

OFFICIAL COPY

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

July 8, 1981

BLRD-50-438/81-32  
BLRD-50-439/81-35



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:

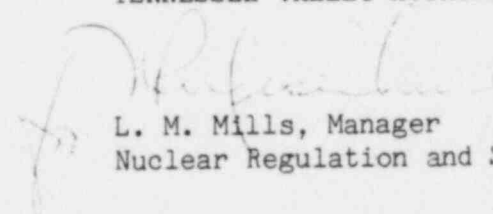
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - CONSOLIDATED CONTROL CORPORATION  
FIELD BUFFER CARDS - BLRD-50-438/81-32, BLRD-50-439/81-35 - THIRD INTERIM  
REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. W. Wright on December 3, 1980 in accordance with 10 CFR 50.55(e) as NCR 1296. This was followed by our interim reports dated January 1 and May 21, 1981. Enclosed is our third interim report. We expect to submit our next written report by December 30, 1981. We consider 10 CFR Part 51 to be applicable to this nonconformance.

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

IER27  
5/1/1

8107310324 810708  
PDR ADOCK 05000438  
S PDR

An Equal Opportunity Employer

ENCLOSURE  
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2  
CONSOLIDATED CONTROL CORPORATION FIELD BUFFER CARDS  
BLRD-50-438/81-32, BLRD-50-439/81-35  
10 CFR 50.55(e)  
THIRD INTERIM REPORT

Description of Deficiency

Field buffer cards (6N193-1) in the Solid State Control System are vendor supplied by Consolidated Controls Corporation. The cards can be used interchangeably in both safety-related and nonsafety-related systems. Some field buffer cards have been found with electrical shorts between inputs of separate channels and others have had pins which were not soldered. The electrical shorts on the cards appear to have been caused by solder defects between pins.

Interim Progress

The problems with the cards surfaced when the 87N2 test set began to provide faulty indications when operated at the plant site. As a result of removing the cards for testing at the site, defects were noted in some of the cards. The solder defects were typically cross channels and the 87N2 test set was inadequate to find them. Most of the defects in the cards were found on the field buffer cards (6N193) which were not tested as extensively as the other cards. Computer testing was not required on the termination cabinets before they were shipped to the plant site. The vendor has inspected and recalled all defective cards at the Bellefonte plant site. The vendor is in the process of correcting all affected documentation and will rework the 6N191, 6N193, and 6N196 cards found to have discrepancies. The vendor expects to provide TVA with a detailed report of their findings.

To correct problems with the test set, the input capacitors of each sensing circuit were removed. The capacitors were originally incorporated to decouple the power supplies only, and their removal will not affect the design intent or performance of the test set. The capacitors were found to be picking up high ambient electrical noise (from fans, core drillers, etc.) from nearby equipment and fluctuated when certain electrical loads were energized.