

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION IV

Report No. 50-458/81-01

Docket No. 50-458

Category A2

Licensee: Gulf States Utilities
Post Office Box 2951
Beaumont, Texas 77704

Facility Name: River Bend, Unit No. 1

Inspection at: River Bend Site

Inspection Conducted: January and February 1981

Inspector: *W. A. Crossman* 3/24/81
for A. B. Beach, Resident Reactor Inspector, Projects Section
No. 3 Date

Approved: *W. A. Crossman* 3/24/81
W. A. Crossman, Chief, Projects Section No. 3 Date

Inspection Summary:

Inspection During January and February 1981 (Report No. 50-458/81-01)

Areas Inspected: Routine, announced inspection by the Resident Reactor Inspector (RRI) including follow up to a previous inspection finding; primary shield wall erection; and concrete placement activities. The inspection involved 116 inspector-hours by one NRC inspector.

Results: Of the two major areas inspected, no violations or deviations were identified in one area; one violation was identified in the area of concrete placement (violation - failure to properly record amount of water added to concrete in truck - paragraph 5).

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DETAILS

1. Persons Contacted

Principal Licensee Employees

- *T. C. Crouse, Director, Quality Assurance
- *R. B. Stafford, Supervisor, Quality Assurance
- K. C. Hodges, QA Engineer
- R. R. Doggart, QA Engineer
- C. L. Ballard, QA Engineer
- E. A. Troncelliti, QA Engineer
- *J. E. Wimberly, Superintendent, Site Construction
- J. R. Dunkelberg, Assistant Superintendent, Site Construction
- J. W. Leavins, Director, Site Engineering

Stone and Webster Personnel

- *C. D. Lundin, Manager, Project Quality Assurance
- *R. L. Spence, Superintendent, Field Quality Control (FQC)
- *J. D. Davis, Assistant Superintendent, FQC
- *W. I. Clifford, Resident Manager
- *E. A. Sweeney, Superintendent, Engineering
- K. E. Conrad, QA Engineer
- J. J. Zullo, QA Engineer
- *G. M. Byrnes, Assistant Superintendent, FQC

Other Personnel

R. C. Wheeler, Quality Assurance, National Mobile Concrete Corporation

The RRI also interviewed other licensee and Stone and Webster personnel during this inspection period.

*Denotes those persons with whom the RRI held on-site management meetings during the inspection period.

2. Action on Previous Inspection Finding

(Open) Infraction (50-458/80-05): Failure to Follow Site Procedures for Utilization of Qualified Inspection Personnel for the Performance of Site Inspection Activities. During a review of concrete cylinder compressive strength reports, the RRI determined by date of signatures that Level II inspector's review of seven day test results, as documented on Inspection Reports IRS 000 7462 (dated 1/4/81) and IRS 000 7409 (dated 1/3/81), was not performed in a reasonable time after the Level I inspector performed the tests. The contractor has reorganized the civil testing laboratory personnel to include two new Level II supervisors to ensure adequate review of all test reports.

This item will remain open pending review of further corrective action.

3. Site Tours

The RRI toured the safety-related plant areas several times weekly during the inspection period to observe the progress of construction and the general practices involved.

No violations or deviations were identified.

4. Primary Shield Wall Accident

On January 25, 1981, at approximately 3:30 p.m., while being moved on its transporter, the primary shield wall sustained damage when the transporter overturned.

On January 29, 1981, the Gulf States Utilities Quality Assurance Director reported, in a memorandum to the Executive Vice President, the results of his investigation to determine the circumstances contributing to the primary shield wall accident. The following is a summary of this report:

Interviews were conducted to establish facts related to the incident. From these interviews, it was determined that the primary shield wall (PSW) was apparently moved without appropriate notifications, "at the whim of the rigging supervisor." Since Stone and Webster had never accomplished a move of equipment of this vertical height, site management should have been more involved in the move.

