

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE
37401



January 15, 1974

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-741W

The enclosed report is to provide details concerning reactor water
level switch malfunction which occurred on Browns Ferry Nuclear
Plant unit 1 on January 6, 1974, and is submitted in accordance
with Appendix A to Regulatory Guide 1.16, Revision 1, October 1973.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

fn
E. F. Thomas
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.
Atlanta, Georgia 30303

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ABNORMAL OCCURRENCE REPORT

Report No.--BFAO-741W
Report Date--January 15, 1974
Occurrence Date--January 6, 1974
Facility--Browns Ferry Nuclear Plant unit 1

Identification of Occurrence

Reactor water level switch malfunction.

Conditions Prior to Occurrence

Reactor at 50-percent power during startup test program.

Description of Occurrence

During accelerated biweekly surveillance testing, reactor water level switches LIS-3-203A, B, C, and D were found to operate outside technical specification setpoint limits. LIS-3-203A and B high-level technical specification setpoints are less than or equal to 583 inches and were found to operate at 587 and 585 inches, respectively. LIS-3-203C and D low-level technical specification setpoints are greater than or equal to 538 inches and were found to operate at 537 inches and 536-1/2 inches, respectively.

Analysis of Occurrence

The contacts of LIS-3-203A and C are arranged in series to trip the RCIC turbine on high level. Although switch A operated outside the technical specification limit, the RCIC would have tripped 4 inches above the trip setting. The contacts of LIS-3-203B and D are arranged in series to isolate the HPCI system on high water level. The automatic isolation would have occurred 2 inches above the trip setting. Both the HPCI and RCIC turbines would have tripped before gross moisture carryover could have resulted.

The low-level contacts of LIS-3-203A, B, C, and D are arranged in a one out of two taken twice logic in the reactor protection system. Although contacts in LIS-3-203C and D operated outside the technical specification limit, contacts in LIS-3-203A and B would have performed the low water level trip within the technical specification limits.

Corrective Action

There was no apparent cause for the setpoint drift. An additional offset will be considered in the setpoint calibration to compensate for drift. These instruments will be checked on an accelerated frequency of once a week until three consecutive tests are satisfactory. At that time, a biweekly accelerated frequency will be resumed; and, upon three consecutive tests at that frequency, the normal monthly frequency will be resumed.

Failure Data

Barton Model 288.

Serial Nos.: LIS-3-203A, 288A-9958; LIS-3-203B, 288A-9959; LIS-3-203C, 288A-9960; LIS-3-203D, 288A-9961.

<u>Switch</u>	<u>Date</u>	<u>Failure</u>	<u>Corrective Action</u>
LIS-3-203B	10/9/73	Operated outside tech spec limit	Reset switch to setpoint
LIS-3-203C	10/9/73	Operated outside tech spec limit	Reset switch to setpoint
LIS-3-203B	11/8/73	Operated outside tech spec limit	Reset switch to setpoint
LIS-3-203C	11/8/73	Operated outside tech spec limit	Reset switch to setpoint
LIS-3-203A	11/16/73	Operated outside tech spec limit	Installing new locking assembly
LIS-3-203B	11/16/73	Operated outside tech spec limit	Installing new locking assembly
LIS-3-203C	11/16/73	Operated outside tech spec limit	Installing new locking assembly
LIS-3-203A	1/6/74	Operated outside tech spec limit	Reset switch to setpoint
LIS-3-203B	1/6/74	Operated outside tech spec limit	Reset switch to setpoint
LIS-3-203C	1/6/74	Operated outside tech spec limit	Reset switch to setpoint
LIS-3-203D	1/6/74	Operated outside tech spec limit	Reset switch to setpoint