

APPENDIX A

U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-458/84-14

Construction Permit: CPPR-145

Docket: 50-458

Category: A2

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

Facility Name: River Bend Station (RBS)

Inspection At: RBS, St. Francisville, West Feliciana Parish, Louisiana

Inspection Conducted: June 25-29, 1984

Inspector: Blaine Murray 8/9/84  
for W. L. Holley, Radiation Specialist, Facilities Date  
Radiological Protection Section (FRPS)

Approved: Blaine Murray 8/9/84  
Blaine Murray, Chief, FRPS Date

J. P. Jaudon 8/13/84  
J. P. Jaudon, Chief, Project Section A, Date  
Reactor Project Branch 1

Inspection Summary

Inspection Conducted June 25-29, 1984 (Report 50-458/84-14)

Areas Inspected: Routine, announced preoperational inspection of the Licensee's radioactive waste (radwaste) management, and transportation activities including: organization, audits, liquid radwaste systems, gaseous radwaste systems, controls for effluent releases, solid radwaste systems, air cleaning filter systems, radiation monitoring instrumentation, radiological effluent technical specifications (RETS) - process control plan, personnel selection/qualification criteria, and radwaste training/retraining program.

The inspection involved 40 inspector-hours onsite by one NRC inspector.

Results: Within the 11 areas inspected, no violations or deviations were identified.

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DETAILS

1. Persons Contacted

GSU

- \*J. C. Deddens, Vice President, RBS Nuclear Group
- T. Anthony, Senior Mechanical Engineer (Engineering Radwaste Coordinator)
- \*M. F. Cassada, Radiation Protection (RP) and Chemistry Supervisor
- \*T. C. Crouse, Quality Assurance (QA) Manager
- \*P. Dantel, Onsite Licensing Representative
- \*D. Derbonne, Preoperational Testing Supervisor
- \*S. DeSai, Chemical Engineer
- \*S. L. Driscoll, RP and Chemistry Coordinator
- \*R. Easlick, RP Foreman (Radwaste Coordinator)
- L. Fann, Start-Up (SU) Engineer
- \*C. Fantacci, RP Supervisor
- \*P. E. Freehill, Assistant Plant Manager (PM) Operations
- \*P. F. Gillespie, QA Engineer
- \*P. G. Grahm, Assistant PM Services
- \*G. O. Gray, Director, Operations QA
- \*R. W. Halwick, Project Engineer
- \*J. R. Hamilton, Site Engineering Supervisor
- \*K. Hodges, Quality Systems Supervisor
- \*A. James, SU Engineer
- R. Lasso, Maintenance Instrumentation and Control Nuclear Training Coordinator
- \*J. M. McGhee, Operations Radwaste Foreman (Operations Radwaste Coordinator)
- C. Nash, Chemistry Supervisor
- \*R. Odden, SU Engineer
- \*W. H. Odell, Nuclear Training Director
- J. Pawlick, SU Engineer
- C. Rohrman, Technical Nuclear Training Coordinator
- \*D. Seymour, QA Engineer, Operations
- \*R. B. Stafford, Quality Services Director
- K. Steele, Health Physicist, Operations
- \*R. N. Taylor, QA Engineer
- \*P. F. Tomlinson, Operations, QA Supervisor
- \*M. E. Walton, Technical Assistant to the Project Engineer
- \*R. B. Coad, Consultant, Acting GSU ALARA Coordinator

Others

- \*R. E. Farrell, NRC Senior Resident Inspector
- \*B. Murray, Chief, FRPS, NRC, Region IV
- \*B. G. Kniazewycz, Consultant, KLM Engineering

\*Denotes those present during the exit interview.

2. Open Items Identified During This Inspection

<u>Open Item</u>	<u>Description</u>	<u>Paragraph</u>
458/8414-01	Management Control Procedures	3
458/8414-02	Radiological Effluent Technical Specifications and Process Control Program	5
458/8414-03	Liquid Radwaste System	6.a
458/8414-04	Gaseous Radwaste System	6.b
458/8414-05	Effluent Release Procedures	7
458/8414-06	Solid Radwaste System	8
458/8414-07	Radiation Monitoring System	9
458/8414-08	Air Cleaning Filter Systems	10
458/8414-09	Transportation Activities	11
458/8414-10	Audits	12

3. Radwaste Organization and Management Control

The NRC inspector examined the licensee's onsite organization regarding radwaste management to determine compliance with the Final Safety Analysis Report (FSAR) commitments.

