

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-458/85-53

Construction Permit: CPPR-145

Docket: 50-458

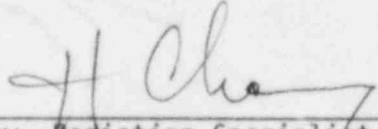
Licensee: Gulf State Utilities (GSU)
P.O. Box 2951
Beaumont, Texas 77704

Facility Name: River Bend Station (RBS)

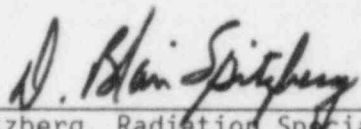
Inspection At: River Bend Station, St. Francisville, Louisiana

Inspection Conducted: August 5-9, 1985

Inspectors:

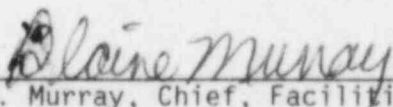

H. Chaney, Radiation Specialist, Facilities
Radiological Protection Section

9/4/85
Date


D. Spitzberg, Radiation Specialist, Facilities
Radiological Protection Section

9/4/85
Date

Approved:


B. Murray, Chief, Facilities Radiological
Protection Section

9/4/85
Date

Inspection Summary

Inspection Conducted August 5-9, 1985 (Report 50-458/85-53)

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PDR ADDCK 05000458
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Areas Inspected: Routine, announced inspection of the licensee's actions to resolve open items in the areas of radiation protection (RP) training, selected TMI action items, chemistry sample stations, radioactive waste processing systems, and the environmental monitoring program. The inspection involved 82 inspector-hours onsite and 9 inspector hours offsite by two NRC inspectors.

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

DETAILS1. Persons ContactedGSU

*J. Deddens, Vice-President River Bend Nuclear Group
 *I. Plunkett, Plant Manager (PM)
 *M. Cassada, Radiological Programs Supervisor
 *E. Cargill, Jr., RP Supervisor
 *J. Conner, Environmental Services Supervisor
 P. Dautel, Licensing Staff Assistant
 *S. Driscoll, Radiological Engineering Supervisor
 C. Fantacci, Senior Health Physicist (HP)
 S. McKenzie, Nuclear Training Coordinator
 *C. Nash, Chemistry Supervisor
 *E. Oswood, Quality Assurance (QA) Engineer
 *B. Hey, Licensing Engineer
 *D. Seymor, Compliance Analyst
 *R. Strafford, Director Quality Services
 *P. Tomlinson, Director Quality Operations QA
 *L. Giadrosich, Acting Supervisor Operations QA
 *R. Coppo, Senior Mechanical Engineer
 D. Jacobsen, Supervisor, Nuclear Engineering
 *L. England, Supervisor, Licensing
 *W. Lambert, Systems Engineer
 *W. Eisle, Staff HP
 *T. Crouse, QA Manager
 *J. Bleau, Radwaste (RW) Specialist
 J. McGhee, Foreman RW

Others

*D. Chamberlain, NRC Senior Resident Inspector
 B. Dunn, Startup Engineer (SU), Consultant
 R. Williams, Training, Consultant
 R. Hines, Senior Construction Engineer, Stone and Webster (S&W)
 J. Baron, Engineer, S&W
 H. Conrad, Acting Principal HP, S&W
 A. James, SU Engineer, Consultant
 R. Sinervo, SU Engineer, Consultant
 G. Humphrey, SU Engineer, General Electric (GE)
 B. Bastian, SU Engineer, GE

*Denotes those present during the exit interview.

The NRC inspectors also contacted other licensee and contractor employees including HP and engineering personnel.

2. Licensee Action on Previously Identified Open Items

(Closed) Open Item (458/8505-01): NUREG-0737, Item III.A.2, Meteorological Instruments and Measurements - This item was previously discussed in NRC Inspection Report 50-458/85-05 and partially resolved in NRC Inspection Report 50-458/85-32. The remaining two areas concerning the security force's monitoring of severe weather conditions and forecasts, and the development of two remaining instrument surveillance procedures (STP-554-4209 and 4210) were resolved. The NRC inspectors determined that security procedure SPI-7 adequately addresses monitoring of the weather conditions along with control room notification of weather related conditions. This item is considered closed.

(Closed) Open Item (458/8414-02): Radiological Effluent Technical Specifications and Process Control Program - This item was previously discussed in NRC Reports 50-458/84-14 and 85-46. The NRC inspector reviewed the final draft of the proposed facility Technical Specifications (TS), the licensee's process control program implementing procedure (RWS-0204), and the controls to be exercised over vendor supplied and operated solidification processes. The NRC inspectors determined that the licensee's actions were adequate to resolve this matter. This item is considered closed.

