APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-458/85-02 Construction Permit: CPPR-145

Docket: 50-458

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

Facility Name: River Bend Station, Unit 1

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

Inspection Conducted: January 21-25, 1985

Inspectors: Wm McNeill 3/7/85
W. M. McNeill, Reactor Inspector, Project Section A, Reactor Project Branch 1 (paragraphs 1, 2, 3, and 7) Date

Wm McNeill for 3/7/85
D. L. Garrison, Reactor Inspector, Project Section A, Reactor Project Branch 1 (paragraphs 1, 4, 5, and 7) Date

Wm McNeill for 3/7/85
C. E. Johnson, Reactor Inspector, Project Section A, Reactor Project Branch 1 (paragraphs 1, 6, and 7) Date

Approved: [signature] 3/12/85
J. P. Jaudon, Chief, Project Section A, Reactor Project Branch 1 Date

Inspection Summary

Inspection Conducted January 21-25, 1985 (Report 50-458/85-02)

Areas Inspected: Routine, unannounced inspection of procurement control; receipt, storage, and handling; audits; records; and safety-related structures. The inspection involved 114 inspector-hours onsite by three NRC inspectors.

Results: Within the five areas inspected, three violations were identified (warehouse controls, paragraph 3; records storage, paragraph 5; and construction records, paragraph 6).

DETAILS

1. Persons Contacted

Gulf States Utilities (GSU)

A. M. Allen, Spare Parts Technician
*W. K. Anders, Quality Assurance (QA) Engineer
*R. E. Bailey, Supervisor, Operations Quality Control (QC)
*C. L. Ballard, Project Supervisor
K. Bankston, QC Inspector
*W. J. Cahill, Senior Vice President
*E. F. Christnot, QA Engineer
*T. L. Crouse, Manager, QA
*P. J. Dautel, Licensing Representative
*J. C. Deddens, Vice President, River Bend Nuclear Group
*O. DeMiranda, QA Engineer
C. Doyel, Safety Representative
P. Gillespie, Compliance Analyst
*P. D. Graham, Assistant Plant Manager
L. P. Handy, QA Engineer
T. Harris, Foreman, Warehouse
R. Hebert, QA Engineer
*R. W. Helmick, Director-Nuclear Projects
K. C. Hodges, Supervisor, Quality Systems
*G. E. Kelley, Supervisor, Purchasing and Materials
G. R. Kimmell, QA Supervisor
*G. V. King, Plant Services Supervisor
*A. D. Kowalczuk, Assistant Plant Manager
*T. C. Lynch, Materials Supervisor
*A. J. Martines, QA Engineer
*V. J. Normans, Construction Supervisor
*W. H. Odell, Manager, Administration
*D. B. Reynolds, Supervisor, Administrative Support
H. Roard, Electrical Supervisor
*D. G. Seymour, Compliance Analyst
*R. B. Stafford, Director, Quality Services
*P. F. Tomlinson, Director, Operations QA
*R. E. Turner, QA Engineer

Stone & Webster (S&W)

V. Barton, Chief Inspection Supervisor
*D. P. Barry, Superintendent of Engineering
W. Dennis, Assistant Superintendent
R. Ferguson, Field QC Engineer
*C. A. Goody, Resident Manager
R. Jackson, Chief, Construction Supervisor
*B. R. Hall, Assistant Superintendent, Field QC

Stone & Webster (cont.)

K. Kennedy, Records Administrator
C. Portner, Records Supervisor
S. Salowitz, QC Engineer
D. Sheele, Field QC Engineer
D. Smith, Records Supervisor
*R. L. Spence, Resident QC Manager
E. Stubbs, Inspection Supervisor
L. R. Sutton, QA Engineer
B. R. Williams, Inspection Supervisor
K. Whitley, Document Control Clerk
C. D. Whitlock, Field QC Inspector

General Electric (GE)

*R. L. Balliet, Mechanical Technician

The NRC inspectors also contacted other site personnel including administrative, clerical, document control, operations, and inspection personnel.

