

U. S. NUCLEAR REGULATORY COMMISSION (NRC)

REGION II

Docket Nos. 50-424 and 50-425
License Nos. NPF-68 and NPF-81

Report No: 50-424/96-12, 50-425/96-12

Licensee: Georgia Power Company (GPC)

Facility: Vogtle Electric Generating Plant (VEGP) Units 1 & 2

Location: 7821 River Road
Waynesboro, GA 30830

Dates: November 10 - December 21, 1996

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Enclosure 2

EXECUTIVE SUMMARY

Vogtle Electric Generating Plant Units 1 and 2
NRC Inspection Report 50-424/96-12, 50-425/96-12

This integrated inspection included aspects of licensee operations, engineering, maintenance, and plant support. The report covers a six-week period of resident inspection; in addition, it includes the results of announced inspections by two reactor inspectors and one regional project engineer.

Operations

- In general, the conduct of operations was professional and safety-conscious (Section 01.1).
- A notification of unusual event was declared on Unit 2 due to a loss of function of 17 main control annunciator panels. Grounding of an annunciator light socket caused a blown fuse in a power supply cabinet that resulted in loss of the control room alarm function. This was a duplicate event due to similar maintenance work performed on the annunciator light boxes. (Section 01.2).
- A Unit 1 automatic turbine/reactor trip occurred as a result of a loss of stator cooling to the turbine generator due to maintenance work on a pressure switch (Section 01.3).
- A weakness was identified in the implementation of the maintenance program for the heat trace/freeze protection system. A review of the heat trace/freeze protection systems were performed with numerous deficiencies noted. The licensee stated that they were cognizant of most of the issues and developed a plan to address the status of open preventive maintenance and maintenance work orders (Section 02.1).

Maintenance

- Maintenance and surveillance activities were generally completed thoroughly and professionally, with satisfactory results (Sections M1.1 and M1.2).
- A non-cited violation was documented concerning missed surveillances on containment electrical penetration circuit breakers for the personnel and escape air locks (Section M1.3).
- A violation was identified for inadequate corrective actions to address improperly secured safety-related motor control center door latches. The issue was initially documented in Inspection Report (IR) 50-424,42' '96-09 dated September 16, 1996. The inspectors performed a walkdown an effort to verify stated corrective actions of IR 96-09 were completed. (Section M1.6).

- A review of the Remote Shutdown Panels and associated equipment was performed. The licensee's program for maintenance and testing for this equipment was adequate. However, a weakness in the area of housekeeping inside of the inspected panels was identified (Section M8.1).

Engineering

- The inspectors concluded that engineering personnel did an effective job in determining the underlying root cause for a loss of annunciator function after the occurrence of two similar events. Engineering personnel effectively supported operations, maintenance, and Instrumentation and Control troubleshooting efforts. (Section E7.1).

Plant Support

- A non-cited violation was identified concerning a missed performance of a technical specification required surveillance for a specific activity prior to entry into mode 4 and subsequent power ascension activities. (Section R8.1).

Report Details

Summary of Plant Status

Unit 1

The unit began the period operating at full power, however, on November 27, 1996, the unit automatically tripped due to a maintenance activity in the main generator stator cooling/hydrogen seal oil panel. A loss of control power to the stator cooling panel actuated a trip relay giving the turbine/reactor trip signal. All rods fully inserted and the unit was safely shutdown into mode 3. Following troubleshooting and corrective action criticality was achieved on November 28, 1996, with nominal full power attained on November 29. The unit operated at full power the remainder of the inspection period.

Unit 2

The unit operated at full power throughout the inspection period.

I. Operations

01 Conduct of Operations

01.1 General Comments (71707)

Using Inspection Procedure (IP) 71707, the inspectors conducted frequent reviews of ongoing plant operations. Operations activities were generally conducted in a controlled, professional, and safety-conscious manner. Minor issues identified were forwarded to operations management for resolution.

01.2 Annunciator Function Lost in Unit 2 Control Room (93702)

At 8:12 a.m. on November 15, 1996, personnel were authorized to perform maintenance on Unit 2 main control room annunciator ALB06-E01, CNMT VENT ISO ACTUATION [Containment Ventilation Isolation Actuation], due to a light socket having fallen behind the alarm panel. During the work activity, maintenance personnel inadvertently grounded the light socket to the annunciator panel which caused various alarms and a loss of power to numerous panels.

At 8:42 a.m. the licensee declared a Notification of Unusual Event (NOUE) on Unit 2 due a loss of function for most of the safety system main control annunciator panels. The NRC, state, and local officials were promptly notified. During the event, compensating non-alarming indicators were available. Due to the loss of safety related annunciator functions, the licensee initiated compensatory measures that included additional monitoring of key plant parameters. The increased monitoring activities were continued until the event was terminated at 11:15 a.m.

On October 25, a similar event occurred as a result of maintenance. From the October event, the licensee developed and implemented several corrective actions including removing the associated annunciator alarm cards to de-energize the affected light socket. The licensee, at that time, also initiated a request for engineering assistance (REA) to review system electrical drawings and investigate other potential contributors to the event. As part of their original troubleshooting efforts, the licensee did not determine that a hard ground was present in the system. The ground detection system design at Vogtle is an ungrounded system. This design allows the system to handle one fault without losing power and permits the licensee time to troubleshoot ground problems. However, the introduction of a second fault may complete a short to ground, resulting in a loss of power to the annunciators.

As a result of troubleshooting efforts stemming from the second event the licensee determined that a logic card had field contacts wired incorrectly that did not allow the ground detection alarm system to recognize a fault. Consequently, the control room operators were unaware of a system ground. When maintenance personnel commenced their work activity on the annunciator light box, the moment they touched the control panel, a fuse blew in the power supply cabinet that fed the main control annunciator panels. This was the same fuse that was replaced in the October 25 incident. The licensee later determined that a common ground wire existed from one annunciator light box to the next. Even though the light socket was de-energized, the light box itself remained part of the ground detection system. Therefore, with the ground fault already present, maintenance inadvertently established a short to ground that caused the loss of the 17 main control room annunciators panels.

The licensee concluded after the second event that if the drawing review requested by the REA had been conducted at the time of the initial event, then the common ground would have been identified and potentially avoided the second event. However, the licensee recognized during their onsite review that the REA effort would be manpower intensive due to the complexity of the electrical system and chose to take corrective action on the annunciator panel light socket prior to completion of that review.

Upon replacement of the fuse, rewiring of the ground detection system logic card contacts, and resolving the hard ground fault, all annunciator functions were restored.

At the time of the declaration, Unit 2 reactor power was approximately 100 percent. No transient or challenges to safe operation occurred during the time of the NOUE.

As in the first event, the inspectors concluded that the licensee's conservative response was appropriate. The classification of the event was timely and all required notifications completed. Operations shift

personnel reviewed all annunciator response procedures and took compensatory actions for alarms affected during the event (reference section E7.1 for additional licensee corrective actions and an assessment of engineering root cause determination).

