

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

July 9, 1981

BLRD-50-438/81-12

BLRD-50-439/81-12

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303



Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 CAPACITORS ON CONSOLIDATED CONTROL
CORPORATION FIELD BUFFER CARDS - BLRD-50-438/81-12, BLRD-50-439/81-12 -
REVISED THIRD INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector M. Thomas on January 23, 1981, in accordance with 10 CFR 50.55(e) as NCR 1309. This was followed by our interim reports dated February 23, May 27, and June 19, 1981. As discussed with R. V. Crlenjak by telephone on June 30, 1981, enclosed is our revised third interim report. We expect to submit our next report by January 12, 1982. The reason for the revision is for clarification of the interim progress. We consider 10 CFR Part 21 to be applicable to this deficiency.

If you have any questions concerning this matter, please get in touch with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Jr., 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
CAPACITORS ON CONSOLIDATED CONTROL CORPORATION FIELD BUFFER CARDS
BLRD-50-438/81-12, BLRD-50-439/81-12
REVISED THIRD INTERIM REPORT

Description of Deficiency

Field buffer cards (6N193-1) in the Solid-State Control System (SSCS) are vendor supplied by Consolidated Controls Corporation. The card can be used interchangeably in both safety-related and nonsafety-related systems. Some field buffer cards have been experiencing failures of the capacitors on the cards, resulting in card failures.

Interim Progress

Site inspections have been completed and all cards which have discrepancies have been identified.

Although only the 6N193 field buffer cards were cited as possibly deficient, additional cards used in the SSCS for Bellefonte units 1 and 2 were analyzed.

The capacitor's failure was because of a large inrush current resulting from insertion of a card into a powered cabinet. A different type capacitor (tantalum electrolytic) and a current limiting resistor were added to design drawings. Implementation of these design changes should eliminate further failures.

Capacitors which were evaluated as unnecessary for circuit function shall be removed. This is the case for the 6N191, 6N193, and 6N196 cards.

As a result of their analysis, the vendor is undertaking an extensive rework program on the 6N191, 6N193, and 6N196 cards, and they expect to provide TVA with an engineering report detailing their findings.