*Denotes those attending the exit interview conducted on January 25, 1985. Both NRC senior resident inspectors for construction and operations also attended this meeting.

2. Procurement Control

The objectives of this inspection were to ascertain whether the licensee had developed and implemented a program for control of procurement activities that is in conformance with regulatory requirements, commitments in the FSAR, the QA Manual, and procedures. In this regard, Chapter 17 of the FSAR, Revision 15, and the Operations QA Manual, "Procurement of Items and Services," ADM-004, Revision 5, dated October 8, 1984, were reviewed. A sample of nine items received by GSU were reviewed in detail. This sample included chemical materials, electrical components, mechanical components, ASME Code components, O-rings, and gaskets.

Each item's purchase order (PO) and its associated purchase requisition, procurement checklist, material work authorization, apparatus requisition, and requisition instruction sheet were reviewed. It was found that requisitions were reviewed and approved in accordance with the procedure for technical and quality requirements, identification of the material, applicable inspection, and documentation requirements. The sample was mostly of spare parts purchases, which identified original equipment specifications and vendors to be used for procurement.

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

3. Receipt, Storage, and Handling

The objectives of this inspection were to ascertain whether the licensee had developed and implemented a program for control of receipt, storage, and handling of items that is in conformance with regulatory requirements, commitments in the FSAR, the QA Manual, and procedures. In this regard, Chapter 17 of the FSAR, Revision 15, the Operations QA Manual, and the following procedures and specifications were reviewed:

Procedure	Revision	Title	Date
MHP-0001	0	Materials Receiving and Inspection	March 5, 1984
MHP-0002	1	Storage of Material	October 2, 1984
MHP-0003	0	Handling of Material Receiving Discrepancy Reports	April 23, 1984
MHP-0004	1	Maintenance of Material in Warehouse	October 2, 1984
QCI-3.8	0	QC Monitoring Activities (with CN1)	June 22, 1984
GMP-0041	1	Storage and Maintenance of Material/Equipment	October 4, 1984
Specification			
229.170	11	Storage and Maintenance of Permanent Plant Equipment	July 27, 1984
22A3796	1	Equipment Storage Requirements	April 1, 1981

Each of the items identified in the above sample were inspected to verify their receipt inspections, disposition of nonconforming conditions (if any), identification, storage, and release for use in plant. Warehouse cleanliness and temperature controls were also verified. No items requiring special handling were found in the warehouse. The QC and QA reviews of warehouse activities were also verified. This included QC reports 84-IR-20076 and 84-IR-20077, and QA reports 83-P-001, 83-P-010, 94/08, and 85/01. Preventive maintenance of the control rod drive housing, five transformers from GE, and eight valves and one valve nozzle from Transamerica Delaval were inspected. These parts were identified as safety-related.

Some isolated errors were identified. A lot of "Super Cool" 1355 had its PO number incorrectly identified on the material. In two instances,

another lot of "Super Cool" 1355 and a lot of valve parts (diaphragms, O-rings, and gaskets) had not been given receipt inspection although such was required. A sample of 100 receipts were checked to verify identification and receipt inspection. No further problems were identified.

One observation of the NRC inspector was that parts in the warehouse were not separated by quality classification. Paragraph 4.4.1 of procedure MHP-0002 could be interpreted to require such. At location BE-37, resistors on Material Receipt Report (MRR) No. 84-2651 of PO 841Q73432S were next to bearing on MRR 84-2006 of PO 822N72046S. At location BE-51, a coil on MRR 84-9150 of PO 841Q78163 was next to unidentified parts on MRR 83-5137 of PO 832N72912S. At location BC-107, ring seals on MRR 84-9438 of PO 841Q76883S were next to relays on MRR 84-9514 of PO 841N78543S. At location BB-26, a differential pressure transmitter on MRR 84-2430 of PO 821B0062 was next to relays on MRR 84-2885 of PO 842N74380S. There appeared to be no control that would preclude storage of parts, with a 1 or 1Q designation in the PO number (safety-related), with parts without a safety-related designation in the PO number on the same shelf; additionally, these parts could be of identical type or appearance.

