



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

Report Nos.: 50-424/88-27 and 50-425/88-37

Licensee: Georgia Power Company
 P. O. Box 4545
 Atlanta, GA 30302

Docket Nos.: 50-424 and 50-425

License Nos.: NPF-68 and CFPR-109

Facility Name: Vogtle 1 and 2

Inspection Conducted: June 27-30, 1988

Inspector:

M. Glasman
 M. Glasman

8/18/88
 Date Signed

Approved by:

J. J. Blake
 J. J. Blake, Chief
 Materials and Processes
 Engineering Branch
 Division of Reactor Safety

8/19/88
 Date Signed

SUMMARY

Scope: This routine, unannounced inspection was in the areas of as-built verification of Reactor Coolant System (RCS) Pressure Boundary Piping and Safety-Related Piping. Previously - identified open items were also reviewed, and licensee activities related to NRC Bulletin 88-05 were reviewed and observed.

Results: In the areas inspected one violation, 425/88-37-01 (paragraph 2c) was identified. This violation was in the area of RCS Work Observation and involved the presence of Weld Spatter and gouges on the pressurizer surge line piping directly prior to application of insulation. Programmatic strength was demonstrated by the rapid evaluation and repair of the above mentioned damage. However, the potential for weakness is indicated by conditions which allowed the weld spatter and gouges to remain on the Pressurizer Surge Line piping following at least two documented inspections of the RCS piping.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *A. Gallant, Project Compliance Coordinator
- *J. Gilmartin, Mechanical Field Staff Engineer
- *E. Groover, Quality Assurance Site Manager
- *C. Hayes, Vogtle Quality Assurance Manager
- *A. Pinson, Vice President
- *K. Pointer, Senior Plant Engineer, NSAC
- *R. Pope, Mechanical Field Staff Engineer
- *C. Rau, Mechanical Discipline Manager

Other licensee employees contacted during this inspection included craftsmen, engineers, mechanics, technicians, and administrative personnel.

Other Organizations

- *J. Agold, Supervisor, Pre-Service Inspection, Southern Company Services
- *D. Strohman, Project Quality Engineer, Bechtel

NRC Resident Inspector

- *R. Schepens, Senior Resident Inspector (Construction)

*Attended exit interview

2. Work Observation and Verification of As-Built Reactor Coolant and Safety-Related Piping (37051, 49053, 49063)

The inspector verified the as-built configuration of Reactor Coolant System (RCS) piping and safety-related piping. The applicable code for piping described herein is the ASME Boiler and Pressure Vessel Code, 1974 Edition, Summer 1976 Addenda. The piping and/or furnished spool pieces were installed by Pullman Power Products (PPP) or Georgia Power Company (GPC), with field welds performed by same.

a. Work Observation and Verification

Since the available window for work activities associated with installation of piping/components has passed, the inspector elected to complete a field examination of installed piping and associated valves, welds, and hungars. Selected portions of piping and assemblies listed in Paragraph 2b were then compared against "as-built" design drawings and quality documentation. The following was then determined:

- ° Piping, components/assemblies, and installed material meet purchase specifications.
- ° Methods of assembly of piping and components/assemblies is consistent with design drawings and work specifications.
- ° Measures exist and are in force to protect installed piping and components/assemblies from construction debris, physical damage, and hostile environments.
- ° Installation activities were conducted with reference to specified procedures and by qualified personnel where required.
- ° Nondestructive Examination (NDE) was performed in accordance with procedures, and examination personnel were qualified.
- ° Inspection (QC) activities were performed as required by proper procedures and by properly qualified personnel.

b. Piping Systems Examined

The following piping systems were examined in accordance with the above:

<u>Drawing or Fabrication Isometric</u>	<u>System Description</u>	<u>Line Number(s)</u>
2K4-1201-024-02	RCS-Resistance Temperature Detector Mainfold	1201-024-2" 1201-186-186-2"
2K4-1208-047-02	Chemical and Volume Control System	1208-047-1-1/2"
2K3-1205-003-02	Residual Heat Removal System	1205-028-14"
2K3-1202-144-01	Nuclear Service Cooling Water	1202-321-1" 1202-035-10"
2J5-2403-051-01	Diesel Generator Fuel Oil System Train "A"	2403-051-2"
2X4DL4A17	Pressurizer Surge Line	1201-053-14" 1201-053-16"
2K4-1204-021-03	Safety Injection	1204-021-6"
2K4-1204-045-01	Safety Injection	1204-127-10"

c. Weld Spatter and Gouges on Pressurizer Surge Line

A violation of failure to follow procedures was identified during the as-build verification inspection activities conducted on the pressurizer surge line. The inspector discovered gouges and weld spatter on spool piece 053-S-03; The damage was on the 16" OD section of the pressurizer surge line; damage was located on the top surface of the surge line 22-1/4" from weld 053-W-03 and extending 19-1/4" long x 1-1/2" wide in an axial direction, and on the bottom surface of the surge line, 10-1/2" from weld 053-W-03, 7 3/4" long x 1/2" wide, in an axial direction. The gouges were estimated at .015" deep.

