



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W.
 ATLANTA, GEORGIA 30323

Report Numbers: 50-321/89-20 and 50-366/89-20

Licensee: Georgia Power Company
 P.O. Box 1295
 Birmingham, AL 35201

Docket Numbers: 50-321 and 50-366

License Numbers: DPR-57 and NPF-5

Facility Name: Hatch Units 1 and 2

Inspection Dates: August 26 - September 22, 1989

Inspection at Hatch site near Baxley, Georgia

Inspectors:

	<u>John E. Menning, Senior Resident Inspector</u>	<u>10-10-89</u>
		Date Signed
	<u>Randall A. Musser, Resident Inspector</u>	<u>10-10-89</u>
		Date Signed

Approved by:

	<u>Kenneth E. Brockman, Chief, Project Section 3B</u>	<u>9 Oct 89</u>
	Division of Reactor Projects	Date Signed

SUMMARY

Scope: This routine inspection was conducted at the site in the areas of Operational Safety Verification, Maintenance Observation, Surveillance Testing Observation, ESF Walkdown, Reportable Occurrences, Operating Reactor Events, Evaluation of Licensee Self-Assessment Capability, Installation and Testing of Modifications, and 10 CFR Part 21 Report Followup.

Results: One unresolved item and one non-cited violation were identified during this inspection. The URI was opened to further evaluate the timeliness of physical examinations for NRC-licensed operators. The NCV was for failure to perform an analysis of liquid radwaste effluent as required by the technical specifications.

No specific strengths or weaknesses of licensee programs were identified based on the inspectors' findings and observations in the areas inspected.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *C. Coggin, Training and Emergency Preparedness Manager
- *D. Davis, Manager General Support
- J. Fitzsimmons, Nuclear Security Manager
- *P. Fornel, Maintenance Manager
- O. Fraser, Site Quality Assurance Manager
- *G. Goode, Engineering Support Manager
- *M. Googe, Outages and Planning Manager
- *W. Kirkley, Acting Health Physics and Chemistry Manager
- J. Lewis, Acting Operations Manager
- *C. Moore, Assistant General Manager - Plant Support
- *H. Nix, General Manager - Nuclear Plant
- *H. Sumner, Assistant General Manager - Plant Operations
- S. Tipps, Nuclear Safety and Compliance Manager

Other licensee employees contacted included technicians, operators, mechanics, security force members and office personnel.

NRC Resident Inspectors

- *J. Menning
- *R. Musser

NRC management on site during inspection period:

L. Crocker, Project Manager, Project Directorate II-3, NRR

- *Attended exit interview

Acronyms and initialisms used throughout this report are listed in the last paragraph.

2. Operational Safety Verification (71707) Units 1 and 2

Unit 1 continued operating at power during this reporting period. Unit 2 began the reporting period operating at approximately 72 percent of rated power, continuing its end-of-cycle power coastdown. Unit 2 automatically scrammed on low reactor vessel water level at 2339 on September 3, 1989. The low reactor vessel water level condition resulted from a failure of the master feedwater controller's self synchronized control unit. The details of this scram are discussed in paragraph 7. Unit 2 was brought to cold shutdown following the scram. The licensee elected, at that time, to begin the condenser retubing/refueling outage that was originally scheduled to commence on September 6.

The inspectors continually kept themselves informed of the overall plant status and any significant safety matters related to plant operations. Daily discussions were held with plant management and various members of the plant operating staff. The inspectors made frequent visits to the control room. Observations included control room manning, access control, operator professionalism and attentiveness, adherence to procedures, adherence to limiting conditions for operation, instrument readings, recorder traces, annunciator alarms, operability of nuclear instrumentation and reactor protection system channels, availability of power sources, and operability of the Safety Parameter Display system. These observations also included log book entries, tags and clearances on equipment, temporary alterations in effect, ECCS system lineups, containment integrity, reactor mode switch position, conformance with technical specification safety limits, daily surveillances, plant chemistry, scram discharge volume valve positions, and rod movement controls. This inspection activity involved numerous informal discussions with operators and their supervisors.

