

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-458/84-33

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: River Bend Station, St. Francisville, Louisiana

Inspection Conducted: November 5-9, 1984

Inspectors: Blaine Murray
for W. L. Holley, Radiation Specialist, Facilities
Radiological Protection Section

12/21/84
Date

Blaine Murray
for R. Baer, Radiation Specialist, Facilities
Radiological Protection Section

12/21/84
Date

Approved: Blaine Murray
Blaine Murray, Chief, Facilities Radiological
Protection Section

12/21/84
Date

J. P. Jaudon
J. P. Jaudon, Chief, Project Section A
Reactor Project Branch 1

01/07/85
Date

Inspection Summary

Inspection Conducted November 5-9, 1984 (Report 50-458/84-33)

Areas Inspected: Routine, announced preoperational inspection of 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 systems, radiation monitoring instrumentation, radiological effluent technical specification (RETS), process control plan (PCP), personnel selection/qualification criteria, and radwaste training/retraining programs. The inspection involved 66 inspector-hours onsite by two NRC inspectors.

Results: Within the 12 areas inspected, no violations or deviations were identified.

DETAILS

1. Persons Contacted

GSU

*J. C. Deddens, Vice President, RBS Nuclear Group
*T. F. Plunkett, Plant Manager (PM)
T. P. Anthony, Senior Mechanical Engineer (Engineering Radwaste Coordinator)
*C. L. Ballard, Construction Supervisor
*E. Cargill, Plant Health Physicist
E. F. Christnot, Quality Assurance (QA) Manager
*J. V. Conner, Environmental Supervisor
*P. J. Dautel, Licensing Staff Assistant
S. V. DeSai, Chemical Engineer
*R. G. Easlick, Radwaste Supervisor
*P. E. Freehill, Assistant PM Operations
*G. O. Gray, Acting QA Manager
*L. P. Handy, QA Engineer
*R. W. Helmick, Project Manager
*K. C. Hodges, Quality Systems Supervisor
*D. E. Jacobsen, Radwaste Systems Engineer
*A. G. James, Jr., Preoperation Startup (SU) and Test Engineer
W. J. Lambert, Systems Engineer
R. Lasso, Maintenance Instrumentation and Control
Nuclear Training
J. M. McGhee, Operations Radwaste Foreman
C. L. Nash, Chemistry Supervisor
E. P. Oswood, QA Engineer
J. L. Pawlick, SU Engineer
C. Rohrmann, Training Supervisor
*R. J. Shah, QA Engineer
*K. E. Steele, Health Physicist
R. N. Taylor, QA Engineer
*A. D. Wells, Radiation Foreman

Others

W. E. Carter, Radwaste Specialist, Consultant, Sunbelt
Technical Services
G. W. Cates, Radwaste Specialist, Consultant, Sunbelt
Technical Services
*R. B. Coad, Acting GSU ALARA Coordinator, Consultant
*R. T. Dunn, Lead Heating Ventilation Air Conditioning (HVAC)
SU Engineer, Consultant, Power Management Consultants

Larry Fann, HVAC SU Engineer, Consultant, Power Management Consultants
F. W. Finger, III, Project Manager, Stone and Webster
B. R. Hall, Assistant Superintendent Field Quality Control,
Stone and Webster
R. R. Tunstall, ALARA Technician, Consultant, NARCO Corporation

*Denotes those present at the exit interview.

2. Radwaste Organization and Management Control

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

The NRC inspectors reviewed the September 14, 1984, reorganization of RBS personnel. Applicable to this inspection, the radwaste coordinator was installed as radwaste supervisor, reporting directly to the assistant plant manager of operations. The radwaste supervisor will directly supervise approximately 5 people and functionally supervise approximately 12 people. A licensee representative stated that this recent change will be reflected in the next quarterly revision of the FSAR.

