

DUKE POWER COMPANY
OCONEE UNIT 3

Report No.: AO-287/74-7

Report Date: November 14, 1974

Occurrence Date: November 2, 1974

Facility: Oconee Unit 3, Seneca, South Carolina

Identification of Occurrence: Reactor coolant pressure transmitter out of calibration

Conditions Prior to Occurrence: Unit in cold shutdown

Description of Occurrence:

On November 2, 1974, the calibration of the reactor coolant pressure transmitters for Oconee Unit 3 was checked. The Channel A pressure transmitter, RC3A-PT1, was found to be out of calibration by +3.2 percent. The full scale error measured as a result of transmitter drift was +25.6 psi. The pressure transmitters for Channels B, C, and D were within the required 2 percent limit. These transmitters provide reactor coolant pressure information to the Reactor Protective System.

Analysis of Occurrence:

The Reactor Protective System (RPS) high and low pressure trips are actuated by signals from these pressure transmitters. The RPS logic produces a trip when two out of four channels trip. Due to the redundancy present in the RPS, the calibration of one pressure transmitter did not affect the safe operation of the unit.

The high pressure trip setpoint for the Channel A detector drifted in a conservative direction and would have produced a trip at an actual pressure of 2323.4 psi rather than 2349 psi, the high pressure trip setpoint. The low pressure trip would have occurred at an actual pressure of 1780.4 psi based upon the setting of 1806 psi which had been set to allow for instrument drift. It can be shown that this low pressure trip setting would result in operation within the core protection safety limits and a conservative margin to departure from nucleate boiling (DNB) was maintained even for this out of calibration transmitter. It is concluded that the health and safety of the public was not affected.

Corrective Action:

The pressure transmitter was recalibrated to the required specifications. To prevent similar occurrences, a check of these transmitters will be performed on a monthly basis until a sequence of tests can be performed to

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determine the cause of the instrument drift. Identical transmitters, calibrated to the same specifications, will be subjected to a similar temperature environment over a period of time to determine the resulting instrument drift.

Failure Data:

The RPS pressure transmitter is a Motorola Type 56PH ID No. 1224-0301. Similar occurrences are discussed in Reports AO-269/74-8 dated May 17, 1974 and AO-269/74-18 dated November 13, 1974.