



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

July 26, 2001

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

**SUBJECT: EDWIN I. HATCH NUCLEAR POWER PLANT - NRC INTEGRATED
INSPECTION REPORT 50-321/01-03, 50-366/01-03**

Dear Mr. Sumner:

On June 30, 2001, the Nuclear Regulatory Commission (NRC) completed an inspection at your Hatch Nuclear Reactor facility. 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 report documents the inspection findings which were discussed on July 6, 2001, with Mr. J. Betsill and other members of your staff.

Based on the results of this inspection, the inspectors identified one issue of very low safety significance (Green). This issue was determined to involve a violation of NRC Requirements. However, because of its very low safety significance and because it has been entered into your corrective action program, the NRC is treating this issue as a non-cited violation, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny this non-cited violation, you should provide a response with the basis for your denial, within 30 days of the date of this report, to the 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 Edwin I. Hatch Nuclear Power Plant.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be publicly available in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS).

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ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.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: Inspection Report 50-321/01-03, 50-366/01-03

Attachment: Supplementary Information - Inspection Documents Reviewed

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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: 50-321/01-03, 50-366/01-03

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: April 01, 2001 - June 30, 2001

Inspectors: J. Munday, Senior Resident Inspector
B. Holbrook, Senior Project Engineer
J. Starefos, Resident Inspector (Browns Ferry)
G. Guthrie, Resident Inspector (Brunswick)
G. Wiseman, Senior Reactor Inspector (Section 1R05, 4OA3.1)

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

SUMMARY OF FINDINGS

IR 05000321-01-03, IR 05000366-01-03, on 04/01 - 06/30/2001, Southern Nuclear Operating Company, Inc., Edwin I. Hatch Nuclear Power Plant, Units 1 & 2, Fire Protection.

The report covers a 13-week period of inspection conducted by resident inspectors, a project engineer, and a regional fire protection inspector. One Green finding which is a Non-Cited Violation was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609 "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.

A. Inspector Identified Findings

Cornerstone: Mitigating Systems

- Green. A Non-Cited Violation (NCV) was identified for the licensee's failure to provide separation of redundant Unit 2 Residual Heat Removal Service Water pump motor cables as required by 10 CFR 50, Appendix R, subsection III.G.2. The cables were located in the same fire area and were needed to achieve and maintain a hot shutdown condition.

The finding was of very low safety significance because of the minimal ignition sources and combustible loading in the area and a low initiating event frequency coupled with the remaining fire suppression capability for a fire in this area (Section 1R05).

B. Licensee Identified Violations

None

Report Details

Summary of Plant Status

During this inspection period 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 operated at or near full RTP, with the exception of routine maintenance and testing, and two power reductions to facilitate repairs to the 2B condensate booster pump.

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

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. Systems verified for correct alignment included the following:

- Emergency Diesel Generators (EDG) 1A and 1B
- Low and High Voltage Switchyards (Units 1 and 2)
- Unit 1 Residual Heat Removal (RHR) "B" Loop
- Unit 2 RHR "A" Loop
- Unit 2 Reactor Core Isolation Cooling (RCIC)

The inspectors conducted a detailed review of the alignment and condition of the Unit 2 Plant Service Water (PSW) system. The inspectors used the licensee procedures and other documents listed in Attachment 1 to verify proper system alignment. The detailed review also verified electrical power requirements, labeling, hangers and support installation, and associated support systems status. A review of maintenance work orders was performed to verify the deficiencies did not significantly affect the PSW system function. In addition, the inspectors reviewed operator workarounds to assess their impact on the PSW system function. The inspectors reviewed Condition Reports (CRs) to verify that equipment PSW alignment problems were being identified and appropriately dispositioned.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors toured risk significant areas to assess the material condition of the fire protection and fire detection equipment and to verify fire protection system equipment was not obstructed. The inspectors reviewed licensee procedure 40AC-ENG-008-OS,

Fire Protection Program, Revision (Rev.) 8, Edition (Ed.) 2 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. The fire areas inspected included the following:

- Unit 2 Turbine Building - Fire Areas: 2101J, 2101M, 2101N, 2102, 2103, and 2104
- Unit 1 Reactor Building - Fire Areas: 1203B, 1203C, 1205B, and 1205C
- Control Building - Fire Areas: 1016, 1017, 1018, 1019, 1020, and 1023
- River Water Intake - Fire Area 0501

The inspectors also witnessed the licensee respond to a simulated fire drill affecting the Unit 2 unit auxiliary transformer. The inspectors used the licensee's training module, FP-LM40100-03, Announced Fire Drills, as guidance to verify that; fire brigade members donned their protective equipment properly, adequate equipment was available to extinguish the simulated fire, communications were effective in carrying out the fire fighting strategy, and the fire fighting strategy employed by the fire brigade leader was sufficient to extinguish the simulated fire.

