

TENNESSEE VALLEY AUTHORITY SNRC REGION II
CHATTANOOGA, TENNESSEE 37401 , ATLANTA, GEORGIA
400 Chestnut Street Tower II

December 9, 1981 81 DEC 14 A 9: 31

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - NRC-OIE REGION II INSPECTION
REPORT 390, 391/81-09 - SUPPLEMENTAL RESPONSE TO NRC CONCERNS

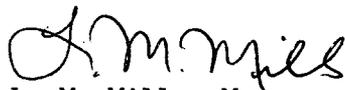
The subject inspection report dated July 8, 1981 cited TVA with two Severity Level IV, two Severity Level V, and two Severity Level VI violations in accordance with 10 CFR 2.201. TVA submitted a response to the violations on September 3, 1981. Enclosure 1 of that response contained information on the effectiveness of the quality assurance program at Watts Bar. During a November 10, 1981 telephone conference call, Inspectors D. Quick and J. McDonald specified concerns with respect to that information. Enclosed is our response to those concerns.

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



L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

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

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ENCLOSURE
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
NRC-OIE INSPECTION REPORT 390,391/81-09
SUPPLEMENTAL INFORMATION REGARDING
TVA RESPONSE TO QA PROGRAM CONCERNS

A list of NRC concerns with TVA's initial report on the subject inspection report is listed below with TVA's response immediately following each question. All of the questions are directed to TVA's response to the NRC request for information on the effectiveness of the quality assurance program at Watts Bar.

1. Step 4 of TVA's Response - When will the "massive site effort to list requirements and the acceptance criteria for each requirement" be complete? How will the adequacy of this list of requirements be evaluated? Once completed, how will TVA check to see that the site QA program satisfies all the requirements of this list?

Additional Response - The massive site effort to list requirements and acceptance criteria is primarily embodied in the Construction Requirement Manual, which is projected to be complete in late December 1981. The adequacy of this manual is being evaluated by a review process which consists of review and input from TVA's design and engineering groups. This will be ensured on a continuing basis by an overall annual review and more frequent revision if deemed necessary. Site QA procedures are checked for adequacy by reviewing requirements and acceptance criteria against those in the manual. This will be done on a continuing basis as procedures are revised and as need is identified for new procedures.

2. Step 5 of TVA's Response - When will the "program to identify and assure that commitments are met" be implemented? Describe this program and how it works in more detail.

Additional Response - The OEDC commitment control program has been implemented and is given in detail in EN DES-EP 2.07, "Licensing Commitment, Control, and Tracking." This establishes a mechanism for identifying and tracking nonenvironmental commitments made to the NRC or other regulatory bodies for which OEDC has responsibility for implementing. Commitments tracked under EP 2.07 include those made in reports to NRC-OIE, letters to NRC-NRR, "major" FSAR commitments (including those made in the text of the FSAR, FSAR amendments, or response to FSAR questions), comments made in telecons or meetings with the NRC, and commitments established by the NRC as necessary for the operating license (as in SER, letters, etc.).

The basic elements of the program are:

- Identification of the commitment by any OEDC organization.
- Documentation on a commitment tracking record (CTR).
- Transmittal to the Nuclear Engineering Branch-Nuclear Licensing Section (NEB-NLS) (the organization responsible for maintaining the log).
- Logging the commitment (NLS).

- Transmittal of the commitment by NLS to the OEDC organization responsible for completing the work.
- Completion of the work committed to by the date required (NLS is responsible to check status near the due date).
- Documentation of such completion by the responsible OEDC organization and transmittal of such closure to NEB.
- Closure of the commitment by NEB-NLS. Note that although the commitment is closed, the file is kept until well after receipt of the operating license.

OEDC organizations are required to notify NLS in advance of the due date of commitments which will not be met on time so that the NRC can be notified and the date changed. Also, some items are not required to be tracked as pointed out in EP 2.07 if they are followed by an equivalent tracking method or system.

3. Step 7 of TVA's Response - TVA described a new position of OEDC project manager for Watts Bar who will have overall responsibility for cost and schedule. What responsibilities does this position have with regard to quality? This report was written in response to QA concerns, yet TVA's response did not mention that the holder of this position would be responsible for quality. The NRC strongly emphasized that quality must be a line function. Also, state when this position becomes/became effective.

Additional Response - TVA's Office of Engineering Design and Construction (OEDC) Project Manager for Watts Bar was appointed in August 1981 and started to assume the new position at that time. The OEDC Project Manager's office reports directly to the Manager of OEDC and is now staffed with a secretary and two experienced project staff engineers, one from Engineering Design (EN DES) and one from Construction (CONST). The OEDC Project Manager has established offices for his staff in Knoxville and at the construction site. The amount of time each person spends at each location is dictated by the immediate need. The primary interfacing and reportability is between the OEDC Project Manager's office and the design and construction project managers and, if necessary, the managers of EN DES and CONST.

