

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

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OCT 27 1989

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of the Application of)
Tennessee Valley Authority)

Docket Nos. 50-390
50-391

WATTS BAR NUCLEAR PLANT (WBN) - NRC INSPECTION REPORT NOS. 50-390, 391/89-11 -
RESPONSE TO NOTICE OF VIOLATION 390, 391/89-11-02

Enclosed is our response to NRC's letter to TVA dated September 27, 1989,
which transmitted the subject inspection report, citing activities at WBN that
appear to be in violation of NRC regulations. The response addresses
violation 390, 391/89-11-02. Commitments are identified in Enclosure 2.

If there are any questions, please telephone G. R. Ashley at (615) 365-8527.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

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Enclosures
cc (Enclosures):

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ENCLOSURE 1
RESPONSE TO NRC'S SEPTEMBER 27, 1989
LETTER TO TVA TRANSMITTING NOTICE OF VIOLATION
390, 391/89-11-02

DESCRIPTION

10 CFR 50, Appendix B, Criterion V, as implemented by TVA's Quality Assurance (QA) Topical Report, TVA-TR75-1A, Revision 10, paragraph 17.1.5, "Instructions, Procedures, and Drawings," requires that activities affecting quality shall be accomplished in accordance with instructions, procedures, or drawings. Design Criteria WB-DC-40-5, "Insulation," Revision 0, dated December 14, 1971, Section 2.0, "General Description," requires that the insulation for systems within the containment are to be the reflective type and of stainless steel construction. Section 3.0 further requires that the insulation shall have a design life of 40 years.

Contrary to the above, Design Criteria WB-DC-40-5 was not met in that plastic foam insulation was installed inside containment on more than 20 percent of the ice condenser piping.

This is a Severity Level IV Violation (Supplement II) and applies to Units 1 and 2.

ADMISSION OR DENIAL OF THE VIOLATION

TVA admits the violation occurred, but would like to provide the following clarification:

REASON FOR THE VIOLATION

The reason for this violation is the lack of adequate design input information. This was a basic problem identified by TVA as early as 1986 and was one of the reasons for the Watts Bar Design Baseline and Verification Program (DBVP) which, in part, developed the Watts Bar Design Basis Document (DBD). The criteria in question was inadequately scoped in that it did not address areas of containment other than those in the immediate vicinity of the reactor coolant system. Foam plastic insulation was therefore not addressed by the criteria, and design engineers were unaware of both the need to limit its application and the need to maintain an inventory of the amount actually used. Therefore, when the guideline of "approximately 20 percent" was issued, TVA had in fact already exceeded that amount.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

As noted by the Nuclear Regulatory Commission (NRC) in paragraph 4.d of the subject inspection report, TVA has performed a review to determine the amount of foam plastic insulation utilized inside containment and has concluded that the amount exceeds that allowed by Design Criteria WB-DC-40-5, Revision 1.

Design Change Notice (DCN) P-01581 has been issued to replace excessive amounts of foam plastic with foam glass in Unit 1. In addition, this DCN has added notes to design documents to prevent substitution of different types of insulation by Nuclear Construction without prior approval by Nuclear Engineering (NE) for inventory control purposes.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER VIOLATION

Recurrence control has been accomplished through the development of the Watts Bar DBD by the Design Baseline and Verification Program. The DBD was developed to ensure that design input was complete, current, and matched licensing documents. In addition, calculation WBN-61-D053, EPM-RM-091688 was developed for Unit 1 to allow for inventory maintenance for foam plastic insulation.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

The work necessary to replace the foam plastic insulation in Unit 1 containment will be complete by fuel load.

WATTS BAR UNIT 2

Corrective steps for Unit 2 include the development of an inventory calculation and a DCN to remove any excess foam plastic. These activities are currently on hold pending the decision to restart Unit 2 efforts and are being tracked by Condition Adverse to Quality Report (CAQR) WBP870349 that was referenced by the NRC inspection report.

ENCLOSURE 2

LIST OF COMMITMENTS

1. Replace excessive amounts of foam plastic with foam glass in Unit 1 containment by fuel load.
2. Unit 2 efforts (development of an inventory calculation and removal of excess foam plastic) are currently on hold and are being tracked by CAQR WBP870349.