U.S. NUCLEAR REGULATORY COMMISSION

REGION II

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Licensee:	Georgia Power Company (GPC)
Facility:	E. I. Hatch Units 1 & 2
Location:	P. O. Box 439 Baxley, Georgia 31513
Dates:	December 8, 1996 - January 18, 1997
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Enclosure 2

EXECUTIVE SUMMARY

Plant Hatch, Units 1 and 2
NRC Inspection Report 50-321/96-15, 50-366/96-15

This integrated inspection included aspects of licensee operations, engineering, maintenance, and plant support. The report covers a 6-week period of resident inspection. In addition, it includes the results of an announced inspection by a regional Senior Radiation Specialist and a Reactor Engineer's inspection of electrical maintenance.

Operations

- The inspectors concluded that Unit 2 control room operator's demonstrated a lack of attention to detail during control room panel walkdowns. Operators did not observe an incorrect switch position and a keepfill pump that had automatically started (Section O1.2).

- The inspectors identified as a strength operations management's proactive actions with respect to providing operator training to correct or prevent some deficiencies (Section O5.1).

- The inspectors concluded that the shift of operators reviewed for fire fighting and fire brigade leader training and qualifications were trained and qualified for their assigned position. Corrective lenses for operator use while wearing Self Contained Breathing Apparatus (SCBA) during control room emergencies were readily available in the control room (Section O5.2).

- The inspectors concluded that plant procedures did not include guidance for removing valves from backseat following plant transient conditions that resulted in a reactor cooldown. This was identified as a weakness. After inspector intervention, the additional guidance and expectations provided to operators during shift briefings were appropriate (Section M3.2).

- The inspectors concluded that the operations department demonstrated a commitment to self assessment and a desire for continued improvement. Although some corrective recommendations contained in the self assessment were not completed, they were under development and the completed items were thorough and comprehensive. The self assessments were conducted by knowledgeable personnel (Section O7.1).

- The failure of the traveling water screen system to operate during cold weather conditions is identified as a significant weakness in the area of engineering. Engineering personnel failed to identify that the design and system configuration did not adequately protect system components from cold weather conditions. Maintenance and operations personnel also failed to identify that portions of the system were vulnerable to cold weather conditions during their system checks and cold weather preparations (Section 08.1).

Maintenance

- The inspectors concluded that the maintenance work activities and the work review by the system engineer for the 1B Emergency Diesel Generator (EDG) voltage regulator repair were thorough and performed in accordance with applicable procedures. Supervisory and engineering oversight were evident. The inspectors also concluded that the EDG design function capability was not degraded (Section M1.2).

- The inspectors concluded that the maintenance activities on the Unit 2 Reactor Core Isolation Cooling turbine identified and corrected the problem with the fluctuations in turbine speed control. Maintenance activities observed were generally thorough and professional. Supervisory and engineering oversight were evident (Section M1.3).

- The inspectors identified an Inspector Followup Item (IFI) 50-321, 366/96-15-04: Switchyard Maintenance and Material Condition. This was due to the switchyard housekeeping and material condition discrepancies and the number and age of the predictive maintenance backlogged items for the switchyard (Section M1.4).

- As demonstrated by good performance, the level of preventive maintenance for the Reactor Protection System and Reactor Recirculation System Motor Generator Sets was appropriate for the circumstances (Section M1.4).

- The lack of records that support differences from equipment manufacturers' preventive maintenance recommendations and dependance on the collective memory of personnel was not a good practice (Section M1.4).

- Leaving loose conductive material in electrical panels was identified as a poor work practice for foreign material exclusion control with the potential of shorting out components. Some housekeeping discrepancies were noted (Section M1.4).

- The inspectors identified Non-Cited Violation (NCV) 50-366/96-15-01: Inadequate Procedures for Replacement of the Unit 2 Drywell Hydrogen Recombiner Flow Controller Batteries and Establishing the Required Controller "Dead Band" Following Certain Maintenance Activities (Section M2.1).

- Operator performance during surveillance activities for the High Pressure Coolant Injection System and EDG was generally professional and competent. The inspectors had observed some improvements in communications in the recent past but observed that operations' standards were not met by all crews (Section M3.1).

- The inspectors identified Violation (VIO) 50-321/96-15-02: Maintenance Personnel Failure To Follow Procedure During Valve Backseating Activities. This failure to follow procedure was generally administrative in nature (Section M3.2).

- The inspectors also concluded that some maintenance personnel's lack of understanding of different types of procedure usage and implementation demonstrated a weakness (Section M3.2).

- The inspectors concluded that the maintenance procedure for electrically backseating valves did not fully implement the requirements of the engineering evaluation. The inspectors concluded that this deficiency did not result in a safety-significant concern for the backseated valves (Section M3.2).

- Inspector Followup Item (IFI) 50-321, 366/96-15-03: Resolution of Reactor Core Isolation Cooling (RCIC) and High Pressure Coolant Injection System (HPCI) Turbine Speed Control Drifting, for Units 1 and 2, respectively, was identified. The inspectors concluded that the maximum speed drift observed on the both systems did not affect the safety function of either system. The inspectors concluded that the speed control drifting could be an indication of pending failures (Section M3.3).

- The inspectors concluded that the Unit 2 loss of feedwater heating transient on January 5, due to a jumper grounding error, demonstrated a poor work practice on the part of one individual. This problem was identified as an isolated occurrence and not a generic concern. Reviewing this error for human performance improvements was appropriate (Section M4.1).

- Personnel who perform mechanical maintenance on safety and non-safety related valves were trained and qualified in accordance with the requirements of ANSI N18.1-1971, the Final Safety Analysis Report, and other applicable plant qualification procedures (Section M5.1).

Engineering

- The inspectors concluded that the Unit 1 Standby Liquid Control (SLC) pump tripping was an isolated problem. The inspectors concluded that engineering personnel from the Nuclear Safety And Compliance (NS&C) conducted a detailed review of the SLC pump tripping problem, and was viewed as a positive attribute of the department. Replacement of the system components was appropriate (Section E2.1).

- The inspectors concluded that the engineering evaluation for electrically backseating valves located in the drywell was satisfactory. The evaluation considered plant safety and identified actions to ensure continued system and component reliability (Section E3.1).

Plant Support

- The inspectors identified a Violation 50-321, 366/96-15-05: Failure to Follow Procedures for Contamination Control and for Deficiency Card Issuance for Inadequate Bioassay Calibration Guidance. Quality control cross-check analyses were conducted in accordance with procedural requirements (Sections R1.2 and R7.1).

- General employee training and completed medical certifications for personnel involved in licensed activities were conducted in accordance with the applicable procedures and met the requirements of 10 CFR 19 and 10 CFR 20 (Section R.5).

- Radiation protection performance indicators verified that licensee actions to control worker dose were effective and radiological effluent releases were minimized (Section R8).

- The inspectors concluded that the inspected areas of the security program met the applicable requirements (Section S2).

- The inspectors attended various Outage Management Meetings held at the site and concluded that the critical path for the refueling outage was identified and that the refueling outage appeared to be well planned, with realistic goals and adequate support (Section X.2).

Report Details

Summary of Plant Status

Unit 1 operated at 100% rated thermal power (RTP) throughout the report period, except for routine testing activities.

Unit 2 began the report period at 100% RTP. On January 5, power was reduced to about 93.5% RTP due to a feedwater heater isolation. Power was returned to 100% RTP on the same day and operated at this power level throughout the remainder of the report period, except for routine testing activities.

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71707)

The inspectors conducted frequent reviews of ongoing plant operations. In general, the conduct of operations was professional and safety-conscious; specific events and observation are detailed in the sections below.

O1.2 Control Room Panel Walkdown

a. Inspection Scope (71707)

On January 10, the inspectors conducted a control room panel walkdown of Unit 2. The walkdown included safety- and non-safety-related equipment valve lineups, switch positions and process instrument indications.

b. Observations and Findings

The inspectors observed that both keepfill pumps on the B loop of Residual Heat Removal System (RHR) were in service. One control switch was in run and the standby pump control switch was in auto. This observation was brought to the attention of the control board operator. The operator indicated that the B loop of RHR had been in service for torus cooling during previous surveillance activities and had been secured earlier that day, following the completion of the surveillance activities. The operator indicated that securing the RHR pump may have caused a small pressure surge that initiated the automatic start of the standby keepfill pump. The operator secured the standby pump and system pressure remained satisfactory.

The inspectors also observed that the bypass selector switch for the A Source Range Monitor (SRM) was in bypass. This was brought to the attention of the control board operator. The operator

stated that the A SRM instrument cabinet had been removed from the control room panel on January 9, for Instrumentation and Control (I&C) work activities. The SRM instrument cabinet had been replaced on the previous shift. The SRM bypass selector switch had not been returned to normal.

The inspectors brought these deficiencies to the attention of operations' management for resolution. Management's expectations are, in part, that the operators walkdown the control room front panels once per hour and back panels once per two hours and look for changing trends and incorrect switch positions.

c. Conclusions

The inspectors did not consider these deficiencies to be an immediate concern for plant safety. The inspectors concluded that control room operators demonstrated a lack of attention to detail during control room panel walkdowns. Operators failed to observe an incorrect switch position and a keepfill pump that had automatically started.

05 Operator Training and Qualification

05.1 Review of operator "Just in Time" Training

a. Inspection Scope (71707)

A new training initiative, entitled "Just in Time" training commenced to address previous problems associated with activities that would affect operators. Operations' management began "Just in Time" training sessions for operators due to previous problems with reverse power trips of the EDGs during surveillance activities. On December 26, the inspectors observed two sessions of "Just In Time" training for EDG manipulations during surveillance activities.

b. Observations and Findings

The inspectors observed that the "Just in Time" training was conducted on the plant simulator. One session provided an operator the opportunity to review the procedure and manipulate the switches prior to performing an inplant Unit 2 EDG surveillance. The other training session provided a different operator the same opportunity prior to performing a Unit 1 EDG surveillance.

The inspectors observed that the training sessions were self directed by the operators and required very little instructor assistance. The operators reviewed the applicable procedures and

performed the necessary manipulations to complete the surveillances.

