



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W.
 ATLANTA, GEORGIA 30323

FEB 02 1988

Report Nos.: 50-327/88-03 and 50-328/88-03

Licensee: Tennessee Valley Authority
 6N38 A Lookout Place
 1101 Market Street
 Chattanooga, TN 37402-2801

Docket Nos.: 50-327 and 50-328

License Nos.: DPR-77 and DPR-79

Facility Name: Sequoyah

Inspection Conducted: January 11-15, 1988

Inspector: R. R. Marston
 R. R. Marston

1/29/88
 Date Signed

Approved by: John B. Kahle
 J. B. Kahle, Section Chief
 Division of Radiation Safety and Safeguards

1/29/88
 Date Signed

SUMMARY

Scope: This routine, announced inspection was conducted in the areas of radiological liquid and gaseous effluents, chemistry, and environmental monitoring. The inspection included reviewing and evaluating open items for closeout.

Results: No violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *N. Black, Jr., Electrical Engineer
- *G. Fiser, Chemistry Program Manager
- *R. Fortenberry, Superintendent, Technical Support
- *G. Gault, Reactor Engineering Supervisor
- D. Goetcheus, Chemistry Manager (Acting)
- J. Hereford, Instrument Engineer
- B. Hobbs, Chief, Environmental Radiological Monitoring and Instrumentation Branch
- *T. Howard, Operations-Surveillance Supervisor
- *J. Howell, Nuclear Engineer, Reactor Fuel and Analysis
- *T. Hughes, Principal Electrical Engineer
- *G. Kirk, Compliance Licensing Manager
- *R. Martin, Technical Services Engineer
- *D. Maxwell, Electrical Engineer
- S. Morrow, Radwaste Control Supervisor
- *R. Mullin, Deputy Manager, Reactor Fuel and Analysis
- D. Nix, Chemical Engineer
- B. Schofield, Licensing Engineer
- *E. Slinger, Manager of Projects, Site Director's Office
- *S. Smith, Plant Manager
- S. Spencer, Licensing Engineer
- R. Welder, Mechanical Engineer
- *C. Whittemore, Licensing Engineer

NRC Resident Inspectors

- K. Jenison
- P. Harmon
- D. Loveless
- K. Poertner
- M. Branch

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on January 15, 1987, with those persons indicated in Paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee. The licensee did not identify as proprietary any of the material provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Audits (80721, 84723, 84724, 84725)

Technical Specification (TS) 6.5.2.8 requires that audits of unit activities be performed under the cognizance of the Nuclear Safety Review Board. The TS further requires that the audit program shall encompass:

- ° The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months;
- ° The radiological environmental monitoring program and the results thereof at least once per 12 months;
- ° The Process Control Program and implementing procedures for solidification of radioactive wastes at least once per 24 months; and
- ° The performance of activities required by the Quality Assurance Program to meet the criteria of Regulatory Guide 4.15, December 1977 at least once per 12 months.

The inspector reviewed Audit QSS-A-87-802, "Radiological Environmental Monitoring and RARC, and Radiological Effluent Monitoring," conducted October 26 through November 23, 1987. The audit covered the programs at Browns Ferry and Sequoyah Plants, the activities of the Radiological Assessments and Review Committee (RARC), and the activities of the Western Area Radiological Laboratory (WARL). Two findings were identified against WARL and Radiological Control pertaining to the environmental monitoring program at Sequoyah, and two areas of concern were identified with respect to Sequoyah's effluent monitoring program. A previously opened area of concern was discussed and closed, and an area of improvement was discussed and was left open due to a need for further evaluation. The inspector also reviewed Audit SQA-87-802, "Nonradiological Environmental Monitoring Program," conducted November 16 through 19, 1987. This audit was conducted to verify TVA's compliance with:

- ° Both national and State environmental protection requirements;
- ° The National Pollution Discharge Elimination System (NPDES) permit;
- ° The FSAP, and
- ° Appendix B of the operating plant specific technical specifications.

The audits appeared to cover the scope in depth and to verify compliance to specified requirements.

No violations or deviations were identified.