(Closed) Open Item (458/8406-23): NUREG-0737, Item II.B.3, Post Accident Sampling Capability - This item was previously discussed in NRC Inspection Reports 50-458/84-06, 84-22, 85-05, and 85-32. The NRC inspectors determined that the licensee's post accident sampling system (PASS) was, for the most part, in place and preoperational testing was in progress. The licensee had not taken actions to eliminate uncontained mechanical fittings from sample lines that traverse areas in or adjacent to areas that have to be occupied by personnel that operate the PASS. The licensee was continuing to perform engineering studies of methods to reduce or eliminate potential for joints to leak, and to reduce the radiation exposure contribution of the PASS sample lines. The NRC inspectors pointed out to licensee representatives the need to evaluate radiological problems associated with the unsealed PASS panel sump drain line to facility radwaste collector drain piping, and the exposure contribution of the 3/4 inch PASS sample lines in the overhead of the PASS cubicle.

The remaining PASS concerns will be tracked via open item (458/8422-05). The NRC inspectors noted that the problems associated with the PASS must be resolved prior to exceeding 5 percent power. Open item 458/8406-23 is considered closed.

(Closed) Open Item (458/8412-01): Environmental Services Organization and Management Controls - This item was previously discussed in NRC

Inspection Report 50-458/84-14 and involved the differences in the licensee's onsite/offsite organizational structure contained in the Final Safety Analysis Report (FSAR) and the lack of approved position descriptions for all positions within the Environmental Services Group (ESG). The NRC inspectors reviewed the licensee's organizational charts, position descriptions, and management control procedures (ESP-8-001 and ESP-8-050), draft TS, and the FSAR (Amendment 16) and found these matters had been resolved. This item is considered closed.

(Closed) Open Item (458/8412-02): Training and Qualifications - This item was previously discussed in NRC Inspection Report 50-458/84-12 and involved the lack of documented training program and qualification criteria. The NRC inspectors reviewed ESG procedure ESP-8-002 and found it resolved the concerns in this area. This item is considered closed.

(Closed) Open Item (458-8412-03): Radiological Environmental Monitoring Program (REMP) - This item was previously discussed in NRC Inspection Report 50-458/84-12 and involved the lack of procedures necessary for conducting an adequate REMP and differences in the radius of the land use survey for 1980. The NRC inspectors reviewed approximately 37 REMP implementing procedures. The licensee's procedures and the 1984 land use census resolve the concerns in this area. This item is considered closed.

(Closed) Open Item (458/8412-04): Meteorological Monitoring Program - This item was previously discussed in NRC Inspection Report 50-458/84-12 and involved the licensee's lack of fully calibrated and tested meteorological instrumentation. The NRC inspectors reviewed an interim 60 day reliability study of the meteorological monitoring system and calibration and surveillance test procedures for meteorological instruments. The licensee's actions were adequate to resolve concerns in this area. This item is considered closed.

(Closed) Open Item (458/8412-05): QA Program for REMP - This item, previously discussed in NRC Report 50-458/84-12, involved the licensee's failure to conduct an audit of the ESG activities. The NRC inspectors reviewed REMP implementing QA procedures and reviewed QA Audit IGSU 8-12, dated December 1984, of the REMP. The licensee's actions were adequate to resolve the concerns in this area. This item is considered closed.

(Closed) Open Item (458/8412-6): Control of Contractor/Vendor Activities - This item was previously discussed in NRC Inspection Report 50-458/84-17 and involved the licensee's failure to perform or have an audit performed on the licensee's contractor providing radiochemistry/analytical service for the REMP. The NRC inspectors reviewed ESG procedures (ESP-8-050) and the licensee's audit of the contractor performing analytical services and determine that the concerns in this area have been adequately resolved. This item is considered closed.

(Closed) Open Item (458/8414-06): Solid Radwaste System - This item was previously discussed in NRC Inspection Report 50-458/84-14, 84-33, and 85-46 and involved the licensee's lack of a fully developed program that implements the requirements of 10 CFR Part 61.55 and 61.56 regarding characterization and classification of low level radioactive wastes. The NRC inspectors reviewed the licensee's solid waste process control program (RWS-0204), vendors solidification program controls (RWS-0209), classification of radwastes (RWS-0207, 0305, and ADM-0043), and container labeling instructions (RWS-0304). The NRC inspectors also discussed with licensee representatives the preoperational testing of a leased, and vendor operated, radwaste solidification system. These licensee actions adequately resolve the concerns in this area. This item is considered closed.

