

TENNESSEE VALLEY AUTHORITY REGION II  
CHATTANOOGA, TENNESSEE 37401 ATLANTA, GEORGIA  
400 Chestnut Street Tower II

June 11, 1981 JUN 15 AIO : 2'

Mr. James P. O'Reilly, Director  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Region II - Suite 3100  
101 Marietta Street  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - OIE INSPECTION REPORT  
50-390/81-03 AND 50-391/81-03 - FIRST INTERIM REPORT

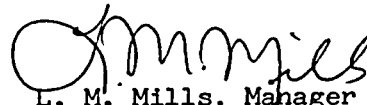
The subject inspection report dated March 14, 1981, cited TVA for violation of NRC requirements. Enclosed are TVA's responses. We expect to provide additional information by September 17, 1981.

If you have any questions, please get in touch with D. L. Lambert at FTS 857-2581.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY



L. M. Mills, Manager  
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Director (Enclosure)  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

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ENCLOSURE  
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
RESPONSE TO NRC-OIE INSPECTION  
REPORT 50-390/81-03 AND 50-391/81-03

Noncompliance Item Severity Level IV Violation 390, 391/81-03-01

10CFR50, Appendix B, Criterion II, requires that the quality assurance program provide control over activities affecting the safety functions of components. The accepted QA program, FSAR section 17.1A.2.1, states that the program provides control over activities affecting quality. The program applies to the components identified in the Safety Analysis Report to an extent consistent with importance to safety. Additionally, FSAR Table 3.2-2a identifies the essential raw cooling water (ERCW) pump as safety related.

Contrary to the above, as of March 18, 1981, the quality assurance program did not provide control over activities affecting quality in that the design, construction, and testing of the essential raw cooling water pump motor cooler's freezing protection was not in the program.

This is a Severity Level IV Violation (Supplement II.D.1).

Admission of the Alleged Violation

TVA admits the violation occurred as stated.

Reasons for Violation

The reason the ERCW pump motor cooler's freeze protection (heat tracing) was deleted from the QA program is that TVA's system evaluation assumed that the number of ERCW pumps required for safe shutdown would normally be operating in both Train A and Train B, thereby suppressing the potential for freezing before a Design Basis Event (DBE) and ensuring their availability during a DBE. However, this assumption was erroneous since the system operating instructions do not ensure that the required pumps will be normally running; therefore, the potential for freezing before the DBE, and probable motor bearing failure if such pumps are subsequently started, cannot be discounted.

Corrective Steps Taken and Results Achieved

The small diameter motor bearing cooling lines are to be rerouted in such a way to make them self-draining. These carbon steel lines are currently being replaced with stainless steel per ECN 2756. The self-draining feature will be incorporated with the material replacement effort. These design changes will eliminate the consideration of freezing for these lines, and therefore, remove the QA requirements for heat tracing them. In addition, we plan to investigate the applicability of the non-IE heat tracing problem identified to other systems and plants.

Corrective Steps to Avoid Further Noncompliance

In the future, we will provide a requirement in Mechanical Design Guide M6.3.3 to check the effects of freezing ambient conditions on ERCW pump availability. If additional measures are required for other systems, they will be defined in a future report.

Date When Full Compliance Will Be Achieved

We will provide the final report on this violation by September 17, 1981. Full compliance will be accomplished when the redesign is implemented. The final report will discuss the implementation date and the results of our investigation of the applicability of the problem to other systems and plants.

Noncompliance Item - Severity Level V Violation - 390,391/81-03-02

10CFR50, Appendix B, Criterion V, requires activities affecting quality to be accomplished in accordance with instructions. The accepted QA program, FSAR Section 17.1A.5, states that assurance is provided that activities are accomplished in accordance with these instructions.

1. Westinghouse Field Change Notice (FCN) WAT 10529 and WBT 10521, Upper Head Injection Valve Modifications, required that the valve downstream disc have weld metal added to correct for body seat metal removal. The FCN's also required the work to be performed under the direction and supervision of an Anchor/Darling representative.

Contrary to the above, as of March 18, 1981, downstream valve discs did not have weld metal added in accordance with the FCN's. Also, the assigned Anchor/Darling representative did not direct and supervise the valve seat modifications for six of the eight valves.