01.3 Unit 1 Automatic Turbine/Reactor Trip (93702)

At 8:46 a.m. on November 27, 1996, a Unit 1 automatic turbine/reactor trip signal was received in the control room as a result of maintenance activity in the main generator stator cooling/hydrogen seal oil panel. The automatic trip signal was received with the unit at 100 percent reactor power. Although main steam line code safety valves did not lift, the atmospheric reliefs valves (secondary pressure operated relief valves) were actuated. Based on a review of the sequence of event report and walkdown of the main control room boards, the inspectors concluded that the post-trip plant response was normal. The unit was stabilized in mode 3, with no significant complications identified.

On November 27, maintenance personnel were authorized to isolate a hydrogen pressure switch inside the stator cooling/hydrogen seal oil panel when the technician inadvertently moved a metal identification tag and touched an exposed terminal strip on the stator cooling system that shorted out the control panel 120 VAC power. As a result, a high temperature relay logic was actuated (failed high on loss of power) which led to the loss of stator cooling and thereby causing the turbine/reactor trip signal.

Shortly after the occurrence of the event the inspectors responded to the control room and observed plant conditions. The inspectors observed a portion of the post-trip maintenance activities including replacement of the stator cooling 120 VAC power fuse and removal of all metal tags inside the control panel. In addition, the inspectors witnessed a portion of licensee management's investigation into the event and concluded that this activity was appropriately performed. The licensee determined that the trip occurred as a result of the metal identification tag coming in contact with an exposed terminal strip. The contact was a direct result of the technician's movement of the tag while closing the hydrogen system isolation valve. A review of the circumstances revealed that the tag was inconspicuously placed in front of the terminal strip. The inspectors' discussions with the technician indicated that he was unaware of the terminal strip behind the tag.

Following troubleshooting efforts the reactor was restarted. Criticality was achieved at 1:27 a.m. on November 28, with nominal full power achieved on November 29. The licensee issued Licensee Event Report (LER) 50-424/96-12, Main Generator Turbine/Reactor Trip While Performing Maintenance In The Stator Cooling/Hydrogen Control Panel.

The inspectors' noted that the licensee management's decision to defer the restart of the unit until after troubleshooting and maintenance efforts were completed on the backup power supply that feeds the Unit 1 annunciator panels was conservative. A restart could have occurred late afternoon the day of the trip, however, management made a conscious choice to defer the startup until this other problem was addressed.

02 Operational Status of Facilities and Equipment

02.1 Heat Tracing and Freeze Protection Panel Status

a. Inspection Scope (71714)

The inspectors walked down the heat tracing and freeze protection system to determine the effectiveness of the licensee's program to protect against cold weather conditions. This review included examination of the Updated Final Safety Analysis Report (UFSAR) system description; the licensee's design basis document; the system's physical condition; preventive maintenance (PM) checklists SCL01749, Freeze Protection; and SCL00424, Heat Tracing; outstanding Maintenance Work Orders (MWO)s and corrective work orders; and Procedure 13901-1/2, Heat Tracing System. The inspectors' also interviewed the system engineer and maintenance manager as to the status of the system work.

b. Observations and Findings

On December 12 and 13, 1996, the inspectors performed a walk down of the Unit 1 and 2 heat tracing and freeze protection panels. Based on this effort, the inspectors identified that the heat trace and freeze protection system had not been maintained in a condition whereby it can be relied upon to perform its intended function. However, the inspectors recognized that the system does not provide a safe shutdown function and is not classified as safety-related.

On December 12, the inspectors performed the walkdown with the system engineer. Of the panels inspected, more than half were not working properly. Numerous maintenance work orders were written, but additional deficient conditions were identified by the inspectors. Deficiencies varied from central alarms being illuminated; ground faults being evident; undertemperature, overtemperature, and undervoltage alarms visible; and freeze protection systems automatically being energized when weather conditions did not warrant it. Inside three freeze protection panels, located in the fire pump house, the inspectors identified evidence of rodent intrusion. Although there was an intrusion of rodents into the panels, there was no obvious damage to cables or circuit connections. The system engineer was aware of some of the problems listed above, but captured the additional deficiencies identified during the walkdown.

The inspectors' review of the PMs on the system indicated that four of the fifteen freeze protection panels had not had a routine PM performed in a number of years. The last time the circulating water heat trace panel PM was performed was in November 1993. The Nuclear Service Cooling Water (NSCW) A and B train freeze protection panel PMs were last performed December 1994, and April 1995, respectively. The high voltage switchyard heat trace PM was last performed in August 1995. The maintenance manager stated that a plan had been developed prior to this review that would address the known deficient conditions, in addition to subsequent issues identified. The maintenance manager also indicated that the past policy of approving PM due date extensions, was not occurring as of November 1996. As of this review, there were 34 open maintenance and corrective work orders against the heat trace/freeze protection systems with the oldest one written in 1992, two written in 1993, and 3 written in 1994. Ten MWOs were written against the system in 1995 that also remain open.

The licensee presented their basis as to why portions of the heat trace/freeze protection systems were out of service and did not have the scheduled PMs performed. REA 94-VAA628, Review of Heat Tracing Panels, dated September 1, 1995, was initiated to eliminate heat tracing on piping larger than four inches. The licensee developed Design Change Package (DCP) 95-VAN0067, Elimination of Heat Tracing/Freeze Protection & Setpoint Lowering, to implement the recommendations of the REA. Since the due dates for the portion of systems affected by this REA were extended, maintenance personnel postponed the work. However, the licensee presented a cancellation notice dated December 12, 1996, indicating that the DCP 95-VAN0067 would not be implemented. The licensee also presented a revised PM schedule that incorporated all heat trace/freeze protection panels including a scheduled commitment date of December 29, 1996 to perform outstanding PMs.

c. Conclusions

The inspectors concluded that although portions of the heat trace/freeze protection systems are not in a condition to perform their function, the licensee has developed an adequate plan to address the issues. The cancellation of the DCP to eliminate heat tracing has removed the affected portions of the system from a state of non-repair and has prompted the licensee to take action on open items. As a result, the inspectors concluded that system problems should be adequately addressed if the licensee follows their current maintenance plan.

02.2 Safety-Related Walkdowns

a. Inspection Scope (71707)

The inspectors walked down the following engineered safety feature (ESF) systems as part of the routine inspection effort to verify availability and overall condition of the safety-related systems:

Unit 1 Safety Injection System

Unit 2 Fuel Handling Building Post-Accident Exhaust System

The inspectors also performed a review of UFSAR commitments and technical specifications (TS) requirements for the above listed systems.

b. Observations and Findings

The inspectors verified proper system configurations both electrically and mechanically for the above ESF systems through accessible portions in the plant, walkdowns of main control room boards, and reviews of system drawings. The inspectors also observed overall material condition of system components during the walk downs. Any minor issues identified were forwarded to the licensee for resolution.

c. Conclusions

The inspectors concluded that the systems reviewed were available to perform their intended designed function; systems were properly aligned; and UFSAR commitments and TS requirements were met. No items or discrepancies were noted during these inspections.

