

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION

REGION IV

NRC Inspection Report: 50-458/85-54

Construction Permit: CPPR-145

Docket: 50-458

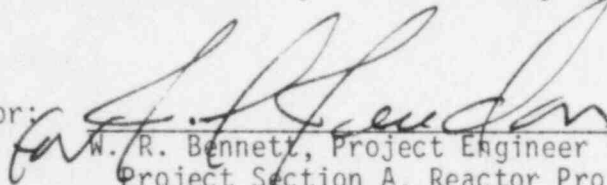
Licensee: Gulf States Utilities  
P. O. Box 2951  
Beaumont, Texas 77704

Facility Name: River Bend Station

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

Inspection Conducted: July 22-26 and July 31-August 2, 1985

Inspector:

  
W. R. Bennett, Project Engineer  
Project Section A, Reactor Projects Branch

10/4/85  
Date

Accompanying

Personnel: P. J. Conlan, Consultant  
F. P. Drake, Consultant

Approved:

  
C. P. Jaudon, Chief, Project Section A  
Reactor Projects Branch

10/4/85  
Date

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Inspection Summary

Inspection Conducted July 22-26 and July 31-August 2, 1985 (Report 50-458/85-54)

Areas Inspected: Routine, unannounced inspection of preoperation test results evaluation and IE Bulletin followup. The inspection involved 144 inspector-hours onsite by one NRC inspector and two NRC consultants.

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

DETAILS

1. Persons Contacted

Gulf States Utilities (GSU)

W. H. Benkert, Lead Quality Engineer  
\*M. F. Cassada, Supervisor - Radiation Programs  
\*J. V. Conner, Supervisor - Environmental Services  
\*P. J. Dautel, Licensing Staff Assistant  
\*J. D. Davis, Quality Assurance (QA) Engineer  
\*J. C. Deddens, Vice President  
D. R. Derbonne, Preoperations Testing Supervisor  
\*S. L. Driscoll, Radiological Engineer Supervisor  
\*J. R. Dunkelberg, Supervisor - Task Contracting  
\*R. T. Dunn, Lead HVAC Startup and Test  
\*R. G. Easlick, Radwaste Supervisor  
\*L. A. England, Supervisor - Nuclear Licensing  
\*D. R. Gipson, Assistant Plant Manager  
\*P. D. Graham, Assistant Plant Manager  
\*R. W. Helmick, Director - Projects  
\*B. E. Hey, Engineer  
\*D. Hill, Staff Specialist (Maintenance)  
D. Jernigan, Startup Engineer  
\*G. R. Kimmell, Supervisor Operations QA  
\*G. V. King, Plant Services Supervisor  
\*A. Kowalczyk, Assistant Plant Manager  
\*T. G. Murphy, Supervisor - Planning and Scheduling  
\*C. L. Nash, Chemistry Supervisor  
\*I. F. Plunkett, Plant Manager  
\*S. R. Radebaugh, Assistant Superintendent Startup and Test  
\*D. M. Reynerson, Director - Nuclear Plant Engineering  
\*J. E. Spivey, Operations QA Engineer  
\*R. R. Stafford, Director Quality Services  
\*K. E. Suhrke, Manager - Project Planning and Coordination

Other Contractor Personnel

\*J. M. Albert, Assistant Project Manager, Nuclear  
Engineering Services (NES)  
\*L. L. Bettis, NES Manager  
\*G. T. Hamilton, Senior Vice President-NES  
\*R. E. Perkins, Resident Engineer, Cajun Electric  
\*D. C. Tolbert, Vice President of Construction, Cajun Electric  
\*W. T. Tucker, Assistant to Superintendent of Engineering,  
Stone and Webster  
\*J. B. Warner, Project Manager, NES

The NRC inspector also contacted other site personnel including administrative, clerical, operations, testing, and inspection personnel.

\*Denotes those attending the exit interview on July 26, 1985.

