



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

Report Nos.: 50-424/85-16 and 50-425/85-16

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: April 15-19, 1985

Inspectors:	<u><i>M. D. Hunt</i></u>	<u>5/17/85</u>
	M. D. Hunt	Date Signed
	<u><i>T. D. Gibbons</i></u>	<u>5/20/85</u>
	T. D. Gibbons	Date Signed
Approved by:	<u><i>T. E. Conlon</i></u>	<u>5/22/85</u>
	T. E. Conlon, Section Chief	Date Signed
	Engineering Branch	
	Division of Reactor Safety	

SUMMARY

Scope: This routine, unannounced inspection involved 72 inspector-hours on site in the areas of employee concerns.

Results: Five violations were identified: Violation 424/85-16-01 and 425/85-16-01, Inadequate Procedure for the Installation and Inspection of Cable Supports in Electrical Penetrations; Violation 424/85-16-02 and 425/85-16-02, No directions for Acceptance/Rejection of Deviation Reports; Violation 424/85-16-03 and 425/85-16-03, Failure to Disposition Deviation Reports in Accordance with Procedures; Violation 424/85-16-04 and 425/85-16-04, Failure to Post Form NRC-3 and Part 21 Information in Three Operation Areas; Violation 424/85-16-05 and 425/85-16-05, Failure to Assemble Battery Racks in Accordance with Approved Instructions.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *D. O. Foster, Vice President and Project General Manager
- *H. H. Gregory, General Manager, Vogtle Nuclear Construction
- *M. A. Googe, Project Construction Manager
- *C. W. Hayes, Vogtle Quality Assurance Manager
- *E. D. Groover, Quality Assurance (QA) Site Manager
- *B. C. Harbin, Manager, Quality Control (QC)
- *T. L. Weatherspoon, Assistant Manager, QC
- *F. Page, QC Section Supervisor
- *L. Glenn, Quality Concerns Manager

Other licensee employees contacted included construction craftsmen, engineers, technicians, operators, mechanics, security force members, and office personnel.

Other Organization

- *S. Pietrzyk , Assistant Project Engineer, Bechtel Power Corporation

NRC Resident Inspectors

- *J. Rogge
- *R. J. Schepens

- *Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on April 19, 1985, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee. The following new items were identified during this inspection.

Violation 424/85-16-01 and 425/85-16-01, Inadequate Procedure for the Installation and Inspection of Cable Supports in Electrical Penetrations. (paragraph 5.a.)

Violation 424/85-16-02 and 425/85-16-02, No Directions for Acceptance/ Rejection of Deviation Reports. (paragraph 5.b)

Violation 424/85-16-03 and 425/85-16-03, Failure to Disposition Deviation Reports in Accordance with Procedures. (paragraph 5.c.)

Violation 424/85-16-04 and 425/85-16-04, Failure to Post Form NRC-3 and Part 21 Information in Three Operation Areas. (paragraph 5.d.)

Violation 424/85-16-05 and 425/85-16-05, Failure to Assemble Battery Racks in Accordance with Approved Instructions. (paragraph 5.g.)

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection.

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. Employee Concerns

The Nuclear Regulatory Commission has been contacted at various times by individuals who expressed concerns relating to the construction quality control program at plant Vogtle. As a result of these concerns the NRC inspectors interviewed various personnel, examined QC records, personnel records and engineering specifications and details. Numerous safety-related components related to the expressed concerns were examined during this inspection.

Meetings were held with various management employees in an effort to determine if concerns expressed to the NRC were part of the ongoing Quality Concerns Committee investigations. While the concerns were similar in nature it was determined that a separate examination of the concerns was warranted. The following is a list of the concerns examined during this inspection, a discussion of the method of evaluation used by the inspectors and the findings resulting from the examination of QA records, procedures, specifications and discussions with various personnel.

- a. Concern: They are adding cable supports internally to electrical penetration (EP) enclosures without appropriate drawings, vendor concurrences and in violation of their own specifications.

Discussion: The inspector examined a Stop Work Notice (SWN) Control No. SW-E-14 which was issued February 2, 1985, to halt the cable pulling including the cutting of holes for cable entry into the EP box enclosures. The reason for the SWN was the lack of installation and inspection requirements for the holes cut in EP enclosure boxes, the installation of chase nipples and cable support assemblies, and the coating of cut hole edges. The recommended action for restart was for engineering to provide installation, inspection and documentation requirements for the listed activities.

The SWN was cleared and work resumed on February 22, 1985, when the questions cited in the stop work order were addressed. However, the answer regarding the addition of supports in the EP boxes did not clearly define the corrective measures in that the resolution permits the addition of supports not to exceed limitations of 300 pound weight and did not define the inspection requirements. The manufacturer had issued a letter dated February 8, 1985, which advised that the load limit is 300 foot-pounds rather than 300 pounds of weight. However, no information was given as to how the total weight was to be distributed.

