



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

Report Nos. 50-424/81-08 and 50-425/81-08

Licensee: Georgia Power Company  
270 Peachtree Street  
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, Georgia

Inspector: E. H. Girard 8/6/81  
E. H. Girard Date Signed

Approved by: B. R. Crowley for 8/6/81  
A. R. Herdt, Section Chief Date Signed  
Engineering Inspection Branch  
Engineering and Technical Inspection Division

#### SUMMARY

Inspection on July 6-9, 1981

#### Areas Inspected

This routine, unannounced inspection involved 26 inspector-hours on site in the areas of licensee action on previous inspection findings (Units 1 and 2), licensee identified items (Units 1 and 2), and safety-related piping - observation of welding activities (Units 1 and 2).

#### Results

Of the three areas inspected, no violations were identified in two areas; one violation was found in one area (Violation - Undersize Structural Welds, paragraph 5.a); no deviations were found.

## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*K. M. Gillespie, Construction Project Manager
- \*H. H. Gregory III, Assistant Construction Project Manager
- \*C. R. Miles, Jr., QA Field Supervisor
- \*E. D. Groover, QA Site Supervisor
- \*W. R. Evans, Project Section Supervisor - Mechanical
- B. F. Barret, Senior QA Field Representative
- C. Sarver, QA Engineer

#### Other Organizations

J. P. Runyan, QA Manager, Pullman Power Products

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on July 9, 1981 with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed the inspection findings listed below. No dissenting comments were received from the licensee.

(Open) Violation 424, 425/81-08-02: "Undersize Structural Welds" - paragraph 5.a. Note: Although this item was discussed in the exit interview it was first identified to the licensee as a violation in a telephone discussion between E. Groover (Georgia Power Co.) and E. Girard (NRC) on July 24, 1981.

(Open) Unresolved Item 424/81/08/03: "Masking Tape" - paragraph 6.b.

(Open) Unresolved Item 425/81-08-04: "Delta Ferrite" - paragraph 6.b.

### 3. Licensee Action on Previous Inspection Findings

- a. (Open) Violation 424, 425/81-02-01: Stud welding procedure control. The licensee's letters of response dated March 11 and March 20, 1981 have been reviewed and determined acceptable by Region II. The inspector held discussions with the site QA Supervisor regarding the item and reviewed the corrective action as described in the letter of response. In examining the licensee's stud welding procedures the NRC inspector found that welding procedure specifications 005 and 006 met ASME Section IX requirements. They did not, however, specify the type of flux used, as required by QW-402.9 of ASME Section IX. The

licensee's stud welding is expected to employ aluminum as a flux and the licensee indicated this flux will be added to the procedures. The inspector stated that this item will remain open until the procedure is revised.

- b. (Open) Violation 424/81-05-01: Failure to follow welding procedure purge requirements. The licensee's letter of response dated June 8, 1981 has been reviewed and determined acceptable by Region II. This item involved use of excessive back purge in welding. The response letter stated that the corrective action was to remind welding supervision to enforce conformance with procedure requirements. The licensee indicated a full compliance date relative to the requirements of May 28, 1981. On July 8, 1981 the inspector observed a welder using excessive back purge on safety related pipe welding as described in paragraph 6.a below. The licensee's corrective action appears to have been inadequate and this item will remain open.

#### 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. Licensee Identified Items (10 CFR 50.55(e))

- a. (Closed) Item 424, 425/81-02-05: Questionable welds on miscellaneous steel construction in the auxillary building. This item involved structural steel construction in which some welds had been found unacceptable because of omitted welds and the presence of visual defects (excess convexity, undercut, overlap and undersize welds) exceeding limits specified by the applicable code and the design drawings. On October 7, 1980 this was reported to Region II by the licensee as a potential 10 CFR 50.55(e) item. On December 29, 1980 the licensee informed Region II that the item had been evaluated and determined not to be reportable. Based on the December 29 report, item 424, 425/81-02-05 is considered closed. However, concerns relative to work in this area remain and will be examined further relative to the new violation described below.