The operability of selected safety-related systems was confirmed on, essentially, a weekly basis. These confirmations involved verification of proper valve and control switch positioning, proper circuit breaker and fuse alignment, and operability of related instrumentation and support systems. Major components were also inspected for leakage, proper lubrication, cooling water supply, and general condition. On August 29, 1989, the inspector confirmed the operability of the Unit 1 RHRSW system. Proper electrical, valve, and switch alignments were confirmed using Attachments 2 and 3 to procedure 34SO-E11-010-1S. On September 1 and 5, 1989, the inspector confirmed the operability of the Unit 2 MSIV Leakage Control system. Proper breaker, switch, and valve lineups were confirmed using Data Package 1 of procedure 34SO-E32-001-2S. On September 18, 1989 the operability of the Unit 1 RCIC system was confirmed. Proper breaker, valve, and switch positions were verified using Attachments 2 and 3 to procedure 34SO-E51-001-1S. On September 21, 1989 the operability of the "1A" and "1C" emergency diesel generators was verified. Proper switch and valve positions were verified using Attachments 1 and 3 to procedure 34SO-R43-001-1S.

General plant tours were conducted on, at least, a weekly basis. Portions of the control building, diesel generator building, intake structure, turbine building, reactor building, and outside areas were toured. Observations included general plant/equipment conditions, fire hazards, fire alarms, fire extinguishing equipment, emergency lighting, fire barriers, emergency equipment, control of ignition sources and flammable materials, and control of maintenance/surveillance activities in progress. Radiation protection controls, implementation of the physical security program, housekeeping conditions/cleanliness, control of missile hazards, and instrumentation and alarms in the main control room were also observed.

The inspectors observed selected operations shift turnover briefings to confirm that all necessary information concerning the status of plant systems was being addressed. Each briefing was conducted by the oncoming OSOS. The inspectors noted that each OSOS discussed existing plant problems, activities that were anticipated for the shift, and any new standing orders or management directives. Radiological and industrial safety were generally stressed. The STAs discussed any recent procedure revisions that impacted the attendees. The inspectors attended shift turnover briefings on the following dates and shifts: August 27, 1989 - Day; September 2, 1989 - Day; and September 17, 1989.

Several safety-related equipment clearances that were active were reviewed to confirm that they were properly prepared and placed. Involved circuit breakers, switches, and valves were walked down to verify that clearance tags were in place and legible and that equipment was properly positioned. Equipment clearance program requirements are specified in licensee procedure 30AC-QPS-001-05, "Control of Equipment Clearances and Tags." On August 29, 1989, Unit 2 equipment clearance 2-89-979 was walked down. This clearance was placed to isolate the "A" Loop of the RHR system to support maintenance on the system. On September 5, 1989, Unit 1 equipment clearance 1-89-1034 was walked down. This clearance was placed to isolate an inoperable refueling floor supply fan motor (1T41-C002A). During this walkdown, the inspector noted that the label on the control switch for the refueling floor supply fan motor (located on panel 1H11-P657) indicated the fan's power source to be MCC 1R24-S013. However, the power supply breaker for the fan is located in MCC 1R24-S015, frame 4B. This discrepancy was brought to the attention of the Unit 1 Shift Supervisor.

Implementation of the licensee's sampling program was reviewed by the inspector. This review involved observation of sampling activities (reactor coolant and tank sampling) and chemistry surveillance. Related records were also reviewed. During this inspection period, the inspector monitored the following activities. On August 31, 1989, the inspector observed the sampling of the Unit 1 reactor building vent for noble gasses and tritium, in accordance with procedure 64CH-SAM-005-05. On September 13, 1989, the inspector observed gaseous waste discharge checks in accordance with procedure 62EV-SAM-003-05. Examples of items checked are as follows: (1) Unit 1 pre-treat flow rate, (2) Recombiner Building vent sample and process flow readings, (3) Unit 1 and 2 post-treat sample flow, and (4) Main stack sample flow. While exiting the recombiner building, the inspector noted that it was impractical to perform a frisk of the hands and feet due to high background radiation levels in the building. This condition was brought to the attention of the Health Physics Superintendent.

