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OCT 16 1991

U.S. Nuclear Regulatory Commission
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Gentlemen:

In the Matter of the Application of)
Tennessee Valley Authority) Docket Nos. 50-390

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 - QA RECORDS CORRECTIVE ACTION PROGRAM ADDITIONAL SYSTEMATIC RECORDS REVIEW (TAC NO. 71923)

REFERENCE: NRC Letter from P. Tam to D. Nauman dated August 30, 1991

This letter is in response to the referenced request for information concerning TVA's QA Records Corrective Action Program (CAP). Enclosure 1 addresses NRC's six specific questions and provides an overview of planned enhancements to the CAP that will include the conduct of an integrated assessment that establishes the bases for technical adequacy of records, the adequacy of installed hardware, and records quality for WBN.

The CAP is being revised to reflect the additional scope of activities. As modified, the QA Records Project includes provisions for assessing both records quality issues and the technical adequacy of these records. In addition, several actions are being taken to further improve the systems for control of records and enhance the capability to retrieve them. Details of implementation for all new aspects of the QA Records Project are under development and will be documented in the CAP revision to be submitted by November 29, 1991.

A number of significant WBN activities either completed or underway address various aspects of technical adequacy. The additional effort under this CAP will appropriately consider this information in the development of the integrated assessment. Thus, the CAP will provide

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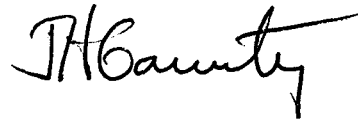
a single, programmatic focus enabling broader conclusions of how the "chain" of critical technical output is maintained from the design criteria to the installed hardware in the field. The conclusions and bases for the integrated assessment will be documented.

An important focus of the CAP will be on early identification of any issues that require attention to meet both records quality and technical adequacy requirements.

Enclosure 2 provides a list of commitments made in this letter.

If there are any questions, please telephone P. L. Pace at (615) 365-1824.

Sincerely,



John H. Garrity

Enclosures

cc (Enclosures):

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RESPONSE TO NRC AUGUST 30, 1991 LETTER ON RECORDS QUALITY

TVA is required and committed to establishing reasonable assurance (factual, documented basis) that WBN is designed and constructed to the proper design criteria set forth in the Application and has achieved the requisite level of quality to begin operation.

It is well understood that this commitment means compiling a set of Quality Assurance (QA) records that collectively demonstrate completeness of coverage in documenting the qualification of all critical hardware. These records will:

- Meet records quality requirements,
- Include the proper content (technically adequate), and
- Confirm the physical installation is consistent with design requirements.

TVA acknowledges that additional effort is required to meet this commitment, not only to support licensing, but to facilitate operational support after the license.

The Quality Assurance Records Project through the QA Records Corrective Action Program (CAP) and the Additional Systematic Records Review (ASRR) provides the vehicle for:

- Demonstrating the overall completeness and adequacy of WBN records produced by historical and ongoing line programs,
- Identifying the need for specific additional actions, and
- Coordinating implementation of required corrective actions.

The QA Records CAP currently includes provisions for addressing records quality issues and physical reinspections and is being modified to reflect its expanded mission in addressing the technical adequacy of QA records. The revised CAP will include the conduct of an integrated assessment that establishes the bases for technical adequacy, the adequacy of installed hardware and records quality for WBN. A key focus for the CAP will be early identification of any issues that are significant and/or generic so that these may be addressed and corrected on a systematic and fast track basis.

The following information includes a summary description of planned activities to address technical adequacy and responds to the NRC's August 30, 1991 letter (six questions). The responses to the NRC's specific individual questions identify ongoing programs or activities that have an important bearing on the questions. Upon completion, the ongoing programs and the expanded QA records CAP will fully address these questions.

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Summary Description: QA Records CAP Evaluation of Technical Adequacy

The expansion of the CAP will provide assurance that the following four phases (or categories) of records development are addressed:

- Records generated by the design/engineering processes (original and CAPs/SPs) to define the design,
- Records generated by the work management and control processes to translate engineering intent into work instructions,
- Records generated by the construction and installation processes to document that the physical plant meets engineering and quality requirements,
- Records generated by the preop and startup testing processes and records associated with the transition to operations.

Modifying the scope of the CAP to provide a single, programmatic point of focus enables broader conclusions of how technical output is maintained from the design criteria to the installed hardware in the field.

The workscope is focused on two principal areas. The first area of focus has been established to verify that the ongoing CAPs and SPs are developing records that meet technical and quality requirements and to coordinate the implementation of early corrective actions that may be required.

The second area of focus has been established to compile necessary records and to conduct an Integrated Assessment of overall WBN records quality and technical adequacy to provide a definitive evaluation and conclusions in support of licensing.

