

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-458/84-08

Docket: 50-458

Permit: CPPR-145
Category: A2

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

Facility Name: River Bend Station (RBS), Unit 1

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

Inspection Conducted: March 1, 1984, through April 30, 1984

Inspector: Dwight D. Chamberlain 5-3-84
D. D. Chamberlain, Senior Resident Inspector Date

Approved: J. P. Jaudon 5/8/84
J. P. Jaudon, Chief, Project Section A, Date
Reactor Project Branch 1

Inspection Summary

Inspection Conducted March 1, 1984, through April 30, 1984
(Report: 50-458/84-08)

Areas Inspected: Routine, announced inspection included review of licensee action on previous inspection findings; site tours; review of the overall preoperational test program; IE Bulletin followup; and status of diesel generator testing. The inspection involved 183 inspector-hours onsite by one NRC inspector.

Results: Within the five areas inspected, two violations were identified (failure to follow procedure for FSAR change request review documentation and failure to provide adequate storage and protection for Category I equipment, paragraphs 2 and 3) and one unresolved item was identified (licensee tracking of commitments to the NRC, paragraph 5).

8406010323 840514
PDR ADOCK 05000458
Q PDR

DETAILS

1. Persons Contacted

Principal Licensee Employees

J. W. Cook, Lead Environmental Analyst
*T. C. Crouse, Manager, Quality Assurance (QA)
*P. J. Dautel, Licensing Staff Assistant
*L. A. England, Supervisor, Nuclear Licensing
*P. E. Freehill, Superintendent, Startup & Test
E. R. Grant, Supervisor, Nuclear Licensing
M. W. Henkel, Engineer, Nuclear Licensing
B. E. Hey, Engineer, Nuclear Licensing
G. V. King, Supervisor, Quality Systems
R. King, Engineer, Nuclear Licensing
J. W. Lawrence, Engineer, Nuclear Licensing
P. Magil, Senior Electrical Engineer
I. M. Malik, Engineer, Operations Quality Assurance (OQA)
W. J. Reed, Director, Nuclear Licensing
S. Sawa, Engineer, Startup and Test
C. L. Shoemake, Engineer, Startup and Test
*P. F. Tomlinson, Supervisor, CQA
B. Turner, Engineer, Construction QA
R. West, Engineer
*T. O. Gray, Director, OQA

Stone and Webster (S&W)

G. T. Avellone, Senior Inspector, Field Quality Control (FQC)
D. P. Barry, Superintendent of Engineering
D. G. Collins, Inspector, FQC
W. A. Crumpler, NSSS Lead Engineer
R. J. Fay, Senior Inspector Chief, FQC
*F. W. Finger, III, Project Manager, Preliminary Test Organization (PTO)
*B. R. Hall, Senior Engineer, FQC
*P. D. Hanks, General Superintendent, Construction
S. L. Hilaman, Engineer, PTO
R. W. Jackson, Construction Supervisor
K. LaLiberte, Engineer, PTO
R. G. Otis, Lead Inspector, FQC
T. Saranjam, Inspector, FQC
R. L. Spence, Superintendent, FQC

The NRC senior resident inspector (SRI) also interviewed additional licensee, S&W, and other contractor personnel during this inspection period.

*Denotes those persons that attended the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Violation (458/8320-01): Certain operating limitations of the diesel generator system identified in diesel generator loading calculation 12210-E-122 had not been communicated to the plant staff for incorporation into operating procedures and a FSAR change request had not been submitted as required.

S&W has reviewed other calculations with potential impact on the FSAR and plant operating procedures and no other conditions similar to that identified in the Notice of Violation were identified. A new S&W River Bend Procedure (RBP) 6.23, Revision 1, "Preparation and Maintenance of Technical Specifications," was issued February 27, 1984, to instruct responsible S&W engineers to notify GSU by letter if, during the preparation and revision of technical specifications, they identify any safety-related calculation assumptions that are important regarding plant operation. Also, GSU Administrative Procedures (ADM) 0003, Revision 1, "Development, Control, and Use of Procedures," was issued February 15, 1984, to provide further guidance concerning the utilization of references as procedure inputs. In accordance with RBP 6.23, GSU was provided a copy of diesel generator loading calculation 12210-E-122 (S&W letter RBS-9116). The FSAR has been changed via approved change notice F8.3.9, Revision 1, to reflect conclusions reached from that calculation. Note 14 of FSAR Table 8.3-2, requires either 1E21*C001 (Low Pressure Core Spray) or 1E12*C002A (Residual Heat Removal-A) be de-energized by the plant operator at T₂₂ hours in accordance with the following:

- a. Either of the above may be removed if, and only if, 1E22*C001 (High Pressure Core Spray) is available.
- b. 1E12*C002A must be de-energized (not 1E21*C001) when 1E22*C001 is not available.

