

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

September 7, 1982

BLRD-50-438/82-56

BLRD-50-439/82-50

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:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - SHIELDED POWER CABLE BEND RADII  
DEFICIENCY - BLRD-50-438/82-56, BLRD-50-439/82-50 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector  
R. V. Crlenjak on August 6, 1982 in accordance with 10 CFR 50.55(e) as NCR  
1889. Enclosed is our first interim report. We expect to submit our next  
report by December 20, 1982. The deficiency has also been reported on our  
Watts Bar Nuclear Plant as NCR 4194R.

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*  
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, DC 20555

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ENCLOSURE  
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2  
SHIELDED POWER CABLE BEND RADIUS DEFICIENCY  
NCR 1889  
BLRD-50-438/82-56, BLRD-50-439/82-50  
10 CFR 50.55(e)  
FIRST INTERIM REPORT

Description of Deficiency

Some cable tray fittings used at Bellefonte allow bending radii of 8-kV and 15-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) of these cables, while the 12-inch radius tray fittings allow the cables to be bent from about 7.4 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. These cables can be used in Class IE systems and the added stress of the tighter bends conceivable could cause premature failure.

Interim Progress

An investigation is being made to determine if the as-installed condition will provide a suitable service life for the cable. TVA will provide more information in the next report.