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

September 14, 2007

Southern Nuclear Operating Company, Inc.
ATTN: Mr. Dennis R. Madison
Vice President - Hatch
Edwin I. Hatch Nuclear Plant
11030 Hatch Parkway North
Baxley, GA 31513

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC IDENTIFICATION AND RESOLUTION OF PROBLEMS INSPECTION REPORT 05000321/2007006 AND 05000366/2007006

Dear Mr. Madison:

On August 16, 2007, the U. S. Nuclear Regulatory Commission (NRC) completed a team inspection at your Edwin I. Hatch Nuclear Plant, Units 1 and 2. The enclosed inspection report documents the inspection findings, which were discussed on August 16, 2007, with yourself and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations and with the conditions of your operating license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

Based on the sample selected for review, the team concluded that, in general, problems were properly identified, evaluated, and corrected. One self-revealing finding and one NRC-identified finding of very low safety significance were identified, both of which were determined to involve violation of regulatory requirements. Additionally, one licensee-identified violation, which was determined to be of very low safety significance, is listed in the report. NRC is treating these violations as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy because of the very low safety significance and because you have entered them into your corrective action program. If you contest any NCVs in this report, you should provide a response with the basis of your denial within 30 days of the date of this inspection report, 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 NRC Resident Inspector at the Hatch Nuclear Plant.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web-site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

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

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

Enclosure: Inspection Report 05000321/2007006 and 05000366/2007006
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

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

David H. Jones
Vice President - Engineering
Southern Nuclear Operating Company, Inc.
P.O. Box 1295
Birmingham, AL 35201-1295

L. M. Stinson
Vice President , Fleet Operations Support
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 Corporation
Electronic Mail Distribution

Moanica Caston
Southern Nuclear Operating Company, Inc.
Bin B-022
P. O. Box 1295
Birmingham, AL 35201-1295

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
69 Tippins St., Suite 201
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

Letter to Dennis R. Madison from Scott M. Shaeffer dated September 14, 2007

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC IDENTIFICATION AND RESOLUTION OF PROBLEMS INSPECTION REPORT 05000321/2007006 AND 05000366/2007006

Distribution w/encl:
R. Martin, NRR
C. Evans, RII
L. Slack, RII
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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.:	05000321, 05000366
License Nos.:	DPR-57 and NPF-5
Report Nos.:	05000321/2007006 and 05000366/2007006
Licensee:	Southern Nuclear Operating Company, Inc.
Facility:	Edwin I. Hatch Nuclear Plant, Units 1 & 2
Location:	Baxley, Georgia 31515
Dates:	July 30 - August 16, 2007
Inspectors:	E. Crowe, Senior Resident Inspector (Team Leader) C. Rapp, Senior Project Engineer B. Miller, Reactor Inspector E. Morris, Resident Inspector
Approved by:	Scott M. Shaeffer, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000321/2007-006, 05000366/2007-006; 07/30/2007 - 08/16/2007; Hatch Nuclear Plant, Units 1 & 2; Biennial Baseline Identification and Resolution of Problems Inspection

The inspection was conducted by a senior resident inspector, a senior project engineer, a resident inspector, and a reactor inspector. Two Green findings, both of which were non-cited violations, were identified. The significance of most findings is indicated by their color (Green, White, Yellow, 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 NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Identification and Resolution of Problems

Two Green non-cited violations (NCVs) were identified. The team identified that the licensee was generally effective at identifying problems and entering them into the corrective action program (CAP) for resolution. The licensee maintained a low threshold for identifying problems as evidenced by the continued large number of condition reports (CRs) entered annually into the CAP. The team also determined the licensee was generally prioritizing and evaluating issues properly. The team identified minor problems involving corrective actions for operating experience not being documented within the corrective action program, timeliness of evaluations, and corrective actions which were incomplete. NCVs related to the effectiveness of corrective actions and inadequate evaluation of issues were identified. Audits and self-assessments continued to identify issues related to the corrective action program. On the basis of interviews conducted during the inspection, the team identified that personnel at the site felt free to raise safety concerns to management and to resolve issues via the CAP.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. A self-revealing Green non-cited violation of 10 CFR 50, Appendix B, Criterion III was identified for failure to control the design aspects of a plant modification. The licensee failed to incorporate vendor parts and specifications for a modification to the Unit 1 residual heat removal (RHR) pump discharge check valves.

