



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W.
 ATLANTA, GEORGIA 30303

Report Nos.: 50-321/84-31 and 50-366/84-31

Licensee: Georgia Power Company
 P. O. Box 4545
 Atlanta, GA 30302

Docket Nos.: 50-321 and 50-366

License Nos.: DPR-57 and NPF-5

Facility Name: Hatch 1 and 2

Inspection Conducted: August 14 - 17, 1984

Inspectors: *A. B. Ruff*
 A. B. Ruff
T. D. Gibbons
 T. D. Gibbons

9/5/84
 Date Signed
9/5/84
 Date Signed

Approved by: *M. D. Hunt for*
 T. E. Conlon, Section Chief
 Engineering Branch
 Division of Reactor Safety

9/7/84
 Date Signed

SUMMARY

Scope: This special unannounced inspection entailed 56 inspector-hours on site in the areas of Licensee Event Reports, Design Change Request Modifications, and Independent Inspection Efforts.

Results: Of the areas inspected no violations or deviations were identified.

REPORT DETAILS

1. Licensee Employees Contacted

- *J. T. Beckham, Jr., Vice President and General Manager Nuclear Operations
- *H. Nix, General Manager Plant Hatch
- *P. E. Fornel, QA Site Manager
- *T. L. Elton, Acting Supervisor Regulatory Compliance
- *C. R. Miles, Manager, Quality Concerns Program
- *M. Webb, Superintendent of Retrofit
- *C. Goodman, Regulatory Compliance Engineer
- *J. A. Betsill, Acting Superintendent Engineering Services
- R. Glisson, Maintenance Engineering Supervisor
- S. Mayhem, Engineering Department
- J. Salisburg, Outage Coordinator

Other Organizations

R. Mayhugh, Bechtel Field Engineer

NRC Resident Inspectors

- *R. V. Cylenjak, SRI
- *P. Holmes-Ray, RI

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on August 17, 1984, with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Followup of Licensee Event Report (LER)

An examination was made of the licensee's identified problem and their corrective measures with regard to unlanded conductors and cable separation in safety-related panels. This problem was reported by Georgia Power

Company (GPC) on LER 84-005. The item was discussed in a telephone conversation with GPC site and NRC personnel in Atlanta before Unit 2 fuel load. Prior to this conversation GPC observed in their electrical panels that many conductors were not terminated and were not adequately identified as to circuit affiliation, spares, or unnecessary leads which were the result of deleted circuits or modifications to circuits. Almost all of these unlanded leads were insulated.

The licensee subsequently took action to identify these leads. Procedure HNP 2-10280, "Identification, Control and Resolution of Problems with Class 1E Electrical Panels" was issued for inspection purposes. All safety-related (S/R) panels in the plant and control room (CR) except for the Analog Transmitter Trip System (ATTS) panels were inspected to this procedure and the unlanded conductor leads were tagged. The installation of these tags provided a base line for acceptability of Logic System Functional Tests (LSFT) in that those leads that are required to be hooked up for satisfactory performance of tests would be identified and reconnected. These tests are required to be performed satisfactorily by the plants Technical Specifications (T.S.) prior to changing various operational modes of the plant such as fuel load, startup, etc. The tags identified all unlanded leads for investigation and resolution, and in addition to the various in-process work packages, such as Maintenance Work Order (MWO) and Design Change Request (DCR), they provided an additional measure of control to insure that lifted leads were properly resolved. The unlanded leads in the ATTS panels were not initially tagged because these panels involved a new modification that had not been completed or turned over to power production. However, prior to the completion of this NRC inspection these leads were tagged in accordance with Procedure HNP-504, "Lifted Wire and Temporary Jumper Control."

After initial tagging and prior to Unit 2 fuel load and this NRC inspection, the licensee completed satisfactorily the required LSFT tests for fuel load and performed an investigation on a sample lot of 270 tagged, unlanded conductor leads. Almost all of the leads in this lot were identified as spares or unnecessary circuit leads as a result of deleted circuit. These leads were marked as spare and/or physically removed as applicable and the tags were removed. Less than 1% of the sample lot needed to be reconnected to satisfactorily complete the LSFT tests and these were identified and terminated in the process of performing these test.

Excluding the tags installed in the ATTS panels, approximately 2055 tags were installed as a result of the inspection of unlanded leads in accordance with procedure HNP 2-10280. Some of these tags identified deficiencies such as cable separation in panels, broken or damaged components, splices within panels etc.

