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Dresden Nuclear Power Station
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May 18, 1993

CWS PMLTR 93-0183

U. S. Nuclear Regulatory Commission
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Licensee Event Report 93-011, Docket 050249 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10CFR 50.73(a)(2)(iv).

Charles W. Schroeder for 5-18-93

Charles W. Schroeder
Station Manager
Dresden Station

CWS/slb

Enclosure

cc: A. Bert Davis, Regional Administrator, Region III
NRC Resident Inspector's Office
File/NRC
File/Numerical

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TEXT Energy Industry Identification System (EIS) 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:

Spurious Group V Primary Containment Isolation While Shutdown Due to Flow Spikes.

A. CONDITIONS PRIOR TO EVENT:

Unit: 3 Event Date: April 21, 1993 Event Time: 1430

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

B. DESCRIPTION OF EVENT:

On April 21, 1993, at 1430 hours, with Unit 3 in the refuel mode with all control rods inserted, a spurious Group V Primary Containment isolation [BL] occurred when the MO 3-1301-3 valve was being opened manually for Votes testing. When the MO 3-1301-3 was manually cracked open, the technician heard water flow through the valve which caused spurious Group V isolation due to flow spikes in the Isolation Condenser condensate return line then the MO 3-1301-3 valve was automatically closed. All of the Isolation Condenser [BL] isolation valves automatically responded as required. The system was walked down following the event, and no line breaks, open fuses, or electrical problems were found. The Group V Primary Containment isolation signal was reset after it was determined to be spurious and Votes testing on MO 3-1301-3 valve was then continued and completed. See Attachment 1 for sequence of events.

C. APPARENT CAUSE OF EVENT:

This report is being submitted in accordance with 10CFR50.73(a)(2)(iv), which requires the reporting of any event or condition that results in the manual or automatic actuation of any Engineering Safety Feature (ESF).

The apparent cause of this event was attribute a flow spike in the Isolation Condenser condensate return line when the MO 3-1301-3 valve was manually cracked open for Votes testing. It appears that the volume between the MO 3-1301-3 and the MO 3-1301-4 was drained during Dresden Instrument Surveillance (DIS) 1300-02, Isolation Condenser Steam/Condensate Line High Flow Calibration, on April 20, because the MO 3-1301-3 and the MO 3-1301-4 valves were left in the closed position at the completion of the surveillance per Operations request and no activities involved these valves until Group V Primary Containment isolation occurred. No adverse trends were observed upon review of the trip set-point calibration records. The cause of draining could not be determined, but it appears that draining occurred inadvertently during DIS 1300-02 surveillance. A maintenance history review indicated that a spurious Unit 3 Group V Primary Containment isolation previously occurred on January 17, 1993 during unit shutdown.

D. SAFETY ANALYSIS OF EVENT:

The purpose of the Isolation Condenser is to control pressure and/or remove decay heat from the reactor inventory during periods when the normal heat

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sink is unavailable. The Isolation Condenser can be manually initiated. An automatic initiation occurs when reactor pressure is sustained at greater than or equal to 1070 psig for 15 seconds. Since Unit 3 was in the refueling mode and reactor pressure was less than 150 psig, operability of the Isolation Condenser was not required.

Technical Specification Table 3.5.E.2 allows the Isolation Condenser to be inoperable for up to seven days provided that all active components of the High Pressure Coolant Injection (HPCI) [BJ] system remain operable. Isolation Condenser operability is not required whenever reactor pressure is less than 150 psig; had this event occurred at power, the consequences of a postulated accident would have been mitigated by the HPCI or Automatic Depressurization [SB] system in conjunction with the Low Pressure Coolant Injection (LPCI) [BO] and Core Spray [BM] systems. Upon Group V isolation signal, normally opened MO 3-1301-3, AO 3-1301-17, and AO 3-1301-20 valves were automatically closed to isolate the Isolation Condenser system as designed. The safety significance of this event is considered to be minimal.

E. CORRECTIVE ACTIONS:

The immediate corrective action was to check system parameters, inspect the relay circuitry prior to resetting the isolation signal. Also, Votes testing on MO 3-1301-3 valve was temporarily stopped. To verify operability of the Isolation Condenser valves, Operations and Instrument Maintenance Department will continue to perform monthly valve operability test per Dresden Operating Surveillance (DOS) 1300-02 and Isolation Condenser Steam/Condensate Line High Flow Calibration per DIS 1300-02. To determine the cause any spurious flow spikes, temporary instruments were installed to monitor the system characteristics. The system characteristic testing results will be evaluated by the System Engineer and Site Engineering and Construction Department. A supplemental report will be issued under previously reported LED 93-003/050249 upon completion of the investigation.

F. PREVIOUS OCCURRENCES:

<u>LED/Docket Numbers</u>	<u>Title</u>
93-003/050249	Spurious Group V Primary Containment Isolation While Shutdown Due to Spurious Flow Spikes. On January 17, 1993 with Unit 3 in cold shutdown, the Control Room received alarm H-2 on Panel 903-3, Isolation Condenser Line Break (Group V Isolation). The root cause of this event was a spurious flow spike.
90-004/050249	Spurious Group V Primary Containment Isolation While Shutdown due to Spurious Flow Spikes. On February 12, 1990 with Unit 3 in cold shutdown, the Control Room received alarm H-2 on Panel 903-3, Isolation Condenser Line Break (Group V Isolation). The root cause of this event was a spurious flow spike.
89-003/050249	Spurious Group V Primary Containment Isolation While Shutdown Due to Design Deficiency.

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On May 6, 1989, at 1443 hours, with Unit 3 in cold shutdown and reactor level at 35 inches, a Group V Primary Containment Isolation occurred. The cause of this event was believed to be differential pressure spikes and/or noise generated by an annubar flow element that was installed on the Isolation Condenser condensate return line during the 1985 Unit 3 refueling outage. As corrective action, a modification to install a time delay with a more accurate time delay scale was initiated.

G. COMPONENT FAILURE DATA:

As no component failure occurred, this section is not applicable and an NPRDS data search was not performed.

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Attachment 1

Sequence of Events

<u>Date</u>	<u>Time</u>	<u>Event</u>
4/16/93	0115 hours	Completed a local leak rate test between MO 3-1301-3 and MO 3-1301-4 valves after MO 3-1301-3 valve maintenance.
4/16/93	0445 hours	Opened MO 3-1301-3 valve to backfill the Isolation Condenser condensate return line.
4/16/93	0600 hours	Completed backfilling of the Isolation Condenser condensate return line.
4/19/93	1744 hours	Performed Votes testing on MO 3-1301-3 valve.
4/20/93	1630 hours	Started DIS 1300-02, Isolation Condenser Steam/Condenser Line High Flow Calibration.
4/20/93	2300 hours	Completed DIS 1300-02.
4/21/93	1430 hours	Group V isolation during Votes testing.
4/21/93	1545 hours	ENS phone call made due to ESF actuation in accordance with 10CFR 50.72(b)(2)(ii).