



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

Report Nos.: 50-424/84-35 and 50-425/84-35

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

Docket Nos.: 50-424 and 50-425

License Nos.: CPPR-108 and CPPR-109

Facility Name: Vogtle 1 and 2

Inspection Conducted: November 26 - 30, 1984

Inspector: N. Merriweather 12-17-84
 N. Merriweather Date Signed

Approved by: T. E. Conlon 12-17-84
 T. E. Conlon, Section Chief Date Signed
 Engineering Branch
 Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection entailed 33 inspector-hours on site in the areas of receipt inspection and storage of safety-related electrical cables; electrical cable installations; work and quality records; and followup on previous enforcement matters.

Results: One violation was identified - failure to establish a documented QA program for safety-related work done by protection engineering - paragraph 3.

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REPORT DETAILS

1. Licensee Employees Contacted

- *H. H. Gregory, General Manager - Vogtle Nuclear Construction Dept.
- *J. L. Blocker, Assistant Manager - QC
- *C. M. Burke, Senior QA Field Representative
- *W. C. Gabbard, Assistant Project Compliance Coordinator
- *S. D. Haltom, QA Engineer Support Supervisor
- *G. A. McCarley, Project Compliance Coordinator
- *D. R. Murphy, Construction Engineer
- *F. Page, Electrical QC Section Supervisor
- C. White, QC Status Group

Other licensee employees contacted included construction craftsmen, QC technicians, and other office personnel.

NRC Resident Inspectors

- *J. F. Rogge
- W. F. Sanders

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on November 30, 1984, with those persons indicated in paragraph 1 above. The licensee was informed of the inspection findings listed below and there were no dissenting comments.

- o Violation 424, 425/84-35-01, Failure to Establish a Documented QA Program for Safety-Related Work Done by Protection Engineering, paragraph 3.
- o Unresolved Item 424, 425/84-35-02, Voiding Previous Cable Termination Inspections, paragraph 5.b.
- o Unresolved Item 424, 425/84-35-04, Discrepancy Punchlists for Cable Terminations, paragraph 5.d.
- o Inspector Followup Item 424, 425/84-35-03, Followup on Licensee Corrective Actions Regarding Cable Reel Storage in the Power Block, paragraph 5.c.

3. Licensee Action on Previous Enforcement Matters (92701 and 92702)

(Closed) Violation 50-424, 425/84-10-01, Training and indoctrination of electrical contract QC personnel. This item was previously examined during inspection 84-24 and was documented in inspection report 50-424, 425/84-24.

Georgia Power Company's (GPC) letter of response dated, July 10, 1984, was reviewed and determined to be acceptable. Discussions were held with responsible GPC QC personnel and corrective actions as stated in the letter were examined. The licensee has revised QC procedure QC-A-02 (Rev. 2) to include training provided contract inspectors working under the supervision of GPC. Procedure QC-A-02 was also revised by Field Procedure Change Notice 9 to add documentation requirements.

The procedure now requires indoctrination training to be documented (by memorandum or exhibit 02 of QC-A-01) and maintained in the inspector's certification file located in the vault. The licensee has assigned a training coordinator in the electrical QC section to administer the in-house training provided electrical QC inspectors. The licensee has generated Electrical Quality Control (EQC) desk top procedure DQE-14 defining the responsibilities and scope of the in-house training. This procedure applies to the EQC Training Coordinator and all incoming contract inspectors. The training coordinator also provides the employee indoctrination for the Electrical QC Section as required by procedure QC-A-02. The inspector concluded that the licensee has determined the full extent of the subject noncompliance, performed the appropriate corrective action, and is now in full compliance.

