

APPENDIX B

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-458/89-12

Operating License: NPF-47

Docket: 50-458

Licensee: Gulf States Utilities Company

Facility Name: River Bend Station

Inspection At: River Bend Station, St. Francisville, Louisiana

Inspection Conducted: March 27-31, 1989

Inspector:

L. D. Gilbert  
L. D. Gilbert, Reactor Inspector, Materials  
and Quality Programs Section, Division of  
Reactor Safety

4/6/89  
Date

Approved:

I. Barnes  
I. Barnes, Chief, Materials and Quality  
Programs Section, Division of Reactor Safety

4/6/89  
Date

Inspection Summary

Inspection Conducted March 27-31, 1989 (Report 50-458/89-12)

Areas Inspected: Routine, unannounced inspection of welding activities.

Results: In general, the welding program, including welder qualification and filler material control, is well defined and includes monitoring by quality control. However, a weakness in the welder qualification program was identified and is discussed in paragraph 2. In the area of welding, one violation was identified (paragraph 2) for failure to follow procedures and ASME Section IX Code requirements for qualifying welding procedure specifications.

DETAILS

1. Persons Contacted

GSU

- \*J. C. Deddens, Senior Vice President
- \*T. F. Plunkett, Plant Manager
- \*M. F. Sankovich, Manager, Engineering Department
- \*T. L. Crouse, Manager, Quality Assurance
- \*K. F. Suhrke, Manager, Project Management
- \*J. E. Booker, Manager, River Bend Oversight
- \*L. A. England, Director, Licensing
- \*W. H. Odell, Manager, Administration
- \*G. Mahan, Senior Welding Engineer
- \*J. R. Hamilton, Director, Design Engineering
- \*T. L. Weir, Director, Materials Management
- \*M. S. Feltner, Engineer - Nuclear Licensing
- \*A. J. Kugler, Process System Supervisor
- \*J. W. Cook, Lead Environment Analyst - Licensing

NRC

- \*E. J. Ford, Senior Resident Inspector
- \*W. B. Jones, Resident Inspector

The NRC inspector also interviewed other licensee employees during the inspection.

\*Denotes attendance at exit interview conducted on March 31, 1989.

2. Welding Activities (55050 and 55100)

a. Review of Welding Program and Procedures

The NRC inspector reviewed the licensee's program for controlling safety-related welding activities to assure that welding is controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements. The following licensee documents were included in the review:

- ° Procedure No. ENG-3-003, "Repair/Replacement Program," Revision 1
- ° Procedure No. EDP-ME-61, "Handling of ASME Section XI Repair/Replacement Packages and Preparation of NIS-2 Reports," Revision 4
- ° Procedure No. SPP-7001, "General Welding Procedure ASME/ANSI," Revision 2



- ° Procedure No. SPP-7004, "Qualification of Welding Procedure Specification," Revision 3
- ° Procedure No. SPP-7006, "Welder Performance Qualification Procedure," Revision 6
- ° Procedure No. SPP-7009, "Storage, Handling and Issuing Filler Material," Revision 5
- ° Procedure No. SPP-7010, "Preparation of Weld Data Sheets," Revision 3
- ° Procedure No. QCI-3.11, "Monitoring of Welders, Brazers and Welding Operators," Revision 4

In addition to the above programmatic procedures, the following welding procedure specifications (WPSs) and their supporting procedure qualification reports (PQRs) were reviewed:

