



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

JUN 02 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) 50-391

WATTS BAR NUCLEAR PLANT (WBN) - UNIT 1 AND UNIT 2 - NRC INSPECTION REPORT
NO. 50-390, 391/94-23 - REPLY TO NOTICE OF VIOLATION

The purpose of this letter is to provide a reply to Notice of Violation
390/94-23-01 cited in the subject Inspection Report dated May 3, 1994.
The notice of violation identifies inadequate review of testing
methodology associated with Preoperational Test Instruction (PTI)-015-01
"Steam Generator Blowdown." The violation response also includes a
discussion of actions TVA is taking to improve the quality of PTIs as
committed in TVA's April 29, 1994, response to Violation 50-390/94-07-02.
Enclosure 1 provides TVA's response to this violation. Enclosure 2
contains a list of commitments made in this letter.

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

Sincerely,

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

Enclosures
cc: See page 2

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cc (Enclosures):

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ENCLOSURE 1

WATTS BAR NUCLEAR PLANT UNIT 1
RESPONSE TO NRC'S MAY 3, 1994 LETTER TO TVA
NRC VIOLATION 390/94-23-01

DESCRIPTION OF VIOLATION

"10 CFR 50 Appendix B, Criterion V as implemented by TVA Nuclear Quality Assurance (NQA) Plan, TVA-NQA-PLN 89-A (Revision 3), Section 6.1 requires that activities effecting quality shall be prescribed by documented instructions, procedures or drawings of a type appropriate to the circumstance and shall be accomplished in accordance with these instructions, procedures or drawings. Instructions, procedures or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Startup Manual Procedure (SMP-3.0), Joint Test Group (JTG) Charter (Revision 8) Section 2.2, JTG Responsibilities, specifies primary responsibilities to its members for verifying test objectives, acceptance criteria, testing methodology, and calculations comply with approved design output documents, licensee commitments, and the FSAR and have been adequately covered in the test instructions.

Contrary to the above, as of April 4, 1994 the JTG failed to implement their responsibilities to verify that testing methodology have been adequately covered in the test instructions. As a consequence the following Preoperational Test Instruction (PTI) was determined to be inadequate in the area of test methodology, which would have affected the test objective to verify design flow rates to the condensate demineralizers and the cooling tower blowdown flow paths. PTI 015.01, Steam Generator Blowdown, (Revision 0), Sections 6.9, 6.10, 6.11, 6.12 requires verifying the ability to achieve design flow rates through the condensate demineralizer and cooling tower blowdown flow paths. PTI 015.01 specified the use of Temporary Operating Plan (TOP) 015.02, Steam Generator Blowdown, (Revision 0) to align the steam generator blowdown system valves and specifies the section of the TOP to be used for system operation. TOP 015.02 valve alignment and system operating instructions for the cooling tower blowdown flow rate verification would have directed blowdown to both the condensate demineralizer and cooling tower blowdown in lieu of the cooling tower blowdown path."

ADMISSION OR DENIAL OF VIOLATION

TVA agrees with the violation as stated.

REASON FOR THE VIOLATION

The errors in valve alignment noted in the violation resulted from over-reliance on the previously issued System Operating Instruction (SOI)-15.1, which was authorized for use in conjunction with PTI-015-01 under Temporary

Operating Plan (TOP)-15-02. Although a review of the TOP was performed as part of preparation of the PTI, the review was insufficient. There were also administrative errors (references to incorrect sections of the TOP) which were made during the preparation of the PTI, however, these would have been detected during the performance of the test. None of the errors noted were detected during the Startup technical review (peer review) or the JTG reviews of PTI-015-01.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

As stated in Inspection Report 50-390, 391/94-23, corrective actions for specific errors in PTI-015-01 were accomplished through CN-1 and 2 to PTI-015-01 and CN-1 to TOP-15-02.

CORRECTIVE STEPS TAKEN OR PLANNED TO AVOID FURTHER VIOLATION

No additional actions are required for the specific violation example. However, as committed in TVA's April 29, 1994, response to Inspection Reports 50-390, 391/94-07 and 94-12, additional actions have been necessary to assess and correct weaknesses in the preoperational test procedure development process. These actions, discussed below, are being developed under the corrective action plan for WBN Problem Evaluation Report (PER) WBP940226. Effective implementation of these actions is expected to prevent the type of errors that occurred for the specific violation including improved reviews of TOPs used in conjunction with future PTIs.

