

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

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FEB 04 1987

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Office of Nuclear Reactor Regulation  
Washington, D.C. 20555

Attention: Dr. J. Nelson Grace

WATTS BAR NUCLEAR PLANT (WBN) UNITS 1 AND 2 - NRC-OIE INSPECTION REPORT  
NOS. 50-390/86-20 AND 391/86-20 - RESPONSE TO VIOLATION

Enclosed is our response to G. G. Zech's letter dated January 7, 1987 to S. A. White which transmitted Inspection Report Nos. 50-390/86-20 and 50-391/86-20, citing activities at Watts Bar Nuclear Plant which appeared to be in violation of NRC regulations. Enclosed is our response to violation 390/86-20-01.

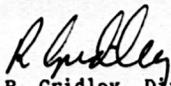
We are in the process of reevaluating our preoperational test program to ensure we have optimum controls, both before and during test performance, including the issuance and maintenance of preoperational test documentation. This effort will include evaluating our control of intent/nonintent changes and our method of processing and performing test addendum packages. After the reevaluation is complete, we wish to schedule a meeting with you to discuss the results of our review, including improvements to the preoperational test program. We plan to schedule this meeting by March 30, 1987.

If there are any questions, please get in touch with R. D. Schulz at (615) 365-8527.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

  
R. Gridley, Director  
Nuclear Safety and Licensing

Enclosure  
cc: See page 2

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U.S. Nuclear Regulatory Commission

FEB 04 1987

cc (Enclosure):

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ENCLOSURE  
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
RESPONSE TO NRC REGION II LETTER  
FROM GARY G. ZECH TO S. A. WHITE DATED JANUARY 7, 1987  
REPORT NOS. 50-390/86-20 AND 391/86-20

This report responds to the Notice of Violation described in enclosure 1 of the NRC Region II Inspection Report referenced above.

Violation 390/86-20-01

10 CFR 50, Appendix B, Criterion V, as implemented by TVA's QA Topical Report, TVA-TR-5-1A, Rev. 8, paragraph 17.2.5 requires that activities affecting quality be prescribed by approved procedures of a type appropriate to the circumstance and shall be accomplished in accordance with these procedures. Watts Bar Administrative Instruction (AI) 3.1, revision 15, "Plant Instructions - Control and Use," requires intent changes to approved procedures be handled through the same formal review process as the original procedure.

Contrary to the above, when the test addenda were constructed from previously-approved test procedures, the addenda did not receive Plant Operations Review Committee (PORC) approval, even though they were intent changes to the original procedure. The addenda changed the scope, technique, or sequential order of the original test.

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

1. Admission or Denial of Alleged Violation

TVA agrees that a violation occurred. However, the violation appears to be for failure to follow procedure AI-6.2, "Preoperational Test Program," and not for failure to follow procedure AI-3.1. TVA also believes that a violation occurred for only the third example, "Integrated Engineered Safety Features Actuation," and not for the first two examples identified in the inspection report details.

The conduct of testing in addenda packages to preoperational test instructions is controlled at WBN by Administrative Instruction AI-6.2, "Preoperational Test Program," and not by AI-3.1. AI-3.1, paragraph 2.0 states that specified instructions were to be prepared, reviewed, approved, revised, and used as indicated in the referenced plant instructions. Among these specified instructions is AI-6.2, which outlines procedures for the conduct of the Preoperational Test Program. AI-6.2 implements the requirements of the Nuclear Quality Assurance Manual (NQAM) Part II, Section 4.1, Preoperational Test Program, and FSAR chapter 14 for WBN.

Therefore, AI-6.2 is the controlling procedure for conduct of activities associated with the Preoperational Test Program. Furthermore, the violation states that, "The addenda changed the scope, technique, or sequential order of the original test." It did not include the fact that a change in scope, technique, or sequential order must affect the results or nuclear safety. This definition is delineated in the inspection report details. Even if AI-3.1 was the applicable controlling document, which it is not, TVA contends that none of the three examples described in the inspection report affect the results or nuclear safety.

AI-6.2, paragraph 5.6.4 describes the procedures to be followed for the performance of addendum test data packages (ATDP). This specifically allows the extraction of portions of the original test procedure for conduct as an ATDP. The preparation of an ATDP does not constitute a procedure change. Additionally, AI-6.2, paragraph 5.6.4 specifies that if steps must be changed or added to perform the test activity, then the requirements for performing changes to the test instruction must be completed in accordance with AI-6.2 paragraph 5.2, "Changes to Approved Instruction." AI-6.2, paragraph 5.2.1 defines intent changes as changes which modify test objectives, the acceptance criteria, change interface points, or possibly invalidate test results. Intent changes are also referred to as safety-related changes. Nonintent changes are changes which do not modify the objectives or test intent (e.g., modification of a valve lineup to facilitate a change in the sequence of testing where a specified sequence is indicated).

