

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

September 4, 1985

05 SEP 9 4 9:30

WBRD-50-391/82-45

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 BARN NUCLEAR PLANT UNIT 2 - INCORRECT SUPPORTS IN ANALYSIS OF 3-INCH
CVCS LINE - WBRD-50-391/82-45 - FINAL REPORT FOR UNIT 2

The subject deficiency was initially reported to NRC-OIE Inspector D. Quick on May 5, 1982 in accordance with 10 CFR 50.55(e) as NCR WBN CEB 8209. Interim reports were submitted on June 3 and December 15, 1982 and May 17, September 23, and November 15, 1983. Our final and revised final report for unit 1 were submitted on September 23 and November 15, 1983. Our sixth interim report for unit 2 was submitted on October 11, 1984. Enclosed is our final report for unit 2 which indicates that TVA no longer considers 10 CFR 50.55(e) applicable to this item.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. W. Hufham
v, khd

J. 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. 20555

Records Center (Enclosure)
Institute of Nuclear Power Operations
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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNIT 2
INCORRECT SUPPORTS IN ANALYSIS OF 3-INCH
CHEMICAL AND VOLUME CONTROL SYSTEM LINE
NCR WBN CEB 8209
WBRD-50-391/82-45
10 CFR 50.55(e)
FINAL REPORT FOR UNIT 2

Description of Deficiency

The 3-inch letdown line in the chemical and volume control system (CVCS) from the crossover leg loop No. 3 to the regenerative heat exchanger has two inline isolation valves (node points 51 to 150 of EDS Nuclear Incorporated's, analysis 0600200-08-10) which are analyzed with rigid supports on the valve operators in one direction. The as-designed supports for these locations are snubbers. This condition results in the analysis being invalid. Additional rigid support piping analysis problems affected by this deficiency were also identified.

The cause of this deficiency is that, at TVA's request, EDS Nuclear performed the subject valve analysis with rigid valve operator supports. TVA subsequently decided to use snubbers in the design of the affected valve operator supports based upon the rigid support loads. This decision was based upon the engineering judgment of a TVA design engineer. Guidelines concerning the design of valve operator supports had not been issued at the time this deficiency occurred.

Safety Implications

TVA conducted a scoping effort to determine the number of analysis problems which were affected by this deficiency. Three additional problems (250-08-10, 250-09-10, and 250-09-11) were identified as requiring reanalysis to qualify valves with supports modeled on the operators. TVA has completed the required reanalysis of these problems in accordance with the Watts Bar Nuclear Plant (WBN) Rigorous Analysis Handbook, section 304, per engineering change notices (ECNs) 4715 and 4799. All affected supports were qualified in the as-installed configuration and will be used as-is. As such, this deficiency could not have adversely affected the safe operation of the plant. Therefore, TVA no longer considers 10 CFR 50.55(e) applicable to this item.