
Electronic Mail Distribution

Director
Department of Natural Resources
205 Butler Street, SE, Suite 1252
Atlanta, GA 30334

Manager, Radioactive Materials Program
Department of Natural Resources
Electronic Mail Distribution

Chairman
Appling County Commissioners
County Courthouse
Baxley, GA 31513

Resident Manager
Oglethorpe Power Corporation
Edwin I. Hatch Nuclear Plant
Electronic Mail Distribution

Senior Engineer - Power Supply
Municipal Electric Authority
of Georgia
Electronic Mail Distribution

Reece McAlister
Executive Secretary
Georgia Public Service Commission
244 Washington Street, SW
Atlanta, GA 30334

Distribution w/encl:
C. Gratton, NRR
L. Slack, RII EICS
RIDSNRRDIPMLIPB
PUBLIC

OFFICE	RII/DRP	RII/DRP	RII/DRP	RII/DRP						
SIGNATURE	CWR1	DSS e-mail	JAH5 e-mail	EXC1 via fax						
NAME	CRapp	DSimpkins	JHickey	EChristnot						
DATE	1.26/2005	1/27/2005	1/27/2005	1/26/2005						
E-MAIL COPY?	YES	YES NO	YES NO	YES NO	YES	NO	YES	NO	YES	NO
PUBLIC DOCUMENT	YES	YES NO	YES NO	YES NO	YES	NO	YES	NO	YES	NO

OFFICIAL RECORD COPY DOCUMENT NAME: E:\Filenet\ML050280268.wpd

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-321, 50-366
License Nos:	DPR-57, NPF-5
Report No:	05000321/2004005 and 05000366/2004005
Licensee:	Southern Nuclear Operating Company, Inc. (SNC)
Facility:	Edwin I. Hatch Nuclear Plant
Location:	P.O. Box 2010 Baxley, Georgia 31515
Dates:	September 26 - December 31, 2004
Inspectors:	D. Simpkins, Senior Resident Inspector J. Hickey, Resident Inspector E. Christnot, Resident Inspector, Browns Ferry Nuclear Plant
Approved By:	Malcolm T. Widmann, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000321/2004-005, 05000366/2004-005; 9/26/2004-12/31/2004; Edwin I. Hatch Nuclear Plant, Units 1 & 2; Identification and Resolution of Problems.

The report covered a three-month period of inspection by resident inspectors. Two Green non-cited violations were 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. A self-revealing non-cited violation was identified for a failure to take prompt action to correct a condition adverse to quality which resulted in a 1C Emergency Diesel Generator (EDG) Lube Oil Cooler tube failure which rendered the 1C EDG inoperable.

  The finding is greater than minor because it adversely affected the Equipment Performance attribute of the Mitigating Systems cornerstone in that the availability of the 1C EDG to respond to Initiating Events was impacted. The finding was determined to be of a very low safety significance because the required redundant equipment trains were operable and the 1C EDG was restored to operable status within the Technical Specification allowed outage time. This finding involved the cross-cutting aspect of Problem Identification and Resolution. (Section 4OA2.2)

B. Licensee-Identified Violations

A violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and corrective actions are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 1 operated at or near Rated Thermal Power during the inspection period.

Unit 2 began the inspection period in a planned shutdown to repair a safety relief valve. On October 3, Unit 2 was connected to the grid and reached Maximum Operating Power (MOP) on October 6. Unit 2 operated at or near MOP 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 the licensee cold weather preparations. The inspectors reviewed licensee procedures 52PM-MEL-005-0, Cold Weather Checks, 34SO-X41-002-0, Intake Structure Ventilation System, and DI-OPS-36-0989, Cold Weather Checks. The inspectors walked down portions of the emergency diesel generators (EDG), plant service water (PSW) system, and the intake structure to assess the condition of heat trace, heaters, and insulation. The inspectors noted equipment condition in relation to documented system deficiencies to determine system readiness for cold weather. Documents reviewed are listed in the Attachment.

