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Nuclear

10 CFR 50.73

June 11, 2004

SVPLTR: #04-0035

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

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

Subject: Licensee Event Report 2004-001-00, "Unit 2 High Pressure Coolant Injection System Inoperability Due To Lifted Leads"

Enclosed is Licensee Event Report 2004-001-00, "Unit 2 High Pressure Coolant Injection System Inoperability Due To Lifted Leads," for Dresden Nuclear Power Station. 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)(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."

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

Respectfully,



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



NRC FORM 366 (7-2001)			U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OBM NO. 3150-0104 EXP 7-31-2004								
LICENSEE EVENT REPORT (LER)									Estimated burden per response to comply with this mandatory information 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 Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@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 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 2						2. DOCKET NUMBER 05000237			3. PAGE 1 of 4					
4. TITLE Unit 2 High Pressure Coolant Injection System Inoperability Due To Lifted Leads														
5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED					
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER				
04	12	2004	2004	- 001 -	00	06	11	2004	N/A	N/A				
9. OPERATING MODE			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)											
10. POWER LEVEL			20.2201(b)			20.2203(a)(3)(ii)			50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)			
1			20.2201(d)			20.2203(a)(4)			50.73(a)(2)(iii)		50.73(a)(2)(x)			
100			20.2203(a)(1)			50.36(c)(1)(i)(A)			50.73(a)(2)(iv)(A)		73.71(a)(4)			
			20.2203(a)(2)(i)			50.36(c)(1)(ii)(A)			50.73(a)(2)(v)(A)		73.71(a)(5)			
			20.2203(a)(2)(ii)			50.36(c)(2)			50.73(a)(2)(v)(B)		OTHER			
			20.2203(a)(2)(iii)			50.46(a)(3)(ii)			50.73(a)(2)(v)(C)		Specify in Abstract below or in NRC Form 366A			
			20.2203(a)(2)(iv)			50.73(a)(2)(i)(A)			X 50.73(a)(2)(v)(D)					
			20.2203(a)(2)(v)			X 50.73(a)(2)(i)(B)			50.73(a)(2)(vii)					
			20.2203(a)(2)(vi)			50.73(a)(2)(i)(C)			50.73(a)(2)(viii)(A)					
			20.2203(a)(3)(i)			50.73(a)(2)(ii)(A)			50.73(a)(2)(viii)(B)					
12. LICENSEE CONTACT FOR THIS LER														
NAME 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	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
14. SUPPLEMENTAL REPORT EXPECTED									15. EXPECTED SUBMISSION DATE			MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)									X NO					

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

On April 12, 2004, at 1810 hours (CDT), with Unit 2 at 100 percent power in Mode 1, Instrument Maintenance Technicians reported to plant operations personnel that High Pressure Coolant Injection System instrumentation leads were found lifted and taped. The disconnected instrumentation leads would have prevented the automatic realignment of the High Pressure Coolant Injection System pump suction from its non-safety related water source, the Condensate Storage Tanks, to its safety related water source, the Suppression Pool. The High Pressure Coolant Injection System was declared inoperable. The instrumentation leads were reconnected and the High Pressure Coolant Injection System was declared operable at 1853 hours (CDT) on April 12, 2004.

The root cause of the High Pressure Coolant Injection System lifted and taped instrumentation leads was the failure of an Instrument Maintenance Supervisor to verify restoration of the leads when the surveillance was stopped. The corrective actions to prevent reoccurrence of the human performance error is to conduct four consecutive monthly reinforcements of management expectations with regards to procedures MA-AA-1000, "Conduct of Maintenance," Section 7, "Documentation of Work," and MA-DR-AD-6-00001, "Maintenance Shift Turnover Guidelines."

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

Dresden Nuclear Power Station 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: 4-12-2004	Event Time: 1810 CDT
Reactor Mode: 1	Mode Name: Power Operation	Power Level: 100 percent
Reactor Coolant System Pressure: 1000 psig		

**B. Description of Event:**

On April 12, 2004, at 1810 hours (CDT), with Unit 2 at 100 percent power in Mode 1, Instrument Maintenance (IM) Technicians reported to plant operations personnel that High Pressure Coolant Injection System (HPCI) [BJ] instrumentation leads were found lifted and taped in the Auxiliary Electrical Equipment Room. The disconnected instrumentation leads would have prevented the automatic realignment of the HPCI pump suction from its non-safety related water source, the Condensate Storage Tanks [TK], to its safety related water source, the Suppression Pool. HPCI was declared inoperable. The instrumentation leads were reconnected and HPCI was declared operable at 1853 hours (CDT) on April 12, 2004.

An ENS call was made on April 12, 2004, at 2346 hours (CDT) for the above-described event. The assigned ENS event number was 40671.

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." Technical Specification 3.5.1, "ECCS-Operating," requires that an inoperable HPCI be restored to operable status within 14 days for the plant to remain in Mode 1. The Unit 2 HPCI was inoperable from March 9, 2004, to April 12, 2004, which exceeded the 14-day allowed outage time.
- 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." HPCI is a single train system and the disconnected instrumentation leads would have prevented the automatic realignment of the HPCI pump suction from its non-safety related water source to its safety related water source.

**C. Cause of Event:**

The root cause of the HPCI lifted and taped instrumentation leads was the failure of an Instrument Maintenance Supervisor to verify restoration of the leads when the surveillance was stopped.

