

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

5N 157B Lookout Place

**JAN 27 1988**

WBRD-50-390/88-01  
WBRD-50-391/88-01

10 CFR 50.55(e)

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

In the Matter of the Application of )  
Tennessee Valley Authority )

Docket Nos. 50-390  
50-391

WATTS BAR NUCLEAR PLANT (WBN) UNITS 1 AND 2 - AUXILIARY CONTROL AIR COMPRESSOR  
CONTROL CIRCUITS MUST BE MANUALLY RESET AFTER LOSS OF OFFSITE POWER -  
WBRD-50-390/88-01 AND WBRD-50-391/88-01 - INTERIM REPORT

The subject deficiency was initially reported to NRC Region II Inspector  
Bob Carrol on December 31, 1987, in accordance with 10 CFR 50.55(e), as  
CAQR WBP 871085. Enclosed is our interim report. We expect to submit our  
final report on or about January 15, 1989.

If there are any questions, please telephone R. D. Schulz at (615) 365-8527.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

*W. J. Ray*  
R. Gridley, Director  
Nuclear Licensing and  
Regulatory Affairs

Enclosure  
cc: See page 2

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U.S. Nuclear Regulatory Commission

JAN 27 1988

cc (Enclosure):

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
AUXILIARY CONTROL AIR COMPRESSOR CONTROL CIRCUITS MUST BE  
MANUALLY RESET AFTER LOSS OF OFFSITE POWER  
WBRD 50-390/88-01 AND WBRD 50-391/88-01  
CAQR WBP 871085  
10 CFR 50.55(e)

FIRST INTERIM REPORT

Description of Deficiency

Upon the loss of offsite power, the auxiliary control air compressors' control circuits become de-energized. These circuits must be manually reset at the auxiliary control air compressor local control panel when power is restored. This condition violates Watts Bar Design Basis Document N3-32-4002 which states, "Once the compressed air system has been placed in operation, no further action or operator intervention is required. No credit has been taken for manual operator actions following any accident."

Safety Implications

If the auxiliary control air compressors are automatically unloaded from their power supply upon a loss of offsite power and auxiliary control air supplied components operate, then a control air pressure bleed-down would occur. There are no calculations which document how long systems using auxiliary control air will remain operable based on reserve air capacity. The affected systems and components (auxiliary feedwater control valves, main steam pressure relief valves, Auxiliary Building Gas Treatment System dampers, Emergency Gas Treatment System dampers, and control building heating, ventilating, and air conditioning) are required to mitigate the consequences of a primary or secondary coolant line break. Therefore, the potential for this deficiency to have adverse safety impact only becomes a concern in the event of such a line break concurrent with a loss of offsite power. Mitigating factors include reserve air capacity, procedural requirements to start the non-safety-related station air compressors, and the procedural precautions for the auxiliary control air compressors to be manually reset following restoration of power. However, without an analysis it is conservatively considered that this deficiency has the potential to adversely affect the safe operation of the plant.

Interim Progress

A review of the commitments and functional requirements for the auxiliary control air subsystem will be performed. The Watts Bar Nuclear Plant FSAR, Design Basis Document N3-32-4002, and any other supporting design input documents will be revised as necessary to ensure their consistency. Calculations will be performed as required to support design commitments and requirements for this system. Design output documentation will be revised as necessary.

TVA will provide a final report to NRC addressing the root cause, corrective action, and recurrence control on or about January 15, 1989.