

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-458/84-34

Permit: CPPR-145

Docket: 50-458

Category: A2

Licensee: Gulf States Utilities (GSU)  
P. O. Box 2951  
Beaumont, TX 77704

Facility Name: River Bend Station (RBS)

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

Inspection Conducted: November 1 through December 31, 1984

Inspector: *J. P. Chamberlain*  
for P. O. Chamberlain, Senior Resident Inspector

1/23/85  
Date

Approved: *J. P. Jaudon*  
J. P. Jaudon, Chief, Project Section A,  
Reactor Project Branch 1

1/23/85  
Date

Inspection Summary

Inspection Conducted November 1 through December 31, 1984  
(Report 50-458/84-34)

Areas Inspected: Routine, unannounced inspection of licensee action on previous inspection findings, site tours, preoperational test procedure review, review of licensee preparations for nuclear fuel receipt, and witness of preoperational testing. The inspection involved 130 inspector-hours onsite by one NRC inspector.

Results: Within the areas inspected, one violation was identified in the area of preoperational test witnessing (failure to follow preoperational test procedure).

8502050245 850128  
PDR ADOCK 05000458  
G PDR

DETAILS

1. Persons Contacted

Principal Licensee Employees

- R. E. Bailey, Supervisor, Quality Control
- B. Brown, Senior Nuclear Engineer
- \*E. F. Christnot, Quality Assurance (QA) Engineer
- \*T. F. Crouse, QA Manager
- \*P. J. Dautel, Licensing Staff Assistant
- \*J. C. Deddens, Vice President, River Bend Nuclear Group
- \*D. R. Derbonne, Supervisor, Startup and Test
  - L. England, Supervisor, Nuclear Licensing
- \*P. E. Freehill, Superintendent, Startup and Test
- \*T. O. Gray, Special QA Assistant
- \*J. R. Hamilton, Supervisor, Nuclear Steam Supply System Projects
- \*G. R. Kimmell, Supervisor, Operations QA
  - W. D. Leonard, Engineer, Startup and Test
  - J. L. Pawlik, Engineer, Startup and Test
- \*T. F. Plunkett, Plant Manager
- \*S. R. Radebaugh, Assistant Superintendent, Startup and Test
  - B. Reed, Director, Nuclear Licensing
  - J. Simmons, Reactor Engineer
- \*R. B. Stafford, Director, Quality Services
  - B. Sutor, Engineer, Startup and Test
- \*P. F. Tomlinson, Director, Operations QA

Stone and Webster

- \*F. W. Finger, III, Project Manager, Preliminary Test Organization
- \*B. R. Hall, Assistant Superintendent, Field Quality Control
  - J. Schram, Quality Control
- \*R. L. Spence, Superintendent, Field Quality Control

General Electric Company

- \*T. E. Sigman, Quality Control Representative

The NRC senior resident inspector (SRI) also interviewed additional licensee, Stone and Webster (S&W), and other contractor personnel during this inspection period.

\*Denotes those persons that attended the exit interview.

The NRC SRI for construction also attended the exit interview.

2. Licensee Action on Previous Inspection Findings

- a. (Closed) Violation (458/8415-02): Construction deficiency reports (CDRs) that documented the removal of items from the residual heat

removal system punch list were not completed in accordance with procedural requirements.

In addition to assuring proper closure of the CDRs with identified discrepancies, CDRs in other Category I systems were checked to assure proper closeout via field quality control (FQC) signoff. Only 2 of 275 Category I CDRs reviewed were inappropriately removed from the punch list prior to FQC signoff of the CDR. These two items were subsequently closed out by inspection report T4000089.

Procedure PTPD 5.6, "Punch Lists and Work Item Tracking During Equipment Release and Testing," was revised to simplify CDR processing and to delete nonessential signatures and entries. The SRI verified that the CDR deletions were either nonessential or were adequately recorded on other documents such as the rework control forms, nonconformance and disposition reports, or inspection reports. Training in the new requirements of CDR processing has been completed for preliminary test organization and FQC personnel.

This item is closed

- b. (Closed) Open Item (458/8322-02): Gulf States Utilities' (GSU) method for assuring that applicable elements of the quality assurance (QA) program were scheduled for audit was not clear to the SRI.

GSU has developed an audit matrix system which cross references scheduled audits to activity and audit criteria and to 10 CFR Part 50, Appendix B, criteria. Starting in 1985, GSU plans to develop the audit schedule/audit matrix on a 2-year cycle, and the audit matrix will be used to provide some assurance that all applicable elements of the QA program are scheduled for audit.

This item is closed.

### 3. Site Tours

The SRI toured areas of the site during the inspection period to gain knowledge of the plant and to observe general job practices. The site tours conducted included a plant walk through as a member of the case load forecast panel with a review of the standby liquid control system, the control rod drive system, and the rod control and information system. During the review of the control rod drive system, it was noted that certain valves on the hydraulic control units had valve bonnet bolts without full thread engagement through the valve body flange. This issue was pursued by the SRI and it was noted that the valves were supplied by General Electric (GE) Company. The GE site personnel contacted believed that only one bolt diameter thread engagement was required and they requested confirmation of this from the GE San Jose design office. The SRI was provided a telefax copy of a memo from the GE Nuclear Services Products Department which provided the results of calculations performed to verify minimum thread engagement requirements. In all cases, the

minimum thread engagements requirements were well within the actual thread engagements for the valves in question.

No violations or deviations were identified in this area of inspection.