In addition, the inspectors reviewed the River Intake Structure Fire Area Shutdown Analysis, dated January 2001 and walked down the area to verify safe shutdown equipment and cable routing was installed in accordance with cable routing drawings.

b. Findings

One finding of very low safety significance was identified by the inspector for the licensee's failure to provide adequate separation of redundant Unit 2 Residual Heat Removal Service Water (RHRSW) pump motor cables. The cables are located in the same fire area and are needed to achieve and maintain a hot shutdown condition. The finding is a non-cited violation (NCV) of 10 CFR 50, Appendix R, subsection III.G.2.

During a fire protection walkdown of the river intake structure the inspector identified that power supply cables for redundant Unit 2 RHRSW pumps were not adequately separated. The licensee's safe shutdown analysis credits the 2A and 2B pumps as a necessary safe shutdown path 1 and path 2 component, respectively, to achieve and maintain a hot shutdown condition. Subsection III.G.2 of 10 CFR 50, Appendix R, requires, in part, where redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located in the same fire area, one of three means of ensuring that one of the redundant trains is free of fire damage shall be provided. The means that the licensee chose was:

- Separation of cables of redundant trains by a horizontal distance of more than 20 feet with no intervening combustible or fire hazards and installation of fire detectors and an automatic fire suppression system in the area.

In May, 1986, the licensee requested an exemption from the 20 foot separation requirement for the river intake structure. The NRC approved the exemption in January 1987. (The licensee had already been granted an exemption to the requirement for the installation of an area-wide automatic fire suppression system for this area, based in part, on having suppression around each PSW and RHRSW pump motor). The technical basis for granting the 20 foot separation exemption included that all unwrapped Unit 2 redundant path 1 and path 2 safe shutdown cables outside of the fire suppression protected areas were separated by a minimum of eight feet. The eight foot minimum separation was based upon the licensee's 1986 review of the affected cables for the requested exemption. However, the inspector identified redundant RHRSW pump motor cables which were separated by a horizontal distance of about two feet.

To assess the risk associated with the inadequate cable separation the inspectors used the guidance provided in NRC Manual Chapter 0609, Appendix F, "Determining Potential Risk Significance Of Fire Protection And Post-fire Safe Shutdown Inspection Findings." The assessment included the following assumptions:

- The only available ignition source and combustible load in the area was approximately 23 gallons of oil and grease for the affected pump and motor. This was based upon licensee administrative procedures to control ignition sources and combustible loading.
- Since the RHRSW pumps and portions of the cable routes near the pumps have fire suppression coverage, the fire protection system was credited as likely suppressing the fire originating at a pump, but, would not be fully effective in controlling a fire that extended to the affected cables since they are routed outside of the existing suppression coverage area and are not protected by fire barrier material.
- Manual fire suppression and detection was considered to be in the normal operating state (effective) for a non-control room fire area. This was based upon inspector observations of licensee performance of previous fire drills.

The inspector identified that the fire ignition frequency documented in the licensee's Individual Plant Evaluation for External Events for this area was 4.21 E-3 per year. Therefore, the fire mitigation frequency, using the assumptions above, was -4.15 , resulting in an approximate event frequency of 1 per 1 E4 to 1 E5 years. Since the condition existed for greater than 30 days, the table for the "Estimated Likelihood Rating for Initiating Event Occurrences During Degraded Period" indicated a likelihood rating of "E". Using the plant specific event tree worksheets, the inspector conservatively concluded that the most likely event affected by a fire in this location was the Transient condition (because a loss of RHRSW would only impact the unit if a plant cooldown was necessary) with the power conversion system (PCS) available (considered available due to the remote location of the affected RHRSW pumps). The inspector concluded that the likelihood of the event occurring combined with the remaining mitigation capability resulted in a finding of very low safety significance which is characterized as Green.

