

Commonwealth Edison Company
Quad Cities Generating Station
22710 206th Avenue North
Cordova, IL 61232-9740
Tel 309-654-2241

ComEd

LWP-97-080

August 7, 1997

United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Document Control Desk

Reference: Quad Cities Nuclear Power Station
Docket Number 50-265, DPR-30, Unit Two

Enclosed is Licensee Event Report (LER) 97-009, Revision 00, for Quad Cities Nuclear Power Station.

This report is submitted as a voluntary report only.

There are no commitments being made by this letter.

If there are any questions or comments concerning this letter, please refer them to Charles Peterson, Regulatory Affairs Manager at 309-654-2241, ext. 3609.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD CITIES NUCLEAR POWER STATION

L. W. Pearce

L. W. Pearce
Station Manager

LWP/CP/plm

Enclosure

cc: A. B. Beach, Regional Administrator, Region III
R. M. Pulsifer, Project Manager, NRR
C. G. Miller, Senior Resident Inspector, Quad Cities
W. D. Leech, MidAmerican Energy Company
D. C. Tubbs, MidAmerican Energy Company
M. E. Wagner, Licensing, ComEd
F. A. Spangenberg, Regulatory Affairs Manager, Dresden
INPO Records Center

IE221

100000

9708190268 970807
PDR ADOCK 05000265
S PDR

STMGR\LER\97080



LICENSEE EVENT REPORT (LER)

Form Rev. 2.0

Facility Name (1) Quad Cities Unit Two	Docket Number (2) 0 5 0 0 0 2 6 5	Page (3) 1 of 0 4
---	--	----------------------------

Title (4)
Control Room personnel misread an indication delaying discovery of abnormal Offgas radiation readings which interfered with proper completion of a Technical Specification surveillance due to a cognitive personnel error.

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 7	1 3	9 7	9 7	-- 0 0 9	-- 0 0	0 8	0 7	9 7		0 5 0 0 0	
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) 0 9 5	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)							
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)							
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input checked="" type="checkbox"/> Other (Specify in Abstract below and in Text)							
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)								
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)								
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)									

LICENSEE CONTACT FOR THIS LER (12)										
NAME Charles Peterson, Regulatory Affairs Manager, ext. 3609						TELEPHONE NUMBER 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	CAUSE SYSTEM	COMPONENT

SUPPLEMENTAL REPORT EXPECTED (14)						Expected Submission Date (15)	Month	Day	Year
YES (If yes, complete EXPECTED SUBMISSION DATE)						<input checked="" type="checkbox"/> NO			

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

ABSTRACT:

On 071397 at approximately 0800, Unit 2 was in Power Operation at 95% power when the Unit 2 Administrative Nuclear Station Operator (NSO) read both channels of the Steam Jet Air Ejector Offgas log radiation monitors improperly. Inaccurate readings were recorded on four occasions and so the NSO did not identify excessively high radiation levels which existed from 0430 through the time of discovery at 2350. In addition, three different Unit Supervisors checked these monitors during turnovers at 0600 and 1800 without identifying the abnormal readings. The cause of this event is a cognitive personnel error by the Control Room personnel who checked these monitors and misread the indication display. As a result, Operations was untimely in their notification of the Chemistry Department to perform Offgas samples required by Technical Specifications. Corrective actions included counseling for the Operators, a procedure revision, and tailgate training on this event emphasizing care in reading instruments. This LER is being submitted voluntarily.

The safety significance of this event is minimal. The highest radiation levels for the release are below specified limits and if the release rate would have been significant, automatic actions would isolate the Offgas system to prevent any further release.

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 Two	0 5 0 0 0 2 5 6	9 7	-	0 0 9	-	0 0	2	OF	0 4		
TEXT Energy Industry Identification System (EIS) codes are identified in the text as [X%]											

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 2511 Mwt rated core thermal power.

EVENT IDENTIFICATION: Control Room personnel misread an indication delaying discovery of abnormal Offgas radiation readings which interfered with proper completion of a Technical Specification surveillance due to a cognitive personnel error.

A. CONDITIONS PRIOR TO EVENT:

Unit: 2 Event Date: 071397 Event Time: 0800
 Reactor Mode: 1 Mode Name: Power Operation Power Level: 95%

This report was initiated by Licensee Event Report 265/97-009

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

B. DESCRIPTION OF EVENT:

On 071397 at 0130, Unit 2 was in Power Operation and had dropped load to 700 Megawatt Electric (MWE) to perform a control rod shuffle and by 0220 the night shift NSO had completed the shuffle. At approximately 0415, the NSOs had taken the second and final set of Control Room readings. Step 19 of these readings, the Steam Jet Air Ejector (SJAE) Offgas Isolation Radiation Monitors [IL], was recorded as "24" MR/hour for Channel A and as "36" MR/hour for Channel B from the digital log radiation monitors [MON]. The A and B monitors show a display to 2 decimals followed by the exponent, such as "2.40 E 1" and "3.60 E 1" respectively. At approximately 0430, chart recorders and the process computer data point history for these Offgas radiation monitors indicated an abrupt increase in radiation levels for both A and B channels. Within an hour the dose rate on both monitors had increased to 100 MR/hour on both channels and then continued to increase more slowly. At 0515, the NSO started to increase the electrical load at 20 MWE per hour.

