



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

AUG 13 1994

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)

WATTS BAR NUCLEAR PLANT (WBN) - UNIT 1 - NRC INSPECTION REPORT NO.
50-390, 391/94-43 - REPLY TO NOTICE OF VIOLATION

The purpose of this letter is to provide a reply to Notice of Violation 390/94-43-01 cited in the subject Inspection Report dated July 15, 1994. The notice of violation identifies a failure to adhere to administrative procedures for issuance of a test deficiency notice (TDN) for post accident sampling equipment inadequacies. Enclosure 1 provides TVA's response to this violation. Enclosure 2 summarizes the commitments made in this letter.

If you should have any questions, contact Bruce S. Schofield at (615) 365-1857.

Sincerely,

Dwight E. Nunn
Vice President
New Plant Completion
Watts Bar Nuclear Plant

Enclosures
cc: See page 2

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ENCLOSURE 1

WATTS BAR NUCLEAR PLANT UNIT 1
RESPONSE TO NRC'S JULY 15, 1994, LETTER TO TVA
NRC VIOLATION 390/94-43-01

DESCRIPTION OF VIOLATION

10 CFR Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings and shall be accomplished in accordance with these instructions, procedures, or drawings.

Final Safety Analysis Report (FSAR) Section 14.2 and Table 14.2.1, Post Accident Sampling System Test Summary, details, in part, preoperational tests conducted to verify that samples collected under post accident conditions can be obtained and safely transported to a transfer point for offsite analysis. The test requires, in part, that sample carts/casks are verified to be operational.

SMP-14.0, Test Deficiencies, Revision (Rev.) 1, dated February 14, 1994, requires, in part, that during the conduct of a Preoperational Test Instruction (PTI) a Test Deficiency Notice (TDN) is to be initiated at the time a failure of a procedural step occurs. A step is considered to fail when the equipment or action does not perform as written.

PTI-043-01, Post Accident Sampling System, Rev. 1, dated March 29, 1994, requires a reactor coolant system (RCS) sample to be obtained and transported to a transfer station or onsite laboratory for analysis. Specifically, Step 6.5.113 requires an undiluted RCS sample to be collected in the undiluted sample cask/cart and subsequently transported to the new fuel cask loading bay for offsite analysis.

Contrary to the above, on May 27, 1994, the licensee failed to issue a TDN for Post Accident Sampling System (PASS) test deficiencies identified after placing a vial containing a simulated PASS RCS sample into the undiluted sample cask/cart and subsequently transferring the equipment to the cask loading (Railroad) bay transfer point. Specific test deficiencies which indicated failure of the cask/cart transfer equipment included the following examples:

1. Liquid of an undetermined origin was observed on the undiluted transfer cask following completion of liquid PASS panel reactor coolant collection and placement of the sample vial into the cask/cart.
2. The undiluted cask/cart hydraulic lines required to introduce or to retrieve the liquid sample vial automatically from the cask were damaged during movement of the cart over the PASS room door threshold rendering the equipment inoperable.
3. Difficulties in aligning and moving the undiluted sample cask/cart over door thresholds (jams) between the PASS facilities and the Railroad Bay were experienced, and for one segment of the transfer, the licensee did not use the portable ramp specifically fabricated for moving the equipment over the door threshold.

ADMISSION OR DENIAL OF VIOLATION

TVA agrees with the violation as stated.

REASON FOR THE VIOLATION

The violation resulted from an isolated personnel error on the part of the test director in not recognizing that the subject test performance issues met the intent of a test deficiency. In addition, although Startup training on the expectations for initiating test deficiencies has been sufficient, the test deficiency definition given in Startup Manual Procedure (SMP)-14.0, Revision 1, needed clarification.

During the performance of Section 6.5.113 of Preoperational Test Instruction (PTI) 43-01, "Post Accident Sampling System," a Reactor Coolant sample was obtained using the undiluted sample flow path and placed in the shielded transfer cask. After completion of these steps, and during transfer of the cask/cart to the loading bay, it was noted that water was present on the outside of the cask. Based on the definition of a test deficiency given in SMP-14.0, Revision 1, (i.e., "a condition or action which departs from procedures or instructions"), the test director did not recognize the presence of water as a test deficiency since the procedure steps did not identify this as basis for failure of the steps, nor was it an acceptance criteria. However, recognizing the presence of water as unusual, the test director documented the condition in the PTI chronological log.

