APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-458/84-21 Construction Permit: CPPR-145
Priority: A2

Docket: 50-458

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

Facility Name: River Bend Station (RBS)

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

Inspection Conducted: July 16-20, 1984

Inspectors: _____ 8-17-84
L. E. Fllershaw, Reactor Inspector Date
(paras. 1, 2, 3, 4, 6)

_____ 8-17-84
C. C. Harbuck, Reactor Inspector Date
(paras. 1 5, 6)

Approved: _____ 8/17/84
L. E. Martin, Chief, Project Section A, Date
Reactor Project Branch 2

_____ 8/17/84
J. P. Jaudon, Chief, Project Section A, Date
Reactor Project Branch 1

Inspection Summary

Inspection Conducted July 16-20, 1984 (Report 50-458/84-21)

Areas Inspected: Routine, unannounced inspection of preoperational test procedures; procurement document control; receipt, storage, and handling of equipment and materials; and IE Bulletin followup. The inspection involved 59 inspector-hours onsite by two NRC inspectors.

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

DETAILS

1. Persons Contacted

Principal Licensee Personnel

*T. L. Crouse, Manager, Quality Assurance (QA)
*G. V. King, Supervisor, Technical Materials/Services
*J. E. Booker, Manager, Engineering, Fuels, and Licensing
*R. B. Stafford, Director, Quality Services
*P. D. Graham, Assistant Plant Manager
*G. E. Kelley, Supervisor, Nuclear Procurement
*J. G. Cadwallader, Supervisor, Emergency Planning
*R. J. Backen, Operations QA Engineer
*J. H. McQuirter, QA Engineer, Systems
*P. F. Gillespie, QA Engineer
*W. K. Anders, Senior QA Engineer, Systems
*P. F. Tomlinson, Supervisor, Operations QA
*W. H. Odell, Director, Nuclear Training
*T. O. Gray, Director, Operations QA
*G. R. Kimmell, Supervisor, Operations Quality Control (QC)
*J. Deddens, Vice President, River Bend Nuclear Group

Stone and Webster Engineering Corporation (SWEC) Personnel

*R. L. Spence, Superintendent, Field Quality Control (FQC)
*B. R. Hall, Assistant Superintendent, FQC
*C. D. Whitlock, Supervisor, FQC, Receiving Department
G. Lee, Supervisor, QC
R. Beaudet, Chief Inspector
K. Kennedy, QC Inspector
G. Boone, Supervisor, Material Control
W. Clarke, Senior Purchasing Agent

The NRC inspectors also contacted other licensee personnel including administrative, quality assurance, and test personnel.

*Denotes those attending the exit interview conducted on July 20, 1984.

2. Procurement Document Control

The NRC inspector reviewed the procurement document control section in Chapter 17 of the RBS Preliminary Safety Analysis Report (PSAR) dated March 1983; SWEC Procedure QS-4.1-RB, Revision 0, "Procurement Document Review"; Revision J to Section 7 of SWEC's Quality Assurance and Control Manual, "Procurement Control"; and SWEC Specification No. 211.180, "Procurement of ASME Section III Materials."

In addition, 13 purchase orders (POs) to vendors of ASME Code items and their applicable requisitions were examined to verify that required reviews and approvals had been performed. Each PO was reviewed to assure

that the applicable regulatory requirements (e.g., compliance with 10 CFR Part 21), material requirements (ASME or ASTM material specifications), technical requirements (ASME Section III), and a QA program in accordance with ANSI N45.2 and/or ASME NCA-3800 had been invoked. The requisitions were additionally compared against the issued POs and the Approved Vendor List in order to assure that approved vendors had been utilized and that the issued POs were consistent in requirements with the original requisitions.

Within this area of the inspection, no violations or deviations were identified.

3. Receipt, Storage, and Handling of Equipment and Materials

The NRC inspector reviewed the receiving inspection commitments contained in: (a) Chapter 17 of the PSAR dated March 1983; (b) Section 8 of SWEC's Quality Assurance and Control Manual, Revision K dated December 17, 1982, "Receiving Inspection, Identification, Storage, and Handling Control"; and (c) SWEC Procedure QS-7.1, Revision D dated July 11, 1980, "Receiving Inspection."

Documentation packages applicable to the 13 POs reviewed in paragraph 2 were examined to verify that required vendor documentation submittals were complete and that receiving inspections had been performed to assure compliance of received items with PO requirements. The documentation packages consist of material requisitions, copies of the POs, material receiving reports, QC inspection reports, and either Certified Material Test Reports or Certificates of Conformance supplied by the vendors.

Within this area of the inspection, no violations or deviations were identified.

4. IE Bulletin Followup

For the IE Bulletin listed below, the NRC inspector verified that the bulletin was received by the licensee management, that a review for applicability was performed, and that the required actions had been taken, i.e., conducting an evaluation to demonstrate that the materials were suitable for intended service, or replacing discrepant materials with materials which have been manufactured in full compliance with ASME Code, Section III and the applicable procurement specification requirements.

