

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

6N 38A Lookout Place

SEP 11 1990

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

Gentlemen:

In the Matter of the Application of)
Tennessee Valley Authority)

Docket No. 50-390

WATTS BAR NUCLEAR PLANT (WBN) - NRC INSPECTION REPORT NO. 390, 391/90-14 -
REPLY TO NOTICE OF VIOLATIONS 390/90-14-01 AND 390/90-14-02

TVA has reviewed the subject inspection report and notice of violations and provides the enclosed responses. Enclosure 1 provides TVA's response to Violation A, 390/90-14-01. Enclosure 2 provides TVA's response to Violation B, 390/90-14-02. Enclosure 3 lists the commitments made in this submittal.

The Region II staff was notified on September 4 and September 10, 1990, of the delay in submitting this response. If there are any questions, please telephone P. L. Pace at (615) 365-1827.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



Mark O. Medford, Vice President
Nuclear Assurance, Licensing,
and Fuels

Enclosures
cc: See page 2

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cc (Enclosures):

Ms. S. C. Black, Deputy Director
Project Directorate II-4
U.S. Nuclear Regulatory Commission
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852

NRC Resident Inspector
Watts Bar Nuclear Plant
P.O. 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

Mr. B. A. Wilson, Project Chief
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

ENCLOSURE 1

RESPONSE TO NRC NOTICE OF VIOLATION
390/90-14-01

Description of Violation (Example 1)

Part 50 of Title 10 of the Code of Federal Regulations, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." requires in part, that activities affecting quality, "...shall be accomplished in accordance with instructions, procedures, and drawings," and that these instructions, procedures, and drawings, "...shall include appropriate quantitative and qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

Contrary to the above, Instruction Change 90-200 to Surveillance Instruction (SI)-7.50 was technically inadequate in that it instructed gagging of the "A" train high pressure fire system relief valve which resulted in a portion of the system piping between the pump discharge and the flow line test throttle valve 0-26-871 exceeding the design pressure.

Admission or Denial of the Violation (Example 1)

TVA admits the violation occurred, but would like to provide the following clarification. The portion of the piping system for which the design pressure was exceeded is Class G (non-ASME) and is bounded by valves 0-26-590, 0-26-591, and 0-26-872 (see attachment). The piping from the pumps to valves 0-26-590 and 0-26-591 has a rated design pressure of 200 psig. The only piping affected by the excessive pressure was the test header, not the high pressure fire protection header.

Reasons for the Violation

The reason for the violation was personnel error. The review requirements that were applicable to the proposed instruction change IC-90-200 are given in AI-1.19, "Document Review and Approval Process Including the Onsite Independent Qualified Review (IQR) Program," and include an independent review(s) by qualified personnel, one of which is designated the primary reviewer. During the review of IC 90-200, the primary reviewer for the IC realized the test line design pressure would be exceeded. However, this was not documented during his review because he incorrectly assumed the proposed test was appropriate as long as the hydrostatic test pressure was not exceeded. Subsequent reviews of the IC may have realized his assumption was incorrect had it been documented.

ENCLOSURE 1

RESPONSE TO NRC NOTICE OF VIOLATION
390/90-14-01

Corrective Steps Taken and Results Achieved

As an enhancement, AI-1.19 was revised to include requirements for the reviewer to ensure that documented technical justification exists for those conditions which exceed design limitations or remove protective features. Additionally, the violation was discussed with the procedure writer and reviewers involved and in a meeting with available personnel in the Technical Support group.

Corrective Steps Which Will Be Taken To Avoid Further Violation

Under the corrective action for Condition Adverse to Quality Report (CAQR) WBP 900290P, the design organization will revise the design pressure of the subject fire protection test line to meet testing requirements.

Date When Full Compliance Will Be Achieved

The design pressure of the fire protection test line will be revised by October 31, 1990.

Description of Violation (Example 2)

Contrary to the above, during performance of SI-7.50 for flow rate verification of the High Pressure Fire Pumps on June 8, 1990, licensee personnel incorrectly installed two test components (differential pressure gauge and hydraulic snubber) and subsequently signed independent verifications which verified that these test components were correctly installed. Maintenance Instruction (IMI)-100, "Configuration Control of Instrument Maintenance Activities and Trouble Shooting Guidelines," Section 9.0, Step C, states in part, ". . .The second party shall physically verify the step was performed correctly and shall document this verification by signing and dating the Instruction."

Admission or Denial of the Violation (Example 2)

TVA admits the violation occurred.

