

Exelon Generation Company, LLC
LaSalle County Station
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March 11, 2003

10 CFR 50.73

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

LaSalle County Station, Unit 2
Facility Operating License No. NPF-18
NRC Docket No. 50-374

Subject: Licensee Event Report

In accordance with 10 CFR 50.73(a)(2)(iv), Exelon Generation Company, (EGC), LLC, is submitting Licensee Event Report Number 03-001-00, Docket No. 050-374.

Should you have any questions concerning this letter, please contact Mr. Glen Kaegi, Regulatory Assurance Manager, at (815) 415-2800.

Respectfully,



Susan R. Landahl
Plant Manager
LaSalle County Station

Attachments Licensee Event Report

cc: Regional Administrator - NRC Region III
NRC Senior Resident Inspector - LaSalle County Station

IE22

LICENSEE EVENT REPORT (LER)

(See reverse for required number of
digits/characters for each block)

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. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and by internet e mail to bjsl@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NOEB-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.

1. FACILITY NAME LaSalle County Station, Unit 2	2. DOCKET NUMBER 05000374	3. PAGE 1 of 3
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4. TITLE Manual Scram Due to Lowering Reactor Water Level as a Result of a Trip of the 2B Condensate/Condensate Booster Pump

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
1	10	2003	2003	- 001	- 00	03	11	03	FACILITY NAME	DOCKET NUMBER

9 OPERATING MODE	1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)
10 POWER LEVEL	090	

<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)(v)(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)	<input type="checkbox"/> OTHER
<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)	Specify in Abstract below or in NRC Form 366A
<input type="checkbox"/> 20 2203(a)(2)(iv)	<input type="checkbox"/> 50 73(a)(2)(i)(A)	<input type="checkbox"/> 50 73(a)(2)(v)(D)	
<input type="checkbox"/> 20 2203(a)(2)(v)	<input type="checkbox"/> 50 73(a)(2)(i)(B)	<input type="checkbox"/> 50 73(a)(2)(vii)	
<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 Frank Gogliotti, Plant Engineering	TELEPHONE NUMBER (Include Area Code) (815) 415-2243
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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
B	SD	CON	PENN-UNION	N					

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

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

On January 10, 2003, at 1156, Unit 2 was manually scrambled in anticipation of an automatic scram due to decreasing reactor water level. The event was initiated by a trip of the 2B Condensate/Condensate Booster (CD/CB) pump on instantaneous overcurrent. The electrical perturbation, along with a latent failed level switch on the heater drain tank, caused the 2A and 2C Heater Drain pumps to trip. This resulted in a low suction pressure trip of both Turbine Driven Reactor Feed Pumps. When the Operators could not maintain reactor water level, a manual scram was inserted. Reactor water level was restored using the Motor Driven Reactor Feed Pump following the scram.

The cause of the trip of the 2B CD/CB pump was a broken lug on the 6.9 kV cable connection to the B phase of the motor. Corrective actions include repairing the termination such that stresses on the connection are limited, and inspecting the terminations to other large motors.

The safety significance of this event was minimal. All control rods fully inserted and all systems responded as expected to the scram. The Emergency Core Cooling Systems were not challenged.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET NUMBER	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
LaSalle County Station, Unit 2	05000374	03	001	00	2 of 3

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

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor, 3489 Megawatts Thermal Rated Core Power

A. CONDITION PRIOR TO EVENT

Unit(s): 2 Event Date: 1/10/03 Event Time: 1156
 Reactor Mode(s): 1 Power Level(s): 090
 Mode(s) Name: Run

B. DESCRIPTION OF EVENT

On January 10, 2003, at 11:56, Unit 2 was manually scrammed in anticipation of an automatic scram due to a decreasing reactor water level.

The event was initiated by a trip of the 2B Condensate/Condensate Booster Pump (CD/CB) [SD] on instantaneous overcurrent. The 2D CD/CB pump was out of service for planned maintenance and was not available to auto-start to compensate for the loss of the 2B pump, which resulted in the condensate system running at two-thirds capacity.

