TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

September 3, 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-OIE REGION II INSPECTION REPORT 390, 391/81-09 - RESPONSE TO VIOLATIONS

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. Enclosure 2 is our response to these violations. Enclosure 1 addresses improvements to the Watts Bar Quality Assurance program. This submittal was discussed with Inspector R. V. Crlenjak on August 6 and 17 and September 2, 1981 and with Inspector D. Quick on August 24 and 27, 1981. TVA expects to supply additional information on four of the subject violations by September 30, 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, Manager
Nuclear Regulation and Safety

Enclosure
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

This enclosure responds to the request for information on the effectiveness of the quality assurance program at Watts Bar.

Response

Your letter requested that we describe any particular actions taken or planned to improve the effectiveness of the Quality Assurance Program at Watts Bar. Our concern for the quality program at Watts Bar dates back quite some time. Our present key management at Watts Bar was selected on the basis of regaining the quality aspects of our program. Specifically, our construction project manager has extensive, direct experience in managing plants in almost all stages of construction. He held key responsible positions at Browns Ferry, Bellefonte, and Sequoyah before being assigned project manager at Watts Bar. He understands and is dedicated to a quality program and to Appendix B requirements. Our construction engineer has extensive construction experience under a quality assurance program and is dedicated to a strong quality program. The site quality assurance unit manager is a capable and experienced supervisor and is knowledgeable and responsible in quality assurance.

In addition, our design project manager is aware of our quality needs and is strengthening design support for Watts Bar. Office of Engineering Design and Construction (OEDC), Division of Engineering Design (EN DES), and Division of Construction (CONST) top management are relying on these key individuals and giving them their full backing and support to resolve quality problems that exist at Watts Bar.

A number of specific steps have been and are being taken by the key project management. Each step has had the full support of the top management. These major steps were:

1. Watts Bar construction forces were reduced to obtain adequate engineering and quality control over the work being performed. This effort resulted in a reduction in force in craft personnel and an increase in engineering and support personnel.

2. The construction project manager has specifically directed all employees to follow procedures and instructions. He set administrative personnel procedures to deal with persons who willfully or continually fail to follow procedures.

3. New construction procedures have been established to control work and assure requirements are being met. These are being reviewed by the EN DES organization and the quality assurance staff in CONST as is appropriate.

4. The construction project manager is personally directing a massive site effort to list requirements and the acceptance criteria for each requirement. This effort is being documented and results will be reviewed by EN DES.

5. EN DES is in the process of setting up and implementing a program to identify and assure that commitments are met.

6. EN DES design support for the construction organization at Watts Bar is being reinforced to be responsive to the construction site needs as required to support the various activities and milestones leading to fuel loading.

7. We have recently named an OEDC Project Manager for Watts Bar with responsibilities for completing the design and construction of Watts Bar Nuclear Plant. He will report to the Manager of OEDC and will have overall responsibility for all TVA activities affecting cost and schedule up to the time of fuel loading of each unit. He will be working directly with the design and construction project managers as well as interfacing with other organizations within TVA. Detailed administrative procedures will be developed as required for the new position.

8. Changes have been made to the WBN QA/QC programs to improve the responsiveness with Appendix B to 10CFR50, licensing commitments, policy and requirements. An increase in manpower has been approved for the QA unit.

We believe that the above actions have resulted in an improvement in the quality situation at Watts Bar and that we will continue to see improvement. Many of the problems now being found have their genesis in the program that existed quite some time ago. We anticipate that it will be some time in the future before we are able to reduce significantly the number of deficiencies and noncompliances.

We are deeply concerned about our overall quality program and in particular our quality program at Watts Bar. The continued high rate of violations and nonconformances is particularly disconcerting. OEDC is planning a further effort to resolve these quality problems. We will keep you informed of our program and development of these plans through our day to day interface with your personnel and through correspondence to you, as required.

ENCLOSURE 2

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
RESPONSE TO VIOLATIONS

Violation 50-390/81-09-04

10CFR50, Appendix B, Criterion V, requires that activities affecting quality be accomplished in accordance with instructions. The accepted QA program, FSAR section 17.1A.5, states the assurance is provided that activities are accomplished in accordance with these instructions. QCI-1.1, Print Room Procedure, section 6.1.4.2, requires revised drawings to be distributed to holders of superseded drawings. Craft personnel will acknowledge receipt by signing the attached drawing and shall return the list with the title blocks.

