TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401

5N 157B Lookout Place

AUG 31 1987

WBRD-50-390/87-02
WBRD-50-391/87-02

10 CFR 50.55(e)

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

Gentlemen:

WATTS BAR NUCLEAR PLANT (WBN) - UNITS 1 AND 2 - UNQUALIFIED AIR CONDITIONING SYSTEM VALVES - WBRD-50-390/87-02, WBRD-50-391/87-02 - FINAL REPORT

The subject deficiency was initially reported to NRC-Region II Inspector Gordon Hunegs on January 12, 1987, in accordance with 10 CFR 50.55(e) as SCR W-492-P. Our interim report was submitted to NRC on February 11, 1987. Enclosed is our final report. We consider 10 CFR 21 applicable to this deficiency.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. A. Domer

for R. Gridley, Director
Nuclear Safety and Licensing

Enclosure
cc: See page 2

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U.S. Nuclear Regulatory Commission

AUG 31 1987

cc (Enclosure):
Mr. Gary G. Zech, Assistant Director
Regional Inspections
Division of TVA Projects
Office of Special Projects
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Mr. J. A. Zwolinski, Assistant Director
for Projects
Division of TVA Projects
Office of Special Projects
U.S. Nuclear Regulatory Commission
4350 East-West Highway
EWW 322
Bethesda, Maryland 20814

Records Center
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

U.S. Nuclear Regulatory Commission
Watts Bar Resident Inspector
P.O. Box 700
Spring City, Tennessee 37381

ENCLOSURE
WATTS BAR NUCLEAR PLANT
UNITS 1 AND 2
UNQUALIFIED AIR CONDITIONING SYSTEM VALVES
WBRD 50-390/87-02 AND 391/87-02
SCR W-492-P
10 CFR 50.55(e)
FINAL REPORT

DESCRIPTION OF DEFICIENCY

This deficiency involves four valves which are used as temperature control valves for the main control room and electrical board room chillers. During a routine reorder of spare parts for Essential Raw Cooling Water (ERCW) System valves furnished by METREX (Glendora, California), by way of DUNHAM-BUSH (West Hartford, Connecticut, water chiller vendor), two different drawings were reviewed which had two different material compositions specified for the valve bodies. After a review of the contract files (83119-2 and 83153-1), it was identified that contract specifications required seismic qualification for the valves and DUNHAM-BUSH submitted a seismic report and noted that the report was for steel body valves only. Also, there was correspondence to TVA from DUNHAM-BUSH which specified that METREX would furnish double diaphragm, cast steel body valves. Because of the conflicting information on valve drawings, a metal analysis was conducted and it was determined that the originally supplied valves were, in fact, cast iron.

This deficiency is attributed to a failure of DUNHAM-BUSH to supply valves which meet the seismic qualification requirements and the root cause is that DUNHAM-BUSH ordered the valves from METREX without specifying a cast steel body material. Also, the fact that DUNHAM-BUSH requested the valve manufacturer (METREX) to deliver the valves direct to TVA precluded DUNHAM-BUSH's quality assurance program from detecting the material discrepancy upon receipt at their plant. A review of DUNHAM-BUSH major component contracts at WBN showed that no other components or equipment were ordered by DUNHAM-BUSH and shipped directly from the manufacturer to TVA. Therefore, TVA considers this deficiency isolated to this case. No TVA deficiencies were identified in the source or receipt inspections.

In addition, no other systems at WBN have been identified that utilize this type METREX valve.

SAFETY IMPLICATIONS

Since the seismic report for these valves is limited to valves with cast steel bodies, then the cast iron body valves used on the main control room and electrical board room chillers may not meet the appropriate seismic requirements. In addition, the operability of the ERCW system could be degraded due to a valve failure during a seismic event that could result in a loss of ERCW pressure boundary integrity. These conditions could adversely affect the ability to safely shut down the reactor and maintain a safe shutdown mode after a design basis seismic event. Therefore, the safe operation of the plant could be adversely affected.

CORRECTIVE ACTION

TVA has determined that replacement of the METREX valves with seismically qualified valves is a more appropriate corrective action than trying to qualify the existing valves. Therefore all four valves, including the replacement valve referenced in the description of deficiency above, will be replaced. Corrective actions will be completed by unit 1 fuel load.

Evaluation of this deficiency for recurrence control indicates that the problem is bounded within the identified contracts based upon review of other DUNHAM-BUSH contracts.