NRC FORM 366
(7-77)

LICENSEE EVENT REPORT

CONTROL BLOCK: | | | | | | | (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | A L B R F 3 (2) | 0 0 - 0 0 0 0 0 - 0 0 (3) | 4 1 1 1 1 (4) | | (5)
LICENSEE CODE 9–14; LICENSE NUMBER 15–25; LICENSE TYPE 26–30; CAT 57–58

CON'T 0 1 REPORT SOURCE | L (6) | 0 5 0 0 0 2 9 6 (7) | 0 4 1 4 8 2 (8) | 0 4 2 7 8 2 (9)
DOCKET NUMBER 61–68; EVENT DATE 69–74; REPORT DATE 75–80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 During a maintenance outage on unit 3, while performing SI 4.1.A-7 (Reactor
0 3 Protection System Water Level) level switches operated as follows: 3-LIS-3-203A
0 4 sw.#1 - 537.03 in., 3-LIS-3-203B sw.#1 - 536.75 in. and 3-LIS-3-203D sw. #1 537.31 in.
0 5 Technical Specification Table 3.2.A limit is ≥ 538 in. There was no danger to the
0 6 health or safety of the public because of the small amount of drift below the
0 7 setpoint. 3-LIS-3-203C sw.#1 was operable.
0 8

0 9	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
	I B (11)	E (12)	E (13)	I N S T R U (14)	S (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 2	—	0 1 1	/	0 1	T	—	0

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
E (18)	F (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	N (24)	N (25)	B 0 8 0 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 Setpoint for the level indicating switches had drifted. The Barton model 288
1 1 switches were recalibrated, functionally tested, and returned to service. See
1 2 attached action plan for corrective action.
1 3
1 4

1 5	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
	D (28)	0 0 0 (29)	NA	B (31)	Surveillance testing

1 6	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
	Z (33)	Z (34)	NA	NA

1 7	PERSONNEL EXPOSURES NUMBER	TYPE	DESCRIPTION (39)
	0 0 0 (37)	Z (38)	NA

1 8	PERSONNEL INJURIES NUMBER	DESCRIPTION (41)
	0 0 0 (40)	NA

1 9	LOSS OF OR DAMAGE TO FACILITY (43) TYPE	DESCRIPTION
	Z (42)	NA

2 0 PUBLICITY ISSUED N (44) DESCRIPTION | NRC USE ONLY

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Tennessee Valley Authority
Browns Ferry Nuclear Plant

Form BF 17
BF 15.2
2/12/82

LER SUPPLEMENTAL INFORMATION

BFRO-50- 296 / 8211   Technical Specification Involved Table 3.2.A

Reported Under Technical Specification 6.7.2.a.(5)   Date Due NRC 4/28/82

Event Narrative:

Unit 1 was operating at 764 MW; unit 2 was operating at 1025 MW; unit 3 was in a maintenance outage. Only unit 3 was affected by this event. During the performance of SI 4.1.A-7(Reactor Protection System Reactor Water Level) level indicating switches 3-LIS-3-203A, switch #1 3-LIS-3-203B switch #1, and 3-LIS-3-203D switch #1, operated at 537.03 in., 536.75 in. and 537.31 in. respectively. Technical Specification Table 3.2.A requires these switches to operate at ≥ 538 inches. Below this trip setting the following occurs: (a) reactor scram; (b) Isolate reactor water cleanup system; (c)close the drywell vent purge and sump isolation valve; (d) initiate TIP withdrawal; (e) initiate standby gas treatment; (f) RHR isolation signal trip; and (g) initiate reactor building main vent isolation. These switches were recalibrated and returned to service. There was no danger to the health or safety of the public, plant employees, or equipment at any time because of the small amount of drift below the setpoint. 3-LIS-3-203C, switch #1 was operable. The failure of the level switch was due to setpoint drift. See attached action plan for category 3 setpoint drift.

*Previous Similar Events:

BFRO-50-259/77002, 78024, 80087, 81001, 81071, 82016; 260/80004, 81055, 81068, 82006; 296/80028, 81055, 82005

Retention: Period - Lifetime; Responsibility - Document Control Supervisor

*Revision: JRP

ACTION PLAN
BROWNS FERRY NUCLEAR PLANT - REACTOR PROTECTION SYSTEM
PRIMARY CONTAINMENT ISOLATION SYSTEM
AND CORE STANDBY COOLING SYSTEMS
PRIMARY SENSOR SWITCHES

BACKGROUND

The reactor protection system (RPS), the primary containment isolation system (PCIS), and the core standby cooling systems (CSCS) use mechanical-type switches in the sensors that monitor plant process parameters. The plant technical specifications have put very close tolerances on these instruments. As a result, almost any change in switch setpoint requires submittal of a licensee event report (LER). To reduce the frequency of this type LER, the following action plan has been developed.

LONG-TERM SOLUTION

Advances in technology make it possible to replace the mechanical-type switches with a more accurate and more stable electronic transmitter-electronic switch system. This modification is a major change to these safety systems and requires fully qualified safety-grade equipment. This equipment is in limited supply and has long procurement times. TVA is presently reviewing bids for this equipment. The tie-in of the new system to the balance of the RPS, the PCIS, and the CSCS requires a refueling outage. TVA expects to install the electronic systems during the first refueling outage after receipt of equipment.

INTERIM ACTIONS

Because of the long leadtime to implement the long-term solution, several interim actions have been taken. They are based on a review of licensee event reports which can be categorized as follows:

Category 1: Individual instruments whose setpoints have drifted two consecutive times.

Category 2: Groups of instruments which exhibit a predictable cyclic setpoint drift pattern.

Category 3: Individual, randomly occurring instrument setpoint drifts which cannot be put in category 1 or 2.

For each category the following action is taken:

Category A: The instrument is replaced with an identical instrument.

Category B: The margin between the instrument setting and the technical specification limit is improved.

Category C: The instrument is readjusted to the nominal setpoint.