The licensee's deficiency control system was reviewed to verify that the system is functioning as intended. Licensee procedure 10AC-MGR-004-05, "Deficiency Control System," establishes requirements and responsibilities for the preparation, processing, review, and disposition of deficiency reporting documents. This procedure applies to all deficiencies affecting equipment, procedures, or personnel. Deficiencies are reported on

Deficiency Cards (DC). On August 29, 1989 the inspector reviewed recently prepared DCs. The inspector verified that the DCs had been prepared as required by the controlling procedure and that several deficiencies that were noted in the Shift Supervisors' logs had been documented on DCs. More specifically, the inspector observed that DC 1-89-3552 had been prepared to document the contamination of a GPC utilityman. It was also noted that DC 2-89-2405 had been generated to document the unanticipated illumination of the "2A" emergency diesel generator's "Generator Not At Synch. Speed Setting" annunciator. On September 5, 1989, the inspector again reviewed recently prepared DCs and verified that problems observed in the plant had been properly documented. The inspector observed that DC 1-89-3645 had been generated to document the repeated tripping of the standby lube oil pump for the "1B" emergency diesel generator. It was also noted that DC 2-89-2499 had been prepared to document erratic operation of the HPCI flow controller, following the Unit 2 automatic scram on September 3, 1989.

Selected portions of the containment isolation lineup were reviewed to confirm that the lineup was correct. The review involved verification of proper valve positioning, verification that motor and air-operated valves were not mechanically blocked and that power was available (unless blocking or power removal was required), and inspection of piping upstream of the valves for leakage or leakage paths. On August 28, 1989, the inspector reviewed the following Unit 1 containment isolation valves: 1B31-F020, 1D11-F051, 1D11-F053, 1E11-F011A and B, 1E11-F016A and B, 1E11-F023, 1E11-F026A and B, 1E11-F028A and B, 1E11-F055A and B, 1E11-F03A and B, 1E21-F015A and B, 1E21-F031A and B, and 1E21-F044B. On August 31, 1989, the inspector reviewed the following Unit 2 containment isolation valves; 2D11-F050, 2D11-F052, 2E11-F023, 2E11-F028A and B, 2E11-F041B and D, 2E41-F121, 2E41-F122, 2E51-F001, 2T49-F001A and B, 2T49-F002A and B, 2T49-F004B, and 2T49-F005B.

During this reporting period, the inspector reviewed the licensee's controls on overtime of personnel who perform safety-related functions. Section 6.2.2.g of the technical specifications establishes requirements for the control of such overtime, and Section 8.4 of licensee procedure 30AC-OPS-003-OS, "Plant Operations," provides implementing instructions to support the technical specification requirements. On August 29, 1989, the inspector reviewed a Health Physics and Chemistry Department Overtime Report for the month of July and determined that technical specification and procedural requirements had been met.

On September 21, 1989, the inspector verified that all required notices to workers were appropriately and conspicuously posted pursuant to 10 CFR 19.11. Related posting requirements are delineated in Section 8.1 of licensee procedure 40AC-REG-002-OS, "Federal and State Reporting Requirements." This procedure establishes posting locations at the Waste Separation and Temporary Storage Facility, Simulator Building near the

breakroom, and Unit 1 Switchyard near Gate 16. Although not referenced in procedure 40AC-REG-002-05, the licensee has also established a posting location north of the new Security Building. The inspector reviewed the postings at these locations and observed no discrepancies.

The inspector reviewed the medical records of SROs and ROs to determine compliance with 10 CFR Part 55.21. The review confirmed that currently licensed operators (SROs and ROs) are medically qualified, since required physical exams have been performed within the last two years. However, while performing the review, the inspector noted that 18 of the 37 ROs and 26 of the 61 SROs had their current physical exam performed at a time in excess of two years from their previous physical exam (the longest period of time identified was 2 years, 6 months). This was as a result of the licensee tracking physical exams by license expiration date in lieu of the previous physical date. (This was the previous methodology when licenses were issued on a 2-year bases). The NRC staff is currently evaluating this issue to determine the exact interpretation of 10 CFR Part 55.21. Pending completion of this evaluation, this matter will be tracked as Unresolved Item 321,366/89-20-01 - Timeliness of NRC Physicals for Licensed Operators.

One URI was identified.

