

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

December 3, 1982

WBRD-50-390/81-08

WBRD-50-391/81-07

U.S. Nuclear Regulatory Commission
Region II

Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

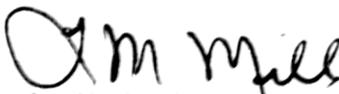
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - STEEL CONTAINMENT PENETRATION
ASSEMBLY - WBRD-50-390/81-08, WBRD-50-391/81-07 - TENTH INTERIM REPORT

The subject deficiency was initially reported to NRC-CIE Inspector F. Cantrell on December 19, 1980 in accordance with 10 CFR 50.55(e) as NCR WBN CER 8014. Interim reports were submitted on January 19, April 7, June 16, September 9, and December 16, 1981 and February 18, April 13, June 23, and August 16, 1982. Enclosed is our tenth interim report. The description of condition and interim progress have been modified from our last report to more accurately describe the deficiency and our progress toward resolution. The submittal date of this report was discussed with Inspector R. V. Crlenjak on November 29, 1982. We expect to submit our next report on or about March 18, 1983.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY


L. M. Mills, Manager
Nuclear Licensing

Enclosure

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

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ENCLOSURE
WATTS-BAR NUCLEAR PLANT UNITS 1 AND 2
STEEL CONTAINMENT PENETRATION ASSEMBLIES
NCR WBN CEB 8014
10 CFR 50.55(e)
WBRD-50-390/81-08, WBRD-50-391/81-07
TENTH INTERIM REPORT

Description of Deficiency

The residual heat removal (RHR), main steam, main feedwater and feedwater bypass pipes penetrate the steel containment vessel (SCV) through free floating bellows penetration assemblies. During a loss of coolant accident (LOCA) the maximum pressure existing inside the SCV is 15 pounds per square inch. This pressure will produce an axial load on the effective areas of the SCV penetration openings. These axial loads were not considered by the piping analyst. There are additional bellows assemblies affected by hydraulic reactions created by anchorages located in the shield wall that may not have been designed to account for this axial load.

Interim Progress

All affected piping has been evaluated and reanalyzed where warranted. No piping changes were made as the reanalysis showed that the piping could withstand the extra pressures. All of the associated piping analysis problems have been issued; however, TVA is still reanalyzing the supports to account for the new loads generated by the piping reanalysis. To prevent a future recurrence of this deficiency, guidance has been furnished to the piping analyst by the inclusion of a new section to the existing checklist. This section incorporated the analysis requirements for SCV penetrations. The checklist was made part of a Watts Bar Nuclear Plant piping analysis procedure and requires the analyst and checker to review all SCV penetration assemblies and to account for all pertinent loading conditions.