Imminent Adverse Weather. The inspectors also reviewed licensee actions in response to potential high winds on September 27. The inspectors walked down external plant areas to ensure debris and loose materials were controlled to limit missile hazards, especially near switchyards and safety-related equipment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial System Walkdowns. The inspectors performed partial walkdowns 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 1 4160 volt Standby Alternating Current (AC) Power Supply during a 1B EDG outage
- 2A and 2C Station Service Air Compressors (SSAC) during a 2B SSAC outage
- 1B EDG during a 1C EDG system outage
- 1B train of Residual Heat Removal (RHR) Service Water during a 1A RHR Service Water Pump outage

Complete 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 and reviewed control room logs, outstanding work orders, and Reactor Core Isolation Cooling System (RCIC) system health reports to verify that alignment and equipment discrepancies were being identified and appropriately resolved. Documents reviewed are listed in the Attachment.

- Unit 1 RCIC

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 conducted area walk downs to assess the licensee's control of transient combustibles. The inspectors also reviewed the Fire Hazards Analysis drawings H-11846 and H-11847 to verify 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.

- 1A EDG and Oil Storage Tank Rooms
- Control Building 112' Elevation
- Unit 2 Reactor Building 130' Elevation
- Unit 2 Reactor Building 158' and 164' Elevation
- Unit 2 Reactor Building 203' Elevation
- Unit 2 Reactor Building 185' Elevation
- Health Physics Area Control Building 130' Elevation
- Low Pressure Coolant Injection Inverter Room
- Unit 1 and Unit 2 Control Room and Roof
- Unit 1 Northeast Diagonal below 130' Elevation
- Unit 1 South Working Floor 156' Elevation
- All Unit 2 Diagonals and Unit 2 High Pressure Coolant Injection (HPCI) Room

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measure

a. Inspection Scope

The inspectors reviewed the individual plant examination for internal flooding events and licensee procedure 31EO-EOP-016-1, CP-2 RPV Flooding. The inspectors performed a detailed walkdown of the following five areas to determine potential sources of interior 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 2 Northeast diagonal - Loop A RHR/Core Spray (CS)
- Unit 2 Southeast diagonal - Loop B RHR/CS
- Unit 2 HPCI room
- Unit 2 Northwest diagonal - RCIC room
- Unit 2 Southwest diagonal - Control Rod Drive Pumps Room

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

Quarterly Resident Observation. The inspectors observed the performance of licensee simulator scenario LT-SG-50425-13, which included a loss of off-site power, a reactor scram, EDG complications resulting in a complete plant blackout, and failure of HPCI and RCIC which required the performance of an emergency depressurization. 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

Resident Quarterly Review. The inspectors reviewed the following four performance-based and function-based problems 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 problems identified below, the inspectors reviewed operator logs, associated condition reports (CRs), Maintenance Work Orders (MWOs), and the licensee's procedures for implementing the Maintenance Rule. The review was to determine if equipment failures were being identified and properly assessed, and corrective actions established to return the equipment to a satisfactory condition. Documents reviewed are listed in the Attachment.

- Crossflow Feedwater Flow Monitoring System
- EDG Air Start System
- Unit 1 Drywell Floor Drain Unidentified Leakage Rate increase
- EDG Overspeed Microswitch Failures

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the following seven Plan of the Day (POD) documents listed below to verify that risk assessments were performed prior to components being removed from service. The inspectors reviewed 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 10/2-8
- POD for Week of 10/9-15
- POD for Week of 10/24-31
- POD for Week of 11/6-12
- POD for Week of 10/16-22
- POD for Week of 10/30-11/5
- POD for Week of 11/13-19

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Nonroutine Evoluations

a. Inspection Scope

For the following event, the inspectors observed operator actions and reviewed operator logs and computer data to verify proper operator actions were taken.

- Unit 2 Main Turbine Generator startup with indication of high bearing vibrations

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 in the Update Final Safety Analysis Report, Technical Specifications, and design basis documents 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.

- Unit 2 HPCI Low Suction Pressure Operability
- Unit 2 HPCI Discharge Check Valve Bonnet Bolts Loose
- Standby Service Water Pump Four Bottom Columns Corroded
- PSW Leakage Inside the Unit 1 Drywell
- Minimum Acceptable Station Battery Temperature

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

a. Inspection Scope

Cumulative Review. The inspectors reviewed conditions on both units that required compensation by the operators. The inspectors reviewed the operator-workarounds, operator-burdens, and the operations-needs list 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 licensee procedure DI-OPS-61-1196N, Control and Tracking of Operator Work-Arounds, as well as pertinent condition reports to verify the licensee had accurately captured these conditions into the corrective action program.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors reviewed personnel performance during the following 11 maintenance and testing activities to verify procedural requirements were met. The inspectors also reviewed activities to determine if the scope of testing demonstrated 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.