  The team determined this finding is more than minor because it was related to the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affects the cornerstone objective in that the repeat failures resulted in unplanned unavailability of one train of RHR. This finding is of very low safety significance because it did not result in loss of safety function for a single train greater than allowed Technical Specification outage time. The team determined this finding was of very low safety significance because it did not result in loss of safety function for a single train greater than allowed Technical Specification outage time. The team determined this finding involved a Human Performance cross-cutting aspect of complete, accurate and up-to-date design documentation, procedures, and work packages in that the vendor part number for the non-counterweighted valve disk hanger was not reflected in current

station documents. The licensee has entered this violation into their corrective action program as CR 2007107101. (Section 4OA2.a(3)(i))

- Green. An NRC-identified Green non-cited violation of 10 CFR 50.55a(g)(4) for the failure to perform periodic leakage testing of buried piping sections of the High Pressure Coolant Injection (HPCI) and Standby Diesel Service Water (SBDSW) systems as required by Section XI of the ASME Code for the third 10-year In-service Inspection (ISI) interval.

  This finding is more than minor because it affects the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affects the cornerstone objective in that if a significant leak or rupture should occur as a result of undetected piping degradation, water could not be delivered to mitigating system components preventing these systems from fulfilling their intended safety functions. This finding is of very low safety significance (Green) because it does not represent an actual loss of a system's safety function. Further, the licensee performed the required testing on the SBDSW piping on May 22, 2007, and performed HPCI piping inspections in 2005 and found no significant degradation. This finding was reviewed for any cross-cutting aspects and none were identified. The licensee has entered the violation into their corrective action program as CRs 2007102265 and 2007104138. (Section 4OA2.a(3)(ii))

B. Licensee-Identified Violations.

A violation of very low safety significance, which was identified by the licensee, has been reviewed by the team. 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

4 OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

The inspection team based the following conclusions, in part, on issues identified/evaluated during the period May 1, 2005 and June 1, 2005. In addition, for selected systems, the team reviewed problems which were identified outside this assessment period whose significance might be age dependent.

a. Assessment of the Corrective Action Program

(1) Inspection Scope

Effectiveness of Problem Identification. The team reviewed the licensee's CAP procedures which described the administrative process for initiating and resolving problems through the use of work orders (WOs) and condition reports (CRs). The team attended meetings where CRs were screened for significance, interviewed personnel, reviewed system health reports, and maintenance rule reports to determine whether the licensee was identifying, accurately characterizing, and entering problems into the corrective action process at an appropriate threshold. The team also conducted plant walkdowns of safety-related equipment to assess the material condition and to identify any deficiencies that had not been previously entered into the CAP.

The team reviewed selected CRs listed in the Attachment covering the seven cornerstones of safety. The team also conducted a review of CRs for five risk significant systems and the components of the Torus and Suppression Pool. These systems were selected based on equipment performance history, Maintenance Rule (MR) considerations, and risk significance insights from the licensee's probabilistic safety assessment. The systems selected were the HPCI system, the RHR system, the Core Spray (CS) system, the RHR Service Water (RHRSW) system, and the 4160 volt and 600 volt Emergency Electrical Buses. The team reviewed the maintenance history, selected WOs, and the associated system health reports for the five systems. Additional CRs were selected for problems previously identified by the NRC. The team also reviewed issues documented in NRC inspection reports and licensee event reports. In accordance with the inspection procedure, a five-year review was performed for the RHR, HPCI, and RHRSW for age dependant issues.

Prioritization and Evaluation of Issues. The team reviewed CRs including root and apparent cause evaluations, trend reports, and self-assessments to verify the licensee appropriately prioritized and evaluated problems in accordance with their risk significance. The team verified the licensee adequately determined the cause of the problems, root cause analysis where appropriate, and adequately addressed operability, reportability, common cause, generic concerns, extent of condition, and extent of cause. The review included the appropriateness of the assigned significance, the timeliness of resolutions, level of effort in the investigation, and the scope and depth of the causal analysis. The review was also performed to verify the licensee appropriately identified

corrective actions to prevent recurrence and that these actions had been appropriately prioritized.

