



Exelon Generation®

Dresden Nuclear Power Station
6500 North Dresden Road
Morris, IL 60450

SVPLTR # 17-0045

10 CFR 50.73

November 10, 2017

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

Dresden Nuclear Power Station, Unit 3
Renewed Facility Operating License Nos. DPR-25
NRC Docket No. 50-249

Subject: Licensee Event Report 249/2017-001-00, Unit 3 Standby Liquid Control System Inoperable Due to a Manufacturing Defect Causing a Piping Leak

Enclosed is Licensee Event Report 249/2017-001-00, "Unit 3 Standby Liquid Control System Inoperable Due to a Manufacturing Defect Causing a Piping Leak." This report describes events which are being reported in accordance with 10 CFR 50.73(a)(2)(v)(A), "Any event or condition that could have prevented the fulfillment of the safety function of ... systems that are needed to shut down the reactor and maintain it in a safe shutdown condition," and in accordance with 10 CFR 50.73(a)(2)(v)(D), "Any event or condition that could have prevented the fulfillment of the safety function of ... systems that are needed to mitigate the consequences of an accident."

There are no regulatory commitments contained in this submittal.

Should you have any questions concerning this letter, please contact Mr. Bruce Franzen at (815) 416-2800.

Respectfully,

Peter J Karaba
Site Vice President
Dresden Nuclear Power Station

Enclosure Licensee Event Report 249/2017-001-00

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

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NRK



LICENSEE EVENT REPORT (LER)
(See Page 2 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

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 Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@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.

1. FACILITY NAME Dresden Nuclear Power Station, Unit 3	2. DOCKET NUMBER 05000249	3. PAGE 1 OF 3
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4. TITLE
Unit 3 Standby Liquid Control System Inoperable Due to a Manufacturing Defect Causing a Piping Leak

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
09	12	2017	2017	- 001	- 00	11	10	2017	N/A	N/A
									FACILITY NAME	DOCKET NUMBER
									N/A	N/A

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

1	<input type="checkbox"/> 20.2201(b)	<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)(A)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
100	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(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)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(1)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(2)(i)
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(ii)
	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> OTHER	Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT Bruce Franzen, Regulatory Assurance Manager	TELEPHONE NUMBER (Include Area Code) 815-416-2800
-----------------------------------------------------------------	------------------------------------------------------

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

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

14. SUPPLEMENTAL REPORT EXPECTED **15. EXPECTED SUBMISSION DATE**

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

MONTH	DAY	YEAR
01	12	2018

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

On September 12, 2017 at 1131 hours (CDT), at Dresden Nuclear Power Station (DNPS), both Unit 3 Standby Liquid Control system subsystems were declared inoperable when control room personnel were notified of a through wall leak on the common discharge piping. Technical Specification (TS) 3.1.7, "Standby Liquid Control System," Condition B was entered. The pipe repair schedule projected that the work could not be completed within the allowed Completion Time of TS 3.1.7 and DNPS requested a Notice of Enforcement Discretion (NOED) to allow Unit 3 to remain at power during the repair. The NRC granted the NOED on September 12, 2017, at 1746 hours. The system was restored to operable status by replacing the piping on September 12, 2017, at 2035 hours within the time allowed by TS.

This event is reportable under 10 CFR 50.73(a)(2)(v)(A), as an event or condition that could have prevented the fulfillment of a safety function of a system that is needed to shut down the reactor and maintain it in a safe shutdown condition and under 10 CFR 50.73(a)(2)(v)(D), for a system that was unavailable for accident mitigation.

Additional reporting requirements, corrective actions, and the cause of the pipe leak is under further investigation and will be documented in a supplemental report.



**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
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1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Dresden Nuclear Power Station, Unit 3	05000249	17	- 001	- 00

NARRATIVE

PLANT AND SYSTEM IDENTIFICATION

Dresden Nuclear Power Station (DNPS), Unit 3, 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: 03 Event Date: 09/12/17 Event Time: 1131 CDT
Reactor Mode: 1 Mode Name: Power Operation Power Level: 100 percent

B. Description of Event:

On September 10, 2017, during Equipment Operator (EO) rounds, the EO found crystalized boron on Dresden, Unit 3 Standby Liquid Control System (SLC) [BR] discharge piping. There was no active leak at the time of discovery and the source of the boron crystals was unknown. Work activities began to determine the source of the boron deposits.

On September 12, 2017, the Division 1 SLC pump was started to pressurize the system to the normal In-Service Testing test pressure as directed by station procedures. With the system pressurized, a leak of approximately one drop per minute was identified on the common discharge line of the SLC pumps. The leak was characterized as a through wall leak from an American Society of Mechanical Engineers (ASME), Class 2 pressure boundary of the SLC system. This leak was treated as a structural integrity issue; therefore, the affected piping was isolated in accordance with station procedures. Isolating the failed piping resulted in both divisions of SLC being declared Inoperable. This action led to entering Technical Specification (TS) Limiting Condition for Operation (LCO) 3.1.7, "Standby Liquid Control (SLC) System," Condition B, "Two SLC subsystems inoperable," and Required Action B.1, "Restore one SLC subsystem to OPERABLE status," with a Completion Time of eight hours.

DNPS requested a Notice of Enforcement Discretion (NOED) to exceed the TS 8 hours Completion Time to complete the pipe repair and replace the pipe. The NRC verbally granted the NOED on September 12, 2017 at 1746 hours.

On September 12, 2017 at 2035 hours, the failed piping was replaced in accordance with station work instructions, thereby restoring the Unit 3 SLC system to Operable status within the TS Completion Times.

Due to the through wall leak on a common discharge line, both SLC subsystems were declared inoperable, this condition was determined to be a reportable event under 10 CFR 50.73(a)(2)(v)(A) and 10 CFR 50.73(a)(2)(v)(D) for an event or condition that that could have prevented the fulfillment of the safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition and mitigate the consequences of an accident.



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CONTINUATION SHEET**

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NARRATIVE

C. Cause of Event:

The cause of these events is under investigation and will be documented in a supplemental report.

D. Safety Analysis:

The SLC System is designed to provide the capability of bringing the reactor, at any time in a fuel cycle, from full power and minimum control rod inventory, which is at the peak of the xenon transient, to a subcritical condition with the reactor in the most reactive, xenon free state without taking credit for control rod movement. The SLC System is also used to maintain suppression pool pH at or above 7 following a Loss of Coolant Accident (LOCA) involving significant fission product releases. Maintaining suppression pool pH levels at or above 7 following an accident ensures that iodine will be retained in the suppression pool water.

The SLC System consists of a boron solution storage tank, two positive displacement pumps, two explosive valves that are provided in parallel for redundancy, and associated piping and valves used to transfer borated water from the storage tank to the reactor pressure vessel. The borated solution is discharged near the bottom of the core shroud, where it then mixes with the cooling water rising through the core.

Additional impacts to the safety analysis will be identified during the root cause investigation and will be documented in a supplemental report.

E. Corrective Actions:

Corrective actions will be developed during the ongoing root cause investigation and will be documented in a supplemental report.

F. Previous Occurrences:

Previous occurrences will be identified through the root cause investigation and will be documented in a supplemental report.

G. Component Failure Data:

The piping with the leak was a 1-1/2 inch pipe tee, ASME A/SA-182-Grade stainless steel. The pipe was in service for over 50 years.