



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report Nos. 50-424/82-17 and 50-425/82-17

Licensee: Georgia Power Company
P. O. Box 4545
Atlanta, GA 30303

Facility Name: Vogtle

Docket Nos. 50-424 and 50-425

License Nos. CPPR-108 and CPPR-109

Inspection at Vogtle site near Waynesboro, GA

Inspector:

W. Harris
J. R. Harris

7-28-82

Date Signed

Approved by:

T. E. Conlon
T. E. Conlon, Section Chief
Engineering Inspection Branch
Division of Engineering and Technical Programs

7-28-82

Date Signed

SUMMARY

Inspection on July 13-16, 1982

Areas Inspected

This routine, unannounced inspection involved 30 inspector-hours on site in the areas of structural concrete, site preparation and foundations, and licensee action on previous identified items.

Results

Of the three areas inspected, no violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

H. H. Gregory, III, Project Manager
*M. H. Googe, Assistant Construction Project Manager
*E. D. Groover, QA Site Supervisor
*B. C. Harbin, Civil Project Supervisor
R. E. Folker, QA Engineer
L. N. Brooks, Civil Engineer
R. Harris, Civil Engineer

Other licensee employees contacted included three construction craftsmen, five technicians, and three office personnel.

Other Organizations

G. Grainger, Geologist, Southern Services
T. Crosby, Geologist, Bechtel
*H. R. Reuter, Resident Engineer, Bechtel
S. A. Shapiro, Engineering Group Supervisor, (Nuclear) Bechtel
D. S. Jagannathan, Civil Structural Engineer, Bechtel
R. H. Brickley, NRC, Region IV

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on July 16, 1982, with those persons indicated in paragraph 1 above. The licensee acknowledged the inspection findings with no dissenting comments. The following item was opened:

Inspector Followup Item, 424/82-17-01, Cadweld Testing, paragraph 7.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Independent Inspection Effort (92706)

The inspector examined the following:

- a. Soils and concrete laboratory and currentness of calibration of laboratory equipment
- b. Ongoing installation of reinforcing steel and preparation for concrete placement in the Unit 1 power block
- c. Results of concrete placement in the auxiliary and control buildings
- d. Postensioning procedures and specifications

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

6. Containment, Structural Concrete II (47054) - Unit 1

The inspector observed partial placement of pour number A-111-010A in the control building. Acceptance criteria examined by the inspector appear in the following documents:

- a. Specification X21P01, Forming, Placing, Finishing, and Curing Concrete
- b. Procedure CD-T-06, Cadweld Quality Control
- c. Procedure CD-T-02, Concrete Quality Control
- d. PSAR, Sections 3 and 17
- e. American National Standard N45.2.5 - 1978

Forms were tight and clean. Rebar was properly installed and clean. Examination of the batch plant indicated proper mixes were being delivered, materials were being controlled and that accurate batch plant records were being generated. Samples for temperature, slump, air content, unit weight, and strength met frequency requirements. Concrete placement activities pertaining to delivery time, free fall, flow distance, and consolidation conformed to procedure and specification requirements. Examination of the pour card indicated that required preplacement inspections were performed. Post placement inspection showed the proper curing controls were being maintained.

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

7. Containment Structural Concrete II (47056) - Unit 1

The inspector examined quality records for concrete placement numbers 1-010-001 and 1-010-002 in the Unit 1 containment shell wall. Acceptance criteria examined by the inspector appear in paragraph 6 above.

Records examined by the inspector included batch tickets, batch plant inspection reports, preplacement inspection reports, audit number CD02-82/65, and test data for air, temperature, slump, strength, and rebar splicing.

Examination of site QA audit number CD02-82/65 and rebar records disclosed the following open item.

The sample frequency for Cadweld testing is being based on the number of Cadwelds inspected by each QC inspector without regard to Cadwelder or Cadweld crew that made the Cadweld. Using this sampling method it is indeterminate how often each Cadweld crew or Cadwelder is tested for Cadwelding capabilities. Also, some test sample cycles start out as a production splice cycle and then change to a combination of production and sister splice testing. Procedure CD-T-06 and American National Standard N45.2.5 - 1978 require that separate test cycles be established for each member or each crew and that test sample cycles be either the production splice cycle or the combination of sister and production cycle. The above deficiencies were identified as finding numbers 303 and 305 in site QA audit CD02-82/65. A task force has been established to evaluate the above deficiencies and Cadweld program. Evaluation of the Cadweld testing program will be inspected by the NRC in a subsequent inspection. Cadweld testing was identified to the licensees as Inspector Followup Item 424/82-17-01.

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

8. Site Preparation and Foundations - Observation of Work and Work Activities (46153B) Unit 1 and Unit 2

The inspector examined test cores and geologic profiles made during investigation of the Millet Fault which was identified by the USGS as a possible fault in a February 1982 news release. The suspected fault is located about seven miles south of the Vogtle plant. Discussions with licensee geologists and examination of geologic profiles indicate that investigations to date have not been able to show any faulting in the suspected areas. The final report of investigations on the Millet Fault will be submitted to NRC for review.

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

9. Licensee Identified Item (92700)

(Closed) CDR 424/80-01-01 and 425/80-01-01, Load Capacity of Concrete Embeds. Bechtel Power Corporation identified the condition on January 25, 1980. Bechtel's preliminary evaluation on January 28, 1980 was reported to Georgia Power Company who in turn reported the condition under 10 CFR 50.55(e) to NRC Region II on that date. Bechtel continued their evaluation and on January 29, 1980 reported the condition to NRC, Region IV, as potentially reportable under 10 CFR 21.

The load capacity tables for embed plates were determined on the basis of full area engagement and no lateral loads. Application of these tables in the design of pipe supports, was in some cases based on partial engagement of plate area, and lateral loads. It was considered possible that some pipe support designs released for construction might have exceeded the allowable embed loads.

The inspector examined the licensee's final response dated July 7, 1980 and discussed the response with responsible licensee engineers and the Region IV NRC inspector that performed a design audit on this item at Bechtel's Office in Norwalk, California.

Examination of all Bechtel projects showed that the condition only affected Georgia Power Company's Vogtle plant. No pipe supports had been installed on Units 1 and 2. All 5,763 nuclear and non nuclear pipe support designs at Vogtle were reanalyzed. Of that total, 1,306 pipe supports were redesigned. New load capacity tables were produced for all existing types of embeds. Training sessions were held with engineers and designers within pipe stress and support groups.

This item was examined by a NRC Region IV inspector during a design audit of Bechtel Power Corporation conducted September 22 to 25, 1980. The item is discussed and closed as an open item in NRC Region IV Report Number 999 00 521/80-03.

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