



TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401



May 30, 1975

Mr. Benard C. Rusche
Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Rusche:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 -
DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - ABNORMAL
OCCURRENCE REPORT BFAO-50-259/758W

The enclosed report is to provide details concerning diesel generator "A" which failed to start during performance of a routine surveillance test and is submitted in accordance with Appendix A to Regulatory Guide 1.16, Revision 1, October 1973. This event occurred on Browns Ferry Nuclear Plant units 1 and 2.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. A. Coffey for
E. F. Thomas
Director of Power Production

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Enclosure

CC (Enclosure):

Mr. Norman C. Moseley, Director
U.S. Nuclear Regulatory Commission
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230 Peachtree Street, NW., Suite 818
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ABNORMAL OCCURRENCE REPORT

Report No.: BFAO-50-259/758W
Report Date: May 30, 1975
Occurrence Date: May 21, 1975
Facility: Browns Ferry Nuclear Plant units 1 and 2

Identification of Occurrence

Diesel generator "A" failed to start during performance of a routine surveillance test.

Conditions Prior to Occurrence

The reactors were in the cold shutdown condition following the fire damage on March 22, 1975.

Description of Occurrence

When an attempt was made to start diesel generator "A," the solenoid valves on the No. 1 bank of starters and on the No. 2 bank were activated normally and the pinion gears engaged. However, the multivane starting motors which drive the pinion gears on the No. 2 bank did not turn at all; and the No. 1 bank starting motors turned a few turns and then stopped. At this same time, the solenoid valve on the No. 1 starter bank would not reseal; and since the pinion gears remained engaged, the air was drained from the air tank.

Designation of Apparent Cause of Occurrence

The four air starting motors were removed and disassembled. The two starters from the No. 2 bank contained rust and oily grit, and the vanes would not move freely in the rotor slots. The two starters from the No. 1 bank contained some rust and grit, and the vanes would not move freely in the slots. The rust and grit were evidently caused by moisture in the air system along with inadequate operation of the lubricator. The malfunction of the solenoid valve was failure to reseal.

Analysis of Occurrence

The abnormality occurred during performance of a periodic test, and the reactors were in a cold shutdown condition. There were no adverse effects to the public health and safety or damage to systems, components, or structures.

Corrective Action

The air line strainers were cleaned, and lubricators were checked and filled with oil. All four starting motors were removed from the unit and replaced with rebuilt starters. Also, the two solenoid valves were removed, the seats cleaned, and reinstalled. The diesel generator was then started to complete the surveillance test. When the fast restart procedure was attempted, the diesel generator started, but the No. 1 starter bank pinion gears did not disengage. The solenoid valve was replaced with a spare, and the diesel generator started satisfactorily.

Corrective Action (continued)

Approved design changes have been issued which provide improved monitoring of the lubricator oil level; ease of filling of the oil lubricator reservoir; and blowdown valves on the air supply line strainers and piping changes which help eliminate condensate in the air system. These will be implemented when materials are available, and the diesel generators can be removed from service.

Failure Data

Diesel generator Ingersoll-Rand size 150BMP air starters; Model 289RH-49

Listed below are previous failure reports on the diesel generators:

<u>No.</u>	<u>Date</u>
7347	12/26/73
7350	1/2/74
744	1/24/74
7413	3/5/74
7419	3/27/74
7421	4/10/74