Subsection III.G.2 of 10 CFR 50, Appendix R, requires, in part, where redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located in the same fire area, one of three means of ensuring that one of the redundant trains is free of fire damage shall be provided. The means that the licensee used was the

separation of cables of redundant trains by a horizontal distance of more than 20 feet with no intervening combustible or fire hazards and installation of fire detectors and an automatic fire suppression system in the area.

Contrary to the above, on April 19, 2001, the inspector identified that the 2A and 2B RHRSW pump motor cables were only separated by a horizontal distance of approximately two feet and had been in this condition since original construction. This NRC identified violation is being treated as a non-cited violation (NCV) consistent with Section VI.A.1 of NRC Enforcement Policy and is identified as NCV 50-366/01-003-01, Inadequate Separation of RHRSW Cables. The licensee documented this violation in CR 2001003595.

1R11 Licensed Operator Requalification (Quarterly Review)

a. Inspection Scope

The inspector observed simulated control room training and one simulator scenario of a quarterly operator evaluation for licensed operators. The inspector 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 inspector reviewed the licensee's Probabilistic Safety Assessment, High Risk Operator Actions/Recovery Actions to verify that the training and evaluation scenarios included high risk operator actions and recovery contingencies. The inspectors also reviewed licensee procedure 73-EP-EIP-001-0S, Emergency Classification and Initial Actions, Rev. 14, Ed. 1 to verify that the scenario action level was correctly identified and reported. The inspector verified that areas previously identified by the licensee evaluators as weaknesses were addressed during the training session. 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.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed six performance-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, 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.

- 1A Turbine Building Chiller trip - CR 2001002915
- 1B Unit Auxiliary Transformer trip - CR 2001002418
- Unit 1 Down River Traveling Water Screen failure - CR 2001003962
- 1B Control Room Chiller Relay Failure - CR 2001003609
- 2B Condensate Booster Pump Seal Leak - CR 2001004262
- 2B Hydrogen Recombiner Flow Control Valve - CR 2001004096

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 documents to verify that risk assessments were performed prior to components being removed from service for work identified below. 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. Procedures and documents reviewed are listed in Attachment 1 of this report.

- Unit 1A Turbine Building Chiller Trip - CR 20010002915
- 2B Isophase Bus Duct Cooling Fan Motor Failure - CR 2001004330
- 2B Condensate Booster Pump Seal Failure - CR 2110004262
- Work Week Schedule for June 2 - 8, 2001

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Nonroutine Plant Evolutions

a. Inspection Scope

The inspectors witnessed a Unit 2 power reduction of approximately 15% to remove the 2B condensate booster pump from service. The inspectors assessed the licensee's use of system operating procedures, annunciator procedures, and communication. Observations were compared to the requirements specified in licensee procedures listed in Attachment 1 of this report.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following operability evaluations. The inspectors compared the evaluations to the system requirements identified in the Technical Specifications and the UFSAR to ensure that operability was adequately assessed and the system or component remained available to perform its intended function.

- High Pressure Coolant Injection System, 2E41-F006 Ground - LR-REG-011-0401
- Unit 2 Hydrogen Recombiner - LR-REG-002-0601
- High Pressure Coolant Injection System Stop Valve, 1E41-F3052 - CR 2001004433
- High Pressure Coolant Injection System Pipe Support, 2-E41HPCIR53 - CR 2001004981
- Unit 2 RHR Torus Suction Valve, 2E11-F004D - LR-REG-006-0401
- Reactor Recirculation Pump Master Flow Controllers

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope

The inspectors reviewed the operator workarounds summarized on the licensee's list dated April 17, 2001, to determine if the cumulative effects would negatively impact operator actions during a plant transient. In addition, the inspector reviewed a workaround associated with the Reactor Recirculation Pump Master Flow Controllers. Through interviews, the inspector assessed whether operations personnel remained sensitive to operator workarounds. The inspectors specifically considered whether the workarounds affected the operators' ability to implement abnormal or emergency operating procedures.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

b. Inspection Scope

The inspector reviewed licensee actions during the implementation phase of Design Change Request (DCR) 98-012, 4160 Volt Breaker Operability Indication. The inspectors reviewed applicable work package and process sheets; the 10 CFR 50.59 evaluation and licensee procedure 10AC-MGR-019-0S, Procedure Use and Adherence, Rev. 3. The inspectors also observed parts of the DCR implementation field work to verify that quality control inspections and independent verifications were completed as specified by procedures and work process sheets. The inspector reviewed procedure 52GM-MEL-003-0S, Cable/Raceway Installation and Cable Termination, Rev. 16, Ed. 1, to verify that cables were installed and terminated as required by the procedure. The inspectors also assessed the licensee's cable termination and verification process using procedure 51GM-MEL-003-0S, Red-Line Drawings, Rev. 2, Ed. 1. The inspectors witnessed portions of the post DCR breaker operability test to verify the test was

conducted as specified by procedure, work package, and work process sheets. The inspectors reviewed the work package to identify system operating and test procedures, drawings, and training materials and the applicable revision check sheets to verify that the documents were either revised or were scheduled to be revised.

c. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspector reviewed licensee procedures listed in Attachment 1 and observed personnel performance during selected maintenance and testing activities to verify procedure requirements were met. The inspector also reviewed the activities to determine whether the scope of testing adequately verified that the work performed was correctly completed and demonstrated that the affected equipment was functional and operable. Following the maintenance activities, the inspectors verified the equipment was properly aligned to perform the function required of that component. The work activities observed included the following:

- RHR Valve 2E11-F048B - MWO 20100153
- RHR Valve 2E11-F004B - MWOs 20100104 and 29903811
- 2C Plant Service Water Pump - MWO 20100388
- 1A EDG Tank Level Transmitter - MWO 10100998
- Unit 2 Control Rod Drive Room Cooler - MWO 20100478
- HPCI Valve 2E41-F045 - MWO 20101225
- 2B Hydrogen Recombiner - MWO 20101860

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed the following 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 upon 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.

- 34SV-E11-001-1S, Residual Heat Removal Pump Operability, Rev. 22, Ed. 1
- 34SV-E11-002-2S, RHR Valve Operability, Rev. 20, Ed. 2
- 34SV-R43-004-1S, Diesel Generator 1A Semi-Annual Test, Rev.12, Ed. 6
- 34SV-E41-002-2S, HPCI Pump Operability, Rev. 28, Ed. 4
- 42SV-FPX-036-0S, Annual Fire Pump Capacity Test, Rev. 2, Ed. 2
- 34SV-SUV-023-1S, Jet Pump And Recirculation Flow Mismatch Operability, Rev. 8
- 34SV-SUV-023-2S, Jet Pump And Recirculation Flow Mismatch Operability, Rev. 7

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 40AC-ENG-018-0S, Temporary Modification Control, Rev. 3, Ed. 1. 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.

- Master Reactor Recirculation Motor Generator Set Controller 1B31-R620 - TMM 1-01-007
- Condensate Pump Motor Temporary Cooling - TMM 2-01-006
- Unit 1 Reactor Building Ventilation Supply Duct - TMM 1-01-006

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 May 14 during off-normal hours and used the following site procedures to assess the licensee's ability to activate the emergency facilities in the required time, classify the simulated event, and make required notifications. The inspectors attended the post-exercise critique to assess the licensee's effectiveness in identifying areas for improvement.

- 10AC-MGR-006-0S, Hatch Emergency Plan, Rev. 7, Ed. 1
- 73EP-EIP-001-0S, Emergency Classification & Initial Actions, Rev. 14, Ed. 1
- 73EP-EIP-073-0S, Offsite Emergency Notifications, Rev. 13

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope

The inspectors reviewed the licensee's procedures and methods for compiling and reporting performance indicators (PIs) for reactor coolant system activity and reactor coolant system leakage. The inspectors reviewed raw PI data collected since October, 2000 for each of the indicators and compared graphical representations from the most recent PI report to the raw data. The inspectors 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, Rev. 1, and NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Rev. 0, to verify procedure and reporting requirements were met.

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up

.1 (Closed) Licensee Event Report (LER) 50-321/2001-001, Component Failure in Station Service Battery Charger Leads to Inoperability of the High Pressure Coolant Injection (HPCI) System

This event resulted from broken soldered joints on an internal fuse. The fuse was replaced and the licensee plans to establish a repetitive task to replace the fuses in the Unit 1 and Unit 2 chargers once every nine years. The licensee entered this problem into their corrective action program as Condition Reports (CRs) 2001001827 and 2001001966. No findings of significance were identified.

.2 (Closed) LER 50-366/2001-001, Poor Work Practice Results in Trip of Emergency 600-Volt Bus "2C" and Unplanned System Actuations

This event is discussed in Section 4OA3 of Integrated Inspection Report 50-321/00-06 and 50-366/00-06. No new information was presented in the LER.

