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

Report Nos.: 50-424/91-33 and 50-425/91-33

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

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

Facility Name: Vogtle Nuclear Station Units 1 and 2

Inspection Conducted: December 22, 1991 - January 25, 1992

Inspectors: S. E. Sparks for
B. R. Bonser, Senior Resident Inspector — Date Signed: 2/6/92

S. E. Sparks for
R. D. Starkey, Resident Inspector — Date Signed: 2/6/92

S. E. Sparks for
P. A. Balmain, Resident Inspector — Date Signed: 2/6/92

Approved By: Pierce H. Skinner
P. Skinner, Chief
Reactor Projects Section 3B
Division Reactor Projects — Date Signed: 2/6/92

SUMMARY

Scope: This routine inspection entailed inspection in the following areas: plant operations, surveillance, maintenance, ESF system walkdown, review of licensee event reports and followup.

Results: One non-cited violation was identified for an inadequate procedure. The procedure used by the licensee for single cell battery charging on a class 1E battery cell failed to provide adequate guidance on how to interpret low cell voltage readings obtained while charging. This resulted in a failure to comply with the battery TS which required declaration of inoperable condition. This condition was identified during a review of charging data for a single cell charge on the 1A battery. The licensee identified that the cell float voltage had dropped below the TS allowable value for approximately 22 hours.

An ESF walkdown of the Unit 1 AFW system was performed. Based on the walkdown no concerns regarding operability of the system were identified. Several minor discrepancies were noted and brought to the attention of the licensee for corrective action.

A declining trend in the performance of a safety related radiation monitor was noted. The containment area low range radiation monitor, 2RE-003, failed for the third time in the last twelve months. Each failure resulted in an ESF actuation. Following each failure the detector assembly was replaced, however, to date the licensee's investigation into the cause of the failures has been inconclusive.

DETAILS

1. Persons Contacted

Licensee Employees

*H. Beacher, Senior Plant Engineer
*J. Beasley, Assistant General Manager Plant Operations
W. Burmeister, Manager Engineering Support
*S. Chestnut, Manager Engineering Technical Support
*C. Christiansen, Safety Audit and Engineering Group Supervisor
W. Copeland, Supervisor - Materials
C. Coursey, Maintenance Superintendent
R. Dorman, Manager Training and Emergency Preparedness
J. Gasser, Operations Unit Superintendent
M. Hobbs, I&C Superintendent
*K. Holmes, Manager Health Physics and Chemistry
*D. Huyck, Nuclear Security Manager
*W. Kitchens, Assistant General Manager Plant Support
*R. LeGrand, Manager Operations
R. Mansfield, Plant Engineer Supervisor
*G. McCarley, ISEG Supervisor
A. Parton, Chemistry Superintendent
*B. Raley, Plant Engineer Supervisor - Maintenance
*M. Sheibani, Nuclear Safety and Compliance Supervisor
*W. Shipman, General Manager Nuclear Plant
C. Stinespring, Manager Administration
*J. Swartzwelder, Manager Outage and Planning
C. Tynan, Nuclear Procedures Supervisor
*L. Ward, Maintenance Manager - Acting

Other licensee employees contacted included technicians, supervisors, engineers, operators, maintenance personnel, quality control inspectors, and office personnel.

Oglethorpe Power Company Representative

*T. Mozingo

NRC Resident Inspectors

*B. Bonser
*D. Starkey
*P. Balmain

*Attended Exit Interview

An alphabetical list of abbreviations is located in the last paragraph of the inspection report.

2. Plant Operations - (71707)

a. General

The inspection staff reviewed plant operations throughout the reporting period to verify conformance with regulatory requirements, Technical Specifications, and administrative controls. Control logs, shift supervisors' logs, shift relief records, LCO status logs, night orders and standing orders, and clearance logs were routinely reviewed. Discussions were conducted with plant operations, maintenance, chemistry and health physics, engineering support and technical support personnel. Daily plant status meetings were routinely attended.

Activities within the control room were monitored during shifts and shift changes. Actions observed were conducted as required by the licensee's procedures. The complement of licensed personnel on each shift met or exceeded the minimum required by TS. Direct observations were conducted of control room panels, instrumentation and recorder traces important to safety. Operating parameters were observed to verify they were within TS limits. The inspectors also reviewed DCs to determine whether the licensee was appropriately documenting problems and implementing corrective actions.

