UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Enclosure

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATING TO THE WATTS BAR REPLACEMENT ITEMS PROGRAM

TENNESSEE VALLEY AUTHORITY

WATTS BAR UNIT 1

DOCKET NO. 50-390

INTRODUCTION

In a letter dated July 31, 1990, the Tennessee Valley Authority (TVA) submitted the third revision to the Corrective Action Program (CAP) Plan for their Replacement Items Program (Piece Parts). The revised CAP reinstated the Quality Release Program in place of the Inventory Release Tracking Log, implemented additional program controls, and identified organizational changes. The tracking log was an interim measure employed to ensure that installed parts and materials were retrievable during the warehouse inventory evaluation. Additional information regarding the inventory evaluation methodology was requested by the NRR staff and subsequently provided by TVA.

EVALUATION

The Watts Bar (WBN) Replacement Items Program (RIP) as described in the CAP plan is implemented to ensure that commercial grade items intended for use in safety-related applications will not degrade the ability of the basic component to perform its safety function. The RIP addresses all 10 CFR 50.49 component replacements and commercial grade replacements for basic component future procurements, inventory items and installed items. The RIP established criteria to evaluate the adequacy of safety-related replacement parts and to dedicate commercial grade items, as needed.

The Materials Application Group (MAG),formerly Contract Engineering Group (CEG), was established to ensure that current and future replacement part procurements are appropriately qualified. The MAG is responsible for the following procurement engineering activities:

- providing technical and quality requirements in procurement documents
- identifying required testing and inspections
- performing dedication of commercial grade items
- performing technical reviews for bids received
- performing technical contract administration
- providing technical disposition for identified nonconforming items.

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The warehouse inventory evaluation was performed to provide reasonable assurance of the acceptability of stored spare and replacement parts by qualifying inventory for the most critical end use. The inventory evaluation included the following:

- o performing engineering evaluations for all inventory parts (100% verification) listed in environmental qualification (EQ) binders including dedication as required.
- o performing engineering evaluations for seismically sensitive, electrically active (SSEA) QA Level II devices, and QA Level II metallic ASME pump and valve parts, including dedication, as required.
- o categorizing the remaining QA Level II inventory parts based on commodity grouping and evaluating acceptability case-by-case or by sampling.

The engineering evaluations (1) determined the required safety function of the part and, (2) verified the documentation necessary to justify acceptability of the item.

The Quality Release Program was implemented to ensure proper qualification of 10 CFR 50.49 and commercial grade parts prior to issuance from inventory. During the inventory evaluation, the Quality Release Program was temporarily suspended. The Inventory Release Tracking Log was the interim measure implemented for control inventory items. The log identified unreviewed parts and materials released for installation and allowed for their replacement if the inventory evaluation could not verify acceptability. The Quality Release Program was reinstituted upon completion of the inventory evaluation. Additionally, the program was revised to include SSEA devices and 10 CFR 50.49 replacement parts.

The RIP also reviewed previous plant maintenance activities to verify the adequacy of replacement items installed in Unit 1 safety-related components. The following maintenance records were reviewed:

- o corrective maintenance
- o preventive maintenance
- o maintenance initiated during surveillance testing
- o maintenance performed during plant modifications.

Any 10 CFR 50.49 component and SSEA device replacement parts identified to have been installed received an engineering evaluation and were dedicated as required.

Construction procurements that provided replacement parts for Unit 1 safety-related equipment were also reviewed. The review included: types and uses of procurements, procurement controlling procedures, testing subsequent to installation, component replacements related to 10 CFR 50.49 compliance, and Conditions Adverse to Quality (CAQ) reports written against construction procurements. The initial review identified specific items requiring detailed engineering evaluations.

The licensee contracted with Stone and Webster Engineering Corporation to perform the warehouse inventory evaluation, which provided the basis for identifying and qualifying the current inventory. The other major work activities that comprised the CAP were accomplished by existing licensee groups:

- Current and future procurements - Materials Application Group (MAG)
- Maintenance installed items - Maintenance History Group (MHG)
- Installed construction procurements - Construction Procurement Review Group (CPRG)

CONCLUSION

Based on our review of TVA's revision of the CAP plan for the Replacement Item Program, we conclude the revision is acceptable.

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Dated:

January 1991