

Duke Power Company
Oconee Nuclear Station

Report Number: RO-269/79-22

Report Date: August 2, 1979

Occurrence Date: July 3, 1979

Facility: Oconee Nuclear Station, Seneca, South Carolina

Identification of Occurrence: High Pressure Service Water Pump Inoperable

Conditions Prior to Occurrence:

Unit 1	Cold Shutdown
Unit 2	90% Full Power
Unit 3	Cold Shutdown

Description of Occurrence:

At 1800 on July 3, 1979, during a routine inspection of the Turbine Building basement, water was observed to be leaking from the high pressure service water (HPSW) pump A motor cooler casing drain. The pump was declared inoperable and removed from service in order to allow repairs to be effected. The motor cooler casing was removed, and the source of the leak was determined to be the joint connecting the motor cooler tubing to the supply line. The leaking joint was resoldered, and the pump was declared operable and returned to service at 1800 on July 4, 1979.

Apparent Cause of Occurrence:

HPSW pump A was removed from service as a result of leakage from it's motor cooler casing. Similar leakage has been observed on four previous occasions, and each time the source has been identified to be the joint connecting the supply line to the motor cooler tubine. Although the pump motor is operated very infrequently, cooling water is constantly circulated through the motor cooler, and this constant flow may have resulted in erosion of the motor cooler tubing.

Analysis of Occurrence:

Two redundant HPSW pumps are provided to supply high pressure water for the fire suppression water system. During the period HPSW pump A was out of service, HPSW pump B was operable and capable of meeting the fire protection safety requirements of the HPSW system. In addition, evaluation of the HPSW pump A motor cooler leakage indicated that it was not of sufficient magnitude to affect the integrity of the pump motor. Oconee Nuclear Station Technical Specification 3.17.2.1 permits one HPSW pump to be removed from service for up to seven days provided that the other pump is operable. However, although the pump was returned to service within 24 hours after the leakage was observed, its removal from service constitutes operation in a degraded mode permitted by a limiting condition for operation. This incident 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 endangered.

Corrective Action:

Investigation of the motor cooler leakage revealed that the source was the joint connecting the supply header to the motor cooler tubing. The joint was resoldered and the motor cooler was pressurized to verify that the leak had been repaired. Replacement motor coolers have been ordered, and delivery is anticipated by August, 1979. In addition, consideration will be given to providing valves in the motor cooler supply lines so that cooling water flow can be removed when the pump motor is not operating.

