

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

August 14, 1981

WBRD-50-390/81-18  
WBRD-50-391/81-17



Mr. James E. 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 - REROUTING OF HIGH PRESSURE FIRE  
PROTECTION PIPING - WBRD-50-390/81-18, WBRD-50-391/81-17 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. W. Wright on January 30, 1981 in accordance with 10 CFR 50.55(e) as NCR SWP 8103. Interim reports were submitted on March 2 and June 3, 1981. 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  
REROUTING OF HIGH-PRESSURE FIRE PROTECTION PIPING  
10CFR50.55(e)  
WBRD-50-390/81-18, WBRD-50-391/81-17  
FINAL REPORT

Description of Deficiency

Field Change Requests (FCR's) for piping changes and additions may have been approved by EN DES without proper analyses being performed on the effects of the changes on the system pressure. The lack of these analyses could result in insufficient pressure for parts of the High-Pressure Fire Protection System.

Safety Implications

Safety-related systems or components could be endangered from fire due to the Fire Protection System not performing its intended function of extinguishment promptly because of inadequate waterflow.

Corrective Action

The majority of the sprinkler system was designed using the pipe schedule method per NFPA 13, Chapter 3, which is a conservative design which does not take pipe routing limitations into consideration. Hydraulic calculations are being performed on sprinkler piping as well as other portions of the high-pressure fire protection system to ensure that adequate water supply and coverage is available for all fire hazards. Any problem areas identified during this analysis will be handled by appropriately modifying header capacity and/or nozzle relocation.