Also, the transfer of the cask/cart to the New Fuel Cask Loading Bay was accomplished with much difficulty. The portable ramp designed for transporting the cask/cart over the PASS door threshold was at first used, but the geometry of approach of the cart to the door created interference problems. It was found more manageable to accomplish the transfer by going over the threshold without the ramp. The ramp was then used for passing through the Fuel Load Bay doorway and its design resulted in damage to the hydraulic lines on the bottom of the cart. For test purposes, the cart hydraulics were only involved in the transfer of the sample into the cask, which was satisfactorily performed. The off-loading of the cask at the New Fuel Cask Loading Bay is accomplished with a crane, not with the cart equipment. Since the difficulties in transfer and damage to the cart did not cause failure of the test steps or involve acceptance criteria, the test director did not issue a TDN. However, again recognizing that the difficulties involved in transfer and the damage to the cart caused by the portable ramp design were unexpected conditions, the test director noted these points in the Chronological Log for further evaluation.

TVA notes that at the time the violation was cited, none of the post test results reviews had yet been accomplished, any of which would be expected to identify the problems as warranting a TDN. The test director himself had not yet analyzed those problems for potential impact on the test results, and had not prepared his test summary report. The peer review of the test results had not been accomplished, nor had the Joint Test Group review been completed. It is not unusual for any one of those reviews to identify cases where a post test TDN must be generated.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

TDN No. 94-1002 was issued June 17, 1994, to document the damage to the hydraulics unit on the cart and the difficulties in transferring the cask/cart over the portable ramp. A Work Request (WR) has also been written to repair the cart. Site Engineering is to generate a WR to build a redesigned portable ramp that will make transfer easier and prevent damage to the hydraulics. In addition, TDN No. 94-1269 was issued August 2, 1994, to document the water discovered on the external surface of the cask/cart after obtaining the undiluted RCS sample.

The involved test director has been counseled on the need to be conservative in resolving test performance concerns through the TDN process.

CORRECTIVE STEPS TAKEN OR PLANNED TO AVOID FURTHER VIOLATION

SMP-14.0, Revision 2, effective June 25, 1994, expanded the definition of a test deficiency, giving the test director clearer guidelines for when a TDN is required to be issued. This revision defines a test deficiency as any condition during which the equipment or system being tested (1) fails to operate, (2) operates in a suspected adverse manner, or (3) operates outside limits of documented acceptance criteria.

A retest of Section 6.5.113 of PTI-43-01 will be performed, using a temporary water source, following troubleshooting/repairing of the source of the leak at the sample panel and redesign of the portable ramp. This retest will include the appropriate personnel from the plant chemistry department. As an enhancement to the original procedure, that retest package will include revised precautions/notes, etc., regarding use of the ramp and will require formally recording the number of personnel and time required for the transport operation, for later use by the Chemistry department. TVA notes that the Chemistry department will, following completion of the startup program for this system, independently demonstrate sampling and transport time requirements as part of TVA's commitment to NUREG-0737, Item II.B.3, "Post Accident Sampling."

With respect to other testing performed by the subject test director and other test personnel, and as discussed in the Reason for Violation, TVA is confident that concerns documented in a chronological log are adequately considered against TDN criteria as part of the normal process for completing and approving preoperational test results. No further corrective action is required.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

With respect to the specific violation, TVA is now in full compliance. The subject retest of portions of PTI-43-01 will be performed in accordance with the Startup test schedule.

ENCLOSURE 2

SUMMARY OF COMMITMENTS

VIOLATION 390/94-43-01

TVA will perform a retest of the appropriate portions of PTI-43-01 in accordance with the Startup test schedule. The test will include the appropriate personnel from the plant chemistry department and will include revised precautions/notes, etc. regarding use of the ramp and will require formally recording the number of personnel and time required for the transport operation.