



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381

SEP 26 1995

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

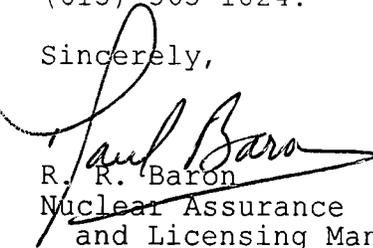
In the Matter of the Application of) Docket Nos. 50-390
Tennessee Valley Authority) 50-391

WATTS BAR NUCLEAR PLANT (WBN) - INSERVICE TESTING (IST) PROGRAM -
ONE-TIME REQUEST FOR RELIEF (RFR)

The purpose of this letter is to submit, for review and approval, a one-time request for relief (RFR) from the requirements of the ASME Section XI Pump and Valve Inservice Testing Program. This RFR seeks relief from certain requirements pertaining to baseline tests performed on system relief valves to be tested in accordance with the requirements of Part 10 of ANSI/ASME Operations and Maintenance (OM) Standard, OM-1987 Edition through the OMa-1988 Addenda, and in accordance with the requirements of OM Part 1- 1987 (OM-1), as referenced in OM Part 10. Specifically, this request seeks a one-time relief from performing baseline tests on certain system relief valves in a manner that includes a ten-minute hold/stabilization time between two consecutive openings of the valve and from documenting temperature stability of set-point pressure tests in relief valve preservice tests as required by OM-1. The list of affected relief valves and justification for this RFR are provided in the enclosure to this letter.

If you should have any questions, please contact P. L. Pace at (615) 365-1824.

Sincerely,


R. R. Baron
Nuclear Assurance
and Licensing Manager (Acting)

Enclosure

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Enclosure

cc (Enclosure):

NRC Resident Inspector
Watts Bar Nuclear Plant
Rt. 2, Box 700
Spring City, Tennessee 37381

Mr. P. S. Tam, Senior Project Manager
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852

U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

ENCLOSURE

REQUEST-FOR-RELIEF (ONE-TIME)

TEN-MINUTE HOLD/STABILIZATION TIME BETWEEN CONSECUTIVE OPENINGS IN SET-POINT TESTS ON RELIEF VALVE TESTS TO ESTABLISH BASELINE REFERENCE VALUES

SYSTEMS: - See the attached list.

COMPONENTS: - See the attached list.

ASME CODE CLASS: - See the attached list.

CATEGORY: - AC-Active and C-Active (See the attached list for each specific valve)

FUNCTION OF COMPONENTS: - Provide over-pressure protection to components in listed systems.

IMPRACTICAL REQUIREMENTS:

- 1) ASME/ANSI Operations and Maintenance Standards - Part 10 (OM-10), paragraph 3.1, **Preservice Testing**, - "Each valve shall be tested during the preservice test period as required by this Part. These tests shall be conducted under conditions as near as practicable to those expected during subsequent inservice testing."
- 2) ASME/ANSI Operations and Maintenance Standards - Part 1 (OM-1), paragraph 8.1.3.7, **Time Between Valve Openings**. - "A minimum of 10 minutes shall elapse between successive openings."
- 3) OM-1, paragraph 8.1.3.4, **Temperature Stability**. - "The test method shall be such that the temperature of the valve body shall be known and stabilized before commencing set pressure testing, with no change in measured temperature of more than 10°F (5°C) in 30 minutes."

BACKGROUND

Recently, in preparation for startup of the Watts Bar Nuclear Plant Unit 1, TVA conducted a review of ASME Section XI Pump and Valve Test baseline/reference data and the methods of collection of the data. This review revealed that the preservice baseline test values recorded for the listed valves (see the attached list) were obtained during the performance of maintenance instructions (MIs) which did not incorporate all of the attributes of the current ASME Section XI IST program surveillance instructions (SIs) associated with the specific valves. Specifically, the baseline test data was obtained during the conduct of Maintenance Instruction MI-0.011, "Safety/Relief Valve." MI-0.011 is used primarily to inspect, repair, and test spring-type relief valves and adjust their set-point pressures during maintenance of the valves.

WBN ASME Section XI IST Program SIs are currently written to conform to the requirements of OM-1. Surveillance Instruction 1-SI-0-902, "Testing Setpoint of Safety Relief Valves - ASME Section XI Category "C" Valves," is a bench-test procedure that was written to incorporate the requirements of OM-1, paragraph 8.1.3.7., and also contains process steps to verify and record the ambient test temperatures. Preservice tests performed to collect reference baseline test data for the listed valves were not performed in accordance with the current ASME Section XI SIs.

TECHNICAL BASIS FOR RELIEF:

Maintenance Instruction MI-0.011 is a bench-test procedure that contains set-point adjustment and documents process steps which set the valve's set-point through a minimum of three successive valve openings. Valve relief pressures on three successive openings must be within the required acceptance criteria. These successive openings are performed over a period of several minutes as pressure is applied to the bench-test rig by a manually operated test pump. The set-point adjustments and tests are performed in plant shop areas under ambient conditions of approximately 80 degrees F and using ambient temperature water as a test medium. The ambient temperature conditions and the time between successive openings is neither measured nor recorded. Only the successive operating relief set-point pressure measurements are recorded. The nature of the bench-test process is such that a temperature gradient between the valve, the ambient test environment, and the ambient temperature test medium would not be sufficient to effect the operational set-point of the relief valve. Therefore, the bench test process is considered to meet the intent of the Code. Set-point adjustments and verifications, in accordance with MI-0.011, were performed on all of the listed valves since March 1993. Category AC-active relief valves are also leak-rate tested in accordance with the appropriate procedures.

