



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

Report Nos.: 50-424/84-24 and 50-425/84-24

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: September 4-7, 1984

Inspector: N. Merriweather
N. Merriweather

9-21-84
Date Signed

Approved by: T. E. Condon
T. E. Condon, Section Chief
Engineering Branch
Division of Reactor Safety

9-24-84
Date Signed

SUMMARY

Scope: This routine, unannounced inspection involved 29 inspector-hours on site in the areas of electrical cable terminations, protective relay settings, licensee action on previously identified enforcement matters, maintenance records, IE Bulletin 84-02, and followup on inspector followup item.

Results: No violations or deviations were identified.

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REPORT DETAILS

1. Licensee Employees Contacted

- *M. H. Googe, Project Construction Manager
- *C. W. Hayes, Vogtle QA Manager
- *E. D. Groover, QA Site Manager
- *R. W. McManus, Manager, Quality Control
- *B. C. Harbin, Manager, Engineering Support
- *R. E. Duke, Project Section Supervisor
- *R. J. Pooni, Assistant Project Section Supervisor
- *S. D. Haltom, QA Engineer Section Supervisor
- *R. L. Page, QC Supervisor
- *A. E. Zabala, QA Engineer
- *G. A. McCarley, Project Compliance Coordinator
- S. McDonnell, Electrical Section, Training Coordinator
- P. Kochery, Electrical and Instrumentation Engineering Supervisor
- A. Brock, QC Inspector
- C. Lowry, Senior QC Inspector
- B. Moncrief, Protection Engineering Representative
- H. Bradley, Power Generation Representative

Other Organization

- *D. L. Kinnsch, Project Engineer, Bechtel Power Corporation

NRC Resident Inspector

W. Sanders

- *Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on September 7, 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.

- 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, paragraph 6.

3. Licensee Action on Previous Enforcement Matters (92702)

- a. (Open) Violation 50-424, 425/84-10-01, "Training and Indoctrination of Electrical Contract QC Personnel." Georgia Power Company's (GPC) letter of response dated July 10, 1984, has been 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.

The licensee now provides supervised classroom training on job-specific requirements and 30-days of on-the-job training prior to initial certification at Vogtle.

The licensee has assigned a training coordinator in the electrical section to administer the in-house training provided electrical QC inspectors. The training coordinator also provides the employee indoctrination for the Electrical QC Section (EQC) as required by QC-A-02.

The inspector reviewed the training coordinator's records and samples of inspector certifications for inspectors certified to the new procedure. From this review, it appears that the indoctrination given new employees is adequate; however, the methods used to document the training are not defined in the procedure. The licensee acknowledged the concern and provided the inspector with a draft copy of a revision to procedure QC-A-02 (Rev. 2), which will require indoctrination training to be documented by memo to the inspector's certification file located in the vault or by entering on Exhibit 02 of QC-A-01. The inspector also had a concern about the activities being performed by the EQC training coordinator in that they are not addressed in a EQC desk top procedure. The inspector discussed this with responsible licensee representatives and they indicated that a desk top procedure would be developed. The inspector concludes that the licensee has determined the full extent of the subject noncompliance, performed the necessary survey and followup actions to correct the present conditions, and is developing the corrective actions to preclude recurrence of similar circumstances. However, this item will remain open pending review of the revision to procedure QC-A-02 (Rev. 2) and issuance of the desk top procedure for EQC in-house training.

- b. (Closed) Violation 50-424, 425/84-10-02, Changing of Procedure Requirements by Memorandum. Georgia Power Company's letter of response dated July 10, 1984, has been reviewed and determined to be acceptable. The General Manager for Vogtle Nuclear Construction issued a memorandum dated July 5, 1984, giving instructions to first line managers that all future revisions to the Vogtle Field Procedures must be accomplished only by procedure revision or Field Procedure Change Notice (FPCN). In addition to the above, the licensee has revised Field Procedure GD-T-01, Revision 11 (by FPCN No. 32), to incorporate the changes made by the memorandum cited in the violation. The inspector concluded that the licensee has determined the full extent of the subject noncompliance, performed appropriate corrective action, and is now in full compliance.

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 6.

5. Electrical (Cables and Terminations I) - Observation of Work and Work Activities (51063) - Unit 1

The inspector accompanied a QC inspector to the field to observe the in-process inspection of safety-related cable terminations 1BA0322WVG (to end), 1BA0321WVE (to end), and 1BA0322WVF (to end). The NRC inspector observed that the inspector had the latest revision of the procedure for cable terminations and specification X3AR01, Section E9. The QC inspector also had the latest approved termination cards and drawings. The cables were observed to be; properly identified, the correct size and type, correct type insulated lugs were installed, conductors were landed on the correct terminal points, and the connections were snug tight. In addition, the crimps appeared to be acceptable and separation was adequate. Cable No. 1BA0322WVG was punch listed by the QC inspector because the cable was not adequately supported inside the cabinet. The other two cable installations were found to be acceptable. The NRC inspector discussed the inspection procedures and specifications with the QC inspector to determine his level of knowledge of the acceptance criteria/procedures. The inspector appeared to be very knowledgeable of the inspection procedures. Within the area examined, no violations or deviations were identified.

6. Electrical (Components and Systems) - Review of Quality Assurance Implementing Procedures (51051) - Units 1 and 2

The purpose of this inspection was to review the QA procedures which are applicable to relay coordination studies and relay settings for protective relays associated with safety-related power supplies. To accomplish this inspection, the inspector talked to responsible licensee representatives in both Construction and Nuclear Operations to determine what organization was functionally responsible for developing the protective relay settings. From these discussions, it was concluded that the responsibility for developing protective relay settings belongs to the System Protection Section and relay calibrations are performed by the Instrumentation and Control Section of Nuclear Operations.