The NRC inspector verified that the organization and management controls of the onsite radwaste organization were as depicted in the FSAR, Figures 13.1-2 and 13.1-5, Amendment 11, except that the radwaste foreman reports to the assistant operations supervisor instead of to the shift supervisor as shown in Figure 13.1-5. In discussions with the NRC inspector, the licensee indicated that this change will be reflected in the next quarterly revision of the FSAR.

The licensee discussed a proposed "Radioactive Waste Management Plan," ADM-0038, which was in draft form, and was expected to be approved shortly. This proposed plan had a radwaste committee, chaired by the RP chemistry supervisor with other organizational representatives as members.

The NRC inspector reviewed the job responsibilities of the operations radwaste foreman and the radwaste nuclear equipment operators as specified in Procedure ADM-0022. The job descriptions for the operations radwaste foreman, RP foreman (radwaste), and RP technicians were also reviewed. Since the licensee had not yet completed his procedures, the NRC inspector was unable to determine the roles and responsibilities of the various organizations.

This is considered an open item (485/8414-01) pending the completion of management control procedures for the radwaste activities.

No violations or deviations were identified.

4. Personnel Selection and Qualification Criteria

The NRC inspector reviewed Procedures ADM-0007, "Selection, Training, Qualification and Evaluation of Plant Staff Personnel," and RSP-0003, "Personnel Qualification for Radiation Protection/Chemistry Section," and verified that the minimum qualifications required for personnel performing radwaste tasks were included. Personnel are not as yet dedicated to radwaste activities.

No violations or deviations were identified.

5. Technical Specifications

The NRC inspector determined that the licensee had initiated the development of the RETS and that they were to be submitted shortly to the Office of Nuclear Reactor Regulation (NRR) for review. The licensee had not yet developed the process control program (PCP) for the solid radwaste system. The licensee plans to use a contractor to solidify radwaste and indicated that the contractor had a PCP approved by NRR. The licensee had plans to develop a site approved PCP incorporating the contractor NRR approved PCP.

This is considered an open item (485/8414-02) pending:

- ° Completion and approval of the RETS
- ° Completion of an approved PCP and procedures.

No violations or deviations were identified.

6. Radioactive Waste Management

The NRC inspector reviewed selected portions of the licensee's radwaste management program with respect to RBS FSAR Chapter 11, "Radioactive Waste Management"; Chapter 12, "Radiation Protection"; Chapter 13, "Conduct of Operations"; and Chapter 14, "Initial Tests and Operations."

a. Liquid Radioactive Waste System

A licensee representative indicated that the completed liquid radwaste system would be released to the construction contractor Preoperational Test Organization in November 1984, and the licensee plans to have all the preoperational tests completed and the system released to site operations at the end of March 1985.

The NRC inspector reviewed the liquid radwaste system, and suggested that the licensee should perform a review of the "as-built" liquid radwaste system against the recommendations of ANSI/ANS 55.6-1979.

The licensee had not yet verified: tank volumes for tanks listed in the FSAR, recirculation time, samples collected would be representative for determining quantities and concentrations of radioactive materials in liquids released to unrestricted areas, discharge flow rates used to determine volumes released, and proper calibration of recorders for the liquid radwaste system. The NRC inspector determined that the licensee had not yet initiated a radwaste systems review as discussed in IE Bulletin 80-10.

The NRC inspector noted that the licensee had not yet developed preoperational test procedures or operating procedures for the liquid radwaste systems. Therefore, the development of a training program had not been initiated.

This is considered an open item (485/8414-03) pending:

- ° Completion and performance of approved preoperational test procedures for all liquid radwaste systems.
  - ° Performance of an ALARA "as-built" system review as well as an "as-built" review per the recommendations of ANSI/ANS-55.6-1979.
  - ° The review of the liquid radwaste system, review of the radwaste operating procedure, and the development of a sampling program per IE Bulletin 80-10.
  - ° Verification of tank volumes, recirculation time, representative sampling, discharge flow rates, and recorder readings.
  - ° Development of liquid radwaste operating system procedures.
  - ° Development of site approved liquid radwaste systems training/retraining program.
- b. Gaseous Radioactive Waste System - The NRC inspector's review of the gaseous radwaste system indicated that the licensee was still in the process of completing construction of the system. Preoperational test procedures were not yet developed for the specific system.

The NRC inspector suggested that the licensee should perform a review of the "as-built" gaseous waste system against the recommendations of ANSI/ANS 55.4-1979. This system and its operating procedures need to be reviewed and a sampling/analysis program developed per IE Bulletin 80-10.

