

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA TENNESSEE 37401
400 Chestnut Street Tower II

84 MAR 2 A/D: March 29, 1984

WBRD-50-390/84-13
WBRD-50-391/84-13

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - MOISTURE INTRUSION INTO SAFETY-RELATED EQUIPMENT - NUREG-0588 - WBRD-50-390/84-13, WBRD-50-391/84-13 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Austin Hardin on February 29, 1984 in accordance with 10 CFR 50.55(e) as NCR WBN EEB 8405. Enclosed is our first interim report. We expect to submit our next report on or about May 11, 1984.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

D S Kammer

for 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

Records Center (Enclosure)
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
MOISTURE INTRUSION INTO SAFETY-RELATED EQUIPMENT - NUREG-0588
NCR WBN EEB 8405
WBRD-50-390/84-13 AND WBRD-50-391/84-13
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

In harsh environments, qualification of class 1E NAMCO limit switches, Target Rock solenoid valves, Rosemont level transmitters, and RDF Corporation RTDs is contingent on the user taking appropriate measures to prevent moisture intrusion during accident conditions. Inside primary containment, the conduit systems (including rigid and flexible conduit, conduit boxes and fittings) for class 1E cables are continuous (closed) from the boxes at primary containment penetrations to the housing of the electrical class 1E devices and are designed to be equivalent NEMA 4 "watertight" standards. However, for certain class 1E devices that are necessary to achieve accident mitigation and safe shutdown, there is no seal provided for these devices, and there is no documentation available to show that moisture intrusion is not a problem without a seal installed in the device.

Interim Progress

TVA is presently in the process of reevaluating the vendor's qualification of electrical equipment needed for accident mitigation and safe shutdown that is located in a harsh environment. Where the vendor's qualification is contingent upon the conduit entry to equipment being sealed, justification will be provided for not sealing, or qualified seals will be installed to ensure that this equipment will not fail due to water/steam intrusion through the conduit system.