APPENDIX B

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-458/85-74 License: NPF-40

Docket: 50-458

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

Facility Name: River Bend Station

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

Inspection Conducted: October 21-25, 1985

Inspectors: W R Bennett 12/11/85
W. R. Bennett, Project Engineer, Project Section A, Reactor Projects Branch — Date

Accompanying Personnel: Won Ky Shin, KAERI

Approved: J P Jaudon 12/11/85
J. P. Jaudon, Chief, Project Section A, Reactor Projects Branch — Date

Inspection Summary

Inspection Conducted October 21-25, 1985 (Report 50-458/85-74)

Areas Inspected: Routine, unannounced inspection of TMI action items, followup on previous inspection findings, and the potential for HPCS system relief valve failure. The inspection involved 37 inspector-hours onsite by one NRC inspector.

Results: Within the three areas inspected, one violation was identified (failure to have required records, paragraph 2).

DETAILS

1. Persons Contacted

Gulf States Utilities (GSU)

*T. L. Crouse, Manager-Quality Assurance (QA)
*P. E. Freehill, Superintendent Startup and Test
*D. R. Gipson, Assistant Plant Manager
*B. E. Hey, Licensing Engineer
*G. R. Kimmell, Supervisor Operations QA
*T. F. Plunkett, Plant Manager
*F. L. Richter, Operations QA
*J. E. Spivey, QA Engineer
*R. B. Stafford, Director Operations QA
*P. F. Tomlinson, Director Quality Services
*R. E. Turner, Quality Engineering

Stone and Webster (S&W)

*B. R. Hall, Assistant Superintendent, Field Quality Control

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

*Denotes those attending the exit interview conducted on October 25, 1985.

2. Licensee Action on Previous Inspection Findings

a. (Closed) Open Item (458/8558-02): Procedures for demonstration of leakage detection system operability did not meet Technical Specification requirements and confusion existed over independent verification.

The NRC inspector reviewed River Bend Procedures STP-511-4528, STP-511-4248, and STP-000-0001 and determined that these procedures now met Technical Specification requirements. River Bend Procedure ADM-0015 was also found to contain a definition of "independent verifier," which clarifies requirements of independent verification.

This item is closed.

b. (Closed) Open Item (458/8551-07): A question was raised about whether RHR pump runout was a concern during a system realignment from the test mode to an injection mode.

The NRC inspector reviewed a General Electric (GE) letter to the licensee dated September 25, 1985. This letter stated that, if a Loss of Coolant Accident (LOCA) occurred with the RHR system in the test mode, sufficient net positive suction head would be available to prevent cavitation and the effects of pump runout would be nil. In addition, the combined probability of being in the test mode, plus LOCA, plus exceeding 10 CFR 100 limits is estimated to be less than 2×10^{-8} events/year, which is less than acceptable limits.

This item is closed.

c. (Closed) Deviation (458/8551-02): Testing did not ensure that the RHR system would realign and inject to the reactor vessel from the test mode as committed to in the River Bend FSAR.

The NRC inspector reviewed GE design specification 22 A 3845 which stated that the RHR system shall not be required to recover from secondary modes of operation, such as testing, within the specified LPCI injection time, because the interval of time the RHR system remains in these secondary modes is so short that the effect on overall reliability is insignificant. The licensee has prepared an FSAR change clarifying the test objectives of the Emergency Core Cooling System Integrated Initiation During Loss of Offsite Power Preoperational Test.

This item is closed.

d. (Closed) Open Item (458/8551-10): Data packages for reactor vessel internals were found to have some errors.

The licensee contacted the NSSS supplier and the required records were delivered to the site. The NRC inspector reviewed these records and determined that they met all requirements.

The NRC inspector reviewed the quality data packages for NSSS supplied, non reactor vessel internal, ASME code, equipment. The package for the standby liquid control system explosive valves (MPL No. C41-F004; serial No. 464 and 465) contained only a product quality certificate and a certificate holder's data report. GE specification 21A1937 requires that material property records, heat treatment records, and other records as applicable, be included in the quality data packages. This is an apparent violation (458/8574-01). No program exists at River Bend Station to ensure that data packages are received and reviewed from the NSSS supplier. The NRC inspector reviewed the quality data package for the standby liquid control system pump (Serial No. N7422610530) and found all required documents to be included in the package and satisfactory.

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

3. TMI Action Items

The purpose of this portion of the inspection was to determine the status of post TMI Action Plan requirements.

Item II K.3.28 Verify Qualification of Accumulators on Automatic Depressurization System (ADS) Valves - This item is to ensure that accumulators will withstand a hostile environment and still perform their functions for 100 days following an accident.

Findings - The licensee submitted the qualification of ADS accumulators to the NRC. This position was accepted in Supplement 3 to River Bend Safety Evaluation Report. This item is closed.

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

4. Potential for High Pressure Core Spray (HPCS) System Relief Valve Failure

The purpose of this portion of the inspection was to evaluate the potential for HPCS system relief valve failure at River Bend Station.

Region IV received a memorandum from the Office of Analysis and Evaluation of Operational Data (AEOD) dated September 16, 1985, documenting failure of HPCS system relief valve bellows at LaSalle Units 1 and 2. The memorandum concluded that the failures were caused by excessive back pressure on the discharge port of the relief valve and that River Bend had the potential for similar failures.

It was determined that several differences exist in the HPCS relief valve piping configurations between LaSalle and River Bend. The most significant difference was that the safety valve at LaSalle discharges through a 1" x 2" reducer to the 6" minimum flow line, while the safety valve at River Bend directly discharges to the 10" full flow test return line. The configuration at LaSalle could lead to a more dynamic thermal hydraulic transient than would be experienced at River Bend.

It was also determined that the relief valve bellows at LaSalle failed at least once during preoperational testing while performing satisfactorily during preoperational testing at River Bend.

The NRC inspector determined that River Bend does not have the potential for relief valve failures of the type which occurred at LaSalle. This is based on the significant piping differences between the two plants and the testing at River Bend which has shown no problem with the safety valves.

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

5. Exit Interview

An exit interview was held on October 25, 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.