Plant tours were taken during the reporting period on a routine basis. They included, but were not limited to the turbine building, the auxiliary building, electrical equipment rooms, cable spreading rooms, NSCW towers, DG buildings, AFW, and the low voltage switchyard.

During plant tours, housekeeping, security, equipment status and radiation control practices were observed.

The inspectors verified that the licensee's health physics policies/procedures were followed. This included observation of HP practices and review of area surveys, radiation work permits, postings, and instrument calibration.

The inspectors verified that the security organization was properly manned and security personnel were capable of performing their assigned functions; persons and packages were checked prior to entry into the PA; vehicles were properly authorized, searched, and escorted within the PA; persons within the PA displayed photo identification badges; and personnel in vital areas were authorized.

b. Unit 1 Summary

The unit remained at 100% power throughout this reporting period.

c. Unit 2 Summary

The unit remained at 100% power throughout this reporting period. A containment ventilation isolation actuation occurred on January 10 due to the failure of radiation monitor 2RE-003.

d. ESF Actuation - Containment Ventilation Isolation

On January 10, 1992, at 2:59 a.m. with Unit 2 operating at full power a CVI occurred on a high radiation signal from containment area low range radiation monitor, 2RE-003. Personnel verified that no abnormal radiation condition existed in containment by observing redundant monitors and placed 2RE-003 in block to prevent further actuations from this monitor. The CVI signal was reset and plant equipment was realigned for normal plant operation. All equipment functioned as required when the CVI occurred.

Following the event, the output of the monitor was blocked and power supplies to the monitor and monitor output were recorded. 2RE-003 operated normally except for a spike in monitor output on January 12. Troubleshooting was unable to identify problems in the equipment or determine the cause of the CVI or the spike in monitor output. Two previous CVIs which have occurred in the last twelve months were attributed to intermittent failures of the 2RE-003 detector tube assembly. Due to this past history, the detector tube assembly was suspected to have caused this event. On January 16, a containment entry was made, the detector was replaced and the monitor was restored to service. 2RE-003 operated normally through the remainder of the reporting period.

As discussed above, in the past year, this detector has been replaced twice. On January 9, 1991 (LER 425/91-02) and on October 29, 1991 (LER 425/91-11) the detector assembly for 2RE-003 failed resulting in a CVI. In both previous cases the detector was replaced but the cause of the detector failure could not be determined. As part of the corrective action for the last LER the licensee committed to evaluate the cyclic failures of 2RE-003 and make recommendations for improvements by February 10, 1992. To date the licensee's investigation has been inconclusive. Since the most recent detector failure the licensee has revised their commitment date to May 15, 1992, to have adequate time to evaluate this most recent failure.

This radiation monitor is part of the Digital Radiation Monitoring System. This system is a digital data acquisition and processing system and is the first system of its kind that Westinghouse has put in operation. The reliability of this safety related system has been lower than expected and has resulted in several ESF actuations and a drain on licensee resources to maintain the system. The inspector will continue to monitor licensee corrective actions for this specific incident and efforts to improve system reliability in general.

e. ACCW System RCP Common Thermal Barrier Isolation Valves

On January 17, 1992, the licensee identified that the torque switch settings for the ACCW system RCP common thermal barrier isolation valves on Units 1 and 2 (1HV-2041, 2HV-2041) were set improperly. The common isolation valve is located downstream of the individual RCP thermal barrier isolation valves. The safety related function of all these MOVs is to close on high flow or high pressure to isolate the ACCW return line in the event of a thermal barrier tube rupture or line break on the return line outside of containment. Problems with the torque switch settings on the Unit 2 individual isolation valves were identified by the licensee on December 11, 1991 (IR 424,425/91-32 and LER 50-425/91-12). During this initial review of MOV data in December 1991, the licensee determined that the torque switch setting on valve 2HV-2041 was such that the valve would have performed its necessary isolation function had a postulated RCP thermal barrier tube rupture occurred.

