NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Quad-Cities Nuclear Power Station, Unit	0 5 0 0 0 2 6 5	1 OF

TITLE (4)

Unit Scram Caused #4 Turbine Control Valve Fast Closure

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 6	1 0	8 4	8 4	0 0 7	0 0				N/A	0 5 0 0 0
									N/A	0 5 0 0 0

OPERATING MODE (9)	4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 8 6	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, NRC Form 366A)
		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	TELEPHONE NUMBER	
	AREA CODE	
David B. Cook	3 0 9	6 5 4 - 2 2 4 1 ext. 244

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	
X	J J	0 0 3 3	N 0 0 7	Y							

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

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

On June 10, 1984, at 1:50 a.m., Unit Two was at 86% core thermal power and the weekly turbine test, QOS 5600-1, was in progress. Control valves 1 through 3 operated properly, but when the test switch for control valve #4 was depressed the valve immediately fast closed. The resulting pressure spike 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 the 90% closed limit switch is remaining engaged, causing contacts in the valve test circuit to remain closed, and thereby fast closing the #4 control valve in the test mode. This line and switch will be examined at the next opportunity. Until then, a wire in the test circuit of the #4 control valve has been lifted to prevent this fast closure in the test mode. A temporary procedure was instituted to enable the weekly turbine test to be performed without a recurrence of this incident.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Quad-Cities Nuclear Power Station, Unit	0 5 0 0 0 2 6 5	8 4	— 0 0 7	— 0 0	OF

TEXT (If more space is required, use additional NRC Form 366A's) (17)

Event Description

On June 10, 1984, at 1:50 am, Unit Two was at 86% core thermal power and the weekly turbine test, QOS 5600-1, was in progress. Part of this procedure demonstrates that a half scram signal is received when the control valve fast closure solenoid is energized. Control valves 1 through 3 tested properly, but when the test switch for control valve number 4 was depressed, the fast closure solenoid energized immediately and the valve fast closed. The resulting void collapse in the vessel 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. This occurrence is being reported as required by 10CFR 50.73 (a) (2) (IV).

CAUSE

Cause of this event is equipment failure. The 90% closed limit switch was already closed when the test button was pushed and this enabled the fast closure solenoid to energize and fast close the valve. The limit switch is manufactured by NAMCO, model number EA 700-70100.

Corrective Action

Immediate corrective actions were to insure that all control rods went to position 00, reset the SCRAM solenoids, and initiate an ordinary scram recovery. In addition, a wire in the test circuit of the number 4 control valve has been lifted so that this will not occur again when testing. Temporary Procedure 2152 has been instituted in order to safely conduct the weekly turbine surveillance. The 90% closed limit switch will be examined the next time U-2 shuts down. Modification M-4-1(2)-84-20 was initiated to provide an indication of when the 90% closed limit switches are picked up, thus letting the operator know that the fast acting solenoid is not energized, and he may proceed with the valve test. This is the first occurrence of this type at Quad Cities Station. We recommend that other stations consider implementing a similar modification to help improve Unit availability.

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

NJK-84-217

July 6, 1984

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 Number LER 84-007 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(s) 50.73 (a) (2) (iv), which requires reporting of any event or condition that resulted in manual or automatic initiation of any Engineered Safety Feature.

Respectfully,

COMMONWELATH EDISON COMPANY
QUAD-CITIES NUCLEAR PWOER STATION

N. J. Kalivianakis
Station Superintendent

NJK/DBC/pdr

Enclosure

CC: B. Rybak
A. Morrongiello
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