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

January 23, 2002

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

SUBJECT: EDWIN I. HATCH NUCLEAR POWER PLANT - NRC INTEGRATED INSPECTION REPORT 50-321/01-07, 50-366/01-07

Dear Mr. Sumner:

On December 29, 2001, the Nuclear Regulatory Commission (NRC) completed an inspection at your Hatch Units 1 and 2. The enclosed report documents the inspection findings which were discussed on January 7, 2001 with Mr. P. Wells 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.

No findings of significance were identified.

Immediately following the terrorist attacks on the World Trade Center and the Pentagon, the NRC issued an advisory recommending that nuclear power plant licensees go to the highest level of security, and all promptly did so. With continued uncertainty about the possibility of additional terrorist activities, the nation's nuclear power plants remain at the highest level of security and the NRC continues to monitor the situation. This advisory was followed by additional advisories, and although the specific actions are not releasable to the public, they generally include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with law enforcement and military authorities, and more limited access of personnel and vehicles to the sites. The NRC has conducted various audits of the Southern Nuclear Operating Company's response to these advisories and Edwin I. Hatch Nuclear Power Plant's ability to respond to terrorist attacks with the capabilities of the current design basis threat. From these audits, the NRC has concluded that the Edwin I. Hatch Nuclear Power Plant's security program is adequate at this time.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available 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/

Stephen J. Cahill , Chief
Reactor Projects Branch 2
Division of Reactor Projects

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

Enclosure: Integrated Inspection Report
50-321/01-07, 50-366/01-07
w/Attachment

cc w/encl: (See page 3)

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

P. H. Wells
General Manager, Plant Hatch
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

D. M. Crowe
Manager Licensing - Hatch
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

Ernest L. Blake, Esq.
Shaw, Pittman, Potts and
Trowbridge
2300 N Street, NW
Washington, D. C. 20037

Office of Planning and Budget
Room 610
270 Washington Street, SW
Atlanta, GA 30334

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

Charles A. Patrizia, Esq.
Paul, Hastings, Janofsky & Walker
10th Floor
1299 Pennsylvania Avenue
Washington, D. C. 20004-9500

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

Distribution w/encl: (See page 4)

Distribution w/encl:
L. Olshan, NRR
RIDSNRRDIPMLIPB
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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:	50-321/01-07, 50-366/01-07
Licensee:	Southern Nuclear Operating Company, Inc. (SNC)
Facility:	E. I. Hatch Nuclear Power Plant, Units 1 & 2
Location:	P. O. Box 2010 Baxley, Georgia 31515
Dates:	September 30, 2001 - December 29, 2001
Inspectors:	J. Munday, Senior Resident Inspector N. Garrett, Resident Inspector M. Scott, Senior Reactor Inspector (Section 1R07)
Approved by:	Stephen J. Cahill, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000321-01-07, IR 05000366-01-07 on 09/30 - 12/29/2001, Southern Nuclear Operating Company, Inc., Edwin I. Hatch Nuclear Power Plant, Units 1 & 2, resident inspector report.

The inspection was conducted by resident inspectors and a senior reactor inspector. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website.

A. Inspector Identified Findings

None

B. Licensee Identified Violations

None

Report Details

Summary of Plant Status

Unit 1 operated at or near full Rated Thermal Power (RTP), with the exception of planned maintenance and testing, during this inspection period.

Unit 2 began this inspection period in a refueling outage. A reactor startup was begun on October 22 and after several power maneuvers to optimize core performance, Unit 2 achieved RTP on October 26. An automatic reactor scram occurred later that day when a reactor recirculation pump flow control malfunction occurred and resulted in a high neutron flux condition. A circuit board, suspected of failing, was replaced and the reactor was restarted on October 28. Rated thermal power was achieved on October 30. On December 25, a reactor scram occurred when the 'B' Outboard Main Steam Isolation Valve shut following failure of the valve stem. The unit remained in cold shutdown for the remainder of the inspection period.

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

1R01 Adverse Weather Protection

a. Inspection Scope

The inspectors performed a review of the cold weather and freeze protection system associated with the emergency diesel generators (EDGs), plant service water (PSW) system, condensate storage tanks, the intake structure, and fire protection system. The inspectors reviewed the licensee's freeze protection procedure and used the most recently completed preventative maintenance checklist for cold weather preparation to assess the system readiness for cold weather and the status of system deficiencies. The inspectors compared licensee performance to the procedure requirements and documents listed in the Attachment of this report.

b. Findings

No finding of significance were identified.