- 2L Safety Relief Valve Replacement
- 2D RHR Pump (Motor Partial Discharge Test)
- 1C11D001-117 Scram Valve Air Operated Control Valve Replacement
- 1C11D001-127 Scram Discharge Air Operated Control Valve Repair
- 1B EDG PSW Cooling Water Spectacle Flange Swap
- 2P41C002 Standby PSW Pump Motor Heater Replacement
- 2P41F338 EDG 2C-1B Cross-tie Valve Periodic Inspection
- 1P41C001C 1C PSW Pump Seal Water Sight Glass Repair
- 1E11-003A 1A RHR Service Water Strainer Annual Preventive Maintenance
- 2A EDG Engine Overspeed Microswitch Replacement
- Replacement of Resistors R20 and R21 in Battery Charger 2R42-S032B

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities

a. Inspection Scope

Outage Activities. The inspectors reviewed the Unit 2 outage schedule for a planned outage to repair the 2L safety relief valve. The inspectors routinely reviewed the licensee's use of risk management techniques and reviewed licensee procedure DI-OPS-57-0393N, Outage Safety Assessment, to verify the licensee was correctly maintaining required equipment in service in accordance with the overall outage safety assessment. During the planned outage, the inspectors monitored licensee control over the following outage activities listed below.

- Plant shutdown including insertion of a manual scram and the following reactor coolant system cooldown to verify the cooldown rate did not exceed Technical Specification limits

- Walkdown of the drywell to verify material conditions supported plant operations
- Plant startup, heatup, and power ascension
- Licensee identification and resolution of problems related to the planned outage activities

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed licensee surveillance test procedures and either witnessed the test or reviewed test records for the following eight 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 verify procedure requirements were met.

Surveillance Tests
- 34SV-P41-001-2, Plant Service Water Pump Operability
- 42SV-P41-001-2, PSW Pump and Isolation Valve Auto Function Functional Test
- 23SV-C41-002-2, 2B Standby Liquid Control Pump Operability Test
- 34SV-R43-001-1, 1A EDG Monthly Test
- 34SV-E51-002-2, RCIC Pump Operability

In-Service Tests
- 34SV-E21-001-1, 1A Core Spray Pump Operability

Reactor Coolant System Leakage Tests
- 34SO-G11-013-1, Unit 1 Drywell Floor Drain Sample
- 24SO-G11-013-1, Attachment 4, Drywell Floor Drain Sump Leak Rate

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed and assessed the following two temporary modifications 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 in the temporary modification work package. Documents reviewed are listed in the Attachment.

- TMM 1-04-027, Valve Internals Removed from 1P65-F003
- TMM 2-04-004, Unit 2 Turbine Building Chillers Oil Leakage Repairs

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed the emergency plan drill conducted on October 13. The inspectors observed licensee activities in the simulator, Technical Support Center and Operations Support Center to verify implementation of licensee procedure 10AC-MGR-006-0S, 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 reviewed 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

4OA1 Performance Indicator Verification

a. Inspection Scope

The inspectors sampled licensee submittals for the performance indicators (PI) 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.

Initiating Events Cornerstone
- Unplanned Scrams
- Scrams with Loss of Normal Heat Removal
- Unplanned Power Changes per 7000 Critical Hours

Mitigating Systems Cornerstone
• Safety System Functional Failures

The inspectors reviewed raw PI data collected between October 2003 and September 2004 for both Unit 1 and Unit 2 and compared 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 correctly calculated.

b. Findings

No findings of significance were identified.

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 detailed reviews of the following three CRs 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.

• 2004109986, Lube Oil Cooler Tube Leak Rendered the 1C EDG Inoperable
• 2004109411, Group 2 PCIV Isolation Following a Reactor Scram
• 2004109461, Galling of the 2D Inboard MSIV

b. Findings and Observations

Introduction. A Green self-revealing non-cited violation (NCV) was identified for a failure to take prompt action to correct a condition adverse to quality which resulted in a 1C EDG Lube Oil Cooler tube failure the which rendered the 1C EDG inoperable.

