

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Dresden Nuclear Power Station, Unit 3 DOCKET NUMBER (2) 0 5 0 0 0 2 4 9 1 OF 0 4 PAGE (3)

TITLE (4) Unit 3 Turbine Building and Reactor Building Interlock Doors Opened Simultaneously Due to a Blown Fuse in the Unit 3 Turbine Building Interlock Door Magnet Circuitry

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 NAMES	DOCKET NUMBER(S)		
03	19	87	87	007	00	04	11	87	Unit 2	0 5 0 0 0 2 3 7		
									N/A	0 5 0 0 0		

OPERATING MODE (9) N

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

20.402(b)	20.405(c)	80.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	80.38(a)(1)	80.73(a)(2)(vi)	73.71(a)
20.405(a)(1)(ii)	80.38(a)(2)	80.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)
20.405(a)(1)(iii)	X 80.73(a)(2)(i)	80.73(a)(2)(vii)(A)	
20.405(a)(1)(iv)	80.73(a)(2)(ii)	80.73(a)(2)(vii)(B)	
20.405(a)(1)(v)	80.73(a)(2)(iii)	80.73(a)(2)(vii)	

POWER LEVEL (10) 01715

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
S. Merritt Technical Staff Engineer (X-421)	AREA CODE 81115 TELEPHONE NUMBER 914121-12191210

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS
X	N	M	F U						
			X X X X	N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

On March 18, 1987 at 0900 hours with Unit 3 in the run mode at 75% power, the Unit 3 Turbine Building electromagnetic interlock door, independently swung open as contractors were exiting the Unit 3 Reactor Building electromagnetic interlock door on 517' elevation. The contractors immediately attempted to close the Unit 3 Turbine Building electromagnetic interlock door. The event was reported to the Shift Engineer's office immediately. Also, alarm E-19 annunciated in the Unit 2/3 Control Room indicating interlock door trouble. An Operator was dispatched to investigate the Unit 3 interlock. He found a fuse blown and replaced it. Access through the interlock was restored. Work Request #D63247 was initiated to inspect the door. The cause of the blown fuse was attributed to pinched wires in the door magnet circuitry. The root cause of the pinched wires could not accurately be determined. Corrective action consisted of replacing and repositioning the door magnets (2). The safety significance of the event was minimal: Secondary Containment was temporarily broken but immediately restored as contractors attempted to keep the door closed. Also any airborne leakage would remain in the Unit 3 Reactor Building due to the .25 inch negative differential pressure which was maintained. A similar occurrence is documented on Reportable Occurrence #85-002-0 on Docket #050237.

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

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 2527 Mwt rated core thermal power. Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

EVENT IDENTIFICATION:

The Unit 3 Turbine Building [NM] to Unit 3 Reactor Building [NG] interlock doors opened simultaneously due to a blown fuse in the Unit 3 Turbine Building interlock door circuitry.

A. CONDITIONS PRIOR TO EVENT:

Unit: 3 Event Date: March 18, 1987 Event Time: 0900 hours
 Reactor Mode: N Mode Name: Run Power Level: 75%
 Reactor Pressure: 1005 psig Reactor Temperature: 540°F

This reported was initiated by Deviation Report #12-3-87-27.

B. DESCRIPTION OF EVENT:

On March 18, 1987 at 0900 hours with Unit 3 in the run mode at 75% power, the Unit 3 Turbine Building [NM] electromagnetic interlock door swung open while contractors were exiting the Unit 3 Reactor Building [NG] interlock door. With both interlock doors open, Reactor Building Secondary Containment requirements of Technical Specification 3.7.C were not met. The contractors immediately attempted to close the Unit 3 Turbine Building interlock door as station personnel attempted to enter the interlock. The contractors reported the event to the Shift Engineer's office at approximately the same time that alarm E-19 (Rx-Turb 517 Intlk Door Inop-Bypass) annunciated on the 903-4 panel in the Unit 2/3 Control Room. The Unit 3 Shift Foreman immediately dispatched an Operator to the area to investigate and restrict usage of the interlock until the Unit 3 Turbine Building interlock door could be repaired. While inspecting the interlock, the Operator checked the fuse box and discovered that a fuse had blown. The Operator replaced the fuse and access through the interlock was re-established. Work Request #D63247 was initiated to have the Electrical Maintenance Department (EMD) inspect the Unit 3 Turbine Building interlock door.

C. APPARENT CAUSE OF EVENT:

The immediate cause of both interlock doors opening simultaneously has been attributed to a blown fuse in the electromagnetic interlock door circuitry. Pinched wires in the electromagnetic circuit caused an intermittent ground on the door electromagnets. There are 2 magnets for each of the interlock doors. The intermittent ground resulted in the fuse blowing causing the Turbine Building interlock door to open as the Reactor Building interlock door opened. Without

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

the electromagnet of the Turbine Building door energized, the .25 inch water differential pressure in the Reactor Building caused the Turbine Building door to swing open. The root cause of the wires being pinched was discussed with the EMD. The EMD could not determine the root cause of the pinched wires. However, daily use of the door could have eventually caused a decrease in the tension of the spring in the door electromagnet assembly. This could have caused the door electromagnet assembly to become loose and expose the wires resulting in the intermittent ground. Past work requests dated back to 1985 were examined and the problem of pinched wires has not occurred. However the magnets have been replaced before. Past work requests for the Unit 2 interlock doors were also reviewed for similar occurrences of this kind. The problem of pinched wires was not noted, but the magnets have been adjusted or replaced before.

D. SAFETY ANALYSIS OF EVENT:

The safety significance of the event was considered minimal. Secondary Containment was temporarily broken but immediately restored as contractor personnel attempted to keep the door closed and prevent usage by other station personnel. Also, the Reactor Building differential pressure of negative .25 inches water was maintained throughout the event via the Reactor Building Ventilation System [VA]. Therefore any airborne leakage would have remained within the Unit 3 Reactor Building.

E. CORRECTIVE ACTION:

Immediate corrective action was initially closing the Unit 3 electromagnetic interlock door and replacing the blown fuse in the electromagnetic door circuitry. Further corrective action consisted of replacing the two (2) door magnets to possibly help prevent pinching of the wires and also repositioning the door magnet (under Work Request #D63247).

F. PREVIOUS EVENTS:

<u>LER Number</u>	<u>Title</u>
85-002-0	Reactor Building/Turbine Building 517' Interlock Door Failure: In this event, secondary containment was broken when the Reactor Building interlock door opened before the Turbine Building interlock door fully closed. The cause of this event was attributed to maladjustment of the door closures.

Corrective action for this event consisted of modification M12-2(3)-85-9, which was initiated in order to install time delay relays that would require one door to be closed for approximately 2 seconds before the other could open in order to prevent simultaneous opening of the interlock. The corrective action has been considered effective but is not applicable to this recent event due to the nature of the component failure.

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

A. COMPONENT FAILURE:

The instrument is not reportable to NPRDS.

Manufacturer: Busmann

Nomenclature: 2 Amp, 125 Volt Fuse Cartridge

Part Number: MDL2



Commonwealth Edison
Dresden Nuclear Power Station
R.R. #1
Morris, Illinois 60450
Telephone 815/942-2920

April 11, 1987

EDE LTR #87-246

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

Licensee Event Report #87-007-0, Docket #050249 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2)(i)(B).

E.D. Eenigenburg
Station Manager
Dresden Nuclear Power Station

EDE/jmt

Enclosure

cc: A Bert Davis, Acting Regional Administrator, Region III
File/NRC
File/Numerical

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