The particular section of pipe on which the spatter and gouges were located had been prepared for insulation and was one of the last un-insulated portions on the pressurizer surge line. This un-insulated portion of the surge line containing the damage was completely wrapped in plastic and according to licenser records, inspected for damage May 19, 1988, (prior to primary hydro testing) and for cleanliness on May 25-26, 1988. GPC Procedure MD-T-19 Rev. June 2, 1988, "Insulation Installation Inspection" requires insulated piping to be checked for among other things "... arc strikes, weld spatter and/or physical damage." This procedure indicates that walkdown inspections are valid for a period not in excess of 60 days.

Following the inspector's discovery of the damage, a PPP QC inspector recorded the gouges and spatter on Deviation Report (DR) number PP-18142 dated June 29, 1988, for disposition by Westinghouse. The PPP Inspector indicated that the damage was "As Supplied."

Their disposition was for removal of spatter and gouges by light buffing and blending, liquid penetrant testing of the affected areas, and ultrasonic testing to ensure minimum wall requirements of the pipe were not violated. The completed DR was received in the regional office immediately following this inspection.

Due to failure to identify this damage- especially due to its close proximity to a shop weld which required pre-service inspection, and following walkdown inspections of the surge line, and failure to follow procedure this will be identified as Violation 425/88-37-01.

d. Records Reviews

The inspector reviewed pertinent records associated with the piping and assemblies listed in Paragraph 2b to determine if materials used were in conformance with requirements for material certification, installation, and testing per ASME Section II code.

This review included Non-destructive Examination (NDE) associated with the piping required by ASME Section II, certification of pipe utilized, and non-conformance/deviation reports.

The following types of documentation were reviewed:

- ° Certified mill test reports for pipe materials
- ° Form NPP-1 Data Reports
- ° NDE reports (Liquid Penetrant and Radiographic)
- ° Weld History Records
- ° Fabrication Sheets and Shop Travellers
- ° Vendor Certificates-of-Conformance for NDE material

No additional violations or deviations were identified within the scope of this inspection.

3. Independent Inspection Effort

Housekeeping (54834B), Material Identification and Control (42902B), and Materials Control (42940B)

The inspector conducted a general inspection of Unit 2 containment and auxiliary building to observe activities such as housekeeping, material identification and control; material control, and storage.

Within the scope of this inspection, no violations or deviations were found.

4. Action on Previous Inspection Findings and NRC Bulletins (92701)

- a. (Closed) URI 425/88-33-01, Proper Incorporation of As-Built Corrections to Design Drawings. A previous inspection identified discrepancies between identification data on penetrations in the Unit 2 containment and corresponding identified data on design drawings. During this inspection, the inspector verified as-built conditions against design drawings in RCS pressure boundary and safety-related piping and no discrepancies were detected.
- b. (Open) NRC Bulletin 88-05 and NRC Bulletin 88-05, Supplement 1, Non-Conforming Materials Supplied by Piping Supplies, Inc. (PSI) at Folsom, NJ, and West Jersey Manufacturing Company (WJM) at Williamstown, NJ. Licensee efforts to establish their actions and response to requirements of this bulletin were outlined by cognizant licensee personnel in a meeting held on June 28, 1988. The inspector, senior construction resident, and cognizant licensee personnel directly involved in planning the licensee response to NRCB 88-05 attended the meeting.

The inspector also witnessed hardness testing of a flange identified by Georgia Power Company as having been supplied by WJM. The flange (8" blind flange, SA-105) was installed on a flushing tee adjacent to the discharge isolation valve on Train "A" CCW Pump No 5. Results of the hardness test indicated the flange was 125 to 130 Brinnell. This is contrary to ASME SA-105 which requires Brinnell 137 minimum.

The licensee's procedures for Equotip hardness testing are 25225C, Revision 0, "Hardness Testing" and MD-A-08 revivision date June 27, 1988, Equotip "Hardness Testing" for Units 1 and 2, respectively.

- c. (Open) Unresolved Item 424/88-03-02; 425/88-02-02, Potential for Banded Microstructure in Cold Leg Accumulator Piping

The licensee furnished a sample measuring approximately 4-1/2" x 9" of 10" Sch 140 pipe, Type 316 SA-376 Class 1, heat 13-351 to the inspector for independent analysis by the NRC. Cognizant licensee personnel indicated to the inspector that the sample provided was of the same section analyzed by Law Engineering for GPC (report dated March 15, 1988). Also relevant to this open item, cognizant licensee personnel in a telephone conversation following this inspection, have indicated Cortest of Columbus, OH will be performing Corrosion and metallurgical evaluation of sample material per the plan outlined in NRC RII Inspection Report Nos. 50-424/88-23 and 50-425/88-33.

A final date for performance of this testing has not been set, however, GPC personnel have assured the inspector of their intention to keep the Region II office informed of changes in a timely manner.

5. Exit Interview

The inspection scope and results were summarized on June 30, 1988, with those persons indicated in paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed below. Although reviewed during this inspection, proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

(Open) Violation 425/88-37-01, Failure to Detect Damage on Pressurizer Surge Line