TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

October 18, 1983

BLRD-50-438/83-32
BLRD-50-439/83-28

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - CABLE BEND RADII IN GOING FROM VERTICAL TO HORIZONTAL TRAYS - BLRD-50-438/83-32, BLRD-50-439/83-28 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Linda Watson on April 22, 1983 in accordance with 10 CFR 50.55(e) as NCR 2331. This was followed by our interim report dated May 23, 1983. Enclosed is our final report.

TVA does not now consider the subject nonconforming condition adverse to the safe operation of the plant. Therefore, we will amend our records to delete the subject nonconformance as a 10 CFR 50.55(e) item.

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

Records Center (Enclosure)
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
CABLE BEND RADII IN GOING FROM VERTICAL TO HORIZONTAL TRAYS
BLRD-50-438/83-32, BLRD-50-439/83-28
10 CFR 50.55(e)
NCR 2331
FINAL REPORT

Description of Deficiency

TVA Construction Specification G-38 (G-38) requires a minimum bend radius of no less than 19.6 inches for 8kV power cables to prevent overstressing the cable insulation. Some of the cable tray fittings used at Bellefonte require an installed cable bend radius as short as 7 inches.

Safety Implications

TVA requested the vendor (the Okonite Company) to evaluate its cable in order to determine if the installed cable was acceptable in its as-built configuration. The vendor responded in its letter to TVA dated June 7, 1983, that the minimum acceptable bend radius for this cable is 4.88 inches. TVA has accordingly concluded that the subject cable is acceptable to use "as-is." Therefore, had this condition remained uncorrected, it could not have adversely affected the safety of operations of the plant, and we consider this item is no longer reportable under 10 CFR 50.55(e).

To identify, evaluate, and resolve Class 1E cable bend radius problems at Watts Bar and Bellefonte Nuclear Plants, TVA has appointed a task team of representatives from the Divisions of Engineering Design (EN DES) and Construction (CONST). Several problems have been identified at both plants, and NCRs have been written where the installed Class 1E cables do not meet the requirements of G-38. These NCRs are being dispositioned on a case-by-case basis. In some cases, relaxed cable bend radius values have been obtained from the cable manufacturers to allow acceptance of the as-installed configurations. For all future installations, TVA will comply with the established cable bend radius values; or, receive specific relaxation of these values from vendors before cable installation.