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ComEd

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TPJLTR 94-0003

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

Licensee Event Report 94-029, Docket 50-237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10CFR50.73(a)(2)(iv).

Sincerely,

T. P. Joyce

Thomas P. Joyce
Site Vice President

TPJ/LEJ:cfq

Enclosure

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

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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)
Spurious Group V Isolation Due to Pressure Spike when Opening the Isolation Condenser Reactor Inlet Isolation Valve

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
11	26	94	94	-- 029 --	00	12	23	94	None	
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	N
POWER LEVEL (10)	002

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

	20.2201(b)		20.2203(a)(3)(i)		50.73(a)(2)(iii)		73.71(b)
	20.2203(a)(1)		20.2203(a)(3)(ii)	X	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)
Lance E. Jacobsen, Isolation Condenser Engineer Ext. 2363	(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)

At 1938 hours on November 26, 1994, with Unit 2 at 2% rated power while in the startup mode, a spurious Group V Isolation Signal was received when Motor Operated Valve (MOV) 2-1301-4 was being opened per Dresden General Procedure (DGP) 1-1 Unit 2(3) Normal Unit Start-up. The procedure required the valve to be opened prior to exceeding 150 psig reactor pressure to place the Isolation Condenser system [BL] in stand-by operation. When the valve opened, a pressure transient occurred which caused a Group V isolation on high condensate flow. All the Isolation Condenser Group V isolation valves went closed as expected except for MOV 2-1301-4. The breaker for MOV 2-1301-4 valve tripped. When the breaker was reset the valve indicated closed. The isolation signal was reset and the valve was stroked successfully. The cause of the spurious isolation was attributed to a pressure transient which occurred when the MOV 2-1301-4 valve was opened. The breaker tripped because its settings were too low to handle the in-rush current that occurred when the motor operated valve was required to reverse directions mid-stroke. This portion of the event is reported under LER 94-30.

EVENT IDENTIFICATION:

Spurious Group V Isolation Due to Pressure Spike when Opening the Isolation Condenser Reactor Inlet Isolation Valve

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 2 Event Date: 11/26/94 Event Time: 1938

Reactor Mode: N Mode Name: Start-up Power Level: 002%

Reactor Coolant System Pressure: 113 psig

B. DESCRIPTION OF EVENT:

At 1938 hours on November 26, 1994, with Unit 2 at 2% rated power while in the start-up mode, a spurious Group V Isolation Signal was received when Motor Operated Valve (MOV) 2-1301-4 was being opened per Dresden General Procedure (DGP) 1-1 Unit 2(3) Normal Unit Start-up. The procedure required the valve to be opened prior to exceeding 150 psig reactor pressure to place the Isolation Condenser System in stand-by operation as required by technical specifications for operability. Prior to opening MOV 2-1301-4, MOVs 2-1301-1 and -2 and Air Operated Valves (AOV) 2-1301-17 and -20 were open, and MOV 2-1301-3 was closed. When MOV 2-1301-4 was opened, a high condensate flow isolation signal was received causing a Group V isolation. All the Isolation Condenser Group V isolation valves went closed as expected except for MOV 2-1301-4. The breaker for MOV 2-1301-4 valve tripped as indicated by no light indication in the control room. When the breaker was reset the valve indicated closed. The isolation signal was reset and the valve was stroked successfully. MOV 2-1301-4 was re-opened and the Isolation Condenser was placed in standby operation.

C. CAUSE OF EVENT:

This LER is submitted in accordance with 10 CFR 50.73 (a)(2)(iv), which requires the reporting of an event or condition that resulted in a manual or automatic actuation of any engineered safety feature (ESF), including the reactor protection system (RPS).

The cause of this event is attributed to a pressure transient that occurred when MOV 2-1301-4 was opened to place the isolation condenser in standby operation prior or exceeding 150 psig reactor pressure. The startup procedures had recently been revised to maintain MOV 2-1301-4 in the closed position until 150 psig reactor pressure is approached. The intention of leaving MOV 2-1301-4 closed during early stages of start-up was to block process noises from causing spurious Group V isolations. The pressure transient is postulated to have occurred because of a pressure build up due to the water trapped between the volume of MOVs 2-1301-3 and 2-1301-4 heating up. The previous Appendix J local leak rate test determined that this volume is essentially leak tight since it resulted in .1 SCFH leakage. When MOV 2-1301-4 was opened, the pressure relieved into the reactor vessel and generated a spurious high condensate flow isolation.

The heating of this volume of water is believed to have occurred because of the extended amount of time it took from reactor critical to the point when MOV 2-1301-4 valve was opened. During this time, drywell temperature increased approximately nine degrees and isolation condenser tube side temperature was increased due to condensation of reactor steam in the tubes. In a previous start-up attempt on November 19, 1994, the time from critical to 150 psig was approximately half that of this start-up (approximately four hours as opposed to eight hours for this start-up). The delay was attributed to extend amounts of time to get below required dissolved oxygen levels prior to increasing reactor power. This heat-up caused the liquid within the volume to pressurize (approximately 100 to 150 psig for every degree temperature rise).

The cause of the breaker tripping on MOV 2-1301-4 is discussed in LER 94-30.

D. SAFETY ANALYSIS:

Because the reactor was below 150 psig when this event occurred, the isolation condenser system was not required to be operable. In addition, MOV 2-1301-3 was in its isolation condition prior to this event. Therefore, even though MOV 2-1301-4 may not have been fully closed when the breaker tripped, its sister isolation valve was already in the isolated condition and primary containment would have been maintained. Finally, this was a spurious isolation which was not caused by an actual line break. For these reasons, the safety significance of this event is considered minimal.

E. CORRECTIVE ACTIONS:

Immediate corrective actions were to reset the Group V isolation, reset the breaker for MOV 2-1301-4 and stroke the valve. The Isolation Condenser was then placed back in standby operation.

DGP 1-1, "Unit 2(3) Normal Unit Startup" and DGP 1-S1, "Unit 2(3) Master Startup Checklist" were revised to open MOV 2(3)-1301-3 prior to unit startup to prevent pressure building between MOVs 2(3)-1301-3 and 2(3)-1301-4 during vessel heat-up. MOV 2(3)-1301-3 will be closed prior to opening MOV 2(3)-1301-4 when approaching 150 psig reactor pressure.

F. PREVIOUS OCCURRENCES:

LER/Docket Numbers	Title
93-012/050249	Spurious Group V Primary Containment Isolation while Shutdown Due to Flow Spiking
93-011/050249	Spurious Group V Primary Containment Isolation While Shutdown Due to Flow Spikes
93-003/050249	Spurious Group V Primary Containment Isolation While Shutdown Due to Spurious Flow Spikes.
89-003/050249	Spurious Group V Primary Containment Isolation While Shutdown Due to Design Deficiency.

G. COMPONENT FAILURE DATA:

N/A