From the sample of CRs, the team selected effectiveness reviews, and work orders initiated to resolve CRs, to verify that the licensee had identified and implemented timely and appropriate corrective actions to address problems. The team verified that corrective actions were properly documented, assigned, and tracked to ensure completion. The review also verified the adequacy of corrective actions to address equipment deficiencies and MR functional failures of risk significant plant safety systems.

The team also attended various plant meetings to observe management oversight and daily functions of the corrective action process. These included the Daily Plant Status Meeting and Management Review Meeting which reviews the previous day's assignment of severity levels, event codes, and cause codes.

Effectiveness of Corrective Actions. The team reviewed selected CRs to verify that specified corrective actions were timely and effective in resolving the problems described. This sample was based upon risk as well as the severity level of the condition report. The CRs reviewed also included those resulting from previous NRC violations as well as licensee audits and self assessments. From the CRs sampled, the team selected effectiveness reviews and work orders initiated to resolve CRs, to verify the licensee has identified and implemented timely and appropriate corrective actions to address problems. The team verified the corrective actions were properly documented, assigned, and tracked to ensure completion. The review also encompassed the adequacy of corrective actions to address equipment deficiencies and MR functional failures of risk significant plant safety systems.

Documents reviewed are listed in the Attachment.

(2) Assessment

Effectiveness of Problem Identification. The team determined the licensee was generally effective in identifying problems and entering the issues into the CAP. The team noted that approximately 12,000 to 13,000 CRs were generated by the site each year. The issues identified in these CRs were at a very low threshold. The team noted one instance where the MR expert panel was inactive for approximately 18 months. This was attributed to turnover of plant staff of which the Engineering Support Manager (ESM) was involved. The ESM was the chairman of this panel. The site Maintenance Rule Coordinator (MRC) was also a participating member of this panel and was also involved in the shift of plant personnel. Neither the ESM or the MRC identified the inactivity of the expert panel. This condition was identified by a Quality Assurance (QA) audit in the first quarter of 2006. The site promptly returned the MR expert panel to an active status and subsequently performed a historical review of previous MR related activities.

Prioritization and Evaluation of Issues. The team determined the corrective action program coordinators (CAPCOs) correctly assigned severity levels to the CRs reviewed by the team. The licensee was generally effective in prioritizing and processing CRs. In general, the root cause evaluations for the CRs reviewed were adequate. In general, apparent cause evaluations reviewed were found to be thorough and well-documented. The team reviewed approximately 45 CRs classified as severity level 3 requiring an apparent cause evaluation. The team determined the following eight CRs asked only the minimum of two "Why" questions required by the previous revision of the licensee procedure (2005100341, 2005111270, 2006101697, 2006104269, 2006105296, 2006109231, 2006109768, and 2006110586). The CRs warranted further investigation to address a third "Why" question which was implied by the documentation contained within the CR. As a result, these evaluations were incomplete and were not stand alone documents. The licensee had previously identified this condition and has implemented a process to correct this issue.

Effectiveness of Corrective Actions. In general, corrective actions developed and implemented for problems were timely and effective, commensurate with the safety significance of the issues. For significant conditions adverse to quality, the corrective actions directly addressed the cause and effectively prevented recurrence. However, the team found the examples listed below where corrective actions were not performed in a timely manner or were inadequate.

- CR 2007103319 documented a condition where the HPCI pump failed to start during surveillance procedure 34SV-E41-005-2. The condition was attributed to moisture intrusion into the electronic governor control circuit. CR 2007101917 previously documented a condition where an improper tagout of the pump's barometric condenser led to the Condensate Storage Tank draining to the pump's turbine and overflowing into the lubricating oil system. The licensee drained the water from the HPCI turbine oil sump and removed the water. However, the licensee didn't remove the moisture from the portion of the oil system that provides the hydraulic fluid for the turbine governor.

- CR 2006104537, a Severity Level (SL) 2 CR, documented 32 procedure adherence examples identified during a QA audit performed in April, 2006. The licensee's corrective actions required department managers to discuss procedure adherence with their employees. However, the team found no corrective action to assess the effectiveness of these actions. CR 2007103243 documented another example of procedure adherence. On March 14, 2007, the Drywell to Suppression Leakage surveillance test failed due to a missing pipe cap and nipple for drywell vacuum breaker. The licensee attributed this to plant personnel failing to install these components as required by the work order during maintenance earlier in the year.

