

## (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

7

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

FACILITY STATUS	POWER	OTHER STATUS	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION
			(30)	(32)

ACTIVITY	CONTENT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
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PHONE: 309-654-2241, ext 245

- I. LER NUMBER: 82-30/03L-0
- II. LICENSEE NAME: Commonwealth Edison Company  
Quad-Cities Nuclear Power Station
- III. FACILITY NAME: Unit One
- IV. DOCKET NUMBER: 050-254
- V. EVENT DESCRIPTION;

On September 5, 1982, at about 1100 hours, Unit One was being shutdown for refueling. In preparation for taking the High Pressure Coolant Injection (HPCI) System out of service for overspeed testing, the Residual Heat Removal (RHR) Service Water Pumps were being tested. When RHR Service Water Pump 1-1001-65D was started at 1110 hours, the packing on the low pressure pump was burned and excessive leakage was observed. The pump was stopped, and the surveillances required by Technical Specification 3.5.B.2 were performed. At 1250 hours, after completion of required surveillances, the pump was taken out of service to be repacked under Work Request Q21436. The pump was returned to service at 1725 hours and successfully tested.

VI. PROBABLE CONSEQUENCES OF THE OCCURRENCE:

The consequences of this occurrence were minimal. The 1D Service Water Pump was not rendered inoperable by the burned packing, and the remaining three 100 percent capacity RHR Service Water Pumps on Unit One were proven operable prior to taking the 1D Service Water Pump out of service. Technical Specification 3.5.B.2 allows operation with an RHR Service Water Pump inoperable for up to 30 days, provided the remaining components of the containment cooling system are proven operable.

VII. CAUSE:

The cause of this event is attributed to personnel error. The pump bearings are located where shaft seal packing leakage can dilute the bearing oil and cause subsequent bearing damage. This has occurred in the past. Operators, because of the tendency for the RHR Service Water Pump packing to overheat due to overtightening, do not attempt to completely stop the leakage but only to limit it. The Operator, accompanied by the Shift Foreman, tightened the packing to the point of excessive shaft friction, causing the packing to burn when the pump was operated. Due to pump design and abrasives in the RHR Service Water, the packing must be kept very tight to avoid significant leakage and dilution of bearing oil. Thus, it is very difficult to adjust the packing in order to sufficiently limit leakage without causing damage to the RHR Service Water Pump packing.

#### VIII. CORRECTIVE ACTION:

The immediate corrective action taken was to replace the pump packing under Work Request Q21436. The long term corrective action will be a modification to the bearing housing. This modification will seal the bearings against water to prevent damage due to packing leakage. Thus, the packing will not need to be kept as tight. Therefore, preventing future problems of this type. This modification requires disassembly of the pumps and will be completed as parts are available and when the pumps are disassembled for other maintenance. In addition, the Station is conducting a special test to determine if mechanical seals would reduce leakage and maintenance on these pumps. This test will involve installing one mechanical seal on an RHR Service Water Pump and monitoring its performance. If the test proves successful, installation of additional seals will be considered. This long term corrective action should improve the reliability of these pumps.