

DUKE POWER COMPANY
OCONEE UNIT 1

Report No.: RO-269/76-10

Report Date: July 9, 1976

Occurrence Date: June 10, 1976

Facility: Oconee Unit 1, Seneca, South Carolina

Identification of Occurrence: Removal of Keowee Unit 1 from service due to clogged oil strainer

Conditions Prior to Occurrence: Units 1 and 3 at power operation
Unit 2 in refueling shutdown

Description of Occurrence:

On June 10, 1976, multiple alarms were received at Keowee Hydro Station Unit 1 which was in operation to supply system load. These alarms were related to the oil system for Unit 1. Investigation revealed that an oil strainer was clogged with a water/oil mixture which prevented flow to the bearing oil pumps. As a result, it was necessary to remove the unit from service for approximately 13 minutes to switch the duplex strainer to the "clean" side and clean the clogged strainer. The unit was also removed from service for approximately three hours on June 11, 1976 to replace the contaminated oil in the turbine bearing oil system. During these short periods of time, the unit was not available to supply emergency power for Oconee, resulting in operation in a degraded mode as permitted by Technical Specification 3.7.2.

Apparent Cause of Occurrence:

The apparent cause of this occurrence was determined to be a leaking heat exchanger in the turbine bearing oil system. This had allowed water to mix with the oil and resulted in clogging the oil strainer with a water/oil mixture.

Analysis of Occurrence:

During the approximately three hours in which Keowee Unit 1 was out of service, Keowee Unit 2 was available for emergency power, and in accordance with Oconee Technical Specification 3.7.2, was connected to the underground feeder circuit. It is concluded, therefore, that the health and safety of the public was not affected by this incident.

Corrective Action:

The clogged oil strainers were cleaned and contaminated oil was replaced with fresh oil. The bearing oil heat exchanger was then bypassed until a new heat exchanger could be installed on June 22, 1976. To prevent recurrence, a

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stainless steel heat exchanger was installed as a replacement in accordance with a station modification. This modification will be performed on Keowee Unit 2 when necessary parts are made available.