1R04 Equipment Alignment (Quarterly and Biannual)

a. Inspection Scope

The inspectors reviewed licensee procedures, system and component checklists, and plant configuration to verify systems and components were correctly aligned. In addition, the inspectors reviewed selected condition reports to determine if equipment alignment issues were being identified and adequately resolved. Procedures and documents reviewed are listed in the Attachment of this report. Systems verified for correct alignment included the following:

- Unit 1 High Pressure Coolant Injection System (HPCI)
- 1A, 1C, 2A, and 2C EDGs
- Unit 1 Control Rod Drive Hydraulic

The inspectors conducted a detailed review of the alignment and condition of the Unit 2 HPCI system. The inspectors used licensee procedures and other documents listed in the Attachment to verify proper system alignment. The review was also to verify that the electrical power alignment was correct, support systems were operable, components were adequately labeled, and hangers and supports were in place and in good condition. The inspectors reviewed all existing work orders associated with the HPCI system to verify the deficiencies did not significantly impact the system function. Operator workarounds, the HPCI system health report, and the maintenance rule report were also reviewed to assess overall system condition. In addition, condition reports (CRs) were reviewed to verify that HPCI system deficiencies were being identified and corrected based upon risk and in accordance with procedure requirements.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (Quarterly and Annual)

a. Inspection Scope

The inspectors toured risk significant areas, identified in the licensee's Independent Plant Evaluation for External Events, to assess the material condition of the fire protection and detection equipment and to verify fire protection equipment was not obstructed. The inspectors reviewed licensee Procedure 40AC-ENG-008-OS, Fire Protection Program, and conducted area walkdowns to assess the licensee's control of transient combustibles. The inspectors also reviewed the Site Fire Hazards Analysis and applicable Pre-fire Plan drawings to verify that the necessary fire fighting equipment, such as fire extinguishers, hose stations, ladders, and communications equipment, was in place. In addition, an unannounced fire drill for the plant computer room was observed to verify the licensee responded to a simulated fire with adequate protective clothing, self-contained breathing apparatus, and equipment necessary to control and extinguish the fire. The inspectors used licensee Procedure 34AB-X43-001-1S, Fire Procedure, Rev. 8, Ed. 5 and fire pre-plan sheets to assess the fire brigades fire fighting strategy including; entry into the fire area; communications; search and rescue; and equipment usage. Documents and drawings reviewed are listed in the Attachment of this report. The fire areas inspected included the following:

- Fire Area 2016, Unit 2 DC Switchgear Room 2A
- Fire Area 2018, Unit 2 600 Volt Switchgear Room 2C
- Fire Area 1015, Unit 1 Annunciator Room
- Fire Area 1104, Unit 1 East Cableway
- Fire Area 1404, 4160 Volt Switchgear Room 1G
- Fire Area 1412, 4160 Volt Switchgear Room 1E
- Fire Area 2404, 4160 Volt Switchgear Room 2E
- Fire Area 2104, Unit 2 East Cableway

- Fire Areas 2101M and 2101N, Turbine building 147 el.
- Fire Area 0024B, Computer Room

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (Annual and Biennial)

a. Inspection Scope

The inspectors reviewed performance testing or cleaning on five risk significant heat exchangers (HX) from both units: (1) the HPCI and Residual Heat Removal/Core Spray room coolers' performance testing, (2) the EDG jacket water heat exchanger cleaning and inspection during the last Unit 2 refueling outage, (3) the Unit 2 Control Rod Drive Mechanism cooler post cleaning flow test, (during the last refueling outage) and (4) the degraded SW piping replacement maintenance work orders (MWOs) on control room ventilation condensers and HPCI room coolers. The inspectors also inspected two Service Water (SW) piping replacement work orders, and observed some of the common intake structure dredging.

The inspectors also reviewed the following: (1) SW discharge check valve maintenance histories, valve repairs, and valve as-found conditions, (2) the surveillance test procedures on the applicable coolers, and (3) the preventive maintenance program work activities on selected components. The above were evaluated against the Inservice Test Inspection Procedures, design parameters, Technical Specifications (TS), Updated Final Safety Analysis Report (UFSAR), and system design documents.

