

400 Chestnut Street Tower II

July 7, 1981

WBRD-50-390/81-16

WBRD-50-391/81-15

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:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - AUXILIARY POWER SYSTEM -  
WBRD-50-390/81-16, WBRD-50-391/81-15 - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector M. Thomas on September 25, 1980, in accordance with 10 CFR 50.55(e) as NCR WBN EEB 8006. This NCR was initially determined to be nonreportable, and the NRC was notified on October 3, 1980. However, subsequent evaluation has revealed that this problem is significant, and the NRC was notified of this determination on January 23, 1981. Our first interim report was submitted on February 24, 1981. Enclosed is our second interim report. We expect to provide additional information by October 22, 1981.

If you have any questions, 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, Director (Enclosure)  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

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## ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
AUXILIARY POWER SYSTEM  
WBRD-50-390/81-16, WBRD-50-391/81-15  
10 CFR 50.55(e)  
SECOND INTERIM REPORT

### Description of the Deficiency

Design review studies indicate that the present design of the Watts Bar Nuclear Plant (WBN) transmission grid-auxiliary power system interface is such that the required grid voltage necessary to ensure adequate offsite (preferred) power to the safety-related buses during a design bases event cannot be achieved. This condition represents a significant deficiency in the transmission grid-auxiliary power system interface to conform to 10 CFR 50, General Design Criteria 17.

### Interim Progress

TVA is evaluating the following corrective actions.

1. Installing two additional common station service transformers dedicated to the safety-related loads of both units.
2. Making safety-related 480-volt system changes to ensure compatibility with the new 6900-volt auxiliary power system design, which results from item 1.

Design studies are proceeding to finalize the maximum and minimum voltage parameters that will ensure the transmission grid-auxiliary power system interface conforms to 10 CFR 50, General Design Criteria 17.

A task force meeting with responsible organizations within TVA is being scheduled to discuss the results of the design studies and continued course of action required to resolve this deficiency.