

DUKE POWER COMPANY
OCONEE UNIT 3

Regulatory Docket File

7-27-76

Report No.: RO-287/76-9

Report Date: July 27, 1976

Occurrence Date: July 13, 1976

Facility: Oconee Unit 3, Seneca, South Carolina

Identification of Occurrence: Power increase above power level cutoff during feedwater transient

Conditions Prior to Occurrence: Unit at 81 percent full power

Description of Occurrence:

On July 13, 1976, Oconee Unit 3 was operating at 81 percent full power until xenon conditions as prescribed by Oconee Technical Specification 3.5.2.5.d could allow operation above the power level cutoff of 82.5 percent full power. During this time a feedwater transient caused a reactor power increase of approximately 3 percent. The resulting power level of 84 percent full power therefore exceeded the power level cutoff limit by approximately 1 $\frac{1}{2}$ percent. The control room operator promptly placed the feedwater controls in manual and decreased the feedwater flow to lower reactor power below the power level cutoff.

Apparent Cause of Occurrence:

This occurrence was apparently caused by a feedwater transient resulting from a spurious 80 percent decrease in feedwater demand for approximately two seconds. This induced an oscillation in the feedwater system resulting in an increase in feedwater flow and a lowering of the average reactor temperature (T_{ave}). Consequently, reactor power was automatically increased by the Integrated Control System in order to maintain T_{ave} .

Analysis of Occurrence:

This occurrence resulted in a power level increase above the power level cutoff for a period of less than a minute. At this time the xenon level was approaching its equilibrium value and the xenon worth was changing very slowly with time. This very brief power escalation caused no significant xenon perturbation or apparent power peaking. All control systems functioned properly and had the control operator not placed the feedwater control in manual, the ICS would have automatically reduced the power level as required. It is concluded, therefore, that this incident did not affect the health and safety of the public.

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Corrective Action:

The control operator involved promptly performed the appropriate corrective action by placing the feedwater system in manual control and reducing reactor power below the power level cutoff limit. This is the first incident of this type and investigation of the Integrated Control System did not determine the cause of the transient. It is considered that no further corrective action is appropriate.