



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37357

OCT 10 1995

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 - NRC INSPECTION REPORT NO.
50-390, 391/95-45 - REVISED RESPONSE TO NOTICE OF VIOLATION
50-390/95-45-01

The purpose of this letter is to provide a revised response to Notice of Violation 390/95-45-01 cited in the subject inspection report dated August 15, 1995. This violation concerns the installation and support of resistance temperature detectors (RTDs) in accordance with vendor supplied instructions or requirements. TVA's original reply was submitted on September 14, 1995. NRC subsequently requested that further details be provided relative to the determined cause of the violation and the corrective steps taken to prevent further recurrence.

The enclosed revised response supersedes that provided with the original September 14, 1995 submittal.

Commitments are documented in Enclosure 2 of this submittal.

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

Sincerely,

R. R. Baron
Nuclear Assurance
and Licensing Manager (Acting)

Enclosures
cc: See page 2

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cc (Enclosures):

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ENCLOSURE 1

NRC INSPECTION REPORT NO. 50-390, 391/95-45
REVISED RESPONSE TO NOTICE OF VIOLATION

Violation 50-390/95-45-01

"10 CFR 50, Appendix B, Criterion III, Design Control, and Tennessee Valley Authority Nuclear Quality Assurance Plan TVA-NQA-PLN89-A, Revision 4, Section 7.0, Design Control, require that measures be established to ensure that applicable design requirements are correctly translated into procedures or instructions. Section 7.2.1.C of TVA-NQA-PLN89-A requires that measures be established and implemented to ensure that design output documents appropriately identify engineering requirements that apply to plant activities and to ensure that plant personnel are made aware of engineering requirements. Section 7.2.7.F requires that measures be established, documented, and implemented to control plant configuration and ensure that the actual plant configuration is accurately depicted on drawings.

Contrary to the above, as of June 23, 1995, the installation of four resistance temperature detectors did not meet vendor installation drawing requirements. Specifically, Note 7 in Westinghouse installation drawing 3D22098 (Contract 54114-01), Revision 1, required the maximum acceptable length of unsupported cable between the resistance temperature detector and the first support to be 15 inches. Additionally, the maximum distance between subsequent cable supports was specified at 24 inches. Based on an NRC inspection, cable supports were not provided within the first 15 inches of the following resistance temperature detectors:

1-TE-068-0324-G	PZR Vapor Temperature
1-TE-068-0319-F	PZR Liquid Temperature
1-TE-074-0014-G	RHR 1A-A Outlet Temperature

Additionally, cable supports were not provided within the maximum span of 24 inches for the following resistance temperature detectors:

1-TE-074-0014-G	RHR 1A-A Outlet Temperature
1-TE-074-0025-F	RHR 1B-B Outlet Temperature"

TVA Response

TVA concurs with the violation.

Reason for the Violation

The RTD cables were not supported in accordance with the vendor-specified requirements because the RTD cables were mistakenly installed using generic guidance for commodity installation, rather than vendor component installation instructions. These cables are similar to other cable/flexible conduit installed routinely in the plant using standard TVA cable supporting requirements.

Despite the fact that vendor drawings for the RTD cable support installations were available within the TVA documentation system at the time of RTD installation, the installers incorrectly assumed that the cable/flexible conduit commodity support criteria were applicable. This caused the retrieval and application of the appropriate vendor guidelines not to occur. This condition reflects an error in judgment on the part of the individuals involved in the RTD installations. Additionally, Engineering output used at the time of the original RTD installations lacked the specificity necessary to ensure that the appropriate vendor requirements were utilized.

The reason for this violation example can therefore be traced to personnel error by Nuclear Engineering and Construction.

Although some of the subject RTDs were subsequently replaced due to cable damage, the new RTDs were reinstalled "like for like" with the as-found condition, in accordance with guidance for commodity installations found in existing site construction specifications. Modification activities related to replacement of damaged commodities generally do not result in a re-review of the original installation requirements.

Corrective Steps That Have Been Taken and the Results Achieved

Design Change Notices (DCNs) W-37478-A and W-37395-A were issued for the installation of supports at the pressurizer and RHR heat exchanger locations. Installation of supports for the pressurizer and RHR heat exchanger RTD cables has been completed.

Programmatically, the TVA Work Control Procedure implemented since the original installation of these RTDs requires a thorough review of equipment installation requirements prior to the issuance and implementation of a work plan. As part of the construction restart effort undertaken in 1991, additional controls were placed upon the work control process to ensure that vendor specified requirements were acknowledged and properly met. Since that time, additional improvements and training in the design control process, as well as training conducted under the Vendor Information Program Corrective Action Plan provide reasonable assurance this condition will not recur.

Corrective Steps Taken to Avoid Further Violations

This problem has been documented in Problem Evaluation Report (PER) WBP950360. Inspections were conducted to verify whether other applicable vendor-specified supporting conditions were properly satisfied. As a result, TVA identified eight other RTDs with similar support installation deficiencies. Field activities associated with the identified RTD support deficiencies, including those identified through the extent of condition review, will be completed prior to closure of WBP950360.

Date When Full Compliance Will Be Achieved

With respect to the cited violation, TVA will be in full compliance upon closure of WBP950360, now scheduled for October 21, 1995.

ENCLOSURE 2

NRC INSPECTION REPORT NO. 50-390, 391/95-45
REVISED RESPONSE TO NOTICE OF VIOLATION
List of Commitments

1. Field activities associated with the identified RTD support deficiencies, including those identified through the extent of condition review, will be completed prior to closure of WBP950360, scheduled for October 21, 1995.