TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
5N 157B Lookout Place

February 13, 1986

WBRD-50-390/86-24
WBRD-50-391/86-20

U.S. Nuclear Regulatory Commission
Region II
Attention: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - QUESTIONABLE USE OF THOMAS AND BETTS CONNECTORS IN 6.9 KV CIRCUITS - WBRD-50-390/86-24, WBRD-50-391/86-20 - INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Bob Carroll on January 14, 1986 in accordance with 10 CFR 50.55(e) as NCR WBN 6536. Enclosed is our interim report. We expect to submit or next report on or about May 23, 1986.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R. L. Gridley
Manager of Licensing

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
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
QUESTIONABLE USE OF THOMAS AND BETTS CONNECTORS IN 6.9 KV CIRCUITS
WBRD-50-390/86-24, WBRD-50-391/86-20
NCR WBN 6536
10 CFR 50.55(e)
INTERIM REPORT

Description of Deficiency

Quality Control Procedure (QCP) 3.06-4 R4, attachment B, for Watts Bar Nuclear Plant (WBN) specifies the use of Thomas and Betts 54500 series two-way connectors for use on 6.9 kV cable types (TVA mark number) WNB through WNG-1. However, these connectors are only rated for use in 600V (or less) applications.

The cause of this problem is the ambiguity of vendor data from Thomas and Betts as well as General Construction Specification G-38. Neither document is clear on what materials/components are rated for medium voltage (600V to 15 kV) service.

Safety Implications

The potential exists for cable damage (due to improper use of these connectors) and subsequent degradation of essential safety-related systems, thereby resulting in a condition that could adversely affect the safety of operations of the plant.

Interim Progress

TVA is determining the acceptability of these connectors in the medium voltage range, the correct termination material to be used in applications greater than 600V, and any required rework of terminations previously made. In addition, updated vendor information is being obtained from Thomas and Betts and revisions to G-38 are being pursued to clarify this matter.

TVA will provide the next report on this matter on or about May 23, 1986.