Potential common cause problems associated with SW discharge valves, SW piping replacement activities, and component maintenance were reviewed to verify that the licensee was cognitive of such potential problems. The inspectors also reviewed the operational occurrences, corrective and routine plant work orders, and the quarterly (health) reports available on the above HXs and systems to verify that the licensee was identifying and correcting problems and incorporating lessons learned.

A walk down of the SW intake structure, dredging discharge spoil area, and piping installations was conducted with a system engineer. Additionally, the inspectors reviewed and discussed test configuration with the system engineer to determine if the selected heat exchanger test methodology was consistent with accepted industry practices or equivalent, the test conditions were appropriately considered, the test criteria were appropriate and met, the test frequency was appropriate, the SW calculations took into account limiting conditions for worst-case scenarios, and the test results considered test instrument inaccuracies and differences.

The completed tests, test configurations, and inspections were reviewed to verify consistency with accepted industry standards (Electric Power Research Institute Service Water Heat Exchanger Testing Guidelines, TR-107397) or equivalent (NRC Generic Letter 89-13, Service Water System Problems Affecting Safety-Related Equipment), and

to verify the as-found results were appropriately dispositioned. The procedures and documents reviewed during the inspection are listed in the Attachment of this report.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (Quarterly Review)

a. Inspection Scope

The inspectors observed the performance of two simulator scenarios; LT-SG-50341, Reference Leg Break, PSW Pump Trip, Isolable RWCU Break in Reactor Building, Rev. 3 and LT-SG-50314, Aircraft Crash into Diesel Generator Building, Fire, Loss of Emergency Buses, Rev 1. The inspectors reviewed licensee Procedures 10AC-MGR-019-0S, Procedure Use and Adherence, Rev. 3 and DI-OPS-59-0896N, Operations Management Expectations, Rev. 10, to assess operator performance for the following: formality of communication; procedure usage; alarm response; control board manipulations; group dynamics; and supervisory oversight. The inspectors also reviewed licensee Procedure 73-EP-EIP-001-0S, Emergency Classification and Initial Actions, Rev. 14, Ed. 2, to verify that the event action level was correctly identified and reported. In addition, the inspectors reviewed the critique results from previous training sessions to assess performance improvement. The inspectors attended the licensee's critique of operator performance to assess if the licensee identified issues were comparable to issues identified by the inspectors. The inspectors compared their observations of licensee performance to the requirements in licensee Procedure DI-TRN-24-0885N, Simulator Documentation Requirements, Rev. 3.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule (MR) Implementation

a. Inspection Scope

The inspectors reviewed the following performance-based problems associated with structures, systems, and components to assess the licensee's implementation of the MR (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 CRs, and the licensee's procedures for implementing the MR. 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. Procedures and documents reviewed are listed in the Attachment of this report.

- Unit 1A Control Rod Drive Pump Motor Failure, CR 2001007171
- Unit 1C Plant Service Water Pump High Vibrations, CR 2001007250
- Unit 2B Turbine Building Chiller, CR 2001006704 and 2001006843

- Unit 2C Station Service Air Compressor, CR 2001007297
- Unit 2 Turbine Building Area Cooler 2U41-B010, CR 2001007846
- Unit 2 Turbine Building Area Cooler 2U41-B011, CR 2001007847

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed licensee Plan of the Day (POD) documents listed below to verify that risk assessments were performed prior to components being removed from service. In addition, when emergent work was identified, the inspectors held discussions with licensee personnel and walked down plant systems to verify that actions were taken to minimize the probability of an initiating event and maintain the functional capability of mitigating systems. Documents reviewed to support this inspection are listed in the Attachment of this report.

- POD for week of October 13 - October 19, 2001
- POD for week of October 27 - November 2, 2001
- POD for week of November 17 - November 23, 2001
- POD following removal of the Upstream Traveling Water Screen for repair, CR 2001010548
- POD following trip of 1B EDG during surveillance, CR 2001010670
- POD for period of December 10 - December 16, 2001

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Nonroutine Plant Evolutions and Events

a. Inspection Scope

On December 25, the inspectors reviewed operator logs, plant computer data, strip chart data recordings, and plant equipment alignment following a Unit 2 reactor scram, to verify the plant responded as expected to the event. In addition, the inspectors reviewed licensee Procedure 34AB-C71-001-2, Scram Procedure, to verify the operators responded properly to the event. Details of the event are included in Section 4OA3, Event Follow-up, of this report.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed operability evaluations and compared the evaluations to the system requirements identified in the TS and the UFSAR to ensure that operability was adequately assessed and the system or component remained available to perform it's intended function. In addition, the inspectors assessed the adequacy of compensatory measures implemented as a result of the condition. Operability evaluations reviewed included the following:

