LICENSEE EVENT REPORT (LER)

Facility Name (1)	Docket Number (2)	Page (3)
QUAD-CITIES NUCLEAR POWER STATION, UNIT TWO	0 5 0 0 0 2 6 5	1 of 0 4

Title (4) REACTOR CORE ISOLATION COOLING INOPERABLE - STEAM SUPPLY VALVE AUXILIARY CONTACT BINDING

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 5 0 0 0
1 1	0 3	8 7	8 7	0 1 6	0 1	0 9	2 2	8 8		0 5 0 0 0

OPERATING MODE (9)	3	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)					
POWER LEVEL (10)	0 0 3	___ 20.402(b)	___ 20.405(c)	___ 50.73(a)(2)(iv)	___ 73.71(b)		
		___ 20.405(a)(1)(i)	___ 50.36(c)(1)	X 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	TELEPHONE NUMBER AREA CODE
J. D. Pacilio, Technical Staff Engineer, Ext. 2187	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	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X	B I N	C N T R	G 0 8 0	Y							

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)

At 0020 hours, on November 3, 1987, Quad Cities Unit Two was in the STARTUP/HOT STANDBY mode at approximately three percent reactor thermal power. While performing the Reactor Core Isolation Cooling (RCIC) System valve operability test, it was found that steam supply valve 2-1301-16 did not automatically close as it should when its companion steam supply valve (2-1301-17) was closed. It also would not close with the control switch on the 902-4 panel in the control room. RCIC was declared inoperable and Technical Specification required testing was completed at 0525 hours. NRC notification via the Emergency Notification System was completed at 0290 hours.

The cause of this event (2-1301-16 failure to close) was the result of auxiliary contact binding in the 480 volt contactor associated with this valve. The auxiliary contact was replaced like for like as well as the movable contact support T-bar. Following this replacement, RCIC was tested and declared operable at 1225 hours of the same day. A preventive maintenance program is to be developed that will address periodic lubrication of the auxiliary contact plunger guides. This report is provided per 10CFR50.73(a)(2)(v) (B and D).

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].

EVENT IDENTIFICATION: Unit Two Reactor Core Isolation Cooling (RCIC) system declared inoperable due to binding of steam supply valve auxiliary contact.

A. CONDITIONS PRIOR TO EVENT:

Unit: Two Event Date: November 3, 1987 Event Time: 0020
Reactor Mode: Three (3) Mode Name: Startup/Hot Standby Power Level: 03%

This report was initiated by Deviation Report D-4-2-87-057

Startup/Hot Standby Mode (3) - In this position, the reactor protection scram trips, initiated by condenser low vacuum and main steamline isolation valve closure are bypassed, the low pressure main steamline isolation valve closure trip is bypassed and the reactor protection system is energized, with IRM and APRM neutron monitoring system trips and control rod withdrawal interlocks in service.

B. DESCRIPTION OF EVENT:

At 0020 hours, on November 3, 1987, Quad Cities Unit Two was in the STARTUP/HOT STANDBY mode at approximately three percent reactor thermal power. While performing QOS 1300-3 (Reactor Core Isolation Cooling (RCIC)[BN] Motor Operated Valve [V] Operability Test), it was observed that steam supply valve 2-1301-16 did not automatically close when steam supply valve 2-1301-17 was closed. This is an interlock feature of the RCIC system. An attempt was then made to close the 2-1301-16 valve with the control switch [HS] on the 902-4 panel [PL]. This also was unsuccessful. As a result, RCIC was declared inoperable and the 2-1301-17 valve was closed. Nuclear Work Request Q61499 was initiated to investigate and repair the problem.

Technical Specification 3.5.E.2. states that "from and after the date that the RCIC system is made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding seven days unless such system is sooner made operable, provided that during such seven days all active components of the High Pressure Coolant Injection (HPCI) [BJ] system are operable." Specification 4.5.E.2. states "when it is determined that the RCIC system is inoperable, the HPCI system shall be demonstrated to be operable immediately and daily thereafter." At 0040 hours, HPCI was placed on turning gear [TGR] in preparation for verifying HPCI operability. At 0135 hours, HPCI valve operability per QOS 2300-S3 was completed satisfactorily. At 0525 hours, HPCI pump operability per QOS 2300-S2 was completed satisfactorily to satisfy the Technical Specifications. NRC notification of this event via the Emergency Notification System (ENS) was completed at 0230 hours to satisfy the requirements of 10CFR50.72.

