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10 CFR 50.73

SVPLTR # 09-0016

April 23, 2009

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

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

Subject: Supplemental Licensee Event Report 249/2008-001-01, "Unit 3 Drywell Floor Drain Sump Monitoring System Declared Inoperable"

Enclosed is Supplemental Licensee Event Report 249/2008-001-01, "Unit 3 Drywell Floor Drain Sump Monitoring System Declared Inoperable" for Dresden Nuclear Power Station, Unit 3. 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." There are no regulatory commitments contained in this submittal.

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

Respectfully,

Tim Hanley
Site Vice President
Dresden Nuclear Power Station

Enclosure

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

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4. TITLE

Unit 3 Drywell Floor Drain Sump Monitoring System Declared Inoperable

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
08	17	2008	2008	- 001 -	01	04	23	2009	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
D	BD	V	ITT Grinnell	Y	N/A				

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 August 16, 2008, at approximately 2000 hours (CDT), with Unit 3 at approximately 100 percent power, Dresden Nuclear Power Station Operations personnel attempted to pump the Unit 3 drywell floor drain sump, which is used to partially satisfy Surveillance Requirement 3.4.4.1. The pumps started as expected, however, the drywell floor drain sump monitoring system flow integrator indicated no flow. Since the water volume in the drywell floor drain sump could not be measured, the plant was not able to meet Technical Specification 3.4.4, "RCS Operational Leakage." Unit 3 initiated a plant shutdown on August 17, 2008 at approximately 0902 hours (CDT), as the repairs to the system could not be made with Unit 3 online. Dresden Nuclear Power Station requested a Notice of Enforcement Discretion on August 17, 2008 at approximately 1030 hours (CDT) to allow Unit 3 to remain at power for 7 days to allow time for the processing of an emergency Technical Specification amendment. The NRC granted the Notice of Enforcement Discretion on August 17, 2008 at approximately 1200 hours (CDT). Dresden Nuclear Power Station requested and received an emergency Technical Specification amendment to allow continued power operation with an inoperable Unit 3 drywell floor drain sump monitoring system within the time allowed by the Notice of Enforcement Discretion.

The Apparent Cause was determined to be a flow blockage due to the stem-to-diaphragm connection being disconnected that was caused by inadequate procedural guidance. This introduced the potential to incorrectly reassemble the valve/actuator, resulting in higher than desired seating forces applied to the process diaphragm. The procedure was revised.

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NARRATIVE

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: 8-17-2008
Reactor Mode: 1 Mode Name: Power Operation Power Level: 100 percent
Reactor Coolant System Pressure: 1000 psig

B. Description of Event:

On August 16, 2008, at approximately 2000 hours (CDT), with Unit 3 at approximately 100 percent power, DNPS Operations personnel attempted to pump the Unit 3 drywell floor drain sump [BD], which is used to partially satisfy Surveillance Requirement (SR) 3.4.4.1. The pumps started as expected, however, the drywell floor drain sump monitoring system [IJ] flow integrator indicated no flow. During a second attempt, Operations personnel observed that the positions of the isolation valves were indicated as being in their proper indicated position. The pump breakers were inspected locally and pump motor amps were checked with no abnormalities observed. Since the drywell floor drain sump could not be pumped, the water volume in the drywell floor drain sump could not be measured resulting in the plant not able to satisfactorily complete SR 3.4.4.1. The sumps had been successfully pumped previously at 1600 hours on August 16, 2008.

Troubleshooting was performed to identify the possible malfunction. Based on the troubleshooting, it appeared that a blockage of flow existed in the line to containment isolation valve 3-2001-105 [V] or the valve failed closed. DNPS determined that the repairs to the system could not be made with Unit 3 online. Unit 3 initiated a plant shutdown on August 17, 2008 at approximately 0902 hours (CDT) as the plant was not able to meet Technical Specification (TS) 3.4.4, "RCS Operational Leakage."

On August 17, 2008 at approximately 1211 hours (CDT), an Emergency Notification System call was made for the TS 3.4.4 required plant shutdown. The event was assigned ENS event number 44420. The Unit 3 shutdown was halted at approximately 30 percent power.

DNPS verbally requested a Notice of Enforcement Discretion (NOED) on August 17, 2008 at approximately 1030 hours (CDT). Specifically, the NOED requested a seven-day extension to the TS Completion Times for TS 3.4.4 and TS 3.4.5, "RCS Leakage Detection Instrumentation," to place the unit in Mode 3 within 12 hours and Mode 4 within 36 hours. This extension was requested to provide sufficient time to reconfigure the drywell floor drain sump monitoring system such that the drywell equipment drain sump monitoring system could be used to quantify unidentified drywell leakage. In addition, the seven-day extension provided sufficient time for DNPS to request, and the NRC to process an emergency TS amendment. The NRC granted the NOED on August 17, 2008 at approximately 1200 hours (CDT).

