



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

August 18, 1988

Docket No. 50-327

Mr. S. A. White
Senior Vice President, Nuclear Power
Tennessee Valley Authority
6N 38A Lookout Street
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dear Mr. White:

SUBJECT: REQUEST FOR RELIEF FROM ASME BOILER AND PRESSURE VESSEL CODE,
SECTION XI, INSERVICE TESTING PROGRAM - FOUR HYDROGEN ANALYZER
SAMPLING VALVES (TAC R00385) - SEQUOYAH NUCLEAR PLANT, UNIT 1

By letter dated July 1, 1988, the Tennessee Valley Authority (TVA) submitted a request for relief (PV-15), for Sequoyah Unit 1 only, from certain American Society for Mechanical Engineers (ASME) Boiler and Pressure Code, Section XI testing requirements for four containment isolation valves on the Hydrogen Analyzer Sampling System. Sequoyah Unit 2 had a similar request submitted by TVA letters dated January 21 and February 26, 1988 which was accepted by the NRC staff in a letter dated March 14, 1988.

The staff has reviewed relief request PV-15 for Sequoyah Unit 1 and finds it acceptable. The basis for our conclusion is provided in the enclosed staff's safety evaluation (SE). The staff concludes that the Code testing requirements are impractical to perform and has determined, pursuant to 10 CFR 50.55a(a)(3)(i), that the proposed alternatives to the described requirements will provide an acceptable level of quality and safety. The staff also concludes that 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 and is otherwise in the public interest considering the burden that could result upon TVA if the Code requirements were imposed upon Sequoyah Unit 1. Accordingly, pursuant to 10 CFR 50.55a(g)(6)(i) of the Commission's regulations, TVA is granted the requested relief, as documented in the enclosed staff SE, from the Code test requirements for the four containment isolation valves on Hydrogen Analyzer Sampling System, on the condition that TVA incorporate

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Mr. S. A. White

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Sequoyah Nuclear Plant

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
SAFETY EVALUATION BY THE OFFICE OF SPECIAL PROJECTS

ON A REQUEST FOR RELIEF FROM ASME CODE
PUMP AND VALVE INSERVICE TEST REQUIREMENTS

TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-327

BACKGROUND

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 interval Inservice Testing (IST) program on pumps and valves for the Sequoyah Nuclear Plant (SQN), Units 1 and 2. The staff issued Safety Evaluations (SEs) concerning the IST program on April 5, 1985, October 23, 1987, and January 19, 1988.

TVA made an additional request for relief (PV-15) for Sequoyah Unit 2 only, by submittals dated January 21 and February 26, 1988 for four valves in the Hydrogen Analyzer Sampling System. Relief request PV-15 for Sequoyah Unit 2 was approved by NRC letter dated March 14, 1988. This SE is in response to a TVA submittal dated July 8, 1988 which forwarded relief request PV-15 for similar valves in Unit 1.

Regulation 10 CFR 50.55a(g)(6)(i) authorizes the Commission to grant relief from these requirements upon making the necessary findings and, pursuant to 10 CFR 50.55a(a)(3)(i), the Commission may authorize alternatives to the Code requirements. This SE contains the NRC staff's findings with respect to granting or not granting to TVA the relief request PV-15 for Sequoyah Unit 1.

RELIEF REQUEST

Relief is requested from the inservice test requirements of the 1977 Edition, Summer 1978 Addenda, of Section XI for Class 2 components, specifically, for four new containment isolation valves (FSV-43-450, -451, -452, and -453) in the Unit 1 hydrogen analyzer sampling system.

CODE REQUIREMENT

IWV-3300 VALVE POSITION INDICATION VERIFICATION

Valves with remote position indicators, which during plant operations are inaccessible for direct observation, shall be visually observed during a plant shutdown at least once every 2 years to verify that remote valve indications accurately reflect valve operation.

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LICENSEE'S BASIS FOR REQUESTING RELIEF

TVA states that these valves are totally enclosed, solenoid-actuated valves and that their position or operation cannot be visually observed.

ALTERNATIVE TESTING

TVA proposes to utilize pressure testing as an indirect means of verifying valve position.

STAFF EVALUATION

The NRC staff has reviewed TVA's relief request PV-15 for the IST of four containment isolation valves FSV-43-450, -451, -452, and -453 in the hydrogen analyzer sampling system. TVA has demonstrated that visual confirmation of valve position, as required by IWB-3300, is not practical due to the valves' totally enclosed design. Compliance with the code could only be achieved through a design change which would require replacement of the valve and would place an unnecessary burden on the licensee without a compensating increase in safety or quality. TVA's submittal also includes a commitment to incorporate an alternative pressure test into SQN Surveillance Instruction (SI) 166, "Summary of Valve Tests for ASME Section XI." A review of the proposed alternative test method to be added to SI 166 indicates that correct performance of the procedure will provide an alternative means of verifying valve position, thereby meeting the intent of the code. The alternative test method also demonstrates actual valve operation and pressure tightness, thereby providing additional safety assurance.

CONCLUSIONS

Based on the staff review of TVA's relief request PV-15 for Sequoyah Unit 1, the staff concludes that TVA's request for relief from certain specific requirements of Section XI of the ASME Code is acceptable. The proposed alternative test method will provide an acceptable level of quality and safety. The staff's acceptance is conditional upon TVA's commitment to incorporate the alternative test method into SI 166 prior to the restart of Sequoyah Unit 1. The test method described in SI 166 will serve in lieu of direct visual observation of valve position. Any additional program changes such as revisions or additional relief requests or deletion of any valves from the IST should be submitted to staff review and should not be implemented prior to review and approval by the staff.

The staff has determined (1) that relief may be granted pursuant to paragraph 10 CFR 50.55a(g)(6)(i) based on our finding that certain requirements of Section XI of the Code are impractical, and (2) that 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, and is otherwise in the public interest considering the burden that could result if they were imposed on the facility.

Principal Contributor: D. E. Smith

Dated:

Mr. S. A. White

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the alternative testing method set forth in TVA's letter of February 26, 1988 into Surveillance Instruction (SI) 166 prior to the restart of Sequoyah Unit 1. TVA has stated in its letter dated July 8, 1988 that SI 166.4 will be incorporated into SI 166 for Sequoyah Unit **2**.

Original Signed by

Suzanne Black, Assistant Director
for Projects
TVA Projects Division
Office of Special Projects

Enclosure:
As stated

cc w/enclosure:
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