A second observation of the NRC inspector was that it was not clear how preventive maintenance requirements are established. S&W and GE specifications are used as a basis for maintenance requirements for such as rotating equipment and any equipment with heaters. Vendor information was also to be used to establish preventive maintenance requirements. The licensee did not appear to have a clear rationale for determining when preventive maintenance was to be performed on spare parts. For example, it was not clear why preventive maintenance was performed on Transamerica Delaval valves or GE transformers but was not performed on motors for valve operators. Paragraph 5.5. of Procedure MHP-0002 precludes preventive maintenance on motors below one horsepower; this could include motors for valve operators, yet the specifications would appear to identify such requirements. It was noted also that GSU, on July 15, 1983, committed to energize motor operators (assembly) in S&W warehouses as corrective action to a violation identified in NRC Inspection Report 81-09. NRC Inspection Report 84-28 also refers this same problem. It was not clear how any special vendor requirements were identified and the equipment flagged so the equipment storage history cards (ESHCs) would be generated. In addition, the key point of generation of ESHCs at receipt inspection had no overcheck process to assure proper generation of ESHCs and their associated maintenance check records (MCRs). Preventive maintenance will be the subject of a separate inspection.

One violation for failure to follow procedures for the control of material in the warehouse with several examples of a programmatic breakdown was identified. The examples are:

- Parts in the warehouse were not always labeled as required by paragraph 4.3.1 of procedure MHP-0002 with all ten items of

information completed. Some parts were observed with only the PO and the MRR such as MRR 84-5203 on PO 841Q75392S at location BA-29; MRR 84-4612 on the same PO at BB-41; MRR 84-1017 on PO 821B0062 (release 149) at BC-149; and MRR 84-382 with no PO number at BC-149. Information missing was such items as vendor, description, PO item number, and as applicable model number, serial number, etc. All of the above are presumably safety-related hardware because of the 1 or 1Q designation in the PO number. The warehouse tag only had space or blanks for recording PO, MRR, quality class, release, PO item, and description.

- Parts in the warehouse were not segregated by ASME class and from non-ASME parts as required by paragraph 4.4.5 of MHP-0002. Parts such as the control rod drive housings were stored in two different locations with non-ASME hardware (position indicator probes) on top of them.

- There was no documentation that measures had been taken to assure that chemicals were separated to avoid mixing in the event of an accident which is required by paragraph 4.4.3 of MHP-0002. There was no documentation that a safety-related chemical called "Super Cool" 1355 could be stored as it indeed was with various oils on the pad outside the warehouse.

- The quality record copies of ESHCs and their associated MCRs were not maintained as required by paragraph 5.0 of MHP-0004 as evidenced by the inability to produce such records for safety-related parts. This means that the preventive maintenance records of hardware on ESHCs 21, 58, 100, 105, 123, 126, 127, 129, 130, 131, 154, and 193 through 196 could not be demonstrated.

- Preventive maintenance was not accomplished on certain parts as required by paragraph 5.2 of MHP-0004 and their associated ESCHs as evidenced by the inability to produce records of maintenance to procedure PMP-1000 for safety-related transformers identified on draft ESHCs 193 through 196.

- ESHCs have not been generated recently as required by paragraph 5.1 of MHP-0004 as evidenced by the absence of ESHCs for recent safety-related receipts of a pump on MRR 84-9322 of PO 821B0062 (release 553) and motors on MRRs 84-9408 and 84-9638 on PO 841Q77563S and MRR 84-9564 on PO 821B0062 (release 363) although 30 days had lapsed since receipt.

- QC monitoring of warehouse activities was not accomplished effectively or in accordance with paragraph 5.2 of MHP-0004 and QCI-3.10. QCI 3.10 does not exist as a procedure. QCI-3.8 which appears applicable is not fully implemented in that an "Annual Monitoring Activities Plan" or schedule has not been developed as required by paragraph 3.2.1 of QCI-3.8. Furthermore, as evidenced by the above findings, although monitoring of the warehouse has been done as late as September and November of 1984, it has not been effective.