(Closed) Open Item (458/8406-024): NUREG-0737, Item II.F.1-1, High Range Noble Gas Effluent Monitor - This item was previously discussed in NRC Inspection Reports 50-458/8406, and 85-32, and involves the licensee lack of an operational high range noble gas monitoring system (WRGMS) for the Main Plant Exhaust, Fuel Building, Exhaust Duct, and Radwaste Building Exhaust Duct. The NRC inspector determined that the WRGMS for the above system was installed, preoperational tested and calibrated, and that routine surveillance procedures for channel calibration and functional checks had been developed and issued. This item is considered closed.

3. Previously Identified Open Items That Were Not Closed During This Inspection

Open Item (458/8406-20): Normal Ventilation System Air Flow Characteristics - This item has been previously discussed in NRC Inspection Report 50-458/84-06, 85-05, and 85-32. The licensee had completed preoperational testing and rough balancing of all areas, and expects to complete final ventilation balancing following completion of construction activities. The licensee expects these activities to be completed by initial criticality. These concerns involving balancing of area ventilation flows have been made a part of the facility operating license as a condition for attaining initial criticality. This item remains open.

Open Item (458/8406-025): NUREG-0737, Item II.F.1-2, Sampling and Analysis of Plant Gaseous Effluents - The licensee had installed a system for obtaining grab samples of plant gaseous effluents at the locations noted in open item (458/8406-024) above. The NRC inspectors reviewed prime architect/engineer (AE) calculations on the theoretical sample line losses for iodines and particulates. These calculations are similar to those recommended in Industry Standard ANSI N13.1-1969, but employ updated and industry accepted methodologies not addressed in ANSI-N13.1-1969. Preliminary calculations for the expected worst case monitor system, the main plant stack particulate and iodine monitor (IRMS-RE126) show possible sample line losses of around 40 percent for elemental iodine and

22 percent for particulate activity. The AE will perform and have reviewed calculational sample line losses for the grab-sample skids associated with the WRGMS on the fuel building, radwaste building, and main plant ventilation exhaust stacks as required by NUREG-0737. The licensee was encouraged to pursue empirical studies of all particulate and gaseous air sampling systems as recommended by Industry Standards ANSI 13.1-1969 and ANSI/ANS 55.4-1979. This item will remain open pending licensee action to establish numerical factors for sample losses during grab sampling of particulates and iodines in the fuel building, radwaste building, and main stack exhaust ventilation systems. Resolution of this item is required prior to exceeding five percent power.

Open Item (458/8414-04): Gaseous Radwaste System - This item was previously discussed in NRC Inspection Reports 50-458/84-14 and 85-46, and involved preoperational testing of the main condenser offgas system referenced in Section 11.3 of the FSAR. The NRC inspectors determined that the offgas system had not been turned over to the plant staff from construction as of this inspection; however, the licensee had issued operating procedure SOP-0092, and had evaluated and documented the cross contamination of the offgas system to determine agreement with IE Bulletin 80-10. The licensee had not completed preoperational testing of this offgas system, established radioactive monitor alarm set points performed in-place testing of the high efficiency filters, and established representative sampling capabilities. The operability had not been established for the main condenser offgas system and other gaseous radwaste treatment systems including the mechanical vacuum pump system and the dry well purge system. The completion of these systems is required prior to exceeding five percent power.

Open Item (458/8414-05): Effluent Release Procedures - This item was previously discussed in NRC Inspection Reports 50-458/84-14 and 85-06, and involved the licensee's lack of a comprehensive liquid effluent release permit program. This item remains open pending licensee action to implement an adequate liquid effluent release permit.

Open Item (458/8414-07): Radiation Monitoring Systems - This item was previously discussed in NRC Inspection Reports 50-458/84-14, 84-33, and 85-46, and involves the lack of pre-operational testing and calibration of effluent, area, and process radiation monitors. The NRC inspectors reviewed the locations of monitors, operational status, calibration and function check surveillance procedures, and discussed the preoperational testing and calibration program with licensee representatives. The NRC inspectors determined that the licensee had developed a formal instrument set-point (calculation/adjustment) control procedure, and developed a program for verifying representative sampling of source streams (gas and liquid) based on comparative measurements and sample line loss studies. The NRC inspector discussed with licensee representatives the future calibration of liquid and gaseous process and effluent monitors with

radioactive gaseous and liquid standards (traceable to the National Bureau of Standards) over the full range of the instruments with 6 months following start full power operation. The licensee had developed and implemented channel calibration and functional check surveillance procedures for process and effluent monitors for TS related parameters. The licensee had elected to use the preoperational calibrations and tests of other process monitors until surveillance procedures for each instrument are developed. The RP group had developed and implemented a procedure for calibration of process and area radiation monitors. This item will remain open pending licensee action to verify representative sampling and performing calibrations using known gaseous and liquids standards.