C. APPARENT CAUSE OF EVENT:

This report is supplied to satisfy 10CFR50.73(a)(2)(v) (B and D), which requires the reporting of any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to remove residual heat or mitigate the consequences of an accident.

The cause for this event (failure of 2-1301-16 to automatically close) was determined to be auxiliary contact binding. The bound auxiliary contact caused the movable contact support T-bar to overheat on the B phase. The 2-1301-16 valve power supply is located on 480 volt Motor Control Center (MCC) 28-1A-1.

D. SAFETY ANALYSIS OF EVENT:

RCIC is designed to provide cooling water to the reactor in the event the reactor becomes isolated from the main condenser simultaneously with a loss of the reactor feedwater system. The 2-1301-16 and 17 valves are interlocked to close when a Group V isolation signal is received. The initiating signals for a Group V isolation are: Low reactor pressure, high steam line differential pressure, and high area temperature. Because the 2-1301-17 valve was immediately closed, containment integrity was insured and the safety impact was minimal.

The safety of public and plant personnel was not affected due to this event. When the RCIC system is determined to be inoperable, it must be restored to an operable condition within seven days, provided HPCI is operable. Since HPCI was proven operable by 0525 hours of the same day, the safety significance of this event is minimal.

E. CORRECTIVE ACTIONS:

The corrective action for this event was to have the Electrical Maintenance Department replace the auxiliary contact like for like and install a new movable contact support T-bar. A thin coat of Aero-Shell #7 was applied to the auxiliary contact plunger guides. This was completed and RCIC was declared operable at 1225 hours (November 3, 1987) following satisfactory completion of QOS 1300-S3 (valve operability) and QOS 1300-S2 (pump operability).

The station has experienced auxiliary contact plunger guide binding in this type contactor in the past. The plunger guides in the EQ and safety related motor control centers are being lubricated with Aero-Shell #7 grease as covered in GEJ-5277 during scheduled refueling outages. This will continue until all plunger guides in the EQ and safety related motor control centers are lubricated during the next two refuel cycles on each unit (Nuclear Tracking System 26520086007R3.1). During this lubrication process, a preventive maintenance program will be developed defining the frequency of the lubrication schedule (NTS 26520086007R3.2).

F. PREVIOUS EVENTS:

Reportable Events:	Subject
254-81-01/03L	1/2 B Standby Gas Treatment (SBGT) Discharge Damper would not close
254-82-14/03L	1/2 B SBGT Discharge Damper would not open
265-81-12/03L	Residual Heat Removal (RHR) 2-1001-7B would not open
265-80-39/03L	RHR 2-1001-34A would not open
265-80-13/03L	RHR 2-1001-36A would not close
265-80-21/03L	Core Spray 2-1402-3A would not open
265/86-007 Revision 3	Failure of 2B Core Spray Room Cooler

All of these events have been identified as being caused by auxiliary contact binding. The above identified events were caused by the same or similar type of auxiliary contact.

G. COMPONENT FAILURE DATA:

Manufacturer	Nomenclature	Model Number
General Electric	Auxiliary Contact	CR105X100P

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

RLB-88-324

September 22, 1988

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 is Licensee Event Report (LER) 87-016 Revision 01, for Quad-Cities Nuclear Power Station. This revision provides additional information regarding corrective action.

This report is submitted in accordance with the requirements of the Code of Federal Regulations, Title 10, Part 50.73(a)(2)(v) (B and D), which requires the reporting of any event that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to remove residual heat or mitigate the consequences of any accident.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION

R. L. Bax
Station Manager

RLB/AAF/ad

Enclosure

cc: I. Johnson
R. Higgins
INPO Records Center
NRC Region III

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