Contrary to the above, as of April 2, 1981, activities affecting quality were not accomplished with instructions in that twenty-four of thirty-seven drawings found in the field had been superseded, which indicated that revised drawings had not been properly distributed or the acknowledgement of receipt of superseded drawings had not been accomplished.

This is a Severity Level VI Violation (Supplement II.F).

Admission or Denial

TVA admits the violation occurred as stated.

Reason for Violation

This violation occurred because craft personnel misplaced the drawings and the Quality Control and Records (QCR) Unit considered them to be lost.

Corrective Steps Taken and Results Achieved

The uncontrolled and outdated prints, when found, were promptly returned to the print room.

The print room is performing a full audit of all site drawings as follows:

A. Drawings no longer assigned to the field were called back to the print room for check-in. After the check-in is complete, the ledgers will be reviewed and the status of drawings not accounted for will be determined.

B. The print room is in the process of auditing 31 sets of assigned controlled drawings. A memo was sent to the craft superintendent to request his assistance in finding any other lost or uncontrolled prints in the field.

Corrective Steps Taken to Avoid Further Violations

QCI-1.1, Print Room Procedure, is being revised to address the responsibiity of the drawing holder to turn in drawings for verification before they are assigned to another individual. The print room is developing a master list for each set of assigned drawings. This list will include each drawing in the set and the issued revision level.

Site QA Unit will conduct periodic audits of this activity.

Date of Full Compliance

TVA will be in full compliance by October 16, 1981.

Violation 50-390/81-09-01

10CFR50, Appendix B, Criterion XVI, requires that measures be established to assure that conditions adverse to quality, such as nonconformances, are corrected. The accepted QA Program, FSAR 17.1A.16, states that procedures provide for the correction of adverse conditions.

Contrary to the above, as of April 16, 1981, measures to assure correction of conditions adverse to quality have not been established in that no corrective action was taken or planned as a result of Nonconforming Condition Report (NCR) 2793. This NCR identified that no approval had been obtained to flush safety-related heat exchangers in the Component Cooling Water System and that strainers had not been installed at the heat exchangers to prevent the entrance of foreign objects into the heat exchanger's shell side.

This is a Severity Level IV Violation (Supplement II.D.1).

Admission or Denial of the Alleged Violation

TVA admits the violation occurred stated.

Reason for Violation

TVA agrees with the violation as stated above. However, TVA does not agree with the discussion contained within the inspection report (under item 5, "Independent Inspection Effort") that states procedures QCI-1.2 and EN DES EP-1.26 do not establish measures to assure corrective actions for conditions adverse to quality.

Quality Control Instruction (QCI)-1.2 and Division of Engineering Design Engineering Procedure (EN DES EP)-1.26 have established measures to assure corrective action for conditions adverse to quality are promptly taken. Both of the aforementioned procedures are adequate in that they provide for the Division of Construction (CONST) to refer to the Design Project any NCR requiring design review and approval of a recommended "use-as-is" or "repair" disposition. In addition, EN DES EP-1.26R3 (dated March 13, 1980), paragraph 6.0, "Handling NCR's Coming to EN DES from the Construction Site," notes that the Design Project Manager (or his delegate) "provides written acceptance of any use-as-is disposition recommended by CONST and agreed to by EN DES, and includes an explanation of the acceptance either in section 8 of the NCR or in the memo returning the NCR to CONST." However, admittedly the above procedures were not followed for this NCR.

Corrective Steps Taken and Results Achieved

TVA has initiated a review of previous CONST NCR (with "use-as-is" disposition) correspondence (Watts Bar) and will assure that the use-as-is disposition meet the current requirements established in EN DES EP-1.26R3.

TVA will provide additional information regarding our corrective action on this violation by September 30, 1981.

Corrective Steps Taken to Avoid Further Noncompliance

TVA has initiated a memorandum from the Watts Bar Design Project Manager to be distributed to all EN DES branch chiefs and design project managers, noting the importance of assuring that EN DES-EP 1.26R3, section 6.4b is followed for 'use-as-is' dispositions.

