NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Quad-Cities Nuclear Power Station, Unit 1 & Unit 2	0 5 0 0 0 2 5 4	1 OF 0 3

TITLE (4)
1/2 Diesel Generator and 1B RHR Service Water Pump Inoperable

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
0 6	1 7	8 5	8 5	— 0 0 8	— 0 0	0 7	1 0	8 5	Quad-Cities Unit 2	0 5 0 0 0 2 6 5
										0 5 0 0 0

OPERATING MODE (9)	4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(a)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(a)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(a)(2)	X 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Dave Kimler, Technical Staff	AREA CODE 3 0 9 — 6 5 4 - 2 2 4 1

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X	C C	P S X		Y							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On June 17, 1985, Unit 1 was in the RUN mode at 99 percent core thermal power and Unit 2 was in the RUN mode at 83 percent core thermal power. At 2115 hours, a high level alarm was received from the 1B/1C Residual Heat Removal Service Water (RHR) (BO) vault sump. The 1C RHR Service Water Pump was immediately tripped and an Equipment Attendant was dispatched to investigate. It was discovered that a broken vent line on the 1C RHR Service Water Pump existed and that the vault was partially filled with water. As a precautionary measure, the 1B RHR Service Water Pump and the 1/2 Diesel Generator (EK) Cooling Water Pump were declared inoperable because they are located in the same room. This action rendered the 1/2 Emergency Diesel Generator inoperable. Electrical integrity tests were performed on all the motors and showed all parameters to be normal. The 1C RHR Service Water Pump was repaired at 0230 hours on June 18, 1985. The 1/2 Diesel Generator Cooling Water Pump was returned to service at 0300 hours and the 1B RHR Service Water Pump was returned to service at 0515 hours on June 18, 1985.

This report is submitted to you in accordance with the requirements of the Code of Federal Regulations, Title 10, Part 50.73(a)(2)(vii), which requires the reporting of any event where a single cause or condition caused at least one independent train or channel or two independent trains or channels to become inoperable in a single system.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Event Description

On June 17, 1985, at 2115 hours, Unit 1 was in the RUN mode at 99 percent core thermal power and Unit 2 was in the RUN mode at 83 percent core thermal power. A high level alarm was received from the 1B/1C Residual Heat Removal Service Water (RHR) (BO) vault sump. The 1C RHR Service Water Pump, which was operating to maintain Torus temperature, was tripped and an Equipment Attendant was dispatched to investigate the alarm. Upon arriving at the vault, the Equipment Attendant reported finding a broken vent line on the 1C RHR Service Water Pump and the vault partially filled with water. The 1C RHR Service Water Pump was placed out of service and Work Request Q43063 was written to repair the broken vent line. Further investigation revealed that water from the broken vent line had been spraying on the motors of the Unit 1/2 Diesel Generator (EK) Cooling Water Pump and the 1B RHR Service Water Pump. As a precautionary measure, these pumps were declared inoperable at 2335 hours on June 17, 1985. With the 1B and 1C RHR Service Water Pumps inoperable, and the 1/2 Emergency Diesel Generator inoperable due to the inoperable Diesel Generator Cooling Water Pump, a Limiting Condition for Operation (LCO) requiring a shutdown within 24 hours was entered. A power level reduction on the unit was initiated at 25 MWe/hour and a Generating Station Emergency Plan (GSEP) Unusual Event was declared for entering an LCO requiring a shutdown.

Work Request Q43064 was written to inspect the motors for possible damage. Electrical integrity tests performed on the motors showed all parameters to be normal. The 1C RHR Service Water Pump was repaired and returned to service at 0230 hours on June 18, 1985. The Unit 1/2 Diesel Generator Cooling Water Pump was returned to service at 0300 hours and the 1B RHR Service Water Pump was returned to service at 0515 hours on June 18, 1985. The GSEP Unusual Event was terminated at 0325 hours on June 18, 1985, and power level on the unit was increased.

Since each loop of the RHR Service Water had an operable pump, namely the 1A and 1D RHR Service Water Pumps, and the Unit 1 and Unit 2 Emergency Diesel Generators were both operable, the safety implications of this event were minimal. A one hour Emergency Notification System (ENS) notification was made in accordance with 10 CFR 50.72.

Cause

The cause of this event was a broken vent line on the 1C RHR Service Water Pump. As a precautionary measure, the Unit 1/2 Diesel Generator Cooling Water Pump and the 1B RHR Service Water Pump were placed out of service in order to have their motors checked for electrical integrity. With the Unit 1/2 Diesel Generator Cooling Water Pump out of service, the

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Cause (continued)

Unit 1/2 Emergency Diesel Generator was rendered inoperable as well. The root cause of this event was attributed to cyclic fatigue and vibration. Due to cyclic loading during normal pump operation, the vent line formed cracks which eventually propagated through-wall and began leaking.

Corrective Action

The immediate corrective action was to replace the defective piping. The defective pipe was removed and repaired by cutting off the old threads and rethreading. In the future, the length of new vent line assemblies will be made as short as possible to minimize vibration in the vent line. An event similar to this one occurred on Unit 2 on June 13, 1985. That event, however, did not affect the operability of other equipment and, therefore, was not classified as a Licensee Event Report. The event is documented in Commonwealth Edison Deviation Report D-4-2-85-39. The next previous occurrence of a failure of this type occurred in 1982.

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NJK-85-191

July 10, 1985

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Reference: Quad-Cities Nuclear Power Station
Docket Number 50-254, DPR-29, Unit One

Enclosed please find Licensee Event Report (LER) 85-008, Revision 00, for Quad-Cities Nuclear Power Station.

This report is submitted to you in accordance with the requirements of the Code of Federal Regulations, Title 10, Part 50.73(a)(2)(vii), which requires the reporting of any event where a single cause or condition caused at least one independent train or channel or two independent trains or channels to become inoperable in a single system.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION

N. J. Kalivianakis
Station Manager

NJK:BRS/bb

Enclosure

cc B. Rybak
A. Madison
INPO Records Center
NRC Region III

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