



Commonwealth Edison

Quad Cities Nuclear Power Station
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RLB-91-27

January 21, 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
Docket Number 50-265, DPR-30, Unit Two

Enclosed is Licensee Event Report (LER) 90-034, 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)(iv): The licensee shall report any event or condition that resulted in a manual or automatic actuation of any Engineered Safety Feature (ESF).

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD CITIES NUCLEAR POWER STATION

R. L. Bax
Station Manager

RLB/MJB/jmt

Enclosure

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

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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 1	Page (3) 1 of 0 4
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Title (4)
Manual Isolation Of Control Room HVAC Due To Misinterpretation of the Cl Analyzer Indication.

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 3	9 0	9 0	0 3 4	0 0	0 1	2 1	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	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" 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 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)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

Name Rachel Hamann, Tech Staff	Ext. 2119	TELEPHONE NUMBER AREA CODE 3 0 9	6 5 4 - 2 2 4 1
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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

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) | NO

Expected Submission Date (15) 0 | 3 | 1 | 5 | 9 | 1

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

ABSTRACT:

On December 23, 1990, Unit One was in the shutdown mode for a refueling outage and Unit Two in the RUN mode at 96 percent of rated core thermal power. At 2055 hours, an Operator reported during his rounds that a high chlorine concentration indication existed. The Control Room Ventilation (HVAC) was manually isolated which is an Engineered Safety Feature (ESF) actuation. At 2330 hours, an Emergency Notification System (ENS) phone call was completed per 10CFR 50.72(b)(2)(ii).

On December 31, 1990, the IM's determined the high concentration reading was actually an instrument error code, and the indicated chlorine concentration had been well below the trip setpoint.

The cause of the event was a manual ESF actuation due to a misinterpretation of the Cl Analyzer indication. The indication was believed to be a high chlorine concentration. It was later discovered that a high chlorine concentration was not present.

It is unknown what caused the alarm which was believed to be a high chlorine concentration. As part of corrective action, the manufacturer was contacted and an inspection of the system was completed. The inspection results are pending. A revised report will be submitted.

This report is submitted in accordance with 10CFR 50.73(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 One	0 5 0 0 0 2 5 4	9 0	-	0 3 4	-	0 0	0 3	OF	0 4	

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

The cause for the system malfunction is unknown at this time and is under investigation. The manufacturer has completed an inspection of the system and the inspection results are pending. The probe tip was found to have dried out and was refilled. The ventilation system will remain in the recirculation mode until all appropriate corrective actions identified from the manufacturer's report are implemented. A revised report will be submitted.

D. SAFETY ANALYSIS OF EVENT:

The safety consequences of this event are minimal. The high toxic gas chlorine concentration read by the operator was actually an operational error code. The measured chlorine concentration was found to be well below the trip setpoint. Therefore, the Control Room Ventilation did not require isolation. The manual isolation of Control Room Ventilation was conservative in nature and represents the proper system alignment had the chlorine concentration exceeded the trip setpoint, which the operator originally believed to be the case. Sargent & Lundy completed a study in May 1988 which showed that the possibility of a chlorine toxicity accident was minimal. With this information, the station is pursuing a Technical Specification revision to remove the Chlorine and Sulfur Dioxide Analyzers as a required Control Room HVAC isolation signal.

E. CORRECTIVE ACTIONS:

The chlorine concentration was measured and found to be below the alarm setpoint. Work request, Q89087, was written to investigate. The Chlorine analyzer probe was filled with solution. The Control Room HVAC is being kept in the recirculation mode to observe the performance of the chlorine analyzer and to perform further investigation.

As recommended by 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, when received, will be reviewed. System improvements will be initiated as appropriate. A revised report will be submitted. (NTS 2542009015001).

The training lesson plan for the Cl analyzer will be enhanced to include the operational self-checks of the analyzer. (NTS 2542009015002)

F. PREVIOUS EVENTS:

In the past five years there have been numerous events involving the Toxic Gas Analyzers. The following is a list of DVR's and LER's written on the Toxic Gas Analyzer problems:

- 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 failure due to corroded solder joint on probe wire.
- D4-1-87-060 6/29/87 CR Vent Isol due to Cl Monitor problem