The OEDC Project Manager's office is responsible for all elements of design and construction for Watts Bar Nuclear Plant. The OEDC Project Manager's responsibility is for quality, safety, schedule, cost, and any other activity that is needed, especially the interfacing with TVA's Division of Nuclear Power (NUC PR) and other TVA organizations. As on any project, quality and safety will not be degraded in support of cost and schedule.

4. Step 8 of TVA's Response - From this response, does TVA mean to imply that all of the QA unit's problems were due to manpower shortages? Is there nothing wrong with the QA unit's effectiveness, the scope of their audits, or the qualification of personnel? Expand and describe in more detail those changes which have been made to the WBN QA/QC program.

Additional Response - The Construction Engineer has formed a staff organization with responsibility for tracking and ensuring adequate response to NRC-OIE, TVA's Nuclear Safety Review Staff, and TVA QA audit (OEDC and CONST) findings. This organization interfaces with CONST QAB at the site level and the EN DES Nuclear Licensing Section and provides a central point of contact for QA-related items.

TVA's response was not intended "to imply that all of the QA unit's problems were due to manpower shortages." CONST QAB management recently evaluated the WBN QAU manpower situation and concluded that an increase of manpower was necessary in order to accomplish the expanded responsibility. The increased involvement by the QAU in the construction test program is an example.

QAB management is not aware of any serious problems with the WBN QAU in the areas of effectiveness, scope of audits, or personnel qualifications. Management will continually seek to improve the performance of the QA units and reduce criticism in such areas as audit closure, communication with the Knoxville office, coverage of audits, timely and responsive corrective action, etc.

The changes to the WBN QA/QC program are those generated in step 3 and step 4 linked with the new construction test program which caused additional QAU workload requiring an increase in manpower.

5. Last Paragraph of TVA's Response - With regard to the "further effort" which OEDC is planning, describe in detail and commit to a completion date for implementation of this further effort.

Additional Response - Since July 1981, the entire OEDC quality effort has been subjected to extensive and intensive scrutiny through internal TVA reviews and audits and NRC reviews and inspections. Most of the reported concerns and deficiencies have been or are being corrected by routine adjustments to the organization or program. However, certain key ones have not been remedied by corrective measures initially applied and appear to be connected to more complex underlying causes that require a more extensive and systematic program of corrective actions for their elimination. These key problems have been determined to stem from a few root causes which have been identified, documented, and evaluated.

OEDC top management of both line and QA organizations has devoted concentrated attention to incisive exploration of the entire network of concerns and deficiencies, to the study of alternatives and recommendations for remedial action, to deciding and planning of corrective action and to determining efficient mechanisms for implementing corrective measures. The culmination of this intense effort has been the formulation of an extensive

array of actions comprising a systematic program directed toward eliminating the root causes of identified problems and achieving a level of organizational and program effectiveness and quality of work for Watts Bar and all later TVA nuclear plants that is fully acceptable to TVA and the NRC.

The program of corrective measures established by OEDC management is being formalized and documented in an Action Plan which includes provisions for measurement of progress toward completion and evaluation of the effectiveness of each action component. The plan addresses not only concerns and deficiencies identified specifically at Watts Bar Nuclear Plant but also those related to all later plants and to the overall OEDC quality effort as well. The Action Plan performs the following function.

- . specifies actions designed to eliminate each root cause
- . assigns primary and support responsibilities for each action
- . establishes priorities
- . sets milestones and completion dates
- . sets key goals and objectives

The Action Plan focuses on the elimination of root causes in the following areas: attitude, authority, responsibility, timeliness and responsiveness, policies and procedures, commitment control, requirements definition, retention of experienced personnel, interfaces, and corrective action.

The Action Plan will be sent to the TVA General Manager by December 18, 1981 and will be fully activated by January 15, 1982.

6. Additional Concern Not Addressed in TVA's Response - With regard to the independence of QC inspectors, they currently report to production supervisors. What steps are being taken to segregate the QC inspection function from the production function. Address this concern.

Response - To ensure independence of QA personnel, the construction engineering group reorganized in October-November 1981 to create the position of Quality Control Supervisor in all engineering units (civil, mechanical, electrical, and welding) having a QC responsibility. The newly created position of QC Section Supervisor operates independently of the Engineering Section Supervisor and ensures that QC and engineering functions are segregated.