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the southern electric system

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Docket Nos. 50-321
50-366

HL-5306

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Edwin I. Hatch Nuclear Plant
Reply to a Notice of Violation

Gentlemen:

In response to your letter dated January 6, 1997, and according to the requirements of 10 CFR 2.201, Georgia Power Company (GPC) is providing the enclosed response to the Notice of Violation associated with Inspection Report 96-14. In the enclosure, a transcription of the NRC violation precedes GPC's response.

Sincerely,

J. D. Woodard FOR
J. D. Woodard

JAW/eb

Enclosure: Violation 96-14-03 and GPC Response

cc: Georgia Power Company
Mr. H. L. Sumner, Jr., Nuclear Plant General Manager
NORMS

U. S. Nuclear Regulatory Commission, Washington, D. C.
Mr. K. Jabbour, Licensing Project Manager - Hatch

U. S. Nuclear Regulatory Commission, Region II
Mr. L. A. Reyes, Regional Administrator
Mr. B. L. Holbrook, Senior Resident Inspector - Hatch

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Enclosure

Edwin I. Hatch Nuclear Plant
Violation 96-14-03 and GPC Response

VIOLATION 96-14-03

10 CFR 50, Appendix B, Criteria III, Design Control, requires, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes.

The E. I. Hatch Nuclear Plant Configuration Management Program Reference Manual establishes the policy that an ongoing Configuration Management Program for the Hatch Project will be implemented. The Configuration Management Program is designed to ensure effective control of plant changes and processes to maintain design and licensing integrity.

Procedure 10AC-MGR-015-0S, Configuration Management Program, Revision 0, establishes the responsibility and requirements for implementing the Plant Hatch Configuration Management Program.

Procedure 40AC-ENG-003-0S, Design Control, Revision 8, establishes the requirements and responsibilities for plant design control of systems, structures and components and states that plant design control policy serves to ensure that basic design criterion is maintained and revised in a planned, controlled and documented manner.

Procedure 50AC-MNT-001-0S, Maintenance Program, Revision 24, establishes the requirements and responsibilities for the control of maintenance activities at Plant Hatch and states that safety related work will be controlled by approved documents that include approved procedures and Architect/Engineering approved drawings and documents.

Contrary to the above, configuration management and adequate design control measures were not implemented in that:

1. On October 20, 1996, a relief valve was installed on the Unit 2 nitrogen tank with a conflict on the proper lift setting specifications. This resulted in a failure to ensure that the basic design criteria was maintained. Subsequently on October 28, 1996, the tank relief valve prematurely lifted, discharging nitrogen into the tank enclosure area, creating a hazardous condition for personnel in the area.
2. During the implementation of an engineering specification implementation in about 1988 for the Torus-to-Drywell Vacuum Breakers, an electrical connection drawing was not adequately changed to reflect the new installation. The inadequately changed

electrical connection drawing resulted in the operators unexpectedly de-energizing the 1H Torus-to-Drywell Vacuum Breaker on September 20, 1996.

3. A wiring error was not identified during a work verification (red-line) of a circuit following Design Change 94-044, resulting in a failure to maintain basic design criterion. The wiring error caused the loss of safety related 600v bus 1D, which resulted in an Engineered Safety Features actuation on April 14, 1996.
4. During the implementation of maintenance work order 1-88-7355, the overcurrent trip setpoint for the normal supply breaker to Motor Control Center 1R24-S026 was not controlled by approved documents. This was discovered on November 6, 1996 and resulted in the 1R Diesel Generator being declared inoperable for a short period of time.

This is a Severity Level IV Violation (Supplement I).

RESPONSE TO VIOLATION 96-14-03

Admission or Denial of the Violation

This violation occurred as stated in the Notice of Violation

Reason for the violation:

The first example of the Notice of Violation was caused by personnel error. Contributing to the event was an error in the vendor manual for the Unit 2 nitrogen tank skid equipment.

