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

January 25, 1982

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 50-390/81-19, 50-391/81-19 - FINAL RESPONSE TO VIOLATIONS

The subject inspection report dated October 8, 1981 cited TVA with one Severity Level V and one Severity Level VI violation in accordance with 10 CFR 2.201. TVA submitted reports on the violations on November 10 and December 28, 1981. Enclosed is our final response.

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 to be 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

ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
FINAL RESPONSE TO VIOLATIONS

Violation 390,391/81-19-01

10CFR50, Appendix B, Criterion V as implemented by Watts Bar FSAR Section 17, paragraph 17.1A.5 requires activities affecting quality be prescribed by documented instructions, procedures, or drawings which include appropriate acceptance criteria for determining that important activities have been satisfactorily accomplished.

Contrary to the above, Watts Bar Nuclear Plant did not have instructions or acceptance criteria for bending locking devices on bolted flanges. As a result, locking devices were not properly installed by the licensee on flanges for the reactor coolant pump (RCP) oil coolers. The locking devices did not engage the flat of the fasteners and therefore would not maintain the torque on the fasteners.

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

Admission or Denial of Alleged Violation

TVA admits the violation occurred as stated.

Reasons for Violation

Although TVA admits that this condition existed, TVA site personnel considered that torquing the bolts (the standard method for preventing loosening of bolts on flanges) would maintain system integrity without the pantleg washers fully engaging the fastener. The retorquing of the bolts was done in the presence of the vendor representative. Pantleg washers are unique to the RCP motors.

Corrective Steps Taken and Results Achieved

All incorrectly installed locking devices on the RCP oil coolers will be installed correctly.

Corrective Steps Taken to Prevent Recurrence

TVA is revising WBNP-QCP-1.42 to include the inspection of locking devices. Also, appropriate craft and inspection personnel will be trained in the proper method of installation of this type locking device.

After investigation of this violation, TVA has concluded that the violation was not a result of unqualified craftsmen or inadequate inspection techniques.

Date of Full Compliance

Due to the massive number of revisions being made to site procedures to improve the WBN quality assurance program, the date of full compliance will be January 29, 1982.

Violation 390/81-19-02

10CFR50, Appendix B, Criterion V as implemented by WBN FSAR Section 17, paragraph 17.1A.5 requires activities affecting quality be accomplished in accordance with instructions, procedures, or drawings. WBN QCP-4.23R2 Appendix 2, paragraph 7.1.1 required that bolts without washers show no visible gap between the bolt head or nut and the member being fastened. The bolt or nut shall be verified to be, as a minimum, "handtight" as referring to the ability of not being able to loosen or turn a bolt or nut without the aid of a mechanical device.

Contrary to the above, on September 10, 1981, nuts on hanger 70-1CC-R181 were observed loose. However, WBN visual inspection report for this hanger indicated that bolts/nuts had been verified tightened.

This is a Severity Level VI Violation (Supplement II.F). This applies to unit 1 only.

Admission or Denial of Alleged Violation

TVA admits the violation occurred as stated.

Reason for the Violation

This violation was caused by Construction personnel circumventing an established quality assurance program for hanger installation and documentation. Hanger removals and alterations were being performed without following the proper procedure (QCP-4.23). Upon investigating this violation and 14 nonconforming condition reports (NCRs) generated since January 1981, TVA has come to the conclusion that construction personnel were performing unauthorized, undocumented work.

Corrective Steps Taken and Results Achieved

The subject hangers identified in this violation and the hangers identified in the recent investigation which had loose bolts/nuts have been nonconformed and will be reworked.

An investigation was performed beginning with two random samples of finalized hangers being selected. This investigation has revealed that of the 17 finalized hanger samples, 3 were found to have loose jam nuts. The first sample of ten hangers were finalized by the inspector involved in the subject violation. Two of the ten hangers were found to have loose jam nuts. The second sample of seven hangers were finalized by other Hanger Engineering Unit (HEU) inspectors, with one hanger having loose jam nuts. The three supports found to have loose jam nuts were all on the same system as the hanger of the subject violation. Research of the previous work activities for the time period before the sample indicated that considerable work by Construction personnel, because of ongoing flushing and hydrostatic testing, had been performed on this sytem. There is documentation showing a considerable amount of hangers being removed or reworked on this system. Also, the HEU has issued 14 NCRs for the removal or alteration of finalized supports, two of which were on the system involved in this violation. In view of this data, TVA does not believe that there is any reason to suspect the quality of this inspector's work.

Corrective Steps Taken to Avoid Further Violations

All construction personnel are continuously being instructed to adhere to the established quality assurance program for hanger installation and documentation. This is being accomplished by formal quality assurance training sessions, safety meetings, and informal group sessions. All construction personnel have the responsibiliy to report to their supervisor any finalized item that has been altered or removed. Specific action that has been or will be taken to prevent recurrence is as follows.

Hanger Engineering Inspection Personnel

1. Before these violations occurred, there was a requirement placed in QCP-4.23R2, Appendix 2, Attachment D, as a reminder to the inspectors for checking bolts/nuts for handtightness. Hanger inspectors have been reinstructed in this requirement.

2. Inspectors for the Hanger Engineering Unit have been issued torque stripping to aid all construction personnel in identifying hangers which have been finalized since December 1981.

3. All NCRs written on future items of this type will be thoroughly investigated by engineering personnel to determine both the cause and the appropriate action that needs to be taken.

Trades and Labor (Craft) Personnel

1. All NCRs written on future items will be thoroughly investigated by the Construction Superindentent's Office to determine both the cause and the appropriate corrective action.

2. Craft foremen have been instructed to check their crews' work areas daily and report to their supervisor any alteration of finalized features.

3. Any craft personnel who willfully violates a QA procedure will receive disciplinary action.

Date of Full Compliance

The hangers identified during the investigation resulting from this deficiency will be reworked by February 25, 1982.