

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

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January 31, 1986

WBRD-50-3900/85-39

U.S. Nuclear Regulatory Commission
Region II
Attention: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

WATTS BAR NUCLEAR PLANT UNIT 1 - INADEQUATE SEPARATION OF TRAINED CABLES -
WBRD-50-390/85-39 - REVISED FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
Al Ignatonis on September 18, 1985 in accordance with 10 CFR 50.55(e) as SCR
WBN MEB 8527. Enclosed is a revised final report.

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

Very truly yours,

TENNESSEE VALLEY

R. L. Gridley

R. L. Gridley
Manager of Licensing

Enclosure

cc (Enclosure):

Mr. James Taylor, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNIT 1
INADEQUATE SEPARATION OF TRAINED CABLES
WBRD-50-390/85-39
SCRs WBN MEB 8527 AND WBN EEB 8547
10 CFR 50.55(e)
REVISED FINAL REPORT

Description of Deficiency

As a result of the 10CFR50, Appendix R, analysis for Watts Bar Nuclear Plant (WBN) unit 1, several safety-related "B-train" electrical cables were relocated into the area of room 737.0-A3. It was subsequently identified that the relocation of those cables resulted in an unacceptable interaction with an A-train auxiliary power system cable (1PL4975A). This is due to a separation of distance of less than 20 feet between the A- and B-train cables.

As a result of this deficiency, TVA has performed a design review of the WBN unit 1 auxiliary power system key diagram. This review was documented as TVA Office of Engineering (OE) calculation WBPEVAR8508006 and was reported under "Corrective Action" for the previously submitted final report on significant condition report (SCR) WBNNEB8527 (J. W. Hufham's letter to J. Nelson Grace dated October 16, 1985, L44 851016 806). This review resulted in the identification of one other area of unacceptable interaction of an A-train auxiliary power system cable (2PL4975A) with B-train auxiliary power system cables at column A12S on el 737 of the WBN auxiliary building. This additional deficiency has been documented as SCR WBNNEEB8547.

TVA has determined that this deficiency is the result of an inadequate review of the WBN auxiliary power system key diagram for unacceptable interactions involving redundant 10CFR50, Appendix R, shutdown paths. TVA considers this inadequate review to be an isolated occurrence.

Safety Implications

A postulated, single-exposure fire in the affected areas could possibly result in the loss of redundant paths required for a safe shutdown of the plant. This could adversely affect the safe operation of the plant.

Corrective Action

TVA will protect the affected A-train auxiliary power cables with one-hour fire-rated barriers. This will ensure the protection of alternate paths for safe shutdown as required by 10CFR50, Appendix R. All design work associated with this item has been completed per engineering change notices (ECNs) 5875 and 5923 for SCRs WBNMEB8527 and WBNNEEB8547, respectively. All necessary construction work will be completed for this item by initial fuel loading.

As mentioned above, TVA has reviewed the WBN unit 1 auxiliary power system key diagram for any other unacceptable cable interactions to ensure compliance to 10CFR50, Appendix R, criteria. The results of this review were documented as an engineering calculation (WBPEVAR8508006) which was completed on October 31, 1985. These actions are adequate to prevent recurrence of this deficiency. No other actions to prevent recurrence will be taken.