TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
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January 9, 1986 10: 24

WBRD-50-390/86-01

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

Dear Dr. Grace:

WATTS BAR NUCLEAR PLANT UNIT 1 - INCORRECT DOOR CHECK ON FIRE DOOR - WBRD-50-390/86-01 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Al Ignatonis on November 12, 1985 in accordance with 10 CFR 50.55(e) as NCR WBN 6306. Enclosed is our final report. Delay in submittal of this response was discussed with Mr. Ignatonis on January 6, 1986.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. A. Domer

J. W. Hufham
Manager of Licensing

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

Records Center
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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNIT 1
INCORRECT DOOR CHECK ON FIRE DOOR
WBRD-50-390/86-01
NCR WBN 6306
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

A deficiency was identified for Watts Bar Nuclear Plant (WBN) by an employee concern (NSRS Report IN-85-311-008) in which a fire-rated door had the wrong door check (closure mechanism) installed. The affected door was No. A143, located on el 757' in the WBN auxiliary building. The subject deficiency was identified as a result of the inability of the affected door to close against airflow resulting from room air pressure. Further investigation of this deficiency by TVA resulted in the identification of additional closure mechanisms which required rework. Some of these mechanisms were the correct type specified for the installation, but would not function against airflow.

While the design drawings specified closure mechanisms to be supplied by Russwin Division of Emhart Hardware Group, Berlin, Connecticut, the contract for the mechanisms was awarded to an "equal" supplier, Yale Security Products, Charlotte, North Carolina. Yale uses a different identification system to denote closer strength. The affected design drawings were not revised to reflect the actual closures procured. The root cause of this deficiency has been determined to be failure to adequately address the requirement for the closure mechanisms to close doors against airflow and to accurately specify the equipment to be installed in applicable output documents.

Safety Implications

The failure of a fire door to close and/or remain closed could allow a fire to propagate through a fire barrier from one compartment or area to another. This could possibly result in damage to redundant, safety-related equipment and could degrade the capability to achieve and maintain a safe shutdown during a fire, as required by 10CFR Appendix R. This could adversely affect the safe operation of the plant.

Corrective Action

TVA has determined that there are approximately 162 fire doors within the WBN unit 1 auxiliary building secondary containment enclosure (ABSCE) boundaries which are required to close against airflow resulting from differential pressure. These doors were inspected to verify which closure mechanisms had been installed, and TVA drawing series 46W454 is being revised to reflect the actual equipment procured. An analysis will be performed to document the specific mechanism required for closure of each door against airflow conditions. All inadequate closure mechanisms will be reworked.

To prevent recurrence of this deficiency, TVA has revised WBN Quality Control Procedure (QCP) 2.18 to require affected quality control personnel to verify the type and model number of closure mechanisms. To achieve this, TVA will provide a cross-reference and additional descriptive information to adequately identify substitute door closure mechanisms. Additionally, TVA will ensure that all future fire door installations will close properly against various area design pressures. The actual force exerted on the doors will be calculated, and closure mechanisms capable of overcoming that force will be specified. This procedure will be described in a revision to WBN Design Criteria WB-DC-20-15, "Pressure Confining Personnel Doors for Auxiliary Building and Control Building."

All necessary corrective actions for this item will be completed prior to initial fuel loading.