

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

January 4, 1983

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U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - NRC-OIE REGION II INSPECTION REPORT
50-390/82-05, 50-391/82-03 - ADDITIONAL INFORMATION

The subject inspection report cited TVA with one Severity Level IV and one Severity Level V Violation in accordance with 10 CFR 2.201. My letter to you dated November 9, 1982 contained two enclosures. Enclosure 1 addressed TVA's programmatic improvements as requested in the subject inspection report. Enclosure 2 provided responses to two items of noncompliance.

Enclosed is a revised version of the information previously provided in Enclosure 1 of the November 9, 1982 letter, items 1, 2, and 13. TVA expects to provide additional revisions to Enclosure 2 of the referenced letter by February 4, 1983.

If you have any questions, please get in touch with R. H. Shell at FTS 858-2688.

To the best of my knowledge, I declare the statements contained herein are complete and true.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

D S Kammer

D. S. Kammer
Nuclear Engineer

Enclosures

cc: Mr. Richard C. DeYoung, Director (Enclosures)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 REVISION TO ENCLOSURE 1, PROGRAMMATIC IMPROVEMENTS

This enclosure responds to the request in the referenced letter that TVA inform NRC Region II "of the programmatic improvements you have instituted to achieve prompt identification and correction of deficiencies and determination and remedy of their root causes." The referenced letter cites examples of conditions occurring between April 1980 and January 1982 and basically cites TVA for an inadequate Quality Assurance (QA) program in the area of modifying the program to preclude recurrence of deficiencies.

Since April 1980, TVA has initiated numerous programmatic improvements directed toward identification of root causes and effective action to prevent recurrence. Some of these, initiated in late 1981 or early in 1982, were either in the process of being implemented or were so newly implemented that their effects were not fully apparent at the time of the January 82-05 exit meeting. The following is a summary of improvements implemented which address "prompt identification of deficiencies and determination and remedy of root causes." As shown below, these improvements have been implemented in all phases of TVA's organization from the corporate level down to and including the Division of Construction (CONST) field engineering groups:

1. In September 1982, the TVA Office of Quality Assurance was established to consolidate and strengthen the TVA Quality Assurance Program and to ensure that TVA's requirements for quality, efficiency, and cost effectiveness are met. The Office of Quality Assurance is responsible for establishing and overseeing the TVA Quality Assurance Program, including the actions of the involved line organizations in identifying and correcting deficiencies and in determining and correcting their root causes. This overview function will be accomplished through the Office of Quality Assurance audit and surveillance programs.
2. OEDC QA action items are complete except for two items in Engineering Design and one in Construction. The four Interdivisional Quality Assurance Procedures (ID-QAPs) have been reassigned to the Office of Quality Assurance for handling. The total OEDC plan will be complete by the end of March 1983.
3. On July 21, 1982, the Manager of OEDC, G. H. Kimmons, issued a policy directive to all OEDC employees entitled, "Timeliness and Responsiveness in Resolving and Reporting Conditions Adverse to Quality." The purpose of this policy statement was stated as follows:

The attached program directive on timeliness and responsiveness addresses the primary root causes for many of the problem areas identified by OEDC organizations. This directive establishes requirements for information which should be obtained for any reportability status. Thoroughness and accuracy in the description of identified conditions adverse to quality (CAQs) are essential if

we are to adequately resolve the situation and preclude its repetition. This program directive will be included in the OEDC Program Requirements Manual. Implementation by the divisions should be promptly initiated.

This policy statement detailed the methods and requirements for identifying and addressing root causes and emphasized the need for promptness and accuracy in identifying, resolving, and responding to CAQs.

4. In early 1982, an Agency-wide task force was formed to establish and issue a common Q-list to define features included within the QA program by EN DES, CONST, and TVA's Division of Nuclear Power (NUC PR). This Q-list will be used by all TVA organizations to preclude recurring deficiencies arising from inconsistent identification of safety-related systems, structures, and components. Also, TVA has formed a task force to review the Q-list and establish requirements to ensure that features listed are covered by a program consistent with their importance to safety. These efforts, together with the existing Construction Requirements Manual and the Construction Accountability Program, serve as a significant programmatic improvement implemented in response to root causes identified as having common basis.
5. In late 1981 and early 1982, TVA's Nuclear Safety Review Staff conducted two reviews at Watts Bar. One of these was a broad scope review conducted to assess the programs for management controls of quality-related activities and reviewed functional areas; the other was an in-depth review of management controls over specific areas of the program. These reviews resulted in 57 findings related to specific elements and functional areas of the program. Implementation of recommendations based on these findings to either bring the program into compliance or to enhance the program constitutes a wide scope effort on TVA's part to implement programmatic improvements to preclude deficiencies and strengthen corrective mechanisms. OEDC responded to all 57 findings, and one followup review has resulted in tentative closure of 31 findings as of October 13, 1982.
6. TVA has continued with a comprehensive program for identifying and documenting conditions adverse to quality both with NCRs and internal audits. Watts Bar now has about two hundred (200) 10 CFR 50.55(e) items in various stages of resolution. These items involve nearly all aspects of our program and entail considerable effort in identifying root causes and actions to prevent recurrence.
7. At the construction site, the number of management personnel has doubled since 1980. Most of these new positions are involved with quality control and ensuring adequate management controls over various aspects of the QA program. The Construction Engineer's Organization is now completely separated into engineering and quality control functions up to the Assistant Construction Engineer with a corresponding increase in manpower at lower levels. This results in managers and lower level inspectors functioning more objectively and independently since they report through separate lines of authority.

