

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

OFFICIAL COPY

July 21, 1981 89 12.5

BLRD-50-438/81-05  
BLRD-50-439/81-06

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:

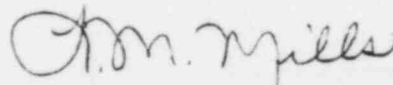
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - LAMBDA POWER MODULE FAILURES -  
BLRD-50-438/81-05, BLRD-50-439/81-06 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. W. Wright on December 18, 1980, in accordance with 10 CFR 50.55(e) as NCR BLN EEB 8006. This was followed by our first interim report dated January 19, 1981. Enclosed is our final report. 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  
LAMBDA POWER MODULE FAILURES  
BLRD-50-438/81-05, BLRD-50-439/81-06  
10 CFR 50.55(e)  
FINAL REPORT

### Description of Deficiency

In the process of cleaning and preparing capacitor charge plates for Lambda type LXS-E-24-R power supplies, a solvent was applied which adversely affected the dielectric substance. The solvent's contamination of the dielectric results in an inability to fully charge the capacitor plates and may result in effectively short circuiting the capacitor.

### Safety Implications

The short circuiting of the subject capacitors could result in the power supply's diode failure and subsequently in a discontinuation of a regulated power source. Loss of power supply in the essential controls and instrumentation would degrade the safe operation of the plant.

### Corrective Action

The Bailey Meter Company supplies the subject printed circuit boards (PCB) for the Lambda type LXS-E-24-R power supplies. Bailey Meter has informed the NSSS supplier (Babcock & Wilcox) that they will change their procedure concerning cleaning of the PCB's. In the future, Bailey Meter Company will clean the subject PCB's without the subject capacitors installed. A halogen cleaning solvent will continue to be used.

Bailey Meter Company has informed the capacitor manufacturer, Sprague, that halogen solvent is reacting with the exposed edge foil of their capacitors. Sprague, in turn, has remedied the process by epoxy coating the exposed foil.

TVA will continue to monitor these power supplies in order to ensure that the implementation of the new Bailey Meter procedures is effective.

Babcock & Wilcox has furnished field change No. 122 (including replacement hardware and installation procedures). This field change was approved by TVA on March 23, 1981. Construction employees will complete the implementation of field change No. 122 by March 1, 1982.