Similar to the records quality review, the technical evaluation will utilize the existing hardware samples and the ANSI N45.2.9 document categories (appropriately modified to reflect TVA categories) to implement certain aspects of the review. The approach to evaluation will include sampling and sample expansion, with provisions for 100% review/corrective action based upon results. Screening criteria will be applied (with justification) to eliminate document categories that:

- Do not contain technically significant information,
- Contain information that was evolutionary to other information that now represents the "qualifying" documentation of interest, and
- Contain old information that will be superseded by new documents.

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In summary, the complete scope of the QA Records CAP will:

- Confirm that required records defined in ANSI N45.2.9-1974 exist as necessary to demonstrate conformance with licensing requirements are complete and meet records quality requirements.
- Demonstrate that the important content of QA records is technically sound.
- Assure that engineering design output is properly reflected in workplans, maintenance requests (MRs), and associated records used to control post-bulk construction work processes. (This technical evaluation will be sample-based, considering the entire population of past workplans and MRs, where subpopulations are derived considering commonality by engineering discipline, process/procedures in effect, implementing organization(s), and timeframe. As such, the full scope of workplans and issues identified by TVA's Construction and QA Self-Assessment and the NRC's Team Review will be directly addressed as well as any other issues falling out of the evaluation. The technical focus will be on a determination that the design engineering intent and/or specific requirements are reflected in the work instructions.)
- Demonstrate by physical reinspection (current ASRR hardware/document reviews) that the construction installations conform with requisite criteria in effect at the time of installation and that the physical configuration is congruent with that shown in the design output records (i.e., drawings and specifications).
- Enhance processes to assure proper storage and retrievability of existing records and records to be generated in the future.

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Specific Responses to NRC Questions:

The six questions contained in the NRC letter dated August 30, 1991, provide examples of how a number of different programs at WBN identify and resolve problems with the technical adequacy of WBN records. The following responses to these questions provide information regarding the programs that are established to identify and resolve these type of problems. Furthermore, as indicated in the previous paragraphs, the QA Records CAP will perform an integrated assessment to demonstrate that the technical adequacy of all WBN records has been assured.

1. How will the ASRR identify deficiencies in Watts Bar records, which are the result of failure of site procedures to incorporate vendor manual requirements? If not identified in the ASRR, what other CAP, Special Program, or other TVA program will identify these deficiencies, and how will the deficiencies be related to the ASRR results?

The WBN Vendor Information CAP is designed to provide reasonable assurance that vendor technical documents for safety-related equipment are current, complete, and appropriately updated for the life of the plant, and that information in these documents has been appropriately incorporated within TVA design output documents, plant instructions and procedures, and built into the plant. This is being accomplished through the review of vendor manual requirements related to the design and installation of safety-related equipment and verification that these requirements have been included in implementing procedures and built into the plant.

The ASRR will provide additional assurance that vendor information has been properly incorporated into work instructions through reviews of records such as workplans and MRs where a verification is made of the incorporation of design output which can include vendor requirements.

2. How will the ASRR identify deficiencies in Watts Bar records, which are the result of failure of modifications personnel to follow site procedures, such as: failure to perform megger checks following cable installations, failure to perform procedurally required QC inspections, failure to perform welding or other special processes in the required sequence, failure to determine cable MTR in accordance with procedural requirements, etc? If not identified in the ASRR, what other CAP, Special Program, or other TVA program will identify these deficiencies, and how will the deficiencies be related to the ASRR results?

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The TVA corrective action process (Nonconformance Reports, Conditions Adverse to Quality Reports, and Significant Corrective Action Reports, etc.) addresses problems such as those caused by failure of personnel to follow procedures.

CAPs and Special Programs collectively address a number of adverse condition reports which identify and correct problems of this type falling within the scope of these programs. Examples of the programs that address some of the type of deficiencies noted above are the Weld CAP and the Cable Issues CAP. In addition, the test program (reference item Number 4) will provide coverage of instances in the past where personnel failed to perform megger checks following cable installation.

The Construction Self-Assessments performed in early 1991 which included reviews of workplans and MRs identified similar deficiencies that occurred in the past and up to the time of the stop work in December 1990. Further reviews of workplans and MRs which were open at the end of 1990 are continuing as part of the "safety net" reviews and will identify and correct these type of deficiencies. To provide additional assurance, an enhanced ASRR review is being performed on closed/vaulted workplans and MRs to identify these type of deficiencies. This review is described previously in this enclosure and will be based on the same detailed checklist as those audited by the NRC as described in Inspection Report 91-13. This enhancement will be addressed in a revision to the ASRR Program description included in the QA Records CAP revision which will be provided to the NRC by November 29, 1991. The ASRR Hardware Review will provide additional assurance by reperforming inspections and tests such as megger checks and MTR inspections on a sample of cables.