The cable separation issues involved intruder cables. That is, cables that enter a panel where most of the other cable for that panel are of the opposite division. The licensee stated that they felt that the separation distance per Hatch's Electrical Design Criteria was maintained during the initial installation of these intruder cables but as a result of subsequent work, the separation distance was breached. The licensee's specification allows a minimum separation distance of 6" air space between the cables of two divisions within equipment. If there is less than 6" air space separation, metal barriers or conduit can be used for the separation criteria. Instead of relying on the minimum 6" air space separation and non-movement of intruder cable by subsequent work, the license intends to correct this condition by installing barriers and/or by placing the intruder cables in conduit. The licensee stated that this action is being or has been performed for the correction of present intruder cable separation deficiencies and that for further modifications, conduit will be used for routing intruder cables in panels. The licensee QA Department stated in memo QA-84-314 dated July 18, 1984, that these separation problems must be resolved prior to start-up.

Over 950 of the initially installed tags have been resolved and removed as a result of GPC's on-going work. This includes all tags, approximately 350, for unlanded leads in S/R panels remote to the CR and 600 for panels in the CR. The remaining tags will be removed as GPC continues to complete their work to resolve and identify these conductor leads.

The above discussions indicates that a violation of Appendix B, Criterion V, "Instructions, Procedures and Drawing" occurred in that procedure HNP 504, Section B.1., requires a tag to be installed on each lifted lead. This action was not performed. In addition, it is considered that personnel training in this area and with regard to divisional cable separation criteria within equipment may have been inadequate. This violation was discussed with the resident inspectors, enforcement, and other regional personnel and the following was considered:

- (a) The violation was identified by the licensee at the first opportunity.
- (b) The violation was promptly reported.
- (c) Adequate corrective measures were being established and implemented.
- (d) There were no previous violations in this areas, therefore, corrective actions for previous violations could not have prevented this occurrence.
- (e) Safety significance was minimal.

Based on the above considerations, it was concluded that the violation would not be cited based on 10 CFR 2 Appendix C.

6. Analog Transmitter Trip System (ATTS)

The licensee is installing an ATTS during this outage. The ATTS provides transmitters and trip units which replace switches and temperature elements. The systems affected are the Reactor Protection System (RPS), Nuclear Steam Supply Shutoff System (NSSSS), Emergency Core Cooling System (ECCS), and the Reactor Core Isolation Cooling System (RCIC). This change incorporate the installation of environmentally qualified transmitters to satisfy the NUREG-0588 requirements. The ATTS system reduces the time the RPS logic must be in a half scram to functional test or calibrate a safety trip. It utilizes a meter in each primary signal loop that will reduce the undetected primary sensor drift and therefore decreases the amount of time required to functionally test or calibrate the trip setpoint. The licensee has identified several pieces of equipment that needed to be relocated to satisfy Appendix R, "Fire Protection Program" requirements. This equipment was or is in the process of being relocated or being reviewed and corrected to satisfy Appendix R requirements. The ATTS design change removed and spared 192 devices and added over 200 instruments. Six wall mounted instrument racks were moved and thirteen were added. Eight control room control panels were added. Modifications were made to 16 instrument racks and 19 Control panels. Approximately 120,000 feet of cable and 5500 feet of 3/8 inch tubing were added.

The inspector examined the installation of level transmitter 2B21-LT-N080B and its trip unit 2B21-LIIS-N680B, and pressure transmitters 2C71-PT-N050A and D and their trip units 2C71-PIS-N650A and D. The items were inspected to verify that the installation complied with the drawings, the components were correctly installed, the racks were properly supported, and the tubing installation was satisfactory. The inspector examined the physical separation and protection of the instrument, tubing, and cables. The instruments were adequately identified. The required inspections were completed and documented. The electrical terminations were verified to be located at the proper points, as shown on the drawings. The fire seals which were opened were restored to service.

Within this area, no violations or deviations were identified.

7. Independent Inspection Effort (92706B)

The inspector conducted a walk through inspection of the secondary containment and the cables spreading room. The overall restoration of electrical raceway system was examined. Cable tray covers were reinstalled and the fiberglass insulation required in several areas was in place. The inspector examined several sections of the 600 volt motor control centers and noted several minor discrepant items. A Work Request was issued to correct these items.

Within this area, no violations or deviations were identified.