

80-070-03L

400 Chestnut Street Tower II

December 24, 1980

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

SEQUOYAH NUCLEAR PLANT UNIT 2 - IMPROPERLY PRESSURIZED HYDROSTATIC TESTS -
NCR'S 2436, 2437, 2438, 2440-2443, 2447, 2448, 2449, 2457, AND 2462 -
FINAL REPORT

The subject deficiencies were initially reported to NRC-OIE Inspector
M. Thomas on November 26, 1980, in accordance with 10 CFR 50.55(e).
Enclosed is our final report.

If you have any questions, please get in touch with D. L. Lambert at
FTS 857-2581.

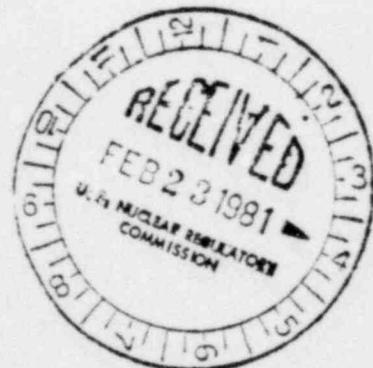
Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555



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ENCLOSURE
SEQUOYAH NUCLEAR PLANT UNIT 2
IMPROPERLY PRESSURIZED HYDROSTATIC TESTS
NCR'S 2436, 2437, 2438, 2440-2443, 2447, 2448, 2449, 2457, AND 2462
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

Approximately 12 hydrostatic tests in safety-related systems were conducted in which a portion of the piping in each test was subjected to the incorrect test pressure. The cause of this problem is the difficulty in establishing the appropriate pressure boundaries. Sections of piping at areas of transition between high pressure and low pressure piping were tested at the incorrect pressure. Also, there was no formal QA document which detailed the procedure for conducting a hydrostatic test. There are three cases involved: (1) Piping subjected to pressures higher than required for hydrostatic testing, (2) piping subjected to pressures lower than required for hydrostatic testing but higher than the system design pressure, and (3) piping subjected to pressures lower than design pressure.

Safety Implications

- Case 1: A review of vendor documentation reveals that all components were hydro tested to pressures higher than the TVA system hydro test pressure. Therefore, this case could not have caused damage to any components and the system has been shown to be adequate for its intended service. As a result, this case could not have adversely affected plant safety.
- Case 2: Because this case resulted in piping being subjected to pressures at least as high as the system design pressure, there is assurance that the piping is adequate to perform its intended function and, therefore, could not have adversely affected plant safety.
- Case 3: Because this case results in the system being pressurized at levels below the system design pressures, there is no assurance that the piping is adequate to perform at the required pressure. Therefore, this piping could sustain leaks during high pressure operation such as might accompany an accident. Therefore, this condition could have adversely affected plant safety.

Corrective Action

- Case 1: Piping which falls into this category will be dispositioned to "use as is" and no changes are required.
- Cases 2 and 3: Piping in these categories will be retested as necessary after establishing the proper pressure boundaries in accordance with the instructions described below. All tests will be performed before fuel loading.

Additionally, Sequoyah Nuclear Plant Inspection Instruction (SNP II) 41 has been revised to provide instructions for properly carrying out the hydrostatic tests. SNP II-41 provides for a review of the pressure boundaries and test requirements (including G-29M requirements) before performance of the test.