

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

85 OCT 31 10 1985
October 23, 1985

WBRD-50-391/82-85

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 UNIT 2 - INCORRECT INSULATION WEIGHTS USED IN PIPING
ANALYSIS - WBRD-50-391/82-85- SIXTH INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector D. Quick on August 25, 1982 in accordance with 10 CFR 50.55(e) as NCR WBN CEB 8223. Related NCR WBN SWP 8247 was subsequently determined to be reportable. Interim reports for both NCRs were submitted on September 24, 1982 and April 25 and September 16, 1983. Our annual report for unit 1 and fourth interim report for unit 2 was submitted on December 22, 1983. Our fifth interim report for unit 2 was submitted on December 20, 1984. Enclosed is our sixth interim report for unit 2. We expect to submit our next report for unit 2 on or about June 20, 1986.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. A. Homer
R. W. Hufham, Manager
Licensing and Risk Protection

Enclosure

cc: Mr. James Taylor, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20535

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 UNIT 2
INCORRECT INSULATION WEIGHTS USED IN PIPING ANALYSIS
WBRD-50-391/R2-85
NCRs WBN CEB 8223 AND WBN SWP C247
10 CFR 50.55(e)
SIXTH INTERIM REPORT

Description of Deficiency

TVA identified several piping analysis problems which had incorrect insulation weights or insulation requirements applied to them. Also, on some problems, the insulation data which was used had not been verified by quality assurance documentation.

This deficiency occurred because there were no requirements for quality controlled insulation data at the time of occurrence. Design drawings detailing insulation requirements had not been issued for all rigorously analyzed piping systems. Therefore, insulation data was acquired from various uncontrolled sources.

Safety Implications

Incorrect insulation data applied to piping analysis problems could possibly result in unconservative or inadequate piping support designs and installations. This could result in the failure of an affected, safety-related piping system during a safe shutdown earthquake or during normal operating conditions. This could adversely affect the safe operation of the plant.

Interim Progress

TVA is in the process of preparing insulation drawings in accordance with Watts Bar Engineering Project (WBEP) Engineering Procedure (EP) 43.18, "Insulation/Heat Tracing Drawings for Safety-Related Systems." These drawings will be used to verify correct insulation weights which will be incorporated in a review and reanalysis of all unit 2 rigorous piping analysis problems. Justification will be provided for those exceptions where insulation weights are not included.

To prevent recurrence of this type deficiency, TVA issued EP 43.18. This EP describes the program for reviewing and documenting the insulation/heat tracing (I/HT) design requirements for all primary and secondary safety-related mechanical (piping and equipment) and instrumentation systems in seismic category I structures at WBN. Existing design, procurement, and contract drawings for these safety-related systems have been reviewed to ensure that all the I/HT requirements of the system are incorporated.

TVA will provide our next report on this item to the NRC on or about June 20, 1986.