

APPENDIX A

NOTICE OF VIOLATION

Tennessee Valley Authority  
Watts Bar Nuclear Plant

License Nos. CPPR-91  
& CPPR-92

Based on the NRC inspection July 1-31, 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 V, activities affecting quality must 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 instructions. Section 6.2 of Appendix E to WBNP-QCP-4.10 designates the cleanliness classification of systems containing fluids which have direct contact with the nuclear reactor core as Class B. Section 6.7 of the appendix requires either the sealing of openings or the complete enclosure of materials to preserve required surface cleanliness.

1. Section 6.3.6.3.5 of Appendix E to WBNP-QCP-4.10 stated that if it becomes necessary to leave an opening temporarily unattended, the protective cover or seal shall be reinstalled.

Contrary to the above, as of July 25, 1980, activities affecting quality were not accomplished in accordance with WBNP-QCP-4.10 in that over 35 examples of pipes, flanges, and fittings of systems including Reactor Coolant System and Chemical and Volume Control System were found in the Unit 1 containment to be unprotected and unattended.

2. Section 5.2.2 of WBNP-QCP-1.6 required that the responsible engineer assign proper storage to permanent materials.

Contrary to the above, as of July 31, 1980, activities affecting quality were not accomplished in accordance with WBNP-QCP-1.6 in that adequate storage requirements were not assigned for over one thousand stainless steel quality valves, flanges, tees, caps, couplings, and reducers in warehouses 9 and 21 which were available for use in cleanliness Class B systems and were stored with internal surfaces unprotected from contamination.

3. Section 6.3.4 of Appendix E to WBNP-QCP-4.10 required periodic inspection of seal integrity for cleanliness Class B materials and the repair or replacement of seals where required.

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Contrary to the above, as of July 31, 1980, activities affecting quality were not accomplished in accordance with WBNP-QCP-4.10 in that seals had not been repaired or replaced for over one thousand pieces of quality stainless steel tubing and pipe available for use in cleanliness Class B systems which were stored in yard sheds 11 and 12 with deteriorated seals which had allowed internal contamination.

This is an infraction. An item similar to A.1 was brought to your attention in our letters of May 2, 1980 and June 26, 1980.

B. As required by 10 CFR 50 Appendix B Criterion V, activities affecting quality must 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 instructions.

1. Section 6.3.2 of WBNP-QCP-1.2, Control of Nonconforming Items, required generic or repetitive Nonconforming Condition Reports (NCRs) to be resolved with corrective action to preclude repetition of the condition.

Contrary to the above, as of July 31, 1980, Nonconforming Condition Report 2272R identified a generic nonconformance not dispositioned to require corrective action to preclude repetition. NCR 2272R addressed a significant condition adverse to quality in Kerotest globe valves (seal leakage, bearing damage and diaphragm damage). Corrective action was not specified for hundreds of these valves available for installation in quality assured activities or for hundreds of these valves previously installed in the plant and suspected of being similarly deteriorated.

2. Engineering Design Engineering Procedure (ENDES-EP) 4.02, Engineering Change Notices (ECN) - Handling, prescribed controls for processing design changes which affect nuclear plant drawings, including the updating of affected drawings.

Contrary to the above, as of July 31, 1980, activities affecting quality were not accomplished in accordance with EP-4.02, in that design changes were implemented without drawing revision as follows:

- a. Engineering Design Memo 363 M 110 dated April 10, 1974, which directed a change in design specifications to replace original type valve packing with a different type in high pressure valves in borated water systems was currently being implemented by the Division of Construction. As a result, the Division of Nuclear Power had procured incorrect gasket replacement materials for subsequent use in these valves, using the outdated drawings.
- b. Engineering Design disposition of Engineering Design Information Request (DIR)-M35 specified a change in anchor bolt installation requirements for the refueling water storage tank (RWST), yet did not provide specific instruction as required by ECN processing.

As a result, the Unit 1 RWST polyethylene bolt sleeves installed did not cover the area where the bolts penetrate the lower lip of the RWST anchor ring and aluminum shims not addressed in the DIR were added above the upper lip of the anchor ring.

This is an infraction.

C. As required by 10 CFR 50, Appendix B Criterion XI, testing is performed with written test procedures incorporating requirements in applicable design documents.

1. The accepted QA program, FSAR section 17.1A.11, states that the test program includes those tests necessary to verify the adequacy of field erection and installation. FSAR section 8.1.5.3 commits to full conformance with Regulatory Guide 1.30 which endorses ANSI N45.2.4-1972. Section 2.3 of ANSI N45.2.4-1972 requires that test procedures be prepared and revised to assure tests are performed in accordance with the latest information. Section 2.2.(5) of the Standard specifies the availability of the manufacturers instructions as prerequisite to all activities, including testing, addressed by the Standard.

