

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

www.exeloncorp.com

10 CFR 50.73

SVPLTR # 08-0067

December 31, 2008

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: Licensee Event Report 249/2008-003-00, "Unit 3 Unplanned Control Rod Withdrawals"

Enclosed is Licensee Event Report 249/2008-003-00, "Unit 3 Unplanned Control Rod Withdrawals" for Dresden Nuclear Power Station, Unit 3. This event is being reported 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 structures or 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 report, please contact Mr. Stephen Taylor, Regulatory Assurance Manager, at (815) 416-2800.

Respectfully,



David B. Wozniak
Site Vice President
Dresden Nuclear Power Station

Enclosure

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

IE22
NRR

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

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.

1. FACILITY NAME Dresden Nuclear Power Station, Unit 3	2. DOCKET NUMBER 05000249	3. PAGE 1 OF 4
--	-------------------------------------	--------------------------

4. TITLE Unit 3 Unplanned Control Rod Withdrawals

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
11	03	2008	2008	- 003 -	00	12	31	2008	N/A	N/A
									FACILITY NAME	DOCKET NUMBER
									N/A	N/A

9. OPERATING MODE 4	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)									
10. POWER LEVEL 000	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER						
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A							

12. LICENSEE CONTACT FOR THIS LER	
FACILITY NAME Dresden Nuclear Power Station – George Papanic Jr.	TELEPHONE NUMBER (Include Area Code) (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
N/A					N/A				

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

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

On November 3, 2008, at approximately 1036 hours (CST), with Unit 3 in a refuel outage, Dresden Nuclear Power Station operations personnel observed an unplanned withdrawal of control rod D-7. The control rod withdrawal stopped at position 06 with no actions taken by main control room personnel. An unplanned withdrawal of control rod E-6 to position 18 and control rod E-7 to position 16 also occurred and stopped with no actions by main control room personnel. All control rods were re-inserted to the full-in position per procedure on November 3, 2008, at approximately 1156 hours (CST).

The root cause of the unplanned control rod withdrawals is attributed to latent procedure deficiencies in DOP 0500-05, "Discharging CRD Accumulators with Mode Switch in Shutdown or Refuel," Revision 4 that were not identified during an Operating Experience Review of the Significant Event Notification (SEN) 264, "Unplanned BWR Control Rod Withdrawals While Shutdown," per procedure LS-AA-115, "Operating Experience Procedure." Corrective actions to address this event include procedure revisions to DOP 0500-05 and LS-AA-115.

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

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Dresden Nuclear Power Station, Unit 3	05000249	YEAR	SEQUENTIAL NUMBER	REV NO.	2 OF 4
		2008	- 003	- 000	

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: 11/3/2008
Reactor Mode: 4 Mode Name: Cold Shutdown Power Level: 0 percent
Reactor Coolant System Pressure: 0 psig

B. Description of Event:

On November 2, 2008, the DNPS Work Execution Center (WEC) Operations Field Supervisor performed a Pre-Job Brief (PJB) of a D3R20 Outage Activity, "Discharge CRD HCU ACCUM - Water Side Only," per procedure DOP 0500-05, "Discharging of CRD Accumulators with Mode Switch in Shutdown or Refuel." The PJB included the direction to perform conditional procedure steps for the Non-Licensed Operators (NLOs) to isolate all control rod drive (CRD) [AA] hydraulic control units (HCUs) [HCU] by closing 177 HCU insert valves (i.e., valve 3-0305-101) [V] and 177 HCU withdraw valves (i.e., valve 3-0305-102) with an operating CRD pump. On November 3, 2008, the NLOs began performing HCU valve closures for the outage activity.

On November 3, 2008, at approximately 1036 hours (CST), with Unit 3 in a refuel outage, DNPS main control room (MCR) personnel observed an unplanned withdrawal of control rod D-7. The control rod withdrawal stopped at position 06 with no actions taken by MCR personnel. An unplanned withdrawal of control rods E-6 to position 18 and E-7 to position 16 also occurred and stopped with no actions taken by MCR personnel.

On November 3, 2008, at approximately 1156 hours (CST), all control rods were re-inserted per procedure to the full-in position by manually opening the associated HCU insert valve.

An Event Notification System call was made on November 18, 2007, at 1608 hours (CST) for the above-described event. The assigned ENS event number was 44665.

This event is being reported 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 structures or systems that are needed to mitigate the consequences of an accident."

