TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

December 23, 1982

WBRD-50-390/82-80
WBRD-50-391/82-76

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 - SHIELDED POWER CABLE BEND RADIUS DEFICIENCY - WBRD-50-390/82-80, -391/82-76 - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on July 29, 1982 in accordance with 10 CFR 50.55(e) as NCR WBN 4194R. Our first interim report was submitted on August 30, 1982. Enclosed is our second interim report. We expect to submit our next report on or about July 25, 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
SHIELDED POWER CABLE BEND RADIUS DEFICIENCY
WBRD-50-390/82-80, WBRD-50-391/82-76
NCR 4194R
10 CFR 50.55(e)
SECOND INTERIM REPORT

Description of Deficiency

Some cable tray fittings used at Watts Bar allow bending radii of 8-kV shielded power cables to be less than the minimum required by TVA construction specifications. These specifications require a minimum bending radius of 12 times the cable outside diameter (OD), while the 12-inch radius tray fittings allow the cables to be bent from about 6.6 to 10.7 times cable OD depending on cable size. The design of the plant cable tray system was based on numerous factors; but in some cases, the bending radius required for the largest shielded power cables was not adequately considered.

Corrective Action

It has been determined that seven different brands of shielded power cable have been utilized at Watts Bar. A worst possible case installed bend radius has been determined for each brand, and each vendor has been advised of the parameters. For those vendors who feel that, or are unsure whether, the worst case installed bends will be detrimental to their cable, cable samples can be supplied for evaluation testing. The object of the testing will be to show that the installed bends are not more detrimental to the cable than those required by TVA construction specifications, or to establish a minimum intalled service life if they are. If tests are performed, information on the test results will be available in the next report.