As a result of site management concerns over the PTI errors identified in Inspection Report 50-390, 391/94-23, as well as errors associated with the preparation and review of other PTIs (reference Inspection Reports 50-390/94-07 and 94-12), WBN's Nuclear Assurance department conducted an assessment of the PTI preparation and review process (Assessment No. NA-WB-94-0069, dated May 24, 1994). The details of that assessment have been discussed with NRC, and confirm that improvements are needed in the process for preparation and review of PTIs.

Based on initiatives being instituted by the Startup Manager, and on the results of the assessment, several improvements will be incorporated into the program for preparation and review of PTIs. These improvements primarily involve: (1) increased emphasis on personal accountability, including lessons learned, on the part of the Startup PTI preparer and peer reviewers, (2) the introduction of a formal process for performing more thorough reviews of PTIs by specific departments, and (3) field walkdowns of PTIs by specific departments to confirm their consistency with plant hardware. These improvements are discussed below and will remain in place until Startup PTI development performance meets management expectations.

Personal Accountability:

Increased accountability is being placed on PTI preparers and peer reviewers for the quality of test instructions, with particular emphasis on examples of recent problems. In part, this includes discussion(s) by the Startup Manager with the PTI preparation group and reviewers to emphasize his expectations for in-process and future PTIs. Included in these discussions will be the subject

inspection report examples and TVA's response to this violation. In addition, TVA will develop improved methods to provide feedback to PTI preparers and peer reviewers, as well as JTG reviewers, for concerns over PTI quality identified by JTG, Quality Assurance, and NRC reviewers. These actions will be completed by June 17, 1994.

In addition, to address specific concerns with insufficient/incorrect acceptance criteria, Startup has revised the test preparation checklist in Desk Top Instruction No. 4 (Writer's Guide), to require that PTI authors identify the source of each acceptance criterion utilized in the test instruction. This information is included with the PTI review package and is subject to confirmation by the peer and JTG reviewers.

Department Reviews:

1. Nuclear Engineering will perform a cross discipline review of PTIs with focus on verification of the appropriateness of acceptance criteria. This review will involve each engineering discipline having responsibility for design output information upon which test acceptance criteria are based. The review will be performed subsequent to test preparation and peer review but prior to JTG approval of the PTI.
2. As part of the Operations JTG member review, or during the Operations walkdown described below, Operations will perform a detailed review of operational aspects of the PTI, including prerequisites, precautions, support system alignments, and restorations steps. The Operations review will be completed prior to JTG approval of the PTI.

Walkdowns:

1. Within Startup, a field walkthrough of the test instruction (to the extent allowed by plant conditions) will be conducted as part of either the preparer or peer reviewer effort. The intent of this walkthrough is to confirm consistency between the test instruction and the plant hardware/configuration, e.g., equipment nomenclature, location, function, lineups, etc., using appropriate drawings. The Startup walkthrough will be completed prior to submittal of the PTI to JTG.
2. Operations will perform a walkdown of the test instruction (to the extent allowed by plant conditions) similar to the Startup walkthrough. Emphasis during the Operations walkdown will be on the operational aspects of the PTI such as valve and power-supply lineups. The Operations walkdown will be completed prior to JTG approval of the PTI.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

With respect to the specific violation, TVA is currently in compliance. TVA will incorporate the process for department reviews and walkdowns of PTIs within appropriate Startup administrative procedures by June 30, 1994. In the interim, the Operations walkdown is currently being performed by management directive. TVA expects to begin implementing the engineering cross disciplinary review and Startup walkthrough for PTIs which are submitted to JTG on or after June 15, 1994.

ENCLOSURE 2

SUMMARY OF COMMITMENTS

1. The Startup manager will emphasize his expectations for in-process and future PTIs with the PTI preparation group and reviewers including discussion of the subject inspection report examples and TVA's response to this violation 390/94-23-01.
2. TVA will develop improved methods to provide feedback to PTI preparers and peer reviewers, as well as JTG members, for concerns over PTI quality identified by JTG, QA, and NRC reviewers.
3. TVA will establish a process for department reviews of PTIs by the Operations and Nuclear Engineering departments.
4. TVA will establish a process for field walkthroughs/walkdowns by Startup and Operations of preoperational test instructions.

Actions 1 and 2 will be completed by June 17, 1994. Actions 3 and 4 will be incorporated within appropriate Startup administrative procedures by June 30, 1994. In the interim, TVA expects to begin implementing the NE cross disciplinary review and Startup walkthrough for PTIs which are submitted to JTG on or after June 15, 1994.