

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

Report: 50-458/82-11

Docket: 50-458

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

Facility Name: River Bend, Unit 1

Inspection at: River Bend

Inspection Conducted: August 1, 1982 through August 31, 1982

Inspector: Ross L. Brown
Ross L. Brown, Senior Resident Inspector

9/27/82
Date

Approved: W. A. Crossman
W. A. Crossman, Chief
Reactor Project Section B

10/4/82
Date

Inspection Summary:

Inspection Period August 1-31, 1982 (NRC Inspection Report 50-458/82-11)

Areas Inspected: Routine, announced inspection by the Senior Resident Inspector (SRI) including site tour; follow up of previous inspection findings; document control; licensee identified construction deficiencies; and electrical system installation. The inspection involved 104 hours by the NRC Resident Inspector.

Results: Within the areas inspected, no violations or deviations were identified. One unresolved item (8211-01) is identified in paragraph 5.

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DETAILS1. Persons ContactedPrincipal Licensee Employees

- *P. D. Graham, Director, Quality Assurance
- R. B. Stafford, Supervisor, Quality Assurance
- *K. C. Hodges, NRC Compliance Coordinator, Quality Assurance
- M. A. Walton, Director, Site Engineering
- W. J. Reed, Director, Nuclear Licensing (Beaumont)
- L. A. England, Lead Licensing Engineer (Beaumont)
- R. J. King, Licensing Engineer (Beaumont)
- R. W. Oprea, QA Engineer
- R. E. Turner, Consultant, Quality Assurance
- *V. J. Normand, Construction Supervisor
- *G. R. Kimmell, QA Engineer

Stone and Webster Personnel

- *R. L. Spence, Superintendent, Field Quality Control (FQC)
- R. B. Hall, FQC Senior Engineer
- N. W. Pressler, FQC Chief Inspection, Electrical
- R. J. Fay, FQC Supervisor, Electrical
- *J. J. Zullo, QA Engineer
- D. K. Smith, Records Supervisor, Document Control (DC)
- E. Tomchek, FQC Office Supervisor, (DC)
- D. D. Castleberry, FQC Inspection Supervisor
- C. A. Goody, Resident Manager
- *E. A. Sweeney, Superintendent, Engineering
- *W. I. Clifford, Senior Construction Manager
- *G. M. Byrnes, FQC Assistant Superintendent
- *K. F. Kennedy, Records Administrator
- *R. J. Brigham, Engineering Assurance

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

*Denotes those persons that attended the management interview.

2. Site Tour

The SRI toured most areas of the site during the inspection period to observe construction progress, general job practices, housekeeping, and fire protection.

3. Licensee Action on Previous Inspection Findings

(Closed) Violation (50-458/80-14): Failure to Contain Untreated Water Runoff From Spoil Deposit Area. The spoil area has been resloped and curbed as stated in GSU letter RBG-9647, dated February 9, 1981, and appears to contain the untreated water. This item is considered closed.

(Closed) Violation (50-458/80-14): Failure to Prevent the Release of Used Petroleum Products to the Environment. The underground storage tanks and retaining curb was constructed at the vehicle maintenance shop as stated in the GSU letter RBG-9647, dated February 9, 1981. This item is considered closed.

4. Follow up on Licensee Identified Deficiency Reports

(Closed) Deficiency Report (DR 50/GSU letter RBG-12,599 dated May 5, 1982): "Failure of Power Strut Model PS-809." The SRI reviewed the nonconformance and disposition report (N&D) that stated PS-809 did not meet the ultimate load capacity given in Vendor Catalog No. 20.3R, when tested in accordance with the procedure for testing of welded power strut and unistrut items.

The Nonengineered Item Data sheet 0032 of Specification 211.161, "Non-engineered Items," was revised to delete Power Strut PS-309 from the list for use as a Category I seismic strut-type support.

Technical justification states that PS-809 has not been installed and is not to be installed in any Category I installation. It also states that PS-809 brackets may be used in Category II and III areas.

The disposition of this deficiency appears to be satisfactory for the River Bend site (RBS). This item is considered closed.

(Closed) Deficiency Report (DR 52/GSU letter RBG-12,684 dated May 24, 1982): "Unsatisfactory Test Results of Load Indicating Washers (LIW)." The SRI reviewed the report of a problem dated April 30, 1982, that described the LIW problem as follows.

