Exelon Generation Company, LLC
Dresden Nuclear Power Station
6500 North Dresden Road
Morris, IL 60450-9765

www.exeloncorp.com

Exelon SM
Nuclear

10 CFR 50.73

SVPLTR # 07-0016

March 19, 2007

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Dresden Nuclear Power Station, Unit 2
Renewed Facility Operating License No. DPR-19
NRC Docket No. 50-237

Subject: Licensee Event Report 237/2007-001-00, "Unit 2 Standby Liquid Control System Tank Inoperable Due To A Small Linear Crack"

Enclosed is Licensee Event Report 237/2007-001-00, "Unit 2 Standby Liquid Control System Tank Inoperable Due To A Small Linear Crack," for Dresden Nuclear Power Station, Unit 2. This event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B), "Any operation or condition which was prohibited by the plant's Technical Specifications," and 10 CFR 50.73(a)(2)(vii)(D), "Any event where a single cause or condition caused at least one independent train or channel to become inoperable in multiple systems or two independent trains or channels to become inoperable in a single system designed to mitigate the consequences of an accident."

Should you have any questions concerning this report, please contact Mr. James Ellis, Regulatory Assurance Manager, at (815) 416-2800.

Respectfully,

for/Danny G. Bost
David B Wozniak

Danny G. Bost
Site Vice President
Dresden Nuclear Power Station

Enclosure

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

IE22

NRC FORM 366 (6-2004) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 06/30/2007

Estimated burden per response to comply with this mandatory 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 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)

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4. TITLE
Unit 2 Standby Liquid Control System Tank Inoperable Due To A Small Linear Crack

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
									N/A	N/A
01	18	2007	2007	- 001 -	00	03	19	2007	FACILITY NAME: N/A	DOCKET NUMBER: N/A

9. OPERATING MODE
1

10. POWER LEVEL
100

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)
Dresden Nuclear Power Station – George Papanic Jr.	(815) 416-2815

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
NA					NA				

14. SUPPLEMENTAL REPORT EXPECTED

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

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR
03	20	2008

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

On January 18, 2007, at 2110 hours (CST), with Unit 2 at approximately 100 percent power, Dresden Nuclear Power Station control room personnel were notified of a through wall linear crack at the Unit 2 Standby Liquid Control System Tank temperature switch well. The Unit 2 Standby Liquid Control System was declared inoperable and Technical Specification 3.1.7, "Standby Liquid Control System," was entered. The repair to the tank could not be completed within the allowed Completion Time of Technical Specification 3.1.7 and Dresden Nuclear Power Station requested a Notice of Enforcement Discretion to allow Unit 2 to remain at power during the repair. The NRC granted the Notice of Enforcement Discretion on January 19, 2007. The system was restored to operable status by encapsulating the cracked component on January 20, 2007 at 0015 hours (CST) within the time allowed by the Notice of Enforcement Discretion.

The cause of the event is indeterminate until the cracked component on the Unit 2 Standby Liquid Control System Tank is removed from the tank and evaluated. The failed component will be removed during the next Unit 2 refueling outage currently scheduled for October 2007. Dresden Nuclear Power Station will supplement this report with the information obtained from the evaluation of the cracked component. The supplemental report is currently scheduled on or before March 20, 2008.

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

Dresden Nuclear Power Station (DNPS) Unit 2 is a General Electric Company Boiling Water Reactor with a licensed maximum power level of 2957 megawatts thermal. The Energy Industry Identification System codes used in the text are identified as [XX].

A. Plant Conditions Prior to Event:

Unit: 02 Event Date: 1-18-2007
Reactor Mode: 1 Mode Name: Power Operation Power Level: 100 percent
Reactor Coolant System Pressure: 1000 psig

B. Description of Event:

On January 18, 2007, at 2110 hours (CST), with Unit 2 at approximately 100 percent power, DNPS control room personnel were notified of a through wall linear crack at the Unit 2 Standby Liquid Control System (SLC) [BR] Tank [TK] temperature switch well. The temperature switch well contains a temperature sensor that inputs to indication only and a main control room annunciator. The Unit 2 SLC was declared inoperable and Technical Specification (TS) 3.1.7, "Standby Liquid Control (SLC) System," was entered. A review of the possible repair options determined that a repair to the tank could not be completed within the allowed Completion Time of TS 3.1.7.

On January 19, 2007, DNPS verbally requested a Notice of Enforcement Discretion (NOED) associated with TS 3.1.7. The NOED requested a temporary 72-hour extension of the Completion Time of Required Action B.1 for TS 3.1.7. The intent of the NOED was to avoid a plant shutdown as a result of compliance with TS 3.1.7, Required Action C.1, which required Unit 2 to be placed in Mode 3 operation (i.e., hot shutdown) on or before 1710 hours on January 19, 2007. The NRC verbally granted the NOED at 0503 hours (CST) on January 19, 2007. The system was restored to operable status by encapsulating the cracked component on January 20, 2007 at 0015 hours (CST) within the time allowed by the NOED.