.3 (Closed) LER 50-321/2000-002-R1, Reduction In Reactor Feedwater Results in Automatic Reactor Shutdown on Low Water Level.

This LER revision was submitted on March 9, 2001, following the issuance of Notice of Violation (NOV) 50-321/01-02-01, Failure To Document Issues Required by 10 CFR 50.73, in Section 4OA2 [c.2] of Inspection Report 50-321/01-02, 50-366/01-02. This LER revision included the required information concerning the complications encountered with the RCIC during the event. No findings of significance were identified.

4OA5 Other.1 (Closed) NOV 50-321/01-02-01, Failure To Document Issues Required by 10CFR 50.73.

This violation was issued based on the determination that the licensee personnel failed to restore compliance and correct the deficiencies noted in the original version of LER 50-321/2000-002. As noted in section .3 above, the licensee submitted LER 50-321/2000-002-R1 on March 9, 2001, which included the information required by 10 CFR 50.73 and therefore restored compliance.

.2 (Closed) Unresolved Item (URI) 50-321, 50-366/00-004-01, Kaowool Fire Protection Barrier at Intake Structure

By letter dated February 2, 2001, the licensee submitted a revised safe shutdown analysis for the River Intake Structure. The licensee concluded that the Kaowool fire barrier was adequate to prevent the protected cables from adding to the fire load during a fire event. In addition, the licensee evaluated the effect on the fire protection strategy, based on a loss of the protected cables during the fire event. The licensee concluded that the cables were not needed to assure safe hot shutdown and that a simple manual action, taken after the fire was extinguished, was all that was necessary to achieve cold shutdown.

The inspectors reviewed this analysis and the fire fighting strategy for this area. The inspectors also conducted walkdowns of the River Intake Structure to assess the adequacy of the licensee's revised analysis. The inspectors concluded the licensee's use of Kaowool at the River Intake Structure was acceptable and that the new fire protection strategy was acceptable without reliance on the existing Kaowool fire barrier material. The inspectors determined that the changes to the analysis and fire protection strategy did not have a significant impact on the combustible loading, circuits, or components needed for the safe shutdown of the plant. No findings or non-compliances of significance were identified.

4OA6 Management Meetings.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. Betsill, Assistant General Manager - Plant Support and other members of licensee management at the conclusion of the inspection on July 6, 2001. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

.2 Reactor Oversight Process - Annual Assessment Meeting
Annual Meeting with State and Local Officials

The NRC Resident Inspectors and the Division of Reactor Projects Branch Chief assigned to the Hatch Nuclear Plant met on June 27, 2001, with Southern Nuclear Operating Company, Inc. (SNC) to discuss the NRC's Reactor Oversight Process (ROP)

annual assessment of safety performance for the Hatch Nuclear Plant for the period of April 2, 2000 - March 31, 2001. The major topics addressed were: the NRC's assessment program, the results of the Hatch assessment, and the NRC's Agency Action Matrix. Attendees included SNC site management, members of plant staff, and several local officials.

Prior to the annual assessment meeting, a brief meeting was held with local officials to discuss the ROP and NRC activities involving the Hatch Nuclear Plant, the role of the Resident Inspectors, and methods of bringing concerns to the NRC.

Both of the meetings were open to the public. Information used for the discussions of the ROP is available from the NRC's document system (ADAMS) as accession number ML 011980088. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room). Additionally NUREG-1649, United States Nuclear Regulatory Commission - Reactor Oversight Process, Revision 3, July 2000, was made available to meeting attendees.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Betsill, J., Assistant General Manager - Plant Support
 Burkett, E., Operations Support Superintendent
 Curtis, S., Unit Superintendent
 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
 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**

50-366/01-003-01	NCV	Inadequate Separation of RHRSW Cables (Section 1RO5)
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Closed

50-366/01-003-01	NCV	Inadequate Separation of RHRSW Cables (Section 1RO5)
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50-321/2001-001	LER	Component Failure in Station Service Battery Charger Leads to Inoperability of the High Pressure Coolant Injection (HPCI) System (Section 4OA3.1)
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50-366/2001-001	LER	Poor Work Practice Results in Trip of Emergency 600-Volt Bus "2C" and Unplanned System Actuations (Section 4OA3.2)
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LER 50-321/2000-002-R1	LER	Reduction In Reactor Feedwater Results in Automatic Reactor Shutdown on Low Water Level (Section 4OA3.3)
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50-321/01-02-01	NOV	Failure To Document Issues Required by 10CFR 50.73 (Section 4OA5.1)
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50-321,366/00-004-01	URI	Kaowool Fire Protection Barrier at Intake Structure (Section 4OA5.1)
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ATTACHMENT 1

