



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

Report No. 50-424/81-04 and 50-425/81-04

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, GA

Inspector: *A. R. Herdt* 3/5/81
B. R. Crowley Date Signed

Approved by: *A. R. Herdt* 3/5/81
A. R. Herdt, Section Chief, EI Branch Date Signed

SUMMARY

Inspected on February 18-20, 1981

Areas Inspected

This routine unannounced inspection involved 25 inspector-hours on site in the areas of welding of steel structures and supports (Units 1 and 2), welding or safety-related piping (Units 1 and 2), previous inspection findings (Units 1 and 2), and general construction activities (Units 1 and 2).

Results

Of the three areas inspected, no violations or deviations were identified in two areas; one item of noncompliance was found in one area (Violation - Failure to follow procedure for controlling nonconforming items, paragraph 8.c).

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DETAILS

1. Persons Contacted

Licensee Employees

- W. M. Johnston, Manager, Generating Plant Construction
- *K. M. Gillespie, Construction Project Manager
- *E. D. Groover, QA Site Supervisor
- *R. W. McManus, Manager of QC
- *M. H. Googe, Manager of Field Operations
- *H. H. Gregory, III, Assistant Construction Project Manager
- *R. R. Allen, Assistant Construction Project Manager
- *D. M. Fiquett, Assistant Construction Project Manager
- *W. R. Evans, Project Station Supervisor - Mechanical
- *D. C. Garner, QA Field Representative
- R. M. Beavers, Engineering Supervisor, Mechanical Piping

Other licensee employees contacted included construction craftsmen, QC inspectors, QA personnel, security force members, and office personnel.

Other Organizations

- *J. R. Runyan, QA Manager, Pullman Power Products (PPP)
- J. Willis, QA Engineer, Pullman Power Products (PPP)
- *J. E. Mahlmeister, Resident Engineer, Bechtel Power Corporation
- C. L. Fields, Welding and QA Superintendent, Chicago Bridge and Iron (CB&I)
- M. N. Willis, QA Auditor, Chicago Bridge and Iron (CB&I)
- K. A. Frar, Welding Engineer, Chicago Bridge and Iron (CB&I)

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on February 20, 1981, with those persons indicated in paragraph 1 above. The violation in paragraph 8.c was discussed in detail and the licensee had no dissenting comments.

3. Licensee Action on Previous Inspection Findings.

(Closed) Unresolved item 425/80-13-05, Failure to enter procedure and drawing revision numbers on weld process sheets. All weld process sheets to date have been reviewed and no other cases of missing revision numbers were found. Therefore, this item is considered resolved.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Independent Inspection Effort (Units 1 and 2)

A general plant tour was made and the following areas of interest examined by the inspector:

- a. General construction activities and conditions such as housekeeping were observed in the reactor and auxiliary buildings.
- b. The inspector observed in-process welding for Unit 1 containment welds 3-F and 3-J. The applicable code for this welding is the ASME Boiler and Pressure Vessel Code, Sections III and VIII, 1974 Edition with addenda through S75. The work was observed 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) Procedures, drawings, and other instructions are at the work station and readily available.
 - (4) WPS assignment is in accordance with applicable code requirements.
 - (5) Welding technique and sequence are specified and adhered to.
 - (6) Welding filler materials are the specified type and traceable to certifications.
 - (7) Weld joint geometry is in accordance with applicable procedures and inspected.
 - (8) Alignment of parts is as specified.
 - (9) Preheat and interpass temperatures are in accordance with procedures.
 - (10) Electrodes are used in positions and with electrical characteristics specified.
 - (11) Welding equipment is in good condition.
 - (12) Interpass cleaning is in accordance with applicable procedures.
 - (13) Temporary attachments are removed in accordance with applicable procedures.
 - (14) Process control system has provision for weld repairs.

(15) Welding and inspection personnel are qualified.

(16) Weld history records are adequate.

- c. Electrode storage and issue conditions were observed for the above welding.
- d. Cutting and identifying material for pipe rack X4CP-R5050 in accordance with PPP Procedure IX-50 in the pipe fabrication shop was observed.

