

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE
37401



September 12, 1973



Mr. John F. O'Leary, Director
Directorate of Licensing
Office of Regulation
U.S. Atomic Energy Commission
Washington, DC 20545

Dear Mr. O'Leary:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 -
DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - ABNORMAL
OCCURRENCE REPORT BFAO-738W

The purpose of this report is to provide details concerning the malfunction of a steam supply valve to the high-pressure coolant injection (HPCI) turbine at Browns Ferry on September 4, 1973.

Description of the Incident

During routine testing of the HPCI with auxiliary steam at 1 p.m. on September 4, steam valve FCV-73-16, which is the steam supply valve to the turbine, failed to operate. Preliminary investigation showed the trouble to be in the valve gearbox. The reactor was in the shutdown condition and had never been operated beyond open vessel testing.

Investigation and Corrective Action

Removal of the limitorque drive motor revealed several scored or damaged motor pinion gear teeth. Inspection of the clutch gear, which meshes with the motor pinion, revealed three chipped gear teeth. The damaged teeth showed that the gears had not been properly axially aligned since there was only 3/16- to 1/4-inch engagement of the teeth. The cause of misalignment was the improper positioning of the motor pinion on the motor shaft. The shouldered gear had been placed on the shaft backwards with the shoulder towards the motor, thus axially misaligning the gears.

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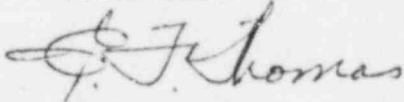
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The corresponding gears were removed from a similar limitorque on unit 2, which is still under construction, and installed in the motor operator. The valve was operated electrically to test serviceability. Satisfactory completion of the HPCI surveillance test demonstrated operability of the valve. The HPCI system was returned to service on September 5, 1973.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



E. F. Thomas
Director of Power Production

CC: Mr. Norman C. Mossley, Director
Region II Regulatory Operations Office, USAEC
230 Peachtree Street, NW.
Atlanta, Georgia 30303