5. Procedures (80721, 84723, 84724, 84725)

Technical Specification (TS) 6.8 requires that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, 1978, and Process Control Program implementation. The TS also requires that each of the above procedures, and changes thereto, shall be reviewed by the Plant Operations Review Committee (PORC) and approved by the Plant Superintendent prior to implementation and reviewed periodically as set forth in administrative procedures. The TS makes provisions for temporary changes to these procedures.

TS 6.8.4 requires that written procedures be established, implemented, and maintained by the Radiological Hygiene Branch covering:

- ° Offsite Dose Calculation Manual (ODCM) implementation.
- ° Quality Assurance program for effluent and environmental monitoring, using the guidance in Regulatory Guide 4.15; and
- ° Surveillance requirements and environmental monitoring requirements shown in Table 6.1-1 (Table 6.1-1 refers to surveillance requirements in calculation of effluent doses and in the radiological environmental monitoring program).

The inspector reviewed selected Surveillance Instructions and Technical Instructions pertinent to the areas examined during this inspection. The instructions appeared to ensure that the licensee's program was in compliance with Technical Specifications.

No violations or deviations were identified.

6. Organization and Management (80721, 84723, 84724, 84725)

The inspector reviewed approved organization charts and discussed the current organization with cognizant licensee representatives. The inspector noted that most manager/supervisor slots in the plant chemistry organization were filled with people in an "acting" status. The organization was established so that the Chemistry Manager would have ready access to the Plant Manager, if required.

The Chemistry group appeared to be adequately manned for the tasks assigned.

No violations or deviations were identified.

7. Environmental Monitoring Program (80721)

Technical Specification 3.12.1 requires that the radiological environmental monitoring program shall be conducted as specified in Table 3.12-1. Table 3.12-1 provides a listing of sample types, number of

locations, collection frequency, and type and frequency of analysis. A footnote to the table states that sample locations are shown on the figure in the ODCM.

The inspector discussed the environmental program via telephone with cognizant licensee representatives at the Western Area Research Lab at Muscle Shoals, Alabama. The licensee representatives stated that the radiological environmental monitoring program, including sampling and analysis, was conducted by the WARL. Data was provided to the plant via the Annual Environmental Monitoring Report. The licensee representatives stated that a procedure provided for discussion of anomalous data or readings near or over determined criteria with Plant Chemistry personnel.

The licensee representatives further stated that each week, a computer printout provided the sampling schedule for the next two weeks and generated labels for the samples. Inspection and maintenance of the system equipment was provided by onsite personnel who also maintained the meteorological system.

No violations or deviations were identified.

8. Gaseous Effluent Program (84724)

Technical Specification 3/4.11.2 specifies dose and/or dose rate limits for gaseous effluent release.

The inspector toured the plant, inspecting accessible parts of the gaseous radwaste storage, treatment, and release systems.

The system included nine Waste Gas Decay Tanks; one of which was in service, one on standby, and one used to provide cover gas. A central control station provided a central indication and control point for the Gaseous Radwaste system.

The inspector reviewed gaseous effluent release documentation for the releases from December 31, 1987, through January 7, 1988. The inspector also reviewed graphs showing levels of nuclides released in gaseous radwaste in calendar year 1987. All releases appeared to be within TS limits.

No violations or deviations were identified.

9. Liquid Effluent Program (84723)

Technical Specification 3/4.11.1 specifies dose and dose rate limits for liquid effluent releases.

The inspector toured the plant, inspecting accessible parts of the liquid radwaste system. The system included storage and sampling tanks, valves, and indicator and control systems.

The inspector reviewed liquid radwaste release documentation for the period from December 20, 1987, through January 9, 1988. The releases appeared to be conducted in accordance with Technical Specifications and the appropriate Surveillance Instructions. Graphs for nuclides released during calendar year 1987 were also reviewed.

No violations or deviations were identified.

10. Chemistry and Radiochemistry (84723, 84724)

Technical Specifications 3/4.4.7 and 3/4.4.8 specify the chemical and radiochemical limits and surveillance requirements for the primary coolant. Technical Specification 3/4.7.1 specifies the radiochemical limits and surveillance requirements for the secondary cooling system.

The inspector reviewed data sheets for chemistry and radiochemistry parameters from primary coolant for the period from January 8, 1987, through January 13, 1988.