The NRC inspector concluded that the programs for control of warehouse activities, preventive maintenance, and spare parts had been changing significantly in the recent past. It was further noted that there had been a number of personnel and organizational changes made around November of 1984. It should be noted also that there are planned inspections of material after warehouse release prior to plant installation. This was all identified in a single violation with several examples demonstrating the need for corrective action on the entire program. (485/8501-01)

The handling of nonconforming items, cleanliness, and temperature controls were found to be in good order. Receipt inspections were found to be in conformance with requirements.

4. Audits

The purpose of this inspection was to assure that the licensee adheres to the requirements set forth in 10 CFR Part 50 and other commitments in order that a functional evaluative audit process covers all aspects of the quality program. A comprehensive system of planned and periodic audits are required to be performed in order to evaluate the total project requirements.

Licensee commitment to audits are:

- Management audits - Licensee management had committed to periodic management audits of the QA Program in QAP-2. This assessment is performed in a number of ways as outlined in the QAP, paragraph 4.7.1.a. One report examined by the NRC inspectors was performed by a joint utility team in September 1984 and included training, procurement, audits, procedures, and audit followup. Three other reports were examined verifying program effectiveness.

- ANSI required audits - This standard, in paragraph 5.7, requires that an audit system be developed concerning records and their storage. These audits are to cover logging, filing, control, facilities deterioration, and handling. Numerous audits have been performed by the licensee concerning all aspects of records, their handling, and storage.

- A/E and NSSS supplier audits - QA procedure 5, Revision 4, paragraph 4.1, commits the licensee to evaluate the adequacy of A/E, and NSSS programs through surveillance and periodic audits. Two reports were examined by the inspector to confirm that this requirement is being followed. Audit No. GSU SGES-84/10 concerning GE-San Jose, California, and GSU SQS 84-546 concerning S&W, Cherry Hill, New Jersey, were examined with other audits.

- Audit/Review of controlled procedures - The requirements for reviewing controlled documents issued by a group is required every 2 years, and evidence of the review can be on the basis of revisions to the documents. This item was verified in the QA/Systems group

through inspection of the Operations Quality Procedures and Instructions Manual and index.

- Audits of user files - QA procedure, QAP 6, Revision 2, paragraph 4.4, requires that, "Controlled document files by user (satellite) organizations are regularly audited by Quality Assurance in accordance with departmental procedures." The NRC inspectors verified that this activity was being accomplished through review of audit report No. GSU 84-S-011, performed in 1984 and other audit reports.

- Audit schedule of vendors - The licensee program commits to audit and inspections on a regular basis. This requirement was verified based on a published schedule for the audit/surveillance of Riverside Central Services and other schedules.

- Audit schedule - The Operations QA Manual commitments outlined in QAD-18, Revision 2, paragraphs 4.1 and 4.6 require a comprehensive program of planned and periodic audits and includes the requirement for a yearly schedule to be published. The NRC inspectors examined the quality systems audit schedule, Revision 0, of December 27, 1984, and found that it contained programmed audits for fiscal year 1985. Also examined were other matrices and cross references. The NRC inspector concluded that documents with audit commitments written on them had been adequately researched; these requirements had been extracted from the text and provided a ready reference to each commitment.

- Audit areas - The licensee committed to audit 19 areas as outlined in QAD-18. These were verified as scheduled in 1985. Additionally, other audit areas are listed on the audit schedule. The NRC inspectors concluded that the licensee operations quality systems group is performing in a satisfactory manner to all commitments set forth in the documents reviewed.