3. Maintenance Observation (62703) Unit 2

During the reporting period, the inspector observed selected maintenance activities. The observations included a review of the work documents for adequacy, adherence to procedure, proper tagouts, adherence to technical specifications, radiological controls, observation of all or part of the actual work and/or retesting in progress, specified retest requirements, and adherence to the appropriate quality controls. The primary maintenance observations during this month are summarized below:

<u>Maintenance Activity</u>	<u>Date</u>
a. Cleaning of a Transmitting Relay in panel 2R43-P001A in accordance with MWO 2-89-4523	08/28/89
b. Calibration of the Lube Oil Temperature Alarm on the "2A" Diesel Generator in accordance with MWO 2-88-3295 and procedure 57CP-CAL-080-2S	09/12/89
c. Limitorque Operator Inspection on Valve 2P41-F303A in accordance with procedure 52PM-MNT-005-0S and MWO 2-89-1907	09/14/89

No violations or deviations were identified.

4. Surveillance Testing Observations (61726) Unit 2

The inspector observed the performance of selected surveillances. The observation included a review of the procedure for technical adequacy, conformance to technical specifications, verification of test instrument calibration, observation of all or part of the actual surveillances, removal from service and return to service of the system or components affected, and review of the data for acceptability based upon the acceptance criteria. The primary surveillance testing observations during this month are summarized below:

<u>Surveillance Testing Activity</u>	<u>Date</u>
a. Monthly Testing of "2A" Diesel Generator in accordance with procedure 34SV-R43-001-2S	08/28/89
b. IRM Instrument Functional Test in accordance with procedure 57SV-C51-004-2S	09/01/89
c. Functional Test of ATTS Trip Units 2B21-N682D and 2B21-N682C in accordance with procedures 57SV-SUV-010-2S and 57SV-SUV-009-2S	09/06/89

On September 1, 1989, while observing the IRM Functional Test, in accordance with procedure 57SV-C51-004-2S, the inspector noted the following discrepancy. During the functional test of each IRM channel, the procedure instructs the operator to place the applicable IRM recorder selector switch to the IRM position (each of the eight IRM channels shares a strip chart recorder with an APRM or RBM channel). With the performance of this action, the strip chart begins to record the IRM's output, while ceasing the recording of the APRM (or RBM) channel's output. Following the completion of the test, the procedure provides no instructions to place the recorder selector switch back into the APRM (or RBM) position. This was brought to the attention of the I&C Superintendent.

No violations or deviations were identified.

5. ESF System Walkdown (71710) Unit 2

The inspectors routinely conducted partial walkdowns of ESF systems. Valve and breaker/switch lineups and equipment conditions were randomly verified, both locally and in the control room, to ensure that lineups were in accordance with operability requirements and that equipment material conditions were satisfactory. During this reporting period, the Unit 2 MSIV Leakage Control system was walked down in detail. This effort involved verification that system lineup procedures were consistent with plant drawings and the as-built configuration, that material condition was satisfactory, and that valves were properly positioned.

No violations or deviations were identified.

6. Reportable Occurrences (90712 & 92700) Units 1 and 2

A number of LERs were reviewed for potential generic impact, to detect trends, and to determine whether corrective actions appeared appropriate. Events which were reported immediately were also reviewed as they occurred to determine that technical specifications were being met and the public health and safety were of utmost consideration.

Unit 1: 88-18 Reactor Scram on Loss of EHC Pressure, Loss of Startup Auxiliary Transformer

This LER concerns the Unit 1 reactor scram on December 17, 1988. The events of this LER were previously discussed in NRC Inspection Report Nos. 50-321/88-40 and 50-366/88-40. Longer term corrective action involved issuing a departmental memo to Operations Shift personnel, revising appropriate manuals and drawings for valves to reflect the securing of bushing set screws, and conducting an investigation. The investigation was intended to determine if the bushing set screw staking problems experienced with valve 1E51-F045 might exist with other valves.

The inspector reviewed memo LR-OPS-010-0289 dated February 15, 1989, and confirmed that the departmental memo had been issued. It was also confirmed that the revision of manuals and drawings was accomplished with the issuance of ABN 89-095, Revision 0. The investigation revealed that nineteen valves required maintenance to preclude failures related to bushing set screw staking. The inspector reviewed documentation which confirmed that maintenance had been performed on the involved valves. Since the licensee's corrective actions have been completed, review of this LER is closed.