Additionally a Deviation Report (DR) No. 8106 dated March 18, 1985 was written which again addressed the problem of acceptability and inspection of the supports added without sufficient engineering details. The portion of the DR which addressed the addition of supports to the EP enclosure boxes was dispositioned as "N/A" and justified on the basis of a drawing which contained various details, but none that address the installation of these supports. The inspector was unable to identify any definite details for the cable support installation. The NRC inspector contacted the EP manufacturer in regard to the installation of supports in the enclosure boxes and was informed that the total moment must include the weight of the cable as well as the support steel.

Findings: This concern is substantiated in part in that there are no appropriate drawings on details for the installation of cable supports in the EPs. In addition there is no inspection criteria. There was however, concurrence from the manufacturer (vendor) for the addition of weight with a resultant moment limit of 300 ft-lbs.

This condition is an example of an inadequate procedure and is identified as a Violation 50-424/85-16-01, 425/85-16-01, Inadequate Procedure for the Installation and Inspection of Cable Supports in Electrical Penetrations.

- b. Concern: Deviation Reports (DR) are not getting numbers. They are being rewritten by supervisors and for various reasons are not getting numbers to be put into the system.

Discussion: Similar concerns have been expressed on three different occasions. One of these concerns was addressed in Inspection Report Nos. 50-424/85-10 and 50-425/85-10. During that inspection several QC inspection personnel were interviewed. Most of those interviewed advised that they had not had a DR rejected. They stated that DRs are usually discussed with their peers and supervision before they are written. The supervision is required to review the DR for completeness, acceptability, and hold tag requirements before assigning it a control number in accordance with Procedure GD-T-01, Nonconformance Control. During the review of this procedure the inspector noted that by Field Procedure Change Notice (FPCN) No. 35 dated December 5, 1984, the following instructions were given to the appropriate supervisor in QC, "for DRs which you feel should not be assigned a

number, write a justification as to why, on the DR and send the original to the Assistant Manager of Quality Control." A QC Audit Report dated April 16, 1985 identified instances where copies of DRs that were not given control numbers were not being given to the assistant manager of QC as directed. Additionally, a memo was issued by the manager of QC on April 2, 1985 which introduced a system that directs that all DRs will be given an interim number before the individual presents the DR to his supervisor. After review by the supervisor, if acceptable, the DR is given a control number in the nonconforming system. The rejected DRs are reviewed by QC supervision and ultimately stored in the records vault.

Findings: No site records were maintained or required for rejected DRs prior to the issuance of FPCN No. 35. Later the QA Audit Report dated April 16, 1985, identified the fact that the procedure was not being followed for proper handling of rejected DRs. In the present form the procedure is not auditable for rejected DRs in that no tracking mechanism is included in the procedure for voided DRs. There are no provisions in the procedure for logging DRs prior to issuance of a control number. This finding is partially substantiated in that the procedure appears to be inadequate in directing the disposition of voided DRs and there is no criteria for the QC supervisor to base his rejection/acceptance of the DR submitted for evaluation and entry into the nonconforming control numbering system. In addition GD-T-01 does not require an independent review of rejected DRs as required by paragraph 17.2 of the licensee's FSAR.

This is identified as Violation 50-424/85-16-02 and 50-425/85-16-02, No Directions For Acceptance/Rejection of Deviation Reports.

c. Concern: Improper disposition of DRs dealing with equipment problems.

Discussion: Several closed DRs were reviewed to examine the dispositions. Deviation Report ED-05471 concerns a Unit 1 circuit breaker which was damaged during the installation of the wiring. The disposition directed that the breaker be replaced with a Unit 2 breaker. It can only be assumed that the replacement breaker is the corresponding Unit 2 breaker. Further, no instructions were listed for the nonconforming tagging of the damaged breaker. It was also noted that one individual performed the evaluation, approved the disposition and approved the inspection requirements for Georgia Power Company (GPC).

Deviation Report No. ED-08440 reported the removal and apparent loss of a 5 amp and a 10 amp class IE breaker from the Diesel Generator (D/G) A motor control center (MCC). The disposition was to remove breakers from Unit 2 and install them in Unit 1. However, the justification states that, "If the missing breakers are used elsewhere the quality standards will still be maintained because the missing breakers are class IE." The disposition does not address the unauthorized removal of the original equipment, but qualifies them as class IE even though

the location, condition or use of them was not known at the time the DR was dispositioned. Deviation Report No. ED-06060 identified several electrical cabinets with cable entries that violate the details of design drawings and specifications. The disposition does not address the problem but, instead promises that a sealant will be installed. Here again the recommended disposition, the approval and work complete was signed by the same individual.

Several DRs cited termination or pulling of cables without QC observation stating that the equipment was not affected, only a procedure was violated. No justification was given for the procedure violation.

Finding: This concern was substantiated. The DRs reviewed by the inspectors confirm that the dispositioning of DRs is not clear, lack sufficient instructions and do not require adequate corrective actions. These conditions are identified as Violation 50-424/85-16-03 and 50-425/85-16-03, Failure to Disposition Deviation Reports in Accordance with Procedures.