The inspectors discussed with operations' management if training on the simulator, which is modeled after Unit 2, may present additional challenges to operator performance when performing Unit 1 activities. Operations' management indicated no and stated that, even though the simulator was modeled for Unit 2, any switch manipulation practice would be of benefit to the operators.

c. Conclusions

The inspectors concluded that operations' management was proactive with respect to providing operators training to correct or prevent some deficiencies by the "Just In Time" training. The inspectors observed that the "Just in Time" training was not a formal or proceduralized process; however, operators or supervisors may request training at their discretion.

05.2 Operator Fire Brigade training and Qualification

a. Inspection Scope 71707

The inspectors reviewed fire training requirements and qualifications for a shift of operations personnel. The review was conducted for fire fighters and fire brigade leaders.

b. Observations and Findings

The inspectors reviewed the licensee's Training Records and Qualification System Matrix Report and confirmed that operators on shift were indicated as qualified for their fire fighting positions. The inspectors also verified that the operators had successfully completed the required initial and requalification training to maintain their qualifications.

The inspectors also verified that corrective lenses were available in the control room for operators' use during emergencies that may require SCBAs to be worn. The inspectors observed that six operators that required corrective lenses license restriction did not have corrective eye glasses stored in the designated storage location in the control room. The inspectors were informed by operations supervision that the six operators wore contact lenses instead of eye glasses. The inspectors reviewed applicable procedures that dealt with wearing contact lenses while wearing a SCBA and concluded that the procedures and training were adequate.

c. Conclusions

The inspectors concluded that the shift of operators reviewed for fire fighting and fire brigade leader training and qualifications were trained and qualified for their assigned position. Operators' corrective lenses for use while wearing a SCBA, during control room emergencies, were readily available in the control room.

07 Quality Assurance in Operations

07.1 Licensee Self-Assessment Activities (40500)

a. Inspection Scope 40500

The inspectors reviewed two licensee self assessments and followup actions and a new procedure for Team Observations.

b. Observations and Findings

The inspectors reviewed a self assessment for operations activities with respect to reactivity controls. Following operator errors during refueling activities, control rod movement errors, and inattention to detail, the licensee initiated a self assessment to identify root causes and recommend corrective actions.

The inspectors reviewed the licensee's completed actions with respect to implementing the recommendations. The inspectors observed that 7 of 20 recommendations were not completed. However, the licensee's documentation indicated that the remaining open items would be completed prior to the Unit 2 refueling outage scheduled for March 1997.

The inspectors reviewed an operations department self assessment completed on about September 26, 1996 that focused on identifying needed enhancements and generating corrective action recommendations aimed at helping the department achieve its goal of excellent performance. The assessment was conducted at the request of operations' management and conducted by personnel both within and outside the parent organization.

The inspectors observed that the assessment included safety focus, management involvement, problem identification, problem resolution, quality of operations, programs and procedures, and operations efficiencies. The inspectors also observed that the assessment provided specific observations and recommendations.

The inspectors also reviewed procedure DI-OPS-59-0896N: Team Observations, Revision 0, and observed that the procedure provided

a means of observing and reinforcing the operations department's expectations by performing supervisory and peer evaluations on routine tasks. Checklists for specific activities were included and contained a method of identifying whether or not the expectations were met.

The inspectors reviewed some completed observations, checklists, and comments and discussed them with operation's management. Operations' management stated that the process was still being improved and a revision of the procedure was being developed.

c. Conclusions

The inspectors concluded that the operations department demonstrated a commitment to self assessment and a desire for continued improvement. Although some corrective recommendations were not completed, they were under development and the completed items were thorough and comprehensive. The self assessments were conducted by knowledgeable personnel.

08 Miscellaneous Operations Issues

08.1 Cold Weather Followup and Walkdown

a. Inspection Scope (71714)(92901)

The inspectors performed a walkdown of systems and plant structures during hard freeze warnings.

b. Observation and Findings

The inspectors observed the following during the walkdown:

- Two of the four wall manual louvers in the Fire Pump House were not closed completely. The louvers were open approximately one inch. The manual roof vent was also open.

- Three heat trace indicating lights were not illuminated. Two were on the fire protection water system and the other was on the cooling water to the 1B EDG.

- Several automatic louvers in the EDG rooms were not completely closed as required.

The inspectors found from that some deficiencies still existed that had been previously observed as documented in IR 50-321, 366/96-14.

Following a hard freeze warning on about December 21, Plant Equipment Operators (PEO) could not get the up-river or the down-

river traveling water screens to operate. Subsequent trouble shooting by maintenance personnel identified that the pressure switches for both screens had frozen. The inspectors observed the pressure switch installations and observed that the sensing lines to the switches were heat traced, but a problem existed in that switches were not heat traced or insulated in order to read their indication. Maintenance personnel corrected this problem and later enclosed the switches with insulating material, installed heat lamps and directed the lamps toward the pressure switches. A design change was initiated to make permanent repairs.

The inspectors were informed that operations personnel had tested the traveling screens due to information received from industry experience. Freezing problems with traveling screens had been identified at other sites.

The inspectors found from the reviews and discussions with licensee personnel that the traveling water screen system for both units would not operate in manual or automatic due to the pressure switch problem. As a result, the support systems affecting plant safety systems, such as Plant Service Water (PSW) and Residual Heat Removal Service Water (RHRSW), were not available during this cold weather condition. The licensee's prompt corrective actions restored the function of the pressure switches. The affected plant safety systems would have performed their required functions.

c. Conclusions

The inspectors concluded that the deficiencies observed during the walk downs were not significant for the existing outside temperatures and the cleanliness of the river water and river level at the time of the walk downs. Maintenance and operations personnel failed to identify that portions of the system were vulnerable to cold weather conditions during their system checks and cold weather preparations. Engineering personnel failed to identify that the design and system configuration did not adequately protect system components from cold weather conditions. The failure of the traveling water screen system to operate during cold weather conditions is identified as a significant weakness in the area of engineering.

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments

a. Inspection Scope (62707)

The inspectors observed all or portions of the following work activities:

- MWO 1-96-4722: Electrically backseat RCIC Inboard Isolation Valve 1E51-F007
- MWO 1-96-4362: Electrically backseat RWCU Inboard Isolation Valve 1G31-F001
- MWO 2-96-3361: Repair 1B EDG Auto Voltage Regulator
- MWO 2-96-0042: Repair Unit 2 RCIC EGM Control Box
- MWO 2-96-2976: Repair Unit 2 RCIC Data Input to DAAS
- MWO 1-97-0066: Investigate Tripping of 1A SLC Pump
- MWO 1-97-0071: Replace Overload Heaters in 1A SLC Pump
- MWO 1-97-0092: Replace Overload Relay for 1A SLC Pump

b. Observations and Findings

The inspectors found that the work was performed in accordance with actively used work packages. Appropriate post modification and maintenance tests were performed. These tests consisted of operating the equipment following the completion of work activities.

Additional inspector observations are documented in Sections M1.2 and M1.3.

M1.2 Repairs to 1B EDG Automatic Voltage Regulator

a. Inspection Scope (62707)

The inspectors observed work activities performed on the 1B Emergency Diesel Generator (EDG) automatic voltage regulator under Maintenance Work Order (MWO) 2-96-3361. The inspectors discussed the activities with maintenance, engineering and operations personnel.

b. Observations and Findings

The inspectors were informed that while performing procedure 34SV-R43-002-2S: Diesel Generator 1B Monthly Test, Rev. 18, with voltage regulation in automatic control and the voltage at 4120 volts alternating current (VAC), the voltage could not be adjusted

to the required 4160 VAC. The automatic voltage adjustment must be performed at the local panel due to the design of the system.

Troubleshooting activities discovered defective diodes in the direct current drive motor circuit of the voltage regulator. The motor positions the automatic regulator rheostat which sets the voltage level for automatic control. The inspectors discussed the failure of the diodes with engineering personnel and were informed that the motor and rheostat were seldom exercised and this may have contributed to the failure. The system engineer indicated that a recommendation to exercise the motor and rheostat more often would be made.

During the repair activities, the inspectors observed that the new diodes were installed by craft personnel using applicable procedures with supervisory and engineering oversight. Subsequent to the repair, a new motor-rheostat unit was installed and the repaired unit was returned to the warehouse as a spare.

The inspectors were informed by engineering that the EDG would have controlled the voltage in automatic at 4120 VAC instead of 4160 VAC and the difference in voltage was not enough to affect safety-related loads.

c. Conclusion

Maintenance activities observed were generally thorough and professional. Supervisory and engineering oversight were evident. The inspectors concluded that the work activities and the review by the system engineer for the 1B EDG voltage regulator were thorough and performed in accordance with applicable procedures. The inspectors also concluded that the EDG was capable of performing the required safety functions.

M1.3 Repairs to Unit 2 Reactor Core Isolation Cooling (RCIC) Turbine Speed Control

a. Inspection Scope (62707)

The inspectors reviewed the results of the maintenance activities and observed the post maintenance test of the Unit 2 RCIC turbine. The system had been declared inoperable due to speed control problems.

b. Observations and Findings

The activities were performed under MWOs 2-96-0042 and 2-96-2976, and applicable procedures. Trouble shooting activities indicated that the electronic governor motor (EGM) was defective. The EGM Control Box was replaced and the RCIC was satisfactorily tested.

The defective electronic governor was bench tested and confirmed that the trouble shooting findings were correct. Inspector observations on the Unit 2 RCIC post maintenance and operability testing are documented in Section M3.3 of this report.

c. Conclusions

Maintenance activities observed were generally thorough and professional. Supervisory and engineering oversight were evident. The inspectors concluded that the maintenance activities on the Unit 2 RCIC identified and corrected the problem with the fluctuations in turbine speed control. The two reversed wires discovered did not affect system operability but demonstrated a lack of attention to detail.