The licensee identified the improper setting on the common isolation valves after determining there was an error in the initial review of valve data and that the torque switch setting on these two valves was actually lower than initially reported in December, 1991. Upon notification to the Control Room of this condition 1HV-2041 and 2HV-2041 were declared inoperable and the TS LCO Action statement was entered. On the morning of January 18, containment entries were made on both units to adjust the MOV torque switches to ensure operability. The LCO Actions were exited shortly thereafter. The licensee is performing a safety evaluation for Unit 2 to determine the effects of an inability to isolate a postulated breached thermal barrier. This evaluation will be reviewed by the inspector when it becomes available.

No violations or deviations were identified.

3. ESF System Walkdown (71710)

On January 9-10, the inspectors conducted a walkdown of those accessible portions of the three trains of Unit 1 AFW. Procedure 11610-1, Auxiliary Feedwater System Alignment, and P&IDs were used to verify correct system alignment. All valves were found in their correct position. There were, however, several discrepancies and general observations noted by the inspectors. Specifically: (1) two drain valves which were required to be locked were discovered to be unlocked; (2) numerous valves were missing plastic identification tags; (3) the terms Train A, B, or C are used interchangeably in procedure 11610-1 with the terms Pump 1, 2, or 3 when there is not a one-to-one correlation. Train A is actually Pump 3, Train B is Pump 2, and Train C is Pump 1; and (4) the written description on numerous valve ID tags did not closely match the description in procedure 11610-1.

The inspectors also verified the electrical breaker alignment for AFW components using procedure 11610-1. Each breaker was found to be in its correct position. However, there were discrepancies noted in the labelling of some MCC breakers. Specifically, on 125 V DC MCC 1CD1M none of the breakers were numbered and the description on the breaker did not closely match the description in the procedure. Also, 480V AC MCC 1NBK was incorrectly identified in procedure 11610-1 as being located on Level 1 of the Auxiliary Building rather than its correct location on Level B. The above listed discrepancies and observations were brought to the attention of Operations supervision. Based on this walkdown the inspectors had no concerns about the operability of the AFW system.

No violations or deviations were identified.

4. Surveillance Observation (61726)

Surveillance tests were reviewed by the inspectors to verify procedural and performance adequacy. The completed tests reviewed were examined for necessary test prerequisites, instructions, acceptance criteria, technical content, data collection, independent verification were required, handling of deficiencies noted, and review of completed work. The tests witnessed, in whole or in part, were inspected to determine that approved procedures were available, equipment was calibrated, prerequisites were met, tests were conducted according to procedure, test results were acceptable and systems restoration was completed.

Listed below are surveillances which were either reviewed or witnessed:

Surveillance No.	Title
14030-1	Power Range Calorimetric Channel Calibration
14495-1	Auxiliary Feedwater System Flow Path Verification
14515-1	Piping Penetration Area Filtration And Exhaust System Operability Test
14545-1	Motor Driven Auxiliary Feedwater Pump Monthly Operability Test
14622-1	SSPS Slave Relay Train A Test Safety Injection
14980-1	Diesel Generator 1A Operability Test
28911-1	Seven Day Battery Inspection And Maintenance - Train D

No violations or deviations were identified.

5. Maintenance Observation (62703)

a. General

The inspectors observed maintenance activities, interviewed personnel, and reviewed records to verify that work was conducted in accordance with approved procedures, TSs, and applicable industry codes and standards. The inspectors also verified that redundant components were operable, administrative controls were followed, clearances were adequate, personnel were qualified, correct replacement parts were used, radiological controls were proper, fire protection was adequate, quality control holdpoints were adequate and observed, adequate post-maintenance testing was performed, and independent verification requirements were implemented. The inspectors independently verified that selected equipment was properly returned to service.

Outstanding work requests were reviewed to ensure that the licensee gave priority to safety-related maintenance activities.

The inspectors witnessed or reviewed the following maintenance activities:

MWO No.	Work Description
19104803	Replace Inner Seal To Fuel Transfer Canal Gate
19105894	Bypass Cell #24 In 1AD1B Battery And Adjust Battery Charger Output
19200126	NSCW Train A Fans 1 & 2 480V AC Breakers Would Not Charge. Repair Breakers
19200025	Repair Containment Hydrogen Monitor Recorder 1AR12979
29102701	Repair 2A DG Air Compressor #1
29103102	12 month PM on Spare NSCW Pump Motor
29104006	Replace Contactors in Piping Penetration Filtration and Exhaust Unit, Heater Control Panel - Root Cause Investigation
29104470	Auxiliary Feedwater Supply Flow to SG 3 - Calibration PM
29104528	SG 4 Blowdown Sample ORC Valve 2HV 9454 - Replace Reed Switch

b. Observation of SG Blowdown Sample Isolation Valve Repair

On January 3, 1992, the inspector observed work performed on 2HV9454, SG Blowdown sample valve ORC, under MWO 29104528. The MWO was issued to troubleshoot the valves control circuit to determine and repair the cause of 2HV9454 drifting closed. Following replacement of a reed switch and initial testing of the valve, a broken lug was discovered on a wire in the control circuitry. This condition was identified by the QC inspector during verification of the maintenance performed on the circuit. The licensee initiated DC 2-92-001, expanded the scope of the work order and replaced the lug. The inspector noted that the QC inspection of this work was very thorough.

c. Review of Maintenance Procedure Verification and Validation Process

During this inspection period, the inspector reviewed the licensee's process for the verification and validation of maintenance procedures. During the maintenance team inspection (IR 424, 425/91-03) a weakness was noted for issuing procedures without requirements for verification and validation of the procedures.

The inspector reviewed the licensee's Maintenance "Desk Top Instructions," which the licensee generated in response to this weakness. The process established guidelines for craft verification of procedure adequacy. The process also established guidelines for maintenance foremen to ensure that personnel performing the verification are qualified on the equipment that the procedure encompasses. Maintenance supervisors are responsible for maintaining a Procedure's Field Review Notebook located in each maintenance shop. These notebooks are used to track the status of field verification ms and procedure revision suggestion forms The procedure group periodically reviews the notebook to ensure that changes are completed as required.

The inspector noted that this process supplements guidance provided in procedure 00051-C, Procedures Review and Approval. The inspector also noted that Procedure 20008-C, Maintenance Procedure Validation/Verification, provides guidance for procedure validation by a peer validator. The peer validation process was established to provide a validation for all new procedures and existing procedures that have had major changes.

The inspector concluded that the licensee's verification/validation program is adequate. The inspector reviewed the Procedures Field Review Notebook in each maintenance shop and verified that it is periodically reviewed. The I&C Field Review Notebook contained copies of in-process procedure revision suggestion forms, and from these, the inspectors concluded that maintenance staff is participating in the process.

d. Use of Single Cell Battery Charger Without Adequate Procedural Guidance

On December 23, while performing surveillance procedure 28911-1, Seven Day Battery Inspection and Maintenance, on the Unit 1 Train A 125 V DC Class 1E battery, 1AD1B, the licensee determined that cell #24 voltage was at 2.105 volts. The limit for battery cell float voltage specified in Table 4.8-2 of TS 3/4.8.2, D.C. Sources, is a voltage equal to or greater than 2.13 volts. The actual measured voltage of 2.105 volts was less than the required float voltage but greater than the specified allowable voltage of 2.10 volts. According to the TS requirements, the battery could be considered operable provided that within 24 hours parameters, (electrolyte level, float voltage and specific gravity) specified by TS Table 4.8-2 were measured for all connected cells and found to be within their allowable limits and provided that any parameters found not meeting their specified limits were restored to within acceptable limits within the next 6 days. Due to these requirements, further measurements for the A Train battery were completed on December 23 and the parameters for all connected cells were found to be within their allowable values. Additionally, all parameters, other than float voltage for cell #24, were found to meet their specified limits.

A maintenance work order was initiated to install a single cell charger on cell #24 per procedure 27915-C, General Battery Maintenance, and restore cell voltage. A temporary modification was also initiated to allow the battery cell to be jumpered out, should the single cell charging prove to be ineffective. A maximum of two cells can be jumpered out on this battery without dropping below the requirements for final battery terminal voltage. Later in the day on December 23, the single cell charger was installed by maintenance electricians. The planned charge duration was 72 hours. After the charger was energized, cell voltage and current readings were taken periodically as required by procedure 27915-C and the charger output was adjusted when required to keep the voltage within the range specified by the procedure.

