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

REGION IV

Report No. 50-458/80-12

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: November 18-21, 1980

Inspector: _____ 12/5/80
J. I. Tapia, Reactor Inspector, Engineering Support Section Date

Other Accompanying:
Personnel: W. B. Jones, Engineering Aide (Co-op)

Approved: _____ 12/5/80
W. A. Crossman, Chief, Projects Section Date

_____ 12/5/80
R. E. Hall, Chief, Engineering Support Section Date

Inspection Summary:

Inspection on November 18-21, 1980 (Report No. 50-458/80-12)
Areas Inspected: Routine, unannounced inspection of concrete and backfill placement activities. The inspection involved twenty-eight hours by one NRC Inspector.
Results: In the areas inspected, two Violations were found in the area of concrete placement (Violation - insufficient lighting of concrete placement - paragraph 3; and Violation - water/cement ratio exceeded the maximum allowable - paragraph 3).

DETAILS

1. Persons Contacted

Principal Licensee Employees

*T. C. Crouse, Director of Quality Assurance
J. R. Dungelberg, Assistant Superintendent of Site Construction
P. D. Graham, QA Engineer
J. E. Wimberly, Superintendent of Site Construction

Other Personnel (Stone and Webster)

D. Castleberry, Senior QC Engineer - Structural Steel Welding
*A. Kamdor, Resident Engineer
S. King, QC Inspection Supervisor - Soils
H. Patton, Senior QC Inspector - Cadwelds
S. Salowitz, Senior QC Inspector - Civil
D. Wells, Chief QC Inspection Supervisor

The IE Inspector also talked with other licensee employees and contractor personnel including members of the QA/QC and engineering staffs.

*Denotes those attending the exit interview.

2. Backfill Placement

Placement of Category I backfill in the areas north and east of the Diesel Generator Building was observed during this inspection. Work activities were found to conform with the requirements of S&W Construction Methods Procedure No. 2.2, Revision 0, "Earthwork," and Quality Assurance Directive No. 10.4, Revision A, "Earthwork Inspections." Maximum loose lift thickness and minimum compactor passes were specifically addressed.

Stone & Webster Specification No. 210.100, Revision 1, "Site Development Work," delineates the requirements and acceptance criteria contained in the implementing procedures for both backfill placement and testing. The IE Inspector reviewed the results of five relative density tests performed during the period November 12-19, 1980. The tests were performed in accordance with ANSI/ASTM D 2049-69, "Standard Test Method for Relative Density of Cohesionless Soils." Five test results from the same period performed in accordance with ANSI/ASTM D 422-63 (1972), "Standard Method for Particle - Size Analysis of Soils," were also reviewed. The Calibration Checklist for the Vibratory Table used in the relative density tests was also reviewed. All records reviewed were found to indicate conformance with the design specification requirements.

No violations or deviations were identified.

3. Concrete Placement

The IE inspector observed portions of concrete placement No. SC4-W-85-7; a 3'-6" exterior radius wall in the No. 1 Standby Cooling Tower, between azimuths 150° and 180° and extending from elevation 64'-6" to 84'-6". During the inspection, it was observed that the bottom of the form was dark, such that the consolidation of the concrete could not be adequately determined from the top of the form where the S&W QC Inspector was observed to be performing his inspection. The S&W QC Inspector did not have a flashlight for observing the consolidation. S&W Specification No. 210.370, Revision 5, "Placing Concrete and Reinforcing Steel," requires that lighting that can improve the placement of concrete be used wherever practicable. This requirement was applicable to the placement in question since it was a twenty foot deep wall which resulted in poor visibility on the date of placement. In addition, the failure of the QC Inspector to carry a flashlight indicates that the consolidation and therefore placement of the concrete was not improved but rather left to judgements conducted in poor visibility. This constitutes a Violation, in that the specification procedure was not followed.

In-process testing results at the field QC station were also reviewed during placement No. SC4-W-85-7. A review of the batch tickets disclosed that ticket No. 14335 indicated that 10 additional gallons of water were allowed for jogging at the pumping station. The ticket indicated that 12 gallons were actually added. The actual water to cement ratio, computed from the information on the batch ticket, was 0.397. The maximum allowable water to cement ration for this mix H3 is 0.394, in accordance with S&W Specification No. 210.350, "Specification for Mixing and Delivering Concrete." S&W Quality Assurance Directive No. 10.2, Revision B, "Inspection of Batch Plant, Concrete, Reinforcing Steel, and Grout," requires that water additions be checked to assure the maximum amount allowed by Specification No. 210.350 is not exceeded. The fact that the maximum amount of water allowed was exceeded, and that the concrete was subsequently placed, represent a failure to follow quality control procedures.

This is a Violation.

4. Exit Interview

The IE Inspector met with the licensee and contractor representatives denoted in paragraph 1 at the conclusion of the inspection on November 21, 1980. The scope and findings of the inspection were summarized.