2. Licensee Action on Previous Inspection Findings

- a. (Closed) Open Item 8522-10: Requirements for qualification of contract personnel for special processes have not been addressed.

Review of River Bend Procedure MSP-0011, "Certification of Training of Personnel for Special Processes," Revision 1, dated July 5, 1985, determined that requirements for qualification of contract personnel for special processes has now been adequately addressed.

This item is closed.

- b. (Closed) Unresolved Item 8413-01: Source inspection of containment electrical penetrations.

Source inspection of the penetrations was performed to existing inspection criteria. Stone and Webster inspection plan R1241211P0001 has been revised to require more stringent inspection of electrical penetrations. This plan will be utilized in the inspection of electrical penetration required as spare parts.

This item is considered closed.

- c. (Closed) Open Item 8537-01: Review of information on high pressure core spray (HPCS) diesel generator battery rack hold down brackets.

During an inspection conducted between May 6 and May 10, 1985, the NRC inspector noticed that the battery hold down brackets were not installed as they appeared on the drawing (General Electric Drawing No. VPF-3778-05(1) - 2). The brackets were bolted to the rack structure, but they were not holding down the batteries; i.e., they were not in contact with the top surface of the cells. The applicant was unable to produce documentation by May 10 that addressed this apparent deficiency as being acceptable. While on-site on July 24, 1985, the NRC inspector was presented with a letter dated May 21, 1985, from the battery rack manufacturer to General Electric Co. This letter stated that the hold down brackets may be excluded when the zero period acceleration (ZPA) is 1.0g (gravity) or less, and no excessively high accelerations (+3.0g) exist in the 17 to 20 Hertz fundamental frequency range of the battery rack. The applicant has certified in their response to this open item that the accelerations in the area of the battery rack installations are less than 0.5g for both cases, thus the installation is acceptable.

This item is considered closed.

- d. (Closed) Open Item (8520-02): Implementation of a reference tracking system.

The NRC inspector reviewed River Bend Procedure, ASP-0002, "River Bend Station Reference Tracking System," Revision 1, dated July 28, 1985, and interviewed licensee personnel about the reference tracking system. The NRC inspector determined that the reference tracking system is in place and being utilized for procedure updating required for changes to Technical Specifications. The licensee plans on continuing to implement the reference tracking system for other applicable references.

This item is considered closed.

- e. (Closed) Violation (8432-01): Documentation of "LATERS"

Corrective action consisted of a review of procedures to determine any "LATERS" page deficiencies and correction of any deficiencies. The NRC inspector reviewed results of the corrective action and reviewed procedures for "LATERS" deficiencies.

This item is considered closed.

- f. (Closed) Unresolved Item (8429-02): Timely Updating of Drawings

The NRC inspector reviewed the program for updating drawings. Piping and Instrument Drawings (P&IDs) and flow diagrams are required to be revised when three changes are identified. In addition, P&IDs in the control room are required to be "red-lined" showing any change to the drawing. The NRC inspector inspected a sample of the P&IDs and found them to be "red-lined" as required. No requirement exists for "red-lining" of flow diagrams in the control room. Interviews with operators in the control room determined that the operators, in an emergency, would utilize the flow diagrams. At this time, flow diagrams are not updated by "red-lining" and the applicable changes to the flow diagrams are not readily available in the control room. This is considered an open item (458/8554-01). The program for updating drawings is otherwise considered satisfactory.

This item is considered closed.

### 3. Preoperational Test Results Evaluation

The objective of this portion of the inspection was to assure that the licensee is performing an adequate evaluation of test results and to ensure that all test data is either within established acceptance criteria or that deviations are properly dispositioned.

The NRC inspector reviewed completed preoperational test procedure 1-PT-508, "Reactor Protection System Preoperational Test." Two test

exceptions were outstanding and properly documented on the master punch list. All other test exceptions were properly documented and dispositioned. The NRC inspector found that the procedure had been properly signed off for completion by the cognizant test engineer and properly reviewed by the joint test group. All test results were found to be within the acceptance criteria.

