



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

APR 08 1993

William J. Museler
Site Vice President
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CDR-50-390/86-22
CDR-50-391/86-18

10 CFR 50.55(e)

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) UNITS 1 AND 2 - INCORRECT USE OF TYPICAL
SUPPORTS ON INSTRUMENT SENSE LINES - WBRD-50-390/86-22 AND 50-391/86-18
REVISED FINAL REPORT

The subject deficiency was initially reported to NRC Inspector Al Ignatonis on January 13, 1986, in accordance with 10 CFR 50.55(e) as Nonconformance Report (NCR) WBN 6597 for Unit 1 and NCR WBN 6502 for Unit 2. TVA's current tracking number for the Unit 1 deficiency is Significant Corrective Action Report (SCAR) WBP900115SCA.

TVA's corrective action plan for resolving the deficiency was provided in a report dated February 13, 1986. Based on information obtained during implementation of Unit 1 corrective actions, TVA has revised the Unit 1 resolution approach for this deficiency. Enclosed is TVA's revised final report that describes the revised corrective actions to resolve the subject deficiency for Unit 1.

Should there be any questions regarding this report, please telephone P. L. Pace at (615) 365-1824.

Very truly yours,

William J. Museler

Enclosure
cc: See page 2

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ENCLOSURE

WBRD-50-390/86-22, 391/86-18
INCORRECT USE OF TYPICAL INSTRUMENT
SENSE LINE SUPPORTS
REVISED FINAL REPORT

Description of Deficiency

A walkdown of approximately 40 Watts Bar Nuclear Plant (WBN) Unit 2 typical supports, as shown on TVA drawings 47A051-35 and -35A, identified seven supports which are providing axial restraint for more piping or tubing than allowed by the drawings. The affected typical supports are used to support various safety-related instrument sense lines. This deficiency was documented on Nonconformance Report (NCR) WBN 6502. A similar deficiency was identified for WBN Unit 1 and was documented in NCR WBN 6597. TVA determined that other 47A051-35 and -35A typical support installations could be affected. Under TVA's current corrective action program the subject deficiency is tracked as Significant Corrective Action Report (SCAR) WBP900115SCA for Unit 1.

TVA determined that this deficiency is the result of a misinterpretation of the subject drawings. Table 1 of drawing 47A051-35 identifies that up to eight 1/2-inch pipes can be supported by a single typical support. However, Note 2 on drawing 47A051-35A states that the support will only provide axial restraint for two 1/2-inch pipes or four 1/2-inch tubes. Apparently, Note 2 was not applied to Table 1 during the installation or inspection of affected supports.

Safety Implications

As discussed in our letter dated February 13, 1986, this installation deficiency was originally considered to potentially reduce safety factors for affected supports, and potentially increase the allowable stress being induced in affected instrument sense lines. After further engineering evaluation, TVA has determined that the affected Unit 1 supports will perform their design safety function as installed. Therefore, TVA does not consider this deficiency to adversely affect the safe operation of Unit 1.

Corrective Action

The corrective actions described in TVA's letter addressing the subject deficiency dated February 13, 1986, included a complete walkdown of 47A051-35 and -35A typical supports to identify deficient support installations. Of the first 342 Unit 1 supports walked down, engineering evaluation determined that the installations are adequate to perform their design function as installed. This information indicated that an alternative resolution to this deficiency (e.g., a random sampling approach) might be pursued.

ENCLOSURE

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A formal evaluation was initiated to confirm that a random sampling of the support population is a valid, technically sound approach to resolving the installation deficiency. TVA's deficiency tracking document WBP900115SCA was revised to perform a random sample of the total population of 47A051-35 and -35A supports and formally establish a technical basis for revising the NRC commitment to perform a complete walkdown. The random sample has been completed and engineering evaluation has confirmed that no technical deficiency exists with the as-installed supports included in the sample. TVA considers the results obtained from the random sample evaluation to provide an adequate confidence level that the total population of 47A051-35 and -35A typical supports for Unit 1 will perform their safety function as installed. Therefore, TVA has determined that no additional walkdown of the Unit 1 support installations is required to resolve the deficiency and submits the random sampling approach as a revision to the NRC commitments made in the previous letter dated February 13, 1986.

In order to reconcile the quality assurance installation records for the affected instrument line supports, the 47A051-series drawings have been annotated to reference the appropriate engineering documents associated with the as-installed supports.

TVA considers the recurrence controls described in the previous letter dated February 13, 1986, addressing this deficiency and the additional work controls associated with WBN's 1991 construction restart effort adequate to prevent recurrence of the subject installation deficiency.

All necessary corrective actions for this deficiency have been completed for WBN Unit 1. Corrective actions for Unit 2 supports will be completed before fuel loading for Unit 2.