8. An additional area of responsibility, the Construction Quality Manager, was established early in 1982 to ensure adequate investigation of CAQs to determine specific and root causes, oversee procedure changes resulting from deficiencies, ensure adequate responses, and to effect training or retraining as required to preclude recurrence of deficiencies. The Quality Manager's Organization has primary responsibility to ensure prompt programmatic and written response to deficiencies and to ensure that the response addresses the underlying or root cause.
9. As a means of addressing recurring deficiencies in the procedural area, a Procedures and Training Unit was established and has, to date, placed all procedures in standard format; reviewed all procedures to ensure all requirements are addressed; removed QA activities from non-QA procedures and placed them in QA procedures; separated quality control activities from engineering activities; and combined fragmented instructions into centralized procedures. This has resulted in the reformatting, restructuring, or revision of over 150 procedures since early 1982.
10. An enhanced orientation and training program has been implemented at the construction site. One element of this program is to ensure that employees are aware of the requirements to promptly identify and document or report any suspected conditions adverse to quality. All employees are trained in this requirement, and this policy is enforced by the project conduct guidelines which are provided to each employee upon initial employment.
11. An enhanced program to control system transfers from CONST to NUC PR has been implemented and includes the additional procedural controls discussed in response to violation 390/82-05-01. Other elements of this program include a startup task force made up of representatives from EN DES, CONST, and NUC PR, and a comprehensive review of all transfers made from 1980 to 1982. This review is being conducted to demonstrate the validity of "as-documented" configuration at the time of transfer for previous transfers. At present, this program is approximately 40 percent complete, with no major discrepancies identified to date.
12. The OEDC Project Manager for Watts Bar Nuclear Plant was named in September 1981 and reports directly to the Manager, OEDC. He has overall responsibility for the planning and direction of the design and construction of the Watts Bar Nuclear Plant. Generally working through the Construction Project Manager and the Design Project Manager of the Watts Bar Nuclear Plant project, he assures the overall planning, organizing, scheduling, procurement, quality control, and expediting of work to meet design and construction schedules and budgets. He also is responsible for coordination of Watts Bar Nuclear Plant activities with the Office of Power and other TVA organizations.

13. TVA has committed to perform an independent review of Watts Bar Nuclear Plant. The review will be performed by Black & Veatch and is to be conducted on the auxiliary feedwater (AFW) system to provide a comprehensive assessment of TVA's design and construction activities at Watts Bar and to provide additional confidence to TVA on the adequacy of the design and construction. The review started on September 6, 1982; and the final report is scheduled to be completed about the end of March 1983, at which time it will be issued in parallel to TVA and NRC.

14. OEDC has implemented a Tracking and Reporting of Open Items System (TROI) to provide an overall standard method in OEDC to sort, select, and identify the more important open items for the purpose of informing upper line and QA management of major problems on open items. The TROI system will be the overall standard method used in OEDC to track and monitor the status of the more important items affecting the design and construction quality program. The TROI System will include nonconformances (NCRs) including supplier NCRs, audit deficiencies, and stop-work orders. The system will also include the following: Authorized Nuclear Inspector items Special Inspection Service (SISs); Nuclear Safety Review Staff (NSRS) items requiring closure; NRC violations, unresolved items, and inspector followup items, 10CFR50.55(e) reports, 10CFR21 reports; and Commitment Tracking Records (CTRs) for licensing commitments. Conditions adverse to quality of less importance than NCRs (such as Quality Control Investigation Reports (QCIRs)) will not be included in TROI but will be tracked separately by the organization responsible for that type of condition adverse to quality.

The above items are elements of TVA's continually evolving program directed at achieving prompt identification and correction of deficiencies and their root causes. These program elements were not implemented in response to specific deficiencies but wide-range or broad-scope root causes. The items enumerated above, plus programmatic improvements implemented previously, are evidence of TVA responsiveness to NRC- and TVA-identified programmatic deficiencies.