On December 26, a maintenance supervisor initiated a review of the charging data recorded to that point to determine if the charge should be terminated at the end of the planned 72 hour period. In reviewing this data with plant engineering, it was noticed that some of the voltage readings appeared abnormally low. After an initial voltage reading of 2.12 volts, the recorded data indicated that cell voltage had actually decreased to 1.99 volts and had remained at that value or slightly higher for approximately 22 hours before finally increasing to greater than 2.10 volts. The licensee had not previously seen similar behavior for battery cells placed on a single cell charger.

During the first 24 hours after the charger was energized the charger was in current limit. Current limit is an internal protection feature of the charger to prevent it from exceeding its limit of 30 amps. The voltage readings had also been taken with the single cell charger connected to the cell. The procedure stated that battery cell voltage readings taken with a charger connected cannot be used for surveillance purposes. The licensee was initially uncertain how to interpret the low voltage readings and the effect of the charger in current limit on the voltage readings. An additional 72 hour charge began on December 25.

On December 28, the single cell charger was removed. Shortly after disconnecting the charger, a voltage reading of 2.26 volts was obtained. Approximately 7 hours later, the measured cell voltage was 2.163 volts and on December 30, 1991, a voltage reading of 2.20 volts was obtained. However, on January 6, 1992, the float voltage of cell #24 was measured to be 2.09 volts. Due to the unacceptable voltage reading the licensee immediately declared the battery inoperable and entered the two hour action statement of TS 3.8.2.1. The contingency plan to jumper out the cell was initiated and the work was completed within the 2 hour action statement limit.

Subsequent engineering review and consultation with the battery vendor determined that a temporary internal short had probably developed within cell #24 after it was placed on single cell charge. The licensee also determined that the voltage readings taken on cell #24 while the charger was in current limit were a true representation of cell voltage. Based on this information, it was evident that the battery had been inoperable for about 22 hours and the licensee had failed to comply with the two hour Action statement. The inspector, however, was also concerned about the safety significance of the battery cell being below the allowable voltage limits and the effect on battery performance. Calculations developed by the licensee determined that the potential negative impact of cell #24 on overall battery capacity would not have prevented the battery from being able to supply its associated emergency loads under accident conditions. Battery 1AD1B was determined to be capable of supplying its emergency DC loads for a period of 2.75 hours as committed to in FSAR section 8.3.2, even though the terminal voltage of cell #24 was at 1.99 volts. The fact that the licensee initially failed to recognize that the low voltage of cell #24 while single cell charging was a potential operability concern is attributed to procedure inadequacy. While procedure 27915-C contains adequate guidance to ensure completion of TS required actions if cell voltage was found to be below the TS allowable value for measurements taken without a single cell charger installed, no precaution was provided in the single cell charging section of the procedure to indicate that the TS requirements should also be implemented for low cell voltage readings obtained while it is on single cell charging.

In addition to the corrective actions stated above, the licensee plans to replace cell #24 with a new cell during the week of January 26. A 'Note' was added to the single cell charger section of procedure 27915-C requiring immediate notification of the Shift Supervisor and the Maintenance Foreman if the measured cell voltage drops below the TS allowable value during a battery charge. This event will also be discussed in future maintenance training classes.

The failure to provide adequate procedural guidance for single cell battery charging is considered a violation of TS 6.7.1a which requires in part that the licensee maintain adequate procedures. This licensee identified violation is not being cited because criteria specified in Section V.G.1 of the NRC Enforcement Policy were satisfied. This non-cited violation is identified as NCV 424, 425/91-33-01, Failure To Provide Adequate Procedural Guidance For Single Cell Charging Of A Safety Related Battery.

e. Electrical Contactor Failures

On January 14, Nutherm International, Inc. notified the NRC by letter, of a potential deviation of design safety function of Elmwood/Fasco Contactors supplied in the heater control circuitry of safety-related ventilation systems. The licensee previously identified problems with this type of electrical contactor and subsequently informed Nutherm on October 2, of these problems. This was discussed in Inspection Report 50-424, 425/91-28.

Nutherm manufactures the heaters and associated control panels and supplies these components to American Air Filter of Louisville, Kentucky which is the original supplier to GPC. The licensee originally identified the root cause of the contactor failures as shrinkage of the molded phenolic contactor carrier such that the designed clearance fit with the laminated steel armature becomes an interference fit ultimately resulting in fracture of the phenolic part due to induced tensile stress. Subsequent testing by Nutherm confirmed that shrinkage of the contact carriers occurs as a function of time and temperature. Nutherm will conduct additional testing to determine the maximum shrinkage of the contactor carrier and to identify the extent of design changes required by the contactor manufacturer.

