PRIORITY ATTENTION REQUIRED MORNING REPORT - REGION IV FEBRUARY 8, 2000

Licensee/Facility: Notification:

Entergy Operations, Inc. MR Number:4-00-0008
Arkansas Nuclear 1 Date: 02/08/00
Russelville,Arkansas By telephone from SRI
Dockets: 50-313
PWR/B&W-L-LP

Subject: BOTH TRAINS OF LOW PRESSURE INJECTION/DECAY HEAT REMOVAL SYSTEM INOPERABLE

INOPERABLE Reportable Event Number: 36664 Discussion: On February 5, 2000, at 12:10 a.m. (CST), the licensee completed a planned shutdown of Arkansas Nuclear One - Unit 1 to replace a failed antirotation device on Reactor Coolant Pump D. During the course of a normal plant cooldown of the reactor coolant system, operators started Low Pressure Injection Pump/Decay Heat Removal (LPI/DHR) Pump P-34A at 11:38 a.m. on February 5 to place the decay heat removal system in service. After the pump was started, operators received a high temperature alarm on the pump's inboard bearing, stopped the pump, and declared it inoperable. The redundant LPI/DHR Pump P-34B was started and pump inboard bearing temperature increased and exceeded its alarm setpoint. Operators secured Pump P-34B and declared it inoperable at 1:06 p.m. on February 5. Decay heat removal was never interrupted and operators continued using reactor coolant pump operation and secondary system heat removal via a once-through steam generator to the condenser.

During review of the event, the licensee determined that the bearing lubricating oil for both LPI/DHR pumps had been changed during the last refueling outage in September 1999. The oil had been changed to one with a higher viscosity in an effort to improve pump bearing wear characteristics. Suspecting that the change in lubricant may have contributed to the high bearing temperature condition, the licensee replaced the oil in Pump P-34A with the lower viscosity lubricant that was used prior to September 1999. Operators placed the pump in service for shutdown cooling on February 6 for approximately 1 hour and 10 minutes and observed that bearing temperatures stabilized at normal levels. The licensee then declared Pump P-34A operable for its decay heat removal function. Decay heat removal continued with the operating reactor coolant pumps and steam generator.

On February 6, the licensee also drained the oil from Pump P-34B. Particulate was observed in the oil and a boroscopic inspection was performed of the bearings. Based on oil analysis and the bearing inspection, the licensee concluded that there was no bearing damage. The bearing housings were flushed and refilled with the lower viscosity lubricant that was used prior to September 1999. Operators attempted to test the pump in the shutdown cooling mode on February 7, but had to stop it when the inboard bearing temperature again approached the alarm setpoint.

On February 8 at 12:53 a.m., operators placed Pump P-34A in service and initiated a plant cooldown. The pump performed normally and operators stopped the operating reactor coolant pumps at 2:32 a.m. At 5:20 a.m., the reactor coolant system temperature was being maintained between 180 and 190 degrees and reactor coolant system pressure was being maintained between 225 and 245 psig. The licensee is maintaining the reactor coolant system loops operable while repairs are made to Pump P-34B. Regional Action: The Region initiated a special inspection on February 8, 2000, to evaluate the cause of the event and assess the licensee's response to the event.

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