M1.4 Electrical Maintenance Implementation

a. Inspection Scope (62700)

To evaluate electrical maintenance implementation as it relates to motor generator (MG) sets and switchyard equipment, the inspectors conducted: walkdown inspections of the Reactor Protection System (RPS) and Reactor Recirculation System (RR) MG set rooms and selected areas of the switchyards and the switchyard control house; and reviews of equipment manufacturers' technical manuals, repetitive task records, maintenance records, and oil analysis and vibration test data. The inspectors compared the equipment manufacturers' maintenance recommendations with the licensee's maintenance program for both scope and periodicity.

b. Observations and Findings

Reactor Protection System and Reactor Recirculation System MG Sets

Housekeeping was good with the following exceptions:

- A number of structural fasteners were missing from control panels. The concern was that the missing fasteners could abrogate the seismic qualification of the panels.

- The closure devices on a number of panel doors were not secured such that the weather stripping was compressed. The concern was that the improper sealing of the panels could abrogate the environmental qualification.

- Metal shavings (probably the debris left from drilling) and miscellaneous fasteners were found adrift inside control panels. Leaving loose conductive material in electrical panels was identified as a poor work practice control with the

potential of shorting out components. The fasteners were removed by the licensee.

- The Reactor Recirculation System MG set oil circulation systems leak. To address this issue, the licensee conducts daily wipe downs and was actively pursuing a permanent repair.

There was a number of areas where the licensee's repetitive preventive maintenance program was not consistent with the equipment manufacturer's recommendations. The licensee was unable to provide documented justifications for the differences. However, the licensee was able to provide anecdotal information remembered by maintenance personnel that supported the deviations.

Records, examined by the inspectors, reflected that repetitive preventive maintenance activities were completed within the scheduled time period.

Records reflect that the repetitive preventive maintenance program had been effective as few repetitive corrective maintenance activities were required.

Switchyards

Maintenance in the switchyards was performed by Georgia Power Company Transmission Maintenance Center with procedures issued by the Transmission Operation and Maintenance Manager. Some surveillances were performed by Plant Hatch Operations Department personnel.

Inspection of housekeeping and material condition revealed a number of items that needed attention. Protective coatings on exterior equipment had deteriorated, as evidenced by many areas of rust and missing closure fasteners. Inside the switch house, the inspectors noted un-taped spare electrical leads in the back board area, trash, and evidence of feline habitation. Conductive material (metal shavings and fasteners) was found in both exterior panels and in the back board area in the switch house. The fasteners were removed on the spot. The effectiveness of rain gutters on the switch house was minimal in deflecting water away from the structure, due to advanced corrosion.

There was a number of areas where the licensee's repetitive maintenance program for switchyard equipment was not consistent with the equipment manufacturer's recommendations. The licensee was unable to provide documented justifications for the differences. However, the licensee was able to provide anecdotal information, remembered by Transmission Maintenance Center personnel, that supported the differences.

Transmission Maintenance Center records reflected that there were 19 repetitive maintenance tasks that were overdue, the oldest of which had a due date of July 23, 1992. The overdue activities were various preventative diagnostic tests of air blast breakers. Transmission Maintenance Center records were such that timeliness of completed maintenance tasks could not be determined.

c. Conclusions

As demonstrated by good performance, the level of preventive maintenance for the Reactor Protection System and Reactor Recirculation System Motor Generators (MG) was appropriate for the circumstances. Some housekeeping discrepancies were noted. The lack of records that support differences from equipment manufacturer's preventive maintenance recommendations, and dependance on the collective memory of personnel was not a good practice.

Due to the switchyard housekeeping and material condition discrepancies identified and the number and age of the predictive maintenance backlogged items, switchyard maintenance will be the subject of a future NRC inspection. This matter will be identified as Inspector Followup Item 50-321, 366/96-15-04: Switchyard Maintenance and Material Condition.

M2 Maintenance and Material Condition of Facilities and Equipment

M2.1 Hydrogen Recombiner Unit 2

a. Inspection Scope (92902)

On November 21, 1996, the inspectors observed that an 18-month surveillance for the Unit 2A Drywell Hydrogen Recombiner System (HRS) could not be performed to due problems with inlet valve, 2T49-F003A. The controller for the valve was not operating properly. The inspectors reviewed past performance and work history for the system. The system had been declared inoperable so that corrective maintenance could be completed.

b. Observations and Findings

The inspectors reviewed documentation dated from November 20 to 24, concerning the HRS and observed the following:

- On November 20, the HRS 2A, Panel 2T49-P600A, was removed from service for testing of motor operated valves (MOVs) and the replacement of MOV electrical overloads

- On November 21, the surveillance for the HRS valve operability was satisfactorily completed and the recombiner functional test was started at 3:30 a.m.

- On November 21, at 5:20 p.m., a functional test was unsatisfactory due to a controller memory loss for inlet MOV 2T41-F003A. The loss of memory was due to a loss of power. The controller loses power when the breaker for the MOV is racked out.

- On November 22, problems continued with valve 2T41-F003A. The valve cycled partially open and closed and technicians were concerned that the motor on the valve would overheat, causing damage. The gain on the controller was adjusted with no affect and engineering personnel continued their investigation.

Licensee documentation revealed the problem was corrected and the 2A HRS was returned to service at 11:45 p.m. on November 24.

The inspectors identified from reviews and discussions with licensee personnel the following: the batteries located in the flow controllers have a service life of five years, and a shelf life of about three to four years, according to vendor information; the batteries had not been changed since Unit 2 was licensed in 1978; and the batteries were installed in order to protect the controllers from a loss of programming during a loss of power.

The inspectors also identified that no procedure discussed the batteries, required that they be functionally tested, nor that they be changed in accordance with vendor recommendations. EDG personnel responsible for the system failed to ensure that the battery replacement was specified in plant procedures.

The inspectors were later informed that, following maintenance activities on the valve, a controller "dead band" was required to be established for proper operation of the valve and valve controller. This requirement was also not identified in any procedure, post maintenance testing, or calibration activity.

When the maintenance activities on the valve were completed, I&C completed the required calibrations and the old battery was tested. It satisfactorily performed. Since the licensee did not have a spare battery, the old one was left in place. The licensee initiated procurement activities to purchase a new battery.

The inspectors verified that procedures were revised to identify establishing the require "dead band" following maintenance or calibration activities. The inspectors verified that procedures

were scheduled to be revised to include replacing the battery within the required vendor recommended frequency.

c. Conclusions

The inspectors concluded from reviews and discussion with licensee personnel that the Unit 2 Drywell HRS flow controller batteries exceeded the vendor recommended service life. Procedures were inadequate in that battery replacement was not identified. Additionally, the procedures were inadequate for establishing the required valve controller "dead band" following certain maintenance activities. This violation constitutes a violation of minor safety significance and is being identified as NCV 50-366/96-15-01: Inadequate Procedures for Replacement of the Unit 2 Drywell Hydrogen Recombiner Flow Controller Batteries and Establishing the Required Controller "Dead Band" Following Certain Maintenance Activities, consistent with Section IV of the NRC Enforcement Policy.

M3 Maintenance Procedures and Documentation

M3.1 Surveillance Observations

a. Inspection Scope (61726)

The inspectors observed all or portions of the following Unit 1 and Unit 2 surveillance activities:

- 34SV-E41-002-1S: HPCI Pump Operability, Revision (Rev.) 19
- 34SV-R43-001-1S: DG 1A Monthly Test, Rev. 17, ED 1
- 34SV-E41-002-2S: HPCI Pump Operability, Rev. 23
- 34SV-E51-002-1S: RCIC Pump Operability, Rev. 17
- 34SV-E51-002-2S: RCIC Pump Operability, Rev. 16

b. Observations and Findings

On December 26, the inspectors attended the pre-job briefing in preparation for the Unit 1 High Pressure Core Injection (HPCI) surveillance activities and observed operator actions during portions of the surveillance. The test was also performed to meet the Inservice Testing (IST) requirements for the HPCI system. The inspectors observed that a member of engineering support, maintenance, health physics (HP), operations, and the system engineer were present at the pre-job briefing. The Assistant General Manager - Plant Support (AGM-PS) was present for the majority of the briefing.

During the briefing, operations personnel requested that HP ensure that no personnel were in the torus area. This was for personnel protection, based upon previous industry operating event history

for failure of small turbine exhaust diaphragms. HP personnel ensured that no personnel were in the area and posted it.

The inspectors observed that hydrogen injection was lowered to about 8 standard cubic feed per minute (SCFM) and that the applicable technical requirements manual (TRM) action statement for the main steam line radiation monitors being set non-conservatively was entered.

The inspectors observed that a HP technical was present locally and had identified the HPCI room as a High radiation area. A minimal number of personnel entered the HPCI room during operation, consistent with As Low As Reasonably Achievable (ALARA) considerations. Maintenance and other personnel were on standby at a designated low dose area.

The inspectors observed that operator actions in the control room were adequate. Appropriate attention to detail, procedural usage, and supervisory oversight were demonstrated. Communications were not all 3-part, but did not present any observable problems during the surveillance. The inspectors discussed operator communications during the surveillance and general communications with operations' management. Operations' management stated that a renewed emphasis had been placed on communications and that some crews demonstrated better communications than others.

The inspectors toured the EDG building and observed the 1A EDG during the surveillance run. The inspectors identified a small oil leak on the governor that had not been previously identified. The leak was brought to the attention of operators stationed at the EDG who contacted maintenance personnel, who repaired the leak.

c. Conclusions

The Unit 1 HPCI and EDG systems performed as required and met the applicable TS criteria. However, the HPCI pump outboard bearing vibration increased to the alert range, requiring that the surveillance test frequency for HPCI pump be doubled. The performance of the operators and crews conducting the surveillances was generally professional and competent. The inspectors had observed some improvements in communications in the recent past but observed that operations' standards were not met by all crews. No other deficiencies were identified.

M3.2 Review of Maintenance Activities to Electrically Backseat Valves.

a. Inspection Scope (62703)

The inspectors reviewed maintenance activities and documentation for electrically backseating two Primary Containment Isolation valves. The licensee electrically backseated the valves in an attempt to identify and reduce the unidentified drywell leakage for Unit 1. Reactor Water Cleanup (RWCU) Inboard Isolation valve 1G31-F001, and RCIC Inboard Isolation valve 1E51-F007, were electrically backseated on November 14 and December 27, 1996, respectfully. The inspectors reviewed the corporate engineering evaluation (section E3.1 of this report) to ensure that all applicable actions were completed. Additional inspector observations are discussed in section E3.1 of this report.

b. Observations and Findings.