Open Item (458/8414-08): Air Cleaning Filter Systems (Category 1 and 2) - This item was previously discussed in NRC Inspection Report 50-458/84-14 and 85-46 and involved the preoperational testing of both safety and non-safety related air cleaning systems. The NRC inspectors inspected ventilation units (selected ducting, filter and absorber units) and reviewed charcoal absorber test data for the category 2 systems. The licensee had sent samples of the category 1 charcoal absorber to an offsite vendor for efficiency testing. The NRC inspectors reviewed the proposed in-place testing procedures for both category 1 & 2 filtration units and determined that they agree with commitments contained in Sections 6, 9, and 11 of the FSAR. The NRC inspectors determined that only the fuel building and control building filtration units had been in-place tested to RG 1.52 criteria as committed to in the FSAR. The high efficiency filters and charcoal absorbers had been loaded, passed preoperational flow and leak tests for the standby gas treatment, technical support center, main condenser off gas, mechanical vacuum pump, containment/dry well purge, and radwaste building. These systems still remain to have final air flow characteristics established per 1-PT-400-2. This item will remain open pending completion of in-place filter and absorber testing, and final testing of system performance, which is expected to be completed by initial criticality per GSU Letter RBG-21603 of July 22, 1985. This item will also be tracked as a license condition.

Open Item (458/8422-05): Post Accident Sampling System - This item was previously discussed in NRC Inspection Reports 50-458/84-06, 84-22, 85-32, 85-17, and 85-47 and involved the licensee's lack of an operable PASS for obtaining reactor coolant and containment atmosphere samples. The NRC inspectors reviewed PASS operating procedures, training programs, walked down portions of the PASS, and held discussions with licensee representatives regarding the uncontained mechanical joints on PASS sample lines. The NRC inspectors also reviewed the licensee's routine surveillance procedures for the PASS (CSP-0150). The licensee had completed training of nearly all chemistry/radiochemistry technicians on operation of the PASS.

The licensee still needs to complete the following items prior to exceeding five percent reactor power:

- Complete preoperational testing of PASS.
- Checkout of the system's operation by performing trial runs using the sample transport devices and the sample preparation facilities in the radiochemistry lab.
- Take action to eliminate the uncontained mechanical joints in and adjacent to the PASS cubicle.
- Perform comparative analysis of routine reactor/containment samples and PASS samples for verification of system performance.

Open Item (458/8422-06): Chemistry/Radiochemistry Facilities, Equipment, and Supplies - This item was previously discussed in NRC Inspection Reports 50-458/84-22, 85-17, and 85-47 and involved the operational status of chemistry sample panels and the process instrumentation contained on them. The NRC inspectors inspected the following sampling panels: reactor plant, turbine plant, condensate demineralizer, makeup water and the liquid radwaste. The licensee had completed preoperational calibrations and functional tests on the reactor plant panel (IG33-PNL-Z020) and makeup water sample panel (ISST-PNL-78) as committed to in NRC Inspection Report 50-458/85-47. The remaining sample panels appear to be ready for completion prior to initial reactor criticality. This item will remain open pending licensee actions to complete calibration and functional checks of analytical process instrumentation concerning the turbine, condensate demineralizer, and liquid radwaste sample panels prior to initial criticality. These items will also be tracked as part of a facility operating license condition.

4. RP Program Management Controls

The NRC inspectors noted that the incumbent radiation protection manager (Radiological Programs Supervisor-RPS) had tendered his resignation to be effective on or about September 1, 1985. The NRC inspectors discussed with licensee representatives during the inspection and at the exit meeting the commitments of Section 12.5.1.1 of the FSAR and Section 6.3.1 of the draft TS as they relate to selection of a replacement for the RPS. The NRC inspectors noted that the current Radiation Protection Supervisor can satisfy the selection criteria of NRC RG 1.8 if a replacement selection is not made prior to departure of the RPS.

No violations or deviations were identified.

5. Exit Interview

The NRC inspector met with the licensee representatives identified in paragraph 1 of this report and the NRC resident inspector at the conclusion of the inspection on August 9, 1985. The NRC inspector summarized the scope and results of the inspection and discussed the closing of open items. The effect of each open item on various stages of operation was discussed, as well as the concerns regarding replacement selection criteria for the soon to be vacant radiation protection manager position.