4. Preoperational Test Procedure Review

The SRI selected 1-PT-052, "Control Rod Drive Hydraulic Preoperational Test," Revision 1, for a detailed administrative and technical review. It was noted during this review that certain Final Safety Analysis Report (FSAR), Chapter 14, test commitments did not appear to be fully implemented by the procedure. The specific items noted in FSAR Section 14.2.12.1.11 were:

- "1.e. To verify the failure mode of the CRD system on loss of power."
- "3.j. The CRD pumps are tripped and the time for accumulator inoperable alarms to occur is recorded as baseline data."
- "4.f. All scram valves open on a loss of instrument air to the CRD system."

This item is essentially identical to the deviation found during this inspection report period and promulgated by NRC Inspection Report 84-38. The licensee's corrective action for the previous deviation was a complete verification that FSAR commitments for preoperational tests were, in fact, incorporated in the appropriate test procedure. Since the licensee's corrective action was not completed, this second example of the deviation reported in NRC Inspection Report 84-38 is noted, but not issued as a separate deviation. It is, however, considered to be an open item so that the NRC inspector can assure that this specific example is addressed by the licensee's corrective action to the deviation reported in NRC Inspection Report 84-38 (8434-01).

Except for the specific concerns noted above, the control rod drive hydraulic preoperational test appeared to address applicable administrative and technical requirements and commitments.

No violations or deviations were identified in this area of inspection.

5. Licensee Preoperations for Nuclear Fuel Receipt

This area of inspection was conducted to review the licensee schedule and preparations for nuclear fuel receipt, possession, inspection, and storage at River Bend Station (RBS). GSU submitted a special nuclear material (SNM) license application to the NRC Fuel Licensing Branch on November 15, 1984, and requested the term of the license to begin January 15, 1985.

The types of equipment required for fuel receipt and inspection include fire protection/detection, bridge crane, fuel servicing, radiation monitoring, instrument air, communications, etc. It was noted that GSU

plans to use portable area radiation monitors with local alarms while completing the testing of the permanent digital radiation monitoring system. The personnel involved with fuel receipt and inspection include maintenance (fuel handling), fire protection, radiation protection, security, and quality control (fuel inspection). All required procedures have been drafted and reviewed with only 4 out of 30 left to receive final approval.

The SRI discussed the fuel receipt schedule and preparations with GSU personnel, and it was determined that they plan to receive the first fuel cask shipments beginning February 1, 1985. All activities required for support of fuel receipt are scheduled to be completed by February 1, 1985. The license application identifies four potential storage locations for new fuel. These locations are (a) new fuel storage vault-fuel building, (b) spent fuel pool-fuel building, (c) fuel pool-containment building, and (d) temporary storage area. All of these locations, except for the fuel pool-containment building, are scheduled to be complete in support of the February 1, 1985, fuel receipt date. However, GSU presently only plans to store the new fuel in the spent fuel pool area.

The SRI noted during this review that the activities required to support the new fuel receipt are scheduled with very little contingency time prior to the February 1, 1985, date. Also, certain key activities, such as completion of system testing and personnel training, are scheduled after January 15, 1985, when the license has been requested. However, the SRI was assured that all license conditions for the fuel storage areas used would be met prior to receipt of fuel by GSU. The NRC Uranium Fuel Licensing Branch has been informed of the above scheduling information by NRC Region IV.

GSU plans to conduct a dry run of fuel receipt activities on January 14, 1985, which will exercise all groups required to support fuel receipt. The SRI will monitor this dry run and will conduct further inspection of fuel receipt activities prior to GSU receipt of fuel.

No violations or deviations were identified in this area of inspection.

#### 6. Witness of Preoperational Testing

The SRI witnessed portions of the control rod drive system preoperational test and the "B" standby diesel generator test during this inspection period as discussed below.

- a. Control Rod Drive System - The control rod drive system preoperational testing is still in progress. The SRI observed testing performance for initial rod coupling/rod overtravel verification, differential pressure testing including obtaining oscilloscope waveform traces of the differential pressures moving through the hydraulic control units during the test mode. The traces obtained were then compared to waveform traces showing normal differential hydraulic pressures for the same mode of operation.

Irregularities noted in the waveform traces are then diagnosed to reveal any system defects requiring corrective action. Some of the traces obtained revealed solenoid valve operation problems, potential check valve problems, etc. All of the identified problems are being diagnosed and corrected as required.

Control rod drive system testing remaining includes single rod scram timing, full control rod scram test, scram on backup scram valves, and scram discharge volume verification. The SRI will continue to monitor this testing as performed.

- b. "B" Standby Diesel Generator - Except for clearing of test exceptions, the "B" standby diesel generator preoperational testing is complete. The SRI observed testing performance for logic testing and loaded acceptance runs. The loaded acceptance runs included 14 runs for 1 hour at 75% load, 1 run for 24 hours at 100% load and 2 runs for 4 hours at 100% load. During the test witnessing, the SRI noted that the test engineer signed off on step 7.12.3.1.C for verification of a "READY TO LOAD" energized condition without the existence of a "READY TO LOAD" condition. Also, step 7.12.15 required the operator to pick up load on the diesel generator in accordance with interim operating instruction (IOI) 309.2, but IOI 309.2 was not available at the local test location or in the control room. These two instances of failure to follow the "B" standby diesel generator preoperational test procedure are examples of an apparent violation of 10 CFR Part 50, Appendix B, Criterion V (8434-02). A quality control engineer performing a routine surveillance also observed the improper signing of step 7.12.3.1.C, and an unsatisfactory inspection report (84-520U) was issued to effect immediate corrective action for both of the above conditions.

No major mechanical problems or difficulties were encountered during the conduct of the "B" standby diesel generator preoperational test.

## 7. Exit Interview

An exit interview was conducted January 4, 1985, with licensee representatives (identified in paragraph 1). During this interview, the SRI reviewed the scope and findings of the inspection.