The overcurrent condition on the 2B CD/CB pump caused a momentary (55msec) low voltage condition on 6.9 kV Bus 252 and the downstream sub-buses. The low voltage condition along with a latent failed level switch on the heater drain tank caused the 2A and 2C Heater Drain pumps to trip. This produced a significant reduction in condensate flow to the feedwater system, and resulted in an automatic trip of both Turbine Driven Reactor Feed Pumps (TDRFP) (FW) [SJ] on low suction pressure. When the Control Room Operators could not maintain the reactor in the band of 20 to 50 inches and in control as specified by the Unit Supervisor, the Unit was manually scrammed.

The Unit 2 Station Air (SA) [LF] Compressor tripped due to a loss of control power as a result of the voltage reduction on Bus 252. The Unit 2 'A' and 'C' Circulating Water (CW) [KE] pumps tripped due to a loss of synchronization that occurred during the fast bus transfer of 4.16 kV Bus 241X from the Unit Aux Transformer to the Station Aux Transformer.

Other plant equipment responded normally to the scram. Operators restored normal reactor water level using the Motor Driven Reactor Feed Pump.

An ENS call was made at 1505 hours on January 10, 2003, in accordance with 10 CFR 50.72(b)(2)(iv)(B). This event is reportable under 10 CFR 50.73(a)(2)(iv)(A) as an actuation of the reactor protection system (RPS) when the reactor is critical.

C. CAUSE OF EVENT

The trip of the 2B CD/CB pump was due to a broken lug on the 6.9 kV cable connection to the 'B' phase of the motor. The lug broke away, resulting in a cloud of ionized gas. This caused a three phase fault, which resulted in the instantaneous overcurrent trip of the motor. The 'B' phase lead was found disconnected and out of position inside the lead box. The lead box cover was found on the floor, some four feet north of the pump, along with the majority of the associated box cover fasteners. The 2B CD/CB Pump motor was tested, and passed all electrical tests, which indicated that the 'B' phase lead failed in service.

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LaSalle County Station, Unit 2	05000374	03	- 001 -	00	3 of 3

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

The root cause of this event was an inadequate original installation, in that the field fit up of the lead box resulted in a vibration-induced fracture and failure of the 'B' phase motor cable lug on the 2B CD/CB pump. The routing of the cable into the motor termination box placed additional weight and stresses on the cable lug (i.e., the weight of the cable conductors and tension due to cable bends).

The cause of the trip of the 2A and 2C HD pumps was a failure in the two out of two logic circuit, in which a failed heater drain tank level switch caused one relay in the logic to be in the tripped condition. This relay failure, when combined with the reduced voltage experienced during the 2B CD/CB motor overcurrent, resulted in the completion of the second part of the logic, which tripped the 2A and 2C HD pumps. The failed level switch was corrected as part of the troubleshooting and recovery efforts to return the unit to service.

D. SAFETY ANALYSIS

The safety significance of this event was minimal. All control rods fully inserted and all systems responded as expected to the scram. The Emergency Core Cooling Systems were not challenged. The loss of a CD/CB pump or reactor feed water flow is an analyzed event. The likelihood of a severe accident does not increase as a result of this event.

E. CORRECTIVE ACTIONS

Corrective Actions:

1. Large cable routings will be reviewed and terminations in junction boxes attached to large motors will be inspected (AT# 139037-25, 26).
2. The lug failure will be reviewed to determine applicability to other Exelon stations (AT# 139037-28).
3. Engineering will evaluate if a typical motor fault will cause a loss of loads on station busses, and recommend possible changes to prevent loss of loads (AT# 139037-23).
4. A review will be performed to identify and evaluate plant systems for latent failures that could potentially affect plant production (AT# 139037-21).

Corrective Action to Prevent Recurrence:

5. The 2B CD/CB motor terminations will be repaired to ensure that stresses on the lugs are minimized (AT# 139037-19).

F. PREVIOUS OCCURRENCES

On July 24, 1996, the CD/CB pump 2CD01PB auto tripped. Investigation found that overcurrent relay 2551-AP115 was tripped at Bus 252. Inspection of the 2B CD/CB pump found that the 'A' phase motor pigtail had burned off at the lug. A new 3/0 3/8" hole lug was attached and the lugs for the 'B' and 'C' phase motor leads were also replaced. The repair was performed under WO 9607053501. The cause of the problem was identified in the work order as an improperly installed and sized lug. This was a different cause than the scram on January 10, 2003.

G. COMPONENT FAILURE DATA

Penn-Union, Connector, Lug, 4/0 Cable, Part No. BBLU-4/0D