An Event Review Team (ERT) investigated this event and determined that the system engineer responsible for installing the relief valve realized the installed valve had the potential of discharging into the Unit 2 nitrogen tank enclosure during filling activities. He was aware the valve lift setting was below the normal nitrogen pressure during filling activities and its discharge was not routed outside the enclosure. He had recommended that procedures be revised to lower the fill pressure and that operations personnel be made aware that the nitrogen filling pressure should be lowered. However, he did not ensure that these actions were performed prior to the relief valve being installed. Thus, the actions taken were less than adequate.

The vendor manual for the Unit 2 nitrogen tank skid equipment erroneously specified the lift setting for the relief valve in that it specified two different lift settings in two different places. In one place, the manual specified a nominal lift pressure of 150 psig; the system engineer used this value in having the valve lift pressure set. In another place, the manual specified a lift pressure of 170 psig; this higher value was not noted by the system engineer. Per the manufacturer of the nitrogen system, 170 psig is the correct lift setting.

Had the valve been set at 170 psig, the event of 10/28/96 would not have occurred because the nitrogen tank pressure did not exceed 160 psig.

The cause of the second example of the Notice of Violation is not known at this time. However, operability of the Torus-to-Drywell vacuum breakers has been verified by performing required Unit 1 Technical Specification Surveillance SR 3.6.1.8.2. The Torus-to-Drywell vacuum breaker position indication switches whose wiring connections are in question are located in the primary containment and are inaccessible when the unit is at power. The wiring to all of these vacuum breakers will be checked during the Fall 1997 refueling outage.

The third example of the Notice of Violation was caused by personnel error. Contractor personnel miswired part of the current transformer circuit for the 4160V/600V Station Service Transformer "1D" circuit, and then failed to identify the miswired circuit during the functional test. As a result, the transformer protection circuit sensed a differential overcurrent condition and automatically opened the supply breaker to 600V bus 1D, de-energizing the bus.

During implementation of Design Change Request 94-044, a cable in the current transformer circuit for 4160V/600V Station Service Transformer "1D" was re-routed. The cable was re-routed to eliminate the need to wrap it in fire barrier material. When the four conductors (Phase 1, Phase 2, Phase 3, and neutral) in the cable were re-landed on the current transformer following cable re-routing, contractor personnel miswired the Phase 1, Phase 3, and neutral wires. The post-installation functional test consisted of a wiring verification and continuity check of the individual conductors, and documenting this check by "redlining" the installation wiring diagram. Redlining is controlled by Plant Hatch maintenance procedure 51GM-MEL-003-0S. Done correctly, a redline should have identified this problem. However, the contractor personnel failed to find the wiring error during this functional test.

The fourth example of the Notice of Violation was caused by an inadequate breaker trip device label. Specifically, the manufacturer-installed labels on the face of the breaker trip device selector switch are misleading. An individual setting the trip device to point to the numeral 12 on the face of the selector switch would actually be setting it to a dot corresponding to an incorrect trip setpoint of 8X instead of the desired setpoint of 12X. (Comparing Figure 1 with Figure 2 shows the labeling problem which led to the breaker trip device being set incorrectly.) The inadequate label resulted in the installed overcurrent trip device for the normal supply breaker to Motor Control Center 1R24-S026 having a setting which differed from the electrical single line diagram and from procedure 52PM-R24-002-0S, "Air Circuit Breaker, Type LA-600, Maintenance," both of which required a trip setpoint of 12X.

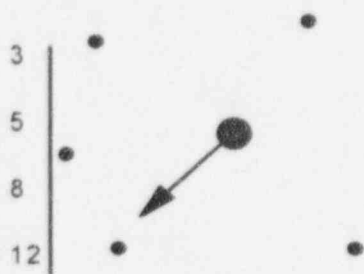


Figure 1
Actual Appearance of
Selector Switch Face

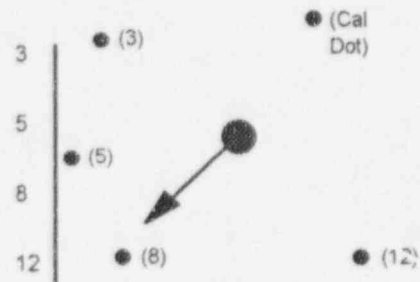


Figure 2
Selector Switch Face With
(Numbers) Added to Show
What Each Dot Represents

Corrective steps which have been taken and the results achieved:

For the first example, the responsible system engineer was made aware of his errors and their adverse consequences. The Unit 2 nitrogen tank fill line relief valve was removed on 10/31/96 per Temporary Modification 2-96-15 and Maintenance Work Order 2-96-3061. Overpressure protection during the filling operation is currently being provided by procedural controls and by the Nitrogen tank relief valve. A revision to the vendor manual has been initiated, specifying that the correct relief valve lift setpoint is 170 psig.

