



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

Report Nos. 50-327/82-20 and 50-328/82-20

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

Facility Name: Sequoyah Nuclear Plant

Docket Nos. 50-327 and 50-328

License Nos. DPR-77 and DPR-79

Inspection at Sequoyah site near Soddy Daisy, Tennessee

Inspectors:	<u>R. V. Hays for</u>	<u>10/6/82</u>
	E. J. Ford	Date Signed
	<u>R. V. Hays for</u>	<u>10/6/82</u>
	S. D. Butler	Date Signed
Approved by:	<u>D. R. Quick</u>	<u>10/6/82</u>
	D. R. Quick, Section Chief, Division of Project and Resident Programs	Date Signed

SUMMARY

Inspection on August 6 - September 5, 1982

Areas Inspected

This routine unannounced inspection involved 161 inspector-hours on site in the areas of Operational Safety Verification, Preparations for Unit 1 Refueling, Independent Inspection Effort, and Radiological Protection Operation.

Results

Of the four areas inspected, no violations or deviations were identified in three areas; one violation was found in one area; Failure to post an airborne radioactivity area, paragraph 8).

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DETAILS

1. Persons Contacted

Licensee Employees

C. C. Mason, Plant Superintendent
J. E. Cross, Assistant Plant Superintendent
P. R. Wallace, Assistant Plant Superintendent
J. M. McGriff, Assistant Plant Superintendent
J. W. Doty, Maintenance Supervisor (M)
B. M. Patterson, Maintenance Supervisor (I)
D. C. Craven, Maintenance Supervisor (E)
L. M. Nobles, Operations Supervisor
R. W. Fortenberry, Results Supervisor
R. J. Kitts, Health Physics Supervisor
J. T. Crittenden, Public Safety Service Supervisor
R. L. Hamilton, Quality Assurance Supervisor
M. R. Harding, Compliance Supervisor
W. M. Halley, Preoperational Test Supervisor
J. Robinson, Outage Director

Other licensee employees contacted included field services craftsmen, technicians, operators, shift engineers, security force members, engineers, maintenance personnel, contractor personnel and corporate office personnel.

Other Organizations

J. K. Asselstine, NRC Commissioner
R. C. Lewis, NRC, RII Director, Division of
Projects and Resident Programs
G. F. Dilworth, TVA, Assistant General Manager
H. J. Green, TVA, Director, Division of Nuclear Power
R. J. Johnson, Power Operations Training Center

2. Exit Interview

The inspection scope and findings were summarized with the Plant Superintendent and/or members of his staff on August 19 and August 20, 1982. During the reporting period, frequent discussions are held with the Plant Superintendent and his assistants concerning inspection findings.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Operational Safety Verification

The inspector toured various areas of the plant on a routine basis throughout the reporting period. The following activities were reviewed/verified:

- a. Adherence to limiting conditions for operation which were directly observable from the control room panels.
- b. Control board instrumentation and recorder traces.
- c. Proper control room and shift manning.
- d. The use of approved operating procedures.
- e. Unit operator and shift engineer logs.
- f. General shift operating practices.
- g. Housekeeping practices.
- h. Posting of hold tags, caution tags and temporary alteration tags.
- i. Personnel, package, and vehicle access control for the plant protected area.
- j. General shift security practices on post manning, vital area access control and security force response to alarms.
- k. Surveillance testing in progress.
- l. Maintenance activities in progress.
- m. Health Physics Practices.

On August 6, 1982 the licensee informed the inspectors that they had been notified by Westinghouse of the existence of a potential undetectable failure in the Solid State Reactor Protection System (SSPS) test circuitry which could prevent complete actuation of the system. Contacts in the output relay test switch could fail to close when the switch is returned to normal following testing and prevent proper operation of the output relays when actually called upon to operate. The licensee tested the switch contacts on both Units to ensure they were closed and incorporated instructions into SSPS surveillance procedures to ensure proper contact closure of the test switch following each use. The licensee officially reported this problem to the NRC in licensee event report SQRO 50-327/82-95 dated 8/6/82 and 8/18/82.

