



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ENCLOSURE

SAFETY EVALUATION REPORT BY THE OFFICE OF SPECIAL PROJECTS

PUMP AND VALVE INSERVICE TESTING PROGRAM

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

1.0 INTRODUCTION

Section 50.55a, "Codes and Standards," of 10 CFR Part 50 requires, in part, that certain safety-related pumps and valves meet the requirements of Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (hereafter "the Code"). In order to meet the requirements of this regulation, the Tennessee Valley Authority (TVA) has submitted to the NRC its first ten-year Inservice Testing (IST) program on pumps and valves for the Sequoyah Nuclear Plant, Units 1 and 2. The staff issued Safety Evaluation Reports (SERs) concerning the Sequoyah IST program on April 5, 1985, October 23, 1987, January 19, 1988, March 14, 1988 (Unit 2 only), and August 18, 1988 (Unit 1 only).

This SER addresses three relief requests made in TVA submittals dated April 22 and August 4, 1988. Requests 1 and 2 in the letters have been identified by TVA as needing resolution prior to Unit 1 restart.

Regulation 10 CFR 50.55a(g)(6)(i) authorizes the Commission to grant relief from these Section XI requirements upon making the necessary findings. This SER contains the NRC staff's findings with respect to granting or not granting reliefs submitted as part of TVA's IST program.

2.0 EVALUATION

By letter dated January 19, 1988, the staff granted requests for relief from instrument accuracy requirements of IWP-4110 for flow measurements of the auxiliary feedwater and centrifugal charging pumps. This present SER addresses similar relief requests on the following pumps: safety injection (SI), containment spray (CS), essential raw cooling water (ERCW), component cooling water (CCW), residual heat removal (RHR), and the diesel fuel oil transfer (DFOT). In addition, TVA has requested relief from the requirements of IWP-3411 for the performance of the ERCW valves quarterly stroke test requirements.

The NRC contractor, Oak Ridge National Laboratory, has reviewed the licensee's three relief requests and prepared the attached Technical Evaluation Report (TER). The staff has reviewed the TER and concurs in its bases and findings. The granting of relief is based upon the fulfillment of commitments made by TVA in its basis for each relief request and the alternate proposed testing.

For all the pumps, TVA committed to an accuracy of $\pm 3\%$ acceptance criteria for ultrasonic flow measurements. For the ERCW, CCW, RHR and DFOT pumps TVA has also made the following commitments. TVA stated that (1) it will use ultrasonics as a backup flow measurement for the pumps in lieu of plant-installed flow instrumentation only when problems are encountered with the plant instrumentation and (2) maintenance and calibration of the plant-installed flow instrumentation will be conducted in a timely manner to preclude repeated use of ultrasonics. For the ERCW valves, TVA committed to full stroke exercise these valves at least once each refueling outage or each time the ERCW heat exchanger chemistry requires cleanup and layup but at a frequency not to exceed once per quarter.

Relief has been granted from the testing requirements which the staff has determined to be impractical to perform, would not compromise the safety of the plant, and where testing, if implemented, would result in undue hardship, and by determination that the relief requests were evaluated in accordance with 10 CFR 50.55a(g)(6)(i).

3.0 CONCLUSION

Based on the staff review of the attached TER, regarding three relief requests for the Sequoyah Nuclear Plant, Units 1 and 2, the staff concludes that TVA's requests for relief from certain specific requirements of Section XI of the ASME Code are acceptable. The licensee is required to comply with the IST program defined above in accordance with the relief granted in the enclosed TER. Review of the overall IST program has been completed. Any additional program changes such as revisions or additional relief requests or deletion of any components from the IST program should be submitted for staff review and should not be implemented prior to review and approval by the staff.

The staff has determined that pursuant to 10 CFR 50.55a(g)(6)(i) granting relief where the Code requirements are impractical is authorized by law and will not endanger life or property, or the common defense and security. The staff has also concluded that granting relief is otherwise in the public interest considering the burden that could result if the requirements were imposed on the facility.

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Dated: September 15, 1988