

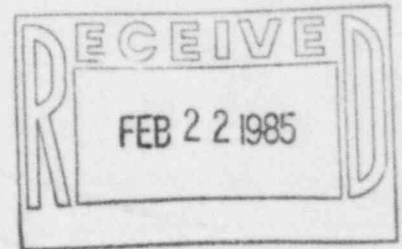


GULF STATES UTILITIES COMPANY

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February 19, 1985
RBG-20180
File Nos. G9.5, G9.25.1.1

Mr. Robert D. Martin, Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV, Office of Inspection and Enforcement
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011



Dear Mr. Martin:

River Bend Station Unit 1
Docket No. 50-458
Interim Report/DR-246

On January 18, 1985, GSU notified Region IV by telephone that it had determined DR-246 concerning a linear indication and the minimum wall thickness of a Benjamin F. Shaw shop weld to be reportable under 10CFR50.55(e). The attachment to this letter is GSU's interim 30-day written report pursuant to 10CFR50.55(e)(3) with regard to this deficiency. An interim or final report will be provided by March 29, 1985.

Sincerely,

J. E. Booker
Manager-Engineering,
Nuclear Fuels & Licensing
River Bend Nuclear Group

JEB/~~ADD~~/lp

Attachment

cc: Director of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC Resident Inspector-Site

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ATTACHMENT

February 19, 1985
RBG- 20180

DR-246/Minimum wall thickness and a linear indication of
Benjamin F. Shaw Shop Weld

Background and Description of the Problem

The deficiency concerns minimum wall thickness violations and a linear indication as identified in Nonconformance and Disposition Report (N&D) No. 7219. Preservice inspection of Benjamin F. Shaw Company (Shaw) shop weld 3 on line 1-RHS-010-15-2 revealed minimum wall violations and a linear indication. These deficiencies were described as follows:

1. On approximately 25 percent of the butt weld arc length, the wall thickness measures less than 87.5 percent of nominal, thus violating the ASME II material specification. Three measurements also revealed ASME III design minimum wall thickness (t_m) violations.
2. The linear indication was 1/4-in. long and ran diagonally across the weld.

These deficiencies were initially discovered during an inspection of vendor radiographs and were verified by ultrasonic testing. The extent of this deficiency is under investigation.

The exact cause of the deficiencies could not be determined. However, a review of Shaw documentation indicates that fabrication operations may have contributed to the problem. The sequence of operations performed on weld 3 during fabrication was traced using the following Shaw documents, Shaw Detail Drawing No. RHS-1042, Shaw Shop Traveler, Radiographic Inspection Report, and Reject Forms.

These documents show that the weld required repair three times before its acceptance. The first radiographic inspection revealed porosity, slag, and a lack of fusion in the weld, while the next two showed a crack in the same area. In each case, the weld was built up after grinding and visual and magnetic particle inspections. The weld then passes a final dimensional check and Shaw QC inspections. The extensive rework performed by Shaw may have led to the thinning of the joint. The origin of the linear indication could not be determined, since the indication was removed and the area repair welded.

Safety Implication

For the weld in question, certified material test reports (CMTRs) show that the weld filler metal exceeds the requirements of the base pipe. Therefore, if the weld metal is considered as base material, it can be classified as SA106, Grade C, with a higher stress allowable than the SA106, Grade B base pipe. Design minimum wall thickness (t_m) for a pipe made of SA106, Grade C, with the same size and design conditions as line 1RHS-010-15-2 is 0.232 in. (Calculation No. PP-054). This (t_m) is less than the lowest ultrasonic thickness measurement reported on^m N&D No. 7219. However, since the linear indication was found to be 1/16-in. deep, the remaining wall thickness in this area was only 0.218 in. Therefore, had the deficiency remained uncorrected, the possibility of failure would exist.

Failure of line 1-RHS-010-15-2 due to insufficient wall thickness would result in unacceptable consequence for the plant's emergency core cooling system (ECCS). A failure in this line would prevent the residual heat removal (RHR) loop B from performing its two safety-related design basis modes of low-pressure core injection (LPCI) and suppression pool cooling (SPC). Postulating a loss-of-coolant accident and applying the single failure criterion (loss of the Division I diesel generator) results in having RHR pump C for LPCI and no RHR loop available for SPC. The safe operations of the plant could therefore be adversely affected by this condition.

Corrective Action

This problem was corrected by grinding out the linear indication and building up the weld and adjacent areas as necessary to meet pipe wall requirements. Any additional corrective action, as a result of ongoing investigation, will be included in a subsequent report.