

ENCLOSURE 1

NOTICE OF VIOLATION

Tennessee Valley Authority
Watts Bar Unit 1

Docket No. 50-390
License No. CPPR-91

During an NRC inspection conducted January 17 through February 20, 1992, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the violations are listed below:

- A. 10 CFR 50, Appendix B, Criterion III, "Design Control," requires in part that design control measures be established to assure that regulatory requirements are correctly translated into specifications and procedures and that quality standards be specified and included in design documents. It further requires that measures provide for verifying the adequacy of design by individuals other than those who performed the original design.

Tennessee Valley Authority Nuclear Quality Assurance Plan TVA-NQA-PLN89-A, Revision 2, Section 7.0, Design Control, requires that measures be established to ensure that applicable design requirements are correctly translated into specifications, procedures, or instructions. It also requires that measures be established to control the preparation, review, and approval of design output documents to ensure that technical and quality requirements are incorporated prior to issuance.

Contrary to the above, on February 7, 1992, the TVA approved electrical design output cable pull calculations associated with workplan D-08413-01, Rework Cable/Conduit, Remove and Reinstall Cable, were inadequate in that the following deficiencies were identified:

1. Cable pull calculations dated February 3, 1992, associated with the workplan omitted two of three single conductor cables for calculating pull tension limits. Therefore, the design output calculations failed to reflect scheduled cable installations.
2. Cable pull calculations failed to address possible cable jamming during cable installations by using nominal average outside cable diameters instead of actual field measurements of cable outside diameter as required by design specifications and procedures.
3. Cable pull tension calculations were incorrectly determined to be adequate by both the preparer and a reviewer even though two cables were omitted from all but one of the referenced calculations.
4. The CBLPUL computer program used to calculate pull tension limits was inaccurate in that it was missing a multiplication safety factor for calculating the maximum sidewall pressure pulling tension.

5. The CBLPUL computer program used to calculate pull tension limits was not verified and validated to limit the maximum allowed conductor pull tension when basket-weave grips are used to pull shielded and unshielded cables.
6. Electrical Design Standard DS-E12.1.13, Class 1E Cable ODs and Weights, was used as a design input document when performing pull tension calculations but had not been designated as a design input document and the document also contained inaccurate computer program input information with regard to whether cables are shielded or unshielded.

This is a Severity Level IV violation (Supplement II).

- B. 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires in part that activities affecting quality be prescribed by documented instructions or procedures and that such activities be accomplished in accordance with those instructions or procedures.

Tennessee Valley Authority Nuclear Quality Assurance Plan TVA-NQA-PLN89-A, Revision 2, Section 6.1, requires that quality-related activities be prescribed by documented procedures and instructions and that these activities be accomplished in accordance with these procedures and instructions. Site Standard Practice SSP-7.53, Modification Workplan, Reviews, requires that once work activities are complete, data sheets and/or work steps cannot be signed prior to obtaining Quality Control signatures.

Contrary to the above, on February 11, 1992, safety-related activities were not performed in accordance with documented procedures in that QC inspections associated with workplan D-02249-03 were documented and dated prior to the date documented by the craftsmen for work completion.

This is a Severity Level IV violation (Supplement II).

- C. 10 CFR 50.55a requires that, "Structures, systems, and components shall be designed, fabricated, erected, constructed, tested, and inspected to quality standards commensurate with the importance of the safety function to be performed." Paragraph NB-6000 of the ASME Boiler and Pressure Vessel Code, Section III, 1971 Edition, Summer 1973 Addenda, has been identified as the appropriate code for hydrostatic testing and examination of ASME piping.

Paragraph NB6111.1 of the ASME Section III code requires that all components and appurtenances constructed and/or installed under the rules of this section of the code shall be hydrostatically tested in the presence of the inspector.

Contrary to the above, on February 4, 1992, hydrostatic testing requirements had been deleted on workplan D01278-01, fire protection piping. The workplan revision that deleted the hydrostatic testing and

examination was approved for implementation with the required hydrostatic testing deleted.

This is a Severity Level IV violation (Supplement II).

Pursuant to the provisions of 10 CFR 2.201, Tennessee Valley Authority is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspector, Watts Bar, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or demand for information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

Dated at Atlanta, Georgia
this 17th day of March 1992