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NOV 23 1987

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) Docket Nos. 50-390
Tennessee Valley Authority) 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 - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC Region II 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. Our interim report was submitted on May 20, 1986, with a commitment to provide a final report on or about September 19, 1986. The schedule for final report submittal was extended to February 28, 1987, by letter dated September 24, 1987, and then extended indefinitely by letter dated January 28, 1987.

Since our last submittal, several other deficiencies associated with the radiation monitoring system have been identified. These increase the scope of the reported deficiency. Enclosed is our second interim report. We expect to submit our final report on or about September 30, 1988. In our interim report that identified deficiencies with the shield building exhaust vent radiation monitor, it was stated that 10 CFR Part 21 was applicable. This remains true for this one deficiency. No new items of 10 CFR Part 21 applicability have been positively identified.

If there are any questions, please telephone R. D. Schulz 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

NOV 23 1987

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ENCLOSURE

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. Flourocarbons 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, 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.

TVA will provide a final report on this item to NRC on or about September 30, 1988.