89-08 Technical Specifications for On-Site Diesel Fuel Inventory Found to be Inadequate

The events of this LER were previously discussed in NRC Inspection Report Nos. 50-321/89-08 and 50-366/89-08. Inspector Follow-up Item 50-321,366/89-08-02 was opened at that time to track the licensee's corrective actions. Since this matter will be tracked with the IFI, review of the LER is closed.

Unit 2: 89-03

Analysis of Liquid Effluent Not Performed per
Technical Specifications

This LER concerns an inadvertent radwaste discharge from CWST "A" without the analysis required by TS Sections 4.11.1.1.1 and 4.11.1.1.2 having been performed. A non-licensed operator had intended to discharge from the "B" CWST. Instead, he inadvertently opened the CWST "A" discharge valve, releasing effluent which had been sampled but not analyzed and approved for discharge. Subsequent analysis showed the "A" CWST contents to be suitable for discharge. The root cause of the event was determined to be cognitive personnel error. A lack of physical controls to help prevent operation of the wrong tank discharge valve was also identified as a contributing factor.

Corrective actions involved implementing physical controls on the use of the tanks' discharge valves, and revising radwaste discharge procedures to reflect the new physical controls. More specifically, red plastic overlays labeled in white letting "Do Not Discharge" were hung on the control switches for the WST discharge valves (1.2G11-F108A and B), the CWST discharge valves (1.2G11-F388A and B), and the FDST discharge valves (1.2G11-F428). The control switches are located in the radwaste control rooms. The overlays are to remain on the control switches until a proper discharge permit is received. The overlay for the authorized tank is to be removed from the appropriate switch and placed with the permit. The overlay is to be returned to the control switch at the completion of discharge. The following radwaste discharge procedures were revised to include the new controls:

- 3450-G11-022-2S. "Radwaste Procedure for Release of Liquid Waste to Discharge Canal"
- 3450-G11-003-1S. "Clean Radwaste Water" Processing"
- 3450-G11-004-1S. "Dirty Radwaste Water" Processing"
- 3450-G11-009-1S. "Chemical Waste Water" Processing"
- 3450-G11-010-1S. "Laundry Drain Processing"

On September 19, 1989, the inspector verified that the overlays were in place in the radwaste control rooms and that radwaste discharge procedures had been

revised as intended. This matter is a violation of TS Sections 4.11.1.1.1 and 4.11.1.1.2. However, the violation meets the criteria in Section V of the NRC Enforcement Policy for not issuing a Notice of Violation and, therefore, is not being cited. This matter, identified as NCV 366/89-20-02, is considered to be closed. Review of the LER is also closed.

One NCV was identified.

7. Operating Reactor Events (93702) Unit 2

The inspectors reviewed activities associated with the below listed reactor event. The review included determination of cause, safety significance, performance of personnel and systems, and corrective action. The inspectors examined instrument recordings, computer printouts, operations journal entries, scram reports and had discussions with operations, maintenance, and engineering support personnel, as appropriate.

Unit 2 automatically scrammed from approximately 70 percent of rated power at 2339 on September 3, 1989. The scram occurred on low reactor vessel water level which resulted from failure of the master feedwater controller's self synchronized control unit. Vessel level was restored via manual operation of the "A" RFP. Reactor vessel water level decreased to approximately minus 35 inches (indicated) during the transient. Recovery from the scram was normal. Although it originally appeared that some plant equipment did not function properly subsequent to the scram, further investigation revealed that this equipment did function as designed. The performance of this equipment is discussed below.

Control room personnel observed that both the HPCI and RCIC systems received start signals (at minus 35 inches), but did not inject into the reactor vessel. The failure to inject was initially questioned. Investigation revealed that this response was consistent with design, since reactor vessel level increased to a point above the systems' initiation setpoint prior to the HPCI and RCIC injection valves receiving open signals. The opening logics for the injection valves require low reactor vessel water level signals and valve off seat signals from the steam inlet valves and turbine stop valve (turbine trip and throttle valve on RCIC). The low reactor water level signals to the injection valves do not seal in. Therefore, these signals cleared before the injection valves received the other opening signals and began to open.