The NRC inspectors discussed with the licensee the need for approval of the "Radioactive Waste Management Plan," ADM-0078. The proposed radwaste committee mentioned in the plan would be beneficial to the radwaste program. A portion of the radwaste personnel job descriptions had not been completed to reflect the responsibility changes due to the reorganization.

Open Item (458/8414-01) remains open pending completion of the management control procedures for radwaste activities.

No violations or deviations were identified.

3. Technical Specifications

The NRC inspectors determined that the licensee had submitted the RETS to the Office of Nuclear Reactor Regulation (NRR) for review and approval. The licensee indicated that the Offsite Dose Calculational Manual will be submitted to NRR for approval in early December 1984.

The licensee plans to use a contractor, which has an NRR approved PCP, to solidify radwaste. The licensee plans to develop a site approved PCP incorporating the contractor NRR approved PCP; but at the time of this inspection a contractor had not yet been selected.

Open item (458/8414-02) remains open pending:

- Approval of the RETS
- Completion of an approved PCP and procedures

No violations or deviations were identified.

4. Radioactive Waste Management

The NRC inspectors 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

The NRC inspectors determined that pumps and tanks in this system had been installed. Approximately 80% of the piping and 40-50% of the wiring had been completed. The NRC inspectors reviewed a copy of the liquid radwaste system's "Preoperational Acceptance Test Procedure," 1-PT-603. The licensee has scheduled the performance of the preoperational tests in March 1985.

The NRC inspectors reviewed the liquid radwaste system and discussed the need to perform an ALARA 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, recirculation time, discharge flow rates, and calibration of recorders for the liquid radwaste system. The NRC inspectors determined that the licensee had not initiated a radwaste systems review as discussed in IE Bulletin 80-10.

The NRC inspectors noted that the licensee had not yet developed operating procedures for the liquid radwaste systems; therefore, the development of a training program had not been initiated.

Open item (458/8414-03) remains open pending:

- Performance of preoperational tests for all liquid radwaste systems.
- Performance of an ALARA "as-built" system review, against the recommendations of ANSI/ANS-55.6-1979.
- The review of the liquid radwaste system, review of the radwaste operating procedures, and the development of a sampling program per IE Bulletin 80-10.

- Verification of tank volumes, recirculation times, representative sampling, discharge flow rates, and recorder readings.
 - Development of liquid radwaste operating system procedures.
 - Development of a liquid radwaste systems training/retraining program.
- b. Gaseous Radioactive Waste System - The NRC inspectors' review of the gaseous radwaste system indicated that the licensee was still in the process of completing construction of the system. Approximately 90% of the large bore piping is completed, 50% of the wiring is completed, and 90% of the system cables are in place. The drain and instrument line installation had been initiated. The NRC inspectors determined that procedure 1-PT-606, "Offgas," a preoperational/acceptance test procedure had not been completed. The licensee has scheduled the preoperational tests to be completed in April 1985.

The NRC inspectors discussed the need to perform an ALARA review of the "as-built" gaseous waste system against the recommendations of ANSI/ANS 55.4-1979. This system and its operating procedures had not been reviewed and a sampling/analysis program had not yet been developed per IE Bulletin 80-10.

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

Open item (458/8414-04) remains open pending:

- Performance of the preoperational tests.
- Performance of an "as-built" ALARA review against recommendation of ANSI/ANS 55.4-1978.
- 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.

5. Controls for Effluent Releases

The NRC inspectors reviewed the licensee's procedure for controlling releases of radioactive liquids and gases to the environment. The licensee had in draft form, Chemistry Section Procedure - 110, "Control of Plant Radioactive Discharges." The NRC inspectors discussed with the licensee the need for the following items to be included as part of the effluent release procedures:

- Radiochemistry analyses results
- Technical Specification limits
- Functional tests of monitors
- Functional tests of isolation valves
- Allowable release rate
- Dilution flow
- Valve line-up verification
- Total volume released
- Total activity released
- Authorization signatures

Open Item (458/8414-05) remains open pending the completion of approved effluent release procedures.

