830 Power Building
TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401

Central File
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November 5, 1976

Mr. Norman C. Moseley, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 818
230 Peachtree Street, NW.
Atlanta, Georgia 30303

Dear Mr. Moseley:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - REPORTABLE DEFICIENCY - GENERAL ELECTRIC 6900-VOLT AUXILIARY POWER SWITCHBOARDS - BLACK LEXAN COIL SPOOLS

The subject deficiency was initially reported to NRC-OIE Region II office, Inspector V. L. Brownlee, on June 11, 1976, in accordance with 10 CFR 50.55(e). Interim reports were sent on July 9 and September 9, 1976. Enclosed is the final report.

Very truly yours,

J. E. Gilleland
Assistant Manager of Power

Enclosure
CC: Dr. Ernst Volgenau, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2

REPORTABLE DEFICIENCY
GENERAL ELECTRIC 6900-VOLT AUXILIARY POWER SWITCHBOARDS
BLACK LEXAN COIL SPOOLS

FINAL REPORT

1. Description of the Deficiency

Nonconformance Report (NCR) 383R was made by the Watts Bar Electrical Engineering Unit on May 18, 1976, to document the discovery of four cracked and broken coil spools on 12HFA51A42F relays contained in the 6900-volt shutdown boards 2A-A and 2B-B. Further investigation revealed four additional defective coil spools and Nonconformance Report 383R Revision 1 was subsequently made on June 1, 1976, to document a total of eight cracked and broken coil spools. NCR 383R, Revision 1 also documents that this deficiency was found to exist on 12HFA54E187F relays and shutdown board 1A-A in addition to those previously reported. It was noted in this NCR that all the defective coil spools discovered to date were made of black Lexan.

2. Safety Implication

The Lexan coil spools in question are those present in the 6900-volt auxiliary power switchboards. Emergency A-C power is supplied from the diesel generators through these boards.

The most probable event to occur as a result of a coil failure would be the loss of one of two trains of class IE circuits that are contained in these switchboards. These circuits supply power to essential equipment and only one train of circuits need be operable in order to safely shut down the plant.

A possibility also exists for a common mode failure of the coils. If this event occurred and both redundant trains of class IE circuits were lost, the health and safety of the public could have been endangered. However, due to the small number of defective coils that have been found and the nature of such a common mode failure, the probability of such an event is very low.

3. Corrective Action

TVA has concluded its investigation of this deficiency. After consultation with the manufacturer it has been determined that this condition can be identified by visual inspection.

TVA will reinspect all Class 1E General Electric HFA type relays and will replace those relays containing defective coil spools. This inspection and replacement program will be completed before preoperational testing.