At 0600, the Unit 2 Supervisor (US) was relieved and both USs viewed the SJAE Offgas Isolation Radiation Monitors but neither identified the abnormally high reading. The on-coming US stated he verified there was no alarm condition present but did not determine any specific values. Sometime after 0800, a Unit 2 NSO took the readings on the SJAE radiation monitors, recording "18" for Channel A and "26" for Channel B. However, the process computer data point history indicates that the monitors actual display was approximately "1.80 E 2" for Channel A and "2.60 E 2" for Channel B at that time which should have been entered in the readings as "180" and "260".

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 Two	0 5 0 0 0 2 5 6	9 7	-	0 0 9	-	0 0	3 OF 0 4	

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

The NSO took these readings again between 1200 and 1300 recording "21" for Channel A and "28" for Channel B. Between 1500 and 1800, the NSO took 2 additional sets of readings, the first being "15" for Channel A and "20" for Channel B and the second being "15" for Channel A and "21" for Channel B. The Shift Engineer reviewed these readings but the values being recorded were within the normal range and so would not raise a concern. At 1800, the US was relieved by another US and again neither US identified the abnormal radiation readings after checking the monitors during the turnover.

At 2350, a NSO took the first set of panel readings for the shift, recording Channel A as "119" and Channel B as "159" and reported the increase from the previous readings to the US. Technical Specification (TS) 4.8.I.2 requires an isotopic analysis of Offgas be performed "within 4 hours following the determination of an increase of > 50%" in these radiation monitor readings. The US contacted Chemistry immediately. A sample was taken on 071497 at 051 and the isotopic analysis results were provided at 0300. The isotopic analysis results were consistent with the abnormal high monitor readings.

This LER is being submitted voluntarily.

C. CAUSE OF EVENT:

The cause of this event is a cognitive personnel error by the Control Room personnel who checked these monitors and misread the indication display. As a result, Operations was untimely in their notification of the Chemistry Department to perform Offgas samples required by TS 4.8.I.2. The NSO did not fully read the display to identify the log scale and so did not identify the adverse condition. In addition, the monitors were checked by 3 different USs during turnovers when the monitors were reading greater than 100 MR/hour and the abnormally high readings were not identified.

Potential failure of the monitors was discussed with Instrument Maintenance (IM) who noted the monitors run continuous self-tests and a module failure would require IM to reset the error display. The process computer datapoint histories which document the increased radiation levels and the digital log scale displays which were read by the operators are both controlled by the same electronics from the same source. The chassis recorder output is designed to track with the chassis indication. In addition, the identical error would have had to occur and also have been resolved at the same time on the independent channels. Performance analysis based on the isotopic analysis results supports the abnormally high monitor readings from 0430 through 2355. Based on this information, the possibility of equipment error was eliminated.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Form Rev. 2.0

FACILITY NAME (1) Quad Cities Unit Two	DOCKET NUMBER (2) 0 5 0 0 0 2 5 6	LER NUMBER (6)			PAGE (3) 4 OF 0 4
		Year	Sequential Number	Revision Number	
		9 7	- 0 0 9	- 0 0	

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

D. SAFETY ANALYSIS:

The safety significance of this event is minimal. The highest radiation levels for the release are well below specified limits and if the release rate would have been significant, automatic actions would isolate the Offgas system to prevent any further release. No equipment was made inoperable and no significant dose was received as a result of the errors. The primary significance was the delay in the identification of the abnormal readings.

E. CORRECTIVE ACTIONS:

1. Chemistry sampled Off-gas and obtained results at 0300 hours within 4 hours of identification of the high readings.
2. This event and the need for care in reading instruments was tailgated with all Operations personnel.
3. The operators involved in this event have been counseled.
4. The procedure for Control Room readings (QOS 0005-S01) has been revised to record the exponent and to include documented checks of the chart recorders for the SJAE Offgas Isolation Radiation Monitors and similar instrument readings.

F. PREVIOUS OCCURRENCES:

A search was conducted for LERs over the last 2 years that resulted from inadequate operator monitoring identified the following event.

LER 254/97-001, Technical Specification required instrumentation readings were not completed within the required time frequency after changing from eight hour to twelve hour shifts because the consequences associated with changing shift durations were not adequately reviewed or assessed.

G. COMPONENT FAILURE DATA:

Not applicable.