3. How will the ASRR identify material deficiencies such as: installation of materials which have been procured at the wrong QA level, installation of incorrect size or types of materials, installation of materials with inadequate traceability, installation of materials with inadequate dedication, etc? If not identified in the ASRR, what other CAP, Special Program, or other TVA program will identify these deficiencies, and how will the deficiencies be related to the ASRR results?

The process of identifying materials which have been procured as replacement items at the wrong QA level and subsequently installed in the plant will be addressed by the Replacement Items Project (RIP) corrective actions.

The issue of material traceability is being resolved at WBN through the Materials Improvement Project (MIP). The MIP will evaluate all materials currently in stock for various procurement attributes among which is traceability. Should discrepancies be found, either the materials will be removed

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from site and replacement materials will be procured or continued use will be justified. If discrepant material is found in stock, a check will be made to determine if any of that material was installed in safety-related applications; if so, it will be replaced. Additionally, the Materials & Procurement Group (M&P) procedures have been upgraded to ensure that material control/traceability from procurement to installation is assured.

The issue of commercial grade dedication is being handled for those items installed in the plant as replacement items for safety-related applications by the RIP CAP. The items currently in the warehouse will be evaluated by the MIP. These two programs interface together where the same type items are both in the warehouse and installed. Furthermore, TVA has procedures in place which ensure that the procurement process for the dedication of commercial grade items is being performed in accordance with industry and NRC standards.

ASRR hardware inspections will be performed on a sample of components and will identify, when accessibility permits, where the installed material does not conform to the records and design output as it pertains to incorrect size or type. ASRR Workplan/MR Review will identify where there is inadequate documentation regarding installation of materials with correct QA level, installation of correct size and type of material, and installation of material with required traceability.

4. How will the ASRR identify instances where no post-maintenance or post-modification testing (PMT) was performed, or where inadequate PMT was performed? If not identified in the ASRR, what other CAP, Special Program, or other TVA program will identify these deficiencies, and how will the deficiencies be related to the ASRR results?

The prestart test program will address the adequacy of post modification and post maintenance testing (PMT). The test program will, with minor justified exceptions, implement a Regulatory Guide 1.68 test program. Cases where PMT was not performed or was inadequate will be included in the test program scope by either (1) specific identification of those items and retest performance, and/or (2) performance of a total Regulatory Guide 1.68 scope test program which encompasses the item(s). The test program will verify that plant equipment important to safety will perform its design basis function.

Any specific deficiencies identified in the course of ASRR reviews related to PMT will be specifically evaluated to ensure the test program adequately addresses the deficiency.

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5. How will the ASRR identify records problems such as the problem reported in Notice of Violation 50-390, 391/89-13-02, regarding being able to identify inspectors' initials such that there is traceability to the inspectors' qualifications? If not identified in the ASRR, what other CAP, Special Program, or other TVA program will identify these deficiencies, and how will the deficiencies be related to the ASRR results?

The subject violation identified a condition in which Quality Control (QC) inspector's initials on cable installation records from 1979 could not clearly identify the QC inspector. Informal signature logs had been used by each unit before issuance of procedural controls for the log in October 1983. TVA had previously identified the above procedural concern in July 1983 in an audit deviation report and implemented controls to prevent recurrence. The inspector's initials cited in the violation were eventually verified to be those of a certified QC inspector. The ASRR is currently sampling the inspector certification record and has not identified any deficiencies in locating inspector certifications by use of the signature on the installation records.

6. How will the ASRR identify problems, which have been corrected by technical procedure changes due to lessons learned, such as changing the cable pull by criteria from 500 pounds to 400 pounds? If not identified in the ASRR, what other CAP, Special Program, or other TVA program will identify these deficiencies, and how will the deficiencies be related to the ASRR results?

Established programs at WBN provide for the identification of the extent of condition of problems which have been previously identified and corrected by specification or procedure changes due to lessons learned, such as changing the cable pull criteria from 500 pounds to 400 pounds. These programs identify and correct the full extent of condition through backfitting. Nuclear Engineering Procedure, NEP-5.1 provides requirements for evaluating the scope of specification revisions to determine the effective date and/or affected features and whether the revision is to be retroactive. The decision regarding retroactivity and the basis for the decision are required to be documented. Established WBN corrective action programs provide for the evaluation of extent of condition and determination of the need for backfitting corrective action resolutions for identified deficiencies.

The ASRR will be carrying out reviews of records and hardware using the procedures and criteria in affect at the time of the latest installation work. Therefore, any changes to procedures or criteria that are backfit will be addressed as applicable to the particular item being reviewed.

ENCLOSURE 2

LIST OF COMMITMENTS

TVA will modify the QA records CAP to address technical adequacy and the integrated assessment of records quality. The modified CAP will be submitted by November 29, 1991.