Date When Full Compliance will be Achieved

TVA has been in full compliance in regard to the adequacy of our procedures since March 13, 1980.

TVA will be in full compliance in regards to review of WBN NCR's, with 'use-as-is' disposition by November 16, 1981.

Violation 50-390/81-09-10

10CFR50, Appendix B, Criterion III, requires that measures be established to assure the applicable regulatory requirements and the design basis are correctly translated into specifications. The accepted QA program, FSAR Section 17.1A.3.2, states that Basic Design Criteria are developed to form the basis for translating requirements into detailed designs. FSAR Section 9.5.1.3 states that the compartment in which the carbon dioxide storage tank is located in the Diesel Generator Building is designed with a blowout wall to the atmosphere.

Contrary to the above, as of April 16, 1981, measures had not been established to assure that applicable regulatory requirements and the designed basis were correctly transmitted into specification in that no procedures were established to ensure that FSAR commitments for a diesel generator building blowout wall were incorporated in the design specifications.

This is a Severity Level IV Violation (Supplement II.D.1).

Admission or Denial

TVA admits the violation occurred as stated.

Reasons for Violation

The writer, reviewers, and approvers of the Design Criteria failed to recognize this as a design basis.

Corrective Steps Taken and Results Achieved

The corrective actions for this item were supplied in a letter from L. M. Mills to J. P. O'Reilly dated March 4, 1981.

Date When Full Compliance will be Achieved

TVA was in full compliance March 4, 1981, when we submitted our response to the information request. This response verified the adequacy of certain doors as blowout panels.

Violation 50-390/81-09-05 and 50-390/81-09-03, 50-391/81-09-02

10 CFR50, Appendix B, Criterion V, requires activities affecting quality to be accomplished in accordance with instructions. The accepted QA program, FSAR Section 17.1A.5, states that assurance is provided that activities are accomplished in accordance with these instructions. QCI-1:2, Section 5.2, states that responsible engineering representatives shall be responsible for initiating Non-Conforming Condition Reports (NCR's).

Contrary to the above, as of April 16, 1981, activities affecting quality had not been accomplished in accordance with instructions in that an NCR had not been written by responsible engineering representatives to identify previously certified expansion anchor lot proof load tests which were non-conservatively tested by as much as twenty-five percent.

This is a Severity Level V Violation (Supplement II.E).

10CFR 50, Appendix B, Criterion XVII, requires that records contain closely related data, such as qualifications of equipment. The accepted QA program, FSAR Section 17.1A.17 states that construction procedure Quality Assurance Records contain provisions for records generated at the site during the construction phase. Quality Control Instruction (QCI) 1.8, Quality Assurance Records, Section 5.1.f, states that the engineering unit supervisor prepares site-originated quality assurance records required by the quality assurance program.

Contrary to the above, as of April 16, 1981, records did not contain closely related data for equipment qualification in that attachment A of QCP-1.14, Production Lot Acceptance Test on Expansion Type Bolt Anchors, did not contain justification data for hydraulic 'jacks' used in bolt anchor testing.

This is a Severity Level VI Violation (Supplement II.F).

Admission or Denial of the Alleged Violations

TVA admits the violations occurred as stated.

Interim Progress

TVA is continuing the investigation of this matter and anticipates supplying the NRC with additional information by September 30, 1981.

We consider these items to be closely related and therefore plan to address them together.

Violation 50-390/81-09-02, 50-391/81-09-01

10 CFR50, Appendix B, Criterion XVI, requires that measures be established to assure that conditions adverse to quality, such as defective material and non-conformances, are promptly corrected. The accepted QA program, FSAR Section 17.1A.17, states that procedures are provided for correction of adverse conditions.

Contrary to the above, as of April 16, 1981, measures were not established to assure that conditions adverse to quality were promptly corrected in that Non-Conforming Condition Report, 2611R, which identified defective 3/8' self drilling bolt anchors, was invalidated by Construction management. Subsequent correspondence between Construction and Engineering Design failed to clearly define corrective action and prompt corrective action was not taken.

This is a Severity Level V Violation.

Admission or Denial of the Alleged Violation

TVA admits the violation occurred.

Interim Progress

TVA is continuing the investigation of this matter and anticipates supplying the NRC with additional information September 30, 1981.