ENCLOSURE 1

RESPONSE TO NRC NOTICE OF VIOLATION
390/90-14-01

Reasons for the Violation

The cause of the incorrect installation of the pressure gauge¹ was lack of attention to detail on the part of the installer and second party verifier. This resulted in the instrument high-pressure side being connected to the system low-pressure side and the instrument low-pressure side being connected to the system high-pressure side. The cause of the incorrect installation of the hydraulic snubber was lack of attention to detail. This resulted in not checking the snubber flow direction resulting in one of two snubbers being reversed.

Assemblage of this pressure gauge arrangement, including the inline snubbers, prior to connection to process equipment was within the training and experience of the instrument mechanics and would have been performed correctly with closer attention to the work.

Corrective Steps Taken and Results Achieved

The event was discussed in detail at an instrument maintenance section safety meeting, and attention to detail was stressed. During this meeting, a video endorsed by Westinghouse Owners Group (WOG) was shown which dealt with good practices for ensuring attention to detail. Additionally, the Instrument Maintenance manager discussed the occurrence with the responsible individuals and foreman.

Corrective Step Which Will Be Taken To Avoid Further Violation

Not applicable.

Date When Full Compliance Will Be Achieved

WBN is presently in compliance.

Description of Violation (Example 3)

Contrary to the above, during the performance of SI-7.50 on May 30, 1990, the licensee failed to implement Administrative Instruction AI-6.14. As a result, a test director was not designated as required by section 6.1.A, a test log containing documentation of test data and test deficiencies was not maintained as required by section 7.2.1, and test data collected by special, ultrasonic equipment was not retained for evaluation as required by section 7.2.5.

1. The subject pressure gauge was installed across flow orifice O-FE-26-19.

ENCLOSURE 1

RESPONSE TO NRC NOTICE OF VIOLATION
390/90-14-01Admission or Denial of the Violation (Example 3)

TVA admits the violation occurred.

Reasons for the Violation

Personnel failed to follow the requirements of AI-6.1, "Surveillance Test Program" and AI-6.14 "Conduct of Test." AI-6.1 states . . . Surveillance tests SHALL be performed by appropriate personnel per AI-6.14. As a result, requirements of AI-6.14 including assignment of a test director, use of a test log, and recording of deficiencies were not implemented.

The cause of the violation was lack of communication between the Operations and Technical Support (TS) organizations, failure by a unit operator (UO) to fully understand the requirements of AI-6.14, and failure of an assistant unit operator (AUO) and system engineer knowledgeable in the requirements of AI-6.14 to recognize noncompliance with AI-6.14 during the improperly run test. A brief description of the events leading to the violation follows.

SI-7.50 is a routine test performed annually for each of four fire protection pumps by the Operations group to verify pump flow adequacy. The test may be performed by a minimum of one AUO at the intake pumping station (IPS) and one UO in the main control room. In the subject case, the design organization requested a plant system engineer in the Technical Support organization to develop a pump curve for the four fire protection pumps. The system engineer modified SI-7.50 with temporary instruction change IC-90-200 to perform the test. The modified test instruction differed from the normal SI-7.50 mainly by requiring additional data, using one additional person, and by gagging the relief valve. After the modified SI-7.50 was approved through WBN's formal review process, described in AI-1.19, the system engineer properly scheduled performance of the test. Upon receiving the test instruction for performance, the UO realized that SI-7.50 had been modified and discussed this with an assistant operations manager. Both agreed Operations would support performance of the test. Additionally, each assumed the system engineer who modified and requested performance of the test was in charge. Operations did not contact personnel in Technical Support to determine who was in charge of the test. Next, the unit operator briefly discussed the test with an AUO noting Operations was to provide support for the system engineer, and directed the AUO to perform the test. The UO and AUO did not discuss the requirements of AI-6.14 or the need for a test director. Personnel present at the IPS included the AUO, the system engineer, instrument mechanics, and two observers from the design group. After instrumentation was installed and system alignments were made, the AUO requested the UO to start fire pump 1A-A to begin the test.

ENCLOSURE 1

RESPONSE TO NRC NOTICE OF VIOLATION
390/90-14-01

Reasons for the Violation (Continued)

The AUO and system engineer are both qualified as test directors; however, during the subject performance of SI-7.50, the AUO believed the system engineer was the test director. Likewise, the system engineer assumed the AUO to be the test director since Operations was responsible for performance of SI-7.50. Although the test was discussed between involved personnel before and during the test, these briefings were not documented, a test director was not designated, a chronological log was not kept, and test deficiencies were not documented. Both the system engineer and AUO should have realized there was not an individual in charge and that conduct of the test was not in accordance with AI-6.14 to which they had been trained.