03 Operations Procedures and Documentation (71707)

03.1 During the inspection period, the inspectors walked down the following clearances:

19600306	accumulator 1, 2, 3, and 4 isolation per unit operating procedure 12006-1
19600666	centrifugal charging pump (CCP) A auxiliary lube oil pump clearance to troubleshoot pump cycling while CCP running

The inspectors did not identify any problems or concerns during these walkdowns.

07 Quality Assurance in Operations

07.1 Evaluation of Licensee Self-Assessment Capability (40500)

During this inspection period the inspector attended two Plant Review Board (PRB) meetings. The PRB meeting of December 11 was primarily concerned with a review of the Technical Review Manual for implementation of the improved technical specifications scheduled to commence January 22, 1997. Other subject matters discussed were the review and approval of deficiency card (DC) dispositions and procedure revisions. The second PRB meeting on December 18 reviewed responses to earlier documented NRC violations. The inspectors recognized the licensee's effort in ensuring that the corrective actions developed

addressed the issues cited. Meetings attended were conducted critically and openly with free and uninhibited discussion of issues. Meeting attendees were knowledgeable of the materials discussed. PRB attendees met TS requirements.

No issues were identified as a result of this review.

II. Maintenance

M1 Conduct of Maintenance

M1.1 Maintenance Work Order Observations

a. Inspection Scope (62707) (92902)

The inspectors observed portions of maintenance activities involving the following work orders:

19502616	Diesel Generator (DG) 1A day tank low level alarm ALB035-D07 troubleshoot
19601067	Replace valve 1-1405-U4-011
19601177	NSCW pump 5 discharge isolation motor operated valve per DCP 95-V1N0035-1
19601931	Calibration 1-T0126; verify UQ1118 below 3562.9 MWt
19601961	DG 1B jacket water leak in coupling under left bank turbo charge
19602213	Match marking motor coolers for A train pumps
19602612	Computer point does not show correct indication on reactor coolant drain tank vent valve 1-HV-7150
19602831	Repair 1-HV-4486 control loop valve miniflow through steam jet air ejector to condenser; change out tracking driver card and light indication fuses
29602921	Troubleshoot and repair train "B" hydrogen recombiner
29602951	Control room emergency filtration system A train breaker change out
29603039	Safety injection pump A train motor cooler low flow condition; reverse plenum orientations
29603080	DG train 2A starting air; uncontrolled bleed down

b. Observations and Findings

The observed maintenance activities were performed satisfactorily except as noted below:

During the inspection period two events occurred as a result of maintenance activities. The declaration of a Notification of Unusual Event (Section 01.2) when work on a light socket resulted in the loss of power to Unit 2 main control room annunciator panels, and the Unit 1 automatic trip due to loss of stator cooling (Section 01.3). These events were a direct result of maintenance personnel errors.

In both cases, the precursors to the events were difficult to identify. However, the licensee took appropriate corrective actions for both events in an effort to preclude repetition.

c. Conclusions

The inspectors concluded that although maintenance personnel caused the two above events, the work activities did not reflect poor control of maintenance. The events were a result of unforeseeable circumstances. No trends or indicators of adverse maintenance performance were identified.

M1.2 Surveillance Observation

a. Inspection Scope (61726)

The inspectors observed the performance or reviewed the following surveillances and plant procedures:

- 14546-2 Turbine driven auxiliary feedwater (TDAFW) pump operability test
- 14810-2 TDAFW pump 1 check valve IST and manual initiating handswitch trip actuation device operability test
- 14970-2 Semiannual, train "B" hydrogen recombiner (2-1513-H7-002-000) functional test
- 14980-1 DG 1A operability test
- 24568-2 Reactor coolant pump 1 train A, reactor trip underfrequency (281-A) and undervoltage (227-A) relays trip actuating device operational test and channel calibration
- 83308-2 Monthly NSCW flow test of 2-1203-P4-002-M01 component cooling water (CCW) train B motor cooler per section 8.2, data sheet 1 of 83308-C

83308-2 Monthly NSCW flow test of 2-1203-P4-004-M01 CCW (train B) motor cooler per section 8.2. data sheet 1 of 83308-C

83308-2 Monthly NSCW flow test of 2-1203-P4-006-M01 CCW (train B) motor cooler per section 8.2. data sheet 1 of 83308-C

b. Observations and Findings

The observed surveillance activities were performed satisfactorily except as noted below:

Review of GPC Procedure 83308-C, Revision 10, Flow Testing of Safety Related NSCW System Coolers, does not address the following when using the polysonics instrument: the maximum variation that is considered stable; what value to report when a range of flow values is encountered; or how to evaluate ranges that bridge the required flow range. The licensee indicated that they currently are in the process of revising this procedure and will make appropriate changes.

Following the observation of flow testing of the upstream flow orifice for Unit 2 B Train Component Cooling Water (CCW) Motor Nos. 2-1203-P4-002-M01, 2-1203-P4-004-M01, and 2-1203-P4-006-M01, the inspectors noted that the prerequisite steps verifying: instrument calibration; Nuclear Service Cooling Water (NSCW) normal alignment; and authorization to install Maintenance and Test Equipment (M&TE); were signed off after the completion of the testing. The licensee's procedural compliance guidance is to: "Follow steps in sequence...", which is documented in Procedure 00054-C, Revision 9, Rules for Performing Procedures, paragraph 1.1. The inspectors noted that the technicians had in fact completed the prerequisite steps prior to conducting the test but completed the sign off for each prerequisite step after completing the test. In addition the inspectors noted that the completed data sheets did not contain required dates for each of the initialed sign offs. The preceding indicates a lack of attention to detail on the part of the Instrumentation and Controls (I&C) technician performing the tests. This was discussed with licensee management.

c. Conclusions

The observed surveillance activities were performed satisfactorily. Some discrepancies were noted in documentation and procedural compliance.

M1.3 Missed TS Surveillance on Containment Penetrations

a. Scope of Inspection (92903)

The inspectors reviewed a licensee identified issue concerning the design of Unit 1 and 2 containment electrical penetrations for the personnel and escape air locks. The review included system drawings.

surveillance requirements, and Licensee Event Report (LER) 50-424/96-11, Inadequate Containment Electrical Penetration and Missed Surveillance.

b. Observations and Findings

On October 23, 1996, during a review of the airlock lighting requirements, the licensee identified that several personnel and escape airlocks essential and normal lighting circuits for both Unit 1 and 2 had not been tested per TS requirements. In addition, the circuits did not meet design requirements to provide dual overcurrent protection. The licensee subsequently install two fuses in series to the affected circuits to address potential containment integrity issues and comply with design requirements. The airlock lighting circuits were returned to service on November 14, 1996.