The System Protection Section (SPS) is part of the Power Engineering Department in Georgia Power Company (GPC). The inspector reviewed Chapter 17.1 of the FSAR to determine what QA requirements were specified for the design activities being performed by SPS. It appears that the QA program described in the FSAR is inadequate because there is no mention of design being performed by SPS. In looking into this matter, the inspector learned that in Bechtel Design Manual, Specification No. DCA-1823 states, in part, that "GPC System Protection has the responsibility for selection and application of relays and other protective devices and the determination of

settings for coordination of protective relays to limit equipment damage and/or system disturbances." This was the only document identified during this inspection which discussed the functional responsibility for developing protective relay settings. The System Protection Section does not have a staff at the site so it was impossible to review their correspondence files or procedures. However, the inspector participated in a conference call between representatives from Site QA and System Protection to discuss the procedures used for developing protective relay settings. The System Protection representative indicated that internal procedures are used for developing the relay settings and that these procedures require design verification by the supervisor. He also indicated that SPS was on Bechtel's controlled drawing distribution list. The inspector concluded that there is some form of a program in place in the SPS for developing protective relay settings; however, the adequacy of the program can only be assessed by visiting the corporate offices or having them come to the site. Therefore, the inspector informed the licensee that these program concerns are unresolved. In addition, the inspector questioned the licensee about the results of the last QA audits of the System Protection Section. It appears that this organization possibly has not been audited for compliance to the QA program.

The inspector also discussed relay setting sheets in detail with the supervisor for the Electrical and Instrumentation Section in Nuclear Operations. He indicated that the Electrical and Instrumentation Section receives the relay setting sheets directly from the Power Generation Department. They in turn distribute the setting sheets to the I&C Maintenance Section to set the relays. After the settings are complete, they return the setting sheets to the Power Generation Department.

The Power Generation Department acts as the focal point for the receipt/distribution of all relay sheets from the System Protection Section. They issue the setting sheets to the applicable sites for implementation of the relay settings. They also maintain a status file on each relay sheet and notify the System Protection Section that the settings have been made so that as-built drawings can be issued to the site. This department provided the site with instructions (dated May 17, 1978) delineating how the protective relay sheets should be handled. Presently, these are the only procedures that exist at the site for controlling protective relay setting sheets. However, the licensee indicated that procedures would be forthcoming and be included in the Nuclear Operations QA Manual to control the relay setting sheets on site.

The inspector concluded that, at this time, it is impossible to determine what QA program requirements are being applied to the relay setting sheets. It appears that the information needed to assess the adequacy of the program is maintained in the corporate offices of the System Protection Section and the Power Generation Department. Therefore, this matter is unresolved until the following inspector questions are adequately addressed:

- a. Where in the GPC's Corporate QA program do they describe the safety-related design activities being performed by the System Protection Section?
- b. What QA audits have been performed of SPS design activities?
- c. What procedures exist in SPS/Power Generation for controlling development, distribution, and revision of relay setting sheets?
- d. What interfaces exist between SPS and Bechtel?

These concerns are identified as 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).

7. Electrical (Components and Systems II) - Review of Quality Records (51056) - Unit 1

The inspector selected the following safety-related electrical components for examination to review the maintenance records:

Class IE Electrical Equipment

Battery Chargers Nos. 1-1806-B3-CAA, CAB, CBA, and CBB
 DC Distribution Panels Nos. 1-1806-Q3-DA1 and DA2
 DC Motor Control Center No. 1-1806,S3-DCA
 DC Switchgear No. 1-1806-S3-DSA
 DC Auxiliary Relay Panel Nos. 1-1816-U3-001 and 002
 Inverter 1-1807-Y3-IA11

The maintenance records indicated that proper storage was specified, routine periodic maintenance was performed, and nonconforming conditions identified were properly evaluated and dispositioned by design. All records examined were determined to be acceptable.

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

8. IE Bulletin (IEB) (92717) - Units 1 and 2

(Open) IEB 84-02, Failures of General Electric Type HFA Relays In Use In Class IE Safety Systems. The licensee's letter of July 10, 1984, reports that HFA relays are used in the following class IE equipment:

- a. 4.0 KV switchgear
- b. 480 V switchgear
- c. 125 V DC switchgear
- d. Diesel generator control panels

The licensee states, in this letter, that they have been receiving information regarding the subject relays since 1979, and have taken the corrective actions for all class 1E HFA relays supplied with balance of plant equipment. The licensee contacted the suppliers for the safety-related equipment identified above and verified that none of the unacceptable relay coils are being supplied in balance of plant equipment. The licensee also states that equipment supplied by Westinghouse (Nuclear Steam System Supplier) does not utilize HFA type relays. However, they have requested Westinghouse to determine if any relays provided within their scope of supply have any problems similar to those addressed in the subject bulletin. This response is still pending. Therefore, this item is open until Westinghouse's response can be reviewed and evaluated.

9. Inspector Followup Item (92701) - Unit 1

(Closed) IFI 424/84-19-01, Review of Acceptability of the Return or Wrap Welds Used on the 125 V DC Battery Chargers. The licensee identified this concern on deficiency report (DR) No. ED-05096 dated July 20, 1984. The licensee has reworked the battery charger installations in accordance with the test lab mounting configuration as shown in the disposition to the deficiency report. The vendor will resubmit drawings 1X3AD01-04 and 26 to reflect the as tested configuration. These drawings will be part of the equipment qualification data package. The installations have been reinspected and the DR has been closed. The inspector has no further concerns. Therefore, this item is considered closed.