

Commonwealth Edison Company  
Quad Cities Generating Station  
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April 19, 2000

SVP-00-075

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Quad Cities Nuclear Power Station, Unit 1  
Facility Operating License No. DPR-29  
NRC Docket No. 50-254

Subject: High Pressure Coolant Injection System failure to start during logic test

Enclosed is Licensee Event Report (LER) 254/00-003, Revision 00, for Quad Cities Nuclear Power Station.

This report is submitted in accordance with the requirements of the Code of Federal Regulations, Title 10, Part 50.73(a)(2)(v)(D). The licensee shall report any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident.

We are committing to the following action:

A supplemental LER will be submitted after completion of the root cause determination.

Any other actions described in the submittal represent intended or planned actions by Commonwealth Edison (ComEd) Company. They are described for the NRC's information and are not regulatory commitments.

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Should you have any questions concerning this letter, please contact Mr. C.C. Peterson at (309) 654-2241, extension 3609.

Respectfully,

A handwritten signature in cursive script, appearing to read "Joel P. Dimmette, Jr.", written in black ink.

Joel P. Dimmette, Jr.  
Site Vice President  
Quad Cities Nuclear Power Station

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station

LICENSEE EVENT REPORT (LER)

Form Rev. 2.0

Facility Name (1) Quad Cities Unit 1	Docket Number (2) 0   5   0   0   0   2   5   4	Page (3) 1   of   0   4
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Title (4)  
Unit 1 High Pressure Coolant Injection (HPCI) Subsystem Auxiliary Oil Pump failure to continue running on an auto-initiation signal during Logic Functional Test

Event Date (5)			LER Number (6)			Report Date (7)			Other Facilities Involved (8)															
Month	Day	Year	Year	Sequential Number	Revision Number	Month	Day	Year	Docket Number(s)															
0	3	2	1	2000	2000	0	0	3	0	0	0	4	1	8	2000	0	5	0	0	0				

OPERATING MODE (9) 1

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)

POWER LEVEL (10)	1	0	0	20.402(b)	20.405(a)(1)(i)	20.405(a)(1)(ii)	20.405(a)(1)(iii)	20.405(a)(1)(iv)	20.405(a)(1)(v)	20.405(c)	50.36(c)(1)	50.36(c)(2)	50.73(a)(2)(i)	50.73(a)(2)(ii)	50.73(a)(2)(iii)	50.73(a)(2)(iv)	50.73(a)(2)(v)	50.73(a)(2)(vii)	50.73(a)(2)(viii)(A)	50.73(a)(viii)(B)	50.73(a)(2)(x)	73.71(b)	73.71(c)	Other (Specify in Abstract below and in Text)
											X													

LICENSEE CONTACT FOR THIS LER (12)

Name	TELEPHONE NUMBER
Charles Peterson, Regulatory Affairs Manager, ext. 3609	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 EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)  NO

Expected Submission Date (15) Month: 0 | 5 | Day: 0 | 3 | Year: 2000

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

**ABSTRACT:**

On March 21, 2000 at 1758 hours the Unit 1 HPCI Auxiliary Oil Pump (AOP) failed to continuously operate when initiated as a part of QCOS 2300-29 "HPCI System Logic Functional Test." The AOP was observed to cycle on and off about every 3 seconds for approximately 10 minutes when given an auto-start signal as a part of the surveillance test.

The logic test was stopped and an adjustment was made to the oil Pressure Regulating Valve 1-2399-PRV3 (PRV #3). The valve was adjusted to maintain a slightly lower pressure. Two more tests of the auto-initiation logic of Unit 1 HPCI were performed and on each of these occasions the AOP started and continued to run, normally.

The logic testing was completed with satisfactory results.

The root cause determination for this event has not been completed. A supplemental report will be submitted after the root cause determination has been completed.

The safety significance of this event was minimal. The Automatic Depressurization System and Low Pressure Emergency Systems were operable during this event.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION													Form Rev. 2.0							
FACILITY NAME (1)	DOCKET NUMBER (2)								LER NUMBER (6)					PAGE (3)						
									Year		Sequential Number			Revision Number						
									Quad Cities Unit 1	0	5	0	0	0	2	5	4	2000		0
TEXT Energy Industry Identification System (EIS) codes are identified in the text as [XX]																				

**PLANT AND SYSTEM IDENTIFICATION:**

General Electric – Boiling Water Reactor – 2511 MWt rated core thermal power.