The identified violation is considered closed, but the SRI will conduct further review to determine if and how the diesel generator loading restrictions of calculation 12210-E-122 are implemented in plant operating procedures (Open Item 8408-01).

(Closed) Open Item (8320-02) Review of the FSAR change request review process within GSU.

This open item was generated by the SRI to determine the program requirements for internal GSU review of FSAR changes and to determine if the FSAR would be used as an input document for plant procedures. The SRI conducted interviews with plant staff personnel and it was determined that the FSAR could and would be used as a reference document for plant procedures in some instances. Plant personnel stated that the FSAR section/amendment would be referenced and FSAR change notices/draft changes would only be reviewed for early notification of pending changes.

The SRI also reviewed the program for processing and review of FSAR changes and it was determined that S&W is responsible for control of all changes to the FSAR. GSU is provided copies of all proposed changes to the FSAR and they are only required to provide approval prior to implementation for "substantial" changes (changes in design basis or criteria stated in licensing documents that may require immediate NRC notification). However, GSU conducts internal review of FSAR changes and RBPP 8.1 "Processing and Review of Draft Sections or Revisions for Licensing Documents," is used for control and documentation of the review. A selected examination by the SRI of review forms for proposed responses to NRC questions revealed that completed review forms from all reviewers were not being maintained to serve as documentation and verification of the review as required by Sections 6.1.8 and 7.0 of RBPP 8.1. It appears that assigned reviewers with no comments were not always returning the completed review forms to Nuclear Licensing. This failure to follow procedures was identified by the SRI as a Severity Level V Violation (8408-02). It was apparent from the review forms examined by the SRI that plant staff personnel are being provided the opportunity to review and comment on FSAR changes.

3. Site Tours

The SRI toured areas of the site during the inspection period to gain knowledge of the plant and to observe general job practices. During a tour of C - Residual Heat Removal Cubicle on April 4, 1984, it was observed that a QA Category I valve (1E12*LVF065B) had been removed for a PTO flushing activity and the valve/internal parts were found in a wooden crate in the general area. Several valve internal parts were loosely scattered in the crate and the crate was apparently being used for a trash bin with an accumulation of dust, orange peelings, peanut shells, etc. A tag on the valve indicated that it had been removed for a PTO flush on February 10, 1984. Construction Site Instruction 1.0.13, Revision 8, "Rework Control Program," was reviewed by the SRI and paragraph 4.2.1 states that the construction supervisor designated to perform requested rework shall be responsible for the protection and care of dismantled equipment. However, the site instruction does not provide specific instructions for care and protection of equipment. This failure to protect QA Category I equipment was identified by the SRI as a Severity Level IV Violation (8408-03). The following immediate action was taken relative to the identified problem.

- a. A S&W unsatisfactory inspection report was issued and clean up and protection of the valve was provided.
- b. GWU issued a Quality Assurance Finding Report (QAFR) P-84-04-02-D to require immediate corrective/preventive action to begin. The QAFR response was received on April 25, 1984, and is being evaluated for adequacy.
- c. Preliminary action was taken by PTO to establish designated storage areas for equipment that is removed for test.

During tours of the auxiliary building, the SRI noted that a number of instruments were missing from General Electric (GE) prefabricated panels. The SRI conducted an extensive review of the reasons for the missing instruments and it was determined that during the site engineering design of tubing runs to certain instruments, (e.g., E21-R001 LPCS PUMP SUCTION PRESSURE). GE specification requirements for slope and distance could not be met in some cases. Apparently GE was requested to issue design changes to relocate a number of instruments. A review of design change and rework control documents revealed that program requirements were being implemented onsite for the areas reviewed. However, the SRI could not determine if a design error had been made or if the design process had prevented a design error from being made. The instrument relocation issue was provided to the independent design inspection (IDI) team currently performing inspection of design control for RBS as an example of a potential design error.

4. Overall Preoperational Test Program

The SRI continued the review of the River Bend Station Startup Manual and the Project Test Program Manual to ascertain that administrative controls have been established for preoperational testing activities. The test organization has been established in accordance with applicable commitments and qualifications and responsibilities of key personnel have been specified. The test program administration provides for jurisdictional control of systems during all phases of testing. Measures have been established for conduct of testing including (1) methods for verifying current procedures, (2) methods for assuring test personnel are knowledgeable of test procedures, (3) methods to change a test procedure during the conduct of test, (4) methods to document significant events, and (5) methods for identifying deficiencies/retest requirements. Also, a formal program for evaluation of test results has been established including the formulation of a "Joint Test Group." Document control measures have been established for test procedure review, approval and issuance. Also, measures have been established to assure that current drawings are being used during test activities.

