

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

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November 20, 1984

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Mr. O'Reilly:

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2 - NRC-OIE REGION II INSPECTION REPORT
50-390/84-70, 50-327/84-23, AND 50-328/84-24 - RESPONSE TO VIOLATION

The subject OIE inspection report dated October 19, 1984 from R. C. Lewis to H. G. Parris cited TVA with one Severity Level IV Violation. Enclosed is the response to the item of violation in the subject inspection report. The delay in submittal of this response to the inspection report was discussed with D. M. Verrelli, NRC-Region II, in a telephone conversation with Jerry Wills of my staff on November 19, 1984.

If you have any questions, please get in touch with R. H. Shell at
FTS 858-2688.

To the best of my knowledge, I declare the statements contained herein are
complete and true.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



J. A. Domer
Nuclear Engineer

Enclosure

cc (Enclosure):

Mr. Richard C. DeYoung, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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ENCLOSURE

RESPONSE - NRC-OIE INSPECTION REPORT
NOS. 50-390/84-70, 50-327/84-23, AND 50-328/84-24
R. C. LEWIS' LETTER TO H. G. PARRIS
DATED OCTOBER 19, 1984

Items 327/84-23-01 and 328/84-24-01

10 CFR 50, Appendix B, Criterion XVI requires that, "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition."

Contrary to the above, in the area of piping design analysis, corrective action measures did not adequately assure that conditions adverse to quality were promptly corrected in that:

On May 5, 1982, nonconformance report (NCR) SQN CEB 8205 recorded the fact that the operating condition input data for the piping analyses were not from a controlled source and therefore, there was no way to verify the validity of the data.

As of September 7, 1984, the operating condition data for the Sequoyah piping analysis had not been verified, except for one piping stress analysis problem.

The licensee's plan of action for the NCR was to resolve a similar issue at the Watts Bar Nuclear Plant before Sequoyah.

This is a Severity Level IV violation.

1. Admission or Denial of Alleged Violation

TVA denies this violation.

2. Reason for the Denial

Sequoyah and Watts Bar Nuclear Plants are similar in design and operation. Piping configurations and operating modes are similar. Operating modes and piping analyses were determined under the same procedures and organizational controls for the two plants up through the time the operating modes-nonconformance was reported.

Watts Bar NCR CEB8215 was written May 5, 1982. Because of potential generic implications, Sequoyah NCR CEB8205 was also written at the same time. A failure evaluation indicated the SQN operational modes data was generated using Westinghouse flow diagrams, system descriptions, conversations with the system engineers, and the bill of materials.

The data was incorporated into the piping analysis. The NCR did not address any specific case of nonconformance, but implied that no procedure was established to document the operational modes data and that there was no procedure to incorporate changes of the piping analysis into such a document.

At the time the failure evaluation was written, it was not the intent to resolve this NCR for SQN by further review and evaluation of the similar NCR for WBN. In the failure evaluation, we stated that the SQN safety-related piping systems were still considered to be qualified because there was no known instance where invalid operational modes data was used. However, we did state that we would, and subsequently did, consider any discrepancies found at WBN. Also, the evaluation for reportability was not based on any further action associated with the WBN NCR.

Since SQN and WBN are very similar in design, a sampling program was established by EN DES-SEP 82-15, which was issued January 14, 1983. The sampling program was performed, and a Watts Bar Unit Report, NCR WBNCEB8215 R5 (Revised Final), was completed March 7, 1984. As indicated by the report, two flanges in one sample problem failed to qualify by the rules established for the Watts Bar sample program. No ECN or field work was required. The same problem at Sequoyah was immediately evaluated and determined to be qualified. No other discrepancies were noted.

Westinghouse provided equipment specifications for major equipment components at SQN and WBN, including flow diagrams for a majority of the nuclear safety-related equipment and piping. These specifications and flow diagrams provided inlet and outlet temperatures by a Professional Engineer when issued. With these data, the river water temperatures and cooling tower temperatures were established and the basic information for developing operating modes was established very early in the design process. Only minor changes, such as system crossties, valving changes, assumptions used for dead end branch line temperatures, etc., would require revisions of operating modes that would impact analysis. The system engineer and analysts worked closely to coordinate changes that would qualify the piping. The final analysis results were formally squadchecked to the system engineer.

The Watts Bar operating modes sampling program demonstrated that the design information and internal controls for piping analysis did ensure qualification of piping systems. However, controls have been reviewed and implemented to improve the operating mode documentation for any new or reanalysis of SQN piping.