The written NOED request, "Request for Enforcement Discretion for Technical Specifications (TS) 3.4.4, 'RCS Operational Leakage' and TS 3.4.5, 'RCS Leakage Detection Instrumentation" was

submitted to the NRC on August 19, 2008, 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."

An emergency TS amendment request, "Request for Emergency License Amendment Regarding Drywell Floor Drain Sump Monitoring System," was submitted on August 18, 2008. The submittal requested the use of the Unit 3 drywell equipment drain sump monitoring system to satisfy the TS 3.4.5 requirements applicable to the Unit 3 drywell floor drain sump monitoring system until the drywell floor drain sump monitoring system is repaired during an outage of sufficient duration, but no later than the startup from D3R20. The NRC issued the amendment on August 22, 2008, within the allowed time period specified in the NOED.

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." The unidentified drywell leakage could not be measured for a period of time that exceeded the TS 3.4.4 Allowed Completion Time and drywell floor drain sump monitoring system was inoperable for a period of time that exceeded TS 3.4.5 Allowed Completion Time. DNPS, as a result of the emergency TS amendment, is currently in compliance with its TS.

C. Cause of Event:

The Apparent Cause was determined to be a flow blockage due to the stem-to-diaphragm connection being disconnected that was caused by inadequate procedural guidance. This introduced the potential to incorrectly reassemble the valve/actuator, resulting in higher than desired seating forces applied to the process diaphragm.

The equipment in the flow path of the drywell floor drain sump monitoring system are (1) the drywell floor drain sump pumps [3A-2001-451 and 3B-2001-451], (2) the drywell floor drain sump pump discharge check valves [3-2001-101A and 3-2001-101B], (3) the drywell floor drain sump pump discharge manual isolation valves [3-2001-102A and 3-2001-102A] and (4) the drywell floor drain sump pumps AOV containment isolation valves [3-2001-105 and 3-2001-106]. The two pumps with their associated check and manual valves are in parallel and only one pump needs to function to pump down the sump. The two AOV's are in series and both must operate to pump down the sump.

Prior to repairing the sump pumps AOV containment isolation valves in D3R20, a thorough review of the Maintenance procedure MA-DR-MM-4-20002, Rev 2, "Disassembly, Reassembly of ITT GRINNELL Diaphragm Valves with Air Operator," was completed utilizing input from the other Exelon Plants with similar valves and instructions from the Original Equipment Manufacturer. It was identified by the review that, due to the inverted orientation of the DNPS sump AOVs, the procedural guidance introduced the potential to incorrectly reassemble the valve/actuator, which could result in higher than desired seating forces being applied to the process diaphragm. Since the process diaphragm is manufactured from an elastomer, high forces can cause mechanical damage. Procedure MA-DR-MM-4-20002 was revised to ensure adequate guidance for proper valve reassembly and output force setting.

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NARRATIVE

Work was performed to overhaul valves 3-2001-105 and 3-2001-106 and replace the process diaphragms using the newly revised procedural guidance in MA-DR-MM-4-20002, Rev 3. During valve 3-2001-105 disassembly it was identified that the stem to diaphragm connection had become disconnected. Since the diaphragm is molded in the closed position, this failure resulted in the blockage of the process line. There was significant diaphragm damage at the area of weir contact and particularly at the contact point of the diaphragm stud. This physical damage is more indicative of high forces than aging or wear.

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 Times of TS 3.4.4 and TS 3.4.5. Additionally, the NRC granted an amendment to allow the use of the Unit 3 drywell equipment drain sump monitoring system to satisfy the TS 3.4.5 requirements applicable to the Unit 3 drywell floor drain sump monitoring system until the drywell floor drain sump monitoring system is repaired during an outage of sufficient duration, but no later than the startup from D3R20. Therefore, the consequences of this event had minimal impact on the health and safety of the public and reactor safety.

E. Corrective Actions:

DNPS verbally requested a NOED on August 17, 2008 at approximately 1030 hours (CDT). The NRC granted the NOED on August 17, 2008 at approximately 1200 hours (CDT).

The written NOED request was submitted to the NRC on August 19, 2008, consistent with the guidelines provided in Regulatory Issue Summary 2005-01 and NRC Inspection Manual Part 9900. An emergency license amendment request was submitted on August 18, 2008. The NRC issued the amendment on August 22, 2008, within the allowed time specified in the NOED.

The drywell floor drain sump monitoring system was reconfigured such that the drywell equipment drain sump monitoring system could be used to quantify unidentified drywell leakage.

Procedure MA-DR-MM-4-20002 was revised to ensure adequate guidance for proper valve reassembly and output force setting.

The Unit 3 drywell floor drain sump monitoring system was repaired during an outage D3R20.

F. Previous Occurrences:

A review of DNPS Licensee Event Reports (LERs) for the last three years did not identified any LERs associated with the drywell floor drain sump monitoring system.

G. Component Failure Data:

ITT Grinnell Size 32101 Air Operator and Diaphragm Valve.