

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

April 7, 1981

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 LETTER RII:CJ 50-390/80-21,  
50-391/80-15 - ADDITIONAL INFORMATION

The subject inspection report dated August 14, 1980, cited Tennessee Valley Authority (TVA) with four infractions and four deficiencies. TVA's responses were provided on September 11, 1980, revised responses were submitted on November 24, 1980, and additional revisions to the subject responses were provided on February 19, 1981.

The enclosed revisions include the following.

1. Addition of corrective action No. 2 under "Corrective Action Taken and Results Achieved" for infraction 390/80-21-01
2. Issuance of WBFI G-11 in "Action Taken to Prevent Recurrence" for infraction 390/80-21-01
3. Additional commitments and commitments dates in "Date when Full Compliance Will Be Achieved" for infraction 390/80-21-01
4. Revisions to infraction 390/80-21-04 to address handling of spiral wound gasket by TVA's Division of Nuclear Power

Also enclosed is additional clarification concerning "Management Control Applied to TVA's QA Program" provided on January 8, 1981.

If you have any questions, please get in touch with D. L. Lambert at FTS 857-2581.

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*  
L. M. Mills, Manager

Nuclear Regulation and Safety

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Enclosure  
cc: See page 2

Mr. James P. O'Reilly, Director

April 7, 1981

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

## ENCLOSURE 1

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
INSPECTION REPORT 50-390/80-21, 50-391/80-15  
ADDITIONAL INFORMATIONInfraction No. 390/80-21-01

As required by 10CFR50, Appendix B, Criterion V, and implemented by FSAR Section 17.1A.5, activities affecting quality shall be accomplished in accordance with appropriate procedures. Section 6.3.11 of Watts Bar Nuclear Plant Quality Control Instruction (WBNP-QCI) 1.22, "Transfer of Permanent Features to the Division of Nuclear Power", requires that, prior to system tentative transfer, Responsible Engineering Unit Supervisors verify the completion of work and note any incomplete work or quality assurance documentation on the incomplete work item list.

Contrary to the above, as of June 19, 1980, activities affecting quality were not accomplished in accordance with procedures in that the verified incomplete work items list for the tentative transfer of the Unit 1 Upper Head Injection (UHI) System did not include the following incomplete work or quality assurance documentation:

1. Control air supplies bypassed two solenoid control valves and were disconnected from the valve operators of two other valves.
2. The two UHI water accumulator level transmitters were not wired.
3. Two instrument's sensing lines were disconnected.
4. One solenoid was disconnected from its solenoid control valve.
5. Electrical conduit bodies without cover plates were noted in four locations.
6. Electrical conduit bodies without cover plates and with wires protruding from the bodies were noted in eight locations.
7. Two temporary pipe supports had not been removed.
8. Six hanger supports were not documented in the quality assurance record files.
9. Two installation adjustments were improperly made and the armour on one cable was broken.

This is an infraction applicable to Unit 1.

Corrective Action Taken and Results Achieved

1. The incomplete work items on UHI identified by this infraction have either been completed or placed on the Outstanding Work Items List.
2. A program has been initiated to review all transfers made prior to transfer No. 67-2 and to identify all incomplete work, documentation, and drawings.

Action Taken to Prevent Recurrence

WBFI G-11 has been issued to clearly define the methods to be used by the responsible engineering unit in performing a walkthrough inspection and identifying incomplete work and documentation. These methods include (1) written notification to the engineering units of an impending transfer walk through; (2) mandatory participation by the responsible engineer in identifying incomplete items; and (3) clearly identified time frames for identification of incomplete items.

WBNP QCI 1.22 is being revised to clarify the transfer process.

Date When Full Compliance Will Be Achieved

1. The review of previous transfer will be complete by August 1, 1981.
2. WBFI G-11 is issued, and we are now in compliance.
3. WBNP QCI 1.22 will be revised by April 15, 1981.

INFRACTION 390/80-21-04

As required by 10 CFR 50, Appendix B, Criterion V, and implemented by Watts Bar Nuclear Plant, FSAR Section 17.1A.5, activities affecting quality must be prescribed by appropriate instructions.

