



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

RLB-91-239

October 15, 1991

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 is Licensee Event Report (LER) 90-026, Revision 01, for Quad Cities Nuclear Power Station.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD CITIES NUCLEAR POWER STATION

Gary Speck
R. L. Bass
Station Manager

RLB/TB/plm

Enclosure

cc: R. Stols
T. Taylor
INPO Records Center
Region III

STMGR 199

2300

9110280201 911015
PDR ADDCK 05000254
S PDR

FEED 11

LICENSEE EVENT REPORT (LER)

Form Rev. 2.0

Facility Name (1) Quad Cities Unit One		Docket Number (2) 0 5 0 0 0 2 5 4	Page (3) 1 of 0 4
Title (4) Control Room Isolation on High Toxic Gas Concentration Due To The EPROM Not being Compatible With The Software.			

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)
1 2	2 0	9 0	9 0	0 2 6	0 1	1 0	1 5	9 1	QUAD CITIES	0 5 0 0 0 2 6 5

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 0 0	20.402(b)	20.405(c)	X	50.73(a)(2)(iv)	73.71(b)
	20.405(a)(1)(i)	50.36(c)(1)		50.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(ii)	50.36(c)(2)		50.73(a)(2)(vii)	Other (Specify in Abstract below and in Text)
	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 Mike Harms, Tech Staff	Ext. 2159	TELEPHONE NUMBER AREA CODE 1 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	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	
X	V I	D E T	X 9 9 9	N							

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)

ABSTRACT:

On December 20, 1990, at 2306 hours, Unit One was in the SHUTDOWN mode at 0 percent power and Unit Two was in the RUN mode at 100 percent of rated core thermal power. Alarm, Control Room Standby HVAC System Major Trouble, annunciated at this time. The Control Room Ventilation system (HVAC) isolated on high chlorine gas concentration. This resulted in a Control Room HVAC Engineered Safety Feature (ESF) actuation. The Instrument Maintenance (IM) Department refilled the chlorine probe with electrolytic solution when it was discovered that the probe had dried out. An Emergency Notification System (ENS) phone notification was completed at 0114 hours on December 21, 1990, as required by 10CFR50.72(b)(2)(11). On December 22, 1990 at 1800 hours the Control Room Vent Toxic Gas Monitor was declared operable again.

The cause of this event was the Erasable/Programmable Read Only Memory (EPROM) was not compatible with current software.

Initial corrective action was to reduce system air flow as recommended by the manufacturer. The manufacturer completed an inspection of the system, and the Station has updated the EPROM via Minor Design Change P04-0-91-018 per the manufacturers recommendation.

This report is submitted in accordance with 10CFR50.73 (a)(2)(iv).

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 2ne	0 5 0 0 0 2 5 4	9 0	- 0 2 6	- 0 1	0 3	OF 0 4

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

The manufacturer has completed an inspection of the system and recommended upgrading the Erasable/Programmable Read Only Memory (EPROM) to match the current software. The probe tip was found to have dried out and was refilled.

D. SAFETY ANALYSIS OF EVENT:

The safety consequences of the event are minimal. As per system design, the Control Room HVAC will isolate on high toxic gas concentration. Upon receiving the high chlorine concentration spike, the Control Room HVAC isolated as designed. Toxic gas concentrations were taken and verified to be below the trip setpoints.

Sargent & Lundy (S&L) did a study in May of '988 which showed that the possibility of a chlorine toxicity accident was minimal. With this information, the station is pursuing a Technical Specification change to remove the Chlorine and Sulfur Dioxide Analyzer as an ESF actuation.

E. CORRECTIVE ACTIONS:

Immediate corrective actions were taken under work request Q89026. The IM's found that the Cl analyzer probe had dried out. The probe was filled with electrolyte solution under procedure QIP 5700-2. The analyzer was then recalibrated and returned to service at 1800 hours on December 22, 1990.

As a result of a recommendation from Anacon, the manufacturer of the Chlorine Analyzer, system flow was reduced with the flow control valve (FCV)[FCV]. The manufacturer performed an inspection of the system on January 15, 1991. The results of the inspection revealed that the EPROM was not compatible with the current software. The EPROM was updated via Minor Design Change P04-0-91-018 and the problem has not returned.

F. PREVIOUS EVENTS:

In the past five years there have been numerous events associated with the Toxic Gas Analyzers. The following is a list of events caused by the probe itself.

DVR/LER	DATE OF OCCURRENCE	DESCRIPTION
D4-1-87-014	1/25/87	CR Vent Cl Monitor Inop due to low electrolyte level.
D4-1-87-042	5/20/87	CR Vent Ammonia and Cl Analyzer failures due to corroded solder joint on probe wire.
D4-1-87-60	6/29/87	CR Vent isolation due to Cl Monitor problem due to condensation, physical defects, and sample line contamination problems.
(LER 87-013)	7/09/87	
	7/14/87	