On August 12, 1982 the inspector verified compliance with technical specification 3.2.1 on Unit 2 during a return to full power after reactor coolant pump maintenance. Tech Spec 3.2.1 requires that axial flux

difference (AFD) be within certain limits prior to exceeding 50% and 90% power. In addition the inspector reviewed the licensee's procedures, Surveillance Instruction SI-49 "Target Axial Flux Difference Determination" and Technical Instruction TI-28 "Curve Book", for measuring and periodically updating the AFD target band as required by surveillance requirements 4.2.1.3 and 4.2.1.4. SI-49 data sheets for January thru August 1982 were reviewed for both Units to verify that the surveillance was being performed within the required frequency.

On August 27, 1982 Unit 2 tripped from 100% power when the feedwater regulating valve for #2 steam generator failed shut. The trip was reported to the NRC in accordance with 10 CFR 50.72. The inspector discussed the trip with the Operations Supervisor to determine if any problems with the plant or safety-related equipment were encountered. None were reported. The licensee determined that a nearby steam leak in the turbine building had caused an accumulation of water in the junction box for the valve. The water caused a ground which blew the power supply fuses for the valve air solenoid. The valve failed shut on loss of control air pressure. The ground was repaired and the valve returned to service. The steam leak had been fixed previously. The Unit was returned to power on August 28.

No violations or deviations were identified.

6. Preparation for Unit 1 Refueling

During the reporting period the inspector began to review the licensee's preparation for the Unit 1 refueling outage. The status of procedure preparation was discussed with the Reactor Engineering personnel. The inspector began to review the licensee's scheduling and administrative control system for the outage and reviewed completed Fuel Handling Instructions and Technical Instructions that will be used during the outage. Other procedures that are in the process of preparation will be reviewed as they are completed.

No violations or deviations were identified.

7. Independent Inspection Effort

The inspector routinely attended the morning scheduling and staff meetings during the reporting period. These meetings provide a daily status report on the operational and testing activities in progress as well as a discussion of significant problems or incidents associated with plant operations.

The inspector learned that the licensee was in the process of performing Unit 1 steam supply and feedwater tests in conjunction with Westinghouse using a radioactive sodium tracer. The inspector verified that the testing was being performed in accordance with an approved procedure, STEAR 82-12, and that proper health physics precautions were being taken for the use of the radioactive sodium.

No violations or deviations were identified.

8. Failure to Post an Airborne Radioactivity Area

To ascertain the validity of an anonymous allegation concerning an event on April 28, 1982, the inspector made inquiries of health physics (HP) and operations personnel. In addition, the inspector reviewed the following operating and HP logs: Shift Engineers Log, Units 1 and 2 Assistant Shift Engineer and Operators Logs, elevation 690 HP lab Daily Journal, Airborne Radiation Sample Log sheets and pertinent HP airborne activity sample requests and sample reports. The inspector examined tabulated raw data to determine the fractional maximum permissible concentrations (MPC) for the sampled noble gases and found that during the time period 8:00 a.m. until approximately noon-time or later, on April 28, 1982, certain normally occupied elevations of the auxiliary building, such as: 690 general area, 669 corridor, 714 general area and 734 west end exceeded 25 percent of the amounts specified in 10 CFR 20, Appendix B for airborne isotopic concentrations. The inspector determined from interviews with HP and operations personnel that there was a lack of required posting in these areas. Failure to post these areas constitutes a violation (327, 328/82-20-01).

9. Auxiliary Building Containment

The inspector has been unable to substantiate an anonymous allegation regarding the breach of auxiliary building (AB) secondary containment by propping open a pair of containment boundary doors on elevation 734. These doors are a pair of interlocked double doors which require passing through first one set, into an enclosed area, and then through a second set in order to gain access to the AB containment. The inspectors had not previously observed these doors open simultaneously. The inspectors will continue to observe all facets of containment integrity on their periodic inspections of the plant.

No violations or deviations were identified.

10. Commissioner Asselstine Visit

On August 18, 1982, the inspector accompanied Commissioner Asselstine and Director Lewis on a tour of Sequoyah plant and the TVA Power Operations Training Center. The party was met and briefed by corporate representatives, Messrs Dilworth and Green, and Sequoyah superintendent, C. C. Mason. After discussions regarding organization and a plant familiarization tour, the party departed for the TVA training center. Dr. Johnson reviewed the content of the various training programs and demonstrated the use of the center's training simulators.