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

4. IE Bulletin Followup

The objective of this portion of the inspection was to determine the status of IE Bulletins.

a. IE Bulletin 80-07 - Cracking and Failure of Jet Pump Hold-Down Beam Assemblies

Item - Cracking and/or failure of jet pump hold-down beams has been experienced at several BWRs. Analysis has shown that these cracks were caused by intergranular stress corrosion.

Findings - The license preloaded the jet pump hold-down beams to 25,000 pounds as required by the FSAR. A visual inspection of the hold-down beams has been satisfactorily completed as required by the bulletin. The licensee has committed to include performance of UT inspection of the hold-down beams in the ISI plan. This bulletin is considered open pending issuance of the ISI plan.

b. IE Bulletin 78-14 - Deterioration of Buna-N Components in ASCO Solenoids

Item - Deterioration of Buna-N components in Control Rod Drive (CRD) system and Hydraulic Control Units (HCUs) has been noted and can cause failure of CRD.

Findings - Service and shelf life on Buna-N components have been determined to be 7 years. The Buna-N components in the safety-related HCUs were replaced in November 1984. The licensee is developing a schedule for replacement of the Buna-N components. This bulletin is considered open until a Buna-N component replacement plan has been approved.

c. IE Bulletin 81-03 - Flow Blockage of Cooling Water to Safety System Components by Corbicula Sp. (Asiatic Clam) and Mytilus Sp (Mussel)

Item - Several plants have experienced degraded cooling water Flow rates in systems exposed to river water due to intrusion of Asiatic clams or mussels. In some cases this has resulted in Technical Specification violations and plant shutdown.



Findings - Analysis of the exposure potential, the monitoring and sampling program, the detection instrumentation, the mechanical and chemical barriers, and the clarifier show that the licensee has an effective control program. This bulletin is considered closed.

- d. IE Bulletin 78-05 - Malfunctioning of Circuit Breaker Auxiliary Contact Mechanism - General Electric (GE) Model C5105X

Item - Misoperation of a GE Model CR105X auxiliary contact mechanism installed on a circuit breaker has been reported. Misoperation is because of surface roughness causing binding.

Findings - This model auxiliary contact mechanism is not used at River Bend Station in any safety-related function. This bulletin is considered closed.

- e. IE Bulletin 80-14 - Degradation of BWR Scram Discharge Volume Capability

Item - Two plants reported problems with Scram Discharge Volume float switches. One plant reported concurrent problems with the associated drain valves.

Findings - River Bend Station design provides for redundant float switches and redundant vent and drain valves. Surveillance Test Procedures (STPs) verify that the drain valves are open and require periodic cycling of the valves to demonstrate operability. STPs require float switch device calibration which demonstrates float switch operability by cycling the float switch full stroke in both directions. This bulletin is considered closed.

- f. IE Bulletin 80-17 and Supplements 1 through 5 - Failure of 76 of 185 Control Rods to Fully Insert During a Scram at a BWR

Item - A plant experienced difficulty in getting control rod drop due to problems with the Scram Discharge Volume. Subsequently, other BWRs were determined to have similar problems.

Findings - GE, the reactor system supplier, issued a generic engineering change notice for BWR/6 type plants. This change, documented in Engineering and Design Coordination Reports C 18180, 50831, and 18050, has been completed. This bulletin is considered closed.

- g. IE Bulletin 79-12 - Short Period Scrams at BWR Facilities

Item - Three plants reported short period scrams on approach to criticality. All scrams were associated with "notch override" withdrawal.

Findings - Review of rod withdrawal procedures, general operating procedures, training procedures, and the overall operator training program shows that the operators have been trained in the area of concern and that compliance with procedures will effectively resolve the concern. This bulletin is considered closed.