**EVENT IDENTIFICATION:**

Unit 1 High Pressure Coolant Injection (HPCI) Subsystem Auxiliary Oil Pump failure to continue running on an auto-initiation signal during Logic Functional Test

**A. CONDITIONS PRIOR TO EVENT:**

Unit:	1	Event Date:	March 21, 2000	Event Time:	1758 hours
Reactor Mode:	1	Mode Name:	Power Operation	Power Level:	100%

This report was initiated by Licensee Event Report (LER) 254/00-003

Power Operation (1) – Mode switch in the Run position with average reactor coolant temperature at any temperature.

**B. DESCRIPTION OF EVENT:**

This LER is being submitted in accordance with 10 CFR 50.73 (a)(2)(v)(D), which requires the reporting of any event or condition that alone could have prevented the fulfillment of a safety function of structures or systems that are needed to mitigate the consequences of an accident.

On March 21, 2000 at 1758 hours the Unit 1 High Pressure Coolant Injection (HPCI) system [BJ] Auxiliary Oil Pump (AOP) failed to continuously operate when initiated as a part of QCOS 2300-29 “HPCI System Logic Functional Test.” The AOP was observed to start and stop numerous times, on a frequency of about every three seconds, when given an auto-start signal as a part of the Logic Functional Test. After several minutes, the AOP control switch was taken to manual to maintain the pump in a running condition. The logic test was stopped and Problem Identification Form (PIF) Q2000-01214 was initiated.

An operator was dispatched to the Unit One HPCI room to check the AOP motor for excessive temperature or other abnormalities. The temperature of the AOP motor and the HPCI Emergency Oil Pump motor were found to be approximately the same temperature and no other damage was noted.

Nuclear Work Request (NWR) 990156693 was written to adjust oil Pressure Regulating Valve 1-2399-PRV3 (PRV #3) [PCV]. The valve was adjusted, about 4 psig, to maintain a lower pressure and the auto-initiation signal was inserted again. Following this adjustment the AOP was observed to cycle on then off and then back on once. Since this cycling did not affect the HPCI logic test the testing was completed.

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TEXT Energy Industry Identification System (EIS) codes are identified in the text as [XX]																				

After completion of the logic test, two more tests of the auto-initiation of Unit 1 HPCI were performed and on each of these occasions the AOP started and continued to run satisfactorily. The pressure at the AOP trip switch was measured during these subsequent tests and the oil system pressure was found to have about 2.5 psig margin to the trip setpoint following the PRV #3 setpoint adjustment.

Engineering Operational Problem Response (EOPR) 00-01-2300-002 was written to evaluate this event and provide information to support operations decision process. The EOPR recommended that the Unit 1 HPCI subsystem be returned to operable status based the PRV #3 adjustment that had been made and on the subsequent successful testing. Operations declared the Unit 1 HPCI subsystem operable at 1850 hours on March 23, 2000.

**C. CAUSE OF THE EVENT:**

The determination of the root cause associated with the auxiliary oil pump failure to remain running during the logic test is not complete. A supplemental LER will be submitted upon completion of the root cause determination

**D. SAFETY ANALYSIS:**

During this event the Automatic Depressurization system and the Low Pressure Emergency Cooling Systems were operable. Therefore, the safety significance of this event was minimal.

**E. CORRECTIVE ACTIONS:**

**Corrective Actions Completed:**

1. PRV #3 setpoint was adjusted to 49 psig per the vendor manual with only the AOP operating.
2. The calibration setpoint of PS #4 was checked and found to be within allowable tolerances.
3. The calibration of PG #5 was checked and found to be within allowable tolerances.

**Corrective Action to be Completed:**

Corrective actions will be developed as part of the determination of the root cause. A supplemental LER will be submitted after completion of the root cause determination.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Form Rev. 2.0

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
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TEXT Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]					

**F. PREVIOUS OCCURRENCES:**

Previous occurrences will be assessed as part of the root cause determination.

**G. COMPONENT FAILURE DATA:**

Component failure data, if required will be presented in the supplemental LER