It was also observed that the "B" train of the SGTS did not auto start, the normal reactor building ventilation system outboard isolation dampers did not isolate, and one half of the Group 5 PCIS valves did not isolate. Since the nominal reactor vessel water level setpoint for these actuations

is minus 35 inches, the failure of the actuations to occur was initially questioned. Investigation revealed that the actuations did not occur because the level sensors which input into the "B" SGTs train logic (which, in turn, initiates the isolation of the normal ventilation outboard isolation dampers) and the Group 5 PCIS logic did not sense the minus 35 inches. The setpoints for the instruments that cause the actuations were not reached due to setpoint tolerance and recovery of the reactor vessel water level so close to the setpoints. Calibration checks of the related reactor vessel water level transmitters (2B21-N081A through D) and ATTS trip units (2B21-N682A through D) confirmed that the systems functioned properly. The inspectors witnessed portions of this surveillance and reviewed all data.

Corrective action involved replacing the self synchronized control unit. The defective unit was sent to the manufacturer for further analysis and possible repair. The defective unit was identified as a GE Self Synchronized Control Unit, Model 547-12.

Within the areas inspected, no violations or deviations were identified.

8. Evaluation of Licensee Self-Assessment Capability (40500) Units 1 and 2

This inspection effort was performed to evaluate the effectiveness of the licensee's self-assessment programs. The effort focussed on determining whether the self-assessment programs contribute to the prevention of problems by monitoring and evaluating plant performance, providing assessments and findings, and communicating and following up on corrective action recommendations. Activities of the licensee's PRB and SRB were previously reviewed and discussed in NRC Inspection Report Nos. 50-321/89-16 and 50-366/89-16. The current inspection effort involved review of the licensee's use of event review findings, SOR and LER data, and QA audit and surveillance findings.

Licensee procedure 10AC-MGR-012-0S, "Plant Event Analysis and Resolution Program," provides instructions for the preparation of event review reports and for the followup of related corrective actions and/or recommendations. In essence, NSAC assigns action items to appropriate department managers in order to obtain formal review and response to corrective actions and/or recommendations in an event review report. The status of such outstanding items is tracked by NSAC. Although not required in the past, a recent change to procedure 04RC-CPL-001-0N, "Effectiveness Audit of Operating Experience Program," now requires that event review reports be included in the licensee's annual audit of responses to industry and in-house operating experience.

Licensee procedure 10AC-MGR-004-0S, "Deficiency Control System," provides instructions for the processing of SORs. Corrective action determinations and the tracking of SORs are performed in accordance with procedure 10AC-MGR-012-0S. The trending of SORs is performed and reported, on at least a semi-annual basis in accordance with procedure DI-REG-08-1285N, "DC, SOR, and LER Trending Program." This procedure requires that

repetitive events and adverse trends be identified. The inspector reviewed a SOR trend report covering the period January 1, 1989 to May 31, 1989, and confirmed that trending had been performed as required.

Licensee Event Reports are processed and related commitments are tracked in accordance with procedure 03RC-CPL-001-ON, "Preparation and Processing of Event Investigation Reports." In essence, LER commitments are logged and tracked to completion by a commitment coordinator in NSAC. The trending of LERs is performed and reported, at least semi-annually, in accordance with procedure DI-REG-08-1285N. This procedure requires that repetitive events and adverse trends be identified. The inspector reviewed a LER trend report covering the period October 1988 to March 1989 and determined that trending had been performed in accordance with program requirements. The inspector noted that the trend report contained two recommendations. The report highlighted the fact that RWCU system events had increased in 1988 and that component failure had been a key factor in most of these events. It was recommended that a problem solving team or task force be established to more clearly evaluate the 1988 reportable events involving RWCU. The intent of this effort would be to determine if the events share a common failure mode and/or characteristics. The trend report also noted a deterioration in the personnel error trend. It was recommended that more effort be made to identify and correct the root causes of personnel errors. More specifically, it was recommended that the plant HPES Coordinator investigate every reportable event in which the root cause is determined to be personnel error. The inspector reviewed the status of these recommendations with the NSAC Manager and determined that both recommendations had been adopted.

