

**LICENSEE EVENT REPORT**

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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LER SUPPLEMENTAL INFORMATION

BFRO-50- 296 / 83008 Technical Specification Involved Table 3.2.A, 3.1.A  
Reported Under Technical Specification 6.7.2.a.(2) \* Date Due NRC 2/20/83

Event Narrative:

Unit 1 was in a maintenance outage, unit 2 was in refuel outage, and unit 3 was operating normally at 100-percent power. Only unit 3 was affected by this event. During the performance of Surveillance Inspection 4.1.A-7 (Reactor Protection System Reactor Water Level) level indicating switches 3-LIS-3-203B switch #1, and 3-LIS-3-203D switch #1, operated at 537.31 inches. Technical Specifications Table 3.2.A and 3.1.A require 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 Barton model 288 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. The greatest out-of-tolerance was 0.74-percent. Also, 3-LIS-3-203 A and C switch #1 were operational. The failure of the level switch was due to setpoint drift. See the attached action plan for category 3 setpoint drift.

\* Previous Similar Events:

BFRO-50-259/73022W, 73026W, 73027W, 73033W, 73040W, 73041W, 73046W, 73052W, 74001W, 74010W, 77002, 77007, 78024, 80087, 80089, 81001, 81071, 81084, 82006, 82016, 82038, 82059, 82084

260/80004, 80029, 81027, 81055, 81068, 82003, 82006, 82013

296/79010, 79011, 79028, 80018, 80028, 81055, 82005, 82011, 82021, 82047, 82049

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 1: The instrument is replaced with an identical instrument.
- Category 2: The margin between the instrument setting and the technical specification limit is increased.
- Category 3: The instrument is readjusted to the specified setpoint.