

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE
37401



April 12, 1974

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

50-259

Dear Mr. O'Leary:

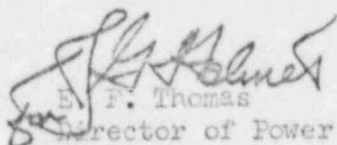
TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 -
DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - ABNORMAL
OCCURRENCE REPORT BFAO-7421W

The enclosed report is to provide details concerning a start
system failure on the right bank of standby diesel engine "D."

This event occurred on Browns Ferry Nuclear Plant unit 1 on
April 3, 1974, and is submitted in accordance with Appendix A
to Regulatory Guide 1.16, Revision 1, October 1973.

Very truly yours,

TENNESSEE VALLEY AUTHORITY


E. F. Thomas
Director of Power Production

Enclosure

CC (Enclosure):

Mr. Norman C. Moseley, Director
Region II Regulatory Operations Office, USAEC
230 Peachtree Street, NW., Suite 818
Atlanta, Georgia 30303

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ABNORMAL OCCURRENCE REPORT

Report No.: BFAO-7421W
Report Date: April 12, 1974
Occurrence Date: April 3, 1974
Facility: Browns Ferry Nuclear Plant unit 1

Identification of Occurrence

Start system failure on the right bank of standby diesel engine "D."

Conditions Prior to Occurrence

Reactor was operating at approximately 90-percent power.

Description of Occurrence

On April 3, 1974, during performance of special increased frequency surveillance testing of the diesel generator redundant air start system, diesel engine "D" failed to start with the right bank of air starting motors; however, it did start satisfactorily with the left bank.

Analysis of Occurrence

Each diesel engine contains two completely independent air starting systems, either of which is capable of starting the engine. The right bank of starters did not start the engine in the required time. Failure of the right-bank starters threatened the starting capability of the diesel generator but did not render it inoperable. The right-bank starters failed to develop enough torque to start the engine.

Corrective Action

Both starters of the right bank were removed from the engine. Two replacement starters were installed. The engine started satisfactorily using the replacement starters. Disassembly of the failed starters revealed rust from air supply piping and possible lack of adequate lubrication from the air-line lubricator. The air-line strainer also needed cleaning. The air-line strainer was cleaned and the air-line lubricator was adjusted to provide necessary lubrication to the starters. The air relay valve and solenoid valve were also checked for proper operation. An effort to determine the source of rust had been previously initiated for all diesels. Visual inspection of one starting air receiver tank internal surface has been completed. The inspection revealed rusting of the surface with some loose rust flakes, a small quantity of water in the bottom of the receiver, and a general appearance that an oil film exists on the surface. The results of this inspection and the rust accumulation problem were referred to our Design staff. They are currently considering various methods of correcting the problem.

Failure Data

Starter Data: Ingersoll-Rand, Size 150 EMP, Model 2899H-49

Similar-type failures occurred on diesel generator "B" on January 16, 1974 (see BFAO-744W) and on diesel generator "A" on February 25, 1974 (see BFAO-7413W).

Failure Data (Continued)

As a result of the occurrence on January 16, 1974, the frequency of inspection of all diesel generator air start motors was changed from annual to semiannual.

On February 25, 1974, an accelerated program of removing starting motors, blowing down air lines, cleaning inlet strainers, and replacing starters with rebuilt starters was begun.