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

Report No.: 50-327/79-02

Docket No.: 50-327

License No.: CPPR-72

Licensee: Tennessee Valley Authority
830 Power Building
Chattanooga, Tennessee 37401

Facility Name: Sequoyah, Unit 1

Inspection at: Sequoyah Site, Daisy, Tennessee

Inspection conducted: January 3-5, 1979

Inspectors: T. J. Donat

Approved by: R D Martin 1/24/79
R. D. Martin, Chief Date
Nuclear Support Section No. 1
Reactor Operations and Nuclear Support Branch

Inspection Summary

Inspection on January 3-5, 1979 (Report No. 50-327/79-02)
Areas Inspected: Routine, announced inspection consisting of witnessing preoperational test TVA-13B(2) (Loss of Off-Site Power), review of applicant response to previously identified items, and facility tour. The inspection involved 28 inspector-hours on-site by one NRC inspector.
Results: Of the three areas inspected, no items of noncompliance or deviations were identified.

DETAILS I Prepared by: R D Martin for 1/24/79
T. J. Donat, Reactor Inspector Date
Nuclear Support Section No. 1
Reactor Operations and Nuclear
Support Branch

Inspection Dates: January 3-5, 1979

Reviewed by: R D Martin 1/24/79
R. D. Martin, Chief Date
Nuclear Support Section No. 1
Reactor Operations and Nuclear
Support Branch

1. Persons Contacted

Tennessee Valley Authority (TVA)

*W. F. Popp, Assistant Plant Superintendent
*W. E. Andrews, Plant Quality Assurance Staff Supervisor
*E. A. Condon, Preoperational Test Supervisor
W. Guinn, Operation Supervisor
R. H. Smith, Electrical Engineer
F. Siler, Instrument Engineer
P. Garrett, Nuclear Engineer
R. G. McCall, Mechanical Engineer (Engineering, Knoxville)
J. Lyons, II, Nuclear Engineer (Engineering, Knoxville)

*Denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

a. In IE Report 50-327/78-04, Detail I.5.b.2.b, the inspector identified that the maximum initial ice load weight used in FSAR section 5.6.1 (Ice Condenser Refrigerator System Design Basis) was inconsistant with the maximum values specified in preoperational test W-12.1 (Ice Condenser Reactor Containment - Rev. 0) step 5.3.1 and Special Maintenance Instruction SNP-SMI-1-61-1 being used to load the Unit #1 Ice Condenser. Ammendment 56 to the FSAR has revised the maximum Initial Ice Load weight to 3.01×10^6 lbm which is consistent with the maximum weights used in W-12.1 and SNP-SMI-1-61-1. This item (78-04-04) is considered closed.

b. In IE Report 50-327/78-17, Detail I.5 and 50-327/78-45, Detail I.6.A, discussed the commitments to monitor the Pressurizer Relief piping downstream of the valves during the Hot Functional Test Program. On January 9, 1979, the applicant contacted the inspector to discuss his program. The applicant stated that for safety reasons, a program of inspection prior to and following the transients would be implemented. He stated that observers will be positioned on the containment floor to observe as much pressurizer relief piping as possible during the pressurizer blowdown and the procedure will be modified to achieve this to a degree consistent with safety. The inspector stated that a similar program of inspection of piping, restraint, hangers, snubbers, and adjacent piping prior to and subsequent to pressurizer relief lifting had been found acceptable at other sites. The inspector stated that he would review the final program as implemented in preoperational test W-1.3 and would consider the item open until that time.

c. In IE Reports 50-327/78-21, Detail I.7, and 50-327/78-35, Detail I.8.b identified the need to verify the Diesel Generator's response in the event it is running and paralleled with the normal power source when the site experiences a loss of offsite power. The applicant has written a new preoperational test procedure, TVA-13D Rev. 0 (Blackout with Diesel in Test Mode), to verify the response. The inspector has reviewed the test procedure for conformance to the requirements of FSAR Section 8.3.1.1 and Table 14.1, and Regulatory Guide 1.68.2, 1.41 and 1.108 and found no discrepancies. The inspector also reviewed the calibration sheets for the diesel generator's "51V Voltage Controlled Overcurrent Relays" to be utilized during this test. The preoperational test procedure TVA-13D satisfies the concerns in open item (78-21-03). This item is considered closed.

