



Commonwealth Edison Company
Quad Cities Generating Station
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An Exelon Company

December 4, 2000

SVP-00-184

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Quad Cities Generating Station, Unit 1
Facility Operating License No. DPR-29
NRC Docket No. 50-254

Subject: Licensee Event Report Concerning Wiring Error in Average Power
Range Monitor Flow Biased Neutron Flux Instrument

Enclosed is Licensee Event Report (LER) 254/00-009, "Wiring Error in Average Power
Range Monitor Flow Biased Neutron Flux Instrument," Revision 00, for Quad Cities Nuclear
Power Station.

This report is submitted in accordance with the requirements of the Code of Federal
Regulations, Title 10, Part 50.73(a)(2)(i)(B), which requires reporting of any operation or
condition prohibited by the Plant's Technical Specifications.

We are committing to the following action:

The root cause determination for this event is in progress but has not been finalized.
Upon completion of the root cause investigation, a supplemental report will be issued.

Any actions described in the submittal represent intended or planned actions by
Commonwealth Edison (ComEd) Company. They are described for the NRC's information
and are not regulatory commitments.

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Should you have any questions concerning this letter, please contact Mr. C.C. Peterson at (309) 654-2241, extension 3609.

Respectfully,

A handwritten signature in black ink that reads "Joel P. Dimmette, Jr." with a stylized flourish at the end.

Joel P. Dimmette, Jr.
Site Vice President
Quad Cities Generating Station

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Quad Cities Generating Station

LICENSEE EVENT REPORT (LER)

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the information and Records Management Branch (t-6 f33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office Of Management And Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FACILITY NAME (1) Quad Cities Nuclear Power Station, Unit 1	DOCKET NUMBER (2) 05000254	PAGE (3) 1 of 3
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TITLE (4)
Wiring Error in Average Power Range Monitor Flow Biased Neutron Flux Instrument

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MON TH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
11	03	2000	2000	009	00	12	04	2000	N/A	05000
									N/A	05000

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more) (11)									
POWER LEVEL (10) 10	20.2201(b)		20.2203(a)(2)(v)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)			
	20.2203(a)(i)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)			
	20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71			
	20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER			
	20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A			
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)					

LICENSEE CONTACT FOR THIS LER (12)

NAME Charles Peterson, Regulatory Assurance Manager	TELEPHONE NUMBER (Include Area Code) (309) 654-2241 ext 3609
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X	YES (If yes, complete EXPECTED SUBMISSION DATE).		NO		01	12	2001

ABSTRACT (Limit to 1400 spaces, i. e., approximately 15 single-spaced typewritten lines) (16)

At 2319 hours on November 2, 2000, with the Unit 1 reactor at about 10% reactor power, an unexpected rod block was received from the Average Power Range Monitor (APRM). At 0214 hours on November 3, 2000, it was determined that the flow biased neutron flux high reactor trip for APRMs 4, 5 and 6 was not operable. The "B" channel of the reactor protection system (RPS) was tripped in accordance with Technical Specifications.

Troubleshooting identified that two AC power wires to the 1-0260-8B General Electric flow biased proportional amplifier were swapped. The wiring error was subsequently corrected.

The root cause determination for this event is in progress but has not been finalized. A supplemental report will be issued upon completion of the root cause investigation.

The safety significance of this event was minimal. The APRMs on the "B" division would have provided an RPS trip signal at a lower (more conservative) power level than that required by Technical Specifications and system design.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
Quad Cities Nuclear Power Station, Unit 1	05000254	YEAR 2000	SEQUENTIAL NUMBER 009	REVISION NUMBER 00	2 of 3

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

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 2511 MWt rated core thermal power
Energy Industry Identification System (EIS) Codes are identified in the text as [XX] and are obtained from IEEE Standard 805-1984, IEEE Recommended Practice for System Identification in Nuclear Power Plants and Related Facilities.

EVENT IDENTIFICATION:

Wiring Error on Average Power Range Monitor Flow Biased Neutron Flux Instrument

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 1	Event Date: November 3, 2000	Event Time: 0214
Reactor Mode: 1	Mode Name: Power Operation	Power Level: 010

Power Operation (1) - Mode switch in the RUN position with average reactor coolant temperature at any temperature.

B. DESCRIPTION OF EVENT:

On November 2, 2000, at 2307 hours, the Unit 1 mode switch was moved to the RUN position, putting the reactor in Mode 1. At 2319 hours, with the reactor at about 10% reactor power, a rod block was received from the Average Power Range Monitor (APRM) [IG]. This was not expected, as the Mode 2 APRM upscale rod block is bypassed when the reactor is in Mode 1, and the APRM Flow Biased rod block would not be expected at that reactor power. At 0214 hours on November 3, 2000, it was determined that the flow biased neutron flux high reactor trip for APRMs 4, 5 and 6 was not operable. The "B" channel of the reactor protection system (RPS) [IG] was placed in the tripped condition in accordance with Technical Specification Section 3.1.A, Action 1.

When the reactor is in Mode 2, the APRMs provide an RPS trip signal at 15% rated neutron flux and a control rod block at 12% rated neutron flux. When the reactor is in Mode 1, the APRMs provide an RPS trip signal and a control rod block at neutron flux levels that increase as reactor flow increases (flow biased).

Troubleshooting identified that two AC power wires to the 1-0260-8B General Electric flow biased proportional amplifier [AMP] had been swapped during maintenance performed in the just completed refueling outage. This resulted in a neutral feed being applied to both sides of the flow bias mode switch contact. Consequently, when the reactor mode switch was placed in RUN (Mode 1) the "B" channel APRM relays that transfer trip setpoints from the fixed high flux level for Mode 2 to the flow biased level for Mode 1 would not energize.

C. CAUSE OF EVENT:

The root cause determination for this event is in progress but has not been finalized. Upon completion of the root cause investigation, a supplemental report will be issued.

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FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
Quad Cities Nuclear Power Station, Unit 1	05000254	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 of 3
		2000	009	00	

TEXT (if more space is required, use additional copies of NRC Form 366A) (17)

D. SAFETY ANALYSIS

The safety significance of this event was minimal. The APRMs on the "A" division were completely operable. The wiring error was such that the APRMs on the "B" division would have provided an RPS trip signal at a lower (more conservative) power level than that required by Technical Specifications and system design. Although the wiring error did result in an APRM rod block and subsequent insertion of an RPS trip on one division, challenging the unit's safety systems, no mitigating equipment was degraded and plant safety equipment operated as designed.

E. CORRECTIVE ACTIONS:

Corrective Actions Completed:

The wiring error was corrected.

Corrective Actions to be Completed:

The root cause has not been determined for this event. Upon completion of the root cause investigation, a supplemental report will be issued.

F. PREVIOUS OCCURRENCES:

Previous occurrences will be provided in the supplemental report.

G. COMPONENT FAILURE DATA:

There were no component failures associated with this event.