



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

Report No. 50-328/81-02

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

Facility Name: Sequoyah, Unit 2

Docket No. 50-328

License No. CPPR-73

Inspection at: Sequoyah Nuclear Plant near Chattanooga, Tennessee

Inspector: Robert W. Wright 2/19/81
R. W. Wright Date Signed

Approved by: F. S. Cantrell 2/19/81
F. S. Cantrell, Section Chief, RC&ES BRANCH Date Signed

Inspection on January 13-16, 1981

Areas Inspected

This routine, unannounced inspection involved 26 inspector-hours on site in the area of licensee identified items.

Results

For the area inspected, no items of violation or deviations were identified.

8104020894

DETAILS

1. Persons Contacted

Licensee Employees

- *G. G. Stack, Construction Project Manager
- *T. B. Northem, Jr., Construction Engineer
- *D. W. Mack, Assistant Construction Engineer
- *J. M. Munns, QA Unit Supervisor, Construction
- *D. O. McCloud, QA Unit Supervisor, Nuclear Power
- *R. C. Miles, Assistant Construction Engineer
- *E. C. Pendergrass, Engineering Associate
- M. A. McBurnett, Nuclear Engineer, Power/Reg. Staff
- D. A. Kulisek, Nuclear Engineer, Power/Reg. Staff
- D. Baese, Instrumentation Engineer, IEU
- H. W. Loftis, Mechanical Engineer, MEU
- J. Fox, Engineering Associate, MEU

Other licensee employees contacted included construction craftsmen, technicians, QC inspectors, and office personnel.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on January 16, 1981 with those persons indicated in Paragraph 1 above. The licensee was advised that no new items of violation or deviations were identified by the inspector.

3. Licensee Action on Previous Inspection Findings Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Licensee Identified Items (LII)

- a. TVA has reported a number of items to Region II as reportable in compliance with 10 CFR 50.55(e). The Region II inspector reviewed the items listed below and the supporting documentation, and discussed the items with responsible licensee staff during this inspection.

(Closed) LII 328/79-31-01 - Inadequate Design of Containment Spray Heat Exchangers (CSHX), NCR 16P and NCR 2070. This item was previously discussed in RII inspection reports 50-328/80-09 and 50-328/79-32. The inspector reviewed the TVA final report to RII dated February 1, 1980, the closed disposition of NCR 2070, the corrective actions taken as specified in drawings 2FW-001-AB through 18 entitled, "Containment Spray Heat Exchangers - 2A, 2B, Tube Modifications". Corrective

actions taken were discussed with the responsible mechanical engineer inspector and pictures taken during various phases of the tube staking modification were examined.

(Closed) LII 328/80-03-03 - Omitted Supports in the CVCS, NCR CEB 79-38. This item was previously discussed in RII inspection report 50-328/80-09. The inspector reviewed the TVA final report dated January 31, 1980, related ECN 2829 which provided for adding supports MK Nos. 2CVCH-616 and 617. The inspector examined the installed subject supports and found the support assemblies installed in accordance with approved drawings.

(Reopened and Closed) LII 328/80-03-04 - Copes - Vulcan Valve Weights Incorrect, NEB 80-1 and NEB 8020. Based on the corrective actions specified in TVA's final report dated February 11, 1980, the subject deficiency was closed in RII report 50-328/80-03. Subsequent to this item's closure, TVA found that additional valves were affected by this nonconformance. TVA has since issued supplemental information reports dated August 15, 1980 and September 2, 1980 specifying the location, valve ID number, correct and incorrect listed weights of the additional affected valves. TVA had the piping system load analysis rerun using the correct valve weights. The resulting new loads were then applied in the support calculations and the existing supports were found to be adequate to absorb the new loads.

(Closed) LII 328/80-03-01 - Bettis Valve Actuators, NCR 19P. The inspector reviewed the TVA final report dated January 17, 1980, related work plan No. S-1257, closed ECN 2804, and document control QC inspection records that verified the valve actuators identified on work item No. 10509 were reworked and equipped with retainer bushings if required. The inspector selected auxiliary building valve actuator 2-FCV-30-61 (Purge Air Exhaust Unit A Sunction Valve) to be visually examined to insure that its spacer bushing had been installed as QC records indicated. The work was found accomplished as stated in inspection records.