- Unit 2 Station Service DC Subsystems, LR-REG-006-0901
- Unit 1and 2 Part 21 for HPCI and RCIC EGM Controls LR-REG-005-0901
- Unit 1 and 2 GE HGA Relays Binding, CR 2001009185
- Potential Inoperability of Unit 2 SRV Logic, CR 2001010345

The inspectors also reviewed an operability evaluation, LR-REG-002-1201 that determined the Unit 1B EDG was operable, but degraded, after it tripped on high crankcase vacuum during a surveillance test on November 28. Inspectors compared the evaluation to the system requirements identified in the TS and the UFSAR. The inspectors reviewed a troubleshooting plan completed by the licensee and observed licensee repair efforts. In addition, the inspectors participated in a conference call between the NRC and the licensee to discuss the licensee's actions and basis for determining operability. The call was conducted to ensure that operability was adequately assessed and the system or component remained available to perform it's intended function. The inspectors also assessed the adequacy of compensatory measures, which included more frequent surveillance tests on the EDG to observe for continued degradation.

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

a. Inspection Scope

Using NRC inspection Procedure 71111.16, Operator Workarounds, the inspectors reviewed conditions on both units during the report period that required compensation by the operators. The inspectors reviewed the licensee's operator workarounds, significant operator workarounds, and operations needs list dated November 9, 2001, 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.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors performed a review of the plant modification for the Unit 2 torus vacuum breakers. The modification consisted of Minor Design Change (MDC) 01-5010, Replace Limit Switches for Vacuum Breakers and Equivalency Determination (ED) 01-9143, Replacement of Vacuum Breaker Air Operator Springs. The inspectors reviewed the associated MDC packages, the 10 CFR 50.59 evaluations, and the applicable licensing basis documentation for the torus vacuum breaker system to ensure procedure, licensing basis, and regulatory requirements were met. The inspectors reviewed the applicable work packages for installation instructions and observed the completed modification installation on the vacuum breakers to verify it was completed in accordance with the design. The inspectors witnessed the post MDC vacuum breaker operability test to verify that the test was conducted in accordance with procedure. The inspectors also reviewed the modification package to verify that applicable changes to procedures and licensing basis documents were revised or scheduled for revision. Observations were compared to the requirements of the procedures listed in the Attachment of this report.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors reviewed licensee procedures listed in the Attachment of this report and observed personnel performance during selected maintenance and testing activities to verify procedural requirements were met. The inspectors also reviewed the activities to determine if the scope of testing demonstrated that the work performed was correctly completed and the affected equipment was functional and operable. Following the maintenance activities, the inspectors reviewed equipment status and alignment to verify the system or component was available to perform the required safety function. The work activities observed included the following:

- HPCI Check Valve 2E41-F046, MWO 20101226
- RCIC Check Valve 2E51-F014, MWO 20101235
- Penetration 2T52-X102A, MWO 20101159
- 2A RHR Pump Relay 2E11-K3A, MWO 20103084, MWO 20103108
- 2C EDG Outage, MWO 20001060, MWO 20001923, MWO 20001928, MWO 20002614, MWO 20003615, MWO 20003824, MWO 20003824, MWO 20101923, MWO 20101989,
- Main Steam Isolation Valve 2B21-F028C, MWO 20103538
- 1B EDG, MWO 10104567 and 10104572
- Unit 1 RCIC Electronic Overspeed, MWO 10101962
- Unit 1 RCIC Governor Control (EGM), MWO 10104550

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities

a. Inspection Scope

The inspectors reviewed licensee records and witnessed maintenance and testing activities to assess the licensee's risk management of Unit 2 refueling outage activities. Specific activities are listed below and documents reviewed are listed in the Attachment of this report.

Licensee Control of Outage Activities: The inspectors periodically reviewed the outage safety assessment to verify the licensee was correctly considering the equipment that was available for service. In addition, the inspectors reviewed contingency plans and equipment relied upon to implement the various actions required to mitigate an event. This review was to verify procedures and equipment were in place and were consistent with the assumptions in the shutdown risk assessment. The inspectors walked down multiple clearances to confirm the associated equipment was properly configured to support the function of the clearance.

