

Exelon Generation Company, LLC
Quad Cities Nuclear Power Station
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January 13, 2003

SVP-03-007

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

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

Subject: Licensee Event Report 254/02-002, "Automatic Initiation and Loading of Emergency Diesel Generator due to Loss of Voltage to Emergency Bus as a Result of Door to Potential Fuse Drawer Falling Open"

Enclosed is Licensee Event Report (LER) 254/02-002, "Automatic Initiation and Loading of Emergency Diesel Generator due to Loss of Voltage to Emergency Bus as a Result of Door to Potential Fuse Drawer Falling Open," for Quad Cities Nuclear Power Station, Unit 1.

This report is submitted in accordance with the requirements of the Code of Federal Regulations, Title 10, Part 50.73(a)(2)(iv), which requires reporting of any event or condition that resulted in manual or automatic actuation of emergency ac electrical power systems, Part 50.73(a)(2)(i)(B), which requires reporting of any operation or condition which was prohibited by the plant's Technical Specifications, and Part 50.73(a)(2)(v)(D), which requires reporting of any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident.

The reportable event occurred on November 13, 2002. Therefore, this report is required to be submitted by January 13, 2003.

We are committing to the following actions:

The results of the investigation regarding the operation of the potential fuse compartment door locking mechanism will be reviewed with the operating crews.

Training regarding the vulnerability associated with the potential fuse compartment door locking mechanism will be incorporated into the Operations recurring training program.

A checklist that provides a method to positively check the condition of the potential fuse compartment door when it is shut will be incorporated into the appropriate Operations procedures.

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A placard will be attached to the affected potential fuse compartment doors that warns of the failure of the handle to provide positive indication that the door is properly latched and that includes instructions that direct the manner in which the door should be operated.

Any other actions described in the submittal represent intended or planned actions by Exelon Generation Company, LLC (EGC). They are described for the NRC's information and are not regulatory commitments.

Should you have any questions concerning this report, please contact Mr. W. J. Beck at (309) 227-2800.

Respectfully,

A handwritten signature in black ink, appearing to read "Tulon", with a large circular flourish at the end.

Timothy J. Tulon
Site Vice President
Quad Cities Nuclear Power Station

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

NRC FORM 366 (7-2001)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB NO. 3150-0104 EXPIRES 7-31-2004 Estimated burden per response to comply with this mandatory information collection request 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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.
LICENSEE EVENT REPORT (LER)		

1. FACILITY NAME Quad Cities Nuclear Power Station Unit 1	2. DOCKET NUMBER 05000254	3. PAGE 1 of 4
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4. TITLE Automatic Initiation and Loading of Emergency Diesel Generator due to Loss of Voltage to Emergency Bus as a Result of Door to Potential Fuse Drawer Falling Open

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
11	13	02	2002	- 002	- 00	01	13	03	N/A	N/A
									FACILITY NAME	DOCKET NUMBER
									N/A	N/A

9. OPERATING MODE	5	11 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
10. POWER LEVEL	000	<input type="checkbox"/> 20 2201(b)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50 73(a)(2)(ii)(B)	<input type="checkbox"/> 50 73(a)(2)(ix)(A)
		<input type="checkbox"/> 20 2201(d)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50 73(a)(2)(iii)	<input type="checkbox"/> 50 73(a)(2)(x)
		<input type="checkbox"/> 20 2203(a)(1)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input checked="" type="checkbox"/> 50 73(a)(2)(iv)(A)	<input type="checkbox"/> 73 71(a)(4)
		<input type="checkbox"/> 20 2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73 71(a)(5)
		<input type="checkbox"/> 20 2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50 73(a)(2)(v)(B)	OTHER Specify in Abstract below or in NRC Form 366A
		<input type="checkbox"/> 20 2203(a)(2)(iii)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50 73(a)(2)(v)(C)	
		<input type="checkbox"/> 20 2203(a)(2)(iv)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input checked="" type="checkbox"/> 50 73(a)(2)(v)(D)	
		<input type="checkbox"/> 20 2203(a)(2)(v)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50 73(a)(2)(vi)	
<input type="checkbox"/> 20 2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50 73(a)(2)(viii)(A)			
<input type="checkbox"/> 20 2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50 73(a)(2)(viii)(B)			

12. LICENSEE CONTACT FOR THIS LER

NAME Wally Beck, Regulatory Assurance Manager	TELEPHONE NUMBER (include Area Code) (309) 227-2800
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
A	EK	DR	G080	Y					

14. SUPPLEMENTAL REPORT EXPECTED				15. EXPECTED SUBMISSION DATE				
YES (If yes, complete EXPECTED SUBMISSION DATE)				<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	MONTH	DAY	YEAR

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

On November 13, 2002, at 0458 hours, with Unit 1 in Refuel Mode, the Unit 1 Division II Emergency Diesel Generator (EDG) started automatically and loaded to the emergency bus (Bus 14-1) in response to a loss of voltage on the bus. This occurred when the door for the Bus 14-1 potential fuse drawer opened, which caused a sensed loss of voltage, the opening of the feed breakers, and the resulting actual loss of voltage to Bus 14-1.