INSPECTION DOCUMENTS REVIEWED

Section 1R04

34AB-P41-001-2S, Loss of Plant Service Water, Rev. 7, Ed. 1
34SO-E11-010-1S, RHR System, Rev. 29
34SO-E11-010-2S, RHR System, Rev. 29
34SO-P41-001-2S, Plant Service Water System Valve Lineup, Rev. 22, Ed. 1
34SO-R22-001-1S, 4160 VAC System, Rev. 15, Ed. 5
34SO-R22-001-2S, 4160 VAC System, Rev. 17, Ed. 4
34SO-R43-001-1S, Diesel Generator Standby AC Systems, Rev. 21, Ed. 3
34SO-R43-001-2S, Diesel Generator Standby AC Systems, Rev. 23, Ed. 4
Maintenance Rule Report for Fourth Quarter, 2000
Monthly Maintenance Rule Report, February 2001
MWOs - All open MWOs for Plant Service Water System Unit 2, 10100363
Condition Report Summary Report, date April 16, 2001.
CRs - 2000003636, 2001001113, 2001000417, 2001000637, 2001000674, 2001001336,
2001003166, 2001003167, 2001003168, 2001003169, 2001003171, 2001003173,
2001003174, 2001003175

Section 1R05

40AC-ENG-008-0S, Fire Protection Program, Rev. 8, Ed. 2
42SV-FPX-006-0S, Fire Damper Surveillance, Rev. 1, Ed. 1
Hatch plant drawing H16054, Rev. 19
Site Fire Hazards Analysis, and applicable Pre-fire Plan drawings (A-43965 sheets 129B and 131B)

Section 1R11

10AC-MGR-019-0S, Procedure Use and Adherence, Rev. 3
73EP-EIP-001-0S, Emergency Classification and Initial Actions, Rev. 14, Ed. 1
Probabilistic Safety Assessment, High Risk Operator Actions/Recovery Actions

Section 1R12

40AC-ENG-020-0S, Maintenance (10 CFR 50.65) Implementation and Compliance, Rev. 3
Maintenance Rule Monthly Report for April, 2001, May, 2001
Plant Hatch 10 CFR 50.65 Scoping Manual, Revision 4
MWO's - 10002655, 20101821, 20101886
CRs - 2001002418, 2001002915, 2001003609, 2001003962, 2001004262

Section 1R13

34AB-B21-002-1S, RPV Water Level Corrections, Rev 5, Ed. 3
90AC-OAM-002-0S, Scheduling Maintenance, Rev 0

CR - 2001004262
MWO - 20101886

Section 1R14

AG-MGR-54-0592N, Plant Communications, Rev. 1
10AC-MGR-019-0S, Procedure Use and Adherence, Rev.3
34GO-OPS-005-2S, Power Changes, Rev. 24, Ed. 2
34GO-OPS-013-2S, Normal Plant Shutdown, Rev. 26, Ed. 1

Section 1R15

Engineering Evaluation for 1E41-F3053 and 1E41-F3052 dated June 8, 2001
CR - 2001004433
MWO - 10102066

Section 1R16

Operations Needs, Significant Work Arouns, and Work Arouns List dated 4/17/2001

Section 1R19

34SV-E11-001-0S, Residual Heat Removal Pump Operability, Rev. 22, Ed. 1
34SV-E11-002-2S, RHR Valve Operability, Rev. 20, Ed. 2
34SV-T49-001-2S, Primary Containment Hydrogen Recombiner System Functional Test
(Heatup to 1200 °F), Rev. 6, Ed. 4
51GM-MNT-023-0S, Maintenance of Check Valves, Rev. 12, Ed. 3
53IT-TET-002-0S, Valve Operation Test and Evaluation, Rev. 7, Ed. 6
52PM-MNT-005-0S, Limitorque Valve Operator Inspection, Rev. 27, Ed. 6
90AC-OAM-002-0S, Scheduling Maintenance, Rev 0
CR - 2001003434
MWOs - 10100998, 20100388, 20100476, 20101225, 20101860

Section 1R22

CR - 2001004691
Plant Drawing - H-11033, Sheet 1, Rev. 44