

SUPPLEMENTAL INFORMATION
FOR
LICENSEE EVENT REPORT 81-27

1. Cause Description and Analysis

On November 15, 1981, with the unit at hot shutdown conditions, "A" Residual Heat Removal (RHR) pump was observed to have about a 4 GPM leak from around the pump shaft. This leak was discovered during the performance of Periodic Test PT-2.8B and "A" RHR pump was declared inoperable at 2000 hours. This leakage rate exceeded the criteria of Technical Specification 4.4.3.a for leakage from the RHR System.

Investigation revealed that the leak resulted from a pump seal failure, caused by corrosion of the seal material. A visual inspection, by the pump seal manufacturer's technical representative, determined that the pump stationary seal was made of the wrong material for its application, which resulted in premature failure. Specifically, the stationary seal ring was made of a nickel-carbon steel alloy instead of tungsten carbide which is acceptable for use in a boric acid system. The usage of incorrect material appears to be the result of a purchasing error, and the cause of this error is still under investigation. Results of the investigation will be reported in a supplement to this report.

This event resulted in a degraded mode permitted by a Limiting Condition For Operation as specified by Technical Specification 3.3.1.3 which is reportable pursuant to 6.9.2.b.2. Due to difficulties in obtaining the proper repair parts and operational considerations, the maintenance period allowed by Technical Specification 3.3.1.3 was extended 24 hours pursuant to 3.3.7. "B" RHR pump was demonstrated operable so there was no threat to the public health and safety.

2. Corrective Action

"A" RHR pump was subsequently repaired with the proper seals, tested, and declared operable at 0300 hours on November 19, 1981.

3. Corrective Action To Prevent Recurrence

The purchase order for RHR pump seals has been revised to include the correct seal material. Any additional corrective action required as a result of the continuing investigation into the purchase order error will be provided in a supplement to this report.