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May 15, 1995

Re: Indian Point Unit No. 2
Docket No. 50-247
LER 95-11-00

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

The attached Licensee Event Report LER 95-11-00 is hereby submitted in accordance with the requirements of 10 CFR 50.73.

Very truly yours,



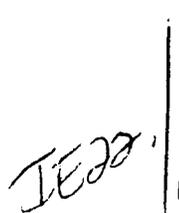
Attachment

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
Project Directorate I-1
Division of Reactor Projects I/II
US Nuclear Regulatory Commission
Mail Stop 14B-2
Washington, DC 20555

Senior Resident Inspector
US Nuclear Regulatory Commission
PO Box 38
Buchanan, NY 10511

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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 1 OF 0 4

PAGE (3)

TITLE (4)

Unexpected Results During Recirculation Switch Test (PT-R13A)

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)
04	14	95	95	011	00	05	15	95		05000
										05000

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)						73.71(b)	73.71(c)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.402(b)	20.406(a)(1)(i)	20.406(a)(1)(ii)	20.406(a)(1)(iii)	20.406(a)(1)(iv)	20.406(a)(1)(v)			
N						X			
POWER LEVEL (10)	0	10	10						

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME	AREA CODE	NUMBER	NUMBER
James J. Maylath, Senior Engineer	911	471	34-15131516

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	
X	EJC	BKIR	W11210	N						
X	JJE	RJLY	W11210	N						

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO				

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

On March 31, 1995, while performing a Recirculation Switch Test, with the unit at cold shutdown for refueling, two service water pump start signals occurred unexpectedly. Start signals for the component cooling water pumps and one recirculation pump and service water pump did not occur when called for by the test. An investigation of the equipment involved in the test determined that the unexpected test results were caused by a defective relay and breaker cell switch. Upon replacement of the relay and repair of the switch, the appropriate portions of the test were successfully repeated.

**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.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 5	- 0 1 1	- 0 0	0 2	OF	0 4

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:

Unexpected Results During Recirculation Switch Test (PT-R13A)

EVENT DATE:

April 14, 1995

REPORT DUE DATE:

May 15, 1995

REFERENCES:

Significant Occurrence Report (SOR) 95-283

PAST SIMILAR EVENT:

None

DESCRIPTION OF OCCURRENCE:

On April 14, 1995 at 1600 hours, while the performing PT-R13A, Recirculation Switches Test, with the unit at cold shutdown for refueling, the following unexpected results occurred. Upon actuation of Recirculation Switch No. 2 (RS-2) with Service Water Pumps (SWP) 24, 25 and 26 on the non-essential header and available according to the test line up, SWP 26 unexpectedly received a start signal. SWP 26 did not actually start because its breaker, 52/SW6, was in the "Test" position according to test procedure. In the "Test" position, the breaker and its associated control switches function normally (52/SW6 did close upon receiving the start signal), but no power is supplied to the pump motor. During this test, the position of the breakers is monitored by the breaker indicating lights to determine if a pump would be running. During the test the breakers for the SWP's on the non-essential header were in the "Test" position.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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		9 5	- 0 1 1	- 0 0	0 3	OF	0 4

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

DESCRIPTION OF OCCURRENCE: (continued)

Upon actuation of Recirculation Switch No. 5 (RS-5) with SWP 24, 25 and 26 on the non-essential header and available with SWP 25 Breaker 52/SW5B already closed according to the test line up, SWP 24 unexpectedly received a start signal. For the line up with SWP 26 not available (its breaker control switch was placed in "Pull-Out"), SWP 24 did not receive a start signal when expected by the test upon actuation of RS-5. Also, upon actuation of RS-5 for three other line ups called for by the test, expected component cooling water pump (CCP) start signals were not received, and Recirculation Pump (RP) 22 did not receive a start signal when one was expected. Following actuation of RS-5, two out of three CCP breakers and RP 22 breaker should have closed after two out of three non-essential SWP breakers were closed (RP 22 gets its start signal after two out of three CCP breakers have closed with the two out of three non-essential SWP breakers closed).

ANALYSIS OF OCCURRENCE:

This report is being made because an inadvertent actuation of an Engineered Safety Feature, the SWP and CCP start logic, occurred and is reportable under 50.73(a)(2)(iv). These inadvertent actuations were due to a defective breaker cell switch and relay which caused the logic to falsely sense running SWP's as not running.

The SWP's and CCP's are listed in the Engineered Safety Features section of the Indian Point Unit No. 2 Technical Specifications. There was no safety significance of this event since the two SWP breakers were in the "Test" position and at no time during the event were the non-essential header SWP's needed for any safety related function. If needed, the SWP's would have been available. The CCP's that did not receive a start signal as expected by the test could have been manually started if they were needed for any safety related function during the event.

These defective components did not cause any safety-related equipment (other than the relay and cell switch) to become inoperable. No automatic actuations during the injection phase would have been precluded by these failures. These failures affected the logic following actuation RS-2 and 5. Manual capability to start or stop the SWP's, CCP's, RP's or any other safety-related pump was not affected by the defective components.

CAUSE OF OCCURRENCE:

An investigation determined that the unexpected test results upon actuation of RS-2 and 5 were due to two defective components. A defective cell switch was found on Breaker 52/SW5B. This resulted in the logic sensing that Breaker 52/SW5B was open when it was actually closed (simulating SWP 25 as not running or not available when it should have been running).

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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		YEAR 9 5	SEQUENTIAL NUMBER — 0 1 1	REVISION NUMBER — 0 0	0 4	OF 0 4

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

CAUSE OF OCCURRENCE: (continued)

The other defective component was an auxiliary relay, 52/SW1X (Westinghouse BFD66S), designed to be energized when SWP 21 is running (its breaker closed). This relay was found to have to an open coil. This resulted in the logic sensing that Breaker 52/SWP1 was open when it was actually closed (simulating SWP 21 as not running or not available when it should have been running). If SWP 21 and 25 were actually not available (these conditions were called for in other portions of the test line ups), the unexpected results would have been expected and occurred as designed (this is reflected in the successful test results for the line ups with SWP 21 or 25 not running).

These defective components also prevented the logic for two out of three non-essential SWP's from being made up which in turn precluded the CCP and RP 22 start signals for three test line ups. Again, had SWP 21 and 25 been actually unavailable, the unexpected results would have been expected and occurred as designed.

CORRECTIVE ACTION:

Following the test, an investigation was undertaken to determine the cause of the unexpected results. Upon finding the defective breaker cell switch and auxiliary relay, these failures were fit into the test scenario, and the unexpected results were explained.

The breaker cell switch and the auxiliary relay were replaced. A post maintenance test for this work which was essentially a repeat of the appropriate portions of PT-R13A was successfully performed on April 21, 1995.

The auxiliary relay (BFD66S) will be subjected to detailed examination to attempt to determine the cause of the failure.