Refueling Activities: The inspectors observed core reload and fuel shuffle activities to ensure operations were performed in accordance with the TS and plant procedures. The inspectors observed several fuel bundle movements in the vessel and the spent fuel pool and verified the fuel movement procedure tracked all movements of fuel.

Heatup and Startup Activities: The inspectors verified that TS and licensee procedures were met for mode change which included containment integrity requirements and startup. The inspectors performed a walkdown of the drywell to verify that material conditions supported plant operations. The inspectors observed the approach to criticality, the subsequent plant heatup, and selected evolutions during power ascension. The inspectors verified the determination of the shutdown margin demonstration performed during the approach to criticality. Licensee performance was compared to the requirements of procedures listed in the Attachment of this report.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed surveillance test procedures and either witnessed the test or reviewed test records to determine if the scope of the test adequately demonstrated that the affected equipment was operable. The inspectors reviewed the activities to assess for preconditioning of equipment, procedure adherence, and valve alignment following completion of the surveillance. The inspectors reviewed licensee Procedure AG-MGR-21-0386N, Evolution and Pre-and Post-Job Brief Guidance, Rev. 2, and attended selected briefings to determine if procedure requirements were met. Documents reviewed to support this inspection are listed in the Attachment of this report. Test procedures either reviewed or witnessed included the following:

- 42SV-TET-001-2S, Primary Containment Periodic Type B and Type C Leakage Tests, Rev. 22.0, LLRT 2T48F342A-L
- 42SV-TET-001-2S, Primary Containment Periodic Type B and Type C Leakage Tests, Rev. 22.0, LLRT 2T48-F335A/B
- 42SV-R43-008-2S, Diesel Generator 2A LOCA/LOSP LSFT, Rev. 9.1
- 34SV-B21-007-0S, Reactor Water Level Cold Reference Leg Keepfill System Surveillance, Rev. 1, Ed. 3
- 34SV-E51-004-2S, RCIC Pump Operability 150 PSIG Test, Rev. 6, Ed. 1
- 34SV-E41-005-2S, HPCI Pump Operability 165 PSIG Test, Rev. 7.3
- 34SV-P41-001-1S, Plant Service Water Pump Operability, Rev. 10, Ed. 4
- 34SV-R43-002-2S, Diesel Generator 1B Monthly Test, Rev. 20.9
- 34SV-R43-003-1S, Diesel Generator 1C Monthly Test, Rev. 15, Ed 6
- 57SV-U61-001-1S, Turbine Building Area Temperature FT&C, Rev. 2, Ed. 1
- 42SP-102501-OR-1-0S, HGA Relay Exercise and Inspection, Rev. 1
- 34SV-R43-001-2S, Diesel Generator 1B Monthly Test, Rev. 18.9

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the following temporary modifications (TMM) and assessed each evaluation using criteria defined in licensee Procedure 40AC-ENG-018-0S, Temporary Modification Control. In addition, the 10 CFR 50.59 evaluations were assessed using the design basis information provided in the UFSAR 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.

- 2E Battery Charger Supply Breaker Trip Setting, TMM 2-01-016
- Unit 1 Drywell Head Flange Bolt Used in Unit 2, TMM 2-01-019
- Unit 2 Reactor Protection System Motor Generator Set Motor, 2C71-S001B, TMM 2-00-004
- 1B EDG Crankcase Pressure Trip Function, TMM 1-01-013

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors witnessed an emergency drill conducted on November 14. The inspectors observed licensee activities in the Main Control Room (simulator) and Technical Support Center to assess the licensee's ability to classify the simulated event, make required notifications, and develop protective action recommendations. The inspectors attended the post-drill exercise critique to assess the licensee's effectiveness in identifying areas of improvement. Licensee performance was compared to the requirements of procedures listed in the Attachment of this report.

b. Findings

No significant findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

.1 Initiating Events Cornerstone (PI)

a. Inspection Scope

The inspectors reviewed the licensee's procedures and methods for compiling and reporting PIs. The inspectors reviewed raw PI data collected since January, 2001 for each of the indicators identified below and 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. The inspectors compared their observations with licensee's Administrative Control Procedure, 00AC-REG-005-0S, Preparation And Reporting Of NRC PI Data, and NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Rev. 1, to verify procedure and reporting requirements were met.