The inspectors reviewed procedure 51GM-MNT-034-0S: MOV Electrical Backseating With Instantaneous Circuit Breaker Trip Protection, Rev. 2. The following are deficiencies that were identified by the inspectors:

- The Evaluation section of the corporate engineering evaluation stated that procedure 51GM-MNT-034-0S, limits the motor current (of the valve being backseated) to twice the rated current.

  However, step 7.6 of the procedure states, in part, to "adjust breaker 2 on the backseat apparatus to 2 times rated amps (+/- 50%)." This would allow a maximum of three times rated motor current, not twice the motor current, as specified in the engineering evaluation. Engineering concluded that this difference was not a safety concern for the valve since the engineering evaluation was more concerned with locked rotor current.

- Special requirements, Step 4.3.2 of the backseating procedure and the engineering evaluation, states, in part, that prior to performing backseating, the Shift Supervisor on duty will review the engineering evaluation for the impact on stroke time requirements and will indicate the results of his review in the work performed section of the MWO.

  This documentation was not completed for either of the two valves that were backseated. The inspectors discussed this deficiency with maintenance and operations personnel. The operations supervisor on shift during one of the backseating activities stated that he did not review the maintenance procedure and was not aware of the documentation requirement. The inspectors discussed maintenance activities with respect to

reviewing procedures prior to their use and how maintenance communicated specific requirements to operations personnel. The inspectors were informed that if a maintenance procedure contained specific requirements for operations personnel, maintenance personnel were required to bring the requirement to the attention of operations.

The inspectors reviewed procedure 10AC-MGR-019-0S: Procedure Use and Adherence, Rev. 0, and observed that step 4.3.4, stated, in part, that all plant personnel were responsible for reviewing and understanding procedures prior to using them.

The inspectors concluded that in at least one example discussed above, maintenance personnel responsible for the valve backseating procedure did not bring the specific documentation requirement to the attention of operations' supervision. The inspectors noted that after bringing the deficiency to the attention of the maintenance personnel, the documentation was later completed.

During the discussion with maintenance personnel concerning procedure use, the inspectors were informed that some sections of maintenance procedures may be considered continuous use, some sections may be considered reference use, and other parts may be considered information use. The inspectors discussed different procedure usage with at least five different maintenance personnel and discovered that no clear understanding of procedure usage was evident. The inspectors reviewed Procedure 10AC-MGR-019-0S, Rev. 0, and discussed procedure usage with maintenance management. The inspectors were informed that improvement in procedure usage continued to be a challenge and management's expectations were not being met.

It was not clear to the inspectors how some personnel's misunderstanding of procedure usage would ensure effective and consistent implementation of the procedures. Procedure usage appeared to be very subjective on the part of the user and would not necessarily ensure that management's expectations for procedure usage were consistently met. The inspectors concluded that maintenance personnel's understanding of different procedure usage and implementation demonstrated a weakness.

- Procedure step 4.3.4 stated, in part, that the engineering evaluation must be attached to Attachment 1 of the procedure and filed in Document Control with a copy attached to the MWO.

The inspectors observed that during the review of the MWO work package for the backseating completed on November 14, the

engineering evaluation was not part of the MWO work package and was not attached to Attachment 1. The inspectors noted that the MWO work package was being maintained open until after outage work. After bringing this deficiency to the attention of maintenance personnel, the engineering evaluation was included as part of the MWO package and properly attached to the procedure.

- Procedure step 4.3.5 stated, in part, that a MWO must be initiated for internal inspection on the valve to be backseated.

  The inspectors observed that the engineering evaluation did not specify that an internal inspection of the valve be completed. However, the evaluation identified that the procedure required an internal inspection of the valve that was backseated. The inspectors observed that a MWO was not initiated for an internal inspection of the valve backseated on December 27. During a discussion with the system engineer, he indicated that an internal valve inspection would be completed provided other inspections of the valve and or actuator indicated that an internal inspection was warranted.

  For the valve backseated on November 14, the MWO identified that an internal valve inspection be performed but referenced an incorrect procedure. The procedure referenced and documented on the MWO did not exist. This deficiency was corrected after the inspectors identified the problem to maintenance personnel.

- The engineering evaluation recommended that operations implement administrative controls to ensure that the backseated valves would be removed from backseat prior to a 100 degree Fahrenheit (°F) cooldown of the reactor. Operations placed caution tags on the valves to meet this recommendation.

  The inspectors observed the caution tags placed on the backseated valves and noted that the caution tags stated that the valves were electrically backseated. The caution tag book did not contain any additional information. The inspectors reviewed procedure 34GO-OPS-013-2S: Normal Plant Shutdown, Rev. 21, and observed that step 7.3.26 stated, in part, that prior to cooldown greater than 100°F, remove all MOVs that have been electrically or manually backseated from their backseat. The procedure did not provide additional instructions for the activity.

  The inspectors discussed a concern with operations' management as to whether the operators had sufficient guidance for removing valves from their backseated condition during all

plant conditions. The normal method of removing a valve from its backseat was to close the valve using the control room handswitch. The inspectors concern was that if operators used this method of removing valves from their backseat, RCIC and RWCU system (and other systems with backseated valves) would be isolated when they may be needed for continued safe unit shutdown. As a result of this discussion, operations' management provided additional instructions for the beginning of shift training (BOST) for each operating crew, informing them of expectations and priorities during plant transient conditions. The inspectors did not identify similar instructions in the unit's scram procedure.

c. Conclusions

The inspectors concluded that failure to follow procedures 51GM-MNT-034-0S and 10 AC-MGR-019-0S by maintenance personnel to ensure that steps were completed was a violation. This was identified as Violation 50-321/96-15-02: Maintenance Personnel Failure To Follow Procedure During Valve Backseating Activities.

The inspectors concluded that maintenance personnel's lack of understanding of the different types of procedure usage requirements and implementation demonstrated a weakness.

The inspectors concluded that the maintenance procedure for electrically backseating valves did not fully implement the requirements of the engineering evaluation. The inspectors concluded that this deficiency did not result in a safety significant concern for the backseated valves.

M3.3 Unit 1 RCIC and Unit 2 HPCI Speed Control Changes

a. Inspection Scope (92902)

The inspectors observed upward drifts in the Unit 1 RCIC and Unit 2 HPCI turbine speed controls during the performance of surveillance tests. The drifting occurred without operator actions. The inspectors reviewed and discussed the results of the Unit 2 RCIC test performed on January 9 with operations and engineering personnel. The inspectors also observed a post-maintenance test of the Unit 2 RCIC system on January 10 (See Section M1.3).

b. Observations and Findings

The inspectors observed, reviewed, and discussed the results of the operability surveillance tests for the Unit 1 RCIC Pump and the Unit 2 HPCI Pump. The inspectors also observed maintenance activities for the repair of the Unit 2 RCIC pump. The inspectors

attended the operations pre-job and post-job briefings. The briefings were thorough and stressed effective communications, procedure adherence, job assignments, responsibilities, and test results.

The inspectors observed the following during the Unit 1 RCIC turbine test:

- The RCIC pump turbine was manually started and after one minute into the test the turbine speed appeared to stabilize at about 4460 revolutions per minute (rpm), as required by procedure

- At approximately four minutes into the test the turbine speed drifted up to 4500 rpm

- The operator took control of the turbine and lowered the speed to 4460 rpm and at eight minutes into the test the turbine appeared to stabilize at that speed

- At approximately 15 minutes into the test the turbine speed started to drift up again

- The test was completed at approximately 25 minutes and the turbine speed had drifted up to 4490 rpm

The inspectors reviewed test results data which verified what the inspectors had observed concerning the upward drift of the RCIC turbine speed. During discussions with operators and engineers, the inspectors were informed that the Control Room (CR) turbine speed indication was 100 rpm lower than the actual turbine speed.

The inspectors observed the following during the Unit 2 HPCI turbine test:

- The HPCI turbine was started, came up to set speed, and appeared to stabilize at 3865 rpm

- Shortly after the speed stabilized, a gradual upward drift began. At the end of the test, which lasted for 21 minutes, the turbine appeared to be controlling at 3910 rpm

- The lowest rpm observed by the inspectors was 3862 and the highest was 3918 rpm

The inspectors found from the observations, discussions and reviews that the upward drift of the Unit 1 RCIC turbine speed was not expected. The turbine speed drift should not have occurred because of the design of the system. The system should have stabilized around 4460 rpm instead of having a constant upward

drift. The system engineer, stationed locally at the Unit 1 RCIC pump, assumed that the upward drift was due to operator action.

The upward drift observed on the Unit 2 HPCI turbine continued throughout the test. The inspector discussed the observation of the drift with operations personnel. Licensee personnel discussed several possibilities for the deficiencies, which included out of calibration electronics, a test valve gradually clogging up with debris, or a mechanical malfunction of the test valve.

Subsequent to the Unit 1 RCIC turbine test a Unit 2 RCIC turbine test was performed. During the test the operators observed significant changes in the speed of the Unit 2 RCIC turbine. The I&C technicians informed the operators that the turbine control valve was receiving full open signals followed by full closed signals on a continuous basis. The turbine control valve appeared to go to the fully open position and immediately go to the fully closed position. This caused observed fluctuations in turbine speed of up to plus-or-minus 160 rpm. The operators declared the Unit 2 RCIC system inoperable. The RCIC system engineer informed the inspectors that the Unit 2 RCIC system would operate in this manner but not for very long. The inspectors observed the post-maintenance test of the Unit 2 RCIC and did not observe any deficiencies.

c. Conclusions

The inspectors concluded that the maximum drift observed on the Unit 1 RCIC turbine was 40 rpm. The upward drift of the Unit 2 HPCI turbine was about 45 rpm. The inspectors concluded that the drifts could be an indication of pending failures. The erratic speed control of the Unit 2 RCIC was a significant problem. This was identified as IFI 50-321, 366/96-15-03: Resolution of RCIC and HPCI Turbine Speed Control Drift Units 1 and 2, respectively.