Contrary to the above, as of June 27, 1980, no instructions authorized the current practice of adding Sepco Grafoil Ribbon Tape to spiral wound gaskets. Also, no procedures controlled the procurement, storage, handling, and installation of this tape or the storage or handling of spiral wound gaskets to assure appropriate compatibility with cleanliness classification of the safety-related piping systems in which they are used.

This is an infraction applicable to unit 1.

Corrective Action Taken and Results Achieved

Certification has been received from Sepco, the crinkle tape manufacturer, establishing the amount of leachable chlorides in the tape. TVA has determined that this is not detrimental to system cleanliness.

Ten of the spiral wound gaskets from the Division of Nuclear Power (NUC PR) present inventory were analyzed and found to be within acceptable limits for leachable chlorides.

Action Taken to Prevent Recurrence

Watts Bar Nuclear Plant Quality Control Instruction (WBNP-QCI) 4.31 has been issued authorizing the use of Sepco Grafoil Crinkle Tape and defines its handling, storage, and installation. Personnel have been trained in the use of Grafoil Crinkle Tape and the requirements of the instruction. Procurement of this tape is accomplished in accordance with Watts Bar Nuclear Plant Quality Control Procedure (WBNP-QCP) 1.20, "Site Control of Procurement Documents," or WBNP-QCP 1.17, "Transfer of Materials, Parts, and Components."

On November 10, 1980, TVA's Division of Construction (CONST) prepared a memorandum requesting TVA's Division of Engineering Design (EN DES) to provide information on spiral wound gaskets in connection with unresolved Item 390/80-21-04. This information was provided by EN DES to CONST in a December 23, 1980, memorandum and a Purchase Specification, PF-4951, was issued. As a result of the memorandum, CONST revised WBNP-QCI 4.31 to define the storage and handling of spiral wound gaskets.

Procurement procedures in NUC PR standard practices have been revised to include the limits on leachable chlorides and require vendor certification that newly purchased gaskets meet this limit. New storage cabinets have been constructed to preclude inadvertent contamination and controls implemented to prevent contamination by handling.

Date When Full Compliance Will Be Achieved

We are now in full compliance.

ENCLOSURE 2

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
MANAGEMENT CONTROL APPLIED TO TVA'S QUALITY ASSURANCE PROGRAM  
ADDITIONAL INFORMATION

On December 24, 1980, there was a telephone conference call involving Hugh Dance, U.S. Nuclear Regulatory Commission, Office of Inspection and Enforcement (NRC-OIE), Region II, and A. W. Crevasse and D. L. Terrill, TVA Office of POWER (POWER). In that call, Mr. Crevasse discussed actions recently taken or being taken to enhance the management controls applied to TVA's quality assurance program. The following is a summary of the items discussed.

1. Additional controls (i.e., reviews and approvals) are being implemented for those construction tests which are prerequisites for the preoperational tests. These were discussed in detail in a letter to J. P. O'Reilly, Director, Office of Inspection and Enforcement, Region II, from L. M. Mills, Manager, Nuclear Regulation and Safety, dated December 9, 1980. Reviews and approvals are underway, and certain requirements have been implemented on all units under construction. Additional requirements are in the process of being implemented on Watts Bar and later plants. Interdivisional Quality Assurance Procedure (ID QAP) 11.2, "Construction Test Control," was issued March 9, 1981, covering this activity.
2. TVA is revising its controls to strengthen the turnover of systems from the Division of Construction (CONST) to the Division of Nuclear Power (NUC PR). The joint walkdown by the CONST engineers and the NUC PR engineers will be reinforced and stressed. Another major change will be that early in the transfer process, a 100-percent independent verification will be performed on selected systems or portions thereof to ensure that the as-constructed systems meet the design requirements. These independent verifications will be performed at each plant by a Quality Assurance (QA) team from the CONST organization and the POWER organization. These verifications will emphasize the importance of identifying all incomplete items and will be in addition to the routine audits performed separately and jointly by the Office of Engineering Design and Construction (OEDC) and POWER QA organizations. These changes are being incorporated into the interdivisional procedure which controls turnover of systems.

The Manager of Power is evaluating the Office of Power QA organization to determine if changes are deemed necessary. You are aware of changes made in the OEDC QA program and organization as a result of the problems identified in your inspection in July 1980.

We believe the actions described above demonstrate a commitment by TVA management to an aggressive quality assurance program.