- Audit records - The procedural requirement that "Records shall be generated and retained for all audits" was investigated. The records are required to include as a minimum, audit program schedules, audit plans and checklists, procedures, audit reports, written responses, and corrective action reports. It was verified through review of the records, correspondence, and review of the index information input data sheet that the records examined by the NRC inspector were adequate. No areas of concern were noted. However, this item is the subject of a violation written by the site resident NRC inspector at an earlier date. (see 50-458/84-28)

- Contractor audits (S&W) - The licensee committed the A/E to perform QA program audits of quality related activities as outlined in the FSAR Table 17.1.18B-1. Eleven audit reports were examined to determine if the requirements of the documents were audited in the

proper area within its given frequency. It was determined that the FSAR requirements are being followed.

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

5. Records

The purpose for inspecting the record keeping system was to assess whether or not records were being handled in accordance with 10 CFR Part 50 and licensee commitments.

The NRC inspectors examined a series of records in three areas of safekeeping - one area vault located in the licensee contractor QC area and two vaults in the licensee administration building.

- Generation - The QA program requires that a records management system be established during the design and construction phase and be continued and expanded during the operational phase. This inspection was performed during the transitional phase before construction is complete and before the unit is operational. The records observed at this time were noted to have been timely and generated in accordance with established procedures and time tables.

- Completion - It was observed in the records that were inspected that the required data was included, i.e., summary, type of observation, legibility, person responsible for sign off, deficiencies, date, etc. The ASME Class II records for the CCCP system (reactor component cooling water) were examined in detail and no deficiencies were noted. Additionally, several QA reports were examined and found to be satisfactory.

- Filing - The filing system used during construction was generated by the A/E; a separate and distinct filing system for operations was issued in 1984. The two systems are different in format and the utility has committed to review and reclassify, if needed, all records received by them. The filing system includes document withdrawal, sign-out and return. For all records examined, the NRC inspector noted that the sign out sheets indicated that these records had been returned to the vault daily as required by procedure.

- Transmittal - The transmittal of records from the contractor to the licensee was found to be in accordance with the approved procedure, QAD 17.1. The transmittal sheets were noted to be properly filled out and included a detail listing of records sent and acknowledgements.

- Receipt - It was observed during this inspection that large quantities of records were being received from the field for processing into the vaults; this has produced an overload on the licensee permanent plant file vault. This is discussed under storage below.

- Storage - The storage of a large number of records was observed to not be in accordance with the requirements of ANSI 45.2.9 to which the licensee QA plan commits. ANSI 45.2.9 deals with records and record keeping. It was noted in the contractor vault that available floor space had been exhausted and the records were being temporarily filed in flammable boxes and stacked on top of the steel filing cabinets. A large number of flammable paper boxes and cases stored on top of the cabinets were also noted. All loose records, being worked on, were being stacked on top of work tables in the vault at days end. These conditions were also noted to a greater extent in the licensee vaults for the permanent plant files. This was identified as a violation. (8502-02)

- Facilities - The vaults were examined to the generally accepted standard of the National Fire Protection Association Codes. It was found that the vaults were properly constructed with the exception of a few minor details, on which the licensee is working to upgrade the facility. It was also noted that several methods were under consideration to expand the filing capability of the facility; it was also found that the filing and storage methods were under study.

- Access - In all cases observed by the NRC inspectors, it was noted that the access to the vaults was very well controlled. The required access list was posted and the doors were kept closed; also, personnel work stations were at the entrance and near each door.

- Security - The NRC inspector examined the security requirements, which are required by ANSI 45.2.9. The requirements are considered to be met with the following practices: Personnel stationed in the area, double doors with locks, certain few individual keys issued, and slab doors without hardware prevent entry from outside.

From observations made by the NRC inspectors and with exception to the filing and storage in this transitional stage, the records systems are being operated and managed adequately.

6. Safety-Related Structures

a. Supports

The NRC inspector reviewed work and quality records associated with three major supports outside containment. These supports were the standby diesel generator fuel oil day tank supports. These records were reviewed by the NRC inspector to determine if they met established procedures and whether records reflected work accomplishments consistent with NRC requirements and FSAR commitments.

