

LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Dresden Nuclear Power Station, Unit 2 Docket Number (2) 0 5 10 10 10 12 13 17 Page (3) 1 of 0 4

Title (4) Unexpected Group V Primary Containment Isolation During Maintenance Work Due to Management Deficiency

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)														
0	2	11	8	9	8	9	---	0	1	10	---	0	3	11	0	8	9	N/A	0	5	10	10	10	1	1
										N/A		0		5	10	10	10	1	1						

OPERATING MODE (9) N

POWER LEVEL (10) 0 0 0

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

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input checked="" type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> 73.71(b)	<input type="checkbox"/> 73.71(c)	<input type="checkbox"/> Other (Specify in Abstract below and in Text)
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LICENSEE CONTACT FOR THIS LER (12)

Name: Michael E. Moy, Technical Staff Engineer Ext. 2354

TELEPHONE NUMBER: AREA CODE 8 1 5 9 4 2 -2 19 2 10

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) X NO

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

On February 11, 1989 with Unit 2 in cold shutdown for a refueling outage, an unexpected Group V Primary Containment Isolation occurred thereby isolating the Isolation Condenser from the reactor vessel. The event occurred during the performance of maintenance on Isolation Condenser instrument flow check valves. Upon initiation of the Group V Primary Containment Isolation signal all associated isolation valves operated as designed. No other systems or components which may have contributed to this event were inoperable at the time of this event. The root cause of this event was determined to be management deficiency. The differential pressure indicating switches that initiated the Group V Primary Containment Isolation were not included as isolation points prior to the start of instrument flow check valve maintenance activity due to inadequate equipment labeling and a lack of attention to detail. The safety significance of this event was considered minimal since the Isolation Condenser is not required to be operable with reactor pressure less than 90 psig. To prevent recurrence of this event the equipment labels involved will be improved and this event was reviewed with the personnel involved. Also, a review of this event will be included in an upcoming Station tailgate session. A previous similar event was reported by LER 89-009 on Docket #050237.

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TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 2527 Mwt rated core thermal power.

Nuclear Tracking System (NTS) tracking code numbers are identified in the text as (XXX-XXX-XX-XXXXX).

EVENT IDENTIFICATION:

An Unexpected Group V Primary Containment [JM] Isolation Occurred During Performance of a Maintenance Activity Due to Management Deficiency.

A. CONDITION PRIOR TO EVENT:

Unit: 2    Event Date: February 11, 1989    Event Time: 1326 hours

Reactor Mode: N    Mode Name: Shutdown    Power Level: 0%

Reactor Coolant System Pressure: 0 psig

B. EVENT DESCRIPTION:

On February 11, 1989 at 1326 hours with Unit 2 in cold shutdown for a scheduled refueling outage, an unexpected Group V Primary Containment Isolation occurred, isolating the Isolation Condenser [BL] from the reactor vessel [AC]. The event occurred during maintenance on the Isolation Condenser instrument flow check valves 2-1301-23 and 2-1301-24 for differential pressure indicating switches DPIS 2-1350-A and DPIS 2-1350-B. Both DPIS 2-1350-A and DPIS 2-1350-B serve protective functions for the Isolation Condenser by automatically initiating a Group V Primary Containment Isolation signal in the event that high steam flow (three times normal flow) is detected in the Isolation Condenser steam supply piping. Three times normal steam flow would be representative of a significant steam line break.

As the first instrument flow check was removed from the low side sensing line, line pressure was relieved causing DPIS 2-1350-A(B) to indicate a differential pressure and initiated the Group V Primary Containment Isolation. As the second instrument flow check was removed from the high side sensing line, the remaining line pressure was relieved causing DPIS 2-1350-A(B) to sense a differential pressure of zero, indicating no flow in the steam line and thus allowing the Group V Primary Containment Isolation to be reset.

After the spurious Group V Primary Containment Isolation initiation signal all associated isolation valves operated as designed with the exception of Isolation Condenser steam supply inboard isolation valve M02-1301-1 which was already out of service for unrelated maintenance. No other system or component which may have contributed to this event was inoperable at the time of this event.

C. APPARENT CAUSE OF EVENT:

The root cause of this event was determined to be management deficiency. Instrument flow check valve 2-1301-23 was removed from service by closing the upstream isolation valve 2-1301-21. Instrument flow check valve 2-1301-24 was removed from service by closing the upstream isolation valve 2-1301-22. With these two isolation valves closed, both the high and low side sensing legs and consequently DPIS 2-1350-A(B) were isolated from the reactor vessel piping. However, DPIS 2-1350-A(B) were not isolated from pressure fluctuations created from the removal of the instrument flow checks. The out of service requests for instrument flow check valves 2-1301-23 and 2-1301-24 did not include the isolation of DPIS 2-1350-A(B).

