

Duke Power Company
Oconee Unit 3

Report No: AO-287/74-8

Report Date: November 29, 1974

Occurrence Date: November 14, 1974

Facility: Oconee Unit 3, Seneca, South Carolina

Identification of Occurrence: Reactor Protective System Bistable Failure

Conditions Prior to Occurrence: Unit at 40 percent full power.

Description of Occurrence:

On November 14, 1974 the Reactor Protective System (RPS) high flux trip setpoint was changed from 50 percent to 80 percent full power prior to continuation of startup testing of 75 percent full power level. It was found that the channel B high flux bistable would not trip after the new setpoint was set. The three redundant channel high flux bistables reset properly. The bistable was replaced and proper operation verified.

Designation of Apparent Cause of Occurrence:

The bistable has a setpoint capability of 0 to 25 percent full power (0-10 volts DC). The setpoint of 80% corresponded to a trip voltage of 6.4 volts, however, the bistable would not trip even when the test voltage was increased to 10 volts. This bistable had been successfully tested on November 7, 1974 during the online channel calibration and functional test. This is the first failure of this type component among the 135 bistables utilized at the Oconee Nuclear Station.

Analysis of Occurrence:

The failure of the high flux bistable would have only prevented a channel B Reactor Protective System (RPS) trip. This would not have affected the other three channels of the RPS. A reactor trip would have occurred, if necessary, with trip signals from two out of the three remaining channels. The health and safety of the public was not affected.

Corrective Action:

The high flux bistable was replaced and the proper operation verified.

Failure Data:

Bailey Company part number 6621 500 A 1.

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