M4 Maintenance Staff Knowledge and Performance

M4.1 Inadvertent Feedwater Heater Isolation.

a. Inspection Scope (62707)

The inspectors conducted a review of maintenance work activities, reviewed documentation and discussed maintenance personnel performance with licensee personnel with respect to an inadvertent isolation of a Unit 2 feedwater heater.

b. Observations and Findings

On January 5, during maintenance activities to replace a relay on the 6th stage A heater steam trap bypass to the condenser, a fuse

blew. As a result, steam from the high pressure turbine to the 6th stage heaters was isolated, causing feedwater heater levels to become erratic.

Operators observed that feedwater temperature decreased and entered the abnormal procedure for loss of feedwater temperature. Power was reduced to about 93.5% RTP. The blown fuse was replaced, heater levels were stabilized and power was later returned to 100% RTP. The relay, which remained in the energized state even though the relay fuse had blown, was not immediately replaced. The relay was replaced the following day after a work plan was completed by engineering and maintenance personnel. The inspectors noted that while similar relays had failed, sticking in the energized condition was an unusual case.

The inspectors reviewed procedure 34AB-N21-001-2S: Loss of Feedwater Heating, Revision 2, and observed that operators initiated the correct actions for the plant transient.

The inspectors discussed maintenance personnel's actions involved with the relay replacement with maintenance supervision. The inspectors were informed that an I&C technician was in the process of jumpering out the relay to be replaced, had connected one end of the jumper to a hot lead, and was routing the jumper through the panel toward the other lead that was to be jumpered. The jumper was inadvertently grounded, blowing the fuse, and initiating the transient.

The inspectors discussed expectations for jumper usage with maintenance management. Management indicated that connecting a jumper to a hot lead and then routing it through a panel did not meet their expectations. The inspectors reviewed several maintenance procedures and observed that general jumper usage and expectations for jumper usage was lacking.

In April and May 1995, the licensee conducted an extensive review of jumper types, and jumper usage at the site. This review was conducted as a result of a reactor scram following operator deficiencies using jumpers. The inspectors observed that as a result of this licensee review, several recommendations for jumper types and jumper usage, and written expectations were developed. Most departments held special training sessions for jumper usage and the proper types of jumpers to be used. Operations issued a special procedure detailing operations management's expectations for jumper usage.

The inspectors observed that maintenance management issued a Maintenance Training Bulletin, dated April 1995, that dealt with jumper usage. The bulletin stated, in part, that personnel authorized to use jumper wires are expected to know and use the

correct type. Maintenance management informed the inspectors that proper jumper usage was taught in craft training and was primarily considered skill of the craft. This maintenance jumper error that initiated this feedwater level transient was being reviewed for human performance improvements.

c. Conclusions

The inspectors concluded that this maintenance jumper error demonstrated a poor work practice on the part of one individual. Similar jumper usage error has not been a concern and this error was an isolated occurrence. Reviewing this error for human performance improvements was appropriate.

M5 Maintenance Staff Training and Qualification

M5.1 Maintenance Training and Qualification Review

a. Inspection Scope (62707)

A review of maintenance training documentation was conducted to verify that personnel involved in the repair and maintenance of valves were appropriately trained and qualified. Also, the training and qualification requirements for valve maintenance were discussed with Maintenance and Training staff members.

b. Observations and Findings

A review of training documentation for mechanics was conducted by the inspectors. This review was conducted to determine the qualification status of personnel assigned to perform valve maintenance on safety-related and those non-safety-related valves that are within the purview of the Maintenance Rule. The mechanical maintenance training staff informed the inspectors that the training and qualification requirements were the same for work on both safety and non-safety-related valves. The training staff maintains the training and qualification status of personnel in a computer data base referred to as the Training Records and Qualification System (TRAQS).

The inspectors reviewed the following documents which provided the training and qualification requirements:

- ANSI N18.1-1971: Selection and Training of Nuclear Power Plant Personnel

- HNP-2-FSAR-13: Section 13.1.3 Qualification Requirements for Nuclear Plant Personnel and Section 13.1.3.1.16 Maintenance Personnel

- 10AC-MGR-007-0S: Personnel Qualification Requirements, Rev. 5

- DI-MNT-11-0287N: Qualification of Maintenance Personnel, Rev. 2

The inspectors were informed during a discussion with maintenance staff members that there were some Building and Grounds (B&G) personnel who were trained and qualified to perform valve packing. These individuals are assigned to the various performance teams. They perform valve packing activities as well as laborer type work. A followup discussion with the mechanical maintenance training staff indicated that these individuals attend a special course to become qualified as Valve Packing Technicians. They are provided training in mathematics, precision tools, torquing, gasket replacement and valve packing. The instructions in this special course is an excerpt from the curriculum for the mechanics and the content of each subject area is the same. The successful completion of this special course qualifies a B&G individual for a Valve Packing Technician position on the Performance Team. The names of these individuals are entered into the TRAQS computer data base as being qualified.

The inspectors reviewed a sampling of MWOs associated with mechanical work activities performed on valves by Mechanics and B&G personnel. The MWO sampling included the following MWOs:

- MWO 2-94-3430: 2B21-F013A, Replace SRV Top Works and Stump

- MWO 1-95-2627: Prepare SRV Solenoid Valve Assembly and Stump for Shipment to Wyle Laboratory

- MWO 2-95-1035: Remove, Test, Replace/Repair RCIC Suction Relief Valve

- MWO 1-95-2942: Clean and Torque Valve 1N22-F6081

- MWO 1-96-0089: Repack Valve Per 52CM-MME-001-0S

- MWO 1-95-2934: Inspect Valve 1N22-F1114A for Packing Adjustment/Repacking

- MWO 2-95-3370: Repair Galled Valve Stem on 2E11-F015B

- MWO 2-95-3639: Repair LPCI Valve 2E11-F015A Ball Stem/Valve Stem Coupler

- MWO-2-94-1732: Perform Mechanical Portion of 52SV-T48-001-0S

- MWO-1-94-5335: Repair/Replace and/or Bench Test Relief Valve 1N22-F070A

- MWO-1-96-1000: Repack Valve 1N21-F023A

The names of the persons who performed the work activity as listed in the MWO were compared to those on the list of individuals qualified to perform the work activity on TRAQS. No discrepancies were identified in this comparison.

c. Conclusions

Personnel who perform mechanical maintenance on safety and non-safety-related valves are trained and qualified in accordance with the requirements of ANSI N18.1-1971, the FSAR, and other applicable plant qualification procedures.

M8 Miscellaneous Maintenance Issues (92700) (92902)

M8.1 (Closed) VIO 50-321/96-06-04: Failure to Meet TS Surveillance Requirements Prior to Withdrawal of a Control Rod While in Cold Shutdown

This Violation was identified when, on two occasions, licensee personnel withdrew a control rod with accumulator pressure below the TS requirement. The activities were performed for maintenance purposes.

The licensee's response was provided in correspondence dated July 10, 1996. The response indicated that procedure 34GO-OPS-066-0S: Single Control Rod Withdrawal in Shutdown or Refueling, was revised to clarify the requirement that an accumulator pressure of equal to or greater then 940 pounds per square inch gauge (psig) must be present before any rod withdrawal. The inspectors reviewed the revised procedure. Based on the reviews by the inspectors and the actions taken by the licensee, this violation is closed.

M8.2 (Closed) LER 50-321/96-06: Inadequate Procedure and Lack of Work Coordination Result in Withdrawal of Inoperable Control Rod

This problem was discussed in IR 50-321,366/96-06. No new issues were revealed by the LER. This LER is closed.

III. Engineering

E2 Engineering Support of Facilities and Equipment

E2.1 Trip and Failure to Start Problems For the Unit 1 A Standby Liquid Control (SLC) Pump

a. Inspection Scope (92903)

The inspectors reviewed engineering activities of an investigation of the 1A SLC pump tripping and failure to start. A review of the MWOs, work completed, procedures, and discussions with engineering personnel were conducted.

b. Observations and Findings

On January 10, during operations performance of a routine operability surveillance, the 1A SLC pump tripped. The system was declared inoperable and actions to investigate the problem were initiated. Maintenance found the motor overloads tripped. Maintenance later replaced a pump control switch and changed the overload relay setting from 100% to 115%, per a telephone conversation with engineering personnel, and in addition meggered the pump motor. Later, operations personnel ran the pump for about 20 minutes and it ran properly.

On January 12, operations began another operability surveillance during which the pump did not start on three attempts. Maintenance personnel were contacted to investigate. A worn control switch block was identified as the problem and was replaced. The pump then started properly.

During the investigation of this problem, technicians identified that the overload heaters were not the size specified in procedure 52PM-R24-001-0S: Allis Chalmers Low Voltage MCC Inspection, Revision 12. The procedure specified that the overload heaters should be size H80s, and size H78s had been installed. Maintenance personnel installed the correct heaters and later changed the relay setting to 125%. Engineering personnel were contacted to investigate the problem with the overload heaters and to further investigate the SLC pump tripping problem to ensure that the correct failure mechanism was identified.

The inspectors discussed the discrepancy of the installed overload heaters with respect to procedural requirements with engineering personnel. The inspectors were informed that a work history review had been completed back to about 1984 and no evidence of heater overload changeout was observed. Documentation reviewed did not indicate what size overload heaters should be installed or when size H78 overload heaters were placed in the system.

Engineering personnel stated that at some time in the past, size H78s may have been the correct size. Engineering personnel did not determine how the size H78 become installed in the system. Engineering also indicated that the overload relay was suspected as the cause of the problem and not the size of the overload heaters. Maintenance personnel replaced the overload relay. Both the overload heaters and the overload relay that was replaced were tested by engineering and revealed that the pump motor would have operated properly and within the expected overload condition of the pump motor.

