

DUKE POWER COMPANY  
OCONEE UNIT 2

Report Number: RO-270/78-6

Report Date: May 5, 1978

Occurrence Date: April 7, 1978

Facility: Oconee Unit 2, Seneca, South Carolina

Identification of Occurrence: Reactor Coolant Leakage in Excess of 1 gpm

Conditions Prior to Occurrence: 100% Full Power

Description of Occurrence:

At 1000, on April 6, 1978, it was determined that the reactor coolant leakage rate exceeded 1 gpm and an investigation was commenced. By 1500, personnel had entered the Reactor Building (RB) and observed the leak to be from a valve packing and would require unit shutdown to repair. A safety evaluation pursuant to Oconee Technical Specification 3.1.6.5 was performed. At 2200 on April 8, 1978, the leak was determined to be coming from Spray Control Outlet Block Valve, 2RC-3. This valve and an instrument line root valve were both repacked. On April 12, 1978, the unit was started up but prior to achieving criticality, an additional leak was discovered in the pressurizer heater bundle. This leak was repaired on April 22, 1978. The unit was then returned to service.

Cause of Occurrence:

The leaks on 2RC-3 and the instrument line root valve were both caused by blown packing. The leak in the pressurizer heater bundle was caused by a flange seal weld failure which was evidently initiated during startup after the valve repairs.

Analysis of Occurrence:

The leakage rate experience throughout the incident was well within the capacity of one HPI pump and no adverse effect on Reactor Coolant System capabilities resulted. The leakage was entirely contained within the Reactor Building. Public health and safety were not endangered by this incident.

A total of 40.885 man-rem of exposure were received by 104 persons involved in the investigation and repair operations.

Corrective Action:

The two leaking valves were repacked and the pressurizer heater bundle flange was cleaned and seal welded.

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