

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

February 17, 1981

WBRD-50-390/81-15
WBRD-50-391/81-14



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 - ENVIRONMENTAL QUALIFICATION OF
CABLES IN MAIN STEAM VALVE ROOM - WBRD-50-390/81-15, WBRD-50-391/81-14 -
FINAL REPORT

The subject condition was initially reported to NRC-OIE Inspector
F. S. Cantrell on January 16, 1981, in accordance with 10 CFR 50.55(e) as
NCR WBN EEB 8101. Enclosed is our final report.

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
ENVIRONMENTAL QUALIFICATION OF CABLES IN MAIN STEAM VALVE ROOM
WBRD-50-390/81-15, WBRD-50-391/81-14
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

PJJ insulated cables are multiconductor cables with polyethylene insulation around single conductors and a PVC jacket around the conductor bundle. This cable type is located in areas outside containment, including the main steam valve rooms. The cables are associated with the control functions of several systems, including the Auxiliary Feedwater System. The cables lack the environmental qualification data necessary to substantiate their required function following a postulated main steam line break in the main steam valve rooms.

Safety Implications

Possible melting and breakdown in the insulation could lead to the cables shorting or malfunctioning, thus interrupting operation of the Auxiliary Feedwater System. This could adversely affect safe operation of the plant.

Corrective Action

All PJJ insulated cable in the main steam valve room will be replaced with cable qualified for the calculated accident environment. TVA engineering change notices have been written which specify an implementation requirement for this work to be accomplished 30 days before unit fuel loading. This change will be implemented in accordance with these scheduler requirements.