LaSalle Generating Station
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Exelon Nuclear

September 18, 2009

10 CFR 50.73

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

LaSalle County Station, Units 1
Facility Operating License No. NPF 11
NRC Docket No. 50-373

Subject: Licensee Event Report

In accordance with 10 CFR 50.73 (a)(2)(v)(B), Exelon Generation Company, (EGC), LLC, is submitting Licensee Event Report Number 09-002-00, Docket No. 050-373.

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

Respectfully,

David P. Rhoades
Plant Manager
LaSalle County Station

Attachment: Licensee Event Report

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

IE22
NRR

NRC FORM 366 (9-2007) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 08/31/2010

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@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 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.

LICENSEE EVENT REPORT (LER)

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

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
LaSalle County Station Unit 1	05000373	1 OF 3

4. TITLE

Loss of Shutdown Cooling Due to Spurious Closure of the Shutdown Cooling Suction Isolation Valve

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
07	20	2009	2009	- 002 -	00	09	18	2009	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE

4

10. POWER LEVEL

000

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*

- ☐ 20.2201(b)
- ☐ 20.2201(d)
- ☐ 20.2203(a)(1)
- ☐ 20.2203(a)(2)(i)
- ☐ 20.2203(a)(2)(ii)
- ☐ 20.2203(a)(2)(iii)
- ☐ 20.2203(a)(2)(iv)
- ☐ 20.2203(a)(2)(v)
- ☐ 20.2203(a)(2)(vi)
- ☐ 20.2203(a)(3)(i)
- ☐ 20.2203(a)(3)(ii)
- ☐ 20.2203(a)(4)
- ☐ 50.36(c)(1)(i)(A)
- ☐ 50.36(c)(1)(ii)(A)
- ☐ 50.36(c)(2)
- ☐ 50.46(a)(3)(ii)
- ☐ 50.73(a)(2)(i)(A)
- ☐ 50.73(a)(2)(i)(B)
- ☐ 50.73(a)(2)(i)(C)
- ☐ 50.73(a)(2)(ii)(A)
- ☐ 50.73(a)(2)(ii)(B)
- ☐ 50.73(a)(2)(iii)
- ☐ 50.73(a)(2)(iv)(A)
- ☐ 50.73(a)(2)(v)(A)
- ☒ 50.73(a)(2)(v)(B)
- ☐ 50.73(a)(2)(v)(C)
- ☐ 50.73(a)(2)(v)(D)
- ☐ 50.73(a)(2)(vii)
- ☐ 50.73(a)(2)(viii)(A)
- ☐ 50.73(a)(2)(viii)(B)
- ☐ 50.73(a)(2)(ix)(A)
- ☐ 50.73(a)(2)(x)
- ☐ 73.71(a)(4)
- ☐ 73.71(a)(5)
- ☐ OTHER

Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER *(Include Area Code)*
Keith Taber, Operations Director	815-415-2200

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
X	AD	RLY 2	T351	Y					

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☒ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

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

On July 20, 2009, LaSalle Unit 1 was in Mode 4 Cold Shutdown. At 1448 CDT the inboard shutdown cooling suction isolation valve (1E12-F009) unexpectedly closed, causing a trip of both the 1A and 1B Residual Heat Removal (RHR) pumps and a loss of shutdown cooling. Control room operators entered the appropriate abnormal procedures, reopened 1E12-F009, and restarted the 1A RHR pump at 1500 CDT thereby restoring shutdown cooling.

The safety consequences of this event were minimal. Shutdown cooling was restored within 12 minutes and reactor coolant temperature rose 12 degrees F. Both Reactor Recirculation (RR) pumps were running during the event, so forced coolant circulation was maintained.

The root cause analysis determined that the cause of the spurious closure of the shutdown cooling isolation valve was high contact resistance on Agastat relay 1B21H-K77 in the shutdown cooling suction high flow isolation logic. Corrective actions included replacing the faulty relay, and scheduling other relays of this model in the shutdown cooling isolation logic for replacement.

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NARRATIVE

A. PLANT AND SYSTEM IDENTIFICATION

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

CONDITION PRIOR TO EVENT

Unit(s): 1
Reactor Mode(s): 4
Mode(s) Name: Cold Shutdown

Event Date: 7/20/09
Power Level(s): 000

Event Time: 1448

B. DESCRIPTION OF EVENT

On July 20, 2009, LaSalle Unit 1 was in Mode 4 Cold Shutdown. At 1448 CDT the inboard shutdown cooling suction isolation valve (1E12-F009) unexpectedly closed, causing a trip of both the 1A and 1B Residual Heat Removal (RHR)[BO] pumps and a loss of shutdown cooling. Control Room operators entered the appropriate abnormal procedures, reopened the 1E12-F009 valve, and restarted the 1A RHR pump at 1500 CDT, thereby restoring shutdown cooling.

At the time of the event, Unit 1 was operating in shutdown cooling mode with two RHR pumps running to perform dual loop flushes of the RHR suction piping. In order to start the second RHR pump, the shutdown cooling suction high flow isolation had been bypassed in accordance with approved station procedures by connecting a jumper across the contacts of relays 1B21H-K74 (Division 1) and 1B21H-K77 (Division 2). The jumper prevents relays 1B21H-K75 (Division 1) and 1B21H-K29 (Division 2) from dropping out on a trip of relays K74 and K77, respectively, which would result in a high flow isolation of the shutdown cooling suction isolation valves.

Instrument Maintenance (IM) technicians had been dispatched to remove the jumpers as part of restoring from the dual loop flush. When the jumper was removed from the terminal of the 1B21H-K29 relay, the IM technicians observed that the circuit appeared to be under load, as a small arc was drawn and they heard an audible click. The IM technicians went to the front of the panel and verified that the relay had not changed state and was positioned as expected. The technicians then exited the area. A short time later, other personnel working in the room heard a relay change state, and were subsequently advised by the Main Control Room operators that the 1A and 1B RHR pumps had tripped.

C. CAUSE OF EVENT

The root cause was identified as high resistance on contacts of the 1B21H-K77 relay. Oxidation buildup caused a high relay contact resistance, resulting in downstream relay 1B21H-K29 momentarily dropping out and causing the inboard shutdown cooling suction isolation valve to close. This condition was exacerbated by the installation of the jumper, because while it was installed the jumper decreased the amount of current through the contacts.

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NARRATIVE

D. SAFETY ANALYSIS

The safety consequences of this event were minimal. Shutdown cooling was restored within 12 minutes and reactor coolant temperature rose 12 degrees F. Both Reactor Recirculation (RR)[AD] pumps were running during the event, so forced coolant circulation was maintained.

The event was determined to be reportable in accordance with 10 CFR50.73(a)(2)(v)(B) as an event or condition that could have prevented the fulfillment of the safety function of systems needed to remove residual heat. This event is considered a Safety System Functional Failure.

E. CORRECTIVE ACTIONS

Corrective Actions:

- The 1B21H-K77 relay was replaced.
- The remaining affected Agastat relays in the SDC isolation logic system were scheduled for replacement in upcoming division work windows.

Corrective Action to Prevent Recurrence:

- A preventative maintenance activity will be created to periodically replace the affected relays.
- A design change will be evaluated for defeating the shutdown cooling isolation logic when not required to be operable by the Technical Specifications.

F. PREVIOUS OCCURENCES

A document search found that LaSalle has not experienced a loss of shutdown cooling due to a spurious closure of the shutdown cooling suction isolation valve within the past five (5) years.

G. COMPONENT FAILURE DATA

Tyco Electronics - Agastat Model E7000 Series Time Day Relay