During the procedure review and through discussions with engineering personnel, the inspectors observed that procedure guidance for determining the correct size of overload heaters was not clear. Engineering personnel stated that procedure clarifications would be recommended.

c. Conclusions

The inspectors concluded that engineering personnel from NS&C conducted a detailed review of the SLC pump tripping problem and consider this as a positive attribute of the engineering department effort. The inspectors also concluded that the SLC pump tripping problem was an isolated occurrence. The inspectors did not consider that this installation of incorrect size overload heaters was an example of poor configuration control or contributed to the tripping problem.

E3 Engineering Procedures and Documentation

E3.1 Review of Engineering Evaluations

a. Inspection Scope (37551) (92903)

The inspectors reviewed licensee activities and engineering evaluations completed for electrically backseating two Primary Containment Isolation valves. The licensee electrically backseated the valves in an attempt to identify and reduce the unidentified drywell leakage for Unit 1. Reactor Water Cleanup (RWCU) Inboard Isolation valve 1G31-F001, and Reactor Core Isolation Cooling (RCIC) Inboard Isolation valve 1E51-F007, were electrically backseated on November 14 and December 27, 1996, respectfully.

b. Observations and Findings

The inspectors reviewed an engineering evaluation conducted by corporate engineering and transmitted to the site by interoffice correspondence, dated February 21, 1994, for Backseating of

Motor-Operated Valves (MOVs) in the Drywell. The engineering evaluation identified a total of 16 valves that were evaluated and included both Unit 1 and Unit 2 valves. Post backseating inspections were identified for some valves and no inspection was identified for others. The evaluation specified the correct maintenance procedure used for electrically backseating the valves and identified that the plant maintenance procedure used to backseat the valves currently required that the backseated valves be disassembled and inspected for damage at the next opportunity. The evaluation also identified the actuators for both valves were to be inspected for damage to thrust components.

The evaluation addressed valve actuator torque ratings, active thrust ratings and valve thrust limit in the open direction. The evaluation concluded that "the backseat may be damaged on many of the valves in question if they are electrically backseated. However, this damage is not postulated to prevent the valve from performing its safety functions. Other valve components are not likely to be damaged by electrically backseating."

The inspectors reviewed table 7.3-1 of the Unit 1 FSAR and observed that the safety function of the valves was in the closed direction. The safety evaluation satisfactorily addressed valve closing requirements and stated that deformation of the backseat would not prevent the valves from closing.

The inspectors also reviewed the interoffice correspondence (memorandum) from site engineering to operations endorsing the 1994 corporate engineering evaluation and identified other specific stipulations. The memorandum identified that the valves duty cycle was 15 minutes and provided guidance for not exceeding the duty cycle time. Also recommended was that administrative controls be placed on a valve to inform operators that the valve was backseated and to take actions to prevent thermal binding during cooldown. The inspectors identified a weakness with the administrative control placed on the valves. This and other inspector identified deficiencies are discussed in section M3.2. Also stipulated was that maintenance must generate or confirm the existence of MWO's to perform repacking of the backseated valve. The inspectors observed that the memorandum referenced maintenance procedure, 52GM-MNT-034-0S, as the procedure used to backseat the valves. The correct procedure reference was 51GM-MNT-034-0S.

The inspectors discussed with engineering whether any changes to the valves, valve motors or actuators were made since 1994 that affected the evaluation. Engineering personnel stated that no changes were made that affected the previously completed evaluation.

c. Conclusions

The inspectors concluded that the engineering evaluation for electrically backseating valves located in the drywell was satisfactory. The evaluation considered plant safety and identified actions to ensure continued system and component reliability. The typographical error on the procedure reference in the memorandum was not a significant concern.

E8 Miscellaneous Engineering Issues (92700) (92903)

E8.1 (Closed) LER Licensee Event Report (LER) 50-321/96-14: Incorrect Circuit Breaker Setting Results in Emergency Diesel Generator Being Inoperable.

This problem was discussed in IR 50-321, 366/96-14, Sections M2.2 and E2.2, and was identified as an example of Violation 50-321, 366/96-14-03: Failure to Implement Configuration Control Requirements. The licensee determined during a system walkdown that the overcurrent protection trip setpoint for the normal supply breaker to Motor Control Center (MCC) 1R24-S026, from the 1B Emergency Diesel Generator (EDG), was not set properly. The problem occurred as the result of a failure to incorporate information developed in a design calculation into appropriate electrical single line drawings and plant maintenance procedures. Poor labeling for setting the breaker trip device was also a contributor. The long time delay pickup of the trip device should have been set at 450 amps but was left at 300 amps instead. This problem made the 1B EDG inoperable.

The licensee promptly initiated a temporary modification to remove the largest load from this MCC and powered it from another source. The trip device installed on the Unit 1 600-volt feeder breaker to the subject MCC was disabled, leaving the upstream 4160-volt feeder breaker to the MCC to provide overcurrent protection. Additional corrective actions will be to remove the trip devices from the primary and alternate feeder breakers on the bus by June 15, 1997. The inspectors will review licensee activities to complete the corrective actions, which are documented as IFI 50-321/96-14-05: Restoration of 1B EDG Motor Control Center. Based upon the inspectors review and licensee actions, the issuance of an NOV and IFI, this LER is closed.

E8.2 (Closed) LER 50-321/96-14, Rev 1.: Incorrect Circuit Breaker Setting Results in Emergency Diesel Generator Being Inoperable.

This LER was discussed in Section E8.1 of this report. The LER corrected a date that licensee corrective actions will be completed. No new issues were revealed by this revision to the LER. This LER is closed.

E8.3 (Closed) IFI 321/96-07-03: Degradation and Replacement of Unit 2 Station Service Battery 2B Due to Buildup of Cell Sediment.

This item addressed an observation of sediment buildup in the cells of the Unit 2 Station Service Battery (SSB) 2B. The vendor determined that the buildup was due to a curing process at the factory. Of the 248 battery cells supplied for both trains of Unit 2, 56 cells showed signs of sediment. All of the cells were located among the 120 cells in SSB 2B. At the end of the report period sediment had not been observed in the cells of SSB 2A. The licensee has received replacement cells from the vendor. MWO 2-96-1929 has been issued to replace all 120 cells of SSB 2B during the upcoming Spring 1997 Unit 2 refueling outage. The MWO will be followed up as part of the inspectors' planned outage inspection activities. Based on the actions taken by the licensee, this item is closed.

E8.4 (Closed) LER 50-321/96-07: Failed Component Results in Inadvertent Emergency Diesel Generator Start.

This LER was issued on May 21, 1996, when the 1A EDG was inadvertently started. Based on the actions taken by the licensee, this item is closed.

E8.5 (Closed) LER 50-321,366/96-08: Inadequate Procedure Results in Reactor Pressure Increase and Automatic Reactor Scram.

This problem was discussed in IR 50-321,366/96-06. The inspectors reviewed the revised procedure 34SO-N32-001-1S: EHC Hydraulic System, Rev. 17. The inspectors also reviewed the previous revision. The inspectors observed that sections 7.3.1, System Isolation With Bypass Capacity, and 7.3.2, Restoring the System to Operation, had been deleted. This would preclude isolating portions of the Electro Hydraulic Control (EHC) system which caused the increase in reactor pressure. Based on the actions taken by the licensee, this item is closed.

IV Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 General Radiological Controls

Inspection Scope (71750)

General Health Physics (HP) activities were observed during the report period. This included locked high radiation area doors, proper radiological postings, and personnel frisking upon exiting the Radiologically Controlled Area (RCA). The inspectors made

frequent tours of the RCA and discussed radiological controls with HP technicians and HP management. No significant deficiencies were identified.

R1.2 Radiological Controls

a. Inspection Scope (83750)

Radiological controls associated with ongoing operational activities were reviewed and evaluated. Controls for both routine operations and specific non-routine tasks were included in the review. In particular, housekeeping and cleanliness, area postings, radioactive waste (radwaste) container labels, and controls for high radiation areas were reviewed for adequacy. Licensee controls for ongoing operations were compared against documented requirements in applicable sections of Technical Specifications (TSs), Final Safety Analysis Report (FSAR), and 10 CFR Part 20.

The inspectors made frequent tours of the RCAs. In addition, specific radiation work permit (RWP) procedural guidance and selected survey results were reviewed and discussed with responsible HP staff and supervisors. Operations and radiological controls associated with the low-level radioactive waste storage building were observed and evaluated. Controls for specific tasks performed in accordance with the following RWPs were evaluated in detail.

- RWP 197-0005, Remove old obsolete drum capping equipment and support work, effective January 10, 1997.
- RWP 097-0017, Process/ship/receive/load out/transport radioactive materials and support work including alpha trending and Waste Separation and Temporary Storage Facility (WSTSF) work, effective January 10, 1997.

In addition, the inspectors reviewed and discussed program guidance and results of internal exposure evaluations made by the licensee during 1996.

b. Observations and Findings

High and locked high radiation area controls were verified to be implemented in accordance with TS requirements. Postings of radwaste storage areas were proper and in accordance with TS or 10 CFR 20 Subpart J requirements. Overall, containers holding radwaste, contaminated materials, and equipment were labeled in accordance with 10 CFR 20.1904 requirements. Excluding activities associated with construction of a hot tool room and an isolated example of trash and debris in the Unit 2 (U2) Radioactive Waste

(RW) building area 164 foot (') elevation floor, cleanliness and housekeeping within the RCAs, outside radwaste processing and storage areas, and the low-level waste storage building were acceptable. Radiation control activities associated with ongoing radwaste processing, storage and shipping operations were adequate and conducted in accordance with applicable RWPs and procedures.

During facility tours, the inspectors observed several poor radiological control practices associated with demolition of a concrete wall located in the Unit 1 (U1) RW area 132' elevation. Demolition activities were in preparation for construction of a hot tool room and were performed under RWP 197-0005, Remove Old Obsolete Drum Capping Equipment and Support Work, effective January 10, 19[illegible]. The work area was roped-off, equipped with a step-off pad, and posted as a Contaminated Area. On January 15, 1997, the inspectors noted that the demolition activities generated visible and potentially contaminated dust which subsequently became airborne and also covered the step-off pad and areas surrounding the posted area. The only established engineering control provided was use of a High Efficiency Particulate Air (HEPA) filtered portable exhaust ventilation system but without an enclosure surrounding the work area. The most recent quantitative contamination and air sample survey results conducted on January 11, 1997, verified contamination on the wall, approximately 1000 to 3000 disintegration per minute per 100 centimeters square (dpm/100cm^2) but did not identify an airborne hazard. However, the inspectors noted that no additional airborne surveys were conducted within the work area and that the most recent quantitative radiation surveys completed on January 13, 1997, were in response to unexpectedly elevated electronic dosimeter readings.