The licensee determined based on a engineering review that Updated Final Safety Analysis Report (UFSAR) Table 16.3-5, Containment Penetration Conductor Overcurrent Protection Devices and Isolation Devices for Class 1E to Non-Class 1E Feeds, did not list all required lighting circuit breakers for surveillance testing. Since the original design was installed, the surveillance testing for the penetration circuit breakers had not been performed. The licensee determined that the cause of the event was a failure to adequately document all airlock lighting circuits as containment electrical penetration circuits requiring surveillance testing. In addition, the licensee determined that engineering failed to properly design and install circuits with dual overcurrent protection during the original plant construction. The subsequent installation of the fuses in the lighting circuit addressed the dual overcurrent protection issues and alleviated the need to incorporate circuit breakers into the existing surveillance testing since fuses are not required to be tested.

The licensee issued LER 50-424/96-011, on November 22, 1996. Licensee actions included a commitment to revise the UFSAR Table 16.3-5 to reflect fuses being used as primary and backup circuit protection and to review other airlock containment penetration power circuits for similar design issues. The inspectors verified the licensee's corrective actions as part of this LER. Actions were taken as stated.

c. Conclusions

The inspectors concluded that the licensee failed to perform required testing of circuit breakers per TS requirement 4.8.4.1, Electrical Equipment Protection Devices, at least once per 18 months since initial startup. However, consistent with Section VII of the NRC Enforcement Policy this was identified as Non-Cited Violation (NCV) 50-424, 425/96-12-01, Failure to Perform Containment Penetration Circuit Breaker Surveillances.

The inspectors noted that the licensee's electrical engineer did a good job during the systems design review in identifying circuits not tested as part of the required surveillance program. This was a good example of attention to detail.

M1.4 Foreign Material Exclusion (FME)

a. Inspection Scope (62707)

Generic Letter 89-13, Service Water System Problems Affecting Safety-Related Equipment, was first implemented for the 1990, Unit 2 fall outage. Heat exchangers and motor/lube oil coolers were tested or inspected during refueling outages for any adverse fouling, corrosion, structural damage, and debris. A deficiency card (DC) was written in September 1994 due to elevated lube oil temperatures for a Unit 2 Centrifugal Charging Pump (CCP) train B lube oil cooler. The investigation indicated that the flow orifice was blocked by a small particle of concrete with a piece of aggregate attached. On December 27, 1994, a DC was written to document a piece of aluminum lagging material (approximately 1 ft²) that had fallen into the Unit 1 NSCW tower basin. In January 1995, on Unit 2, two other instances occurred that indicated debris was possibly blocking flow orifices in some of the motor coolers. During the fourth Unit 2 refueling outage in March 1995, considerably more debris was discovered during scheduled inspections of the containment coolers. On August 18, 1995, during the performance of operator rounds, an operator noted that the temperature was 4°F higher than normal on the Unit 1 Train B CCP. On August 26, 1995, maintenance and engineering personnel measured a low flow condition through the CCP lube oil cooler. NRC Inspection Report (IR) 50-424,425/95-21, dated October 13, 1995, identified this issue as an Unresolved Item. NRC IR 50-424,425/95-27, dated December 1, 1995, closed the Unresolved Item for NSCW debris and opened a Severity Level IV violation. This issue is further discussed in NRC IRs 50-424,425/96-02; 50-424,425/96-09; 50-424,425/96-10; and 50-424,425/96-11.

To evaluate the FME program at Vogtle in general and the debris in the NSCW system in particular, the inspectors reviewed procedures, observed flow testing in progress, interviewed licensee personnel and examined selected records.

b. Observations and Findings

The licensee established a NSCW debris data base compiled from records starting September 1992. This data base is composed of 63 records representing 63 occurrences when debris was identified in the NSCW system. The items found in the system include but are not limited to: concrete, sand and aggregate; assorted metal items including expanded metal, various fasteners, assorted wire, a tapered drift pin; plastic, including pieces of a beeper, a pipe cap, ball point pen, silicon plug, and tie wraps; an AA battery; pieces of Colmonoy wear surfaces of the

NSCW pumps; and other assorted trash. The licensee attributes the debris intrusion into the NSCW system to the following: construction debris not removed by pre-operational flushes; spalling concrete debris from NSCW cooling tower and basin; debris that was improperly or inadvertently washed, swept, blown or dropped into unprotected NSCW cooling tower basins and pump wells; and degrading Colmonoy coating on sleeves and wear ring surfaces of the NSCW pumps.

To address the existing debris and new debris ingress into the NSCW system, the licensee has taken the following actions: steel plates have been installed over the Unit 1 and 2 pump well openings to prevent foreign material from entering the basins and pump shaft wells; kick plates were installed and screens were installed/repared on the basins in both units pump rooms; a diving service was contracted to inspect a representative sample of the Unit 1 and 2 tower basin walls to inspect the integrity of the suction screens, and inspect and vacuum debris; flow testing on all Unit 1 and 2 safety-related NSCW small diameter motor/lube oil coolers is ongoing and is expected to continue on a monthly basis; the scope was expanded for Generic Letter 89-13 testing and inspection during the Unit 1 sixth refueling outage; the removal of orifices and flushing of lines and/or visual inspection of lines serving critical components; the Colmonoy coating on NSCW pump sleeves and wear rings have been repaired on the Unit 1 pumps and is expected to be completed by September 1, 1997 for the Unit 2 pumps; and a design change has been proposed but not yet approved to provide strainers for all Unit 1 and 2 safety-related NSCW small diameter motor/lube oil coolers.

c. Conclusions

The licensee's program continues to identify and remove debris from the NSCW system. The licensee's plant modifications and the FME program should prevent new ingress of debris into the NSCW system (with the exception of spalling concrete from the NSCW cooling towers and basins). At present, the monthly flow testing is identifying debris already in the NSCW system, when it migrates to the small diameter flow orifices. Appropriately sized strainers have the potential of reducing the need for the current level of flow testing.

M1.5 Replacement of Valve 1-1405-U4-011

a. Inspection Scope (62703)

The inspectors observed work and work activities associated with the replacement of valve 1-1405-U4-011. These activities included implementation of a freeze seal, removal of valve 1-1405-U4-011, pipe fitting, welding, and termination of the freeze seal.

b. Observations and Findings

As reported in NRC IR 50-424,425/96-09, several examples were noted where procedural personnel safety precautions were not followed during the application of a freeze seal associated with the repair to valve 2-1901-U4-144. In addition, a number of unsupported divergences were noted, between NRC Technical Guidance and the implementation of the freeze seals. The licensee has revised the freeze seal procedure to appropriately address the previously identified unsupported divergences from NRC Technical Guidance for freeze seals. The freeze seal was implemented in compliance with all personnel safety and technical requirements of the freeze seal procedure consistent with NRC Guidance.

Welding was accomplished by a properly qualified welder using properly certified welding filler material in accordance with a properly qualified welding procedure specification.

c. Conclusions

Maintenance activities were completed thoroughly and professionally, in accordance with procedures.