Contrary to the above, as of July 31, 1980, Westinghouse Instruction Book, Motor Operated Gate Valves was not considered when preparing General Construction Specification G-50, Torque and Limit Switch Settings for Motor-Operated Gate Valves. As a result, torque switches and geared limit switches on certain level and flow control valves were not set in accordance with the manufacturers instructions. These valves are required to reposition in response to an engineered safety features actuation.

2. The accepted QA program, FSAR Section 17.1A.11.3, requires that final detailed procedures for preliminary tests are to be reviewed by the proper divisions of the Office of Engineering Design and Construction, Power, and the NSSS vendor. This section further requires that the NSSS vendor evaluate preliminary test results at the time of the test.

Contrary to the above, as of July 31, 1980, preliminary test procedures and their results did not receive required reviews in that:

- a. Of four preliminary tests inspected, none were reviewed by the NSSS vendor and the Office of Power had reviewed only the system flushing test.
- b. The NSSS vendor had not evaluated any preliminary test results.

This is an infraction.

D. As required by 10 CFR 50 Appendix B Criterion XIII, measures shall be established to control the storage of equipment in accordance with work and inspection instructions to prevent damage or deterioration. The accepted

QA program, FSAR Section 17.1A.13, states that measures to provide control at the construction site are prescribed by construction procedure for Handling, Storage, and Maintenance of Permanent Equipment.

Contrary to the above, as of July 31, 1980, measures were not established to preclude damage or deterioration associated with the Refueling Water Storage Tank (RWST) as follows:

- a. The four RWST level transmitter circuits were housed in electrical panels which were open; the contacts were rusted; and the panels contained an accumulation of water and debris.
- b. Rusted carbon steel wire used to join insulation banding was in contact with one RWST stainless steel manway.

This is an infraction applicable to Unit 1.

- E. As required by 10 CFR 50 Appendix B Criterion XIII, measures must be established to control the storage of equipment to prevent damage or deterioration. The accepted QA program FSAR section 17.1A.13 states that measures to provide control at the construction site are prescribed by construction procedure Handling, Storage, and Maintenance of Permanent Equipment.

Contrary to the above, as of July 7, 1980, measures were not established to control the storage of Residual Heat Removal (RHR) system flood mode spool pieces, which are employed to provide core cooling during abnormal flood conditions. The Unit 1 spool piece had been tentatively transferred to the Division of Nuclear Power and was unprotected in the RHR and Containment Spray heat exchanger room.

This is an infraction applicable to Unit 1.

- F. As required by 10 CFR 50 Appendix B Criterion V, activities affecting quality must 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 instructions. Section 6.2 of QCP-1.30, Attachment E of QCP-1.30 and Attachment D of WBNP Administrative Instruction 8B required that work plans be prepared, reviewed and approved for work on systems that have been tentatively transferred from the Division of Construction to the Division of Power Production. Section 6.3.10 of QCP-1.30 requires distribution of the work plan cover sheet to the shift engineer. Section 6.4.7 requires the responsible engineer to coordinate with the shift engineer to place equipment back in service. Section 6.5.2 requires copies of any required operations sheets to be included in the work plan.

Contrary to the above, during an audit of five work plans (0174, 0181, 0190, 0201, and 0212), several examples were found that indicated proper preparation, review and approval of safety-related work plans had not occurred.

1. Work plans 0181, 0190, and 0201, did not receive the required management review because of incorrect or inconsistent form completion.

2. Two sections of work plans 0181 and 0201 were not filled out as required.
3. A Bolting Operations Sheet was not included on completed work plan 0174.
4. The Shift Engineer's Office at the Division of Power Production did not have a copy of work plan 0212 that was being accomplished. The responsible engineer did not coordinate with the shift engineer to put equipment back in service after completion of work.

This is an infraction applicable to Unit 1.

- G. As required by 10 CFR 50 Appendix B Criterion XVI, measures must be established to assure that deficiencies and deviations are promptly corrected. The accepted QA plan, FSAR section 17.1A.17, Corrective Action, states that corrective action measures are prescribed by procedures which provide for the correction of adverse conditions.

Contrary to the above, as of July 25, 1980, measures had not been established to assure the prompt correction of deficiencies and deviations which were identified by Office of Power quality assurance audits and classified as Category B findings under OP-QAP-18.1. Section 4.2 of OP-QAP-18.1 states that a Category B finding is a violation of established requirements; however, there are no requirements to assure prompt correction of Category B findings. Audit finding B-6 of audit OP-QAA-WB-80-02 identified on February 29, 1980 that required programs had not been generated for protection of equipment in the Power Stores warehouse including: periodic insulation tests and rotation of electrical equipment, pressurization of items with inert gases, use of dessicant and humidity indicators, and use of space heaters in electrical components. However, corrective action for this finding was not prompt in that the required programs were not written or implemented.

This is an infraction.