The inspector also reviewed chemistry and radiochemistry graphs for primary and secondary coolant from November 8, 1986, through January 13, 1988.

Parameters appeared to be within specified limits and surveillances appeared to be conducted at required intervals.

No violations or deviations were identified.

11. Effluent Monitoring Instrumentation (84723, 84724, 84725)

Technical Specifications 3/4.3.3.9 and 3/4.3.3.10 specify surveillance requirements and frequencies for radioactive liquid and gaseous effluent monitoring instrumentation, respectively. Appropriate Surveillance Instructions and Technical Instructions specify requirements and frequencies for laboratory instrumentation and implement Technical Specifications for effluent monitors.

The inspector reviewed a selection of completed Surveillance Instruction packages for calibration and functional test of effluent monitors which were conducted in calendar year 1987.

The Count Room was equipped with two GeLi gamma spectroscopy systems, a PCC-11T Proportional Counter, and a Beckman LS 100C Liquid Scintillation system. Appendix A to Technical Instruction TI-49 specifies the calibration or performance test and the frequency of each for each of the Lab counting systems.

The inspector reviewed a selection of count room records for the period from June 1986 to December 1987 for calibration and testing of the count room equipment. In addition, the inspector reviewed the control charts which had been prepared for each instrument, and the source certificates

provided for the calibration sources. The required calibrations and tests appeared to have been done at the required frequencies. The inspector noted that the efficiency determination for the gamma spectroscopy systems was performed on a 30-month cycle. A licensee representative stated that data taken in recent years had shown the systems to be fairly stable with very little drift from year-to-year. In addition, numerous other tests and checks performed showed no significant drift.

No violations or deviations were identified.

12. Air Cleaning Systems (84724)

Technical Specification 3/4.6.1.8 specifies operability and surveillance requirements for the Emergency Gas Treatment System (EGTS). TS 3/4.7.7 specifies operability and surveillance requirements for the Control Room Emergency Ventilation System; and TS 3/4.7.8 for the Auxiliary Building Gas Treatment System (ABGTS).

The inspector discussed the filter and charcoal testing program with licensee representatives and reviewed the licensee records on in-place leak testing and charcoal sample testing. The documentation showed that the testing had been done at the required intervals. The inspector noted that the licensee maintained records of the charcoal trays by serial number.

No violations or deviations were identified.

13. Collocated Environmental TLDs (25022)

The inspector and licensee discussed NRC Temporary Instruction TI 2500/22. The licensee provided the inspector with the required data. The Inspector Followup Item in this area (TI 2500/22) is now closed.

No violations or deviations were identified.

14. Reports (80721, 84723, 84724)

a. Annual Radiological Environmental Operating Report

Technical Specifications 6.9.1.6 and 6.9.1.7 require that routine radiological environmental operating reports covering the operation of the unit during the previous calendar year shall be submitted prior to May 1 of each year, and specify contents of the report.

The inspector reviewed the Annual Radiological Environmental Operating Report for calendar year 1986, dated April 30, 1987.

The report provided the information required by Technical Specifications, including results of the annual land use census and the interlaboratory intercomparison program.

No violations or deviations were identified.

b. Effluent and Waste Disposal Semiannual Report (1st Half 1987)

Technical Specifications 6.9.1.8 and 6.9.1.9 require that radioactive effluent release reports covering the operation of the unit during the previous 6 months of operation shall be submitted within 60 days after January 1 and July 1 of each year, and specify the content and format of the report.

The inspector reviewed the report for the first half of calendar year 1987, dated August 29, 1987. The report was evaluated against Technical Specification requirements and the criteria of NRC Regulatory Guide 1.21, Revision 1, June 1974.

The report included elements and data as specified in the Technical Specifications and according to the criteria of Regulatory Guide 1.21. There were no abnormal releases. A brief note was included explaining the inoperability of the instrumentation for measuring flow through the Unit 1 shield building exhaust, and specifying the interim means of determining the flow during this period.

No violations or deviations were identified.

15. Inspector Followup Item (IFI) (92701)

(Closed) IFI 86-02-01: Review of licensee's evaluation of methyl iodide retention testing for ventilation system charcoal adsorber. A licensee representative stated that the evaluation determined that the existing method (ANSI N510-1975) provided acceptable results.