To perform the necessary preservice baseline tests of the listed valves in accordance with the current SI (and OM-1) requirements, TVA would have to isolate and drain the indicated systems and remove the relief valves from the systems for bench-testing. This process would result in an undue hardship on TVA in terms of the cost of performing the maintenance activities and the impact to the plant's startup schedule. These activities would also constitute an unnecessary intrusion on the plant systems' integrity without any increase in the plant margin of safety. In addition, the time frame of tests recently performed (under MI-0.011), on the listed valves, is well within the expected frequency of testing required in an OM-1 test program. The data obtained from any performance of 1-SI-0-902 should agree closely with the operating set-point pressure data obtained during the conduct of MI-0.011 because of the similarity of the bench tests in these two instructions. The design, construction, and extent of operating time on the listed valves is such that TVA would not expect to experience any degradation in the components. The physical plant operating conditions would support the expectation that there would be no difference between any new test data and the data obtained since March 1993. In addition to the physical situation, ASME OM-10, paragraph 3.3, has provisions to allow reference values (i.e., baseline values in the case of OM-1) to be determined from the results of preservice testing or from the results of inservice testing. Conduct of the initial inservice tests on a representative sample of valves chosen from the attached list of valves, in accordance with the WBN OM-1 relief valve test program, will validate MI-0.011 test data.

In summary, the testing and set-point adjustment data obtained under the performance of the maintenance instruction MI-0.011 is sufficient to meet the intent of the OM-1 requirement because the testing was performed as a bench test under ambient conditions. On this basis, TVA is requesting relief from meeting the OM-1 requirements identified in Items 2 and 3, above.

PROPOSED ALTERNATIVE TESTING: - None. These valves will be tested in subsequent inservice tests under test conditions as required in OM-1-1987 and within the Code required frequency of tests.

REQUEST-FOR-RELIEF (ONE-TIME)

TEN-MINUTE HOLD/STABILIZATION TIME BETWEEN CONSECUTIVE OPENINGS IN
SET-POINT TESTS ON RELIEF VALVE TESTS TO ESTABLISH BASELINE REFERENCE
VALUES

LIST OF EFFECTED COMPONENTS - PAGE 1 of 2

<u>SYSTEM/ COMPONENT ID</u>	<u>CODE CLASS</u>	<u>CODE CAT.</u>	<u>DESCRIPTION</u>
System 31 - Air Conditioning System Chilled-Water System			
0-RFV-31-2210	N	C-active	MCR Surge Tank A-A
0-RFV-31-2252	N	C-active	MCR Surge Tank B-B
0-RFV-31-2326	N	C-active	Elec. Board Rm. Surge Tank
System 62 - Chemical and Volume Control System			
1-RFV-62-505-S	2	C-active	Charging Pump Suction Hdr.
1-RFV-62-636-S	2	C-active	CVCS Seal Water Return Hdr.
1-RFV-62-662-S	2	AC-active	CVCS Letdown Hdr.
1-RFV-62-675-S	2	C-active	CVCS Letdown
1-RFV-62-688-S	2	C-active	Volume Control Tank
1-RFV-62-955	2	C-active	Holdup Tank A
1-RFV-62-1221	2	C-active	Cent. Charging Pump 1A-A
1-RFV-62-1222	2	C-active	Cent. Charging Pump 1B-B
System 63 - Safety Injection System			
1-RFV-63-511-S	2	C-active	SI Pump 1A-A
1-RFV-63-534-A	2	C-active	SI Pump 1A-A Hot Leg Injection Line Discharge
1-RFV-63-535-S	2	C-active	SI Pump Cold Leg Injection Line Discharge
1-RFV-63-536-B	2	C-active	SI Pump 1B-B Hot Leg Injection Line Discharge
1-RFV-63-577-S	2	C-active	SIS Boron Injection Tank Outlet
1-RFV-63-602-S	2	C-active	SIS Cold Leg Accum. 1
1-RFV-63-603-S	2	C-active	SIS Cold Leg Accum. 2
1-RFV-63-604-S	2	C-active	SIS Cold Leg Accum. 3
1-RFV-63-605-S	2	C-active	SIS Cold Leg Accum. 4
1-RFV-63-626-A	2	C-active	RHR to Cold Leg 2 and 3 Injection Line
1-RFV-63-627-B	2	C-active	RHR to Cold Leg 1 and 4 Injection Line
1-RFV-63-637-S	2	C-active	RHR to Hot Leg 1 and 3 Injection Line
1-RFV-63-835	2	C-active	RHR HX 1B-B Outlet to SI Pump Suction

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TEN-MINUTE HOLD/STABILIZATION TIME BETWEEN CONSECUTIVE OPENINGS IN SET-POINT TESTS ON RELIEF VALVE TESTS TO ESTABLISH BASELINE REFERENCE VALUES

LIST OF EFFECTED COMPONENTS - PAGE 2 of 2

<u>SYSTEM/ COMPONENT ID</u>	<u>CODE CLASS</u>	<u>CODE CAT.</u>	<u>DESCRIPTION</u>
System 70 - Component Cooling System			
1-RFV-70-538-S	3	C-Active	CCS Surge Tank
1-RFV-70-703	2	AC-Active	Excess Letdown HX CCS Outlet
1-RFV-70-835	3	C-Active	CCS RCP 1, 2, 3, and 4 Thermal Barrier HX Supply
System 72 - Containment Spray System			
1-RFV-72-508-A	2	C-active	CS Pump 1A-A Suction
1-RFV-72-509-B	2	C-active	CS Pump 1B-B Suction
System 74 - Residual Heat Removal System			
1-RFV-74-505-S	2	C-active	RHR Pump Suction Hdr.

Note: Code Class N designates a non-ASME Section III component that performs a safety-related function and requires testing under the ASME Section XI IST program.