Commonwealth Edison
Dresden Nuclear Power Station
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May 16, 1994

GFSLTR 94-0156

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

License Event Report 94-012, Docket 50/237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2)(iv).

Sincerely,

Gary F. Spedl
Station Manager
Dresden Station

GFS/pt

Enclosure

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

(GFS94\0156.94)

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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)
Inadvertent Auto Start of 2A Core Spray Pump Due to Personnel Error

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
04	18	94	94	-- 012 --	0	05	17	94	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)	099		20.402(b)		20.405(c)	X	50.73(a)(2)(iv)		73.71(b)
			20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)
			20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER
			20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in Abstract below and in Text, NRC Form 366A)
			20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		
			20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Walter J. Marcis, Staff Engineer Ext. 2850	(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
X	YES (If yes, complete EXPECTED SUBMISSION DATE).		NO		06	30	94

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

On April 18, 1994 at 1741, with Unit 2 at 99% rated core thermal power, the 2A Core Spray Pump (CS) started inadvertently during modification work in the 2/3 Diesel Generator (DG) cubicle at Bus 23-1. This resulted in core spray flow through the minimum flow lines.

While transferring wires on the auxiliary switch, the worker lost control of a wire, and its lug subsequently shorted across two other energized terminals. He taped up the loose wire lug and stopped work. Operators in the control room responded to alarms, checked drywell pressure and reactor water level as proper and then opened the 2A CS Pump Circuit breaker and placed it out-of-service. After an investigation, the wiring was completed and tested, and the 2A CS Pump was returned to service at 2009 hours.

EVENT IDENTIFICATION:

Inadvertent Auto Start of 2A Core Spray Pump Due to Personnel Error

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 2 Event Date: 4/18/94 Event Time: 1741 hrs.

Reactor Mode: N Mode Name: Run Power Level: 99%

Reactor Coolant System Pressure: 1000 psig

B. DESCRIPTION OF EVENT:

On April 18, 1994, at 1741 hours, work was in progress at 4KV Bus 23-1 Cubicle 14, DG 2/3 Feed, to replace the auxiliary switch per Modification M12-0-91-018B, NWR D-04456, Work Package 11. Bus 23-1 and its cubicle for the 2A Core Spray (CS) Pump were in service. The Unit 2/3 Emergency Diesel Generator (DG) was out of service in day 1 of a 7 day LCO. The circuits on the auxiliary switch were energized.

While transferring the wires from the existing auxiliary switch to the new one, the worker lost control of a wire whose lug then touched 2 other terminals. That momentary contact energized the 2A Core Spray Pump relay 1430-114A, which started the pump.

The initiation of 2A Core Spray Pump was detected by the worker, who saw the spark at the wire terminals and heard a nearby 4KV circuit breaker close. He taped up the loose wire lug and stopped work.

After receiving alarms for running the Core Spray Pump, the Nuclear Station Operator (NSO) noted that drywell pressure, reactor water level, and electrical power were all normal. The 2A CS Pump Control Switch was placed in Pull-To-Lock position which stopped it and prevented further running. An immediate investigation revealed that work was in progress at Bus 23-1 cubicle for DG 2/3. At 2009 hours, the 2A Core Spray Pump was taken out of Pull-To-Lock and returned to normal.

C. CAUSE OF EVENT:

This report is being submitted in accordance with 10CFR50.73(a)(2)(iv) which requires the reporting of any condition that caused an inadvertent ESF actuation.

The investigation concluded that there were inadequate precautions prior to transferring energized conductors. The environment was a contributing factor because of the physical location of the auxiliary switch. It is at the bottom and inside of the 4KV cubicle which present a poor work place layout, cramped conditions, uncomfortable temperature, and an expected shock hazard. The risk to work with energized conductors was accepted to avoid entering a 24 hour shutdown of Unit 2 if the 2A Core Spray and 2B LPCI Pumps had been taken out of service.

This event involved a personnel error by a non-licensed CECo worker from Substation Construction Department. He was not cognitive of the possible effect of a short circuit but was treating each wire as energized to avoid any other contact with terminals or ground.

D. SAFETY ANALYSIS:

Core Spray would not inject water until the reactor pressure drops below the core spray pumps discharge pressure of 350 psig and the admission valve is opened. A LOCA initiation signal was not present so the water flow was confined to the minimum flow bypass line to the suppression pool.

The switches being replaced per modification M12-0-91-018B contain contacts that provide indication of the 2/3 Diesel Generator output breaker closed/open status to various logic circuits, including Core Spray and Low Pressure Coolant Injection. The Core Spray and LPCI systems were operable and were ready for operation upon the receipt of an ECCS initiation signal with the appropriate Diesel Generator loading sequence in accordance with the FSAR. The Core Spray pump started and lined up as anticipated in response to the false start signal provided by this inadvertent action.

There were no safety consequences because the core spray did not inject into the vessel and only circulated to the minimum flow lines.

E. CORRECTIVE ACTIONS:

Immediate corrective action after this event was the isolation and taping of the loose wire lug. Operations had placed the 2A Core Spray Pump into Pull-To-Lock position, effectively taking it out of service and entering into a 24 hour LCO time clock toward a forced shutdown condition. Site Engineering and Construction and Operations analyzed the event and then proceeded with Substation Construction to complete the wiring inside the Bus 23-1 Cubicle 14. The 2A Core Spray Pump was returned to service in approximately 3 hours.

The action to prevent reoccurrence was to hold tailgate sessions. The Substation Construction Department at Dresden was made aware of the event and the consequences of working on energized circuits. Various corrective actions to prevent recurrence have been suggested, and are still being evaluated. A supplemental report will be submitted by June 30, 1994, detailing these corrective actions.

F. PREVIOUS OCCURRENCES:

LER/Docket Number	Title
90-010/0500237	2B Core Spray Pump Automatic Start Due to Management Deficiency.
91-010/0500249	Bus 38 Undervoltage Relay actuation Due to Inadvertent Shorting of Relay Terminals.

G. COMPONENT FAILURE DATA:

No component failures were involved.