Nutherm will respond within the required time frame as identified in paragraph 21.21 of 10CFR Part 21, dated July 31, 1991. In the interim GPC has installed replacement contactors, Fasco Model No 3M40B, which may also require replacement when the investigation of the carrier problem has been concluded. These replacements from Fasco were selected by Nutherm as those manufactured to the highest manufacturer design range for clearance/tolerances for contact carriers.

f. Safety Features Sequencer Review

During this inspection period the inspector reviewed the TS requirements, and historical performance associated with the safety fectures sequencers. The sequencer functions to provide detection of undervoltage conditions sensed on the 4160V ESF buses, to provide automatic load shedding, an automatic diesel start, and sequencing of required loads onto the 4160V ESF buses following a loss of preferred power or a loss of preferred power concurrent with a safety injection actuation signal. The sequencer also functions to automatically start the diesel generator and sequence required loads onto the 4160V buses following a safety injection signal.

The sequencers are not specifically addressed in a TS LCO, however, they perform functions which are considered as automatic actuation logic addressed in TS 3.3.2, Engineered Safety Features Actuation System Instrumentation. In addition, the sequencers are used to fulfill several surveillance requirements to verify the operability of the diesel generators.

The licensee is considering the development of a TS clarification to provide guidance for actions required should a sequencer be declared inoperable. TSs which apply to the sequencers include TS 3.3.2, Engineered Safety Features Actuation System Instrumentation, table 3.3-2, functional unit 1b and functional unit 8; TS 3.0.3; and TS 3.8.1.1, A.C. Sources. Each of these TS are applicable in Modes 1 through 4. Currently, if a sequencer is declared inoperable, the licensee would enter actions for TS 3.3.2, which is the most restrictive and requires the plant to be in Hot Standby within 6 hours.

Routine sequencer maintenance and surveillance requirements are provided in procedures 24613-1,2 and 24614-1,2, Safety Features Sequencer Analog Channel Operational Test and Channel Calibration; procedures 24901-1,2 and 24902-1,2, Safety Features Sequencer Response Time Test, and standardized PM checklist SCL00200, Power Panel Maintenance. The sequencer also continuously performs an automatic internal surveillance of its control and logic circuitry from input to output with an Automatic Test Insertion feature. This feature does not interfere with the normal operation of the sequencer.

The inspector reviewed the sequencer panels with the system engineer and noted that the engineer was very knowledgeable of the system. In addition, from a review of training materials and DC dispositions, the inspector noted that the licensee maintains a good technical relationship with the sequencer supplier, Consolidated Controls.

The inspector reviewed a listing of DCs from the licensee's commitment tracking database of DCs written against the sequencers since 1990. Corrective actions noted for these problems were adequate. No trends or repeat equipment problems were noted. Several examples of personnel errors during the performance of slave relay surveillances using the sequencer manual test panel were noted and are discussed in IR 424,425/91-28 and 424,425/91-05. The most significant deficiencies noted in this review included:

- Short duration DG1A overload to 8000 KW due to an inadequately prepared functional test. The test did not caution against performing a sequencer system test while the DG was tied to the grid.

- Several instances where ESFAS time response summations did not include sequencer loading/sequence block delays or time from loss of power to sequencer activation. In each case the licensee revised the associated procedures and in one case was required to submit a LER.

- Intermittent transfer of the 1B sequencer to UV mode during testing. The licensee isolated the fault to a portion of the sequencer's circuitry that does not impact the response of the sequencer to accident conditions. This circuit will be replaced at the next scheduled outage.

- Lock up of diesel generator and load sequencer control circuits prevented restart of tripped EDG. The licensee corrected the DG control circuitry which caused this condition. This event is further discussed in NRC Information Notice 91-06.

Upon completion of this review the inspector had no concerns regarding the operation or maintenance of the sequencers.

One non-cited violation was identified.