- CR 2006104538 documented untimely or inadequate corrective actions identified during the QA audit performed in April 2006. The untimely or inadequate corrective actions resulted in chemistry procedures not containing required contingency plans to obtain post accident suppression pool samples, non-environmental qualified fuse in Operations Department fuse kit, deficiencies in building permit closure and control, no

procedure for recovery operations following a Hatch Nuclear Plant emergency, and humidity in Records Storage Facility being outside procedural limits. The team discovered instances where work orders were inadequate after completion of corrective actions for the above condition report. CR 2007100132 was written identifying the lack of identification for the sealant for a bearing housing for the HPCI pump. The licensee performs frequent replacement of the pump's outboard seal as a result of a design deficiency due to lack of seal water vents for this pump. The team also discovered, during the most recent maintenance, the licensee had milled the outboard thrust bearing housing during replacement of the outboard seal. Licensee personnel discovered, during maintenance, the thrust bearing run-out to be out of tolerance which led to the milling evolution. Licensee personnel stated the out-of tolerance run-out was due to utilizing a gasket which had been omitted in previous maintenance and sealant used in its place. The work order for the HPCI pump outboard seal replacement failed to clearly indicate the need for a gasket or to provide for the use of sealant instead of the gasket.

(3) Findings

(I) Introduction: A self-revealing Green NCV of 10 CFR 50, Appendix B, Criterion III, Design Control, was identified for failure to translate complete vendor specifications into plant hardware following a modification to remove the counterweights from the RHR pump discharge check valves.

Discussion: The original design of the RHR pump discharge check valves (1E11-F031A - D) included packing between the hinge pins and the valve disk hanger. An external counterweight provided additional closing force to compensate for the friction due to the packing. Due to the presence of packing, the tolerance between the hinge pins and the disk hanger were tighter than those for similar noncounterweighted check valves. In 1995, the licensee implemented a design modification which removed the counterweights from the check valves. The licensee also discontinued the use of packing between the hinge pin and the hanger assembly. However, the licensee did not evaluate the need to use a different valve disk hanger for non-counterweighted check valves.

On June 14, 2007, the 1C RHR pump discharge check valve (1E11-F031C) failed to fully close following an RHR pump vibration test. The licensee determined that excess wear between the hinge pins and the valve disk hanger resulting in binding of the valve disk. The licensee replaced the valve disk hanger using a part from the warehouse which was for a counterweighted check valve. Following maintenance on the valve, the licensee performed a reverse flow test and verified that the disk was seating.

On July 30, 2007, the 1C RHR pump discharge check valve again failed to fully close following operation of RHR in suppression cooling mode. The licensee performed a root-cause analysis for this failure and determined the disk hanger was not the correct part for a non-counterweighted check valve. The licensee determined from vendor documentation that the valve disk hanger for a non-counterweighted valve had a larger tolerance between the hinge pins and the valve disk hanger than for a counterweighted

valve. The licensee believed smaller tolerance resulted in higher friction causing excess wear between the hinge pins and the valve disk hanger which resulted in binding of the valve disk. The licensee enlarged the tolerance to that recommended by the vendor for non-counterweighted valves in an effort to reduce the friction between the hinge pins and the valve disk hanger. The licensee also machined the disk hanger to remove a burr from the valve disk hanger and slightly change the angle of the mating surface. Following maintenance on the valve, the licensee performed a reverse flow test and verified that the disk was seating.

Analysis: This finding is more than minor because it was related to the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affects the cornerstone objective in that the repeat failures resulted in unplanned unavailability of one train of RHR. This finding is of very low safety significance because it did not result in loss of safety function for a single train greater than allowed Technical Specification outage time. The team determined this finding involved a Human Performance cross-cutting aspect of complete, accurate and up-to-date design documentation, procedures, and work packages in that the vendor part number for the non-counterweighted valve disk hanger was not reflected in current station documents.

