

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

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March 17, 1981

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 UNIT 1 - POSSIBLE ERROR IN SIS PREOPERATIONAL TEST
- NCR WBN NEB 8014 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector M. Thomas on November 24, 1980, in accordance with 10 CFR 50.55(e). Interim reports were submitted on December 27, 1980, and February 6, 1981. Enclosed is our final report.

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 UNIT 1
POSSIBLE ERROR IN SIS PREOPERATIONAL TEST
NCR WBN NEB 8014
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

The TVA Engineering Design-issued scoping documents for the Safety Injection System preoperational tests do not require that the position of all check valves important to the test results be checked. As a result, apparently acceptable flow rates could have been measured from the combination of flow to the Reactor Coolant System and through partially opened check valves. During plant operation with the check valves in the proper positions, the flow rate to the Reactor Coolant System during a Loss of Coolant Accident (LOCA) could have been less than the value used in the plant safety analysis due to higher system resistance.

Safety Implications

The flow rate from the Safety Injection System during a LOCA could have been less than that claimed in the plant safety analysis, which could have adversely affected the safety of the plant.

Corrective Action

The scoping document for preoperational test W-3.1 has been revised to require position verification of all check valves which must be closed for the test results to be valid. The required modifications to the preop test instructions have been coordinated between EN DES and those running preop tests. The scoping documents for future nuclear plants will include this requirement. Implications to Sequoyah will be reported in NCR SQN NEB 8115.