The written NOED request, "Request for Enforcement Discretion, Technical Specification 3.1.7, Standby Liquid Control (SLC) System," was submitted to the NRC on January 22, 2007, consistent with the guidelines provided in Regulatory Issue Summary 2005-01, "Changes to Notice of Enforcement Discretion (NOED) Process and Staff Guidance," and NRC Inspection Manual Part 9900, "Operations – Notices of Enforcement Discretion."

This event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B), "Any operation or condition which was prohibited by the plant's Technical Specifications," and 10 CFR 50.73(a)(2)(vii)(D), "Any event where a single cause or condition caused at least one independent train or channel to become inoperable in multiple systems or two independent trains or channels to become inoperable in a single system designed to mitigate the consequences of an accident." The SLC Tank was inoperable for a period of time that exceeded TS 3.1.7 allowed Completion Time, and the degraded component rendered both trains of SLC injection inoperable until the system was restored to operable status within the time allowed by the granted NOED.

C. Cause of Event:

The cause of the event cannot be completely determined until the cracked component on the Unit 2 SLC Tank is removed from the tank and evaluated.

During a maintenance outage in November 2006, DNPS Unit 2 drained the SLC Tank to replace the Boric Acid. During this evolution, an existing leak at the threaded connection to the temperature switch well was repaired. The components associated with the temperature switch well include a 1 inch Half-Coupling welded to the tank wall, a 1 inch to 3/4 inch Hex-Reducing bushing threaded and welded to the Half-Coupling and a 3/4 inch Fenwall Thermowell threaded into the Hex-Reducing bushing. The leak at the threaded connection between the Fenwall Thermowell and the Hex-Reducing bushing did not jeopardize the operability of the SLC Tank. The repair required increased seal welding of the Hex-Reducing bushing to the Half-Coupling and replacement of the threaded connection between the Fenwall Thermowell and the Hex-Reducing bushing with seal welding. The leak was successfully repaired.

On January 18, 2007, during a DNPS Senior Manager overview of training in Unit 2, it was identified that a through wall linear crack existed on the 1 inch to 3/4 inch Hex-Reducing bushing of the Unit 2 SLC Tank temperature switch well. DNPS determined that the best repair solution was to remove the temperature sensor from the thermowell and encapsulate the cracked component thereby restoring the integrity of the tank's boundary. During the event, the repair method that was utilized did not require the tank to be drained, thus the SLC Tank remained available to support the injection of Boric Acid into the reactor vessel during a postulated accident.

DNPS is currently scheduled for a refuel outage in October 2007 that will allow the draining of the SLC Tank to permit the removal of the cracked component. After removal the cracked component will be sent to a vendor's lab for evaluation of the failure mechanism. DNPS will supplement this report with the information obtained from the evaluation. The supplemental report is currently scheduled on or before March 20, 2008.

An inspection of the Unit 3 SLC Tank identified no observable leakage from the tank and the Unit 3 temperature switch well does not use a Hex-Reducing bushing between the Half-Coupling and thermowell.

D. Safety Analysis:

The safety significance of the event is minimal. During this event, DNPS continued to operate within the requirements of the TS and the NRC granted NOED, which temporarily extended the Completion Time. The SLC Tank remained available to support the injection of Boric Acid into the reactor vessel during a postulated accident. Additionally, the leak from the linear crack was extremely small in relation to the Boric Acid volume contained in the tank and at no time did the quantity of available Boric Acid fall below that assumed in any accident analyses. Therefore, the consequences of this event had minimal impact on the health and safety of the public and reactor safety.

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

E. Corrective Actions:

The SLC Tank was repaired by encapsulating the cracked component. The system was restored to operable status on January 20, 2007 at 0015 hours (CST) within the time allowed by the NOED.

The written NOED request was submitted to the NRC on January 22, 2007, consistent with the guidelines provided in Regulatory Issue Summary 2005-01 and NRC Inspection Manual Part 9900.

The cracked component will be removed from SLC Tank during the next Unit 2 refueling outage currently scheduled for October 2007. The cracked component will be sent to a vendor's lab for evaluation.

A Supplemental Licensee Event Reports (LER) will be submitted on or before March 20, 2008 containing the information obtained from the additional evaluation performed at the vendor's lab.

An inspection of the Unit 3 SLC Tank identified no observable leakage from the tank.

F. Previous Occurrences:

A review of DNPS Licensee Event Reports (LERs) for the last three years did not identified any LERs associated with through-wall leakage of the SLC Tank.

G. Component Failure Data:

NA