

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-458/85-39

Construction Permit: CPPR-145

Docket: 50-458

Licensee: Gulf States Utilities
P. O. Box 2951
Beaumont, Texas 77704

Facility Name: River Bend Station

Inspection At: St. Francisville, Louisiana

Inspection Conducted: May 20-25, 1985

Inspector: *J. P. Jaudon* 6/20/85
C. C. Harbuck, Reactor Inspector, Project Section A Date
Reactor Project Branch 1

Approved: *J. P. Jaudon* 6/20/85
J. P. Jaudon, Chief, Project Section A, Reactor Date
Project Branch 1

Inspection Summary

Inspection Conducted May 20-25, 1985 (Report 50-458/85-39)

Areas Inspected: Routine, unannounced inspection of preoperational test performance, preoperational test results, licensee actions concerning previous inspection findings, and the corrective action taken for deficiencies previously reported pursuant to 10 CFR Part 50.55(e).

The inspection involved 58 inspector-hours onsite by one NRC inspector.

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

DETAILS

1. Persons Contacted

Gulf States Utilities

T. C. Crouse, Manager, Quality Assurance
J. D. Davis, Supervisor, Quality Assurance Engineering
L. A. England, Supervisor, Nuclear Licensing
P. E. Freehill, Superintendent, Startup and Test
K. J. Giadrosich, Operations Quality Assurance Engineer
G. V. King, Plant Services Supervisor
D. J. Krueger, Supervisor, Engineering Administration
T. W. Overlid, Process Systems Supervisor
T. F. Plunkett, Plant Manager
J. E. Spivey, Operations Quality Assurance Engineer
R. B. Stafford, Director Quality Services
P. F. Tomlinson, Director Operations Quality Assurance

Stone & Webster Engineering Corporation

B. R. Hall, Assistant Superintendent, Field Quality Control
H. E. Stubbs, Supervisor, Field Quality Control
W. T. Tucker, Assistant to Superintendent of Engineering

All of the persons listed above were present at the exit meeting on May 24, 1985. In addition to these, other licensee personnel were contacted in the areas of startup and test, quality assurance, and licensing.

2. Licensee Actions on Previous Inspection Findings

a. (Closed) Deviation (8438-01) Failure to meet FSAR commitments for standby diesel generator preoperational testing. The two commitments from FSAR Section 14.2.12.1.36 were:

- (1) Paragraph 3.h - performance of two tests specified in paragraphs 3.d and 3.e (automatic starting and loading) within 5 minutes after completion of the 24-hour load test.

The FSAR indicates that the actual Emergency Core Cooling System (ECCS) loading sequence will be used to load the diesel for this test. Contrary to this, the licensee stated, in their January 28, 1985, letter of response to the NRC, that a more conservative test had been performed in that, once in parallel with the grid, the diesel was loaded at a faster rate than the ECCS loading sequence.

The NRC inspector therefore concluded that this FSAR commitment appeared to have been satisfied.

- (2) Paragraph 3.1 - demonstration that the capability of the diesel generator to supply standby power within the required time is not impaired during periodic surveillance testing.

The licensee responded to this commitment by issuing two procedures, SST-24-1 and SST-24-2, which specifically performed this test, for each standby diesel. The NRC inspector reviewed the procedures and concluded that they appeared to satisfy this FSAR commitment.

Corrective action to avoid further deviations in this area consisted of comparing all FSAR preoperational test commitments against all licensee preoperational test procedures. The adequacy of this review was verified in a previous inspection (50-458/85-13).

This item is considered to be closed.

- b. (Open) Open Item (8513-01) Standby diesel generator jacket water system/service water system engineering analysis.

The licensee committed to perform an engineering analysis of the standby diesel generator cooling systems to ascertain why the nominal jacket water standby temperature could not be maintained at the manufacturer's recommended temperature of around 150°F, and to propose corrective action, if necessary.

The NRC inspector reviewed a draft of the engineering report. Its conclusions were as follows: The inability to maintain the jacket water temperature around 150°F when in standby was because of two reasons: (1) When the diesel is in the standby condition, service water is required to be continuously circulating at full flow through the jacket water cooler. This is because there are no automatically operated isolation valves in the service water header, either to or from the cooler; and (2) during cold weather the service water temperature drops sufficiently to induce convective heat transfer from the jacket water system to the service water; i.e. natural circulation. As a result of this additional heat loss, even with the jacket water system electric heaters in continuous operation, the jacket water equilibrium temperature drops to well below 150°F (temperatures of as low as 87°F have been recorded). The report proposed the following solution to this problem: to isolate service water to the jacket water cooler during standby conditions by adding an air operator to an existing butterfly valve in the service water supply to the cooler. The air operator would be designed so that the valve would fail open. The NRC inspector noted that this solution was general in nature, and that many of the engineering details had yet to be worked out. Therefore, this item will remain open until the licensee completes the system alteration and has satisfactorily tested it.