An annual effectiveness audit of the Operating Experience Program is performed in accordance with procedure 04RC-CPL-001-ON, "Effectiveness Audit of the Operating Experience Program." The OEP consists, in part, of the translation of operating experience into plant actions and includes LERs and SORs. The inspector reviewed a report dated October 10, 1988, of an annual audit to evaluate the effectiveness of translating operating experience into plant corrective actions. This report concluded that corrective actions had generally been both timely and effective. However, four items were identified as concerns that required further review. The concerns involved not fully adequate corrective actions in response to NRC Bulletin 84-02, NRC Information Notice 85-30, GE SIL 442, and Unit 1 LER 85-18. Additional review showed that the four problems would have been precluded by subsequent corrective action program enhancements. The inspector concluded that the audit was thorough and represented a sincere effort to evaluate program effectiveness.

The licensee's QA open items are tracked in accordance with procedure 10AC-MGR-005-0S, "Operating Experience Program and Corrective Action Program." Related audit and surveillance findings are trended at least annually in accordance with procedure SAER-11, "SAER Trend Program." The inspector reviewed a QA item trend report dated February 16, 1989, and concluded that trending had been performed as required.

No violations or deviations were identified. Based on the reviews of procedures and reports and discussions with cognizant personnel, the inspector concluded that the licensee's use of event review findings, SOR and LER data, and QA audit and surveillance findings does contribute to the prevention of problems. Additionally, the inspector concluded that the licensee's programs for tracking and assessing the effectiveness of related corrective actions and for trending related data are adequate and being implemented.

9. Installation and Testing of Modifications (37828) Unit 1

The objective of this inspection effort was to verify proper installation and testing of plant modifications. The inspector reviewed a Unit 1 PSW system modification. This particular modification, DCR 1H89-162, was implemented to provide permanent tie-ins to the plant service water system for a temporary cooling system. Specifically, this change provides two permanent branch connections to the PSW system. One branch connection is located in the turbine building on a 16-inch line. The other branch connection is located in one of the Unit 1 PSW valve pits on a 10-inch line supplying water to the reactor building. This change provides for the addition of chilled water to the service water supplying the Unit 1 drywell coolers. Related installation activities were previously reviewed and discussed in NRC Inspection Report Nos. 50-321/89-16 and 50-366/89-16. The current inspection effort involved review of the licensee's testing of the modification.

During the initial installation, testing involved the examination of welds and the hydrostatic testing of piping. Welding processes were controlled by procedure 42EN-EME-012-05, "Weld Process Control." This procedure describes the method by which welding requirements such as welding details, inspection, and NDE requirements are assigned and documented prior to the performance of welding. A permanent record of each weld joint (Weld Process Sheet) and its subsequent examination is required by the weld process control procedure. Fabrication of several weld joints was specified during the implementation of DCR 1H89-162. The inspector reviewed related Weld Process Sheets to confirm proper completion for the following weld joints:

- 1P41-HFW-097
- 1P41-HFW-098
- 1P41-HFW-099
- 1P41-HFW-100
- 1P41-HFW-101
- 1P41-HFW-102
- 1P41-HFW-103
- 1P41-HFW-104
- 1P41-HFW-105
- 1P41-HFW-106

The inspector determined that each of the above weld joints had been visually and liquid penetrant examined in accordance with established requirements. It was also determined that the Weld Process Sheets had been properly completed in accordance with 42EN-EME-012-0S.

Hydrostatic pressure testing was controlled by procedure 42IT-TET-003-0S, "Hydrostatic Pressure Testing of Piping and Components." The inspector reviewed documentation for the testing of DCR 1H89-162 piping and confirmed that testing had been performed in accordance with procedure 42IT-TET-003-0S.

