

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

June 6, 1983

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USNRC REGION I  
ATLANTA, GEORGIA

WBRD-50-390/83-31  
WBRD-50-391/83-31

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:

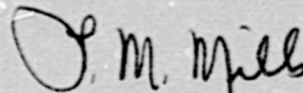
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - REACTOR TRIP BREAKERS DESIGN ERROR  
WBRD-50-390/83-31, WBRD-50-391/83-31- FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Linda Watson on May 5, 1983 in accordance with 10 CFR 50.55(e) as NCR WBN NEB 8305. Enclosed is our first interim report. We expect to submit our next report on or about September 26, 1983. We consider 10 CFR Part 21 applicable to this deficiency.

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, 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  
REACTOR TRIP BREAKERS DESIGN ERROR  
NCR WBN NEB 8305  
WBRD-50-390/83-31, WBRD-50-391/83-31  
10 CFR 50.55(e)  
FIRST INTERIM REPORT

Description of Deficiency

In April 1983, Westinghouse Electric Corporation, Pittsburgh, Pennsylvania, notified TVA of a potential problem with the model DS-416 reactor trip breakers supplied for use at Watts Bar Nuclear Plant (WBN). According to Westinghouse letters WAT-D-5433 and WAT-D-5451, an undervoltage attachment of the DS-416 breaker failed to trip during testing at a plant operated by another utility. Investigation of a second, independent incident revealed a missing retaining ring on an undervoltage attachment pivot shaft which allowed the shaft to move laterally such that one end came out of its guide hole in the frame of the undervoltage attachment, and prevented the attachment from operating on demand. The Westinghouse evaluation of the failures revealed a discrepancy in design wherein a 1972 retaining ring design change increased the retaining ring's size without a corresponding increase of the groove in the shaft. Westinghouse also concluded that improper alignment and clearances between the undervoltage attachment and the breaker trip shaft could cause misoperation of the breakers.

Interim Progress

Westinghouse has designed and is manufacturing replacement DS-416 undervoltage attachments which have a corrected groove design to accommodate the larger retaining rings. The WBN undervoltage attachments will be replaced via Westinghouse field deficiency report Nos. WATM-10214 and WBTM-10117 for units 1 and 2, respectively. Delivery of the replacement undervoltage attachments is expected to occur before September 1, 1983. Westinghouse is also developing a field installation procedure to ensure that the undervoltage attachment is properly interfaced with the breaker trip shaft.