As the notice of violation indicates, ultrasonic data using the Polysonics flow measuring device was not retained for evaluation. However, this data was not pertinent to the test acceptance criteria. The device had only been included in the test at the request of the Fire Protection Unit to provide a backup reading to check the flow orifice. Data taken for development of the pump test curves was retained as required.

Corrective Steps Taken and Results Achieved

SI-7.50 was reperformed on the "A" train fire pump in accordance with AI-6.14. Additionally, a standing order has been issued to require the senior reactor operator (SRO) to ensure that a test director has been assigned prior to granting permission to run a test. This will be an interim measure until formal retraining on AI-6.14 can be conducted. Also, AI-6.1 has been included in the required reading package for Operations personnel.

Corrective Steps Which Will Be Taken To Avoid Further Violation

A training module on the requirements and responsibilities contained in AI-6.14 will be developed to provide formal training for potential test directors and retraining for existing test directors.

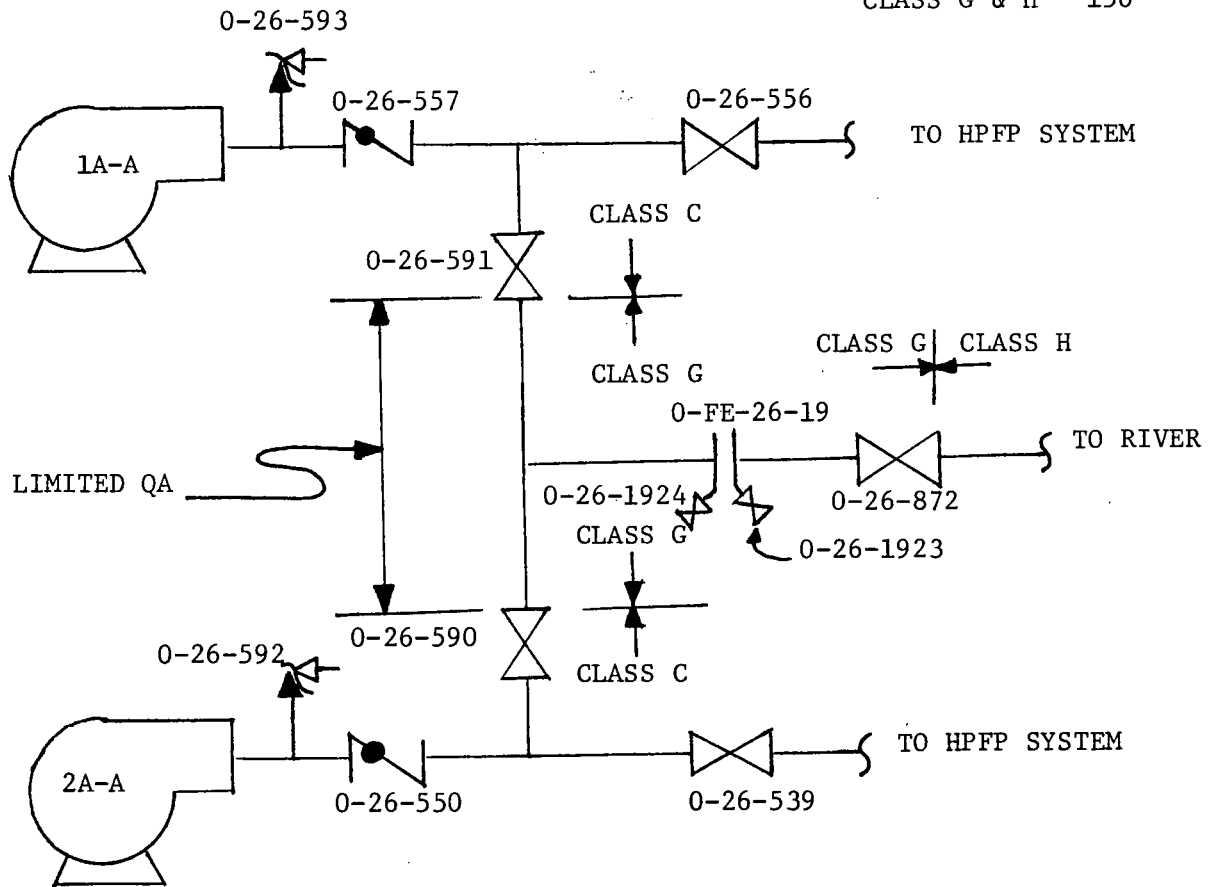
Date When Full Compliance Will Be Achieved

The training module will be developed by October 31, 1990.