"Load indicator washers (LIW) are designed to reflect a bolt tension greater than or equal to the required minimum bolt tension specified by AISC, when tightened in a connection to a .015-inch gap. In efforts to establish installation requirements for special slip connections in the Reactor Building utilizing 3/4-inch diameter black LIWs, it was observed that six of a sample of sixteen tested closed to less than a .015-inch gap at or below the required minimum bolt tension of 28 kips. These washers represent a sample taken from a lot of 9,000 comprised of four heats (1204/3, 1202/2, 1232/2, and 1246/6) which were all accepted for use on site as a result of testing by the vendor at a rate of three per heat in accordance with Specification 211.161, control R0076."

These washers were all received onsite prior to the vendor receiving the requirement to increase testing frequency to three per keg rather than three per heat; therefore, these LIW's were tested by S&W personnel with unsatisfactory results.

The SRI reviewed S&W letter RBS-7720, dated June 18, 1982, to GSU that states, in part, that the testing of the LIW's was conducted primarily to verify a secondary requirement of allowable variation in pretension (+10 percent, -5 percent) in a bolt using an LIW. This secondary requirement is for certain steel framing connections in the reactor building. Certain connections in the reactor building have been designed with an acceptable range of pretension in bolts. If such pretension is not achieved, steel members may slide in an axial direction at a load that is less than the designated load. Such sliding does not reduce the load-bearing capacity of the connections or the integrity of the framing. In the event of dynamic loading, steel members might rattle because of the reversible nature of loading. Such rattling is undesirable but does not affect the integrity of the steel framing.

LIW's are also used in other friction connections of other Category I buildings. LIW's used in friction connections may slide if proper pretension cannot be achieved, and the connections may become bearing connections. Such sliding does not reduce the load-bearing capacity of the connections or the integrity of the framing.

None of the lot of 9,000 LIW's were installed in field connections, and all have been returned to the vendor. If the LIW's in the lot of 9,000 had been installed, the resulting construction would not have adversely affected the safety of operations of the nuclear power plant. In addition, the vendor has revised his QA program by increasing his testing frequency.

It appears that this problem has been resolved at the RBS and is not reportable under 10 CFR 50.55(e) requirements.

(Closed) Deficiency Report (DR 57/ GSU letter RBG-12,760 dated May 27, 1982): "Incorrectly Fabricated Piping." The SRI reviewed N&D No. 2407 and S&W letter RBS-7800, that identified the questionable pipe as the lower portion of the discharge piping for the 16 main steam safety-relief valves, starting with the elbow at the inlet to each quencher up to and including the first elbow inside each drywell penetration.

The problems were identified as follows:

"The lower portion of the piping (16 lines) was designed as 10-inch, Schedule 80 stainless steel pipe, with a 0.954-inch wall thickness. The piping provided was schedule 80S stainless steel, which has a 0.500-inch wall thickness.

"In addition, the elbows entering the top of the quenchers were required to be Schedule 100, but were also provided as Schedule 80S."

The S&W letter RBS-7800 states the justification and/or disposition as follows:

"A computerized analysis of the initial design was made, taking into account the conservatism in the original calculations, to determine the effect of the reduction in pipe wall thickness. The results indicated that the local stress in the pipe wall with the reduced thickness is within the ASME Code allowable limits. The piping is acceptable and will be retained.

"In the case of the elbows, a review of the original calculations indicated that ASME Code allowable stresses would have been met with essentially no margin. Since the elbows were also incorrectly endrepped on one end, they are being replaced with the proper size elbows to provide additional stress margin.

"The problem identified is a deviation from performance specifications, the ASME Code allowable stresses would not have been exceeded, and the piping would not have failed. Hence, the safety of operation of the nuclear power plant would not have been affected."

It appears that this deficiency has been satisfactorily resolved at RBS and is not reportable under 10 CFR 50.55(e) requirements.

5. Document Control

The SRI reviewed the following documents to determine that procedures have been established to control the issuance of documents such as procedures, specifications, and drawings, including changes thereto.

- a. Engineering Assurance Procedure (EAP) 6.1, "Document Control"
- b. EAP 6.2, "Distribution of Process Procedures"
- c. EAP 6.3, "Preparation, Review, Approval, and Control of E&DCR"
- d. RBP 12.0-11, "Engineering & Design Coordination Report (E&DCR) Procedure"
- e. RBP 2.0-1, "General Procedure for the Preparation and Maintenance of Project Specifications"

Procedures identified in 5.a, b, c, and e, appear to assure that the approved documents, including changes, are distributed to the work station where the activity is performed and the obsolete document either destroyed or identified.

Procedure RBP 12.0-11 is vague in how to determine that an outstanding E&DCR covers a one-time deviation (nongeneric change) and does not require a specification addendum or revision to be issued to incorporate the E&DCR within the 1 or 2 months time limit specified by the procedure.

