

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1): Quad-Cities Nuclear Power Station, Unit 1  
DOCKET NUMBER (2): 0 5 0 0 0 2 1 5 4 1 OF 0 2

TITLE (4): Reactor Scram

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)		
08	25	84	84	015	00	09	20	84	None	0 5 0 0 0		
										0 5 0 0 0		

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

OPERATING MODE (8): 4	20.402(b)	20.406(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10): 01715	20.406(a)(1)(i)	50.38(a)(1)		50.73(a)(2)(v)	73.71(c)
	20.406(a)(1)(ii)	50.38(a)(2)		50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 305A)
	20.406(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(vii)(A)	
	20.406(a)(1)(iv)	50.73(a)(2)(ii)		50.73(a)(2)(vii)(B)	
	20.406(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12):  
NAME: Hien Do  
TELEPHONE NUMBER: AREA CODE 3109, 6154-12241

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

SUPPLEMENTAL REPORT EXPECTED (14):  
YES (If yes, complete EXPECTED SUBMISSION DATE):  NO   
EXPECTED SUBMISSION DATE (15): MONTH DAY YEAR

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

On August 25, 1984, at 7:26 a.m., Unit One was in the RUN mode at 75 percent core thermal power. The Turbine bypass valves suddenly cycled opened then closed. The sudden cycling of the Turbine bypass valves created a pressure spike which collapsed the voids in the vessel, and a trip of the Reactor Protection System was received due to high neutron flux. It has been determined that dirty contacts on the back-up speed control circuit board caused unstable voltage output which resulted in the cycling of the bypass valves. This is considered an isolated occurrence.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Quad-Cities Nuclear Power Station, Unit 1	DOCKET NUMBER (2)  0   5   0   0   0   2   5   4   8   4	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		84	- 015	- 000	02	OF 02

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

Event Description

On August 25, 1984, Unit One was at 75 percent core thermal power. At 7:26 a.m., the Turbine bypass valves cycled opened then closed. The sudden opening and closing of these bypass valves resulted in void collapse in the Reactor vessel. This caused the neutron flux to increase and the Reactor Protection System tripped on an APRM Hi-Hi signal. All control rods inserted to position 00 and a normal trip recovery was initiated. All Reactor safety systems were operable and functioned as designed, therefore, the safety implications of this event were minimal. This event is being reported as required by the Code of Federal Regulations, 10 CFR 50.73(a)(2)(iv).

Cause

The root cause of this occurrence is attributed to dirty contacts on the back-up speed control circuit board. Because of poor contact, the voltage output from the back-up speed control board became intermittent. This unstable voltage, which was fed to the control valve amplifier circuit, caused the cycling of the Turbine bypass valves. The back-up speed control circuit is a General Electric design, Part No. 872D432G1.

Corrective Action

The immediate corrective actions were to ensure all control rods went to position 00 and initiate a normal scram recovery. In addition, Instrument Mechanics cleaned the back-up speed control board contacts and performed an electronic alignment check on this board. The circuitry was found to operate satisfactorily. Additional troubleshootings conducted on the primary speed control circuit did not reveal any malfunction, therefore, no further corrective action is being considered at this time. This is the first occurrence of this type, on the Electro-Hydraulic Control System, at Quad-Cities Station.



**Commonwealth Edison**

Quad Cities Nuclear Power Station  
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Cordova, Illinois 61242  
Telephone 309/654-2241

NJK-84-287

September 20, 1984

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 number 84-015  
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 requires 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

*L. J. Merman for*  
N. J. Kalivianakis  
Station Superintendent

NJK:HQD/bb

Enclosure

cc B. Rybak  
A. Morrongiello  
INPO Records Center  
NRC Region III

*IE22*  
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