



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30303

Report Nos.: 50-327/84-17 and 50-328/84-17

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

Docket Nos.: 50-327 and 50-328

License Nos.: DPR-77 and DPR-79

Facility Name: Sequoyah 1 and 2

Inspection Dates: June 6 - July 5, 1984

Inspection at Sequoyah site near Chattanooga, Tennessee

Inspectors:	<u><i>P. J. Ford</i></u>	<u>7/31/84</u>
	E. J. Ford	Date Signed
	<u><i>S. D. Butler</i></u>	<u>7/31/84</u>
	S. D. Butler	Date Signed
Approved by:	<u><i>C. A. Julian</i></u>	<u>7/31/84</u>
	C. A. Julian, Section Chief	Date Signed
	Division of Reactor Projects	

SUMMARY

Scope: This routine inspection involved 138 inspector-hours onsite in the areas of Operational Safety Verification, ESF System Operability Verification, Independent Inspection Effort, Surveillance and Maintenance, and LER review.

Results: Of the six areas inspected no violations or deviations were identified in five areas; two were found in one area (Failure to lock containment isolation valve 1-33-704 (paragraph 5), and failure to maintain containment clear of debris (paragraph 5)).

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

P. R. Wallace, Plant Manager
L. M. Nobles, Operations and Engineering Superintendent
J. B. Kru, Maintenance Superintendent
M. R. Harding, Engineering Group Supervisor
J. M. Anthony, Operations Group Supervisor
D. C. Craven, Maintenance Supervisor (E)
D. H. Tollis, Maintenance Supervisor (M)
B. M. Patterson, Maintenance Supervisor (I)
R. W. Fortenberry, Engineering Section Supervisor
J. R. Walker, Assistant Operations Group Supervisor
G. G. Wilson, Assistant Operations Group Supervisor
D. E. Crawley, Health Physics Supervisor
J. T. Crittenden, Public Safety Service Supervisor
J. L. Hamilton, Quality Engineering Supervisor
R. E. Alsup, Compliance Supervisor
W. M. Halley, Preoperational Test Supervisor

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

2. Exit Interview

The inspection scope and findings were summarized with the Plant Superintendent and/or members of his staff on June 15 and 29, 1984. The violations were discussed and the licensee acknowledged the findings. 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 (71707)

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.

During the reporting period the inspector did an independent check of the Unit 1 containment integrity using the licensee's Surveillance Instruction SI-14 "Verification of Containment Integrity". Over a two week period approximately 160 valves were checked for required position and installed locking device. On June 7, while checking valves inside the Unit 1 containment, the inspector identified that 2 inch valve 1-33-704 was shut but did not have any kind of locking device to secure it in its closed position. Unit 1 was in Mode 3, Hot Standby, at the time. Valve 1-33-704 is the inside isolation for the service air system. The inspector informed the Shift Engineer who immediately had the valve checked shut and had a locking device installed. No other discrepancies were identified with containment integrity. While in the Unit 1 lower containment, the inspector observed a large yellow plastic bag (approximately 36" x 48") inside the polar crane wall. The plastic bag was in an area where it could have been transported to the containment sump screen and cause restriction of the the Emergency Core Cooling System (ECCS) pump suction during a LOCA. Two other similar bags were found in the incore instrument room but could not have been transported to the containment sump. The bags were removed from containment and the Shift Engineer notified. The discrepancies were discussed with the Assistant Plant Superintendent and it was determined that the 1-33-704 valve had been independently verified locked shut using two different procedures following the recent refueling outage. There was no

explanation as to why the chain lock was missing. The licensee performed a complete check of Unit 1 containment integrity prior to performing a reactor startup. No other problems were reported. Failure to secure valve 1-33-704 in the closed position while containment integrity was required is a violation of Technical Specification 3.6.1.1. (327/84-17-01).

The presence of trash in the Unit 1 containment was also discussed and the licensee stated that the trash must have been carried into the containment after entry into mode 4, Hot Shutdown. The licensee performed a re-inspection of containment as required by Technical Specification 3.5.2 prior to performing a reactor startup. Failure to ensure ECCS operability by keeping the containment clear of debris which could block the containment sump is a violation of Technical Specification 3.5.2. (327/84-17-02).

