

80-024-03L

USNRC REGION II
ATLANTA, GEORGIA

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

50-518,1920

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August 29, 1980



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:

HARTSVILLE NUCLEAR PLANT - REPORTABLE DEFICIENCY - DEFICIENT SIX
INCH BORG-WARNER GATE VALVES (NCR 23)

Initial report of the subject deficiency was made to NRC-OIE, Region
II Inspector R. W. Wright on August 1, 1980. In compliance with
paragraph 50.55(e) of 10 CFR Part 50, we are enclosing the final
report of the subject deficiency. If you have any questions, please
call Jim Domer at FTS 857-2014.

Very truly your,

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

HARTSVILLE NUCLEAR PLANT A UNIT 1
DEFICIENT 6" GATE VALVES (BORG-WARNER)
10CFR50.55(e)
NCR 23
REPORT NO. 1 (FINAL)

On August 1, 1980, TVA informed NRC-OIE Region II Inspector, R. W. Wright, of a potentially reportable condition under 10CFR50.55(e) regarding deficient 6" gate valves. The valves were manufactured by Borg-Warner, Nuclear Valve Division, Van Nuys, California, who reported this to NRC-OIE Region V pursuant to 10CFR21. This is the final report on this condition.

Description of Deficiency

TVA has received two 6" gate valves which may fail due to an error in design. If all worst case tolerances which are specified actually exist, the gate could disengage from the guide when the valve is in the backseat (full open) position. This could render the valve inoperable in the full open position. One valve is located in the Residual Heat Removal (RHR) system and the second valve is in the Drywell Chilled Water system.

Safety Implications

The valve in the RHR system is used to align Side II of the RHR system with the Reactor Core Isolation Cooling (RCIC) system in order to supply condensate to RCIC if needed. For all other modes of RHR system operation this valve is closed. Therefore, failure of this valve could lead to the degradation of RHR system due to misalignment with RCIC and make it susceptible to a single failure in Side I of RHR which could adversely affect plant safety.

The valve in the Drywell Chilled Water system is used as a containment isolation valve. Failure of this valve in the full open position leaves isolation of that line susceptible to a single failure which could adversely affect plant safety.

Corrective Action

The valves will be modified to eliminate the possibility of disengagement of the gate from the guide. A stem extension bushing will be installed to interface between the stem and the backseat. TVA anticipates that the valves will be modified by March 1, 1981.

This condition only applies to the two valves identified. All valves shipped after January 1, 1979 incorporated a different gate guide location such that this deficiency does not exist.