3. Unresolved Items

None

4. Exit Interview

The inspector met with Mr. W. F. Popp concerning the inspection on January 5, 1979. The inspection lasted beyond the exit interview and a call was placed to Mr. E. A. Condon on January 10, 1979, to state that no additional findings were made after the exit interview. The inspector summarized, as reported in the following paragraphs the

purpose and findings of the inspection. Within the areas inspected no items of noncompliance or deviations were identified.

5. Preoperational Test Witnessing

The inspector witnessed the performance of portions of preoperational test procedures W-6.1A1 (SIS - Integrated Flow), and TVA-13B(2) (Onsite AC Distribution - Loss of Offsite Power).

a. The inspector witnessed the repetition of those portions of W-6.1A1 necessary to obtain new data in place of the out-of-specification RHR pump suction data discussed in IE report 50-327/78-45, detail I.6. It was noted that the appropriate prerequisites had been re-signed, the chronological test log was being used, and the official copy of the test procedure was being used.

A review of the test data showed a disagreement, when all pumps were secured, between the suction pressures recorded for the RHR pumps and those for the containment spray pumps which are located on the same elevation. The applicant stated that this was due to leakage past RHR pump discharge throttle valves FCV-74-16 and FCV-74-23. Subsequent closure of downstream valves FCV-63-93 and 63-94, securing gravity flow past the discharge valves, resulted in RHR suction pressures which were within specification and which agreed within measurement accuracy with the containment spray pump suction pressures.

The inspector witnessed the performance of the portion of paragraph 5.2 concerning the vibration of the RHR train when in the recirculation mode. Witnessed were the measurement of vibration levels on RHR heat exchanger 1B-B discharge piping and the tracing of the piping associated with RHR train B while monitoring it for excessive vibration. The inspector did not have any comments concerning the conduct of the test and vibration measurement by the applicant.

b. The inspector witnessed the performance of portions of TVA-13B(2) - Onsite AC Distribution Test (Loss of Offsite Power). Prior to and during the test the inspector reviewed the test prerequisite section, section 2., to insure that all items had been signed by the appropriate personnel. He performed an independent verification of the following prerequisites: 2.1.1.1 and 2.2.1.4 concerning Test Record Drawings being marked to show as built conditions and acceptability of this by Engineering Design and Power Production,

2.1.1.2 concerning transfer of all necessary loads and electrical boards to Power Production, 2.2.1.3 on most recent revision to SOI 82.1 (Rev. 5) and SOI 57.4 (Rev. 4) being used; 2.2.1.7 on differences in equipment configuration between preoperational test TVA-13B(1) and this test, and 2.3.1.1 on Uncompleted Engineering Change Notices to equipment operated during this test. No discrepancies were noted during this review and verification.

The inspector witnessed the performance of the following tests on diesel generator 1A-A: Loss of Offsite Power (Non Accident); Loss of Offsite Power followed by a Safety Injection; Simultaneous Loss of Offsite Power and Safety Injection; Safety Injection without Losing Offsite Power, and Simultaneous Safety Injection and Loss of Offsite Power with ESF equipment aligned for full flow conditions. The inspector also monitored the performance of Operations personnel in paralleling the shutdown boards with the Offsite Power Bus and transfering the boards back to their normal configuration in accordance with SOI-82.1. The inspector had no comments on the conduct of the test.

6. Plant Tour

The inspector toured portions of the turbine building, the control bay and auxiliary instrument room, the auxiliary equipment building, and the Unit No. 1 reactor containment. Housekeeping and general cleanliness were observed. No deficiencies were identified.