TENNESSEE VALLEY AUTHORITY
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5N 157B Lookout Place

MAR 21 1988

WBRD-50-390/87-13
WBRD-50-391/87-14

10 CFR 50.55(e)

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

Gentlemen:

In the Matter of the Application of)
Tennessee Valley Authority)

Docket Nos. 50-390
50-391

WATTS BAR NUCLEAR PLANT (WBN) UNITS 1 AND 2 - SLEEVE-SEALING PROGRAM DEFICIENCIES - WBRD-50-390/87-13 AND WBRD-50-391/87-14 - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC Region II Inspector Gordon Hunegs on May 27, 1987, in accordance with 10 CFR 50.55(e) as SCRs WBN WBP 8780 and WBN WBP 8781. Our first interim report was submitted on June 25, 1987. Enclosed is our second interim report. We expect to submit our next report on or about August 21, 1989.

Gordon Hunegs was notified of delays in submitting this report on March 9 and 11, 1988.

If there are any questions, please telephone C. J. Riedl at (615) 365-8527.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R. Gridley, Director
Nuclear Licensing and
Regulatory Affairs

Enclosure
cc: See page 2

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U.S. Nuclear Regulatory Commission

MAR 21 1988

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ENCLOSURE

WATTS BAR NUCLEAR PLANT (WBN) UNITS 1 AND 2
SLEEVE-SEALING PROGRAM DEFICIENCIES
SCRs WBN WBP 8780 AND WBN WBP 8781
WBRD-50-390/87-13 AND WBRD-50-391/87-14
10 CFR 50.55(e)

SECOND INTERIM REPORT

DESCRIPTION OF DEFICIENCY

Various discrepancies have been identified involving the sleeve-sealing program for Seismic Category I buildings at WBN. These can be categorized as follows: lack of adequate documentation of seal materials; incorrect translation of test model into issued design details; and design drawing deficiencies. As a result of these discrepancies, TVA has not demonstrated the ability of the sleeve seals in Seismic Category I buildings to perform their intended function. Although there is no reason to believe that any sleeve seals are not installed according to the design drawings, it is questionable whether the design drawings provide for all design requirements. This could lead to sleeve components (i.e., room temperature vulcanizing (RTV) silicon foam, fabric boots, and silicon caulk) being exposed to conditions for which they, and the seal as a whole, are not qualified. There is, therefore, no assurance that the sleeve seals would provide an adequate barrier to fire, water, pressure, airborne contamination, etc.

SAFETY IMPLICATIONS

Sleeve seals are used at floor, wall, and ceiling penetrations to provide a barrier, such as water seal, fire stop, and airborne contamination containment. The functional requirements of sleeve seals are to prevent:

1. Spread of fire from one fire compartment to another.

2. Flooding of annulus during maximum flood conditions.

3. Loss of water inventory during containment spray recirculation mode.

4. Release of radioactive containments to environment in excess of 10 CFR 100 limits.

Failure to perform any of these functions could adversely affect safe operations of the plant.

INTERIM PROGRESS

The following corrective actions for this deficiency are currently planned:

- The draft Watts Bar Design Criteria WB-DC-P1021, "Containment Penetration Assemblies," is being expanded in scope to include all mechanical pipe sleeves in Category I structures.

- A program will be implemented to identify possible material and design deficiencies with the sleeve seals.

- New seal designs will be provided if needed.

- Design drawings will be reviewed to determine if design requirements are adequate. Drawing revisions may be necessary.

TVA will provide a final report on this item to NRC on or about August 21, 1989.