



DUKE POWER COMPANY  
OCONEE NUCLEAR STATION

Report Number: RO-269/80-4

Report Date: March 17, 1980

Occurrence Date: February 16, 1980

Facility: Oconee Nuclear Station, Seneca, South Carolina

Identification of Occurrence: High Pressure Service Water Pump Inoperable

Conditions Prior to Occurrence: Oconee 1 Cold Shutdown  
Oconee 2 72% Full Power  
Oconee 3 100% Full Power

Description of Occurrence:

At 0745 on February 16, 1980, during a routine inspection of the Turbine Building basement, water was observed to be leaking from the motor cooler casing drain for high pressure service water (HPSW) pump B. The pump was declared inoperable and removed from service. The leaks in the motor cooler were repaired, and the pump was returned to service by approximately 1100 on February 16, 1980.

Apparent Cause of Occurrence:

HPSW pump B was declared inoperable due to leaking tubes in its motor cooler casing. These leaks, as well as similar leaks previously reported, are considered to be the result of erosion. Although the pump is operated very infrequently, lake water flows through the cooler constantly, allowing continuous erosion of the tubes.

Analysis of Occurrence:

Two redundant pumps are provided to supply HPSW flow for the fire suppression water system. During the period HPSW pump B was out of service, HPSW pump A was operable and capable of satisfying the fire protection safety requirements of the HPSW system. In addition, the cooler leakage was determined to have been sufficiently small such that operation of HPSW pump B would not have been adversely affected. Oconee Nuclear Station Technical Specification 3.17.2.1 permits one HPSW pump to be removed from service for up to seven days, provided the redundant pump is operable. HPSW pump B was returned to service approximately three hours after it was declared inoperable, well within the time permitted. However, the removal of the pump from service constituted operation in a degraded mode permitted by a limiting condition for operation, and must therefore be reported pursuant to Technical Specification 6.6.2.1.b(2), although it was of no significance with respect to safe operation, and the health and safety of the public were not affected.

Corrective Action:

The cooler was drained and then repressurized so that the leaks could be identified. The leaks were soldered, and the cooler was repressurized to verify that they had been repaired. New motor coolers will be installed for both HPSW pumps by August 30, 1980. In addition, valves will be added to the cooling water supply lines for the HPSW pumps so that cooling flow is admitted only when the pumps are in service. It is anticipated that this action will greatly reduce the erosion rate for the cooler tubes.