(Closed) Unresolved Item 424, 425/84-24-01, Review the licensee's QA program being applied to the System Protection Group for developing protective relay settings; and followup on the procedures used at the site for controlling relay setting sheets. On October 31, 1984, the licensee audited the activities of the GPC Protection Engineering Section (Audit Report SP 84-1). The licensee determined in this audit that the Protection Engineering Section was not operating under an approved QA Program. 10 CFR 50, Appendix B, Criterion II requires GPC to identify the major organizations participating in the QA program, together with the designated functions of these organizations. It also requires the quality assurance program to provide control over those activities affecting the quality of the structures, systems, and components, to an extent consistent with their importance to safety. The GPC Protection Engineering Section has the responsibility for selection and application of relays and other protective devices and the determination of relay settings. The failure of the licensee to have established a documented QA Program for the Protection Engineering Group is considered a violation and will be identified as 50-424, 425/84-35-01, Failure to Establish a Documented QA Program for Safety-Related Work Done by Protection Engineering.

For more information on this matter please review inspection Report No. 84-24.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations or deviations. New unresolved items identified during this inspection are discussed in paragraph 5.

5. Electrical (Cables and Terminations) - Observation of Work and Quality Records Review (51063 and 52063) Unit 1

- a. Documents Examined: Procedure ED-T-05 (Rev. 6) Cable Reel Control
 Procedure ED-T-07 (Rev. 6), Cable Installation
 Procedure ED-T-08 (Rev. 4), Cable Termination
 Specification No. X3AR01, Section E8 (Rev. 15), Receiving Systems
 Specification No. X3AR01, Section E9 (Rev. 8), Cable Installation and Cable Termination
 Specification No. X3AR01, Section E 11 (Rev. 5), Storage and Protection of Equipment and Materials

The above documents were examined to determine the requirements for storage and maintenance of electrical cables, methods for cable installation, separation of raceways, identification methods for cables and raceways, cable terminations, and final QC acceptance requirements.

b. Field Inspection

The inspector selected the following safety-related cables for examination to verify that the installations were in accordance with procedures, specifications, and drawings.

Cable Nos.

1BD105LA	1AR7760ASC	1AA0221EA
1AR7760ASE	1ABB05LA	1BBD06LA
1AR7760ASD	1AACSA	1AAASD
1AABSB		

The above cables were inspected in accordance with the above specifications and procedures. The cable installations were verified by walking the cable routes indicated on the pull cards. The cables were the correct type materials and were properly color-coded by painting. The cables and raceways were identified per procedure and properly tied down. The raceway loading and separation appeared adequate. Two cables (1BBD06LA and 1BBD06SD) were identified which appeared to have exceeded the minimum bend radius specified in specification X3AR01, Section E9. However, the licensee was aware of this problem. It had been identified and documented by the licensee on Deviation Report No. ED-06680.

The inspector also witnessed in-process inspections of cable terminations 1BBD45SD, 1BBB06SE, 1BBD27SF, 1BBD24SF and 1BB1608SG. The results of the inspection are as follows:

- Cable terminations 1BBD45SD and 1BBB06SE were found to be acceptable in accordance with inspection procedures.
- Punchlist type discrepancies were identified with the remaining cable terminations.

The QC inspector demonstrated a working knowledge of the procedures and specifications.

The NRC inspector had one concern after witnessing the performance of the termination inspections. In situations where there were two ring lugs terminated and the cable leads which were being examined were landed (terminated) on the bottom, the inspector had an electrician determinate both leads in order to inspect the lug on the bottom. This inspection is appropriate to verify proper crimping of lugs; however, previously inspected and accepted cable terminations can be (lifted) determinate as allowed by the procedures. The licensee does not have procedure requirements to uniquely identify previously accepted cable terminations. The licensee acknowledged this concern and committed to review this matter to verify that previous termination inspections are not being voided. This concern was identified to the licensee as unresolved item 50-424, 425/84-35-02, Voiding Previous Cable Termination Inspections.