2. WBNP-QCP-1.6, Section 6.6.2, required a responsible engineer during receipt inspection to ensure that all required records accompanying or preceding material to the project were complete and comply with contractual requirements.

Contrary to the above, as of March 18, 1981, repair, inspection, and testing records completed as a result of FCN's WAT 10529 and WBT 10521, were not reviewed to ensure they complied with contractual requirements.

3. FCN WBT 10521 required a Westinghouse Quality Control release before shipment of the reworked valves from Anchor/Darling.

Contrary to the above, as of March 18, 1981, a Quality Control release was not provided on the reworked valves.

This is a Severity Level V Violation (Supplement II.E). Items similar to B.2 have been brought to your attention as items A.1 and A.4, in our letter of June 20, 1980, as items A, B, C, D, and F.2 in our letter of August 14, 1980, and as items A.2, A.3, and B.1 in our letter of October 9, 1980.

Admission or Denial of the Alleged Violation

TVA admits the violations occurred as stated.

Item 1

Interim Progress

TVA is notifying Westinghouse of this condition so that the appropriate disposition can be determined. Also, Watts Bar CONST is initiating a nonconforming condition report on this subject. We will supply corrective action, action to prevent recurrence, and date of full compliance in our next report, which we expect to supply to you by September 17, 1981.

Item 2

Reason for the Violation

It is a failure of employees to properly implement WBNP-QCP-1.6 for the receipt of NSSS vendor equipment.

Corrective Action Taken and Results Achieved

A review has been made of the documentation received on both unit 1 and 2 valves as a result of the implementation of FCN's WAT-10529 and WBT-10521. As a result of this review, NCR 3341R and NCR 3342R has been issued documenting this condition.

Action Taken to Prevent Recurrence

Employees involved in the receipt inspection of permanent material will be retrained to the requirements of WBNP-QCP-1.6.

Date of Full Compliance

Full compliance will be achieved by July 1, 1981.

Item 3

Interim Progress

This infraction was due to an oversight on the part of the vendor. The QA review box on the second addendum to FCN WBT 10521 was not checked as it should have been. TVA initiated nonconforming condition report WBNNEB8103 on February 25, 1981, pertaining to this deficiency. Westinghouse has subsequently inspected the reworked valves at the site, and has stated that a Westinghouse Quality Release is forthcoming.

We will be in full compliance when the Westinghouse Quality Release is received and will inform you of this in our next report.

Noncompliance Item - Severity Level V Violation - 390,391/81-03-03

10CFR50, Appendix B, Criterion V, requires activities affecting quality to be accomplished in accordance with instructions. The accepted QA program, FSAR, Section 17.1A.5, states that assurance is provided that activities are accomplished in accordance with these instructions. Section 5.2 of WBNP-QCI-1.2, "Control of Nonconforming Items," requires engineering personnel to assure identification of nonconforming items by initiating nonconforming condition reports.

Contrary to the above, as of March 18, 1981, engineering personnel had not initiated a nonconforming condition report for the sandy textured contamination in the oil systems of the unit 1 and 2 steam-driven auxiliary feedwater pumps.

Admission of Denial of Alleged Violation

TVA admits the violation occurred as stated.

Reasons for the Violation

This problem of contaminated oil systems was identified through a routine equipment inspection performed by MEU-A maintenance inspection and brought to the attention of the responsible engineer. The responsible engineer reviewed the remarks of the maintenance inspector and determined this was not a nonconforming condition as prescribed in QCI-1.2. The responsible engineer interpreted the disposition as being the system was not complete; therefore, he believed the contaminated pumps would be properly cared for through the normal construction process. Therefore, the engineer believed no NCR was warranted and, therefore, no NCR was issued.

Corrective Steps Taken and Results Achieved

Nonconforming condition report No. 3085R was initiated documenting this condition.

Corrective Steps to Avoid Further Violations

None

Date of Compliance

We are now in full compliance.

Description of Violation (390/81-03-07)

10 CFR 50, Appendix B, Criterion XII, requires measures to be established to ensure that instruments used in activities affecting quality are properly adjusted to maintain accuracy within necessary limits. The accepted QA program, FSAR section 17.1A.12, states that instruments are adjusted according to written procedures.