- Unplanned Scrams

- Scrams with Loss of Normal Heat Removal
- Unplanned Power Changes

b. Findings

No findings of significance were identified.

.2 Mitigating Systems Cornerstone (PI)

a. Inspection Scope

The inspectors reviewed the licensee's procedures and methods for compiling and reporting PIs. The inspectors reviewed raw PI data collected since January, 2001, for the indicator identified below and compared graphical representations from the most recent PI report to the raw data to verify it was correctly 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 calculated correctly. The inspectors compared their observations with licensee's Administrative Control Procedure, 00AC-REG-005-0S, Preparation And Reporting Of NRC PI Data, and NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Rev. 1, to verify procedure and reporting requirements were met.

- Safety System Functional Failures

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up

.1 Unit 2 Reactor Scram Due to 2B Recirculation Pump Speed Failure

a. Inspection Scope

On October 26, Unit 2 tripped from RTP due to a malfunction of the 2B reactor recirculation pump flow control circuit. The 2B recirculation pump decreased in speed, thus reducing reactor power, and then rapidly increased speed back to its original setting. This resulted in a high power condition and automatic scram. The inspectors reviewed licensee procedures, control room logs, chart data recordings, and discussed personnel performance with licensee management following the event. The inspectors review was to verify operator performance was in accordance with licensee Procedure 34AB-C71-001-2, Scram Procedure. Although the licensee was unable to conclusively determine the root cause, a circuit board was found faulted and was suspected as being responsible for the event. The circuit board was replaced and the failed board was returned to the vendor for failure analysis. The licensee documented the event in CR 2001009843.

b. Findings

No findings of significance were identified.

.2 Unit 2 Reactor Scram Due to Failure of the 'B' Outboard Main Steam Isolation Valve

a. Inspection Scope

On December 25, Unit 2 tripped from RTP due to the failure of the 'B' Outboard Main Steam Isolation Valve (MSIV). The valve stem broke and the disk fell into the closed position stopping flow in the 'B' steam line. The valve closure resulted in an automatic reactor scram. The inspectors review of the plant event is included in Section 1R14, Personnel Performance During Nonroutine Plant Evolutions and Events, of this report. The licensee determined that the MSIV valve stem sheared at the threaded connection between the stem disk and the stem. At the end of this inspection period, the licensee had not determined the cause of the stem failure. The licensee documented the event in CR 2001011345.

b. Findings

No findings of significance were identified.

.3 (Closed) LER 50-321/2001-002, Component Failure Causes Turbine Trip and Reactor Scram

This event occurred when the 1B auxiliary transformer faulted which caused a main turbine trip and subsequent reactor Scram. The licensee determined that the transformer failed due to an internal fault but did not determine the root cause. The licensee removed the transformer from service for repairs. This problem was entered into the licensee's corrective action program as CR 2001002428. No findings of significance or violations of regulatory requirements were identified.

4OA6 Management Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. P. Wells, General Manager - Nuclear Plant and other members of licensee management at the conclusion of the inspection on January 7, 2002. No proprietary information was identified.

Supplementary Information

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Betsill, J., Assistant General Manager - Plant Support
Burkett, E., Operations Support Superintendent
Curtis, S., Unit Superintendent
Cowan S. Radiation Protection Manager
Davis, D., Plant Administration Manager
Dedrickson, R., Operations Manager
Googe, M., Performance Team Manager
Hammonds, J., Engineering Support Manager
Johnson, G., Safety Audit and Engineering Review Supervisor
Kirkley, W., Health Physics and Chemistry Manager
Lewis, J., Training and Emergency Preparedness Manager
Madison, D., Assistant General Manager - Plant Operations
Reddick, R., Site Emergency Preparedness Coordinator
Roberts, P., Outage and Planning Manager
Smith D., Chemistry Manager
Thompson, J., Nuclear Security Manager
Tipps, S., Nuclear Safety and Compliance Manager
Varnadore, R., Unit Superintendent
Wells, P., General Manager - Nuclear Plant

Other licensee employees contacted included office, operations, engineering, maintenance, chemistry/radiation, and corporate personnel.

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-321/2001-002	LER	Component Failure Causes Turbine Trip and Reactor Scram (Section 4OA3.3)

Attachment

INSPECTION DOCUMENTS REVIEWED

Section 1R01

DI-OPS-36-0989N, Cold Weather Checks, Revision (Rev.) 13
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