- d. Concern: The worker claimed that craft/construction personnel do not know how to contact the NRC resident inspector and that appropriate telephone numbers should be posted at the site.

Discussion: The NRC inspector examined the telephone directories for the site, Augusta and Waynesboro. The site directory has an NRC Resident Inspector listing with the correct number listed. The Augusta directory has a listing for the Region II Office in Atlanta and the Waynesboro directory has a listing for both the resident inspectors office and Region II.

The Form NRC-3 is posted in six places where workers can see it when going to work or leaving work in the construction areas.

The NRC inspectors wear the NRC hardhats and blue jackets while in the plant. The senior resident inspector for construction is known to the crafts and construction personnel.

Findings: This concern is not substantiated. However, the NRC inspectors did identify a violation while researching this concern. The licensee has failed to post the Form-NRC 3 and Part 21 information in the nuclear power administration building, service building and maintenance building. This is a Violation of 10 CFR 50.7(e) and 10 CFR 21.6(a) posting requirements. This Violation is identified as 50-424/85-16-04 and 50-425/85-16-04, Failure to Post Form NRC-3 and Part 21 Information in Three Operations Areas.

- e. Concern: The worker claimed that his supervisor had told QC inspectors to leave a job after they had issued a stop work order because a 1300KV cable was stressed to over 1000 pounds during a pull.

Discussion: The NRC inspector examined the plant power systems drawings to ascertain where the 1300KV power was used. There is no 1300KV power system at the plant. The worker must have meant 13.8KV cable. The Final Safety Analysis Report (FSAR) paragraph 8.3.1.1.1 states that the 13.8KV system is a Non-Class IE system.

The licensee procedure ED-T-07, "Cable Installation" Revision 7 dated December 21, 1984 states in paragraph 1.0, "QC department inspection is required only for Class IE cables" and GPC Electrical Field Operations personnel are responsible for maintaining quality standards for all non-class IE cables. QC inspection is not required for the 13.8KV cable.

Finding: The concern could not be substantiated. The QC inspectors were not following these procedures in that the observation of non-class IE cable installation is the responsibility of GPC Electrical Field Operations personnel. The QC supervisor was correct in directing his employees.

- f. Concern: The worker stated that there are no procedures dealing with the pulling of non-class IE electrical cable over 600 volts.

Discussion: The NRC inspector examined procedure ED-T-07. The procedure states in paragraph 1, "GPC Electrical Field Operations personnel are responsible for maintaining quality standards for all non-class IE cables." In paragraph 3.7 the field operations personnel are directed to perform in process monitoring of non-class IE cable. Paragraph 5.5 requires high potential testing to be witnessed by electrical field operations personnel when testing non-class IE cables.

Findings: This concern is not substantiated by the facts that ED-T-07 does in fact cover the installation of non-class IE cable rated 600 volts and above.

- g. Concern: Equipment turnovers are being accomplished without the installation being complete and the appropriate documentation not being on file.

Discussion: The inspector examined batteries, 1AD1B, 1CD1B and 1BD1B, which had been turned over for testing. It was found that the racks were not uniform in the spacing provided at the ends of the racks. The rack ends are tight against the end cells on one row of battery cells while another row of cells in same battery has a gap of 7/8" (Battery 1CD1B) and 3/4" (Battery 1AD1B). The racks for Battery 1BD1B have three rows of cells which have gaps of 3/4" at each end, 1" at each end and 7/8" at each end. One row of cells has the rack end in contact with the cells. Records examined by the inspectors revealed that the only inspection performed by QC inspectors was torquing of rack assembly bolts. For battery rack 1AD1B there were no rack bolt torquing records, battery rack 1BD1B had 5/16" bolts torqued to 27 foot-pounds on a rework order. Battery rack 1CD1B record listed the

tie bar torquing value at 12 foot-pounds and its rod brackets at 17 foot-pounds. No bolt size was listed.

It was also noted that the craft had used torque wrenches calibrated in inch-pounds (in-lbs.) while the QC inspectors used torque wrenches calibrated in ft-lbs. No conversion calculations were attached to the records. It should be recognized that there are three sizes of batteries. As a result the racks for each battery are of differing dimensions.

Findings: It appears that the assembly drawings for these battery racks were not followed during the erection and inspection in that the racks are not uniform and QC inspections were not performed in the same manner. This concern is substantiated. The assembly of these battery racks appears to be a violation of procedures, drawings and instructions in that the racks for the individual batteries are not uniform in length. Further, the manufacturer advised the NRC inspectors that the rack ends should be in contact with the end cell in each row.

This is identified as Violation 50-424/85-16-05 and 50-425/85-16-05, Failure to Assemble Battery Racks in Accordance With Approved Instructions.

6. Inspector Followup Items

(Closed) 424/85-10-04, 425/85-10-04, Review Staff Engineering Qualifications. The NRC inspector selected five licensee engineers and five engineers employed by the licensee's electrical contractor. The NRC inspector examined personnel records of the employees to verify that their training and experience were adequate for their positions. The inspector found that each individuals' record confirms that he is qualified for the position he fills.