

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

Quad-Cities Nuclear Power Station, Unit 1

DOCKET NUMBER (2)

0 5 0 0 0 2 5 4 1 OF 0 3

PAGE (3)

TITLE (4)

1A Fuel Pool Radiation Monitor Trip

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	3	2	7	8	5	8	5	0	1	2	0	0	0	0	0	0
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)													
4			20.402(b)			20.405(c)			X 50.73(a)(2)(iv)			73.71(b)				
POWER LEVEL (10)			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)			73.71(e)				
1 0 0			20.405(a)(1)(ii)			50.36(c)(2)			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)(ix)							

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Dan Wilgus, Technical Staff Engineer	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 NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs										
B	I	L	M	O	N	G	0	8	2	Y									

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input checked="" type="checkbox"/>	<input type="checkbox"/>				

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

On March 27, 1985, at 1525 hours, and on April 18, 1985, at 0644 hours, the 1A Fuel Pool Radiation Monitor (IL) spiked upscale isolating the Reactor Building Ventilation System (VA) and starting the 'A' Standby Gas Treatment System (BH). Following the trip on April 18, 1985, the sensor unit from the 1A Fuel Pool Monitor was exchanged with the 1B Fuel Pool Monitor. On April 19, 1985, at 0234 hours, the 1B Fuel Pool Monitor spiked upscale and isolated the Reactor Building Ventilation System and started the 'A' Standby Gas Treatment System. There were no actual increases in radiation on the Refuel Floor and no radioactive releases associated with the event.

The cause of these spurious trips appears to be a loose capacitor in the Sensor Unit. The capacitor connection was repaired on April 20, 1985, at 0325 hours.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						PAGE (3)		
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TEXT (If more space is required, use additional NRC Form 388A's) (17)

Event Description

On March 27, 1985, Unit One was operating at 100 percent of rated core thermal power. At 1525 hours the 1A Fuel Pool Radiation Monitor (IL) spiked upscale energizing the "Fuel Pool 'A' High Radiation" alarm. The Reactor Building Ventilation System (VA) isolated and the 'A' Standby Gas Treatment System (BH) automatically started as designed. There was no radioactive release associated with this event. All systems operated as designed.

On April 18, 1985, Unit One was operating at 94 percent of rated core thermal power. At 0644 hours the 1A Fuel Pool Radiation Monitor again spiked upscale energizing the "Fuel Pool 'A' High Radiation" alarm. The Reactor Building Ventilation System isolated and the 'A' Standby Gas Treatment System automatically started.

On April 19, 1985, Unit One was operating at 90 percent of rated core thermal power. At 0234 hours the 1B Fuel Pool Radiation Monitor spiked upscale energizing the "Fuel Pool 'B' High Radiation" alarm. The Reactor Building Ventilation System isolated and the 'A' Standby Gas Treatment System automatically started.

With each of these events the Radiation Protection Department could find no actual increase in radiation on the Refuel Floor. The upscale trip setpoint for these radiation monitors is 100 millirem per hour. The current dose rate on the Refuel Floor in the vicinity of the radiation monitors is approximately 3 to 6 millirem per hour.

This report is being submitted due to the requirements of Title 10 of the Code of Federal Regulations, Part 50.73(a)(2)(iv).

Cause

It appears that the cause of the spurious trips was a loose capacitor in the sensor unit of the radiation monitor. When the sensor unit from the 1A monitor was exchanged with the 1B monitor the 1B monitor tripped on the following day. In addition, a light emitting diode (LED) (DS1) was also found to be open. The loose capacitor (C3) together with the open LED would cause spurious upscale spikes.

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TEXT (If more space is required, use additional NRC Form 388A's) (17)

Corrective Action

In addition to the three upscale spikes documented here, Fuel Pool Radiation Monitors have spiked upscale 15 times since March 7, 1985. The other incidents are documented in Licensee Event Reports 85-5 and 85-14. The Instrument Maintenance Department has devoted a great amount of effort to determine the cause of these spurious trips. The Geiger Mueller tube in the Sensor Unit and the Sensor Converter have been replaced. The response time of the trip units was reduced by the installation of a capacitor in the unit. In an attempt to isolate the problem and find the defective part, the trip units were exchanged between the 1A and 1B Channels. The Sensor Units between the 1A and 1B Channels were also exchanged. It was this exchange of the Sensor Units that resulted in 1B monitor trip on April 19, 1985. In checking out the Sensor Unit it was discovered that a capacitor was loose at its terminal point. The connection was repaired on April 20, 1985, at 0325 hours. The open LED was also replaced at this time.



Commonwealth Edison

Quad Cities Nuclear Power Station
22710 206 Avenue North
Cordova, Illinois 61242
Telephone 309/654-2241

NJK-85-117

April 22, 1985

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

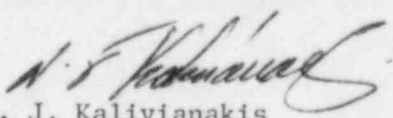
Reference: Quad-Cities Nuclear Power Station
Docket Number 50-254, DPR-29, Unit One

Enclosed please find Licensee Event Report (LER) 85-12, 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)-(iv), which required reporting of any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature.

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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