(Closed) LII 328/81-02-38 - Spray Header Attachment Lug Re-evaluation, SWP 8009. The subject deficiency was initially reported to RII on July 9, 1980 and TVA submitted a final report on this matter dated August 7, 1980. The support lug attachments located in the containment dome for the containment spray and residual heat removal system headers were found to be not properly evaluated when the subject supports were reanalyzed for steel containment vessel dynamic movements during a design basis accident (DBA). TVA's recent reanalysis of the subject support lug attachments verifies that they perform their designed functions. This item was opened and closed during this inspection.

(Closed) LII 328/80-02-39 - Sensing Line Connections to Process Piping SWP 8010. TVA initially reported the subject deficiency to RII on July 9, 1980 and the licensee subsequently submitted interim and final reports on the matter dated August 7, 1980 and October 16, 1980 respec-

tively. The original piping analysis assumed the sensing lines to be tubing when they were actually piping. The stress imposed on the process piping due to less flexible sensing lines and the inertial effects of the increased weight of the sensing line pipes and connections were not included in the seismic analysis; therefore, it was possible that supporting hardware was not adequate to carry the design loads. TVA has since reanalyzed the affected process using proper weights and found that no hardware changes are necessary to carry the additional loads. This item was opened and closed during this inspection.

(Closed) LII 328/80-02-40 - Defective Containment Vacuum Relief Isolation Valve Pneumatic Operators, NCR 2292R. The licensee initially reported the subject deficiency to RII on September 23, 1980 and submitted a final report on the matter dated October 23, 1980. An excessive corrosion problem was identified in all three of the containment vacuum relief isolation valve pneumatic operators. The pistons, piston seals, return springs, and cylinders of the operators were damaged by corrosion to the point that operation of the operators was inhibited. Repair parts or suitable replacements for the operators were not available so the entire valves and operator assemblies were replaced by valves that were transferred from Hartsville Nuclear Plant in accordance with ECN 2928. This was handled under contract No. 788256 and shipping ticket No. G178095. The inspector accompanied by an instrumentation engineer verified that the three presently installed valve serial numbers corresponded with those that appear on the Hartsville shipping ticket. Inspection records, specifically II80 (stroking inspection) and II85 (tubing check) were examined for the three valves to ensure their proper operability. This item was opened and closed during this inspection.

(Closed) LII 328/80-02-41 - Seismic Analysis of 3-inch Check Valve in CVCS, CEB 8028. TVA initially reported the subject deficiency to RII on October 2, 1980 and submitted interim progress reports dated October 31, 1980 and January 6, 1981. During a design review, it was discovered that a 3-inch check valve was overlooked in a piping analysis of the CVCS for unit 2, thereby creating the possibility of inadequate pipe supports due to unknown seismic loading. Subsequent TVA reanalysis of the subject deficiency has determined that the additional loads due to the 3-inch check valve are not significant and no hardware changes are required. This item was opened and closed during this inspection.

(Reopen) LII 328/79-16-04, Containment Piping Support Design Basis, CEB 79-19. TVA has issued a supplemental information report dated June 18, 1980. The residual heat (RHR) spray header piping was not reanalyzed for the design basis accident movement of the steel containment vessel. This reanalysis should have been accomplished as a part of the response to nonconforming report CEB 79-19. Based on the above, LII 328/79-16-04 is reopened; it was previously closed in RII report 50-328/79-35.

New supports and some changes to the existing supports are required for the RHR spray header line. This item was not inspected.

- b. The following LII's were reported to RII during the period April, 1980 through January, 1981. The dates listed below correspond to TVA's initial telephone (T) notification of the subject LII to RII and subsequent dates thereafter relate to various licensee written reports (I - interim, F - final, RF - Revised Final) received by RII on the subject matters. The below listed LII's are opened in this inspection and given the following RII item numbers.

<u>Item No.</u>	<u>Title</u>	<u>Reports Received</u>
328/81-02-01 (CEB 8008)	Incorrect Insulation Weights	4/24/80 T 5/23/80 I 10/16/80 I
328/81-02-02 (MEB 8002)	Environmental Effect On Main Stream Safety Valve Set Points	4/25/80 T 5/27/80 F 6/11/80 RF
328/81-02-03 (NEB 8009) (NEB 8010)	Omitted Pipe Rupture Protective Devices	4/30/80 T 5/29/80 F
328/81-02-04 (NEB 8012)	Spent Fuel Pool Gates	5/01/80 T 5/29/80 I 6/18/80 F 7/02/80 RF 9/08/80 2RF 10/15/80 3RF
328/81-02-05 (CEB 8012)	Secondary Side Pipe Breaks - Design Criteria Change	5/16/80 T 6/11/80 I 9/04/80 I 10/29/80 F
328/81-02-06 (NEB 8017)	Chemical Volume Control System Centrifugal Charging Pumps	5/20/80 T 6/18/80 F
328/81-02-07 (NEB 8023)	Nonconservative Boron Dilution Indication	7/10/80 T 8/08/80 I 10/08/80 I
328/81-02-08 (EEB 8017)	Seismic Supports for Auxiliary Feedwater Control Valves	7/21/80 T 8/20/80 F
328/81-02-09 (CEB 8023)	Incorrect Valve Weights In Auxiliary Feedwater Piping	8/01/80 T 9/04/80 I 10/22/80 F