Description. In March 1999, eddy current testing of the 1C EDG lube oil cooler identified nine tubes with wall thickness losses from 42.9% to 63.3% resulting from active erosion. The licensee did not evaluate this condition for potential impact on 1C EDG continued operability. In December 2003, the tubes in the 1C EDG air cooler and water jacket

cooler, which were in series with the lube oil cooler, were also found to be eroded. This condition was documented in CR 2003113568. The licensee determined the air and jacket water coolers were operable and that a tube failure would not affect operation of the EDG. However, the licensee did not evaluate the effect of a lube oil cooler tube failure on EDG operability. The licensee determined that all three coolers should be replaced at the next major engine outage; however, no predictive evaluation was peformed to support that the lube oil cooler tubes would not fail before the next major engine outage. On October 1, 2004, the licensee found the oil level in the 1C EDG sump four inches above normal. Analysis determined the oil was contaminated with PSW, which originated from a tube leak in the 1C EDG lube oil cooler. The licensee declared the 1C EDG inoperable due to the tube leak. The lube oil cooler repairs resulted in 125 hours of unavailability.

Analysis. The finding is greater than minor because it adversely affected the Equipment Performance attribute of the Mitigating Systems cornerstone in that the availability of the 1C EDG was impacted. The finding was determined to be of a very low safety significance because the required redundant equipment trains were operable and the 1C EDG was restored to operable status within the Technical Specification allowed outage time. This finding involved the cross-cutting aspect of Problem Identification and Resolution.

Enforcement. 10 CFR 50, Appendix B, Criteria XVI, Corrective Actions, requires, in part, that measures be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to the above, in March 1999 the licensee identified degraded tubes in the 1C EDG lube oil cooler, but failed to take prompt corrective actions for this condition. Consequently, on October 1, 2004, the licensee determined that a lube oil cooler tube had failed which rendered the 1C EDG inoperable. Because the event was of a very low safety significance and has been entered into the licensee's corrective action program as CR 2004109986, this violation is being treated as a NCV, consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000321/2004005-001, Lube Oil Cooler Failure Results in Emergency Diesel Generator Inoperability.

3. Semi-Annual Trend Review

a. Inspection Scope

As required by NRC Inspection Procedure 71152, Identification and Resolution of Problems, 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 inspector's review was focused on repetitive equipment issues, but also considered the results of the 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 July 2004 through December 2004. Corrective actions associated with a sample of the issues identified in the licensee's CR database were reviewed for adequacy.

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. The inspectors reviewed several CRs involving as-found calibration of instruments being outside the required acceptance criteria to assess the licensee's sensitivity to potential instrument operability and related operational issues. Based on the sample reviewed, the inspectors observed that the depth of the as-found condition assessments were inconsistent. Documents reviewed are listed in the Attachment.

4OA3 Event Followup

1. (Closed) LER 05000321/2003-002, Potentially Non-Conservative Setpoints Result in Inoperable Oscillating Power Range Monitor System

On October 3, 2003, the Oscillating Power Range Monitor (OPRM) system for each Hatch unit was declared inoperable. The declaration was made based upon the anticipated issuance of a 10 CFR Part 21 communication by General Electric (GE) concerning the adequacy of the OPRM period tolerance and cut-off frequency setpoints. The licensee reset the OPRM values to those recommended by GE. This condition was documented in CRs 2003110882, 2003110816, and 2003110817. No findings of significance were identified. This LER is closed.

2. (Closed) LER 05000321/2004-002, Air Actuator for Vacuum Breaker Failed LLRT due to Inadequate Design

On February 24, 2004, an investigation of the as-found local leak rate test (LLRT) failures on five of twelve suppression chamber to drywell vacuum breakers' air actuators (replaced during the spring 2002 refueling outage) determined the internal seal arrangement had not been correctly supplied from the vendor, as the design drawings were not sufficiently clear as to describe the required seal arrangement. This resulted in a failure to complete the TS 3.6.1.3 required actions for a failed primary containment isolation valve (PCIV). All twelve valves were rebuilt, and successfully retested. Also, the licensee revised the design drawing, as well as procurement procedures. This finding constitutes a violation of minor significance, and is not subject to enforcement action in accordance with Section IV of the NRC's Enforcement Policy. No findings of significance were identified. The licensee documented this issue in CR 2004102319. This LER is closed.