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

5. IE Bulletin Followup

This area of inspection was conducted to review GSU methods for processing and tracking IE Bulletins and to evaluate GSU action taken as a result of IE Bulletin information. This review was conducted at the GSU Beaumont office where the IE Bulletin files are maintained by Nuclear Licensing. GSU has evaluated and maintained files for all IE Bulletins that they have received since their construction permit was issued in 1977. Project Procedure RBPP 4.1, Revision 1, "Processing NRC Correspondence," is the current procedure for processing and tracking IE Bulletins. The bulletins that require a response to the NRC have always been monitored

to assure that responses were submitted as required. The information type bulletins have been evaluated for applicability to RBS and distributed within GSU for information. Since 1982, GSU has used a statement of action program for bulletins where the required action is specified and assigned on the routing sheet for the bulletin. Nuclear Licensing is now tracking required actions to assure completion.

The SRI reviewed IE Bulletin files and the following bulletins were addressed in either NRC Inspection Reports 50-458/83-11 or 50-458/83-12: IE Bulletins 77-01, 77-02, 77-07, 78-01, 78-02, 78-04, 78-06, 78-10, 78-12, 80-02, 80-09, 80-10, 80-19, 80-20, 80-21, and 80-23. The GSU initiated evaluations for each revealed that the identified hardware is not used or the hardware deficiency is not applicable for safety-related applications at RBS. These bulletins are considered closed (no further follow up by the SRI is required).

The following status is provided for the additional bulletin files reviewed:

77-05 Electrical Connector Assemblies. This bulletin identified problems with environmental qualifications of certain types of electrical penetration connectors. GSU letter RBG-4874 to the NRC stated that information regarding the environmental qualification of safety-related systems at RBS and their ability to meet those environmental qualifications will be available in the River Bend FSAR. This commitment to the NRC is not being formally tracked by GSU presently. This bulletin will remain open.

77-06 Potential Problems with Containment Electrical Penetration Assemblies. This bulletin was apparently addressed to operating plants only and was not available in GSU files. This bulletin will remain open.

77-08 Assurance of Safety and Safeguards During an Emergency - Locking Systems. GSU letter RBG-4990 to the NRC stated that the design had not been formulated in early 1978, but that the design would include the requirements to ensure emergency ingress and egress in the event of loss of offsite power. This commitment to the NRC is not being formally tracked by GSU presently. This bulletin will remain open.

78-05 Malfunctioning of Circuit Breaker Auxiliary Contact Mechanism - General Electric Model CR105X. GE letter GSS-2058 stated that CR105X contacts were not used in safety-related applications at RBS, but CR105X contacts were used in the reactor protection system for non safety applications such as indication, alarm and back up scram solenoid circuit. The SRI reviewed GE drawings with GSU engineering personnel and it appeared that CR105 contacts were used in the main scram solenoid circuit. GSU contact with site personnel revealed that CR205 contacts were installed in RBS hardware on site. It was not clear from the SRI review if GE had made product improvements to RBS hardware and if

GE drawings were properly updated to reflect plant hardware. This design issue was referred to the NRC independent design inspection (IDI) group presently conducting an inspection of RBS design activities as an example of a potential design error. This bulletin will remain open for further review by the SRI.

79-01 Environmental Qualification of Class 1E Equipment. GSU letter RBG-9344 to NRC states with reference to IE Bulletin 79-01B, Supplement 2, questions 2 and 3, that the required information will be submitted to NRC at least 4 months in advance of the expected date of issuance of a full-power license. This commitment to the NRC is not being formally tracked by GSU presently. This bulletin will remain open.

79-23 Potential Failure of Emergency Diesel Generator Field Exciter Transformer. GSU letter RBG-6851 to NRC states that S&W and GE have reviewed the design of the emergency diesel generators and conclude that they are designed and delivered to RBS with a floating primary neutral. Testing of these machines will be done during preoperational and startup testing phase and will be outlined in the FSAR. This commitment to the NRC is not being formally tracked by GSU presently. This bulletin will remain open.

80-11 Masonry Wall Design. S&W letter RBS-5467 states that the masonry wall design at RBS is being done in accordance with standard review plan requirements and that there will be no attachments to masonry walls. This issue was referred to the IDI group for their review of S&W design control to prevent attachments to masonry walls. This bulletin will remain open for further review by the SRI.

80-12 Decay Heat Removal System Operability. This bulletin addresses a problem with degradation of decay heat removal during certain cold shutdown refueling modes due to maintenance of redundant equipment. S&W letter RBS-5692 states that this is not a design problem but requires adequately detailed operating and maintenance procedures and sufficiently strict administrative control. This bulletin will remain open for the SRI to review with plant staff at RBS.

