TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

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May 21, 1982

WBRD-50-390/81-98
WBRD-50-391/81-92

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - DEFICIENT CONTAINMENT ISOLATION VALVE SIGNAL AND FUNCTION - WBRD-50-390/81-98, WBRD-50-391/81-92 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector D. Quick on November 9, 1981 in accordance with 10 CFR 50.55(e) as NCR WBN NEB 8121. Interim reports were submitted on December 10, 1981 and March 16, 1982. Enclosed is our final report.

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, DC 20555

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
DEFICIENT CONTAINMENT ISOLATION VALVE SIGNAL AND FUNCTION
NCR WBN NEB 8121
WBRD-50-390/81-98, WBRD-50-391/81-92
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

Control valves FCV-62-76 and FCV-77-20 were identified on the subject NCR as containment isolation valves that did not receive a containment isolation signal (CIS) as required by TVA design criteria WB-DC-40-34. Investigations disclosed that valve FCV-77-20 does receive a CIS; and therefore no further action is required. Valve FCV-62-76 did not receive a CIS. Valve FCV-62-76 was added (reference ECN 1585) to the CVCS system to prevent thermal shock to the associated class A piping. During TVA's review of the design change, the valve's secondary function to serve as a containment isolation valve was not discovered. The review was limited since TVA's Division of Engineering Design Engineering Procedure EP 4.04, "Handling of Squad Checks," which indicates that all affected branches should review design changes, was not followed.

Safety Implications

Control valve FCV-62-76 provided a parallel flow path around the existing inboard containment isolation valves. Therefore, if valve FCV-62-76 was open and a failure of the outboard containment isolation valve FCV-62-77 occurred, a breach of containment could occur.

Corrective Action

TVA issued ECN 3249 to add a Phase A CIS to the valve control circuit. This signal automatically closes FCV-62-76 in accordance with design criteria WB-DC-40-34. All design drawings were issued by April 16, 1982. This change will be implemented before unit fuel loading.

A memorandum has been written to applicable design project personnel instructing designers to refamiliarize themselves with TVA's Division of Engineering Design Engineering Procedure EP 4.04 and to fully carry out its requirements. Strict adherence to this engineering procedure will prevent the described deficiency from recurring.