

DUKE POWER COMPANY
OCONEE UNIT 3

Report No.: AO-287/75-9

1-25-75

Report Date: July 25, 1975

Date of Occurrence: July 13, 1975

Facility: Oconee Unit 3, Seneca, South Carolina

Identification of Occurrence: Power level cutoff exceeded during transient xenon conditions

Conditions Prior to Occurrence: Unit at 80 percent full power

Description of Occurrence:

On July 13, 1975, Oconee Unit 3 was operating at approximately 80 percent full power while waiting for xenon to approach equilibrium. Control board annunciators alerted the control operator that reactor power had increased to 84 percent full power. The control operator noticed that the B loop turbine bypass valves had opened. The operator took immediate action to reduce reactor power below the power level cutoff and to close the turbine bypass block valve.

Designation of Apparent Cause of Occurrence:

Oconee Technical Specification 3.5.2.5.d does not allow Oconee 3 reactor power to be increased above 82.5 percent full power unless xenon reactivity is within 10 percent of the value for operation at steady-state rated power. Reactor power was increased above 82.5 percent full power by the Integrated Control System in response to the opening of the B loop turbine bypass valves. As the bypass valves opened, dumping steam directly to the condenser, the Integrated Control System increased reactor power in order to maintain the unit electrical load. The bypass valves opened improperly because of a failed module within the turbine bypass valve controls.

Analysis of Occurrence:

The power level cutoff is designed to maintain linear heat rate within limits based on 10CFR50, Appendix K (ECCS) criteria. Although xenon reactivity was not within prescribed limits, analysis has shown the peaking factors and maximum linear heat rate at this time to be well within the normal operating limits.

Operation above the power level cutoff was limited to a short period of time due to the prompt action taken by the control operator. It is concluded that the occurrence did not affect the safe operation of the unit nor the health and safety of the public.

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Corrective Action:

The failed module in the turbine bypass valve control section of the Integrated Control System was replaced and a functional check performed to verify correct operation.