During the reporting period the inspector made several tours through pipe chases and heat exchanger rooms which house safety related piping and components (e.g. motor operated valves and snubbers). The inspector observed increased amounts of debris and dust on piping and components apparently caused by pipe lagging operations. The inspector discussed the possible long term degradation of active safety related components due to the presence of excessive amounts of lagging dust and debris with the Plant Superintendent and Maintenance Supervisors. They acknowledged the inspectors concerns and stated that they would review the problem and take the necessary measures to improve housekeeping in the areas of concern. The inspector will continue to monitor the situation in future inspections.

No other violations or deviations were identified.

6. ESF System Operability Verification (71710)

During the reporting period the inspector performed a detailed operability review of the Unit 1 Emergency Core Cooling System. The review included accessible system walkdown, surveillance test results review, valve alignment verification and power availability checks for selected components. Both trains of equipment were checked. No significant discrepancies were noted.

No violations or deviations were identified.

7. Independent Inspection Effort

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

No violations or deviations were identified.

8. Surveillance and Maintenance (61726, 62703)

During the inspection period the inspector reviewed numerous completed surveillance instructions which were in the review and approval circuit in the main control room. The instructions were reviewed to ensure proper procedural review and PORC approval, correct formatting for procedure type, and technical and Technical Specification (TS) surveillance requirement (SR) adequacy. Additionally, surveillances in progress were observed to ensure procedures usage and proper sign off. Among those observed were surveillance instructions SI 137.2 "RCS Water Inventory" Rev. 5 which satisfies S.R. 4.4.6.2.1.d performed on June 20 on Unit 1 and SI-2 "Shift Log" Rev. 34 which satisfies various SR's which are required on an eight-hour (i.e., per shift) basis performed on June 22 on Unit 2. No violations or deviations were identified.

On June 30 the licensee declared the Turbine Driven Auxiliary Feedwater (TDAFW) turbine inoperable and entered the appropriate LCO (3.6.1.2). The inoperability was discovered when a portion of the auxiliary feedwater system (AFW) apparently failed to respond to a partial engineered safety features actuation signal (ESFAS). The signal generated was due to an inadvertent trip of a main feedwater pump which was undergoing maintenance on the evening shift. At the time of the event the unit was in mode 2 startup mode, <5% rated thermal power with the main feed pumps out of service and the steam generator water levels being maintained by the motor driven auxiliary feedwater pumps.

During the day shift the TDAFW pump turbine steam supply had been isolated by improper operator action in that no procedure was used, nor did the maintenance request authorizing the main feed pump work direct the operator to put the TDAFW in a standby mode by closing the steam supply valves (FCV 1-17 and 18). As a result of a main feed pump trip during authorized maintenance actions and the steam supply valve lineup, a set of circumstances was created which caused a seal-in circuit to exist in the turbine parallel steam supply line switchgear logic. This seal-in caused the turbine throttle valve to be held in the closed position after the steam isolation valves were reopened by operator action. The TDAFW inoperability was then discovered on the evening shift as previously mentioned.

The resident inspector conducted a preliminary technical inquiry, determined that an immediate safety question did not exist and reviewed regulatory compliance. A Region II inspection team responded to the event and conducted a detailed technical, regulatory, and management controls review. The results of their inspection, with appropriate regulatory enforcement action resulting from that inspection and further technical details are available in inspection report 50-328/84-18.

9. Licensee Event Report (LER) Review

During the reporting period, LER's were reviewed on a routine basis as they were received from the licensee. Each LER was reviewed to determine that:

- a. The report accurately described the event

- b. The reported cause was accurate and the LER form reflected the proper cause code
- c. The report satisfied the technical specification reporting requirement with respect to information provided and timing of submittal
- e. Corrective action appeared appropriate to correct the cause of the event
- f. Generic implications if identified were incorporated in corrective action
- g. Corrective action taken or to be taken was adequate, particularly to prevent recurrence
- h. The event did not involve continued operation in violation of regulatory requirements or licensee conditions.

No violations or deviations were identified.