3. (Closed) LER 05000321/2004-003, 4160V Normal Supply Breaker Shutter Failure Trips MOC Switch Causing DG Start on Undervoltage

On March 3, 2004, the 1B EDG started unexpectedly during the planned removal of the normal supply breaker for the 1F 4160 volt AC emergency bus. The shutter in the back of the breaker cubicle became hung up on the breaker when it was being removed from

the cubicle. This caused the shutter linkage to actuate an electrical switch, which in turn generated an undervoltage signal to start the 1B EDG. The licensee revised breaker maintenance procedures to verify the shutter assembly travels freely and the operating mechanisms were not hindered during breaker racking operations. No findings of significance were identified. The licensee documented this issue in CRs 2004102876 and 2004102878. This LER is closed.

4. (Closed) LER 05000321/2004-004, Momentary False Low Reactor Water Level Signal Results in Safety System Actuations

On March 9, 2004, Unit 1 had a safety systems actuation from a momentary false low reactor water level signal. During a vessel pressure test, an incorrectly installed reactor vessel head vent line flange began leaking and operators lowered vessel pressure to commence shutdown cooling. However, during valve manipulations on the water-solid plant, the reactor water level instruments sensed a pressure reduction and initiated a low reactor water level signal, actuating several safety systems. The licensee repaired the flange and the leakage test was completed satisfactorily. The test procedures have been revised to help operators determine if the vessel is water-solid and include instructions on recovering from the condition. No findings of significance were identified. The licensee documented this issue in CR 2004103147. This LER is closed.

5. (Closed) LER 05000366/2004-001, Water Intrusion into Relay Panel 2H21-P232 Results in the Start of the 2C Emergency Diesel Generator

On February 18, 2004, a PSW pipe was being cut over relay panel 2H21-P232, which houses several protective relays for the 2C EDG. Although the pipe was thought to be empty, several gallons of water drained from the pipe onto the relay panel, and initiated an invalid start signal to the EDG. This condition was documented in NRC Inspection Report 05000321,05000366/2004002 as NCV 05000366/2004002-001. The licensee added guidance to plant procedures to ensure electrical equipment is protected when breaching nearby systems. No findings of significance were identified. The licensee documented this issue in CRs 2004101943 and 2004101957. This LER is closed.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On January 21, the inspectors presented the inspection results to Mr. George Frederick and the other members of his staff who acknowledged the observations. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as an NCV.

- TS 3.6.1.3 requires all PCIVs to be operable prior to entering Mode 3. Contrary to the above, at 0655 on October 3, 2004, the licensee discovered four manual PCIVs that had not been closed prior to entering Mode 3 at 1530 on October 1, 2004, and one manual PCIV that was not closed within one hour subsequently. These manual PCIVs were required to be closed in order to be considered operable. This violation was identified in CR 2004109710. This finding is more than minor because it represented an actual open pathway in the physical integrity of reactor containment. This condition was evaluated using Inspection Manual Chapter 0609 Appendix H, Table 6.3, and determined to be of very low safety significance because no structures, systems, or components were affected for Mark II type containments.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

R. Dedrickson, Assistant General Manager - Plant Support
J. Dixon, Health Physics and Chemistry Manager
G. Frederick, General Manager - Nuclear Plant
M. Googe, Performance Team Manager
J. Hammonds, Operations Manager
D. Madison, Assistant General Manager - Plant Operations
J. Thompson, Nuclear Security Manager
S. Tipps, Engineering Supervisor
K. Underwood, Performance Analysis Supervisor
R. Varnadore, Engineering Support Manager

NRC personnel

B. Bonser, Chief, Reactor Projects Branch 2 (former)

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

05000321/2003-002	LER	Potentially Non-Conservative Setpoints Result in Inoperable Oscillating Power Range Monitor System (Section 4OA3.1)
05000321/2004-002	LER	Air Actuator for Vacuum Breaker Failed LLRT due to Inadequate Design (Section 4OA3.2)
05000321/2004-003	LER	4160V Normal Supply Breaker Shutter Failure Trips MOC Switch Causing DG Start on Undervoltage (Section 4OA3.3)
05000321/2004-004	LER	Momentary False Low Reactor Water Level Signal Results in Safety System Actuations (Section 4OA3.4)
05000366/2004-001	LER	Water Intrusion into Relay Panel 2H21-P232 Results in the Start of the 2C Emergency Diesel Generator (Section 4OA3.5)

