

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

85 MAR 14 P 2: 48
March 11, 1985

WB RD-50-390/85-10
WB RD-50-391/85-10

U.S. Nuclear Regulatory Commission
Region II
Attn: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

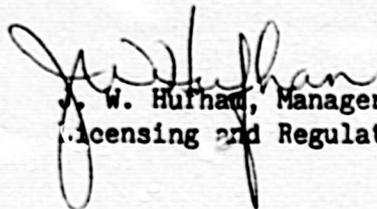
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - DESIGN ERRORS ON DRAWING 47W491-8 -
WB RD-50-390/85-10 AND WB RD-50-391/85-10 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Al Ignatonis on February 20, 1985 in accordance with 10 CFR 50.55(e) as NCP WBN MEB 8507. Enclosed is our final report.

If you have any questions, please get in touch with R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY


W. Hufham, Manager
Licensing and Regulations

Enclosure

cc: Mr. James Taylor, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center (Enclosure)
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
WBRD-50-390/85-10 AND WBRD-50-391/85-10
NCR WBN MEB 8507
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

During a walkdown of various typical hangers, TVA identified design discrepancies against drawing 47W491-8. This drawing contains piping design for the service air, raw service water, demineralized water, primary makeup water, and the high-pressure fire protection systems for the auxiliary and control buildings. The discrepancies were found between revision levels R8 and R47 and include the lack of information on the drawing identifying what was done for a particular revision, the erasure of existing design information while incorporating a change, incorrect system designations for particular hangers, and the addition or deletion of hangers without documentation.

The cause of these discrepancies was the lack of adequate review and the blurring of design information over time due to the numerous revisions which were made to the drawing.

Safety Implications

Through review of this problem, TVA has identified instances where piping in the service air system is presently overspanned. This overspan occurs in areas of the auxiliary building where there is safety-related equipment which could be damaged by the pipe falling during a postulated design basis seismic event.

Corrective Action

TVA has issued engineering change notice (ECN) 5488 to add hangers to eliminate the overspan condition, to reinstate all design information deleted during previous revisions, to assign hanger numbers to the appropriate pipes, to identify all revisions by backcircling, and to define all these revisions in the drawing's revision block. The design work for the ECN is completed and the field work required for the hangers will be complete by March 15, 1985.

TVA's management controls emphasize the review of all design efforts for critical plant features as the method of identifying such individual mistakes so that appropriate action can be taken. Recent revisions to Office of Engineering (OE) Engineering Procedure (EP) 3.10 "Design Verification Methods and Performance of Design Verifications," have strengthened the management controls over independent reviews on drawings and associated design efforts. These revisions should ensure that adequate independent reviews are performed in the future.