

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE
37401



October 25, 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-7324W

The purpose of this report is to provide details concerning the failure of the stack gas monitoring system at Browns Ferry Nuclear Plant. This occurrence was reported by telegram BFAO-7324T dated October 16, 1973, to the Directorate of Regulatory Operations, U.S. Atomic Energy Commission.

Description of the Incident

At 11:35 a.m. on October 15, the stack gas sample pump "A" motor failed. Attempts to place "B" pump in service failed. The reactor was operating at approximately 8-percent power. The "A" pump motor was replaced and the stack gas monitor system was returned to service at 12:50 p.m.

Investigation and Corrective Action

The A and B stack gas sample pump motors failed as a result of overheating and deterioration of motor insulation. The overheating was caused by live voltage drop in the undersized power supply cable from battery board 2 to panel 25-39. The motors were provided with low-temperature insulation, and this contributed to a more rapid failure.

A spare motor was installed and the sample system returned to service. The sample system was inoperable for an hour and 15 minutes.

There were no significant changes to the release rate from the stack and the power level during the period that the stack monitor was inoperable. The release rate during this period was less than 1 percent of the most restrictive technical specifications release rate limit.

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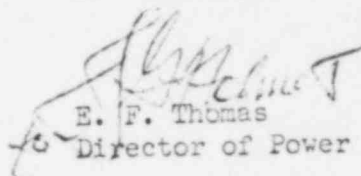
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Subsequent corrective action has been the replacement of both sample pump motors with motors rewound using class H insulation. Work is currently in progress to change the No. 8 size power supply cable to No. 1/0 conductors. Proposed design changes to motor circuitry to improve reliability have been submitted. These changes include dividing the power and control circuits including the fuses down to the pump selector switch.

Very truly yours,

TENNESSEE VALLEY AUTHORITY


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