No violations or deviations were identified.

6. Solid Radioactive Waste System

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

The NRC inspectors' review of the solid radwaste system indicated that the construction of this system was approximately 40% completed. Some progress had been made in several areas of the solid radwaste system (e.g., Radwaste Procedure, RWP-0310, "Operation of the Nuclear Packaging Model-WC-18000 Waste Compactor," and RPW-0304, "Radioactive Waste Storage and Accountability," had been completed); but essentially the status of the system is the same as discussed in NRC Report 50-458/84-14.

Open item (458/8414-06) remains open pending:

- Completion of approved preoperational test procedures.
- Verification of representative sampling of waste streams to determine compliance with 10 CFR 61.55 and 61.56.
- Performance of "as-built" ALARA review against recommendations of ANSI/ANS 55.1-1978.
- Completion of operating procedures.
- Completion of training/retraining programs for solid radwaste systems.

No violations or deviations were identified.

7. Radiation Monitoring Systems - Process and Effluent Monitors

The NRC inspectors reviewed the licensee's inplant radiation monitoring systems for compliance with the FSAR.

The NRC inspector determined that the licensee had installed the majority of the Area Radiation Monitoring System (ARMS). Loop 5 of ARMS which is for the radwaste and fuel storage buildings had been completed. Generic test procedures 1-G-CAL-03, "Low Range Area Radiation Monitoring Calibration," and 1-G-CAL-04, "Ion Chamber Area Radiation Monitor Calibration," had been completed.

The process and effluent monitors had not been installed at the time of this inspection. The preoperational tests are scheduled to be completed in March 1985. Approximately 90% of the surveillance and calibration procedures are in draft form.

The NRC inspectors 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.

Open item (458/8417-07) remains open pending:

- 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.

8. Air Cleaning Systems

The NRC inspectors reviewed the air filtration system to determine compliance with FSAR commitments.

The NRC inspectors determined the radwaste building ventilation system will be finished by the construction contractor and turned over in December 1984. The standby gas treatment HVAC and control room HVAC construction will also be completed in December 1984. The fuel building HVAC system is to be completed by the end of November 1984. The fuel building preoperational test procedures had been completed and approved. The radwaste building preoperational test procedures are in the RBS approval chain and the procedures for the technical support center are being drafted.

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

Open item (458/8414-08) remains open pending:

- Performance of an "as-built" ALARA review.
- Completion of preoperational tests.
- Development of an inplace 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 deviation were identified.

9. Transportation Activities

The NRC inspectors 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 determined that the licensee had scheduled the transportation activities procedures to be completed in December 1984.

Open item (458/8414-09) remains open 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.

10. Audits and Reviews

The NRC inspectors reviewed the licensee's audit/review program regarding radwaste and transportation activities to determine compliance with FSAR commitments.

The NRC inspectors reviewed an audit, "Audit of Radwaste Management Program," performed by RBS Quality Systems organization during September 10-14, 1984. This audit included pre and post audit meetings, audit procedures, and a contracted consultant who was knowledgeable in radwaste as an audit team member; but since the RBS radwaste management and transportation programs are not completed and operating, a meaningful checklist had not been developed.

Open item (458/8414-10) remains open pending:

- Completion of approved audit plans, including checklists, for the radwaste and transportation programs.
- Performance of radwaste and transportation audits.

No violations or deviations were identified.

11. Exit Interview

The NRC inspectors met with licensee representatives identified in paragraph 1 at the conclusion of the inspection on November 9, 1984. The NRC inspectors discussed the scope and findings of this inspection. The NRC inspectors stated that, based on the current projected fuel load date, the radwaste systems and transportation activities programs have much work to be completed in a short time. The NRC inspectors also stated that it would be necessary to resolve the open items discussed in this report prior to fuel loading.