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

6. Steel Structures and Supports - Welding Procedure Specifications and Quality Assurance Procedures (Units 1 and 2)

Steel structures and supports are being welded by CB&I, PPP, and Ingalls Iron Works (Ingalls) as indicated below. The inspector reviewed welding procedure specifications (WPS) and quality assurance procedures for this work as indicated below to determine whether specifications and procedures have been established, qualified and controlled in accordance with NRC requirements, SAR commitments, licensee's QA program, and code requirements, as applicable.

a. The applicable codes are as follows:

- (1) CB&I - Containment Welding - ASME Boiler and Pressure Vessel Code, Sections III and VIII, 1974 edition with addenda through S75.
- (2) Ingalls (GP procedures are used) - Miscellaneous structural steel - AWS Structural Welding Code D1.1-75.
- (3) PPP - Pipe Supports - ASME Boiler and Pressure Vessel Code, Section III, 1977 edition with addenda through W77.

b. (1) QA Manuals and referenced documents, as identified (2) below, were reviewed to determine whether adequate QA plans and procedures, including QC procedures have been established (written, reviewed, approved and issued) to assure accomplishment and control of the following activities:

- (a) Organizational structure including qualifications, training and stop work authority
- (b) Audits including procedures, checklists, scope, frequency and qualification of auditors
- (c) General quality requirements relative to material specifications, test reports, procurement documents, deviations, and control of components, structures, and systems

- (d) Work and inspection procedures including provisions for review, approval, and control
 - (e) Control of material including traceability, handling, shipping storage, and identification or nonconforming material
 - (f) Procedures for Control of Processes including special processes
 - (g) Procedures for corrective action
 - (h) Document control including control of QA manual and periodic review for adequacy of document control
 - (i) Test control and control of test equipment
 - (j) Quality records
- (2) The following were reviewed:
- (a) CB&I
 - . "Nuclear Quality Assurance MANUAL FOR ASME III Products"
 - Division I, Revision 1, "General"
 - Division II, Revision 8, "Corporate"
 - Division III, Revision 9, "Manufacturing"
 - Division IV, Revision 8, "Construction"
 - . In-house Procedure NRP-1, Revision 8, "Nuclear Records Procedure"
 - . Bechtel Specification X2AG06, Revision 4, "Containment Liner Plate System"
 - (b) PPP

The PPP controls for welding steel structures and supports are the same as used for control of safety-related pipe welding. See IE:II Report 50-424, 425/80-13 for details of the review made for this program. In addition to the previous review, one additional procedure, IX-50, Revision dated September 3, 1980, "Pipe Support Field Installation and Fabrication Procedure" was reviewed.
 - (c) Georgia Power Procedures for Control of Ingalls Work
 - . Vogtle "QA Manual"
 - . "QA Department Procedure Manual"
 - QA-01 Series "Organization Division"
 - QA-03 Series "Personnel Training Division"

QA-05 Series "Audits Inspection Division"

. GD-A-24, Revision 3, "Onsite Procurement Process"
 . "Project Procurement Procedures Manual"
 . MD-A-03, Revision 1, "Mechanical Section Field Procurement"
 . GD-A-30, Revision 1, "Receipt, Receipt Inspection, Storage, and Handling"
 . GD-T-01, Revision 7, "Nonconformance Control"
 . DC-A-03, Revision 7, "Drawing Change Notices, Field Change Notices, Construction Specification Change Notices, and Material Specification Change Notices"
 . GD-A-08, Revision 8, "Procedure Development and Control"
 . MD-A-02, Revision 2, "Traceability of Mechanical Materials/Equipment"
 . CD-T-08, Revision 1, "Field Fabrication Miscellaneous Steel"
 . CD-T-14, Revision 2, "Receipt, Storage and Control of Welding Materials"
 . CD-T-13, Revision 2, "Structural Steel Welding Procedure"
 . QC-T-01, Revision 0, "Field Book Control"
 . DC-A-07, Revision 3, "Plant Vogtle Procedure Manual Control"
 . GD-A-04, Revision 4, "Calibration and Control"
 . DC-A-06, Revision 1, "Review and Control of Quality Assurance Documentation"
 . Bechtel Specification X2AP01, "Civil - Structural Construction Specification"
 . GD-T-07, Revision 2, "Work Stoppage"
 . GA-5-16, Revision 0, "Stop Work Orders"

c. The inspector reviewed preparation, qualification, approval/certification and revision requirements for WPSs as covered by Division 4, "Construction", Sections 6.0, "QA Handbook and Procedure Control" and 8.0, "Welding" of the CB&I QA Manual.

d. The CB&I WPSs listed below were reviewed for: compliance with documents of paragraph c. above; qualification in accordance with ASME Section IX; procedure qualification records containing essential variables and mechanical test results in accordance with ASME Section IX; and compliance with PSAR and regulatory guide requirements.

