

**Commonwealth Edison** Dresden Nuclear Power Station 6500 North Dresden Road Morris, Illinois 60450 Telephone 815/942-2920

July 27, 1994

GFSLTR 94-0246

U.S. Nuclear Regulatory Commission Document Control Desk Washington, D. C. 20555

Licensee Event Report 94-017, Docket 50-237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10CFR50.73(a)(2)(iv).

Sincerely,

Gary Spedl Station Manager Dresden Station

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GFS/MC/cfq

Enclosure

cc: J. Martin, Regional Administrator, Region III NRC Resident Inspector's Office File/NRC File/Numerical

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NRC FOR	MRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION APPROVED BY ONE NO. 3150-0104 (5-92) EXPIRES 5/31/95							• •							
	LICENSEE EVENT REPORT (LER)							ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.							
FACILITY	FACILITY NAME (1) Dresden Nuclear Power Station, Unit 2						DOCKET NUMBER (2) 05000237			PAGE (3) 1 OF 4					
TITLE (4	4) HPCI	Syst	em Sud	ction Swap du	e to In	corre	ctly	Insta	lled	IJ	umpers	-			
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On July 4, 1994 at 0957 hours, with Unit 2 at 87% rated core thermal power, while draining the 2/3B Condensate Storage Tank (CST) the High Pressure Coolant Injection System swapped from the normal 2/3 CST suction path to the Suppression Pool suction path. An operator was dispatched to the CST level switch area to investigate the potential cause for the suction swap. It was determined that the jumpers installed under Out of Service 1994 0-0385, 2/3B Cst Draining, were installed on the Unit 3 side of the level switches instead of on Unit 2. Unit 3 was in refuel at the time with the HPCI system inoperable and isolated. Additional jumpers were then installed on Unit 2 and the HPCI suction was realigned to the 2/3A CST at 1300 hours. The investigation which followed concluded that the jumpers were placed on the wrong unit due to improper wiring verification. An additional contributing factor was that the internal and external labeling of the associated Terminal Boxes were inadequate. The safety significance of this event is considered minimal since all other Emergency Core Cooling Systems (ECCS) required by Technical Specification (T.S.) 3.5.C.2.a were operable and a suction path for the HPCI system was available throughout this event. There have been no previous events involving the unplanned swap of the HPCI system suction path.

NRC FORM 366A (5-92)	U.S. NUCLEAR R	APPROVED BY ONB NO. 3150-0104 EXPIRES 5/31/95						
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

EVENT IDENTIFICATION:

HPCI System Suction Swap due to Incorrectly Installed Jumpers

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 2	2		Event	Date:	07/04/94	Event	Time:	0957
Reactor	Mode:	N	Mode	Name:	Run	Power	Level:	87%
Reactor	Coolant	: System	Pressu	re: 94	48 psig			

#### B. DESCRIPTION OF EVENT:

On July 4, 1994 at 0957 hours, with Unit 2 at 87% rated core thermal power, while draining the 2/3B Condensate Storage Tank (CST) the High Pressure Coolant Injection System swapped from the normal 2/3 CST suction path to the Suppression Pool suction path. An operator was dispatched to the CST level switch area to investigate the potential cause for the suction swap. It was determined that the jumpers installed under Out of Service 1994 0-0385, 2/3B Cst Draining, were installed on the Unit 3 side of the level switches instead of on Unit 2. Unit 3 was in refuel at the time with the HPCI system inoperable and isolated. Additional jumpers were then installed on Unit 2 and the HPCI suction was realigned to the 2/3A CST at 1300 hours. The investigation which followed concluded that the jumpers were placed on the wrong unit due to improper wiring verification. An additional contributing factor was that the internal and external labeling of the associated Terminal Box was inadequate. The safety significance of this event is considered minimal since all other Emergency Core Cooling Systems (ECCS) required by Technical Specification (T.S.) 3.5.C.2.a were operable and a suction path for the HPCI system was available throughout this event. There have been no previous events involving the unplanned swap of the HPCI system suction path.