Following installation of the modification, the licensee performed preoperational and startup testing. The following engineering procedures were prepared to perform this testing:

- 42SP-081489-QK-1-1N, "FT of Reactor Bldg. Temp Service Water Cooling System"
- 42SP-080689-QK-1-1N, "FT to Determine Reactor Building Service Water Flow"
- 42SP-080689-QK-1-1N, "FT of The Temp Reactor Bldg Service Water Cooling System"

The inspector reviewed the above procedures and determined that they were adequate to support release of the equipment for operation. Additionally, the inspector verified, through discussion with the implementation engineer, that pre-test training was conducted to ensure proper testing performance. Once the system was declared operable, the plant operations department assumed responsibility for the operation of the system. Procedure 34SP-080789-QK-1-1N, "Operation of Reactor Bldg. Temp Service Water Cooling System" was placed in effect to provide instructions for operation of the system.

No violations or deviations were identified. Based on the reviews of procedures, records, observations of the installation of equipment, and discussions with cognizant personnel, the inspector concluded that the licensee's programs for the installation and testing of plant modifications are in conformance with the specified requirements.

10. 10 CFR Part 21 Report Followup (92701) Units 1 and 2

By letter dated April 30, 1987, the Fairbanks Morse Engine Division of Colt Industries advised the NRC of an Indicator Valve Plug failure. As previously documented in NRC Inspection Reports Nos. 50-321/89-01 and 50-366/89-01, all vendor recommendations had been implemented with the exception of incorporating five-year inspection requirements into the preventive maintenance procedures. Through review of a new preventive maintenance procedure 52PM-R43-001-0S, "Diesel Engine 5-Year Inspection," the inspector determined that the requirement to inspect the plugs at five-year intervals had been established. Review of this matter, tracked by Region II as item 321,366/P2187-01, is closed.

11. Exit Interview (30703)

The inspection scope and findings were summarized on September 22, 1989, with those persons indicated in paragraph 1 above. Particular emphasis was placed on the URI discussed in paragraph 2 and the NCV discussed in paragraph 6. The licensee was also advised that the LERs discussed in paragraph 6 and the 10 CFR Part 21 Report discussed in paragraph 10 were considered closed. The licensee did not identify as proprietary any of the material provided to or reviewed by the inspectors during this inspection. Dissenting comments were not received from the licensee.

<u>Item Number</u>	<u>Status</u>	<u>Description/Reference Paragraph</u>
321,366/89-20-01	Opened	URI - Timeliness of NRC Physicals for Licensed Operators (paragraph 2)
366/89-20-02	Opened and Closed	NCV - Failure to Perform Analysis of Liquid Radwaste Effluent (paragraph 6)

12. Acronyms and Abbreviations

ABN - As-Built Notice
 ATTS - Analog Transmitter Trip System
 CFR - Code of Federal Regulations
 CWST - Chemical Waste Sample Tank
 DC - Deficiency Card
 DCR - Design Change Request
 ECCS - Emergency Core Cooling System
 EHC - Electro-Hydraulic Control
 ESF - Engineered Safety Feature
 FDST - Floor Drain Sample Tank
 FT - Functional Testing
 GE - General Electric Company
 GPC - Georgia Power Company
 HPCI - High Pressure Coolant Injection
 HPES - Human Performance Evaluation System
 I&C - Instrumentation and Controls
 IFI - Inspector Followup Item
 IRM - Intermediate Range Monitor
 LER - Licensee Event Report
 MCC - Motor Control Center
 MSIV - Main Steam Isolation Valve
 MWO - Maintenance Work Order

NCV - Non-Cited Violation
NDE - Non-Destructive Examination
NRC - Nuclear Regulatory Commission
NSAC - Nuclear Safety and Compliance
OEP - Operating Experience Program
OSOS - On-Shift Operations Supervisor
PRB - Plant Review Board
PSW - Plant Service Water
QA - Quality Assurance
PCIS - Primary Containment Isolation System
RBM - Rod Block Monitor
KCIC - Reactor Core Isolation Cooling
RFP - Reactor Feedwater Pump
RHR - Residual Heat Removal System
RHRSW - Residual Heat Removal Service Water
RO - Reactor Operator
RWCU - Reactor Water Cleanup
SAER - Safety Audit and Engineering Review
SGTS - Standby Gas Treatment System
SIL - Service Information Letter
SOR - Significant Occurrence Report
SRB - Safety Review Board
SRO - Senior Reactor Operator
STA - Shift Technical Advisor
TS - Technical Specifications
URI - Unresolved Item
WST - Waste Sample Tank