

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

September 29, 1982

WBRD-50-390/82-91

WBRD-50-391/82-67

U.S. Nuclear Regulatory Commission  
Region II  
Attn: Mr. James P. O'Reilly, Regional Administrator  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - SOLID-STATE PROTECTION SYSTEM TEST  
PROCEDURES - WBRD-50-390/82-91, WBRD-50-391/82-87 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector  
D. Quick on August 31, 1982 in accordance with 10 CFR 50.55(e) as NCR  
WBN NEB 8217. Enclosed is our first interim report. We expect to submit  
our next report on or about December 10, 1982.

If you have any questions, please get in touch with R. H. Shell at  
FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

*L. M. Mills*  
L. M. Mills, Manager  
Nuclear Licensing

Enclosure

cc: Mr. Richard C. DeYoung, Director (Enclosure)  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
SOLID-STATE PROTECTION SYSTEM TEST PROCEDURES  
NCR WBN NEB 8217  
WBRD-50-390/82-91, WBRD-50-391/82-87  
10 CFR 50.55(e)  
FIRST INTERIM REPORT

Description of Deficiency

During periodic testing of the SSPS, the master relays which actuate safeguards systems are energized. The master relays, in turn, actuate the slave relays under operating conditions. However, during testing the voltage to the slave relays is reduced from 120V ac to 15V dc which allows checking electrical continuity through the slave relay coil without energizing the relay and actually starting the safeguards equipment. There is a test light in series with the slave relay which normally has a shunt around it. During testing the shunt is removed such that when the master relay contacts close, if the slave relay circuit is continuous, the test lamp will light. If, after testing, the switch which opens the shunt does not reclose, then a subsequent accident signal would apply 120V ac to the lamp which would cause it to burn open. This would prevent actuation of the slave relay. With present test procedures, this failure is undetectable.

Corrective Action

TVA is currently reviewing a Westinghouse proposal for an interim procedural change which would provide for detection of this failure during testing. Meanwhile Westinghouse is investigating the problem further in order to determine if design changes are required.