C. CAUSE OF EVENT:

This report is being submitted in accordance with 10CFR50.73 (a)(2)(iv), which requires the reporting of any manual or automatic actuation of an engineered safety feature.

The HPCI system is capable of taking suction from the 2/3A CST (normal) or Suppression Pool. The system is normally aligned to the 2/3A CST and switches on low level in either the 2/3A or 2/3B CST. During this event the 2/3B CST was being drained in order to perform planned maintenance. Prior to draining 2/3B CST, jumpers were installed on Level Switches (LS) 2/3-2350-B and LS 2/3-2350-D to prevent the suction swap of the Unit 2 HPCI system. The jumpers were installed as part of Equipment Out of Service (OOS)1994 0-0385. However, further review of the placement of the jumpers revealed that the jumpers were placed on the Unit 3 level switch contacts instead of the Unit 2 level switch contacts.

The jumpers were installed on July 2,1994 under OOS 1994 0-0385. The HPCI System Engineer was assisting in the placement of the jumpers. The 2/3-2350-B and 2/3-2350-D Level switches are located in the Unit 2 Reactor Feed Pump Room.

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The wiring coming from the level switches are routed to two local Terminal Boxes 2TB-82 and 3TB-89. During the initial installation of the jumpers only the Unit 2 Terminal Box was labeled. The system engineer observing the configuration assumed that the labeled box was a cable pull box and the box below was the actual Unit 2 terminal box. Prior to installing the jumpers the system engineer was responsible for verifying the correct cable number. The input cable number was inaccurately verified to be #23891 due to poor labeling markers on the cable. The cable number was actually #33891 which corresponds to the Unit 3 level switch contacts. The jumpers were then installed on Unit 3 which was in refuel outage D3R13 with the HPCI System inoperable and isolated. Subsequently, on July 4 during 2/3B CST draining the 2/3-2350-B and 2/3-2350-D actuated as designed on the low level in the CST. As a result the HPCI system suction swapped to the suppression pool. The operations department dispatched personnel to the room to determine the cause of the swap. The determination was made that the jumpers were not on the correct unit. Additional jumpers were then installed on Unit 2 and the HPCI system was realigned to the 2/3A CST at 1300 hours. The HPCI system was considered operable since a suction path for HPCI existed throughout the event.

#### D. SAFETY ANALYSIS:

The HPCI system is capable of taking suction from the 2/3A CST (normal) or the Suppression Pool. The system is normally aligned to the 2/3A CST and transfers on low level in either the 2/3A or 2/3B CST. During this event the 2/3B CST was being drained in order to perform planned maintenance. Due to incorrectly installed jumpers on the 2/3B CST Level Switches the Unit 2 HPCI suction swapped on the Low Level condition at 0957 hours. The Unit 2 contacts were jumpered and the system was returned to the 2/3A CST suction path at 1300 hours. The safety significance is considered minimal since a suction path was available for HPCI system throughout this event. In addition, all other ECCS required by TS 3.5.C.2.a were operable at the time of the event.

### E. CORRECTIVE ACTIONS:

The Unit 2 contacts for LS 2/3-2350-B and LS 2/3-2350-D were installed and the HPCI system was realigned to the CST.

The Cognizant System Engineer was disciplined due to failure to properly verify the wiring configuration of the Unit 2 and the Unit 3 HPCI CST Level Switches.

The event description was electronically transmitted to all of the operation department personnel.

Temporary Labels were installed on the Unit 2 and Unit 3 Level Switch terminal boxes.

The System Engineer will provide an event description to the System Engineering Department during a weekly tailgate meeting by August 30, 1994.

New Labels will be installed on the Terminal Boxes and the wiring prior to October 1, 1994.

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

## F. **PREVIOUS OCCURRENCES:**

None

# G. COMPONENT FAILURE DATA:

None.