M1.6 Motor Control Center (MCC) Door Latches

a. Inspection Scope (62707)

As identified in NRC IR 50-424,425/96-09, a significant number of MCC panel door closure "dogs" or latches were not secured. The licensee stated that a REA 96-VAA639 had been opened to address this issue. Completed REA 96-VAA639, dated August 7, 1996, indicated that no data had been found to support the position that impact loads from unlatched or partially latched doors would not adversely affect devices that would chatter. Further, the seismic report indicated that the MCCs were tested with all latches secured, therefore the cabinets, with some latches not fully secure are not within the envelope of the seismic qualification.

REA 96-VAA639 indicated that duct tape was an acceptable temporary closure mechanism for broken latches as it was used at the testing facility during test to secure wiring, flexible conduits, air lines, and other components.

After determining that unsecured MCC panel doors were outside of the envelope of the seismic qualification for MCCs, the licensee's corrective action, concerning the findings of REA 96-VAA639, consisted of a walkdown inspection of all MCCs to assure that all doors on all MCCs were properly secured. The licensee stated that this walkdown inspection was performed but undocumented.

b. Observations and Findings

To determine the efficacy of the licensee's corrective actions related to MCC latches, the inspectors on December 5, 1996, started to conduct a walkdown inspection of a representative number of MCCs, examining the security of the latches. The inspectors, accompanied by a licensee representative, examined safety related 1E 480 volt MCCs 2-1805-S3-2BBA and 2-1805-S3-2ABA. The inspectors identified seven latches not secured on MCC 2-1805-S3-2ABA and 34 latches not secured on MCC 2-1805-S3-2BBA. One unsecured latch was identified with a work order tag indicating that the latch was broken, but the door was not secured with duct tape as recommended by REA 96-VAA639. Both latches on a number of doors were not secured. In view of the number of unsecured latches found on the first two MCCs examined, the inspectors discontinued their inspection and the licensee documented the discrepancies in DC 2-96-310.

c. Conclusions

The licensee's corrective action to assure that MCC panel doors were properly secured, was ineffective, as evidenced by the unsecured latches identified by the inspectors on MCC Nos. 2-1805-S3-2BBA and 2-1805-S3-2ABA after the completion of the licensee's walkdown. Failure to establish effective measures to assure that nonconformances are promptly identified and corrected is a violation of Title Ten Code of Federal Regulations Part 50, Appendix B, Criterion XVI. This is identified as Violation (VIO) 50-424,425/96-12-02, Failure To Take Effective Corrective Actions To Assure MCC Door Latches Are Properly Secured.

M1.7 Maintenance Audits

a. Inspection Scope (62707)

The inspectors reviewed 1996 audits in the maintenance area. The scope of these audits included: NSCW pump refurbishment, procedure control, maintenance program, Performance Team activities, and maintenance.

b. Observations and Findings

Audit findings included weaknesses related to: safety related work performed by a contractor not on the safety related approved vendors list, bolts over torqued, lockwire not installed, receipt inspection not performed, American Society of Mechanical Engineering (ASME) Boiler and Pressure Vessel Code Section XI repair not implemented, improperly written purchase order, color coding of grinding wheels for specific material application, awareness of hold points, training and

qualification of maintenance planners, excessive overtime authorizations, procedure revision process, lifting rigging color coding, improper/lack of restraint of materials and equipment to prevent damage to operable safety related equipment. Appropriate corrective actions were taken or planned.

c. Conclusions

The area of maintenance was subjected to independent audits, with appropriate action taken for identified weaknesses.

M7 Quality Assurance in Maintenance Activities

M7.1 Hydrogen Recombiner Failed Surveillance

a. Inspection Scope (61726) (40500)

The inspectors reviewed the licensee's investigation and troubleshooting efforts regarding a failed surveillance on the Unit 2 train B hydrogen recombiner. The inspectors reviewed the MWO associated with the corrective work order, the DC generated, and Procedure 14970-2, Hydrogen Recombiner Functional Test. The inspectors also discussed the root cause determination effort with the system maintenance team leader and maintenance manager.

b. Observations and Findings

On November 28, 1996, the Unit 2 hydrogen recombiner train B failed to successfully pass the surveillance criteria of procedure 14970-2. Maintenance determined that the failure was a result of a transducer filter that prevented the recombiner from reaching the required kilowatt output specified in the surveillance. Maintenance was able to identify and replace the failed component through effective root cause and troubleshooting techniques. Maintenance activities observed were properly documented and well controlled.

After completion of corrective maintenance activities operations performed the surveillance again with satisfactory results.

c. Conclusions

The inspectors concluded that, for this example of surveillance/maintenance root cause and troubleshooting effort, the licensee effectively identified and resolved issues affecting plant operations.

M8 Miscellaneous Maintenance Issues (62700) (61726) (92902)**M8.1 Remote Shutdown Panel****a. Inspection Scope (62700) (61726)**

The inspectors reviewed the licensee's maintenance and testing program for the Remote Shutdown Panels (RSPs) to evaluate the adequacy of the licensee's program for maintenance and routine testing of this equipment. Additionally, the inspectors reviewed post-modification testing following implementation of design changes to components controlled from the RSPs to determine adequacy of testing.

b. Observation and Findings

Instrumentation and controls to achieve and maintain hot/cold shutdown as required by 10 CFR 50 Appendix R are provided by separate RSPs for each unit and supplemented by manual actions at local component control stations. The inspectors determined that the RSPs for both units were installed and functionally tested prior to initial plant operation. Systems and components required to satisfy the alternate shutdown capability are described in the licensee's UFSAR Section 7.4.3, Safe Shutdown From Outside the Control Room. TS requirements are described in Sections 3.3.3.5.1, 3.3.3.5.2, 4.3.3.5.1 and 4.3.3.5.2.

The inspectors reviewed a listing of plant modifications issued by the licensee for systems controlled from the RSPs. Five completed modifications which could have potentially affected operability of RSP instrumentation or the ability to control components from the RSPs were selected for review. DCP records for those completed modifications were reviewed by the inspectors to determine actual scope of modification activities and adequacy of required post modification testing. The inspectors determined that for four of the five selected DCPs, post modification testing of RSP controls was not required since the scope of modification activities could not have affected the ability to control components from the RSPs. The remaining DCP appeared to potentially affect RSP controls. This modification was DCP 88-V1N0076, which deleted the automatic closure interlock associated with Residual Heat Removal (RHR) Hot Leg Isolation Valves 1HV-8701A, 1HV-8701B, 1HV-8702A, and 1HV-8702B. The inspectors verified that post modification testing for this DCP had included functional testing of those RHR valves from the Unit 1 RSPs. No problems were identified during this review.