- Material - The NRC inspector reviewed the vendor material identification tabulation sheets. This list contained item mark numbers by piece and associated heat codes. The supports were

fabricated by Teledyne Brown Engineering. The NRC inspectors reviewed all Teledyne Brown inspection sheets and weld records associated with these supports. Records appeared to be legible and properly prepared. Records indicated that the required material was used and fabricated in accordance to the ASME Code, Section III, NF Class 2. Material test reports and certificates of compliance were available for review.

All material receiving and inspection reports by FQC were properly prepared. No discrepancies were observed during the material package review.

- Installation/Erection - Review by the NRC inspector indicated that the installation/erection of the standby diesel generator fuel oil day tank supports were installed as required by specification. Visual observations by the NRC inspector indicated that one discrepancy was noted. The front set of bolts were double nutted. The installation drawing indicated one nut. This was immediately investigated by S&W. An unsatisfactory IR No. M5000079 was generated. This was an isolated case.

  With the exception of the discrepancy noted above, the standby diesel generator fuel oil day tank supports appeared to conform to the general configuration and location as required by installation drawings. Documents reviewed are listed below:

  - Dwg No. 12210-EV-185A-4
  - Dwg No. 12210-EV-185B-2

- Inspection Records - Review of FQC inspection records indicated that work was accomplished in accordance to the field quality control (FQC) inspection plan and specification. Records of inspection activities were complete, legible, and readily retrievable. All modifications and changes were incorporated on the latest revised drawings, such as nonconformance reports (NCRs) and engineering and design coordination reports (E&DRC). Documents reviewed are listed below:

  - QA Plan No. R1229160F05230B01, "Mechanical Equipment Installation"
  - Specification 229.160, "Mechanical Installations Cat I"
  - IR No. P4200826
    M4000597
    M2100158
    M2100039

- N&D No. 3821
  3140
  3060
  3049
  2903

- E&DCR C31,288

- Qualification - The NRC inspector reviewed FQC inspectors and welder qualifications for work performed on the fuel oil day tank supports. The personnel involved in this installation and inspection appeared to be qualified in accordance with procedures. No discrepancies were observed.

b. Structural Steel

- Structural Platform at Elevation 114'-0" - The NRC inspector reviewed FQC inspection records and marked up drawings of the structural platform at elevation 114'-0" in the auxiliary building. Records were legible and readily retrievable. Visual examination of the structural platform appeared to conform to installation drawings and overall configurations. Documents reviewed are listed below:

  - Dwg No. 12210-ES-66AH-1

  - IR No. S-1202182

  - IR No. S-1202154

  - IR No. S-1202163

- Single Swing Missile Protected Door - The NRC inspector reviewed work in process on the missile protected door No. F-98-1 of the north side of the fuel building. The NRC inspector also reviewed the work package and associated E&DCR for the missile protected door. Required documents were available for review at the place of activity. No discrepancies were noted by the NRC inspector during the observation. Documents reviewed are listed below:

  - IR No. S5200100

  - E&DCR No. C-7036 and C-7036A

  - N&D No. 10250

- Structural Columns - The NRC inspector requested records for structural columns located in residual heat removal (RHR) cubicles "C" and "F" in the auxiliary building for review. The

licensee could not retrieve any records to indicate that sufficient inspection had been performed for columns P1, P3, P4, P5, P7, and P8. Documentation was available for two of the eight columns. These two records (columns P2 and P6) contained discrepancies. Documents reviewed are listed below:

- Dwg No. 12210-ES-66B-8
- Dwg No. 12210-ES-66G-7
- IR No. S-1201043
- IR No. 3-562.0001

There appears to be insufficient records to assure that work in this area is being performed in compliance with project specifications and related construction procedures. This is in violation of Criterion XVII of Appendix B. (482/8502-03)

7. Exit Interview

An exit interview was conducted on January 25, 1985, with those personnel denoted in paragraph 1 of this report. At this exit interview the NRC inspector summarized the scope and findings of this inspection.