TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

January 8, 1981

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Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - DISCREPANCY IN TWO MK-71 EMBEDDED PLATES - NCR 2508R - FINAL REPORT

The subject condition was initially reported to NRC-OIE Inspector M. Thomas on August 18, 1980, in accordance with 10 CFR 50.55(e). Interim reports were submitted on September 16 and November 20, 1980. Enclosed is our final report.

If you have any questions, please get in touch with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure
cc: Mr. Victor Stello, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
DISCREPANCY IN TWO MK-71 EMBEDDED PLATES
NCR 2508R
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

During the chipping of cracked concrete (reference NCR 2163R) behind two MK-71 embedded plates at azimuth 24° and 156° in unit 1 containment building, it was discovered that the horizontal rows of anchors for these two plates were different, when they should have been the same. After further investigation, it was determined that the existing E dimension for the MK-71 plate at 156° was three spaces of 6 inches with four concrete anchors, when it should have been six spaces of 3 inches totaling 1 foot 6 inches with seven concrete anchors as shown on the original embedded plate schedule.

After ascertaining the difference between the two MK-71 embedded plates, a further fabrication inequity was discovered. The two specified MK-71 plates were required to have double-studded (double length) concrete anchors, but the plates were fabricated with only single studs.

Safety Implications

The lack of double studded anchors and the deficiency in the number of required anchors in the embedded plates could jeopardize the safety of the plant. Without these features, it would be possible for vital safety systems to fail during a seismic event and possibly damage other safety systems. This could affect the availability of redundant safety features claimed in the plant safety analysis.

Corrective Action

TVA has a identified all attachments to the embedded plates and has reanalyzed the plates for the related loads assuming none of the embedment anchors are double studded. As a result of the reanalysis, the single-studded, embedded plates have been determined to be acceptable for the plate loads. An insufficient number of horizontal rows has been determined to be unacceptable, and the embedded plates will be replaced. A random sampling of 20 additional embedments has been ultrasonically tested to verify that the numbers of anchors in all rows are as indicated on the design drawings.