Opened and Closed

05000321/2004005-001	NCV	Lube Oil Cooler failure Results in Emergency Diesel Generator Inoperability (Section 4OA2.2)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather
CR 2004111247, 2004112151

Section 1R04: Equipment Alignment
Drawings: H-16334, H-16335, D-11004, H-21028, H-21029, H-13352, H-23528
34SO-E51-001-1, Reactor Core Isolation Cooling (RCIC) System
34SO-E11-010-1, Residual Heat Removal System
34SO-P51-002-2, Instrument and Service Air System
34AB-P51-001-2, Loss of Instrument and Service Air System
34SO-R43-001-1, Diesel Generator Standby AC System
MWO's 1041222901, 1040559001, 1040879001
RCIC System Health Report 3rd Quarter 2003
RCIC System Health Report 1st Quarter 2004
RCIC System Health Report 2nd Quarter 2004
RCIC System Health Report 3rd Quarter 2004

Section 1R05: Fire Protection
Drawings A-43965 sheets 8B, 10B, 13B, 17B-20B, 23B, 47B, 48B, 50B, 53B, 60B, 99B-103B, 106B, 107B, 109B, 110B, 112B-115B, 118B,119B, 121B, 122B and A-43966 sheets 14B,16B,

Section 1R06: Flood Protection Measures
34AR-650-901-7, Alarm Response Procedure for Control Panel 2H11-P650, Alarm Panel 1
CR 2004: 2212, 8606, 8141, 6696, 3914
MWO: 2004200797

Section 1R12: Maintenance Effectiveness
CR 2004: 00063, 00341, 1320, 1458, 2845, 4295, 4341, 4638, 4838, 4849, 4870, 5166, 5369, 5627, 5687, 6197, 6199, 6639, 7181, 7341, 7343, 7420, 7560, 7659, 7755, 7839, 7857, 7902, 8257,8317, 8411, 8433, 8443, 8477, 8729, 8811, 8812, 8813, 8837, 8956, 9014, 9181, 9214, 9273, 9381, 9844, 9906, 9916, 9927, 9948, 10062, 10384, 10863, 10898, 11000, 11091, 11140, 11314, 11431, 11699, 107251, 107263
CR 2003: 10745, 11467, 11709, 11894, 12012, 12603, 12771, 12875, 13165

AIT's: 2004: 0868, 1464, 1833, 1834, 1996, 1997, 2211, 2684, 3259, 3260, 3261, 3262, 3263, 3264, 3265, 3266, 3267, 3268, 3318, 3432, 3433, 3434, 4147, 4254, 4263, 4402, 4403, 3006, 3008, 3009, 2994, 3010
2003: 4811
MWO's: 1042000802, 1042898201, 2041227601, 20412227901, 2041228301
34SV-SUV-020-0, 34GO-OPS-005-1
System Health Report for EDGs
Drawings: H-16007, 16011, 16012, SI-03301

40AC-ENG-020-0, Maintenance Rule Implementation and Compliance
Plant Hatch Maintenance Rule Scoping Manual

Section 1R15: Operability Evaluations
CR: 2004109880, 2004106563, 2004110683, 2004111128, 2004111953

Section 1R19: Post Maintenance Testing
CR: 2004108631
MWO: 2030154301, 2042060401, 1042110601, 1041603501, 2042369601, 2042837001, 2030200901, 1042942701, 1042071001, 2041677701, 2042520601
34SO-R42-001-2, 125 VDC and 125/250 VDC System

Section 1R23: Temporary Plant Modifications
Drawings: H-42880, S52595
MWO: 1042331804, 2041824501, 2041824502

Section 4OA2: Identification and Resolution of Problems
CR 2004107207, 1S32-K227-4 (4160 Bus 1G Undervoltage Relay) as found setpoint 21.4 seconds.
CR 2004107214, 1S32-K220-5 (4160 Bus 1F Undervoltage Relay) as found set point 21.4 seconds.
CR 2004106595, ATTS 2B21-N690D Reactor Pressure SPDS output high out of acceptance criteria band.
CR 2004111504, Relay 2R43-K766-2 fault time of 1.08 secs.
CR 2004107710, 1R43-N030B Oil Pressure Low Shutdown as found value 11.36 psig.