For the second example, the design of the Torus-to-Drywell vacuum breakers was reviewed. To perform their intended function, these vacuum breakers operate mechanically upon exceeding a preset differential pressure between the drywell and the torus. Electrical power to these vacuum breakers is provided to facilitate their manual actuation for testing, and to provide indication of their position in the control room and at a local panel in the reactor building. The power supply to the test and indication circuits is common for all of these vacuum breakers. GPC has thus determined that the apparent wiring discrepancy does not impact the ability to test the vacuum breakers and will not impact the ability of the vacuum breakers to perform their intended function. The operability of all of the Torus-to-Drywell vacuum breakers has been verified and will continue to be verified monthly as required by Unit 1 Technical Specifications Surveillance Requirement 3.6.1.8.2. Deficiency card CO9604283 was written on 9/20/96 to document the apparent wiring/drawing discrepancy and initiate corrective action.

For the third example, the wiring error was corrected on 4/15/96 per Maintenance Work Order 1-96-1393 and the 4160V/600V transformer was returned to service. Responsible personnel were counseled regarding their error and its adverse consequences. Additionally, procedure 51GM-MEL-003-0S, "Red Line Drawings," was revised 9/9/96 to enhance the instructions on how to redline wire conductors.

For the fourth example, a temporary modification was implemented on 11/10/96 in which a 150-amp, non-safety related load was removed from Unit 1 Motor Control Center 1R24-S026 and powered from another bus. The incorrectly set trip device installed on the

600V feeder breaker in Motor Control Center 1R24-S026 then was disabled and the appropriate breakers set to accommodate the remaining loads on the bus. These actions were taken in response to potential concerns regarding proper breaker coordination with the instantaneous overcurrent trip device installed and resulted in the "B" Emergency Diesel Generator being returned to operable status. Breaker settings for similar breakers in the plant have been checked by the system engineer; they were found to be correct.

Corrective steps which will be taken to avoid further violations:

1. Temporary Modification 2-96-15 will remain in place until permanent pressure relief protection is provided.
2. The event in which the nitrogen tank relief valve lifted prematurely will be included in the appropriate continuing training courses. This training will emphasize the need to address identified concerns in a complete and timely manner.
3. The position indication wiring for all of the Torus-to-Drywell vacuum breakers will be checked in response to deficiency card CO9604283 during the Fall 1997 refueling outage, and the drawings/wiring connections will be corrected, as necessary.
4. The review of breaker coordination begun in response to NRC Violation 50-321/96-06-08 will continue and will be completed during the scheduled 1997 Unit 1 and Unit 2 refueling outages.
5. A permanent design change will be made to Unit 1 Motor Control Center 1R24-S026 to remove the existing trip devices from the primary and alternate feeder breakers on this bus. Thereafter, circuit protection will be provided for this 600V bus by upstream 4160V breakers. The load which was removed from this 600V bus will be returned to the bus. These actions will be completed by 6/15/97.

Date when full compliance will be achieved:

For the first example, full compliance was achieved on 10/31/96 when the Unit 2 nitrogen tank relief valve was removed and documented per an approved temporary design configuration.

For the second example, full compliance will be achieved by the end of the Fall 1997 refueling outage when the wiring connection/drawing discrepancy will be resolved.

For the third example, full compliance was achieved on 4/15/96 when the 4160V/600V transformer wiring error was corrected.

For the fourth example, full compliance was achieved on 11/10/96 when the breaker trip device on Unit 1 Motor Control Center 1R24-S026 was disabled and documented per an approved temporary design configuration.