

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

August 6, 1981 AUG 11 9:21

WBRD-50-390/81-27

WBRD-50-391/81-26

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 - INSUFFICIENT DOCUMENTATION FOR PROTECTIVE DEVICES - WBRD-50-390/81-27, WBRD-50-391/81-26 - FOURTH INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on March 13, 1981, in accordance with 10 CFR 50.55(e) as NCR 3001R R1. Interim reports were submitted on April 10, May 21, and July 9, 1981. Enclosed is our fourth interim report. We expect to provide additional information by July 30, 1982.

If you have any questions, please get in touch with D. L. Lambert at FTS 857-2581.

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

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ENCLOSURE  
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
INSUFFICIENT DOCUMENTATION FOR PROTECTIVE DEVICES  
WBRD-50-390/81-27, WBRD-50-391/81-26  
10 CFR 50.55(e)  
FOURTH INTERIM REPORT

Description of Deficiency

TVA has recently discovered that there has been insufficient documentation on the installation and fabrication of all pipe whip and jet impingement protective devices (PD's). The PD's provide protection, as required, to safety system components (pipes, equipment, walls, etc.) from the effects of postulated high energy pipe breaks. The detailed description of the deficiency is as follows:

- (a) No weld inspection documentation is available for PD's other than those in valve rooms and the feedwater system in the unit 1 reactor building.
- (b) Where weld inspection documentation is available, it is incomplete because it cannot be determined whether an entire assembly was accepted or only part of it.
- (c) No fitup documentation is available for any welded connections; i.e., there is no inprocess documentation available.
- (d) Location acceptance is based upon plus or minus 1/2" tolerance on PD's whereas piping systems protected are given plus or minus 2" tolerance. Piping systems have not been, on an average, within PD tolerance.
- (e) We have incomplete documentation on anchor bolts with regard to embedment or testing.
- (f) No documentation is available for friction-type bolted connections.

The affected PD's are located in the following systems: Residual Heat Removal (RHR), Safety Injection (SIS), Upper Head Injection (UHI), Chemical and Volume Control (CVCS), Reactor Coolant (RCS), Main Steam (MS), Feedwater (FW), Auxiliary Feedwater (AFW), and Steam Generator Blow Down (BD) Systems.

Interim Progress

This nonconforming condition is being corrected by providing sufficient documentation and/or repairing deficient protective devices. The location of each device is being checked and deviations are being analyzed. Anchor bolts are being tested using QCP 1.14. Specific as-built conditions, which appear to be equivalent to the original design, are being analyzed. New requirements for welding employees, better orientation of welding employees, inprocess inspection training of structural inspectors, and detailed descriptions of the work within the work packages are expected to correct future structural installation and documentation problems. To date, nine PD's have been completed and documented.