Contrary to the above, as of March 18, 1981, measures were not established to adjust instruments, in that formal requirements did not exist for instrument adjustment to compensate for elevation effects for preoperational test program instrumentation. The results of the Upper Head Injection preoperational test were misinterpreted due to lack of instrument level compensation.

This is a Severity Level V Violation (Supplement II.E.) applicable to unit 1.

Admission or Denial of the Alleged Violation

TVA admits the violation occurred as stated.

Reasons for the Violation

There was a failure to recognize the need for a written program addressing test instrument corrections for elevation effects. The Preoperational Test Section supervisors considered water leg corrections to be standard practice for test engineers in recording data and requiring only verbal instructions to effectively implement.

Corrective Steps Which Have Been Taken and the Results Achieved

All Preoperational section employees (Sequoyah, Watts Bar and Bellefonte) have been informed by section instruction letter as to proper methods of correcting test instrument readings for elevation and proper documentation methods for these corrections.

Corrective Steps Which Will Be Taken To Avoid Further Violations

Instructions in this area will be provided to future Preoperational Test Sections at later plants by inclusion of correction methods for test instrument readings in a staff procedure manual.

The Date When Full Compliance Will Be Achieved

Watts Bar was in compliance by May 1, 1981.

Noncompliance Item - Severity Level VI Violation - 390/81-03-09

10CFR50.55(e), Appendix B, Criterion V, requires that activities affecting quality be documented by instructions and shall be accomplished in accordance with those instructions. FSAR, section 17.1A.5, states that activities affecting quality are prescribed by documented instructions. Watts Bar Quality Control Instruction (WBNP-QCP-1.39), section 6.2.6.5, states that fire doors will be inspected according to WBNP-QCP-2.18, "Inspection of Mechanical Doors, Hatches, and Manways." WBNP-QCP 2.18 applies to all doors installed by TVA forces within the scope of the Quality Assurance Program and requires that completed documentation be sent to the Quality Control and Records Unit for storage.

Contrary to the above, as of March 18, 1981, activities affecting quality were not accomplished in accordance with instructions in that no inspection documentation of installed fire doors had been completed.

Admission or Denial of the Alleged Violation

TVA admits the violation occurred as stated.

Reason for the Violation

Civil Engineering Unit inspectors were unaware of the QA program applicable to fire doors. TVA drawings 46W454 and 46W455, Architectural Door and Hardware Schedule and Door Frames and Details, do not identify these features as safety related. Construction Specification N3G-881, Identification of Structures, Systems, and Components Covered by the Watts Bar Nuclear Plant Quality Assurance Program, does not list these doors as safety related.

Corrective Action Taken and Results Achieved

Nonconforming Condition Report 3083R1 was initiated on March 17, 1981, applicable to all fire-rated access doors and overhead rolling doors listed on drawings 46W454 and 46W455. Recommended disposition on this NCR is "Reinspect installation and document all fire-rated doors in safety-related buildings." NCR 3053R1 was revised on March 25, 1981, to include "Also, add notes to drawings: No QA required on redhead installation, and no QA required on grouted fire-rated door frames, only verification of grout installation is required" to the recommended disposition.

Action Taken to Prevent Recurrence

The scope of WBNP-QCP-2.18, Inspection of Mechanical Doors, Hatches, and Manways, is currently under revision to include fire-rated, hinge-type, sliding, and overhead, rolling-type doors in safety-related buildings. Civil Engineering Unit (CEU) QA inspectors will be retrained in WBNP-QCI-1.39 and WBNP-QCP-2.18. TVA is investigating whether fire doors should be included in Construction Specification N3G-881, and also why notes were not



placed on the drawings to identify the fire doors as safety related. TVA is also investigating whether the fire doors have sufficient documentation to meet the QA program procurement requirements.

Date of Full Compliance

WBNP-WCP-2.18 will be revised and the CEU QC inspectors will be retrained by July 20, 1981. The results of our investigations will be discussed in in our next report on this matter which will be supplied to you by September 17, 1981.