

LICENSEE EVENT REPORT (LER)

Facility Name (1) QUAD-CITIES, NUCLEAR POWER STATION, UNIT TWO Docket Number (2) 0 | 5 | 0 | 0 | 0 | 2 | 6 | 5 Page (3) 1 | of | 0 | 3

Title (4) HPCI Turbine Trip Due To Turbine Exhaust Pressure Switch Failure

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	1 4	8 6	8 6	0 0 14	0 0	0 4	0 4	8 6		0 5 0 0 0

OPERATING MODE (9) 4

POWER LEVEL (10) 0 | 9 | 5

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

<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 checked="" 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
<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)	in Abstract below
<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)	and in Text)
<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 Ken Medulan, Tech Staff Engineer Ext. 2154 TELEPHONE NUMBER 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	B J	6 3	B 0 7 4	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

[Yes (If yes, complete EXPECTED SUBMISSION DATE)] X | NO Expected Submission Date (15) | | | | |

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

On March 14, 1986, Unit Two was in the RUN mode operating at approximately 95 percent of rated core thermal power. At 0450 hours the HPCI TURBINE DISCHARGE HIGH PRESSURE alarm was received in the control room. The indicated pressure was normal and an initial inspection revealed no cause. At 0805 hours the High Pressure Coolant Injection System (HPCI) [BJ] was declared inoperable when it was determined that the pressure signal had initiated a HPCI turbine trip which could not be reset. Technical Specification testing was then initiated. Cause of the trip was corroded seals in the turbine exhaust pressure switch 2-2638A. The seals allowed moisture in the casing which shorted the wiring. The switch was replaced and HPCI made operable. Switch is a Barksdale diaphragm type, model number D2H-M15055. The report is submitted in accordance with the requirement of 10CFR 50.73(a)(2)(v), which requires the reporting of any event or condition that alone could have prevented the fulfillment of the safety function of systems needed to remove residual heat or mitigate the consequences of an accident.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT										

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 2511 Mwt rated core thermal power. Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

IDENTIFICATION OF OCCURRENCE:

HPCI Turbine Trip due to turbine exhaust pressure switch failure.

Discovery Date: 3-14-86

Report Date: 04-04-86

This report was initiated by Deviation Report D-4-2-86-22

CONDITIONS PRIOR TO OCCURRENCE:

RUN Mode(4) - Rx Power 95% - Unit Load 790 MWe

RUN Mode - In this position the reactor system pressure is at or above 825 psig, and the reactor protection system is energized, with APRM protection and RBM interlocks in service (excluding the 15% high flux scram).

DESCRIPTION OF OCCURRENCE:

On March 14, 1986, at 0450 hours, Unit Two was in the RUN mode operating at approximately 95 percent of rated core thermal power. At that time the HPCI TURBINE DISCHARGE HIGH PRESSURE alarm activated in the control room. The indicated pressure was normal and an initial inspection revealed no cause. At 0805 hours the High Pressure Coolant Injection System (HPCI) [BJ] was declared inoperable when it was determined that the HPCI turbine discharge high pressure signal had initiated a HPCI turbine trip, which could not be reset. The required testing of the Emergency Core Coolant Systems (ECCS) systems was initiated as per Technical Specification 3.5/4.5.C.2. Prior to completion of the testing, HPCI repairs were completed, and the HPCI system was made operable. This report is submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(v), which requires the reporting of any event or condition that alone could have prevented the fulfillment of the safety function of systems needed to remove residual heat and mitigate the consequences of an accident.

APPARENT CAUSE:

The cause of the HPCI turbine trip is due to the failure of the HPCI turbine exhaust pressure switch 2-2368A. Seals in the pressure switch were corroded thus allowing moisture in the casing. The moisture shorted the wiring, tripping the HPCI turbine and causing the alarm. The pressure switch is a diaphragm type, manufactured by Barksdale, model number D2H-M15055.

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Quad Cities Unit Two	0 5 0 0 0 2 6 5	8 6	-	0 0 4	-	0 0	0 3	OF	0 3	
TEXT										

ANALYSIS OF OCCURRENCE:

The Unit Two HPCI system was inoperable for 8 hours. The High Pressure Coolant Injection (HPCI) System is provided to adequately cool the core for all pipe breaks smaller than those for which the Low Pressure Coolant Injection (LPCI)[BD] mode of the Residual Heat Removal (RHR) system or Core Spray [BM] systems can protect the core. The relief valves of the Automatic Depressurization System (ADS) are a backup to the HPCI system. They enable the Core Spray System or LPCI mode of the RHR system to provide protection against the small pipe break in the event of HPCI failure by depressurizing the reactor vessel rapidly enough to allow the low pressure coolant systems to inject into the reactor vessel. At the time HPCI was inoperable these other ECCS systems were available and being proven operable per test requirements. Therefore, there was minimal effects on safe reactor operation as a result of this occurrence.

CORRECTIVE ACTION:

The defective Unit Two pressure switch was replaced with a like for like pressure switch from Unit One, which was shutdown at the time. The pressure switch was tested satisfactorily and the Unit Two HPCI outage surveillances were terminated at 1215 hours the same day. Unit one pressure switch was replaced with a new switch under work request Q48387.

FAILURE DATA:

None



Commonwealth Edison

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22710 206 Avenue North
Cordova, Illinois 61242
Telephone 309/654-2241

RLB-86-12

April 4, 1986

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

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

Enclosed please find Licensee Event Report (LER) 86-004, 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)(v), which requires the reporting of any event or condition that alone could have prevented the fulfillment of the safety function of systems needed to remove residual heat or mitigate the consequences of an accident.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION

R. L. Bax
Station Manager

RLB/MSK/dak

Enclosure

cc: J. Wojnarowski
A. Madison
INPO Records Center
NRC Region III

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