At the NRC inspector's request, the licensee identified examples of accepted structural welds similar to but completed and accepted since those originally covered by item 424, 425/81-02-05. About 10 welds were examined by the inspector, two of which the inspector found were smaller (as confirmed by the licensee's QC inspector) than specified by the applicable drawings and code (AWS D1.1-75). The undersize welds were:

- (1) Weld Stiffener Weld  
Location: Room C-80, 6'11" E of column line A<sub>12</sub> and  
 11'3" S of column line A<sub>F</sub>  
Drawing: MO 8G S176  
Unit: 1
- (2) Weld: Clip Angle Weld  
Location: Room C-13, sequential weld 2 as described on  
 Civil Field Weld Inspection Report No. 01762  
Drawing: AX2D08F049  
Unit: 2

The undersize welds are considered to represent noncompliance with Criterion V of 10 CFR 50 Appendix B in that drawing requirements for weld size were not met. This is identified as violation 424, 425/81-08-02, "Undersize Structural Steel Welds".

- b. (Closed) Item 424, 425/80-12-01: Holddown bolting material.

On November 17, 1980 the licensee informed Region II that they did not have any of the reportedly defective bolting material about which concern had been expressed. They, therefore, concluded that this item was not a reportable deficiency.

6. Safety-Related Piping - Observation of Welds and Welding Related Activities (Units 1 and 2)

The inspector observed welds and welding related activities on safety related piping for compliance with regulatory requirements and PSAR commitments. The applicable code for the safety-related piping observed is ASME Section III Class 2.

a. Welding (Unit 1)

The inspector observed welding related activities in progress on the following Unit 1 piping welds:

<u>Weld No.</u>	<u>ISO</u>	<u>Size</u>	<u>System</u>
036A-W-1A	1K3-1206-005-01	3" x .216"	Containment Spray
006-W-05	1K3-1204-038-01	12" x .406"	Containment Spray

As applicable to the work in progress the welding was examined to determine whether:

- (1) Work is conducted in accordance with a document which coordinates and sequences operations, references procedure, establishes hold

- points, and provides for production and inspection approval.
- (2) Weld identification and location are as specified.
  - (3) Applicable drawings are at the work station and readily available.
  - (4) Welding filler materials are the specified type and are identified with traceability numbers.
  - (5) Weld joint geometry is inspected.
  - (6) Purge gas is in accordance with procedure requirements.
  - (7) Preheat and interpass temperatures are in accordance with procedures.
  - (8) Welding equipment is in good condition.
  - (9) Interpass cleaning is in accordance with applicable procedures.
  - (10) Weld history records are adequate.

The inspector noted that an excessive back purge (over 70 CFH) was being used on weld 036-W-1A. This is a continuation of the violation identified 424/81-05-01, as described in paragraph 3.b above.

b. Visual Examination of Welds (Units 1 and 2).

The inspector visually examined the following welds:

<u>Weld No.</u>	<u>ISO*</u>	<u>System</u>
009-W-05 (Field Weld)	1K3-1205-009-01	Residual Heat Removal
A (Shop Weld)	2K3-1206-002-01	Containment Spray
B (Shop Weld)	2K3-1206-002-01	Containment Spray

\*First number of ISO indicates Unit (1 or 2)

In attempting to examine the ID of weld 009-W-05, which was not easily accessible, the inspector observed what appeared to be a strip of masking tape attached to the pipe ID about 2 inches from the weld. This indicated possibly inadequate controls on piping cleanliness. There was not enough pipe welding in progress and available for examination during the inspection to provide the inspector with a sufficient sample for evaluation of the licensee's piping cleanliness controls. The adequacy of the licensee's controls relative to foreign materials such as masking tape, on piping is considered an unresolved item, identified 424/81-08-03, "Masking Tape".

In examining the welds A and B, which joined stainless steel piping components, the inspector checked the welds for magnetic attraction with a pocket magnet. The degree of attraction between a pocket magnet and stainless steel weld metal provides an indication of the presence of delta ferrite in the weld. As the inspector noted no attraction between the welds and magnet, the licensee's records for the welding material were checked. The records indicated a measurement of 6.5% delta ferrite in a sample of the weld metal. The data sheet for the

pipng indicated a requirement for weld metal containing 8 to 25% delta ferrite. The significance of this discrepancy relative to the applicable code and engineering requirements will be examined in subsequent NRC inspection. It is identified as unresolved item 425/81-08-04, "Delta Ferrite".

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