6. Review of Licensee Reports (90712) (92700)

The below listed Licensee Event Reports were reviewed to determine if the information provided met NRC requirements. The determination included: adequacy of description, verification of compliance with TS and regulatory requirements, corrective action taken, existence of potential generic problems, reporting requirements satisfied, and relative safety significance of each event.

a. (Closed) 50-424/90-21, Rev. 2, "Personal Error Leads To Missed Special Condition Surveillance."

This LER resulted when Control Room personnel inadvertently made the rod position deviation monitor inoperable when attempting to reinsert control rod position indicator values into the Proteus computer.

This resulted in a failure to comply with a TS special condition surveillance requirement. A similar event occurred on January 2, 1991 which resulted in a violation (425/90-32-01) and another LER (50-425/91-01). The corrective action for this first LER included counselling the shift supervisor and shift superintendent regarding the importance of procedural compliance, incorporating more detail on Proteus computer operation in licensed operator requalification training, and installation of a system stop log. Installation of the stop log was completed in the Fall of 1991 on Unit 1 and scheduled to be installed on Unit 2 in the spring of 1992. The stop log will print out computer software information following a computer shutdown and can be used to uncover hardware problems. The stop log is used more for the diagnosis of computer problems by the system engineer and not by the Control Room operators. When a similar event occurred in January 1991, it became apparent the short term corrective actions to this event were not sufficiently comprehensive to preclude recurrence of this event. Corrective action documented in response to violation 425/90-32-01, (see section 7b), which resulted from the similar event, have been completed and closed.

b. (Closed) 50-424/90-22, Rev. 0, Incorrect Calculation Leads To Emergency Filtration System Inoperability.

Following identification of discrepancies in electrical heater power dissipation calculations, the licensee requested and received an interim TS change to TS 4.7.7.d.4. This interim measure allowed continued operation of the plant until studies had been completed. The interim TS change, which is still in effect, reflects the requirement of the heaters to adequately control the relative humidity of the air entering the charcoal filter. This was done by providing a surveillance requirement that is consistent with the design functional requirements of the heaters and that requires a more direct verification that the heaters are meeting their functional requirements. This TS change will remain effective until restart following the fourth outage of Unit 1 and the second refueling outage of Unit 2.

The study recommended TS and FSAR changes. There were no hardware changes proposed. The licensee completed an engineering study in October 1991. The licensee submitted a request to revise TSs 4.7.6, 4.7.7, and 4.9.12 on November 11, 1991. This amendment request modifies the surveillance requirements by revising minimum heater capacity, charcoal adsorber decontamination efficiency, and relative humidity testing requirements. These modifications will result in increasing the margin between the actual heater power and the power required to fulfill the filtration units' design function. Approval of the TS change is pending.

No violations or deviations were identified.

7. Followup (92701) (92702)

a. (Closed) Part 21 50-424, 425/P2191-05, "Limitorque PT21 RE Potential Failure Of SMB 00 Torque Switch Roll Pins Depending On Licensee Operating Conditions,"

On December 11, 1990, Limitorque Corporation notified the licensee of a potential defect of torque switch roll pins installed in certain Limitorque supplied valve actuators. On April 4, 1991, Limitorque Corporation notified the licensee that torque switches shipped from February 22 through March 21, 1991, as replacements for the components noted above, were built with an incorrect roll pin and were subject to the failure addressed in the December 11 notification.

The licensee has identified approximately 75 safety related actuators per unit with the affected style of valve actuators. The licensee plans to replace the torque switches during each of the valves next scheduled MOVATS test. Approximately 28 have been replaced to date. A comment was added to the MWO packaging instruction field of the equipment database which directs maintenance personnel to avoid declutching these operators from a torque closed condition. Declutching the operator from this condition causes failure of the roll pins.

The inspector reviewed warehouse inventory records and noted that the torque switches that were received as replacements were shipped to the licensee in June 1991, which is after the time frame outlined in the Limitorque April 4, 1991 notification. The inspector also reviewed a sample of torque switches in storage and verified that they were identified with the appropriate part number.

b. (Closed) VIO 50-425/90-32-01, "Failure To Perform Special Condition Surveillance Results In Violation Of TS 4.1.3.2."

This violation occurred when the rod position deviation monitor alarm was inoperable and the special condition surveillance requirements were not implemented. This event was similar to a previous event which occurred on December 26, 1990.