The investigation report also included a review of procedures and drawings for the transport of the shield wall to the designated work area. The review of procedures included an evaluation for adequacy and implementation. The procedures reviewed were: QS-13.1, Revision B, "Handling and Rigging"; CMP-10.1, Revision A, "Rigging on Nuclear Power Plants"; MPC-10.4, Revision A, "Heavy Construction Equipment Operator Qualification"; and FRP-5, Revision 0, "Field Rigging Procedure for Transporting the Primary Shield Wall." Two procedural violations were noted, as follows:

- a. QS-13.1, Revision B, paragraph 6.2.4 requires the construction department to notify FQC prior to performing any scheduled lifts or equipment tests for Class "A" lifts.

Contrary to this requirement, FQC was not notified by the construction department prior to transporting the PSW. On the day of the accident, FQC only monitored the last five minutes of the move.

- b. CMP-10.1, Revision A, paragraph 4.2.8 and FRP-5, Revision 0, paragraph 4.5.1 require the rigging supervisor to brief all parties participating in, or directly affected by, the handling and transport operation regarding their duties and/or obligations.

Contrary to this requirement, FQC was not briefed by the rigging supervisor. The review of Procedure FRP-5, Revision 0 indicates that parts of the procedure require additional direction and clarification to adequately control the transport of the PSW. Numerous procedural inadequacies were also noted in the investigation report.

A review of the drawings included in the transporting procedure revealed that Sheet 1, Issue 2 and Sheet 3, Issue 1 were not checked.

The report stated, "if the procedure violations had been prevented and the transporting procedure had provided better controls, the chances of the accident occurring would have been reduced." The report concluded that "the fact that the calculations did not take all factors into account, lack of proper management attention, a poorly written procedure, inadequate communications, and finally a rigging supervisor exercising poor judgement, were all contributing factors" to the accident.

The licensee reported this incident to the Region IV Office in accordance with the requirements of 10 CFR Part 50.55(e).

The above deficiency is a violation of a legally binding requirement, but this violation will not be cited in accordance with Section IV.A of the Interim Enforcement Policy, 46 FR 66754 (October 7, 1980), because it was identified and reported by the licensee and met the additional tests for violations that will not be cited.

5. Concrete Placement Activities

The RRI continued to monitor placements and review records related to the concrete consistency problems identified in the NRC Inspection Report No. 50-458/80-13. A report was prepared by the Field Quality Control Organization "to attempt to identify problems related to mixing, delivering and placing concrete and to measure the progress made in minimizing and eliminating these problems." This report, "Concrete Production Summary and Analysis," was reviewed by the RRI and was found to be a significant aid in measuring concrete consistency improvements.

The RRI, during a review of concrete placement records, determined that on January 26, 1981, during the final water addition to a truck load of concrete identified on Batch Ticket 16574, the National Mobile Concrete Corporation (NMCC) QA Director, recorded that 12 gallons were added to the truck load. However, data on the batch ticket indicated that 9 gallons was the maximum amount of water allowed to be added without exceeding the allowed water-cement ratio. The number on the batch ticket was subsequently crossed out and replaced by "9" gallons.

Stone and Webster Specification 210.350, Revision 2, "Specification for Mixing and Delivering Concrete," states that, "the amount of withheld water added and slump measured after the final addition of water shall be recorded on truck delivery tickets."

The RRI determined that the NMCC QA Director did not verify conformance with the documented procedure, in that, he did not actually verify the amount of final water added to the truck for entry on the truck delivery ticket. Thus, this is considered to be a violation of Criterion X of Appendix B to 10 CFR Part 50; i.e., failure to properly record the amount of water added to concrete in truck.

Subsequently, Stone and Webster batch plant inspection personnel, upon discovery that the original batch ticket information had been changed, initiated a type C Inspection Report, IRS 1000 329, documenting that 12 gallons of water had been actually added.

6. Management Interviews

The RRI met with one or more of the persons identified in paragraph 1 of January 16, 30 and February 28, 1981, to discuss various inspection findings and to discuss licensee actions and positions.