It was determined that the door to the potential fuse drawer had not been completely latched. The root cause was a lack of awareness of the vulnerability of the door locking mechanism. Immediate corrective actions included closing the door and verifying other potential fuse drawer doors were latched. One other door at the bus that feeds Bus 14-1 (Bus 14) was identified as being closed but not fully latched.

The safety significance was minimal in that both unlatched doors were on Unit 1 Division II. The Division I Emergency Bus and EDG were not affected by this issue.

Corrective actions include training, development of a checklist for ensuring the doors are latched, and placement of a warning placard on each door.

LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Quad Cities Nuclear Power Station Unit 1	05000254	2002	002	00	3 of 4

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

The doors to the potential transformer fuse drawers for the Unit 1, Division I and II, EDGs, emergency buses, and the buses that supply power to the emergency buses were verified to be closed and latched. This was accomplished by pushing on each of the doors to free the latch and allow it to engage fully. During verification that the door to the Unit 1 Bus 14 drawer was latched, the door latch clicked shut, indicating that it had previously been not fully latched but was now fully latched. Bus 14 provides power to Bus 14-1.

All such doors on Unit 2 were verified by radiography to be fully latched.

C. CAUSE OF EVENT

The root cause of the event was that Operations department personnel were not aware of the vulnerability associated with the door locking mechanism that existed in the design of the potential fuse compartment door. Operations department personnel were not aware that the door could be closed with the handle in the closed position, but the latch be in a less than fully latched condition. This resulted in the failure of the latching mechanism to adequately engage the door frame to lock the potential fuse compartment door shut. When properly latched, the door will not fall open.

D. SAFETY ANALYSIS

The safety significance of having the doors to two potential transformer fuse drawers not fully latched was minimal. Although the two doors that were not fully latched (one on Bus 14-1 and one on Bus 14, which is the bus that supplies offsite power to Bus 14-1) were capable of falling open during a seismic event, it was determined that they would not have been damaged during the seismic event such that they could not have been reclosed. It was also determined that the doors remaining open during the seismic event would not have caused other relay actuations to occur.

The effect of the doors falling open would be to render the Division II emergency bus incapable of carrying emergency loads until the door was reclosed. Although the EDG would have started and loaded to the bus, the equipment that was shed as a result of the loss of voltage to the bus would not reclose to the bus until the undervoltage trip signal was cleared. This would require the door to be reclosed. Therefore, the Division II Residual Heat Removal (RHR) [BO] and Core Spray [BM] pumps would not have had power after a seismic event.

This affected only Unit 1 Division II. The Division I equipment was not affected by this issue.

E. CORRECTIVE ACTIONSImmediate Actions:

The door to the Bus 14-1 drawer was closed and latched.

LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

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Quad Cities Nuclear Power Station Unit 1	05000254	2002	002	00	4 of 4

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

Corrective Actions Completed:

The doors to the potential transformer fuse drawers for the Unit 1, Division I and II, EDGs, emergency buses, and the buses that supply power to the emergency buses were verified to be closed and latched. This was accomplished by pushing on each of the doors to free the latch and allow it to engage fully. During verification that the door to the Unit 1 Bus 14 drawer was latched, the door latch clicked shut, indicating that it had previously not been fully latched but was now fully latched.

All such doors on Unit 2 were verified by radiography to be fully latched.

Corrective Actions to be Completed:

The results of the investigation regarding the operation of the potential fuse compartment door locking mechanism will be reviewed with the operating crews.

Training regarding the vulnerability associated with the potential fuse compartment door locking mechanism will be incorporated into the Operations recurring training program.

A checklist that provides a method to positively check the condition of the potential fuse compartment door when it is shut will be incorporated into the appropriate Operations procedures.

A placard will be attached to the affected potential fuse compartment doors that warns of the failure of the handle to provide positive indication that the door is properly latched and that includes instructions that direct the manner in which the door should be operated.

F. PREVIOUS OCCURRENCES

No previous events at Quad Cities Nuclear Power Station were identified that were similar to the event described above.

G. COMPONENT FAILURE DATA

The potential transformer fuse drawers with this type of latching mechanism are in General Electric Magne Blast AMH switchgear.