Enforcement: 10 CFR 50, Appendix B, Design Control, requires, in part, that measures shall be established for the identification and control of design interfaces and for coordination among participating design organizations. These measures shall include the establishment of procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces. Contrary to the above, the licensee failed to translate complete vendor specifications into plant hardware following modification to remove the counterweights for the RHR pump discharge check valves. This resulted in vendor parts for counterweighted check valves being used during subsequent valve maintenance. Because this finding is of very low safety significance and because the licensee has entered the violation into their corrective action program as CR 2007107101, this violation will be characterized as a NCV in accordance with Section IV.A.1 of the NRC's Enforcement Policy and is identified as NCV 050000321,366/2007006-01, Failure to Update Parts Specifications Following a Design Modification.

(2) Introduction: An NRC-identified NCV of 10 CFR 50.55a(g)(4) for failure to perform periodic leakage testing of buried piping sections of the HPCI and the SBDSW systems as required by Section XI of the ASME Code for the third 10-year ISI interval.

Description: During the Unit 2 refueling outage in February 2007, NRC inspectors identified that the licensee had not performed the required periodic pressure drop test or change in flow rate test for buried portions of the HPCI and SBDSW systems piping during the third ISI interval in accordance with the 1989 Edition of Section XI, Article IWA-5244. The licensee was committed to this Code Edition for the third ISI interval. This Code required testing was for buried piping that was nonredundant and isolable. Prior to the discovery by NRC inspectors, the licensee had incorrectly considered the buried portions of HPCI and SBDSW systems to be redundant and isolable, a classification which would have exempted them from testing. Since the third ISI interval

ended December 31, 2005, it was unclear if the licensee was within the grace period to request relief from this requirement which, if granted, would have alleviated the Code requirement. Subsequent to the February outage, the licensee concluded that they were unable to request relief and that there was no avenue to reconcile this missed examination. The licensee has included this Code requirement in their fourth 10-year ISI interval testing program.

Analysis: This finding is more than minor because it affects the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affects the cornerstone objective in that if a significant leak or rupture should occur as a result of undetected piping degradation, water could not be delivered to mitigating system components preventing these systems from fulfilling their intended safety functions. This finding is of very low safety significance (Green) because it does not represent an actual loss of a system's safety function. Further, the licensee performed the required testing on the SBDSW piping on May 22, 2007, and performed HPCI piping inspections in 2005 and found no significant degradation. This finding was reviewed for any cross-cutting aspects and none were identified.

Enforcement: 10 CFR 50.55a(g)(4) requires, in part, that throughout the service life of a boiling or pressurized water reactor facility, components classified as ASME Code Class 1, 2, and 3 must meet the requirements set forth in Section XI of the ASME Code. The 1989 Edition of Section XI, IWA-5244, "Buried Components," states "(a) In non-redundant systems where the buried components are isolable by means of valves, the visual examination VT-2 shall consist of a leakage test that determines the rate of pressure loss. Alternatively, the test may determine the change in flow between the ends of the buried components..." Contrary to this requirement, the licensee failed to perform the required testing on buried portions of the Class 2 HPCI and Class 3 SBDSW systems during the third 10-year ISI interval (January 1, 1996 to December 31, 2005) for which the 1989 Edition of the ASME Code was applicable. Because this finding is of very low safety significance and the licensee has entered the violation into their corrective action program as CRs 2007102265 and 2007104138, it is being treated as a NCV consistent with Section VI.A.1 of the Enforcement Policy and is identified as NCV 050000321,366/2007006-02, Failure to Perform Required ASME Code, Section XI Testing.

b. Assessment of the Use of Operating Experience

(1) Inspection Scope

The team conducted a review of the licensee's Operating Experience (OE) program to verify actions were completed in accordance with licensee procedure NMP-GM-008, Operating Experience Program. The team focused on NRC generic communications and OE items associated with recent industry operating experience for a detailed review to verify issues were appropriately evaluated and entered into the CAP. The team also reviewed a sampling of the items the licensee had submitted for OE to verify the information accurately reflected the event(s).

(2) Assessment

In general, the team determined that OE items were adequately identified, evaluated, and utilized. However, the two items listed below reveal recent weaknesses in the OE program.