IEB 83-06 Nonconforming Materials Supplied By Tube-Line Corporation Facilities at Long Island City, New York; Houston, Texas; and Carol Stream, Illinois.

As a result of GSU completing all required actions, this item is considered closed.

5. Preoperational Test Procedure Review

An indepth review of Preoperational Test Procedure 1-PT-201-1, Revision 1, High Pressure Core Spray (HPCS) was performed, including a walkthrough of Section 7.3 of the procedure with the responsible test engineer. The following comments were made at the exit interview in the interest of improving test procedures by reviewing each one from the standpoint of the person actually directing the procedure, as well as ensuring that it is technically accurate and meets all test requirements.

Sentence fragments, phrases, and statements in lieu of specific directions using complete sentence structures were widely used. In some cases this could cause confusion in that the exact meaning of some steps appears to be open to interpretation. For example, step 7.3.3.10e specifies an 800 Vac limit, in parenthesis, for a voltage drop. It is possible to interpret this either as a limit of 800 Vac below initial line voltage, or as a limit to not go below 800 Vac upon starting the HPCS main pump.

Some steps either describe a method, or reference a procedure to perform a specific task, but imply that the task could be done other ways without specifying the approved alternatives. An example is step 7.1.2.46 which directs that a certain relay be energized in order to activate its corresponding annunciator. It then provides "a possible method" for energizing the relay, thus indicating that other methods, unspecified, are permissible.

Prerequisite 3.1.4 directs that the completion of annunciator prerequisite tests be verified per Data Sheet 9.1 prior to step 7.3.2. Data Sheet 9.1 is completed by performing various steps in Sections 7.1 and 7.2. Rather than addressing its completion in Section 3.0 as an overall procedural prerequisite, it would appear to be more effective by placing it just prior to step 7.3.2 in the form of a verification step. This would also resolve an apparent conflict regarding the present policy for releasing the procedure for performance by the Joint Test Group. This policy requires that all prerequisites (Section 3.0) be completed prior to releasing the procedure for performance (i.e., performance of Section 7.0). Clearly step 3.1.4 cannot be completed as written, prior to beginning Section 7.0.

A precaution is more effective if the reason behind it, if not obvious, is included. Several precautions had no explanation. A precaution or limitation is also more effective if the limiting or undesirable condition is specified in terms of a system parameter(s) that can be read directly from a gauge or meter or determined by direct observation. Precaution 5.12 addresses the need to ensure adequate NPSH prior to and during operation of any pump and to clean the pump suction strainer as necessary. But it does not give a practical method for quickly ensuring adequate NPSH such as specifying a minimum reading on the condensate storage tank water

level meter, or a minimum reading on the main pump suction pressure gauge, neither does it describe how to determine the strainer differential pressure (DP), much less what DP warrants cleaning the strainer.

Precaution steps 5.10 and 5.11 state the maximum allowable vibration and full load current, but do not address the equipment that these limits apply to (presumably the HPCS main pump).

There was one example of two unrelated actions in the same procedure step with only one sign off provided (step 7.1.1.2).

There were several typographical errors. Step 7.1.2.27.b denoted the wrong Data Sheet. The note on page 26 denoted the wrong initial condition; i.e., step 6.8 was specified rather than the correct step 6.11. Page 2 of Enclosure 11.9 (Restoration Valve Lineup) did not indicate the desired position for valve V36.

Step 7.1.2.57.a requires a verification that HPCS initiation occurs. The HPCS system has several modes of operation and in this part of the procedure the HPCS pump breaker C001 is racked out. Thus, it is unclear as to what must be checked to verify HPCS initiation as it pertains to this part of the procedure.

Independent verification of procedure peformance is accomplished by QA personnel. Test instruction 2, page 11 of the RBS Startup Manual states that the preoperational test supervisor stamps the QA verification signature block at the desired steps in the procedure just prior to the Joint Test Group releasing the procedure for performance. However, this process is not used in the performance of the initial and restoration valve lineups, Enclosures 11.5 and 11.9. One person ensures that each valve is in the position prescribed in the valve lineup sheet. However, that person does not sign or initial the valve lineup sheet; the test engineer does. There is no requirement for anyone, test engineer included, to second check the valve positions. This valve alignment method is used throughout the preoperational test program. The NRC inspector expressed concern that this method could lead to alignment problems, especially in procedures where the valve lineup consisted of several hundred valves, such as in Preoperational Test Procedure 1-PT-204, "Residual Heat Removal System." Recognizing this concern, the applicant stated his position that a two-party valve lineup method was unnecessary for the Preoperational Test Program. This will be further reviewed at a future inspection and is considered to be an open item (8421-01)

No violations or deviations were identified.

6. Exit Interview

The NRC inspectors met with licensee representatives denoted in paragraph 1 and Mr. Dwight D. Chamberlain, NRC senior resident inspector, at the conclusion of the inspection on July 20, 1984. The NRC inspectors summarized the purpose, scope, and findings of the inspection.