

APPENDIX A

NOTICE OF VIOLATION

Tennessee Valley Authority
Watts Bar Unit 1

License No. CPPR-91

Based on the NRC inspection April 1-29, 1980, certain of your activities were apparently not conducted in full compliance with NRC requirements as indicated below. These items have been categorized as described in correspondence to you dated December 31, 1974.

- A. As required by 10 CFR 50, Appendix B, Criterion XI, and implemented by Watts Bar Nuclear Plant FSAR Section 17.1A.11, testing is required to be identified and performed in accordance with test procedures incorporating design requirements and acceptance limits. These procedures shall include provisions for prerequisites, test instrumentation, and suitable test environment. Test results must be documented and evaluated. Construction Specification G39, Cleaning During Fabrication of Fluid Handling Components, Section 8.4.3.1, requires the use of a filter or strainer to filter the exit water of a once-through flush, and Section 8.4.5 requires flushes to be repeated until two successive filter cloths or strainers meet the acceptance criteria. Watts Bar Field Instruction WBFI-M32, Preoperational Flushing Instructions for Residual Heat Removal System, Section 11.1 requires the quality of flush water to be virtually unchanged by flushing. Technical Instruction TI-27, Chemical Specifications, Part III (Cleanliness Criteria for Piping Systems), Section 3.3.1 requires Class A water to be used to flush all Class B systems, which includes the Residual Heat Removal (RHR) system.

Contrary to the above, testing was not controlled in that:

1. As of April 18, 1980, preliminary testing required to demonstrate the cleanliness of the Residual Heat Removal system instrument sensing lines was not identified or performed in accordance with written test procedures.
2. As of completion of the Unit 1 RHR system flushing on June 12, 1979, WBFI-M32 did not require taking final flush samples of each portion of the system flushed. The QA record incorrectly documents one sample as representative of each flush path in each RHR system train. This procedure also failed to require the use of a flush cloth or strainer and none was used for the once-through flush of the two RHR system lines between the containment sump and the suction side of the RHR pumps. Additionally, two successive acceptable observations of the flush strainer were not required and none were done, for the recirculation flushes. Also, this procedure allowed fill water to be demineralized rather than require Class A water. Demineralized water

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- containing 8.1 ppm total solids was used, whereas the Class A water acceptance criteria was 0.5 ppm total solids.
3. As of August 20, 1979, the chemistry results of flushing of the Unit 1 RHR system under WBF1-M32 were evaluated without assuring that the final flush water conductivity was virtually unchanged from the conductivity of the fill water. The conductivity had increased by a factor of approximately two.
 4. As of April 23, 1980, test procedure WBNP-QCP-4.10, Appendix D, Hydrostatic/Pneumatic Testing of Piping Systems and Piping Subassemblies, did not include provisions for assuring the adequate establishment of prerequisite overpressure protection. Step 6.1.4.5 required the consideration of precautions to prevent overpressurization and detailed a suitable method which employed a relief valve. However, licensee personnel have used other methods of providing overpressure protection without these methods being documented or required to meet any formal acceptance criteria. Additionally, the procedure does not define the time interval to be recorded in Attachment A and engineers have made recordings based on varying assumptions; which has rendered this information unreliable.

This is an infraction.

- B. As required by 10 CFR 50, Appendix B, Criterion V and implemented by FSAR Section 17.1A.5, activities affecting quality shall be prescribed by and accomplished in accordance with appropriate instructions, procedures or drawings. Quality control procedure (WBNP-QCP) 1.1, Print Room Procedure, Section 6.1.7 requires that superseded drawings be removed and destroyed and this be noted on the ledger cards for the drawings. Section 6.2.1 requires the stamping of new or revised drawings with "MASTER". WBNP-QCP-1.13, Preparation and Documentation of Field Change Requests, Section 6.1.1.2, requires that the print room master drawing of a system affected by a field change request be annotated by circling the affected area.

Contrary to the above, as of April 22, 1980:

1. Sixteen of two-hundred ledger cards maintained on drawings of safety-related and radiological waste systems did not indicate that superseded prints were removed and destroyed.

2. Six of one-hundred safety-related manufacturing master prints reviewed were not stamped "MASTER".
3. Four of twenty-five safety-related master prints which were affected by Field Change Requests did not contain the required annotation.

This is an infraction.