- NRC IN 84-20 was published in March 1984 to inform licensees of the results of GE testing of Agastat GP Series Relays. These relays were used in the reactor protection system and other safety-related systems for logic actuation in instrumentation and control circuits. The results of the test indicated that normally de-energized relays had a service life of 10 years and that normally energized relays had a service life of 4.5 years. The licensee evaluated IN 84-20 and determined that Agastat relays installed in the plant had shown no degradation and chose no further action at that time. On September 25, 2006, CR 2006109692 was written to identify 6 relay failures out of 291 relays installed on Unit 1 had failed over the last six years. Four of the six relay failures on Unit 1 involved relays providing an alarm function that were found during routine calibration. The CR further identified that Unit 2 had experienced 3 relay failures over the same period. Unit 2 relay failures also involved relays providing an alarm function. The condition report indicated that no complete loss of safety function was identified. On March 30, 2007, CR 2007103818 was written to identify that the licensee had received notice from the Agastat relay vendor that "F" series relays, purchased as safety-related in 1979, were not actually qualified for Class 1E applications and that they were not tested for a specific life expectancy. The vendor recommended replacing all "F" series relays used in a safety related application with safety related "E" series relays. The team discovered that previous evaluations of the service life of the safety-related Agastat relays had been of normally de-energized relays when the HPCI system actually contains normally energized relays which have less than one half the recommended service life of the normally de-energized relays. The licensee has implemented a plan to replace all "F" series relays used in safety-related systems by December 2007.

- CR 20051000341 documented that valve F016A, Outboard Containment Spray Isolation Valve, failed to open during a stroke timing surveillance. The licensee dissembled the actuator and found that the four set screws that held the clutch sleeve and the gear together were missing which resulted in the actuator failing. As part of the root cause evaluation, the licensee identified a 1993 industry notice that the clutch set screws would loosen due to vibration and could result in actuator failure. The notice stated that either a locking compound or staking be used to prevent the set screws from loosening. The notice recommended that the set screws be inspected during actuator overhaul or if the motor was removed. In 1994, the licensee replaced both the actuator and the motor on valve F016A, but did not inspect if the set screws were secured in place. This was a missed opportunity to identify and correct a

condition adverse to quality. Subsequently, the actuator failed during routine surveillance. The enforcement aspects of this issue are disposition in Section 4OA7.

(3) Findings

No findings of significance were identified.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The team conducted a review of the licensee's self-assessment and audit programs to verify actions were completed in accordance with licensee procedures NMP-GM-003, “Self-Assessment Procedure” and NMP-GM-003-GL-1, “Self-Assessment Guideline.” The team conducted a review of licensee self-assessments that were conducted during the time period of May 1, 2005 to June 1, 2007. The team reviewed a sampling of self-assessments and audits to verify that identified deficiencies and areas needing improvement were entered into the CAP tracking system.

(2) Assessment

The team verified that self-assessments and audits were adequately performed to identify deficiencies and areas needing improvement. For the deficiencies and areas needing improvement, the team confirmed that the items were entered into the CAP tracking system.

(3) Findings

No findings of significance were identified.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The team randomly interviewed approximately 25 on-site workers, focusing on their knowledge of the problem identification process. Interviewees were questioned on their understanding and their willingness to initiate condition reports or raise safety concerns through the employee concerns program (ECP). Discussions with plant staff were conducted to develop a general sense of the safety-conscious work environment at the site. The team looked for indications of conditions that would cause employees to be reluctant to raise safety concerns.

Additionally, the team reviewed Corporate ECP files for completeness, adequacy of the investigation, file documentation, responsiveness to the concerned individuals, responses to “recommended corrective actions” by station management, and to verify that employee concerns remain anonymous. The team also interviewed the Corporate and Site ECP Managers related to their assigned duties. The inspection included verification that concerns were being properly reviewed; identified deficiencies were being resolved; and issues were entered into the CAP when appropriate.

(2) Assessment and Observations

The team determined, through interviews, that site personnel felt free to raise safety concerns. All personnel stated they would not hesitate to raise safety concerns to their direct management or through the CR process. They also understood and believed they could raise issues without fear of retaliation by management. Concern resolution files were sampled from years 2005 and 2006. The team noted the majority of the concerns were related to non-safety related concerns and were being tracked through action items. The team concluded that a safety conscious work environment existed.

(3) Findings

No findings of significance were identified.

4OA6 Management Meetings

On August 16, 2007, the team presented the inspection results to Mr. D. Madison and other members of his staff who acknowledged the findings. The team informed the licensee that any proprietary information that was examined during the inspection will not be included in the report.

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 NCVs.