The NRC inspector discussed with licensee representatives the need to verify representative sampling, discharge flow rates, and recorder readings.

This is considered an open item (485/8414-04) pending:

- ° Completion of approved preoperational test procedures and performance of the tests.
- ° Performance of an "as-built" ALARA review of the gaseous radwaste system including the recommendation of ANSI/ANS 55.4-1979.
- ° Review of system operating procedures and development of a sampling/analysis program per IE Bulletin 80-10.
- ° Verification of representative sampling, discharge flow rates, and recorder readings.
- ° Completion of operating procedures.

No violations or deviations were identified.

7. Controls for Effluent Releases

The NRC inspector reviewed the licensee's procedure for controlling releases of radioactive liquids and gases to the environment.

The licensee had not established procedures for controlling releases at the time of this inspection. The NRC inspector determined that the chemistry organization had been assigned the responsibility for developing the liquid and gaseous release permits.

This is considered an open item (485/8414-05) pending the development of the effluent release procedures.

No violations or deviations were identified.

8. Solid Radioactive Waste System

The NRC inspector reviewed the solid radwaste system to determine compliance with FSAR commitments.

The NRC inspector's review of the solid radwaste system indicated that the licensee was still in the process of constructing that portion of the system that would interface with a contractor's (Chem Nuclear) portable solidification equipment. The NRC inspector determined that preoperational test procedures and the system operating procedures had not yet been completed. The NRC inspector discussed with the licensee the need for the development of a training/retraining program, performance of an "as-built" ALARA review including recommendations of ANSI/ANS 55.1, and the verification of representative sampling of waste streams to determine compliance with 10 CFR 61.55.

The licensee discussed Procedure RPP-0313, "Radwaste Contractor Solidification Procedure," which had been scheduled to be in draft form by September 1984. The licensee plans to incorporate Chem Nuclear's procedures into the preoperational and operating procedures for the solid radwaste systems.

This is considered an open item (485/8414-06) pending:

- ° Preparation and completion of approved preoperational test procedures.
- ° Verification of representative sampling of waste streams to determine compliance with 10 CFR 61.55.
- ° Performance of "as-built" ALARA review including recommendations of ANSI/ANS 55.1.
- ° Completion of operating procedures.
- ° Completion of training/retraining programs for solid radwaste systems.

No violations or deviations were identified.

9. Radiation Monitoring Systems - Process and Effluent Monitors

The NRC inspector reviewed the licensee's inplant radiation monitoring systems for compliance with the FSAR. The licensee had not yet installed any of the radiation monitoring systems at the time of this inspection. The NRC inspector discussed with the licensee representatives the need to verify that liquid, particulate, and gaseous monitors are measuring a representative portion of the effluent stream and that the calibration of gaseous and liquid radioactivity monitors is performed with gaseous and liquid standards, traceable to the National Bureau of Standards, over the full range of instrumentation.

The licensee had not yet completed any surveillance, calibration, or operation procedures for the various systems.

This is considered an open item (485/8414-07) pending:

- ° Preparation and completion of preoperational test procedures.
- ° Development of a surveillance and calibration program, which would include a response test, functional checks, and calibration for the liquid and gaseous process and effluent monitors.
- ° Verification of representative sampling for offline monitors.
- ° Review of monitors installed per ANSI/ANS N13.1-1969.

No violations or deviations were identified.

10. Air Cleaning Systems - HEPA and Charcoal Adsorbers

The NRC inspector reviewed the licensee's air filtration system to determine compliance with FSAR commitments. The NRC inspector determined that the air cleaning filter systems had not yet been completely constructed. All of the preoperational test procedures had been written (see attachment) except for those procedures for the systems in the Fuel Building, Radwaste Building, and Technical Support Center. No preoperational tests had been completed at the time of this inspection.

The NRC inspector discussed with licensee representatives the desirability of including portable air cleaning systems which use HEPA filters in a testing program initially and after each filter change, since these units will be used as an engineering control feature.

This is considered an open item (485/8414-08) pending:

- ° Preparation and completion of preoperational test procedures.
- ° Performance of an "as-built" ALARA review.
- ° Development of an in-place testing and laboratory analysis per recommendations of ANSI/ASME-N509-1980 and N510-1980 and Regulatory Guides 1.52 and 1.140.

No violations or deviations were identified.

11. Transportation Activities

The NRC inspector reviewed the licensee's transportation activities to determine compliance with 10 CFR Parts 20.311 and 71, 49 CFR Parts 171-177, and IE Bulletin 79-19. The NRC inspector found that no procedures were as yet developed. A licensee representative indicated that the transportation activities procedures are scheduled to be completed approximately in September 1984.