C. Cause of Event:

The root cause of the unplanned control rod withdrawals is attributed to latent procedure deficiencies in DOP 0500-05, "Discharging CRD Accumulators with Mode Switch in Shutdown or Refuel," Revision 4 that were not identified during an Operating Experience Review of the Significant Event Notification (SEN) 264, "Unplanned BWR Control Rod Withdrawals While Shutdown," per procedure LS-AA-115, "Operating Experience Procedure."

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

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Dresden Nuclear Power Station, Unit 3	05000249	YEAR	SEQUENTIAL NUMBER	REV NO.	3 OF 4
		2008	- 003	- 000	

NARRATIVE

A Unit 2 start-up from an unscheduled mid-cycle forced outage in 2005 was delayed due to excessive nitrogen gas accumulation in HCU piping. This event prompted the development and issuance of Revision 4 to DOP 0500-05, which permitted isolation of any or all HCU accumulators by closing the HCU insert, and HCU withdraw valves to limit migration of nitrogen gas into HCU piping. The intended purpose was to shorten subsequent venting of drives after system restoration. The procedure did not contain any precautions, prerequisites, selection criteria or limitations for the quantity of HCU's to be isolated with an operating CRD pump. The root cause evaluation determined that the procedure lacked sufficient guidance for the intended use.

In 2007, the Institute of Nuclear Power Operations (INPO) issued SEN 264 that provided information based on recently reported historical events at several Boiling Water Reactors (BWRs) in Japan during outages, which occurred between 1978 and 2000. In each event, single or multiple control rods unexpectedly withdrew from the core without a deliberate command withdrawal signal. The SEN 264 stated in part:

"The unexpected rod withdrawals occurred during either isolation or restoration of multiple HCU's. With a CRD pump running and the majority of the HCU's isolated, CRD system pressures had increased sufficiently for some control rods to withdraw from the core when the associated HCU isolation valves were manipulated in a specific sequence."

"These events involved a scenario which was not well known within the industry, and other BWRs are potentially vulnerable if operated in a similar fashion without compensatory actions taken to address the anomalous operating conditions."

DNPS operations and engineering personnel reviewed the applicability of SEN 264 and concluded that although unlikely, the vulnerability exists at DNPS. Based on this conclusion, a procedure review was conducted in accordance with the requirements in procedure LS-AA-115, "Operating Experience Procedure," to identify procedures requiring revision to address the SEN 264 issue. The review identified procedures revisions were required to DOP 0300-08, "Control Rod Drive System Hydraulic Control Unit Isolation / Pump Isolation," DOP 0400-01, "Reactor Manual Control System Operation" and DGP 03-04, "Control Rod Movements." The procedure revisions made were considered adequate to address the SEN 264 issue and were completed in October 2007.

The RCR evaluation reviewed the cause of procedure DOP 0500-05 not being revised to address the SEN 264 issue and identified that the procedural requirements in LS-AA-115 to perform the procedure review provided insufficient guidance. LS-AA-115 did not require adequate technical rigor during the evaluation for effected procedures, did not require adequate documentation of the effected procedure evaluation, and lacked sufficient departmental, inter-departmental and cross-discipline reviews to ensure the issue under review is completely addressed.

D. Safety Analysis:

The safety significance of the event is minimal. A detailed risk assessment was performed for this event and concluded that the risk of core damage was judged to be negligible due to the reactor

LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Dresden Nuclear Power Station, Unit 3	05000249	YEAR	SEQUENTIAL NUMBER	REV NO.	4 OF 4
		2008	- 003	- 000	

NARRATIVE

remaining subcritical, no boiling in the core and redundant heat removal methods being available. Reactor engineering calculations determined the core remained sub-critical by approximately 4.5 percent. Therefore, the consequences of this event had minimal impact on the health and safety of the public and reactor safety.

E. Corrective Actions:

All control rods were re-inserted per procedure to the full-in position by manually opening the associated HCU insert valve.

Procedure DOP 0500-05 was revised to provide administrative barriers to prevent unplanned control rod withdrawal as described in SEN 264.

Procedure LS-AA-115 will be revised to require sufficient rigor, departmental, inter-departmental and cross-discipline reviews for high significance / risk OPEX items.

Procedure OP-DR-108-101-1002, "Operations Department Standards and Expectations," will be revised to require if a knowledge-based procedure conditional statement shall be executed, in a non-emergency condition at the discretion of the supervisor, then a peer check by a second licensed operator shall be obtained.

F. Previous Occurrences:

A review of DNPS Licensee Event Reports (LERs) for the last three years did not identified any LERs associated with unplanned control rod withdrawal.

G. Component Failure Data:

N/A