c. Cable Storage Areas

The inspector toured the cable storage areas to verify that safety-related cables were being stored and handled in accordance with procedures and specifications identified above. All safety-related cables stored in the reel yard were observed to have end caps with the reels properly tagged. Cables on hold were clearly identified. The inspector discussed with QC personnel assigned to the cable yard the procedures for handling (receiving, storing, and issuing) safety-related cables. They appeared very knowledgeable of cable reel control procedures. The inspector reviewed the logs maintained in the cable yard office to verify that the requirements of Procedure ED-T-05 were being met. All logs were found to be acceptable. One minor discrepancy was identified with the wording of Specification X3AR01, Section E11.5.3, Weatherproof Storage (WS). It allows unjacketed armored cable to be stored outdoors with weatherproof covers. The vendor (Okonite) recommends indoor storage. The licensee stores these cables indoors; however, the specification as presently worded will allow storage outside with weatherproof covers. The licensee acknowledged this concern and committed to review this matter to verify that appropriate requirements are incorporated in the specification.

While examining cable installations in the fuel handling building, the inspector observed two reels which were improperly stored. The inspector toured other areas of the plant (such as the roof of the auxiliary building) and observed other reels that were improperly stored or were not located in designated storage areas. The inspector discussed housekeeping with the QC electrical inspector that is responsible for performing periodic (monthly) housekeeping inspections of the powerhouse. By reviewing the inspection reports for November 1984, and October 1984, the NRC inspector concluded that the licensee has identified some of the same problems. The NRC inspector informed the licensee that improvements should be made in cable reel storage in

the powerhouse to prevent damage to cables from on-going construction activities. The licensee acknowledged this concern and committed to take steps to ensure that electrical cables are properly stored. This concern will be identified as inspector followup item 50-424, 425/84-35-03, Followup on Licensee Corrective Actions Regarding Cable Reel Storage in the Power Block.

d. QA Records Review (51065)

The inspector reviewed the cable installation records (pull sheets) for the cables identified in paragraph 5.b. The records were properly completed and reviewed per procedure.

The inspector also examined the Discrepancy Punchlist logs for cable termination reworks. These reworks are deficient conditions which were identified by QC during the initial termination inspection and documented on a Discrepancy Punchlist. (The only items which can be punchlisted are those deficiencies which have been previously identified as punchlist items in the procedure.) The discrepancy punchlist original is maintained in a log in the QC office. Copies are distributed to engineering and one copy is sent to the craft for rework. The craft reworks the punchlist and annotates on their copy the person who performed the work, crimp tool number, etc. The craft sends their copy to QC to notify them that the work is complete and ready for reinspection. The inspector reinspects the installation and if acceptable, signs the original of the Discrepancy Punchlist and the "Termination Installation Card." Then the original Discrepancy Punchlist is filed in a book maintained by the Status Group and a copy is maintained by QC. The inspector may or may not discard the copy provided to QC by the craft. The NRC inspector was concerned that the information indicated on the original punchlist does not identify who did the work and crimp tool number. An additional concern was that the punchlists were not being stored in the QA records vault. The licensee indicated that these were duplicate records and did not require storage in accordance with ANSI N45.2.9. However, the licensee did take steps to have the original punchlist logs placed in the QA vault. The inspector reviewed the log books maintained in the QC office and selected Log No. EL-16: P-57 for examination. This was a discrepancy punchlist for Cable No. 1AD1202SA. The cable had two nicked conductors and the wrong size lugs. This discrepancy required the conductors to be relugged. The inspector reviewed both the original log and the QC log and could not determine the man who performed the rework and the crimp tool used. In addition, both logs show different inspectors accepting the installation. It appears that another inspector signed the original punchlist for the accepting inspector that worked on a different shift; however, he did not indicate that he was signing for the inspector. This problem was also found to exist on other punchlists. The licensee acknowledged this concern and committed to review their records to verify that appropriate records exist to reflect acceptability of cable termination rework. The concern is identified as unresolved item 50-424, 425/84-35-04, Discrepancy Punchlists for Cable Terminations.

Within the areas examined, no violations or deviations were identified.