TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE
37401

TVA 40TH ANNIVERSARY OF PEOPLE IN PARTNERSHIP

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-737W

The purpose of this report is to provide details concerning the suspected failure of the core spray system (CSS)-Loop I to deliver required flow at required system pressure. This occurrence was reported on September 3, 1973, by telephone and telegram to the AEC Region II Directorate of Regulatory Operations in Atlanta, Georgia.

Description of the Incident

On September 2, 1973, during routine surveillance testing the CSS-Loop I appeared to be unable to deliver required flow at the required system pressure in the torus-to-torus test mode. The reactor was in the cold-shutdown condition during preparations for initial nuclear heatup and the CSS was not required.

Investigation and Corrective Action

Flow in each CSS loop is measured by a GE/MAC 555 flow transmitter. Upon apparent failure of CSS-Loop I, the flow transmitter for CSS-Loop I was checked. The "as found" test results indicated a zero offset of approximately 2-1/2 percent. The transmitter was recalibrated and the CSS-Loop I surveillance test was repeated

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and all test results were satisfactory. CSS flow instruments were originally scheduled for annual calibration; and this flow transmitter was last calibrated on June 11, 1973. Previous calibration data did not indicate an offset error. The cause of this instrument error is not known, but hydraulic surging during system startup and shutdown is suspected. Calibration of the CSS-Loop II flow transmitter was checked and found to have about 1/2 percent offset in the same low direction at zero, which is within acceptable tolerance.

The CSS-Loop I was never incapable of delivering required flow at required pressure. The reported failure was in a flow instrument installed in a loop used for surveillance test purposes only.

The scheduled periodic calibration frequency for the CSS flow transmitters has been changed to bimonthly. This schedule will be adjusted back to the original calibration frequency if data for three successive calibrations are found to be within instrument accuracy.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

E. J. Thomas

E. F. Thomas
Director of Power Production

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