Discussions with responsible HP and maintenance personnel indicated that the tools used for the demolition changed and that the staff was aware of the increased levels of potentially contaminated dust outside of the designated area. Licensee representatives stated that additional gross contamination surveys of the floor conducted outside of the posted area using Masslin cloth were conducted but not documented. Responsible HP personnel stated that the gross surveys did not indicate any contamination outside of the roped-off area. TS 5.4 requires that written procedures be established, implemented, and maintained covering activities delineated in Appendix A of Regulatory Guide (RG) 1.33, Rev. 2, dated February 1978. Regulatory Guide 1.33, Appendix A, "Typical Procedures for Pressurized Water Reactor and Boiling Water Reactors," Paragraph 7.e, requires radiation protection procedures for Radiation Work Permit System and for Contamination Control. Health Physics procedure 60AC-HPX-004-0S, Radiation and Contamination Control, Revision (Rev.) 14, effective October 15, 1996, specifies that HP will: initiate controls, e.g.,

engineering controls, to ensure that spread of contamination is minimized; will perform non-routine radiation and contamination surveys as required, to support operation and maintenance; will perform airborne surveys during radioactive work which is expected to cause airborne radioactivity unless constant air monitors are provided; and perform periodic air sampling to evaluate the effectiveness of filtered ventilation used to control airborne radioactivity. The inspectors noted that the established engineering controls and the contamination and airborne surveys conducted for the observed demolition activities were not in accordance with the established procedure.

The inspectors did not identify any significant concerns regarding use of the whole body counter (WBC) equipment used for *in vivo* analyses and results. Excluding concerns identified for WBC calibration guidance detailed in Paragraph R7.1, the applicable licensee procedures were determined to be satisfactory and staff knowledge adequate to implement the current program. Potential procedural enhancements discussed with responsible licensee representatives included: improved guidance for evaluating potential internal exposure resulting from non-gamma-emitting radionuclides; collection methods for bioassay samples and associated vendor capabilities; and inclusion of the standup WBC, currently used for qualitative (screening) analyses, in the crosscheck program. Results of all positive internal exposures of workers analyzed in 1996 were less than one percent of the Annual Limits of Intake (ALIs) documented in 10 CFR Part 20.

c. Conclusions

Radiological controls for high and locked high radiation areas were maintained in accordance with TS requirements. Area postings and container radiation labels were appropriate. Housekeeping and cleanliness were adequate. In general, the licensee was controlling internal exposure effectively. The poor engineering controls and survey practices observed were identified as an example of VIO 50-321, 366/96-15-05: Failure to Follow Procedures for Contamination Control and for Deficiency Card Issuance for Inadequate Bioassay Calibration Guidance.

R5 Staff Training and Qualifications in Radiation Protection and Chemistry

a. Inspection Scope (83750)

General employee training provided to meet the requirements of 10 CFR Part 19, and specific training and medical certification, required by 10 CFR Part 20 for persons who used or were designated to wear respiratory protective equipment, were reviewed and evaluated during the onsite inspection.

Selected 1996 training and medical certification records for selected personnel within the following groups were reviewed and discussed with responsible licensee representatives.

- Personnel evaluated by the licensee for potential internal exposure during 1996.
- All licensee and contract personnel involved in the transfer of a full radwaste liner from the radwaste processing facilities to a shipping cask during the week of January 13, 1997.
- All contract personnel involved with routine operations at the low-level radioactive waste storage building.

b. Observations and Findings

The inspectors verified that general employee and respiratory protection training, and medical certifications were conducted in accordance with training procedure 73TR-T-RN-001-0S, General Employee Training Programs, Rev. 9, effective June 1, 1996. The guidance met the requirements of 10 CFR 19.13 and 10 CFR 20.1703.

Review and discussion of training records verified that all personnel met the required general employee training requirements. From review of training records and selected Respirator Device Issuance Reports, the inspectors verified that all persons who used respiratory protection equipment were trained and medically certified in accordance with the applicable procedures.

c. Conclusions

General employee training and completed medical certifications for personnel involved in licensed activities were conducted in accordance with the applicable procedures and met the applicable requirements of 10 CFR 19 and 10 CFR 20.

R7 Quality Assurance in Radiation Protection and Chemistry Activities

R7.1 *In Vivo* Quality Control Analyses

a. Inspection Scope (83750, 84750)

During the inspection, the 1996 quarterly Quality Control (QC) cross-check results for the *in vivo* WBC quantitative (chair geometry) radionuclide analyses were reviewed and discussed.

b. Observations and Findings

For the first and fourth quarter cross-check samples, all results for torso, lung and thyroid were in agreement with the vendor

values. Disagreements between selected licensee analysis results and the known values were identified for the second and third quarters of 1996. For the second quarter samples analyzed on May 23, 1996, the identified disagreements resulted from an improper calibration conducted April 23, 1996. Responsible licensee representatives stated that the improper calibration resulted from misinterpretation of calibration guidance provided by the vendor software-driven calibration menu.

From review of the applicable procedure and discussions with cognizant licensee representatives, the inspectors determined that no changes to, nor procedural warnings regarding applicable computer-based calibration menu were implemented. A licensee review of the WBC chair *in vivo* analysis results determined that the improper calibration had no significant effect on assignment of internal exposure for the two individuals who were evaluated using the WBC chair between the dates of the improper calibration and when the deficiency was identified and corrected. However, the inspectors noted that the subject evaluations were not documented. The inspectors noted that RG 1.33 recommends written procedures for bioassay programs and that contrary to administrative control procedure 10AC-MGR-004-0S, Deficiency Control System, Rev. 10, dated March 3, 1996, a Deficiency Card for the calibration procedural inadequacy was not initiated. For the third quarter, disagreements in results of the crosscheck comparisons resulted from failure to load all the provided cross-check samples and did not affect the calibration accuracy.

c. Conclusions

Quality control cross-check analyses were conducted in accordance with procedural requirements. However, the failure to issue a deficiency card was identified as an additional example of procedural VIO 50-321, 366/96-15-05: Failure to Follow Procedures for Issuance of a Deficiency Card for Inadequate Bioassay Calibration Procedural Guidance.

R8 Miscellaneous Radiation Protection and Chemistry Issues

a. Inspection Scope (83750, 84750, 86750)

The status of selected radiation control and radwaste performance indicators was reviewed and discussed with licensee representatives.

b. Observations and Findings

Since 1993, annual dose expenditure per unit outage continued to decrease. For 1996, dose expenditure was approximately 441 person-rem and was within the established goal of 575 person-rem.

For 1996, licensee representatives informed the inspectors that no abnormal effluent releases were identified. The 1996 dose estimates from both liquid and gaseous effluents were small percentages of the Offsite Dose Calculation Manual (ODCM) limits. No significant trends or changes in radiological environmental monitoring program sample radiological analyses were identified.

c. Conclusions

Radiation protection performance indicators verified that licensee actions to control worker dose were effective and radiological effluent releases were minimized.

R8.1 (Closed) Inspector Followup Item (IFI) 50-321, 366/95-05-01: Review Post Accident Sampling System (PASS) Program Enhancements.

This item was opened pending completion of equipment modifications and procedural changes identified for the PASS system by the licensee. From selected comparison of installed PASS equipment with configuration control documents and review of current procedures, the inspectors verified completion of modifications and procedural revisions. On January 16, 1997, the inspectors observed licensee representatives successfully demonstrate PASS operability by collecting, processing, and analyzing a U2 reactor coolant system (RCS) liquid sample in accordance with Chemistry (CH) Sampling (SAM) procedure 64CH-SAM-020-0S, Rev. 1. From review of selected August 1996 through January 1997 PASS In-Line Analyses records and discussions with the licensee, the inspectors verified that both containment air and RCS samples from both U1 and U2 were collected and processed by chemistry personnel using the PASS equipment on a routine basis. Excluding several instances of low RCS pH determinations relative to reference samples, no other analysis accuracy issues were identified. The licensee stated that a review of the low pH values would be conducted. As of November 1996, PASS availability was listed as 95 percent in licensee maintenance records. Based on licensee actions and current system reliability, this item is closed.

R8.2 (Closed) Unresolved Item (URI) 50-321, 366/96-14-07: Determine if Certificate of Compliance (COC) and Associated Vendor Documents for Package No. USA/5805/B() Were Controlled in Accordance with Administrative Procedure 20AC-ADM-003-0S, Vendor Manual Review and Control.

During review of COCs and associated documentation for package type USA/5805/B() used for an August 7, 1996 Type B shipment of irradiated hardware to a licensed burial facility, the inspectors determined that current manuals and procedures were received directly by the radwaste staff from the vendor. However, the inspectors noted that the subject documents may not have been

reviewed and controlled in accordance with the applicable administrative procedure, and thus may not have met the intent of 10 CFR 70.113 quality assurance (QA) requirements for shipping program activities. A review of licensee records identified that the COC and procedures were maintained in accordance with the applicable administrative procedure. However, the licensee was unable to demonstrate that the subject manual was received, reviewed, processed, and maintained in accordance with the subject administrative control procedure. All other documents associated with shipping containers which were, or could be used to make Type B shipments were maintained in accordance with the licensee's procedure.

Prior to the current inspection, the licensee requested all uncontrolled copies of COCs, and associated documents from staff members involved in transportation activities. The inspectors reviewed a January 7, 1997, letter confirming that a single copy of shipping container documents would be sent to the licensee. Consistent with Section IV of the Enforcement Policy based on corrective actions taken prior to the end of the inspection, this issue was identified as Non-cited Violation (NCV) 50-321, 366/96-15-06: Failure to Maintain Shipping Cask Manuals in Accordance with Established Procedures to Meet 10 CFR Part 70.113.

