UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report Nos. 50-327/81-24 and 50-328/81-31

Licensee: Tennessee Valley Authority
500A Chestnut Street
Chattanooga, TN 37401

Facility Name: Sequoyah

Docket Nos. 50-327 and 50-328

License Nos. DPR-77 and CPPR-73

Inspection at Sequoyah Nuclear Plant near Daisy, TN

Inspector: G. L. Troup — Date Signed: 7/17/81

Approved by: C. M. Hosey, Acting Section Chief — Date Signed: 7/17/81
Technical Inspection Branch
Engineering and Technical Inspection Division

SUMMARY

Inspection on June 15-19, 1981

Areas Inspected

This routine, unannounced inspection involved 37 inspector-hours onsite in the areas of preoperational testing of Unit 2, external exposure control, modifications of radioactive waste systems, radioactive source surveys and reports to the NRC.

Results

Of the areas inspected, no violations of NRC requirements or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*J. M. McGriff, Jr., Assistant Plant Superintendent
W. T. Cottle, Assistant Plant Superintendent
W. H. Kinsey, Jr., Results Supervisor
*R. J. Kitts, Health Physics Supervisor
*W. M. Halley, Pre-op Test Section Supervisor
M. A. Skarzinski, Assistant Pre-op Test Section Supervisor
*D. O. McCloud, Quality Assurance Supervisor
*R. L. Hamilton, QA Engineer
F. P. Cupport, Startup Engineer

Other licensee employees contacted included 3 technicians.

NRC Resident Inspector

*E. J. Ford
S. D. Butler

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on June 19, 1981 with those persons indicated in paragraph 1 above. The inspector noted that during his review of the sealed source inventory and survey (paragraph 8), the completed data sheets were not in the plant files although almost three months had passed since the completion. They were subsequently found to still be in the review process. The inspector noted that the test is due again in July and the review should have been completed in a timely manner so any problems could be corrected before the next review cycle. The cognizant supervisor acknowledged this and stated that the overall review process would be reviewed so the data sheets are reviewed in a timely manner.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Preoperational Tests - Unit 2

a. The inspector discussed the status of eight preoperational tests relating to radiation monitors, ventilation systems, sampling and radioactive waste systems with licensee representatives. Six of these procedures were completed. The inspector reviewed test procedures to determine that the procedures were completed, procedure changes had been properly approved, identified deficiencies or incomplete work were documented and evaluated and the completed procedures approved. A licensee representative stated that the test procedures had been forwarded to Engineering Design for review and approval prior to final approval of the procedure.

b. Test procedures reviewed during the inspection were:

TVA-9B, "Reactor Building Purge System"
TVA-28, "Water Quality and Sampling System"
TVA-31A, "Process Radiation Monitoring System (Off-Line Gamma Scintillation Liquid Monitors)"
TVA-31B, "Process Radiation Monitoring System (Off-Line Particulate, Total Gas and Iodine Monitors)"
TVA-31C, "Process Radiation Monitoring System (Gaseous Monitoring - Total Gas)"
TVA-32A, "Area Radiation Monitoring System"

TVA-9B and TVA-28 have significant outstanding test exceptions which require further testing. The exception resolutions will be reviewed during subsequent inspections as will the completion of test procedures TVA-9A and TVA-44.

c. The tests of the process monitors included the verification of the annunciator alarms, low flow alarms, loss of power and, where applicable, filter paper break. When appropriate, verification of interlock trips on high alarm was accomplished.

d. As the liquid and gaseous radwaste systems are shared systems for both units, the preoperational testing was done as part of the Unit 1 testing. The inspector reviewed the Unit 1 test procedures W5.2, "Liquid Waste Processing" and W5.4, "Gaseous Waste Processing" and verified that portions of the system associated with Unit 2 had been tested and then isolated. Those portions of the liquid system in the Unit 2 containment are covered in TVA-44.

e. When reviewing the test procedures for radiation monitors the inspector noted that monitor 2-RE-90-100, Unit 2 Shield Building Vent Monitor, was not included. A licensee representative informed the inspector that this monitor had been tested during the conduct of the Unit 1 radiation monitors because of the potential discharge path from the

Emergency Gas Treatment System. The inspector reviewed TVA-31B for Unit 1 and verified that this monitor had been tested in February 1980. The inspector had no further questions.