In response to this event, the licensee took several corrective steps, documented in the violation response, which were completed shortly after the condition was identified. These corrective steps involved counseling the BOP operator regarding the importance of procedural compliance; replacing the failed relay output circuit card; issuing a standing order implementing administrative controls for Proteus computer operations until operator training was complete; revising procedures 17010-1 & 2, Annunciator Response Procedures for ALB 10 On Panel 1C1 on MCB; and procedure 13504-C, Proteus Computer,

was revised to provide stricter administrative control of Proteus computer operations. Also the Proteus computer access codes were modified to limit the number of individuals authorized to change computer parameters.

Other actions which the licensee has completed to avoid further violations included incorporating more detail related to Proteus computer operation in licensee operator requalification training, and implementing a check of computer points as part of the control room rounds (procedure 11874) each shift. The inspector had no further questions. This item is closed.

c. (Closed) VIO 50-424,425/90-28-01, Failure To Follow Procedure Resulted In ESF Components Inadvertently Changing Position and Failure To Follow Procedure Results in TDAFW Pump Actuation

This violation documented two examples of failures to follow procedure. The first example occurred when jumpers were removed from SSPS equipment out of procedural sequence resulting in several ESF components changing position. In the second example a procedural step was performed out of sequence resulting in actuation of the TDAFW pump. The licensee responded to the violation in correspondence dated January 8, 1991. Corrective actions for the first example included counselling of the technicians involved, procedure enhancements which will require technicians to initial and obtain the ROs signature for the steps restoring blocks and resetting ESF actuation signals, and training for appropriate personnel on the effects of the operation of the SSPS 'Mode Selector' test switch on the SSPS slave relays and their outputs.

Corrective action for the second example included counseling of the duty engineer, reminding appropriate personnel of the importance of following procedure steps in sequence, addition of a warning in the procedure that a failure to follow steps in sequence may result in an ESF actuation, and a review of similar procedures for similar revisions. Also, as a result of this and similar procedure violations plant management identified a weakness in the area of procedural compliance and steps that would be taken to improve performance in this area. Based on these actions this item is closed.

No violations or deviations were identified.

8. Formation of Modifications Department

During this reporting period, Vogtle established a Modifications Department. The general purpose of this department will be to focus site resources on the engineering, planning and scheduling, and implementation of design changes. Heretofore, the design change implementation process had involved coordination among several groups. With this new department, the performance of design changes is expected to be more focused. The

Modifications Department will consist of three sections: engineering, planning and scheduling, and contractor supervision. Personnel for this department are being drawn from present plant resources. Two areas which may benefit and be strengthened are reducing Field Change Requests, which have caused delays in implementing design changes, and return to service issues. This department is expected to be fully functional by the Unit 2 refueling outage scheduled for March 1992.

9. Exit Meeting

The inspection scope and findings were summarized on January 24, 1992, with those persons indicated in paragraph 1. The inspector described the areas inspected and discussed in detail the inspection findings listed below. No dissenting comments were received from the licensee. The licensee did not identify as proprietary any of the material provided to or reviewed by the inspectors during this inspection.

Item No.	Description and Reference
NCV 424,425/91-33-01	Failure To Provide Adequate Procedural Guidance For Single Cell Charging Of A Safety Related Battery

10. Abbreviations

ACCW	Auxiliary Component Cooling Water
AFW	Auxiliary Feedwater System
ATI	Automatic Test Insertion
BOP	Balance of Plant
CFR	Code of Federal Regulations
CVI	Containment Ventilation Isolation
DC	Deficiency Cards
DG	Diesel Generator
ESF	Engineered Safety Features
FSAR	Final Safety Analysis Report
GPC	Georgia Power Company
HP	Health Physics
I&C	Instrumentation and Control
IR	NRC Inspection Report
LCO	Limiting Condition for Operation
LER	Licensee Event Report
MCC	Motor Control Center
MOV	Motor Operated Valve
MOVATS	Motor Operated Valve Actuator Testing System
MWO	Maintenance Work Order
NSCW	Nuclear Service Cooling Water
NPF	Nuclear Power Facility

NRC	Nuclear Regulatory Commission
ORC	Outside Reactor Containment
PA	Protected Area
QC	Quality Control
RCP	Reactor Coolant Pump
Rev	Revision
SG	Steam Gererator
TS	Technical Specification
VIO	Violation