The inspectors reviewed GPC Procedures, 14445-1, Rev. 4, Remote Shutdown Monitoring Instrumentation Channel Check, Unit 1, and 14445-2, Rev. 2, Remote Shutdown Monitoring Instrumentation Channel Check, Unit 2, which are performed by the licensee on a monthly basis. The inspectors also reviewed GPC Procedures, 14710-1, Rev. 18, Remote Shutdown Panel Transfer Switch and Control Circuit 18 Month Surveillance Test, Unit 1, and 14710-2, Rev. 17, Remote Shutdown Panel Transfer Switch and Control

Circuit 18 Month Surveillance Test, Unit 2, which are used by the licensee to periodically verify operability of the transfer switches and functional controls located on the RSPs and at local control stations. These two test procedures are performed every refueling outage. The inspectors reviewed each of these surveillance procedures and verified that all instrumentation and controls surveillance requirements from TS 4.3.3.5.1 and 4.3.3.5.2 were satisfied. The inspectors also reviewed the data package associated with the most recent performance of each procedure. Additionally, the inspectors verified that instrumentation located on the RSP was included in the licensee's instrumentation calibration program. During this review the inspectors determined that all necessary instrumentation located on the RSP or locally is routinely checked and all required functional controls are adequately tested. During this review, the inspectors noted that the licensee had previously identified various control switches located on the RSPs or locally that had not been included under the scope of GPC Procedures 14710-1 and 14710-2. The inspectors reviewed DC 1-95-129 which documented the licensee's disposition of this problem. DC 1-95-129 included a list of specific control switches which should have been routinely tested. The licensee evaluated this problem as not affecting the operability of required safe shutdown equipment. This determination was based on the fact that none of the listed control switches were associated with equipment required by TS 3.3.3.5.2. The inspectors noted that the licensee subsequently revised both procedures to require functional testing of those control switches as the result of this issue. The inspectors review of the licensee's resolution of this issue identified no concerns.

The inspectors performed a walkdown on the Unit 1 Train A and Train B RSPs, Unit 1 TDAFW Control Panel, Unit 2 Train A and Train B RSPs, along with selected local controls for the diesel generators and other components located on the safety related electrical switchgear. The RSPs are located in separate locked rooms with access restricted. No loose wires, damaged components, or evidence of corrosion were observed during this walkdown. Material condition inside and outside of the panels was acceptable. However, several housekeeping deficiencies were identified during the walkdown. A section of loose metal deck plate, sound powered phone headset and cable, a used 100 VAC light bulb with bulb cage, and several spare 110 VAC light bulbs were noted inside the RSPs. The section of deck plate was approximately 8 inches by 15 inches in size and had all four bolts missing. The inspectors identified these deficiencies to licensee management and the deficiencies were immediately corrected. The licensee also requested that corporate engineering evaluate any seismic effects of the loose material on operability of the RSPs. The licensee's evaluation was documented under REA VE-3100. The inspectors reviewed the licensee's evaluation and determined that the operability of the RSPs was not effected by the

presence of the loose material. However, better housekeeping practices following maintenance could have prevented these deficiencies. The presence of this material within infrequently inspected panels represents a weakness.

c. Conclusions

The inspectors concluded that the licensee has maintained the alternate safe shutdown equipment in a satisfactory manner, and that the licensee's program for routine testing of RSP instrumentation and controls is adequate. The inspectors did not identify any examples of inadequate post modification testing following licensee modification activities that could have had a negative impact on any control functions of equipment operated from the RSP. A weakness was identified associated with poor housekeeping practices following maintenance within infrequently inspected panels.

M8.2 Balance of Plant (BOP) Equipment Reliability

a. Inspection Scope (62700)

The inspectors reviewed a listing of unplanned capability loss data for both units along with other plant operating history provided by the licensee to identify potential equipment reliability problems that might exist. This listing was evaluated to identify unplanned power reductions and trips associated with equipment failures that might be associated with maintenance activities for Balance of Plant (BOP) equipment that was not being conducted in a manner that results in the reliable and safe operation of the plant. The purpose for this review was to identify equipment that has a history of recurring problems or whose failure resulted in a safety system actuation or plant shutdown or resulted in reduced system capability and determine if the problem might have been caused by inadequate maintenance.

b. Observation and Findings

The inspectors reviewed plant operating history for 1994, 1995, and 1996 and noted that the licensee had experienced some plant trips and unplanned power reductions due to degraded performance of BOP equipment. However, the inspectors did not identify any trends associated with these failures which might indicate that the equipment reliability problems resulted from inadequate maintenance.

c. Conclusions

The licensee has experienced some trips or unplanned power reductions due to degraded performance of BOP equipment. The inspectors did not identify any adverse trends that might indicate that the equipment reliability problems resulted from inadequate maintenance.

M8.3 Reactor Trip Breakers

a. Inspection Scope (62700)

The inspectors reviewed the status of licensee action to address NRC Information Notice (IN) 96-44. IN 96-44 was issued to alert licensees to the possible failure of reactor trip breakers (RTBs) to properly function because of cracking or breakage of the secondary disconnecting contact assemblies. During RTB testing at another nuclear facility, a licensee found that one of the bypass breakers failed to open electrically when the local shunt trip push button was depressed. During subsequent inspection of the breaker, a small piece of the assembly was found lodged in the secondary disconnecting contact assembly, which may have prevented reliable electrical continuity for the local shunt trip push button circuitry for the manual trip function.

The disconnect assemblies provide circuit connections between the control and monitoring devices on the breaker and external control circuits. The housing of the electrical contacts in the disconnect assemblies consists of a phenolic material. The assemblies are made of a molded, cellulose-filled, phenolic material which has low impact strength and may be highly susceptible to chipping or cracking. Breakage or partial cracking of these assemblies may prevent the breaker from performing its design function or other secondary functions provided by the status of the breaker position.

b. Observation and Findings

The inspectors reviewed Operating Experience Program Evaluation, OER-ID: IN 96-44, which documented the licensee's disposition of this issue. The RTBs installed are Westinghouse DS-416 type breakers which are the same type which were in use at the other nuclear facility which had been the subject of IN 96-44. As the result of the licensee's review of this issue the licensee determined that the PM procedure used for routine RTB inspection and maintenance required revision. The licensee determined that maximum torque values specified in the vendor manual might prevent overtightening and resultant cracking of the disconnect assemblies. Required procedure changes included specific inspection of the secondary disconnecting contact assembly for cracking of the phenolic material and incorporation of the torque values specified in the vendor manual into the licensee's procedure.

The inspectors reviewed PM Procedure, 27765-C, Westinghouse Type DS-416 Circuit Breaker Maintenance, and verified that Step 4.9 includes a requirement to verify that the secondary contact assembly is free of cracks during this periodic inspection. Additionally, Step 4.9 requires that whenever those assemblies are replaced torquing requirements from Westinghouse Vendor Manual AX6AT01-10005 would be followed. The inspectors were informed that the breaker inspection under the new revised procedure had been performed during the recent Unit 2 refueling

outage and that no abnormalities were identified during those inspections. The breaker inspections for the Unit 1 breakers are scheduled for the upcoming refueling outage during September 1997.

c. Conclusions

The licensee has adequately addressed IN 96-44.