- 10 CFR 50, Appendix B, Criterion XVI, “Corrective Actions” states, in part, that measures shall be established to assure that conditions adverse to quality, such as non-conformances are promptly identified and corrected. Contrary to the above, the licensee failed to identify that a locking compound had not been applied to the set screws of the actuator for Containment Spray Valve 1E11-F016A. An industry notice, available in 1993, provided information on applying a locking compound to the actuator set screws.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee personnel
M. Ajluni, Plant Support Manager
J. Dixon, Health Physics Manager
S. Douglas, Plant Manager
B. Goodwin, Engineering Manager
D. Herrin, Corrective Actions Program Manager
G. Johnson, Operations Manager
R. King, Engineering Supervisor for Modifications
J. Lewis, Training and Emergency Preparedness Manager
D. Madison, Hatch Vice President
V. Shaw, E-Fin Supervisor
J. Thompson, Nuclear Security Manager
K. Underwood, Performance Analysis Manager
R. Varnadore, Maintenance Manager

NRC personnel
C. Christensen, Deputy Director, Division of Reactor Projects
S. Shaeffer, Chief, Branch 2, Division of Reactor Projects

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000321, 366/2007006-01	NCV	Failure to Update Plant Components to Match Design Modification (Section 4OA2.a(3)(i))
05000321, 366/2007006-02	NCV	Failure to Perform Required ASME Code, Section XI Testing (Section 4OA2.a(3)(ii))

LIST OF DOCUMENTS REVIEWED

Procedures

NMP-AD-002	Troubleshooting Guidelines A Graded Approach
NMP-AD-012	Operability Determinations and Functionality Assessments for Resolution of Degraded and Nonconforming Conditions Adverse to Quality or Safety
NMP-ES-026	As-Built Notices (ABNs)
NMP-GM-002	Corrective Action Program
NMP-GM-003	Self-Assessment Procedure
NMP-OS-003	Operational Decision Making Issue Evaluation Process

Root Cause Evaluations

CR2005100077	Unit 1 Shutdown Due to Increasing Drywell Floor Drain Leakage
CR2006103226	FME Controls Not In Compliance With Station Procedures
CR2006105462	HPCI System Inoperable Due to Discharge Check Valve Leakage

CR2006105826	5 SRVs As Found Test Results Greater Than 3% Above TS Allowance
CR2006106806	EOP Collapsible Fire Hose For Alternate Boron Injection - NRC Violation
CR2006107057	Testing Program for ECCS Area Coolers Failed to Meet Degree of Required Instrument Accuracy
CR2006107110	Safety Related Motor Control Center and Local Starters Have Thermal Overloads Bypassed
CR2006108855	RCIC System Torus Suction Failed to Meet Acceptance Criterion #3 of NUREG-0737
CR2007101771	Unit 2 MSIVs Failed LLRT
CR2007102031	Core Spray and RHR Room Cooler Plant Service Water Supply Valves Unintentionally Preconditioned
CR2007103319	HCPI Turbine Control Valve Failed to Open
CR2007103455	2A RFPT Minimum Flow Manual Isolation Valve Found Partially Closed
CR2007104398	5 SRVs As Found Test Results Greater Than 3% Above TS Allowance

Condition Reports:

1998005418	2005110949	2006103493	2006108419	2007100717
2000005376	2005110955	2006103537	2006108555	2007100931
2003112330	2005110391	2006103539	2006108582	2007101102
2004111186	2005111006	2006103699	2006108820	2007101267
2004101533	2005111247	2006103842	2006108855	2007101308
2004103030	2005111270	2006104269	2006108952	2007101315
2005100077	2005111372	2006104038	2006109052	2007101351
2005100206	2005111378	2006104403	2006109091	2007101561
2005100341	2005111621	2006104537	2006109154	2007101606
2005104542	2005111893	2006104538	2006109231	2007101753
2005104950	2005112047	2006104543	2006109372	2007101990
2005105478	2006100132	2006104574	2006109692	2007101991
2005105499	2006100187	2006104678	2006109717	2007101762
2005105639	2006100204	2006104774	2006109726	2007101917
2005105743	2006100390	2006104825	2006109768	2007102031
2005106000	2006100396	2006104908	2006109820	2007102265
2005106027	2006100576	2006105242	2006109823	2007102285
2005106049	2006100645	2006105296	2006110043	2007102502
2005106119	2006100776	2006105346	2006110200	2007102803
2005106166	2006101209	2006105428	2006110334	2007102912
2005106174	2006101569	2006105462	2006110344	2007103055
2005106396	2006101575	2006105520	2006110354	2007103056
2005106564	2006101697	2006105657	2006110382	2007103215
2005106887	2006101753	2006105661	2006110682	2007103243
2005106888	2006101761	2006105710	2006110683	2007103319
2005107003	2006101771	2006105747	2006110736	2007103329
2005107472	2006101850	2006105893	2006111035	2007103455

