TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

March 5, 1984

BLRD-50-438/83-01

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 UNIT 1 - CABLE BEND RADIUS FOR DIESEL GENERATOR CONTROL CABINETS - BLRD-50-438/83-01 - REVISED FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector P. E. Fredrickson on December 6, 1982 in accordance with 10 CFR 50.55(e) as NCR 2053. This was followed by our interim report dated January 3, 1983 and our final report dated September 8, 1983. Enclosed is our revised 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 concerning this matter, 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 UNIT 1
CABLE BEND RADIUS FOR DIESEL GENERATOR CONTROL CABINETS
NCR 2053
BLRD-50-438/83-01
10 CFR 50.55(e)
REVISED FINAL REPORT

Description of Deficiency

The "from end" cable bend radii of medium voltage power cables 1RT-ECA5-69, 70, 71-A and 194, 195, 196-B in diesel generator control cabinets 1RT-ELCP-1-A and 2-B are less than TVA General Construction Specification G-38 minimum allowable values. The design and installation of the cable system for the diesel generator control cabinets was performed by TVA.

Safety Implications

The above cables were supplied by the Okonite Company on contract 79K5-825903, item 3. TVA erroneously reported in the last report that the worst case bend radius inside these cabinets was approximately 16.3 inches. The worst case was actually 10.5 inches which translates to a value of 6.6 times the cable's outside diameter.

Okonite's June 7, 1983 letter to TVA stated that the concern in the minimum installed radius is that the shield system does not buckle or separate at the tape overlap and that their shield tape overlap is 12-1/2 percent minimum. Based on the same letter, the bend radius of 6.6 times O.D. inside the cabinets will not cause separation. Therefore, based on the manufacturer's analysis, we have determined that the cable bend in generator control cabinets 1RT-ELCP-1-A and 2-B are acceptable and will be used "as is." No corrective action is required.

Therefore, there are no safety implications to Bellefonte, and TVA no longer consider this item to be reportable under the requirements of 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 TVA Construction Specification 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.