80-13 Cracking in Core Spray Spargers. This bulletin required inspections by operating plants only and was determined to be not applicable to RBS. This bulletin is considered closed.

80-15 Possible Loss of Emergency Notification System (ENS) with Loss of Offsite Power. This bulletin was apparently addressed to operating plants only and was not available in GSU files. This bulletin will remain open.

80-16 Potential Misapplication of Rosemount Inc., Models 1151 and 1152 Pressure Transmitters with Either "A" or "D" Output Codes. GSU letter RBG-14940 to NRC stated that the identified hardware is not used for safety-related applications at RBS. However, GE Field Disposition Instruction (FDI) MCDY was issued on December 14, 1982, to replace some

type E boards with type N boards. GSU personnel interviewed by the SRI indicated that the boards required replacement due to the potential radiation environment levels in certain areas. This bulletin was referred to the IDI group as an example of a potential design error. This bulletin will remain open for further review by the SRI.

80-18 Maintenance of Adequate Minimum Flow Thru Centrifugal Charging Pumps Following Secondary Side High Energy Line Rupture. This bulletin was apparently addressed to Pressurized Water Reactor (PWR) plants only and was not available in GSU files. The subject equipment is unique to PWR plants. This bulletin is considered closed.

80-22 Automation Industries, Model 200-250-008 Sealed Source Connectors. This bulletin apparently applies to radiography licensees only and was not available in GSU files. This bulletin is considered closed.

80-25 Operating Problems with Target Rock Safety Relief Valves at BWRs. RBS has Crosby safety valves, but the potential maintenance and operational problems identified with Target Rock valves could possibly occur on other types of valves. Nuclear Licensing sent letter RBG-10580 to plant staff for their information. This bulletin will remain open for the SRI to review with plant staff at RBS.

81-01 Surveillance of Mechanical Snubbers. This bulletin required no response to the NRC, but Nuclear Licensing transmitted to RBS plant staff for their information. Plant staff must develop surveillance testing requirements for mechanical snubbers at RBS. This bulletin will remain open for the SRI to review with plant staff at RBS.

82-04 Deficiencies in Primary Containment Electrical Penetration Assemblies. GSU letter RBG-14510 to the NRC states that the identified hardware/hardware deficiency is not applicable for safety-related applications at RBS. This bulletin is considered closed.

83-01 Failure of Reactor Trip Breakers (Westinghouse DB-50) to Open on Automatic Trip Signal. This bulletin has been referred to plant staff for action and is being tracked by Nuclear Licensing. This bulletin will remain open.

83-02 Stress Corrosion Cracking in Large-Diameter Stainless Steel Recirculation System Piping at BWR Plants. This bulletin has been referred to plant staff for action and is being tracked by Nuclear Licensing. This bulletin will remain open.

83-03 Check Valve Failure in Raw Water Cooling Systems of Diesel Generators. This bulletin has been referred to plant staff for action and is being tracked by Nuclear Licensing. This bulletin will remain open.

IE Bulletins 80-14 and 80-17, both relate to potential anticipated transient without a scram (ATWAS) concerns. GSU is evaluating RBS design with regard to ATWAS issues presently. These bulletins will remain open for further review by the SRI once the RBS design is finalized.

The SRI discussed the bulletins with GSU licensing personnel where future commitments have been made to the NRC. GSU personnel interviewed stated that a commitment tracking program is being developed to assure that all commitments are identified and completed. The SRI will review the commitment tracking program during future bulletin follow up. The identified problem with licensee tracking of commitments to the NRC is considered unresolved (8408-04).

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

6. Status of Diesel Generator Testing

GSU is a member of the Transamerica Delaval Diesel Generator Owners Group which is testing and evaluating Delaval diesels and identified problems. The RBS diesels are the model R48 type, which are similar to the Shoreham diesels. GSU has accelerated the testing program for the diesels at RBS and they plan to build on testing and evaluations by other owners in order to develop a confidence level with the RBS diesels. The SRI was on site March 17, 1984, to witness the planned initial run of the "A" diesel, but the testing was delayed due to last minute information from the owner's group regarding cylinder wall cracking. GSU has completed additional inspections and evaluation of the RBS diesels and the present schedule calls for an initial run of "A" diesel during the first week of May. The SRI will monitor the initial run and testing of the RBS diesels as completed.

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. An unresolved item related to licensee tracking of commitments to the NRC is discussed in paragraph 5.

8. Exit Interview

An exit interview was conducted April 26, 1984, with licensee representatives (identified in paragraph 1). During this interview, the SRI reviewed the scope and discussed the inspection findings.