

LICENSEE EVENT REPORT

CONTROL BLOCK: _____ (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	1	L	Q	A	D	1	0	0	0	-	0	0	0	-	0	0	0	4	1	1	1	1	4	5
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
LICENSEE CODE							LICENSE NUMBER							LICENSE TYPE					CAT 58						

0	1	L	0	5	0	0	0	2	5	4	0	8	0	1	8	2	0	8	2	3	8	2	9	
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
REPORT SOURCE		DOCKET NUMBER							EVENT DATE					REPORT DATE										

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | On August 1, 1982, the ID Residual Heat Removal System (RHRS) Service Water Pump

0 3 | was removed from service to replace a leaking vent line on the low pressure stage

0 4 | of the pump. Subsequent maintenance was performed on August 8 and 13, 1982. All

0 5 | surveillances, as required by Technical Specification 4.5.B.2, were successfully

0 6 | performed. The RHRS was always capable of meeting its design requirements. Thus,

0 7 | there were no safety implications involved with this occurrence.

0	9	C	I	F	E	B	P	U	M	P	X	X	B	Z	8	2	0	2	1	0	3	L	0	10	7	5	
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
SYSTEM CODE			CAUSE CODE			CAUSE SUBCODE			COMPONENT CODE				COMP SUBCODE		VALVE SUBCODE		EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE		REPORT TYPE		REVISION NO.		
LER/RO REPORT NUMBER		ACTION TAKEN		FUTURE ACTION		EFFECT ON PLANT		SHUTDOWN METHOD		HOURS		ATTACHMENT SUBMITTED		NPRD-4 FORM SUB		PRIME COMP SUPPLIER		COMPONENT MANUFACTURER									

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | Failure of the vent was due to stress fatigue, as a result of pump vibration. The

1 1 | failure occurred at the threaded connector at the base of the vent line. On August

1 2 | 2, 1982, the line was replaced like-for-like, but subsequent leakage and repairs on

1 3 | August 8 and 13, 1982, lead to the removal and plugging of the vent connector.

1 4 | Future actions will replace the vent and weld it at its connector to strengthen the

1 5 | apparent stress point.

1	5	E	0	5	5	NA	B	Operator Observation	32
7	8	9	10	11	12	13	14	15	16
FACILITY STATUS		% POWER		OTHER STATUS		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION	
ACTIVITY CONTENT		RELEASED OF RELEASE		AMOUNT OF ACTIVITY		LOCATION OF RELEASE			
1	6	Z	Z	NA	NA	NA			
7	8	9	10	11	12	13	14	15	16
PERSONNEL EXPOSURES		PERSONNEL INJURIES		LOSS OF OR DAMAGE TO FACILITY		PUBLICITY			
1	7	0	0	0	0	0	0	0	0
7	8	9	10	11	12	13	14	15	16
ISSUED		DESCRIPTION		PDR		ADOCK		PDR	
2	0	N	NA	NA	8209030372	820823	05000254	S	
7	8	9	10	11	12	13	14	15	16

- I. LER NUMBER: LER/RO 82-21/03L-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:

The 1D Residual Heat Removal (RHR) System Service Water Pump was removed from service, at 0930 hours on August 1, 1982, when it was discovered that the vent line on the low pressure stage of the pump was broken. The vent line was repaired, and the pump was returned to service and proven operable at 1245 hours on August 2, 1982. Subsequent repairs were made on August 8, 1982, and August 13, 1982, after small leaks were discovered at threaded joints in the vent line. Operation continued in a degraded mode in each case as permitted by Technical Specification limiting condition for operation 3.5.B.2. The surveillances required by Technical Specification section 4.5.B.2 were performed, and no other equipment failures were found during these surveillances.

VI. PROBABLE CONSEQUENCES OF THE OCCURRENCE:

Removing one RHR Service Water pump from service has no adverse effect on the overall safety of the Reactor. As described in the Final Safety Analysis Report 6.2.4.2., any one RHR Service Water pump of the remaining three supplies the required cooling capacity. As determined during the surveillance, all other active components of the RHR System were available during the event.

The RHR Service Water pumps have been inoperative in the past. The most recent occurrence is documented in LER/RO number 50-82-9/03L-0. This is the first time an RHR Service Water pump has been taken out of service to repair a failed vent line.

VII. CAUSE:

The probable cause of this occurrence is stress induced cracking. The presence of stress is due to the vibration of the pump and the mass of the vent line which consists of approximately 1 foot of 1/2 inch pipe and one 1/2 inch globe valve. Failure of the line was on the threaded portion of the pipe where it couples to the top of the pump housing.

VIII. CORRECTIVE ACTION:

The immediate action to correct the situation was to replace the line with new like-for-like pipe as documented on Work Request number Q20874. After additional leaks were found in the vent line, the entire vent line was replaced with a plug. This restored the pump to its original design. The remaining pump vent lines were inspected for any evidence of cracking. Subsequent action to reduce probability of this type of failure recurring was initiated under Work Request number Q21013 to replace the vent line and weld the joints on the vent line for increased strength. This action is planned during the next outage of sufficient duration.