The NRC inspector also noted that the engineering report concluded that the inability to maintain the jacket water system at nominal temperatures would not affect the operability of the standby diesels, and is therefore not a safety concern. However, in that maintaining the nominal 150°F standby temperature enhances engine reliability, it is the NRC inspector's opinion that the completion of the above system alteration is important to safety.

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

3. Preoperational Test Witness

The purpose of this part of the inspection was to verify that the licensee was performing preoperational testing in accordance with the approved procedures and regulatory requirements.

The NRC inspector witnessed portions of the following preoperational tests as noted:

a. 1-PT-508, Reactor Protection System

- Section 7.16.7, 7.16.15, and 7.16.16; control room trip unit and annunciator logic checks.
- Section 7.17; trip unit time response checks. Many attempts to perform this section were made. None were successful, apparently due to faulty test equipment.

b. 1-PT-502, Rod Control System

- Section 7.11, step 8; test scram of all control rods using the backup scram valves.

No problems were noted with the conduct of the tests.

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

4. Preoperational Test Results

The purpose of this area of the inspection was to verify that the acceptance criteria for each procedure reviewed had been met and that the licensee had reviewed the procedure and resolved all test exceptions in accordance with the Startup Manual.

The NRC inspector reviewed the results of the following completed preoperational test procedures:

- 1-PT-309-1, Standby Diesel Generator 1EGS*EG1A
- SST-14, Load Shedding and Sequencing
- 1-PT-201, High Pressure Core Spray System

No problems were noted.

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

5. Review of the Corrective Actions for Licensee Identified Construction Deficiencies

The purpose of this part of the inspection was to determine the adequacy of actions taken by the licensee to correct construction deficiencies identified to the NRC pursuant to the requirements of 10 CFR Part 50.55(e).

The NRC inspector checked the corrective actions along with the supporting documentation for each deficiency for the following attributes:

- That the deficiency was properly determined to be "Reportable";
- That the applicant submitted a written report to the NRC within 30 days as required by 10 CFR Part 50.55(e)(3);
- That the specific hardware deficiency had been corrected such that it no longer exists;
- That adequate permanent corrective action was taken to preclude a repeat of the deficiency in the future;
- That sufficient documentation existed containing a clear description of the deficiency, the causes, an analysis of the safety implications, and what remedial actions were taken; and
- That the final report submitted to the NRC contained sufficient information to permit analysis and evaluation of the deficiency and of the corrective action.

The NRC inspector found that the following deficiencies had been dispositioned according to regulatory requirements (outlined by the attributes noted above). The completion of the corrective action for each deficiency was verified by a review of the supportive documentation and, where possible, a visual inspection of the system repairs or alterations. All four deficiencies had been designated by the licensee as "reportable," as defined by 10 CFR Part 50.55(e)(1).

<u>Deficiency Report Number</u>	<u>Description of the Problem</u>	<u>Initial Notification Date</u>	<u>GSU Final Report Letter</u>
270	Out of tolerance gaps between the guard pipe and lateral restraints for containment wall nonradial penetrations.	11-28-84	RBG-20274/02-14-85

<u>Deficiency Report Number</u>	<u>Description of the Problem</u>	<u>Initial Notification Date</u>	<u>GSU Final Report Letter</u>
272	Pins for 7 of the 8 spring-can hangers supporting the two reactor recirculation pumps were not removed as required during system hot flow test.	12-06-84	RBG-20486/03-21-85
276	Potential failure of the Reactor Core Isolation Cooling pump suction isolation valve to the Condensate Storage Tank could lead to an unmonitored radiological release.	12-26-84	RBG-19993/01-25-85
281	Seismic analysis for the Iodine Removal Charcoal Filter housings invalid due to nonuniform contact between the housing steel bearing channels and their concrete mounting surfaces.	02-27-85	RBG-20818/04-26-85

These four construction deficiencies are considered closed.

No violations or deviations were noted in this area of the inspection.

6. Exit Meeting

The NRC inspector conducted an exit meeting with the personnel listed in paragraph 1 of this report on May 24, 1985. The NRC senior resident inspector for operations also attended. At this meeting the results of the inspection were summarized.