6. External Exposure Control

a. 10 CFR 20.101(a) specifies the exposure limits for individuals in the restricted areas. 20.101(b) specifies the requirements for extending the permissible limits for a quarter to 3 rems.

b. The inspector reviewed the "Current Occupational External Radiation Exposure Report" for the month of May 1981 and determined that no individual had exceeded the exposure limits of 10 CFR 20.101(a) for the first or second quarter. The inspector selected twelve individuals from the report and verified from other records that the individuals were authorized 3 rems per quarter exposure, had a Form NRC-4 on file and had completed the requisite health physics training. The inspector had no further questions.

c. In reviewing the records the inspector noted that four individuals apparently had exceeded the deadline on the health physics training. A licensee representative informed the inspector that training was controlled by calendar quarters, so all of the individuals in question who had completed their training during the second quarter (April 1979) had until the end of the second quarter 1981 to complete the training. The licensee representative showed the inspector the printout of individuals who required retraining during the quarter and discussed the control methods to assure that the individuals received the training or would be excluded from the regulated area.

d. 10 CFR 20.104(a) limits the exposure of individuals less than 18 years of age to 10% of the limit of 10 CFR 20.101(a); e.g., 125 mrem per quarter. The inspector discussed the exposure control measures for these individuals with the cognizant supervisor. The Division of Nuclear Power Procedures Manual, Section N74A13 specifies exposure limits but does not exclude them from the regulated area. The cognizant supervisor stated that because of exposure problems at other facilities, additional controls or restrictions were being considered. These will be reviewed during subsequent inspections.

7. Liquid Radioactive Waste System

a. In RII Report No. 50-327/80-41, paragraph 6, open item 327/80-41-02, was identified concerning the performance of dose projections in accordance with Technical Specification 3.11.1.3 for the periods when the liquid radwaste system was not being operated. In RII Report No. 50-327/81-10, paragraph 9.b, it was noted that the monthly dose projections had been performed, open item 327/80-41-02 is closed for record purposes.

b. Due to operational difficulties with the waste evaporators, the licensee has modified the system to incorporate a filtration/demineralization system to process waste. The inspector reviewed the plant records for the modification and determined that the change was evaluated in accordance with 10 CFR 50.59, had been reviewed and approved by PORC and the effect of the change on releases and off-site exposures had been evaluated in accordance with Technical Specification 6.15. The inspector had no further questions on the modification.

8. Radioactive Sources

Technical Specification 4.7 10.1 requires that each radioactive source containing more than 100 µCi beta-gamma activity or 5 µCi of alpha activity be leak tested at least every six months. The inspector reviewed SI-56, "Byproduct Material Inventory and Sealed Source Leak Test" performed in the first quarter of 1981, which includes the inventory of both exempt and non-exempt sources. All leak test results were within the Technical Specification limits.

9. Changes to NRC-Approved Manuals

a. Technical Specification 6.14 and 6.15 specify that changes to the Off-site Dose Calculation Manual (ODCM) and to the radwaste systems shall be reported to the NRC and specify the information to be provided. The inspector reviewed the monthly operating report for January 1981 and determined that the ODCM changes and radwaste modifications (paragraph 7.b) had been documented and described as required. The inspector had no further questions.

b. In RII Report No. 50-327/81-10, paragraph 9.b, open item 327/81-10-06 was identified concerning revision of the ODCM to require that the monthly analysis include any isotope which is greater than a predetermined percentage of the total vice the five preselected isotopes. The inspector discussed the status of this revision with the cognizant supervisor and was informed that this revision had not been made yet. Open item 327/81-10-06 remains open.

10. Effluent Release Procedures - Unit 2

Technical Specification 6.8.1 requires that written procedures be established as recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2. Regulatory Guide 1.33, Appendix A, Section 7 includes procedures for the control of radioactive liquid and gaseous effluents. As the release points for liquid waste and gaseous waste are common to the two units, and release points such as the shield building vent, may discharge effluent from either unit, the release procedures (SI-4XX series) were prepared and approved for the startup of Unit 1 but are applicable to both Unit 1 and Unit 2. The inspector discussed the procedures with the cognizant supervisor and reviewed several of the procedures; the inspector had no further questions.

11. Reports to the NRC

10 CFR 20.402, 20.403, and 20.405 require that reports be submitted to the NRC for the theft or loss of licensed material, incidents and overexposures, respectively. The inspector discussed these reportable situations with the cognizant supervisors and reviewed plant exposure records. The inspector determined that no reports had been required pursuant to these sections of the regulations; the inspector had no further questions.

12. Health Physics Technician Training

Technical Specification 6.4 states, in part, "A retraining and replacement training program for the unit staff...shall meet or exceed the requirements and recommendations of ANSI N18.1-1971..." The inspector discussed the retraining program for technicians with the cognizant supervisor, who explained that the retraining program has been implemented utilizing training seminars and a classroom program will start next month. The inspector had no further questions at this time and stated that the program will be reviewed after it has been in progress for a period of time.