On March 9, 2004, IM technicians were performing a calibration of HPCI level switches in accordance with procedure DIS 2300-16, "Torus Level Switches Channel Calibration." The procedure directs the lifting of HPCI instrumentation leads in the Auxiliary Electrical Equipment Room during the calibration of the switches and directs the reconnection of the leads after calibration. The calibration was initiated by the day shift IM technicians and during this shift a problem was encountered with the calibration of the first HPCI level switch 2-2351A. The switch was determined to have been capable of performing its safety function of transferring HPCI pump suction from the Condensate Storage Tanks to the Torus and the problem, which was associated with the resetting of the switch, was corrected.

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During the turnover from the day shift to the afternoon shift, the work package for the calibration of the level switches, including HPCI level switch 2-2351B, was provided to the afternoon shift IM supervisor by the day shift IM supervisor to complete the surveillance. The completion of the surveillance would have reconnected the instrumentation leads as the procedure provides direction to connect the leads if only one switch is calibrated. The IM superintendent informed the afternoon shift supervisor that HPCI level switch 2-2351A was repaired and can fulfill its function. Additionally, the IM superintendent informed the afternoon IM supervisor of the decision not to continue the surveillance for HPCI level switch 2-2351B until replacement switches which were on order, arrived on site. The status of the HPCI switches when the surveillance was stopped was not recorded in the shift turnover log. The afternoon IM supervisor changed the status of the work package in such a way that it implied that the HPCI level switches were operable without reviewing the work package. He also rescheduled the completion of the surveillance to a later date.

Exelon procedure MA-AA-1000, "Conduct of Maintenance," Section 7, "Documentation of Work," states that the "First Line Supervisors (i.e., day shift IM supervisor and afternoon shift IM supervisor) are responsible for ensuring the completed work packages contain all required documentation and signoffs." MA-AA-1000 Section 15, "Configuration Control," states that the "Maintenance Departments must ensure that components are returned to the Operations Department in the configuration in which they were received. This requires a strong focus in performance of our work, as well as review of our documentation." The procedure also directs maintenance personnel to "Take measures to ensure your activity does not compromise plant configuration."

Dresden procedure MA-DR-AD-6-00001, "Maintenance Shift Turnover Guidelines," states that the Maintenance First Line Supervisor shall be responsible for ensuring a Maintenance Turnover Log is maintained containing turnover notes and issues; and to document current work package status as well as work in-progress that is being turned over to continue work on successive shifts on the computer data base Turnover Log.

The corrective actions to prevent reoccurrence of the human performance error is to conduct four consecutive monthly reinforcements of management expectations with regards to procedures MA-AA-1000, Section 7.0 and MA-DR-AD-6-00001 to IM supervisors.

**D. Safety Analysis:**

The safety significance of the HPCI lifted and taped instrumentation leads event was minimal. HPCI is normally aligned during plant operation to the Condensate Storage Tanks. HPCI is designed to initially take suction from the Condensate Storage Tanks and then automatically realign to the Suppression Pool when the water level in the tanks is low or the Torus water level is high. The disconnected instrumentation leads would have prevented the automatic HPCI realignment from the Condensate Storage Tanks to the Suppression Pool. The Dresden Control Room is equipped with two annunciator alarms, HPCI Condensate Storage Tank Level Low Low and Torus Level High, which alert the operator that HPCI must realign from the Condensate Storage Tanks to the Suppression Pool. The disconnected instrumentation leads would not have prevented the annunciator alarms. There are alarm response procedures, DAN 902-3, "HPCI COND STG TK LVL LO LO," and DAN 902-3, "TORUS LVL HI," that directs the operator to verify that the HPCI has realigned to the Suppression Pool. If automatic realignment does not occur, the operator is trained to manually perform the realignment. The required operator actions are uncomplicated manipulation of control room valve switches and valve position indication is available in the control room. Thus, there is reasonable assurance that manual operator action would have successfully accomplished the transfer of HPCI suction from the Condensate Storage Tanks to the Suppression Pool. Additionally, other Emergency Core Cooling Systems (i.e., Core Spray System, Low Pressure Coolant Injection System, and the

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Automatic Depressurization System) were operable during the time interval that the HPCI instrumentation leads were disconnected.

Therefore, the consequences of this event had minimal impact on the health and safety of the public and reactor safety.

**E. Corrective Actions:**

The HPCI instrumentation leads were reconnected.

Immediate corrective actions included the verification that this problem did not exist on Unit 3 HPCI.

Four consecutive monthly reinforcements of management expectations with regards to procedures MA-AA-1000, Section 7.0 and MA-DR-AD-6-00001 will be conducted with IM supervisors.

A meeting was held with all IM Supervisors to reinforce the expectation that ownership of turnover logs includes the need to remain cognizant of major plant evolutions, changes in equipment status and trends that may effect safe plant operation in accordance with procedures MA-DR-AD-6-00001, "Maintenance Shift Turnover Guidelines, and MA-AA-1000."

A Common Cause Analysis will be conducted to evaluate recent IM performance.

An Operations Policy was modified to more clearly delineate actions and accountability for work orders or other activities that affect equipment operability. Actions included logging and tracking to completion of all work requests prior to exiting the associated LCO Action Statement, especially for any activity not completed in its entirety.

**F. Previous Occurrences:**

A review of Dresden Nuclear Power Station Licensee Event Reports (LERs) and operating experience over the previous five years did not find any similar occurrences.

**G. Component Failure Data:**

NA