- ° WPS W3-01, Revision 4
- ° WPS W3-02, Revision 4
- ° WPS W3-08-TW, Revision 0

In reviewing the WPSs and their supporting PQRs, the NRC inspector identified two discrepancies concerning the qualifications of WPSs. The first discrepancy noted was that the 500°F maximum interpass temperature specified by WPS W3-01, Revision 4, was not qualified by the supporting PQRs for materials requiring impact properties and postweld heat treatment. The only testing performed to qualify materials requiring impact properties and postweld heat treatment is documented in PQR 86-1-2 which is dated April 16, 1986. The maximum interpass temperature recorded on this PQR is 325°F; therefore, the maximum interpass temperature qualified would be 425°F as required by paragraph QW-406.3 of ASME Code Section IX. The second discrepancy noted was that the qualification of WPSs was not accomplished using the latest edition and current addenda of Section IX as required by Procedure SPP-7004. For example, PQRs 88-11-WP and 89-88-TW-2 state that the qualifications were performed in accordance with Section IX, 1986 Edition and 1986 Addenda when the current addenda at the time was the Winter 1987 Addenda for one and Summer 1988 Addenda for the other. The failure to comply with procedural requirements and ASME Section IX Code requirements in qualifying welding procedure specifications is an apparent violation. (458/8912-01)

b. Observation of Work Activities

The NRC inspector inspected the storage, handling, and issue of welding filler material for compliance with Procedure SPP-7009. The welding material was stored in a designated area of the main tool

issue room and only issued to welders by personnel that had received training on Procedure SPP-7009. The welding material storage ovens were within the temperature range specified in Procedure SPP-7009 for each type of coated electrode. The welding materials were marked with heat and lot numbers for traceability to the manufacturer's certified material test report and receiving inspection report.

The NRC inspector observed the visual inspection by Quality Control personnel of the four Class 2 pipe welds in the 14-inch diameter residual heat removal system. A modification of the system was being made to install an orifice plate in two pipe lines. The carbon steel pipe lines were identified as 1RHS014-062-2 and 1RHS014-9-2. The receiving inspection documents for the welding material used on the welds were reviewed for compliance with procurement requirements. The qualification records of the six welders that welded on these four welds were reviewed for compliance with the requirements of Procedure SPP-7006. All six welders were qualified using the bend test which is a less stringent test than the optional radiographic test. The initial radiographic examinations of the four pipe welds were all rejected by Quality Control. This high reject rate would indicate a weakness in the licensee's welder qualification program.

c. Review of Records

The NRC inspector reviewed seven completed weld data sheets. Three of the welds were made as part of a valve replacement in a 6-inch diameter Class 1 pipe line in the reactor core isolation cooling system. Four of the welds were made as part of a modification to delete a bypass line and valve in a 1 1/2-inch diameter Class 1 pipe line in the reactor water cleanup system. The piping lines and welds are listed below:

- ° Line 1-ICS-006-6-1: Welds XI-FW002, XI-FW003, and XI-FW004
- ° Line 1-WCS-003-006-1: Welds XI-FW004, XI-FW005, XI-FW006, and XI-FW007

The weld data sheets were retrievable, readable, and complete.

3. Exit Interview

An exit interview was conducted on March 31, 1989, with those personnel denoted in paragraph 1. At the exit interview, the NRC inspector informed the licensee that the failure to follow procedures for qualifying welding procedure specifications is an apparent violation. No information was presented to the NRC inspector that was identified by the licensee as proprietary.



# INSPECTOR'S REPORT

Office of Inspection and Enforcement

REVIEWER: *Gilbert, Leslie D*  
*I Barnes*

INSPECTOR'S																																																	
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REPORT

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INSPECTOR'S REPORT  
(Continuation)

Office of Inspection and Enforcement

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Contrary to Criterion IX of 10 CFR Part 50 and Procedure SPP-7004, two discrepancies were identified concerning the qualifications of welding procedure specifications. The first discrepancy is that Welding Procedure Specification W3-01, Revision 4 specifies a 500 F maximum interpass temperature which was not qualified by the supporting procedure qualification reports for materials requiring impact properties and post weld heat treatment. The maximum interpass temperature recorded on Procedure Qualification Report No. 86-1-2 is 325 F, therefore the maximum interpass temperature qualified is 425 F per paragraph 406.3 of ASME Code Section IX. The second discrepancy is that welding procedure specification qualifications are not being accomplished using the latest edition and current addenda of Section IX, for example, Procedure Qualification Reports 88-11-WP and 89-88-TW-2 state that the qualifications were performed in accordance with Section IX, 1986 Edition and 1986 Addenda when the current addenda at the time was the Winter 1987 Addenda for one and Summer 1988 Addenda for the other.