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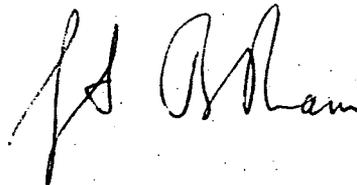
March 10, 1993

Re: Indian Point Unit No. 2
Docket No. 50-247
LER 93-002-00

Document Control Desk
US Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555

The attached Licensee Event Report LER 93-002-00 is hereby
submitted in accordance with the requirements of 10 CFR 50.73.

Very truly yours,



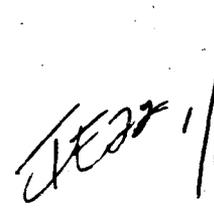
Attachment

cc: Mr. Thomas T. Martin
Regional Administrator - Region I
US Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Francis J. Williams, Jr., Project Manager
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US Nuclear Regulatory Commission
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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Indian Point Unit No. 2	DOCKET NUMBER (2) 0 5 0 0 0 2 4 7	PAGE (3) 1 OF 0 3
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TITLE (4)
Auto-Start of Emergency Diesels

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 0 8 9 3	9 3	9 3	9 3	0 0 2	0 0	0 3 1 0 9 3					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)									
POWER LEVEL (10) 0 0 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)

NAME James J. Maylath, Senior Engineer	TELEPHONE NUMBER 9 1 4 5 12 16 1 - 15 13 15 16
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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) <input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH 	DAY 	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On February 8, 1993, during a cold shutdown refueling outage, the three emergency diesel generators automatically started. A 6.9 kV bus lockout relay tripped and de-energized a 6.9 kV bus and the 480V bus which it was supplying. The diesels received an undervoltage signal from the 480V bus which initiated the start. All offsite power remained available, and all Engineered Safety Features performed as expected. A perturbation on the DC circuit associated with the bus lockout relay due to an inadvertent bumping of the breaker cubicle door handle is the most probable cause for initiating the bus lockout signal.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Indian Point Unit No. 2	DOCKET NUMBER (2) 0 5 0 0 0 2 4 7 9 3 - 0 0 2 - 0 0 0 2 OF 0 3	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

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

PLANT AND SYSTEM IDENTIFICATION:

Westinghouse 4-Loop Pressurized Water Reactor

IDENTIFICATION OF OCCURRENCE:

Emergency Diesel Generator Auto-Start

EVENT DATE:

February 8, 1993

REPORT DUE DATE:

March 10, 1993

REFERENCES:

Significant Occurrence Report (SOR) 93-58

PAST SIMILAR OCCURRENCE:

July 13, 1984; LER 84-008-00
February 28, 1991; LER 91-005-00
March 28, 1991; LER 91-007-00

DESCRIPTION OF OCCURRENCE:

On February 8, 1993, at 2116 hours, with the unit in cold shutdown, the three Emergency Diesel Generator (EDGs) automatically started. This was initiated by the tripping of 6.9 kV Breaker 52UT3 86 device (bus lockout relay) which stripped 6.9 kV Bus 3 and caused a loss of power to 480V bus 3A. This in turn resulted in an undervoltage signal from 480V bus 3A which initiated the automatic start of the EDGs, as designed. Since the power remained on 6.9 kV Buses 5 and 6 and 480V buses 2A, 5A and 6A, the EDGs did not connect to the 480V buses. There was no loss of decay heat removal, spent fuel pool cooling, component cooling or service water. Residual Heat Removal (RHR) Pump 22 was in operation to provide decay heat removal at this time. This pump is powered by 480V bus 6A, which was not affected in this scenario.

At 2117 hours the operator manually closed the 480V bus 2A-3A tie breaker to energize 408V bus 3A. At 2120 hours power was restored to MCC22, MCC25 and MCC211, and Service Water Pump (SWP) 24 was started to support the running EDGs. The EDGs were shut down and returned to their automatic mode at 2130 hours. SWP 24 was secured at 2135 hours. At 2250 hours power was restored to 6.9 kV bus 3 and 480V bus 3A from offsite, and the 480V bus 2A-3A tie breaker was opened. No electrical fault occurred at any time during this scenario.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Indian Point Unit No. 2	DOCKET NUMBER (2) 0 5 0 0 0 2 4 7	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 3	- 0 0 2	- 0 0	0 3	OF 0 3

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

ANALYSIS OF OCCURRENCE:

This report is being made because actuation of an Engineered Safety Feature (ESF) System occurred. Any manual or automatic actuation of an ESF is reportable under 10 CFR 50.73(a)(2)(iv). There were no adverse safety implications as a result of this event. All ESF performed as expected. Service water, decay heat removal, component cooling water and spent pool cooling flow were not impacted by this event. This event did not cause any personnel injury or damage to equipment other than a broken breaker cubicle door handle.

CAUSE OF OCCURRENCE:

The EDGs started as a result of the actuation of the undervoltage relays on 480V bus 3A. This was due to the loss of power to 480V bus 3A resulting from the stripping and lockout of 6.9 kV Bus 3. This lockout was initiated by the tripping of the Breaker 52UT3 86 device. The most probable cause for the tripping of the 86 device was due to a perturbation in the DC circuit when the 52UT3 breaker cubicle door was bumped while removing the adjacent 52UT4 breaker from its cubicle for testing. The bump caused the cubicle door handle to break, resulting in vibration throughout the door. The 86 device and associated protective relays, which are designed to trip the 86 device for an electrical fault, are located on the cubicle door. It is most likely that some momentary actuation(s) of the protective relays caused the 86 device to trip, and/or the 86 device itself tripped due to the vibration. Since any protective relay actuation was momentary (with no target, alarm or indication) it is only known that the 86 device tripped. Following the event workers were interviewed and the area was surveyed. The temporary grounds used for equipment and personnel protection were seen as intrusive, possibly causing workers to work around them, increasing the probability of bumping and jarring equipment. The door handle of the 52UT3 breaker cubicle was in the unlatched horizontal position, reducing clearance with the door swing of the adjacent cubicle.

CORRECTIVE ACTION:

Following similar events in 1991, the General Employee Training Program was revised to address the consequences of bumping into plant components. Maintenance Continuing Training also addresses this issue.

The temporary grounds were relocated allowing for easier access to the breaker cubicle, and all door handles were subsequently checked and returned to their proper positions as required. In addition a modification has been made to allow future temporary grounds to be installed in a location separate from the protective relays and breaker cubicles. A written "briefing" of the event was also issued to all operations personnel. Copies of this "briefing" were given to Maintenance and other sections. Work crews were briefed as to why the event occurred.