M8.4 (Closed) EEI 50-424/96-11-03: Unit 1 SIP Train B Loss of Function

An Enforcement Conference (EA 96-479) was held in the Region II office on December 19, 1996 to discuss the issues identified in Escalated Enforcement Item (EEI) 50-424/96-11-03, Unit 1 SIP Train B Loss of Function. (Refer to Section M3.1 of IRs 50-424,425/96-11.) As a result of the conference, the EEI was closed and two violations were identified: VIO 50-424/96-479-01013, Inoperable 1B Safety Injection Pump (SIP) for Period of at least 09/30/91 through 10/23/96 due to Inadequate Cooling Flow to Its Motor Coolers, and VIO 50-424,425/96-479-01023, Inadequate Procedural Guidance to Assure Correct Installation of Motor Cooler Gaskets and Plenums for Safety-Related Equipment. The Notices of Violation were issued as Enclosure 1 to the NRC letter of December 31, 1996 summarizing the proceedings of the meeting.

III. Engineering

E7 Quality Assurance in Engineering Activities

E7.1 NOUE Problem Identification and Corrective Actions

a. Inspection Scope (37551)

As a result of a Notification of Unusual Event (NOUE) that occurred on November 15, the inspectors reviewed the licensee's engineering root cause/problem identification and corrective action effort. This review included assessment of the engineering process into the root cause of the event and an evaluation of the adequacy of engineering support personnel activities.

b. Observations and Findings

As a result of a NOUE declared on October 25, (reference IR 50-424, 425/96-11, section 01.7) engineering personnel were requested to support annunciator troubleshooting efforts. Engineering, I&C, and maintenance personnel determined that a blown fuse in a power supply cabinet caused the loss of annunciator function. However, on November 15, a second similar event took place (reference section 01.2) as a result of the same maintenance activity (i.e. fixing a light socket, but on a different annunciator panel). Investigation into this event also determined that the same fuse blew, but that an undetected system ground was present. Engineering personnel were able to identify a system

ground even though the complexity of the annunciator panel electrical system made it difficult to troubleshoot. During the process of the root cause investigation engineering personnel made management aware of potential issues and contributors to the event as they were determined.

As a result of the second event, the licensee developed additional corrective actions that included de-energizing the affected annunciator light box for future maintenance activities on light sockets. In addition, the licensee plans to complete a review of system electrical drawings for other potential contributors to the event.

c. Conclusions

The inspectors concluded that engineering personnel did an effective job in determining the underlying root cause as a result of the second event. Engineering personnel effectively supported operations, maintenance, and I&C troubleshooting efforts. Engineering personnel involved the proper level of management commensurate with the event. The inspectors also concluded that the licensee's planned corrective actions as a result of the second event, to address future maintenance activities on annunciator light boxes was appropriate.

E8 Miscellaneous Engineering Issues (92903)

E8.1 (Closed) VIO 50-424,425/95-27-04: Partially Obstructed NSCW System Flow Orifice Corrective Actions Inadequate To Preclude Repetition

Violation 50-424, 425/95-27-04 documents the inadequate corrective actions taken to prevent repetition of NSCW flow reduction events. The reply to the violation itemizes additional corrective actions to be taken. The inspectors' review of this issue and the associated corrective actions is documented in section M1.4 of this report. The inspectors determined that the corrective actions identified were completed, therefore VIO 50-424,425/95-27-04 is closed.

E8.2 (Closed) LER 50-424/96-011: Inadequate Containment Electrical Penetration and Missed Surveillance.

This issue was discussed in this report as part of Section M1.3. No new issues were revealed by the LER. This LER is closed.

IV. Plant Support**R8 Miscellaneous Radiological Protection and Chemistry (RP&C) Issues (92700)****R8.1 (Closed) LER 50-424/96-008: Secondary Water Chemistry Tests not Performed Prior to Power Ascension.**

The inspectors reviewed the circumstances associated with not performing secondary water chemistry tests for dose equivalent iodine-131 prior to power ascension, as required by TS 4.7.1.4, as well as the following Chemistry procedures:

- 30025-C, Rev. 24, Periodic Analysis Scheduling Program
- 30090-C, Rev. 17, Chemistry Technical Specification
Surveillance Performance Coordination
- 35110-C, Rev. 22, Chemistry Control of the Reactor Coolant System
- 35210-C, Rev. 14, Chemistry Control of the Steam Generators

On June 14, 1996, the licensee identified a procedural weakness when it discovered that specific chemistry surveillance tasks were not being performed prior to mode 4 entry following a refueling outage. Specifically, the licensee identified that TS required surveillances for specific activities were not done prior to power ascension upon the completion of the 2R4 refueling outage in March 1995 and the 1R6 refueling outage in April 1996. The licensee feels that it is likely that this condition occurred following outages previous to these two referenced outages. TS 3.7.1.4 requires the specific activity of the secondary coolant system to be less than or equal to 0.1 microCurie per gram dose equivalent iodine-131 whenever the unit is in modes 1, 2, 3, or 4. The failure to complete the TS required surveillances prior to entry into mode 4 is a violation of TS 3.7.1.4. The cause of the failure was identified by the licensee as procedural inadequacy, in that the procedures did not specifically state that the surveillances were required to be performed prior to entry into mode 4.

The required surveillances were made shortly after entering mode 4 in both cases and confirmed that the specific activity in the secondary system was within the required TS limits. Therefore, there was no adverse effect on plant safety nor on the health and safety of the public as a result of these events.

The inspectors verified that the licensee revised the above-referenced procedures to specify that the required sampling be completed prior to entry into the applicable mode.

The inspectors concluded that the failure to complete the secondary system sampling prior to entry into mode 4 violated the requirements of TS 3/4.7.1.4. However, consistent with Section VII of the NRC Enforcement Policy, this is identified as NCV 50-424,425/96-12-03, Failure to Complete Required Sampling Prior to Entering Mode 4. Based upon the inspector's review, this LER is closed.

P1 Conduct of EP Activities

P1.1 Conduct of 1996 Full Scale Emergency Preparedness (EP) Exercise (71750)

On November 20, 1996 the licensee conducted a full scale EP exercise. Participants in the emergency exercise included state and county representatives from Georgia and South Carolina, and the resident inspectors. The inspectors observed and participated in the exercise from the Emergency Operating Facility (EOF), Technical Support Center (TSC), Operations Support Center (OSC), and simulator. The results of the EP exercise are documented in a separate report, IR 50-424,425/96-13.

The resident inspectors did not identify any specific concerns.

F5 Fire Protection Staff Training and Qualification

F5.1 Announced Fire Drill (71750)

On December 10 and 11, 1996, the inspectors observed an announced fire drill. The scenario was a truck fire located at the fuel pumps near the receiving warehouse. This location is outside of the protected area. The fire team response was timely. Equipment was readily available and in adequate condition. The self-contained air breathing apparatuses were sufficiently charged and in good working condition. The fire team established good communications with the control room and security. Minor issues identified by the inspectors were forwarded to the licensee and adequately addressed.

Overall, the inspectors concluded that the drill was well controlled and met the performance criteria established by the licensee.