2005107674	2006102029	2006105926	2006111230	2007103538
2005107766	2006102098	2006106497	2006111310	2007103612
2005107892	2006102117	2006106498	2006111387	2007103787
2005107994	2006104263	2006106537	2006111424	2007103818
2005108144	2006104301	2006106806	2006111676	2007104022
2005107184	2006102348	2006106811	2006112174	2007104138
2005108217	2006102504	2006106882	2006205476	2007104347
2005108188	2006102563	2006106958	2007100097	2007104398
2005108428	2006102616	2006106960	2007100101	2007104535
2005108429	2006102673	2006106972	2007100119	2007104704
2005108538	2006102794	2006107057	2007100120	2007105258
2005108597	2006102822	2006107110	2007100121	2007105277
2005108891	2006102880	2006107114	2007100132	2007105289
2005109557	2006102984	2006107272	2007100134	2007105456
2005109663	2006103074	2006107289	2007100189	2007105485
2005110111	2006103102	2006107531	2007100265	2007106773
2005110158	2006103140	2006107631	2007100267	2007107110
2005110613	2006103183	2006107905	2007100268	
2005110737	2006103226	2006108156	2007100303	
2005110766	2006103442	2006108329	2007100320	
2005110770	2006103447	2006108225	2007100574	

Engineering Work Orders
2052352601

PM/EQPM Work Orders
2R24S0119B1-2040902601
1E11C001B2-1042371101
1E11F046A1-1040188701
1E11F078B1-1050268301

Work Orders

1030892102	1052853301	1060834101	2060252101	2070536801
1050072201	1052853601	1060834901	2061083101	2070537001
1050072202	1052892501	1061067001	2061439201	2070588401
1050078601	1052934501	1061083001	2061595401	2070637801
1050690901	1060219101	1061565101	2061666201	2070673601
1051450301	1060395901	1061752101	206185501	2070720101
1052048801	1060577201	1070018701	2062226301	2070746501
1052173301	1060579001	1070095401	2062300701	2070933301
1052712601	1060622301	1070794201	2062646401	T001272001
1052777701	1060830501	2051450501		

System Health Reports:
Core Spray
Emergency AC Distribution
High Pressure Core Injection

Attachment

Reactor Core Isolation Cooling System
Residual Heat Removal
Residual Heat Removal Service Water

Miscellaneous Documents

2006 Southern Company Compliance Questionnaire
40AC-ENG-020-0S Maintenance Rule (10CFR50.65) Implementation and Compliance Concerns Program Procedure
ERS-M-003 E.I. Hatch Nuclear Plant Refurbishment/Repair Specification/RHR Service Water Pumps
Engineering Evaluation 1060395901/1060395902
Engineering Evaluation 2070536802
Intracompany Correspondence "Response to NRCIN 2006-20: Foreign Material Found in the Emergency Core Cooling System"
Intracompany Correspondence "Response to NRCIN 2006-21: Operating Experience Regarding Entrainment of Air Into Emergency Core Cooling and Containment Spray Systems"
Intracompany Correspondence "QA Audit of the Corrective Action Program (CAP), H-CAP-2007-1"
Intracompany Correspondence "Units 1 & 2 CST Reserve Volume for HPCI & RCIC"

Licensee Event Reports

05000366/2005-002-001, 05000366/2006-002-000, 05000366/2006-003-000, 05000321/2006-002-000, 05000321/2006-S01-000, 05000321/2006-003-000, 05000321/2007-001-000, 05000366/2007-001-000, 05000366/2007-002-000, 05000366/2007-003-000, 05000366/2007-004-000, 05000321/2007-002-000, 05000366/2007-005-000, 05000366/2007-006-000