328/81-02-10 (NCR 2246 & 2259)	Piping Support Discrepancies At ERCW Pumphouse	8/05/80 T 9/04/80 F
328/81-02-11 (NEB 8025)	Safety Injection Train B Flow Deficiency	8/22/80 T 9/22/80 I 10/23/80 F 11/26/80 RF
328/81-02-12 (SWP 8014)	Auxiliary Feedwater Recirculation Line	8/27/80 T 9/25/80 F
328/81-02-13 (CEB 8027)	Analysis of Intermediate Break Locations	9/18/80 T 10/16/80 I 12/02/80 I
328/81-02-14 (EEB 8022)	ERCW Pump Motor Relays	10/06/80 T 11/05/80 F
328/81-02-15 (EEB 8023 thru 8039 excluding EEB 8034) (EEB 8008, 8040, 8041, 8042, 8044)	Environmental Qualification of Electrical Equipment	10/24/80 T 11/25/80 I
328/81-02-16 (CEB 80-31)	Non-reinforced Masonry Walls	10/17/80 T 11/14/80 I
328/81-02-17 (EEB 8034)	Offsite Power Supply Fluctuations	10/20/80 T 11/19/80 I
328/81-02-18 (NCR 2398)	Faulty Fillet Welds	11/07/80 T 12/03/80 I
328/81-02-19 (EEB 8021)	Auxiliary Feedwater System Design Deficiency	10/07/80 T 11/05/80 F
328/81-02-20 (NCR 2397)	Broken Spring In Pressurizer Safety Valve	10/29/80 T 11/26/80 F
328/81-02-21 (NCR 28P)	Inadequate Cladding Thickness On 2BB Centrifugal Charging Pump	11/17/80 T 12/17/80 F

328/81-02-22 (NCR 2436)	Underpressurized Hydrostatic Tests	11/28/80 T 12/29/80 F
328/81-02-23 (CEB 8036)	Thermon Heat Transfer Cement	11/26/80 T 12/29/80 I
328/81-02-24 (NEB 8028)	Stress Corrosion Cracking In Tubing of Reactor Coolant Pump	12/02/80 T 1/02/81 I
328/81-02-25 (SWP 8023)	Discrepancies In The Field Installation of Piping Systems and Supports Versus Design Isometric Drawings	11/28/80 T 12/29/80 I
328/81-02-26 (CEB 8037 = 81-01	Discrepancies In As-Built Versus As-Analyzed Piping Anchor Locations	12/03/80 T 01/05/80 I
328/81-02-27 EEB 8044 RI	ASCO Solenoid Valves	12/08/80 T
328/81-02-28 SWP 8026	Diesel Interlock Design Error	12/09/80 T
328/81-02-29 SWP 8025	Faulty Fillet Weld Specification	12/10/80 T
328/81-02-30 Audit JA800- 13	Inadequate Handling of Engineering Design - Engineering Procedure Changes	12/11/80 T
328/81-02-31 (CEB 8035)	Retrievable Information From Valve Tag Numbers	12/12/80 T
328/81-02-32 SWP 8028	ASCO Solenoid Valves	12/16/80 T
328/81-02-33 CEB 8039	Unconservative Loads On Pipe Support Design Modifications	12/17/80 T
328/81-02-34 CEB 8041	Analysis of Steel Containment Penetration Assemblies	12/19/80 T
328/81-02-35 NEB 8035	Corrosion of Carbon Steel Piping	12/30/80 T

328/81-02-36
Audit SN-M-
80-17

Failure to Comply With
Procedures

01/02/81 T

328/81-02-37
EEB 8054

Failure of Generator System
To Supply Adequate Voltage
To The Safety-Related Boards

01/05/81 T