For the first two examples identified in the body of the inspection report, an addendum test data package was used to complete testing requirements. In the first example, retesting was necessary to clear test deficiency DN-1 associated with preoperational test TVA-25B, "High Pressure Fire Pumps (HPFP) Water Supply System." The inspection report stated that changes made to the test equipment list made before the ATDP were not incorporated in the ATDP. TVA evaluation showed that the changes made to the TVA-25B test equipment list affected pressure indicating and transmitting test equipment which were not applicable to the conduct of the ATDP. The test equipment utilized in this ATDP was a stopwatch stipulated in the original test package, and used for timing of valve stroking. The test director appropriately documented the stopwatch in the addendum test data package. Therefore, TVA was in compliance with AI-6.2 for processing a ATDP.

For the second example listed in the inspection report details, again an ATDP was used to complete testing requirements. Retesting was necessary to clear test exception No. EN-11 to TVA-9A, "Auxiliary Building Gas Treatment System." EN-11 was written to control a test prerequisite that was not met before start of test conduct. This prerequisite required that charcoal absorber material for the ABGTS met standards specified in ANSI N509-1976, Table 5.1. While addressing the prerequisites before testing, the absorber material failed the specified criteria. The test director appropriately identified test steps for which this exception would need to be cleared before performance of testing. The test

director then completed the steps that did not require this prerequisite and submitted the partially completed test package to DNE. Acceptable material was not received until after initial reviews of the test data package for TVA-9A, so an ATDP was prepared in accordance with AI-6.2, paragraph 5.6.4 to complete the necessary testing and documentation. Documentation and testing consisted of verification of absorber acceptability, signing the associated prerequisite (2.2.7), closure of EN-11 in the test exception log, and performance of the test steps outlined in the addendum. The TVA-9A test steps contained in the addendum consisted of performance of Surveillance Instructions SI-7.9 and SI-7.40. TVA has reevaluated the adequacy of administering the prerequisites and precautions for this ATDP. The steps in the test procedure, and those contained in the surveillance instructions performed to satisfy testing, adequately established the needed prerequisites to conduct the ATDP. Precautions contained in the surveillance instructions were sufficient for safe and efficient conduct of this activity. Therefore, no changes were involved and ATDP preparation was in compliance with AI-6.2.

The third example cited in the inspection report concerned retest activities associated with clearing test deficiency DN-22 on W-3.1F, "Integrated Engineered Safety Features Actuation." This activity was not performed as an ATDP, but during conduct of the original test. DN-22 was written when the 2B-B diesel generator failed to start from a B-Train safety injection signal while in the standby mode. Troubleshooting initiated at the time revealed that the failure to start was caused by a blown fuse in the diesel start circuitry and not due to failures associated with the control logic. The blown fuse was replaced and the 2B-B diesel generator was started by lifting a wire from the K609 relay to simulate a safety injection signal to the start circuitry of the diesel. The nature of this action was a change of test method and, therefore, constituted a nonintentional procedure change as specified in AI-6.2 section 5.2. The test director closed DN-22 based on consideration that the troubleshooting had determined why the failure had occurred and that the diesel generator operated properly following troubleshooting. The test director used the closed test deficiency as the basis for completion of testing. This did not satisfy AI-6.2 procedures with respect to nonintentional changes. Since the testing method employed was a wire lift rather than a switch operation as specified in the original procedure, a nonintentional procedure change should have been processed and Senior Reactor Operator (SRO) approval obtained per AI-6.2 Section 5.2. Therefore, TVA was in violation of 10 CFR 50, Appendix B, Criterion V, for failure to follow AI-6.2.

2. Reasons for the Violation

The test director considered the documentation of successful testing in the test director's log and in Appendix B of the W-3.1F test procedure to be sufficient. However, the test director overlooked that the method that was employed (lifting a wire from the K609 relay) constituted a nonintentional change to the test procedure which required processing and approval by an SRO before its implementation.

3. Corrective Actions Taken and Results Achieved

TVA has reviewed the disposition of DN-22 for technical adequacy, including reevaluating the testing method (wire lift), and determined that the test objectives were satisfied. Therefore, no further correction action was required. Also, as part of the completed test data package approval process, Division of Nuclear Engineering had previously concurred with the closure of this deficiency. Furthermore, during a subsequent portion of the same test, both trains of engineered safety features were actuated simultaneously and the B Train standby diesel did start. It is also noted that an NRC inspector witnessed this testing and identified no violations or deviations in dispositioning this deficiency (Inspection Report 50-390/84-32).

4. Corrective Action Taken to Avoid Further Violations

TVA will critique the failure to process a nonintentional change and obtain SRO approval as stipulated in AI-6.2. The results of this critique will be reviewed with WBN Test directors in a weekly safety meeting, and will be completed by February 20, 1987.

5. Date When Full Compliance Will Be Achieved

TVA will be in full compliance by February 20, 1987.