ENCLOSURE 1

RESPONSE TO NRC NOTICE OF VIOLATION
390/90-14-01

	DESIGN PRESS	HYDRO PRESS
CLASS C	200	250
CLASS G & H	150	225



WBN INTAKE PUMPING STATION - FIRE PROTECTION PUMP DISCHARGE (TRAIN A)

ENCLOSURE 2

RESPONSE TO NRC NOTICE OF VIOLATION
390/90-14-02Description of Violation

During the Nuclear Regulatory Commission (NRC) inspection conducted from May 19 through June 18, 1990, two violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix (1990), violation 390/90-14-02 is listed below:

10 CFR Part 50, Appendix B, Criterion X, "Inspection," requires, in part, that activities affecting quality ". . . shall be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings," and that, "Such inspection shall be performed by individuals other than those who performed the activity being inspected."

Administrative Instruction (AI)-7.1, "Quality Control (QC) Inspection Program," states in part that only responsible engineering personnel shall be allowed to N/A or delete QC holdpoints.

Contrary to the above, during the performance of maintenance activities associated with a motor operated valve repair, under the licensee's maintenance request work order procedure, maintenance personnel deleted QC holdpoints from the identified work instructions without obtaining the required engineering evaluation or quality assurance (QA) approval or concurrence.

This is a Severity Level IV violation (Supplement II) and applies to Unit 1.

Admission or Denial of Violation

TVA accepts the violation regarding the deletion of QC holdpoints from identified work instructions without obtaining engineering evaluation or QA approval or concurrence. However, the holdpoints identified were not applicable for the work activity being performed.

Reason for Violation

The violation occurred as the result of an inconsistency between procedures which dealt with the method of dispositioning nonapplicable QA holdpoints. The requirements for responsible engineering evaluation and QA concurrence for dispositioning nonapplicable QA holdpoints was added to AI-7.1 on December 6, 1989. Section 6.3.2 of AI-7.1 now states in part:

ENCLOSURE 2

RESPONSE TO NRC NOTICE OF VIOLATION
390/90-14-02Reason for Violation (Continued)

"Responsible engineering personnel may make an evaluation of applicable attributes/holdpoints listed on data sheets. For those attributes/holdpoints that do not apply, responsible engineering personnel shall insert an N/A, initial, and date and obtain Site Quality Assurance (SQA) concurrence."

Before this insertion to AI-7.1, AI-3.11, "Use of Plant Work Procedures and Instructions," was the controlling document for providing instruction to the responsible individual to disposition all unused or nonapplicable data blanks. AI-3.11 states in part:

"All procedure steps SHALL be completed or marked 'Not Applicable' (N/A) except where it is clear from the documentation package that no data is needed. Where documentation or data is normally required but not taken, explanatory remarks SHALL be added and SHALL be initialed and dated by the responsible individual. Blanks, pages, tables, etc., which are marked 'N/A' SHALL be initialed and dated by the responsible individual."

These instructions were interpreted by the individuals completing MRs to N/A unused attributes/holdpoints to AI-3.11. When an unused attribute/holdpoint or series were obviously not applicable, the blanks would be N/A'd as required by AI-3.11, including QA attributes/holdpoints. QA attributes/holdpoints that were N/A'd that could potentially be applicable would be evaluated and concurrence from SQA obtained. This would be in accordance with AI-7.1.

Corrective Steps Taken and Results Achieved

The corrective actions taken by TVA to resolve this condition included the following steps:

A review of 14 work-completed maintenance requests containing instructions similar to those identified in the violation was performed. This review showed that the data blanks were being completed in accordance with AI-3.11 requirements, and that the QA holdpoints had been addressed appropriately with respect to the work activity.

AI-3.11 has been revised to indicate that there are additional requirements in AI-7.1 concerning QA holdpoint dispositioning. This instruction change (IC) 90-445 requires maintenance personnel to obtain QA concurrence for all nonapplicable QA holdpoints.

ENCLOSURE 2

RESPONSE TO NRC NOTICE OF VIOLATION
390/90-14-02

Steps Taken to Avoid Further Violation

A memorandum has been issued to the effected disciplines to inform personnel of the revised requirements in AI-7.1. In addition, a meeting was held with maintenance supervisory personnel to discuss the current requirements and to emphasize the correct method for handling QA holdpoints.

Date When Full Compliance Will Be Achieved

WBN is currently in compliance with the requirements of AI-7.1.

ENCLOSURE 3

LIST OF COMMITMENTS

Violation 390/90-14-01

1. Under the corrective action for Condition Adverse to Quality Report (CAQR) WBP 900290P, the design organization will revise the design pressure of the subject fire protection test line to meet testing requirements.
2. A training module on the requirements and responsibilities contained in AI-6.14 will be developed to provide formal training for potential test directors and retraining for existing test directors.

The above commitments will be completed by October 31, 1990.

Violation 390/90-14-02

Not applicable.