V. Management Meetings and Other Areas

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on December 23, 1996. The licensee acknowledged the findings presented.

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

After the conclusion of one of the regional reactor inspector's exit performed on December 6, the licensee was notified by telephone at approximately 2:30 p.m. December 9, 1996, that the issue relating to unsecured MCC door latches, would be the subject of a violation.

X2 Pre-Decisional Enforcement Conference Summary

On December 19, 1996, a pre-decisional enforcement conference was held at the NRC Region II office to discuss potential enforcement issues identified in IR 50-424,425/96-11. Issues discussed primarily focused on emergency core cooling system pump motor cooler maintenance activities and the operability of the Unit 1 safety injection pump train B since September 30, 1991.

X3 Review of Final Safety Analysis Report

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 descriptions. While performing the inspections discussed in this report, it was noted that the licensee had determined that the UFSAR Table 16.3-5, Containment Penetration Conductor Overcurrent Protection Devices and Isolation Devices for Class 1E to Non-Class 1E Feeds, did not list all required lighting circuit breakers for surveillance testing. This is discussed in section M1.3 of this report. The inspectors reviewed the applicable portions of the UFSAR that related to the areas inspected.

X4 Management Meeting Summary

PARTIAL LIST OF PERSONS CONTACTED

Licensee

- J. Beasley, Nuclear Plant General Manager
- J. Gasser, Plant Operations Assistant General Manager
- S. Chesnut, Manager Operations
- P. Rushton, Plant Support Assistant General Manager
- K. Holmes, Manager Maintenance
- W. Burmeister, Manager Engineering Support
- B. Brown, Manager Emergency Preparedness and Training
- M. Sheibani, Nuclear Safety and Compliance Supervisor
- C. Stinespring, Manager Plant Administration
- C. Tippins, Jr., Nuclear Specialist I

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 92700: Onsite Notification of Written Reports of Non-routine Events At Power Reactor Facilities
 IP 92902: Followup - Maintenance
 IP 92903: Followup - Engineering
 IP 93702: Prompt Onsite Response To Events At Operating Power Reactors

REFERENCED PROCEDURES AND DRAWINGS

- GPC PM Procedure 27765-C, Westinghouse Type DS-416 Circuit Breaker Maintenance
- GPC Procedure 14445-1, Rev. 4, Remote Shutdown Monitoring Instrumentation Channel Check, Unit 1
- GPC Procedure 14445-2, Rev. 2, Remote Shutdown Monitoring Instrumentation Channel Check, Unit 2
- GPC Procedure 14710-1, Rev. 19, Remote Shutdown Panel Transfer Switch and Control Circuit 18 Month Surveillance Test, Unit 1
- GPC Procedure 14710-2, Rev. 17, Remote Shutdown Panel Transfer Switch and Control Circuit 18 Month Surveillance Test, Unit 2
- DCP 88-V1N0076, Deletion of Automatic Closure Interlock for RHR Hot Leg Isolation Valves
- DCP 90-V2N0029, AFW to S/G 3 Testing Provision DCP 87-V1E0242, RHR Hot Leg Isolation Valves RCS Pressure Open Permissive Interlock Setpoint Change
- DCP 91-V2N0142, Change Handswitch Logic on Power Lockout Handswitch on Main Control Board
- DCP 92-V1N0058, NSCW Reliability Upgrade

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-424, 425/96-12-01	NCV	Failure to Perform Containment Penetration Circuit Breaker Surveillances (Section M1.3)
50-424, 425/96-12-02	VIO	Failure to Take Effective Corrective Actions to Assure MCC Door Latches Are Properly Secured (Section M1.6)

50-424, 425/96-12-03	NCV	Failure to Complete Required Sampling Prior to Entering Mode 4 (Section R8.1)
50-424/96-479-01013	VIO	Inoperable 1B Safety Injection Pump (SIP) for Period of at least 09/30/91 through 10/23/96 due to Inadequate Cooling Flow to Its Motor Coolers (Section M8.4)
50-424, 425/96-479-01023	VIO	Inadequate Procedural Guidance to Assure Correct Installation of Motor Cooler Gaskets and Plenums for Safety-Related Equipment (Section M8.4)

Closed

50-424, 425/96-12-01	NCV	Failure to Perform Containment Penetration Circuit Breaker Surveillances (Section M1.3)
50-424, 425/95-27-04	VIO	Partially Obstructed NSCW System Flow Orifice Corrective Actions Inadequate to Preclude Repetition (Section E8.1)
50-424/96-011	LER	Inadequate Containment Electrical Penetration and Missed Surveillance (Section E8.2).
50-424/96-008	LER	Secondary Water Chemistry Tests Not Performed Prior to Power Ascension (Section R8.1)
50-424, 425/96-12-03	NCV	Failure to Complete Required Sampling Prior to Entering Mode 4 (Section R8.1)
50-424/96-11-03	EEI	Unit 1 Safety Injection Pump Train B Loss of Function (Section M8.4)

LIST OF ACRONYMS USED

AFW	- Auxiliary Feedwater
ASME	- American Society of Mechanical Engineering
BOP	- Balance of Plant
CCP	- Centrifugal Charging Pump
CCW	- Component Cooling Water
CFR	- Code of Federal Regulations
DC	- Deficiency Card
DCP	- Design Change Package
DG	- Diesel Generator
EOF	- Emergency Operating Facility
EP	- Emergency Preparedness
FME	- Foreign Material Exclusion
ESF	- Engineered Safety Feature
ft ²	- square feet
GPC	- Georgia Power Company
I&C	- Instrumentation and Controls

IN	- Information Notice
IR	- Inspection Report
IP	- Inspection Procedure
LER	- Licensee Event Report
M&TE	- Maintenance and Test Equipment
MCC	- Motor Control Center
MWO	- Maintenance Work Order
MWt	- Megawatt Thermal
NCV	- Non-Cited Violation
NOUE	- Notification of Unusual Event
NPF	- Nuclear Power Facility
NRC	- Nuclear Regulatory Commission
NSAC	- Nuclear Safety and Compliance
NSCW	- Nuclear Service Cooling Water
NUREG	- Nuclear Regulations
OSC	- Operations Support Center
PDR	- Public Document Room
PM	- Preventive Maintenance
PRB	- Plant Review Board
RCS	- Reactor Coolant System
REA	- Request for Engineering Assistance
RHR	- Residual Heat Removal
RP&C	- Radiological Protection and Chemistry
RSP	- Remote Shutdown Panel
RTB	- Reactor Trip Breaker
S/G	- Steam Generator
TDAFW	- Turbine Driven Auxiliary Feedwater
TS	- Technical Specifications
TSC	- Technical Support Center
UFSAR	- Updated Final Safety Analysis Report
VAC	- Volts Alternating Current
VEGP	- Vogtle Electric Generating Plant
VIO	- Violation
1R6	- Unit 1 Sixth Refueling Outage
2R4	- Unit 2 Fourth Refueling Outage