



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

Report Nos. 50-327/81-03 and 50-328/81-06

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 CPPR-73

Inspection at Sequoyah site near Soddy Daisy, Tennessee

Inspector: John W. York 3/17/81
J. W. York Date Signed

Accompanying Personnel: A. R. Herdt

Approved by: B. R. Crowley for 3/17/81
A. R. Herdt, Section Chief Date Signed
Engineering Inspection Branch
Engineering and Technical Inspection Division

SUMMARY

Inspected on February 25-27, 1981

Areas Inspected

This special announced inspection involved 37 inspector-hours onsite in the areas of IEB 79-14 and IEB 79-02.

Results

Of the two areas inspected, no violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *G. G. Stack, Project Manager
- *H. J. Fischer, Mechanical Engineer Supervisor
- R. Guthrie, Civil Engineer Supervisor (EN DES)
- *E. Burke, EIIU Supervisor
- *J. W. Beason, Civil Engineer (EN DES)
- *D. W. Kelley, QCRU Supervisor
- *K. G. Galloway, M&WIU Supervisor
- *J. M. Munns, QA Supervisor
- *R. C. Miles, Assistant Construction Engineer
- *T. B. Northern, Assistant Construction Engineer

Other Organizations

Contract employees from Teledyne Engineering Services (TES) were contacted.

NRC Resident Inspector

S. D. Butler

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on February 27, 1981 with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. IE Bulletin 79-02, Concrete Expansion Anchors (Units 1 and 2)

a. Sequoyah Unit 2

The following program was reviewed:

Attachment A1 to Work Plan No. S-1206, "Program for Verifying Correct Installation of Self-Drilling Type Concrete Anchors in Unit 2 Safety-Related Supports for Response to NRC IE Bulletin 79-02".

The inspection to show compliance with the Bulletin consisted of a reinspection of a random sample population of 30 base plates for each of four different diameter anchor bolts. A minimum of one anchor per plate was to be inspected for a total of 120 anchors. The reinspection evaluated 217 anchors. Only two of the anchors or 0.92 percent were determined to be structurally unacceptable. The results of this inspection meets the criteria of IEB 79-02, but the Bulletin will remain open until the final report is received from TVA and evaluated by Region II.

b. Sequoyah Unit 1

Bulletin 79-02 had been previously closed for Unit 1.

A favorable comparison was made between the inspection results obtained on both units.

Within the areas inspected no violations or deviations were identified.

6. (Open) Seismic Analysis for As-Built Safety-Related Piping Systems (IE Bulletin 79-14)

The inspector verified that Sequoyah Nuclear Plant (SNP) Unit 2 had established procedures and a program of verifying the proper installation of safety-related piping and supports. The licensee has the program divided into two phases.

- a. Phase I of the program involved the 100% reinspection of all safety-related systems in regards to: pipe run geometry; support and restraint design, location, function, and clearance; embedments; pipe attachments; and valve and valve operator location and weights. Any discrepancies discovered in this Phase were to be resolved. This phase was approximately 80 percent complete at the time of the inspection.

The following SNP procedures for Phase I were reviewed:

- (1) SNP Construction Procedure No. P-47, "Pipe and Pipe Hanger Analysis Drawing Walkdown Inspection", Revision 1
- (2) SNP Inspection Instruction No. D5, "Piping and Supports Walkdown Procedure", Revision 1

- b. Phase II of the TVA program was an independent inspection of a representative sampling of the systems inspected by Phase I. Inspection was performed by Teledyne Engineering Services (TES) under contract to the TVA EN DES Civil Engineering Branch. Evaluation of all of the inspection results were to be performed by this Civil Engineering Group only. The TES personnel had performed similar inspections at other nuclear plants, however, before inspections were performed, the TES inspectors attended a training session conducted by the Civil Engineering Branch.

A minimum of one isometric design drawing with a minimum of ten supports in eight different piping systems was inspected by TES. The systems and number of supports were as follows:

- (1) reactor coolant, 32 supports and 10 snubbers
- (2) safety injection, 13 supports
- (3) chemical and volume control, 19 supports and 1 snubber
- (4) main steam, 21 supports, 8 snubbers, and 4 spring cans
- (5) component cooling, 27 supports, 5 snubbers, and 1 spring can
- (6) main feedwater, 10 supports, 3 snubbers and 2 spring cans
- (7) containment spray, 40 supports, 14 snubbers and 4 spring cans
- (8) essential raw cooling water, 17 supports

The following SNP procedures for Phase II were reviewed:

- (1) "Procedure for the Implementation of NRC-OIE Bulletin 79-14 Inspection Procedure, Phase II"
- (2) "Procedure for the Implementation of NRC-OIE 79-14 Discrepancy Evaluation Criteria, Phase II"

The NRC inspectors observed Teledyne Engineering Services (TES) during their inspection of the following systems:

- (1) Main Steam-Inspection Packet 2ROI-0600102-06-01, Pipe Support Nos. 2-MSH-311 and 2-MSH-313
- (2) Safety Injection-Inspection Packet 2R63-0600102-09-01, Pipe Support Nos. 2-H20-234 and 2-H20-237
- (3) Containment Spray-Inspection Packet 2R72-0600102-01-04 and 0600102-01-02, Pipe Support Nos. 307A and 308
- (4) Component Cooling-Inspection Packet 2R70-47K464-099, dimensioning and component location
- (5) Essential Raw Cooling Water-Inspection Packet 2R67-47K450-206, System N2-67-7R, Hanger 47A450-21-156.

The NRC inspector compared some of the discrepancies found by TES in Phase II on the ERCW system to those found during the Phase I operation. These discrepancies were:

- (1) Existing guide near data point 132 (not on drawing)
- (2) An additional support at 47A450-21-156
- (3) Maintenance report not performed on support 404
- (4) Support 25-457 missing top piece.

These four discrepancies had been found during Phase I of the operation.

After reviewing the two phases of the program the following areas of concern were noted:

- (1) During inspection TES personnel should utilize TVA QC personnel (NDE) to evaluate any apparent weld discrepancies.
- (2) Procedures did not call for a comparison of the discrepancies found in the two phases of the program.
- (3) Procedures did not specify under what conditions reanalysis would be performed in the evaluation criteria. Analysis of the inspection data should be made to determine whether there are any trends that would indicate a reanalysis or reinspection should be performed.

During the NRC inspector's observation of the Phase II inspection of the Component Cooling System, a potential concern was raised by the TES inspectors that a collar supporting a pipe had a snubber on only one side of the collar. This pipe support, 2-CCH-192, is designed to support an axial load of 1330 pounds. Similar supports could exist within the system and plant. This item will be identified as inspection followup item No. 50-328/81-06-01, Axial Load on Collar Snubber From One Direction.

IE Bulletin 79-14 for Sequoyah Nuclear Plant Unit 2 remains open until the licensee's final report is received and evaluated by Region II. The licensee agreed that the final report will also address the inaccessible supports in each system that could not be reinspected in Phase I.

Bulletin 79-14 for Sequoyah Nuclear Plant Unit 1 still remains open until a final report is received from TVA and evaluated by Region II. It was pointed out to TVA that there were two open items, 327/80-15-02 and 327/80-21-01 that need to be addressed with the Unit 1 report.

Within the areas examined, no violations or deviations were identified.