This is considered an open item (485/8414-09) pending:

- ° Completion of procedures for compliance with 10 CFR Parts 20.311 and 71 and 49 CFR Parts 171-177 for the various processes and details of the transportation activities.
- ° Establishment of a training/retraining program which entails all aspects of the transportation program including IE Bulletin 79-19.

No violations or deviations were identified.

12. Audits and Review

The NRC inspector reviewed the licensee's audit/review program regarding radwaste and transportation activities to determine compliance with FSAR commitments and the requirements of 10 CFR Part 50, Appendix B.



The NRC inspector determined that the Quality Systems organization of the QA Department had been assigned the responsibility to perform audits of the radwaste and transportation programs. Although the Quality Systems organization had plans to perform an audit of the radwaste activities in August 1984, there had not been any development of audit procedures, audit plans, or an audit checklist.

This is considered an open item (485/8414-10) pending:

- ° Completion of an approved audit plan, including a checklist, for the radwaste program.
- ° Completion of an approved audit plan, including a checklist, for transportation.
- ° Performance of audits in these areas.

No violations or deviations were identified.

13. Exit Interview

The NRC inspector met with licensee representatives identified in paragraph 1 at the conclusion of the inspection on June 29, 1984. The NRC inspector discussed the scope and findings of this inspection. The NRC inspector stated that, based on a projected April 1985 fuel load date, the radwaste systems and transportation activities programs have much work to be completed. The NRC inspector also stated that it would be necessary to resolve the open items discussed in this report prior to fuel loading.

ATTACHMENT

Reviewed Air Cleaning Filter Systems Preoperational Test Procedures

1-AT-414-7	Circ Water Pump House Ventilation System
1-AT-414-8	Switchgear House-Clarifier Area Vent System
1-AT-414-10	Switchgear House-Cooling Tower Ventilation
1-AT-414-9	Makeup Water Intake Structure and Switchgear House Vent
1-PT-402	Control Building Ventilation System
1-G-ME-10	(Generic Test Procedure) Air Balancing of Ventilation Systems
1-PT-409-4	Auxiliary Building - Supply and Exhaust HVAC
1-PT-409-5/6	Auxiliary Building Unit Coolers
1-AT-410-2	Radwaste Building Ventilation Chilled Water
1-PT-414-2	Standby Cooling Tower Pump House Ventilation System
1-AT-412	Water Treatment Building Ventilation
1-AT-414-1	Electrical and Piping Tunnels Ventilation
1-AT-414-4	Normal Switchgear Building Ventilation
1-AT-414-5	Motor Generator Building Ventilation System
1-AT-414-6	Demin Water Pumphouse Vent
1-AT-408-1	Turbine Building Ventilation
1-AT-408-3	Off Gas Building Ventilation
1-AT-408-4	Condensate Demineralizer Building and Turbine Plant Sampling Room Ventilation
1-PT-409-3	Containment and Drywell Purge HVAC
1-PT-405	Diesel Generator Building Ventilation
1-PT-404	HVAC - Drywell Cooling
1-AT-400-1	Non-Safety Related Ventilation Systems Environmental Design Acceptance Test
1-PT-257	Standby Gas Treatment
1-PT-401-1	HVAC - Technical Support Center
1-PT-401-2	HVAC - Service Building
1-PT-406	HVAC - Fuel Building
1-PT-407	HVAC - Radwaste Building
1-PT-408-2	HVAC - Off Gas Vault Refrigeration
1-PT-410-3	Chilled Water-Control Building
1-AT-413	HVAC - Auxiliary Boiler Room
ESSP-1147	Filter Housing Structural Air Leakage Test
ESSP-1161	Pressure Differential, Air Velocity, Fan Speed, Amp, and Voltage Measurements Procedure
S.I.P. No. 13	(Supplement to CQP 01010-C) HEPA Filter Inspection and Test Procedure
ESSP-1179	Carbon Filter - Residence Time Calculation
ESSP-1149	Adsorption Filter R-112 Leakage Test Data Interpretation
ESSP-1158/1159	Filter, Adsorption In-Place Leakage Upstream Test Data
ESSP-1155	Standby Gas Treatment System Leakage Tests
ESSP-1154	In-Place HEPA Filter Bank Leakage
ESSP-1152	In-Place Adsorption Filter Bank Leakage
ESSP-1173	Filter Mounting Frame Leakage Test
ESSP-1150	In-Place HEPA Individual Leakage Testing