

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

05 JUL 25 1985  
June 25, 1985

WBRD-50-390/85-09  
WBRD-50-391/85-09

U.S. Nuclear Regulatory Commission  
Region II  
Attn: Dr. J. Nelson Grace, Regional Administrator  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30303

Dear Dr. Grace:

**WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - UNQUALIFIED FIRE PROTECTION EQUIPMENT FOR THE EMERGENCY GAS TREATMENT SYSTEM AND AUXILIARY BUILDING GAS TREATMENT SYSTEM FILTER HOUSING - WBRD-50-390/85-09, WBRD-50-391/85-09 - SUPPLEMENT TO FINAL REPORT**

The subject deficiency was initially reported to NRC-OIE Inspector A. Ignatonis on January 25, 1985 in accordance with 10 CFR 50.55(e) as NCR WBN MEB 8504. Our final and revised final reports were submitted on February 25 and March 25, 1985, respectively. Below is our supplement to final report.

Report Supplement

In our final report on this matter, TVA had identified the cause of the condition as a failure of system designers to consider the effects of the operating environment on this equipment, and TVA had stated that the strengthening of management controls over independent design review would prevent a recurrence of the problem.

Since then, TVA has determined that the underlying cause of the designer's failure was due to a combination of the unique location of the sprinkler heads and ionization detectors and the unique environmental conditions to which the sprinkler heads and ionization detectors are exposed. This equipment is installed inside ventilation ducts and is exposed to temperature and radiation levels in excess of room conditions present during the gas treatment system operation. The designer did not recognize the unique environmental conditions when specifying equipment or when designating fire protection equipment for automatic shutdown of the ABGTS. The specific environmental data for the filter spaces was not readily available to him.

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Since the time of this design error, TVA has issued WB-DC-40-42, "Design Criteria for Environmental Data," which was revised in December 1983 to establish an environmental drawing series. These drawings document environmental data for various rooms and alert the designer that other criteria may apply for specific or unique locations and that applicable information for such locations can be obtained from the Radiation Protection Section within the Office of Engineering's Nuclear Engineering Branch. Use of this revised design criteria will prevent a recurrence of this type nonconformance.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

  
J. W. Hufham, Manager  
Licensing and Risk Protection

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

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