- h. IE Bulletin 80-10 - Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity to Environment

Item - A plant auxiliary boiler was inadvertently radioactively contaminated because of temporary use to supply steam to a radioactive waste evaporator. An ensuing firebox tube leak resulted in uncontrolled release of radioactive contaminants to the off-site environment.

Findings -- The licensee has identified and addressed areas of potential cross-contamination, and is evaluating requirements for further monitoring. This bulletin is considered closed.

- i. IE Bulletin 83-03 - Check Valve Failures in Raw Water Cooling Systems of Diesel Generators

Item - Several plants have reported failures of check valves in diesel generator cooling water systems. Some failures have caused obstruction of coolant flow.

Findings - The licensee has not approved STPs to check reverse and forward flow through these valves periodically, or to disassemble and inspect these valves periodically. This bulletin is considered open pending approval and review of these STPs.

- j. IE Bulletin 79-21 - Temperature Effects on Level Measurement

Item - Increased temperature during a Loss of Coolant Accident (LOCA) introduces errors in steam generator level measurement in PWR reactors that must be taken into consideration in emergency situations.

Findings - Annunicator systems at River Bend Station are designed to compensate for drywell temperature changes which could occur during an emergency condition. In addition, operating procedures provide operators with liquid level measurement indication errors which could occur during emergencies. This bulletin is considered closed.

- k. IE Bulletin 81-02 and Supplement 1 - Failure of Gate Valves to Close Against Differential Pressure



Item - Atomic Power Research Institute testing revealed that gate valves produced by several manufacturers failed to fully close against differential pressure.

Findings - It was determined that the valves that failed are not in use at River Bend Station. This bulletin is considered closed.

1. IE Bulletin 83-05 - ASME Nuclear Code Pumps and Spare Parts Manufactured by the Hayward Tyler Pump Company (HTPC)

Item - An NRC investigation required performance tests of all ASME code pumps manufactured by HTPC during the period 1977 to 1981.

Findings - The affected pumps are utilized in the standby service water system. The required performance tests on the standby service water pumps have been satisfactorily completed in accordance with Procedures 1-G-ME-04 and 1-PT-256. There is a system in place for performing the required action for spare parts if or the spare parts are needed. This bulletin is considered closed.

- m. IE Bulletin 80-01 - Operability of ADS Valve Pneumatic Supply

Item - A plant advised that their ADS pneumatic supply may not be operable when required due to a combination of misapplication of check valves, a lack of leak testing, and questions about seismic operability.

Findings - Periodic leak testing per ASME Section XI is required by Technical Specifications. The supply has been analyzed and found to be operable under required conditions and seismically qualified. RBS utilizes hard-seat check valves which is the type which leaked, resulting in issuance of the bulletin. The use of this design was evaluated and approved in NRC Inspection Report 50-458/84-18. This bulletin is considered closed.

- n. IE Bulletin 79-14 - Seismic Analysis for As-Built Safety-Related Piping Systems

Item - Instances were identified at several plants where inaccurate valve weights and pipe support data, incorrect analysis, or lack of compliance to design documents led to nonconservative seismic analysis results.

Findings - The licensee has performed and documented all inspections required by the bulletin. This bulletin is considered closed.

- o. IE Bulletin 80-24 - Prevention of Damage Due to Water Leakage Inside Containment

Item - A plant reported undetected leakage of over 100,000 gallons of water which flooded the reactor vessel pit and wetted the lower 9 feet of the reactor vessel.

Findings - Review of the RBS design shows significant features which prevent such leakage from adversely affecting plant operation. It was determined that the Reactor Plant Component Cooling Water System make-up water flow totalizer would require monitoring for excessive flow indication. This bulletin is considered closed.

5. Exit Interview

An exit interview was held on July 26, 1985, with the personnel denoted in paragraph 1 of this report. The NRC senior resident inspector also attended this meeting. At this meeting, the scope of the inspection and the findings were summarized.