

LICENSEE EVENT REPORT (LER)

Facility Name (1) QUAD-CITIES NUCLEAR POWER STATION, UNIT TWO  
 Docket Number (2) 01501002615  
 Page (3) 1 of 04

Title (4) UPDATE ON THE FAILURE OF THE UNIT 2B CORE SPRAY ROOM COOLER DUE TO 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)
04	09	86	86	007	03	09	21	88		0150100111

OPERATING MODE (9) 4

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

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: J. D. Pacilio, Technical Staff, Ext. 2187  
 TELEPHONE NUMBER: 309 654-2241

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	VIA	CIN TR	G1080	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 April 9, 1986 at 2155 hours, Unit 2 was in the RUN mode operating at 100 percent of rated thermal power. It was found that the 2B Core Spray Room Cooler would not run in either the Manual or Automatic mode. The 2B Core Spray System and the Unit 2 RCIC system, which are located in the same room, were declared inoperable due to lack of room cooling capability. Technical Specification surveillance tests were immediately initiated because of the inoperable equipment. The cause of the room cooler failing to run was due to pitting and burning of contacts on the motor control center contactor that supplies power to the room cooler motor. The pitting and burning of the contactor apparently resulted from an auxiliary contact hanging up and this prevented adequate electrical contact. During the electrical maintenance inspection, the auxiliary contact did not bind but as a precautionary measure both the main contactor and the auxiliary contact were replaced. The auxiliary contact is common to all 480 volt contactors in use at the station. This report is submitted to satisfy the requirements of 10CFR50.73(a)(2)(v).

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TEXT									

C. APPARENT CAUSE OF EVENT:

Because the RCIC system was inoperable, 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. The event was caused by the pitting and burning of the contacts of the motor control center contactor [CNTR] that supplies power to the 2B Core Spray Room Cooler motor. Only a very low current would pass through the contactor due to the very high resistance caused by the pitting of the contacts. A definitive cause for the pitting and burning of the breaker contactor that supplies power to the 2B Core Spray room cooler motor could not be determined. However, it appeared that auxiliary contacts were hanging up and not allowing the breaker contactor to fully close. This poor electrical contact then caused the pitting and burning of the contacts. Further attempts were made to verify this but were inconclusive because the auxiliary contacts functioned properly repeatedly when tested.

D. SAFETY ANALYSIS OF EVENT:

The Technical Specification requirements for surveillance tests were satisfactorily completed proving the LPCI System, 2A Core Spray System, the Unit 1/2 and Unit 2 Diesel Generators, and the HPCI system operable and available to perform their intended functions. There was no adverse effect on the health and safety of the public because redundant safety systems were determined to be operable.

E. CORRECTIVE ACTION:

The failed contactor was replaced using General Electric contactor part number CR105K102AAA. The auxiliary contact was also replaced with General Electric auxiliary contact kit model number CR106C. The 2B Core Spray Room Cooler motor's insulation resistance was measured satisfactorily as well as phase checked. All connections were tightened as well. The drive belts for the room cooler were also replaced as preventative maintenance. The 2B Core Spray Room Cooler was then satisfactorily tested and returned to service at 1910 hours on April 10, 1986, 21 hours after it was declared inoperable. The 2B Core Spray System and RCIC System were subsequently declared to be operable.

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).

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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

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:

<u>Manufacturer</u>	<u>Nomenclature</u>	<u>Model Number</u>
General Electric	Auxiliary Contact	CR106C



**Commonwealth Edison**

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RLB-88-319

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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) 86-007, Revision 03, for Quad-Cities Nuclear Power Station. This revision provides information regarding the resolution of the problem identified.

This report is submitted 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.

Respectfully,

COMMONWEALTH EDISON COMPANY  
QUAD-CITIES NUCLEAR POWER STATION

R. L. Bax  
Station Manager

RLB/AF/ad

Enclosure

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

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