S2 Status of Security Facilities and Equipment

The inspectors toured the protected area and observed that the perimeter fence was intact and not compromised by erosion nor disrepair. The fence fabric was secured and barbed wire was angled as required by the licensee's Plant Security Program (PSP). Isolation zones were maintained on both sides of the barrier and were free of objects which could shield or conceal an individual. The inspectors observed personnel and packages entering the protected area were searched either by special purpose detectors or by a physical patdown for firearms, explosives and contraband. Badge issuance was observed, as was the processing and escorting of visitors. Vehicles were searched, escorted and secured as described in the PSP.

The inspectors concluded that the areas of the PSP inspected met the PSP requirements.

V. Management Meetings

X. Review of UFSAR Commitments

A recent discovery of a licensee operating its facility in a manner contrary to the Updated Final Safety Analysis Report (UFSAR) description highlighted the need for a special focused review that compares plant practices, procedures and/or parameters

to the UFSAR description. While performing the inspections discussed in this report, the inspectors reviewed the applicable portions of the UFSAR that related to the areas inspected. The inspectors verified that the UFSAR wording was consistent with the observed plant practices, procedures, and/or parameters.

X.1 Exit Meeting Summary

The inspectors presented the inspection results to members of the licensee management at the conclusion of the inspection on January 31, 1997. The licensee acknowledged the findings presented. An interim exit was conducted on January 17, 1997.

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

X.2 Refueling Outage Management Meeting

The inspectors attended several Outage Management Meetings conducted at the site. Among the items discussed were: The Fall 1997, Unit 1 outage status; the Spring 1997, Unit 2 outage status; the Unit 2 maintenance planning update; the Unit 2 scope additions; the status of outage requisitions; and the status of design changes. The inspectors observed that the critical path was identified as the high pressure turbine modifications. A fuel shuffle, and not a fuel off load, will be performed. However, the visual inspection of the vessel internal core spray piping could impact the outage schedule. The inspectors concluded that the outage is well planned, with realistic goals, with adequate support.

X.3 Management Meeting in Region II Office

A licensee-requested meeting was held in the Nuclear Regulatory Commission (NRC) office in Atlanta, Georgia on January 8, 1997. The purpose of the meeting was to discuss Georgia Power Company's Self-Assessment for the Hatch nuclear plant. The NRC concluded that the meeting was beneficial in that it provided a better understanding of accomplishments and improvement initiatives at the Hatch facility. A meeting summary was documented under separate correspondence dated January 9, 1997.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Anderson, J., Unit Superintendent
Betsill, J., Operations Manager
Coggin, C., Engineering Support Manager
Curtis, S., Operations Support Superintendent
Davis, D., Plant Administration Manager
Fornel, P., Performance Team Manager
Fraser, O., Safety Audit and Engineering Review Supervisor
Hammonds, J., Regulatory Compliance Supervisor
Kirkley, W., Health Physics and Chemistry Manager
Lewis, J., Training and Emergency Preparedness Manager
Moore, C., Assistant General Manager - Plant Support
Reddick, R., Site Emergency Preparedness Coordinator
Roberts, P., Outages and Planning Manager
Sumner, H., General Manager - Nuclear Plant
Thompson, J., Nuclear Security Manager
Tipps, S., Nuclear Safety and Compliance Manager
Wells, P., Assistant General Manager - Operations

INSPECTION PROCEDURES USED

IP 37551: Onsite Engineering
IP 40500: Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems
IP 61726: Surveillance Observations
IP 62700: Maintenance Implementation
IP 62703: Maintenance Observations
IP 62707: Maintenance Observations
IP 71707: Plant Operations
IP 71714: Cold Weather Preparations
IP 71750: Plant Support Activities
IP 83750: Occupational Radiation Exposure
IP 84750: Radioactive Waste Treatment and Effluent and Environmental Monitoring
IP 86750: Solid Radioactive Waste Management and Transportation of Radioactive Materials
IP 92700: Onsite Follow-up of Written Reports of Nonroutine Events at Power Reactor Facilities
IP 92901: Followup - Operations
IP 92902: Followup - Maintenance/Surveillance
IP 92903: Followup - Followup Engineering
IP 92904: Followup - Plant Support

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-366/96-15-01	NCV	Inadequate Procedures for Replacement of the Unit 2 Drywell Hydrogen Recombiner Flow Controller Batteries and Establishing the Required Controller "Dead Band" Following Certain Maintenance Activities identified (Section M2.1).
50-321/96-15-02	VIO	Maintenance Personnel Failure To Follow Procedure During Valve backseating Activities (Section M3.2).
50-321,366/96-15-03	IFI	Resolution of RCIC and HPCI Turbine Speed Control Drift Units 1 and 2, respectively (Section M3.3).
50-321,366/96-15-04	IFI	Switchyard Maintenance and Material Condition (Section M1.4).
50-321,366/96-15-05	VIO	Failure to Follow Procedures for Contamination Control and for Deficiency Card Issuance for Inadequate Bioassay Calibration Guidance (Sections R1.2 and R7.1).
50-321,366/96-15-06	NCV	Failure to Maintain Shipping Cask Manuals in accordance with Established Procedures to Meet 10 CFR Part 70.113 (Section R8.2).

Closed

50-366/96-15-01	NCV	Inadequate Procedures for Replacement of the Unit 2 Drywell Hydrogen Recombiner Flow Controller Batteries and Establishing the Required Controller "Dead Band" Following Certain Maintenance Activities (Section M2.1).
50-321,366/96-15-06	NCV	Failure to Maintain Shipping Cask Manuals in Accordance with Established Procedures to Meet 10 CFR Part 70.113 (Section R8.2).
50-321,366/96-14-07	URI	Determine if Certificate of Compliance (COC) and Associated Vendor Documents for Package No. USA/5805/B() Were Controlled in Accordance with Administrative Procedure 20AC-ADM-003-0S, Vendor Manual Review and Control (Section R8.2).

50-321/96-14	LER	Incorrect Circuit Breaker Setting Results in Emergency Diesel Generator Being Inoperable (Section E8.1).
50-321/96-14, R1	LER	Incorrect Circuit Breaker Setting Results in Emergency Diesel Generator Being Inoperable (Section E8.2).
50-321,366/96-08	LER	Inadequate Procedure Results in Reactor Pressure Increase and Automatic Reactor Scram (Section E8.5).
50-321/96-07	LER	Failed Component Results in Inadvertent Emergency Diesel Generator Start (Section E8.4).
50-321/96-07-03	IFI	Degradation and Replacement of Unit 2 Station Service Battery 2B Due to Buildup of Cell Sediment (Section E8.3).
50-321/96-06	LER	Inadequate Procedure and Lack of Work Coordination Result in Withdrawal of Inoperable Control Rod (Section M8.2).
50-321,366/95-05-01	IFI	Review Post Accident Sampling System (PASS) Program Enhancements (Section R8.1).
50-321/96-06-04	VIO	Failure to Meet TS Surveillance Requirements Prior to Withdrawal of a Control Rod While in Cold Shutdown (Section M8.1).

LIST OF ACRONYMS USED

ALARA- As Low as Reasonably Achievable
ALI - Annual Limit of Intake
ANSI - American National Standards Institute
B&G - Building and Grounds
BOST - Beginning Of Shift Training
CFR - Code of Federal Regulations
AGM-PS- Assistant General Manager, Plant Support
CH - Chemistry
cm - centimeter
COC - Certificate of Compliance
CR - Control Room
°F - degrees Fahrenheit
DC - Deficiency Card
DG - Diesel Generator
dpm - disintegrations per minute
ECCS - Emergency Core Cooling Systems
EDG - Emergency Diesel Generator
EGM - Electronic Governor Motor
EHC - Electro Hydraulic Control
FME - Foreign Material Exclusion
FSAR - Final Safety Analysis Report
GPC - Georgia Power Company
HEPA - High-Efficiency Particulate Air Filters
HNP - Hatch Nuclear Plant
HP - Health Physics
HPCI - High Pressure Coolant Injection
HRS - Hydrogen Recombiner System
I&C - Instrument and Control
IFI - Inspector Followup Item
IR - Inspection Report
IST - Inservice Testing
KW - Kilowatt
KVAR - Kilovolts Ampere Reactive
LER - Licensee Event Report
LPCI - Low Pressure Coolant Injection
MCC - Motor Control Center
MG - Motor Generator
MOV - Motor Operated Valve
MWO - Maintenance Work Order
NCV - Non-Cited Violation
NRC - Nuclear Regulatory Commission
NRR - Nuclear Reactor Regulation
NS&C - Nuclear Safety and Compliance
ODCM - Offsite Dose Calculation Manual
PASS - Post Accident Sample System
PDR - Public Document Room
PEO - Plant Equipment Operator
PM - Preventative Maintenance

PSIG - Pounds Per Square Inch Gauge
PSP - Plant Security Program
PSW - Plant Service Water System
QA - Quality Assurance
QC - Quality Control
RCA - Radiological Controlled Area
RCS - Reactor Coolant System
RCIC - Reactor Core Isolation Cooling
Rev - Revision
RG - Regulatory Guide
RHR - Residual Heat Removal
RHRSW- Residual Heat Removal Service Water
RPM - Revolutions Per Minute
RPS - Reactor Protection System
RR - Reactor Recirculation
RTP - Rated Thermal Power
RW - Radioactive Waste
RWCU - Reactor Water Clean-up
RWP - Radiation Work Permit
SAM - Sampling
SCBA - Self Contained Breathing Apparatus
SCFM - Standard Cubic Feed Per Minute
SLC - Standby Liquid Control
SRM - Source Range Monitor
SRV - Safety Relief Valve
SSB - Station Service Battery
TRAQS- Training Record and Qualification System
TRM - Technical Requirements Manual
TS - Technical Specifications
U1,U2- Unit 1, Unit 2
UFSAR- Updated Final Safety Analysis Report
URI - Unresolved Item
VAC - Volts Alternating Current
VIO - Violation
WBC - Whole Body Counter
WSTSF- Waste Separation and Temporary Storage Facility