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Upon review of the equipment outage checklist by the Operations Department Shift Foreman prior to allowing placement of the outage, it was observed that the cognizant Mechanical Maintenance Department Foreman had not requested appropriate isolation points in order to prevent a spurious Group V Primary Containment Isolation signal from the differential pressure indicating switches. The Operations Department Shift Foreman then prepared an additional out of service with the intention to isolate the required differential pressure indicating switches. However, instead of placing DPIS 2-1350-A(B) (Isolation Condenser Steam Supply High Flow) out of service, DPIS 2-1349-A(B) (Isolation Condenser condensate return high flow) were inadvertently requested out of service instead. Consequently DPIS 2-1350-A(B) remained capable of initiating a Group V Primary Containment Isolation. DPIS 2-1359-A(B) were inadvertently taken out of service due to the lack of clarity in the labeling involved with the differential pressure indicating switches and due to the lack of attention to detail. DPIS 2-1350-A(B) and DPIS 2-1349-A(B) are located on the same equipment rack and the equipment labels for all four differential pressure indicating switches read "ISO COND STM LINE". Since the instrument flow check valves being worked on were on the Isolation Condenser steam supply line, the Operations Department Shift Foreman inadvertently selected DPIS 2-1349-A(B) as being the correct switches to be isolated. Therefore, the root cause of this event was attributed to management deficiency on the part of the cognizant Mechanical Maintenance Foreman and Operations Department Shift Foreman. As noted previously, inadequate equipment labelling was a contributing factor in this event. This event is reported in accordance with 10CFR50.72(b)(2)(ii), which requires the reporting of any unplanned Engineered Safety Feature actuation.

D. SAFETY ANALYSIS OF EVENT:

The purpose of the Isolation Condenser is to control reactor pressure and/or remove decay heat from the reactor without loss of inventory during periods when the normal heat sink is unavailable. The Isolation Condenser can be manually or automatically initiated. An automatic initiation occurs when reactor pressure is sustained at greater than or equal to 1070 psig for 15 seconds. The Group V Primary Containment Isolation of this event occurred with Unit 2 in a cold shutdown condition with reactor pressure less than 90 psig. Technical Specification 3.5.E.1 allows the Isolation Condenser to be inoperable whenever reactor pressure is less than 90 psig. In addition, Isolation Condenser inboard steam supply isolation valve MO2-2301-1 was out of service closed at the time of this event to facilitate unrelated maintenance work, thus rendering the Isolation Condenser functionally inoperable.

E. CORRECTIVE ACTIONS:

To prevent recurrence of this event the equipment labels for DPIS 2-1349-A(B) and DPIS 2-1350-A(B) will be changed to more accurately describe the differential pressure indicating switches as to their specific function (237-200-89-03701). This corrective action will also be implemented for the Unit 3 Isolation Condenser instrumentation.

To emphasize the importance of properly removing instrumentation from service that could result in an Engineered Safety Feature (ESF) actuation [JE] this event was reviewed with the personnel directly involved and will be reviewed in a future tailgate session with all Station Departments (237-200-89-03702).

NUCLEAR EVENT REPORT (LER) TEXT CONTINUATION

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F. PREVIOUS EVENTS:

LER/Docket Number

Title

89-009/050237

Group V Primary Containment Isolation Initiation During Surveillance Testing.

The root cause of this event is unknown. It was hypothesized that personnel performing surveillance testing at the instrument rack where Group V Primary Containment Isolation initiating switches are located may have inadvertently caused the isolation.

87-014/050249

Isolation Condenser Group V Isolation Due to Spurious Tripping of the High Condensate Flow Instrumentation.

86-018/050249

Spurious Group V Containment Isolation Due to Design Deficiency.

Both of these above events were caused by differential pressure spikes generated by an annular flow instruments. The corrective action was to install a two second time delay in the isolation circuitry.

G. COMPONENT FAILURE DATA:

There were no component failures involved with this event; therefore, this section is not applicable.



**Commonwealth Edison**

Dresden Nuclear Power Station

R.R. #1

Morris, Illinois 60450

Telephone 815/942-2920

March 10, 1989

EDE LTR #89-214

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

Licensee Event Report #89-010-0, Docket #050237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2)(iv).

E.D. Eenigenburg  
Station Manager  
Dresden Nuclear Power Station

EDE/ade

Enclosure

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

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