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 F. Spedl
Station Manager
Dresden Station

GFS/MC/cfq

Enclosure

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

gfs94\0246.94

IE22

NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

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.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Dresden Nuclear Power Station, Unit 2	05000237	1 OF 4

TITLE (4)
HPCI System Suction Swap due to Incorrectly Installed Jumpers

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
07	04	94	94	-- 017 --	00	07	27	94	None	
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	N
POWER LEVEL (10)	087

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.2201(b)		20.2203(a)(3)(i)	X	50.73(a)(2)(iii)		73.71(b)
	20.2203(a)(1)		20.2203(a)(3)(ii)		50.73(a)(2)(iv)		73.71(c)
	20.2203(a)(2)(i)		20.2203(a)(4)		50.73(a)(2)(v)		OTHER
	20.2203(a)(2)(ii)		50.36(c)(1)		50.73(a)(2)(vii)		(Specify in Abstract below and in Text, NRC Form 366A)
	20.2203(a)(2)(iii)		50.36(c)(2)		50.73(a)(2)(viii)(A)		
	20.2203(a)(2)(iv)		50.73(a)(2)(i)		50.73(a)(2)(viii)(B)		
	20.2203(a)(2)(v)		50.73(a)(2)(ii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Mark Churilla, System Engineering Department Ext. 2788	(815) 942-2920

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

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.

EVENT IDENTIFICATION:

HPCI System Suction Swap due to Incorrectly Installed Jumpers

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 2 Event Date: 07/04/94 Event Time: 0957

Reactor Mode: N Mode Name: Run Power Level: 87%

Reactor Coolant System Pressure: 948 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.

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.

F. PREVIOUS OCCURRENCES:

None

G. COMPONENT FAILURE DATA:

None.