TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

1630 Chestnut Street Tower II

December 28, 1984

WBRD-50-390/84-53
WBRD-50-391/84-47

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - STEEL CONTAINMENT VESSEL RESPONSE SPECTRA - WBRD-50-390/84-53 AND WBRD-50-391/84-47 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector A. Ignatonis on November 28, 1984 in accordance with 10 CFR 50.55(e) as NCR GEN CEB 8407. Enclosed is our first interim report. We expect to submit our next report on or about January 31, 1985.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. A. Domer

for J. W. Hufham, Manager
Licensing and Regulations

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

Records Center
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
STEEL CONTAINMENT VESSEL RESPONSE SPECTRA
NCR WBN CEB 8407
WBRD-50-390/84-53 AND WBRD-50-391/84-47
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

In the period from May to September 1979, design basis accident (DBA) analyses were performed on the Watts Bar Nuclear Plant (WBN) steel containment vessel (SCV) to determine response spectra for piping analysis. The axisymmetric shell analysis program called SUPERSHELL was used to generate the response. Because this program only gives displacement time histories as a function of azimuth, a postprocessor program was written to double differentiate the displacement functions to get accelerations. Recently, while attempting to regenerate the acceleration functions on the computer, an error in the differentiation program was discovered. This error resulted in incorrect DBA response spectra for these structures.

Interim Progress

Acceleration time histories are being generated from the original data using the corrected computer program. Acceleration response spectra will be calculated and plotted using the correct acceleration time histories. The response spectra will be enveloped for the hot leg load cases and will be compared with the original spectra. For the locations where the corrected spectra significantly exceed the original spectra, effects on applicable piping systems will be assessed and corrective action taken as required.