TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401

5N 157B Lookout Place

OCT 06 1989

WBRD-50-390/86-49
WBRD-50-391/86-46

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 - DISCREPANCIES AFFECTING RADIATION MONITORING SYSTEM - WBRD-50-390/86-49 AND WBRD-50-391/86-46 - THIRD INTERIM REPORT

The subject deficiency was initially reported to NRC Inspector Gordon Hunegs on April 2, 1986, in accordance with 10 CFR 50.55(e) as NCR WBN 6750 for Unit 2. NCR W-390-P documents the deficiency for Unit 1. Interim reports were submitted on May 20, 1986, and November 23, 1987. The schedule for final report submittal was extended by letter dated May 18, 1988.

As stated in the initial interim report on this subject, dated May 20, 1986, TVA considers 10 CFR Part 21 applicable to the deficiencies with the shield building exhaust vent radiation monitor. 10 CFR 21 reporting requirements were satisfied by that report.

Enclosure 1 is our third interim report. Enclosure 2 identifies the commitment made in this submittal. Our final report for this item will be submitted on or about May 15, 1990.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

M. J. Ray for

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and Regulatory Affairs

Enclosures
cc: See page 2

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U.S. Nuclear Regulatory Commission

OCT 06 1989

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ENCLOSURE 1

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
DISCREPANCIES AFFECTING RADIATION MONITORING SYSTEM
WBRD 50-390/86-49 AND WBRD 50-391/86-46
NCRs WBN 6750, W-390-P, AND OTHERS
10 CFR 50.55(e)

INTERIM REPORT

Description of Deficiency

Deficiencies in the Radiation Monitoring System can be categorized into the following general areas:

1. Sample lines were constructed in such a way as to render their effectiveness in obtaining a representative sample questionable.

   Specific deficiencies include:

   - excessive length of sample lines
   - incomplete heat tracing
   - tight bend radii
   - traps and other mechanical restrictions
   - incorrect slope

2. The design of some radiation monitors did not provide allowance for purge capability following an accident, appropriate system interlock with containment isolation initiation, and sufficient mounting details.

3. Fluorocarbons were used in instrument lines and in the assembly of radiation monitor skids.

4. Several discrepancies exist between TVA and vendor documentation of equipment purchased.

While the root cause of this deficiency has not yet been identified, it appears that programmatic inadequacies are involved. The extent of these inadequacies are still being evaluated.

Safety Implications

Equipment identified as being deficient includes monitors which provide information necessary for appropriate operator response in accident diagnosis and for determination of accident severity and release rates for offsite response.

Interim Progress

TVA is currently developing an assessment of and an action plan for the radiation monitoring system deficiencies. The action plan will address all open items associated with the radiation monitoring system, including conditions adverse to quality (CAQs), application of Regulatory Guide 1.97 and NUREG-0737 (as applicable), calculations, ALARA considerations, and open engineering change notices. The action plan will be directed to the component level, and corrective actions required to resolve open issues will be generated. The assessment will identify the cause of each deficiency as well as any programmatic inadequacies which caused the deficiencies or allowed them to exist.

The overall radiation monitoring program being developed to address problems covered in the CAQ documents is accomplishing walkdowns of equipment and sample lines. It is identifying deviations and providing information which will be used to determine specific corrective actions and root cause for problems cited in the CAQ documents. It will be early 1990 before TVA can fully address this issue at the component level and define corrective actions for both individual deficiencies and programmatic inadequacies. Upon completion, TVA will provide a final report to the NRC on these deficiencies.

Therefore, TVA will submit the final report containing the complete action plan on or about May 15, 1990.

ENCLOSURE 2

LIST OF COMMITMENTS

TVA will submit the final report containing the complete action plan on or about May 15, 1990.