- (1) E309/74-2195/96, Revision 1
- (2) E6010/E7018/74-2195/96, Revision 1
- (3) EM12K/585/74-2195/96, Revision 2

During the review of these WPSs the inspector noted that non-essential variable 410.16, pertaining to weld progression for vertical position welding had not been covered. CB&I stated that, although the WPS covered all positions, there were no applications for this procedure (stainless steel) for other than the flat position. CB&I further stated that the WPS will be revised to either delete the vertical position or include non-essential variable 410.16. This matter will be identified as inspector followup item 424/425/80-04-01, Revision of WPS to include non-essential variable 410.16.

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

7. Steel Structures and Supports - Welder Qualification (Units 1 and 2)

The inspector observed the welder qualification activities listed below for welding of steel structures and supports. See paragraph 6.a. above for the applicable codes for this work.

- a. CB&I - Reviewed welder qualification film for 3/8" and 7/8" test assemblies for welder SMW.
- b. PPP - Observed welder (Badge No. 889) in process of welding test C12 and bend sample preparation for welder V-7 for test S-7.

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

8. Safety-Related Piping (Units 1 and 2)

The inspector examined welding activities for safety-related piping as described below to determine whether applicable code and procedure requirements were being met. The applicable code for this welding is the ASME Boiler and Pressure Vessel Code, Section III, 1977 edition, with addenda through W77.

a. Observation of Welding Activities

The inspector observed in-process welding on welds FW 006-W-03, ISO 2K3-1205-006-01 (Unit 2); FW 006-W-07, ISO 2K3-1204-006-01 (Unit 2); and FW 006-W-09, ISO 1K3-1204-038-01 (Unit 1). The work was observed 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) Procedures, drawings, and other instructions are at the work station and readily available.

- (4) WPS assignment is in accordance with applicable code requirements.
- (5) Welding technique and sequence are specified and adhered to.
- (6) Welding filler materials are the specified type and traceable to certifications.
- (7) Weld joint geometry is in accordance with applicable procedure and inspected.
- (8) Alignment of parts is as specified.
- (9) Purge gas and shielding gas are in accordance with procedure requirements.
- (10) Preheat and interpass temperatures are in accordance with procedures.
- (11) Electrodes are used in positions and with electrical characteristics specified.
- (12) Welding equipment is in good condition.
- (13) Interpass cleaning is in accordance with applicable procedures.
- (14) Temporary attachments are removed in accordance with applicable procedures.
- (15) Process control system has provision for weld repairs.
- (16) Welding and inspection personnel are qualified.
- (17) Weld history records are adequate.

b. Welder Qualification

The inspector reviewed qualification status records and initial qualification records for welders B7, BA, and BT as applicable to the production welds of paragraph 8.a.

c. Welding Material Control

The inspector reviewed welding material procurement and receiving records for Heat 97401 E70S-2 carbon steel bare wire.

During this review the inspector found that a licensee QA audit GD-10-80/45 conducted November 25 through December 23, 1980 had identified a number of problems with the procurement documentation for this lot of material. The most significant problem, which resulted in audit

finding No. 160, was that the material was not tested by the vendor using production preheat and interpass temperature requirements as required by ASME Section III. Although, a significant documentation problem had been identified, at the time of this inspection the material had not been nonconformed or placed on hold and was available for issue to the crafts for use as accepted material. This appears to be in nonconformance with Paragraph VIII.A. and VIII.E.3.b of licensee procedure GD-T-01 which require that a nonconformance report (NCR) be issued and the item placed on "Hold" for incorrect or deficient documentation. This matter is considered to be in violation of 10 CFR 50, Appendix B, Criterion V and is identified as item number 424,425/81-04-02, Failure to follow procedure for controlling nonconforming items.

Within the areas inspected, no violations, except as noted in 8.c. above, or deviations were identified.

9. Inspector Followup Items (IFI)

(Closed) Item 424/425/80-13-01, Review of Nonconformance Reporting Procedures. PP Procedure XV-2, revision dated December 1, 1980 and GP Procedure DD-T-01, Revision 7 have been issued. The inspector reviewed these procedures and has no further questions.

(Closed) Item 424/425/80-13-02, Clarification of General Welding Standard. General Welding Standard GWS-III/I, revision dated September 18, 1980, has been issued to clarify interpass cleaning, purge gas flow rate, and minimum socket weld size. The inspector has no further questions.

(Closed) Item 424/425/80-13-04, Incorrect Thickness Range on WPS. WPS 38-III/I-8-KI-1, revision dated January 7, 1981 has been issued to correct thickness range. The inspector has no further questions.