S&W management stated that they will review the applicable procedures and take the necessary action to clarify the requirement. This area will remain an unresolved item (8211-01) until the clarification has been made and the area reexamined.

The document history and distribution is maintained and controlled by a computer system. The RBS document control department (DC) has verified the accuracy of the computer controlled distribution of the documents.

The SRI reviewed the following documents to verify conformance with the procedural requirements.

- a. Computer Printout - Monthly document listing and daily supplement.
- b. Computer Printout - Complete documentation history.
- c. Thirteen E&DCR's related to the nonactive Specification No. 228.000, Revision 1, Addendum 3, "Piping Engineering and Design."
- d. Twenty-five E&DCR's related to active Specification No. 248.000, Revision 4, Addendum 1, "Electrical Installation."

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

6. Electrical Systems Installation

The SRI reviewed the inspection plan, drawings, and records related to the installation that includes the placement, alignment, and securing the various panels, etc., in the control room.

The Inspection Plan R 1248000, FO 524, Revision 0, Change 0, inspection reports, inspection work sheets, and activities observed were found to be in accordance with S&W Specification 248.000, Revision 4, Addendum 1, and applicable drawings.

No violations or deviations were identified in this area.

7. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations, or deviations. Unresolved items disclosed during this inspection are discussed in paragraph 5.

8. Management Interviews

The SRI met with one or more of the persons listed in paragraph 1 at various times during the inspection period. A meeting was conducted on September 7, 1982, to discuss the scope of the inspection and findings with those persons identified by an asterisk in paragraph 1.

INSPECTOR'S REPORT
Office of Inspection and Enforcement

ROSS L. BROWN

REVIEWER

W. A. GROSSEMAN

INSPECTORS
ROSS L. BROWN

LICENSEE/VEKDOR	TRANSACTION TYPE	DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)	REPORT		NEXT INSP. DATE	
			NO.	SEQ.	MO.	YR.
GULF STATES UTILITIES X	I - INSERT M - MODIFY D - DELETE R - REPLACE	05000458	8211	A		
				B		
				C		
				D		

PERIOD OF INVESTIGATION/INSPECTION						INSPECTION PERFORMED BY		ORGANIZATION CODE OF REGION/HQ CONDUCTING ACTIVITY (See IEMC 0530 Manpower Reporting—Weekly Manpower Reporting, for code)		
FROM			TO			OTHER		REGION	DIVISION	BRANCH
MO	DAY	YR.	MO	DAY	YR.	1 - REGIONAL OFFICE STAFF 2 - RESIDENT INSPECTOR 3 - PERFORMANCE APPRAISAL TEAM				
08	01	82	20	31	82		4	C	A	

REGIONAL ACTION (Check one box only)	TYPE OF ACTIVITY CONDUCTED (Check one box only)				
<input checked="" type="checkbox"/> 1 - NRC FORM 591 <input checked="" type="checkbox"/> 2 - REGIONAL OFFICE LETTER	<input checked="" type="checkbox"/> 02 - SAFETY 03 - INCIDENT 04 - ENFORCEMENT 05 - MGMT. AUDIT	06 - MGMT. VISIT 07 - SPECIAL 08 - VENDOR 09 - MAT. ACCT.	10 - PLANT SEC. 11 - INVENT. VER. 12 - SHIPMENT/EXPORT 13 - IMPORT	14 - INQUIRY 15 - INVESTIGATION	

INSPECTION/INVESTIGATION FINDINGS (Check one box only)				TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS				ENFORCEMENT CONFERENCE HELD				REPORT CONTAIN 2,790 INFORMATION				LETTER OR REPORT TRANSMITTAL DATE					
A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	MO.	DAY	YR.	MO.	DAY	YR.
<input checked="" type="checkbox"/>																					
1 - CLEAR 2 - VIOLATION 3 - DEVIATION 4 - VIOLATION & DEVIATION																OCT 7 1982					

MODULE INFORMATION														MODULE INFORMATION													
REC. ORD.	MODULE NUMBER INSP.				PRIORITY	DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	MODULE REQ. FOLLOWUP				REC. ORD.	MODULE NUMBER INSP.				PRIORITY	DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	MODULE REQ. FOLLOWUP					
TYPE	NUMBER	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER					LEVEL	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL	TYPE	NUMBER	PHASE	MANUAL CHAPTER					PROCEDURE NUMBER	LEVEL	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL
B	23107038	A			010						B	2510530	A			014											
B	2927028	A			020						B																
B	109902103	A			040						B																
B	23179948	A			020050						B																

* CIRCLE SEQUENCE IF VIOLATION OR DEVIATION