NRC Form 366 (9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Indian Point, Unit 3	0 5 0 0 0 2 8 6	1 OF 0 2

TITLE (4)

Unit Trip and Safety Injection Actuation Caused by Loss of Instrument Bus No. 33

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 4	1 7	8 7	8 7	- 0 0 4	- 0 0	0 5	1 8	8 7		0 5 0 0 0
										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 1 9	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
John J. Anderson - Site Reactor Engineer	9 1 4 7 3 6 - 8 3 4 3

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	A B	L S	M 0 4 0	Y							
X	K E	F S	Z 9 9 9	N							

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 fifteen single-space typewritten lines) (16)

On April 17, 1987, a short circuit developed in a reactor coolant pump oil reservoir level switch, causing a momentary decrease in voltage on No. 33 instrument bus (IB). The voltage decrease caused a partial closure of all main feedwater regulating valves which resulted in an automatic reactor trip. A high steam flow safety injection signal was also generated after the trip due to the actuation of bistables powered by No. 33 IB. Since the reactor coolant system was at normal operating pressure no water was injected as a result of the SI actuation. The failed switch was repaired, and an evaluation of the IB supply circuits will be undertaken to determine if corrective actions are necessary.

IE22 1/1

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Indian Point, Unit 3	0 5 0 0 0 2 8 6	8 7	— 0 0 4	— 0 0	0 2 OF 0 2

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

At 0553 hours on April 17, 1987, a short circuit developed on a level switch (codes X,AB,LS,M040, Magnatrol No. TF201-51M3R-S1M3R) in No. 32 reactor coolant pump lower oil resevoir. The short circuit caused a temporary voltage decrease on instrument bus (IB) No. 33, until a branch circuit breaker opened, isolating the faulty switch. The decrease in IB voltage caused a partial closure of all main feedwater regulating valves and actuation of one reactor protection Train B low steam generator level bistable. A subsequent train B reactor trip was generated automatically on steam flow/feedwater flow mismatch with coincident low steam generator (SG) level. The trip occurred at 0554 hours with the reactor at 99 percent power. Approximately 0.9 seconds after the reactor trip due to the train B trip signal, reactor protection train A actuated due to an overpower delta-T (OPDT) signal. The OPDT signal is generated as a normal phenomenon during a plant trip from high power by the change in axial power shape which occurs as the control rods move through the core.

Approximately 0.4 seconds after the train A actuation, a high steam flow safety injection (SI) occurred due to high steam flow signal coincident with low steam line pressure logic for two steam generators. All equipment associated with the SI operated properly. The safety injection was the result of low steam line pressure bistables being actuated by the lowered IB voltage concurrent with the high steam flow matrix being completed during the turbine trip. Since the reactor coolant system was at normal operating pressure, no water was injected as a result of the SI actuation.

After the SI actuation, Nos. 31 and 33 circulating water pumps (CWP) remained in service when their seal water supply was automatically secured by the SI load shedding process. These pumps should have tripped automatically due to loss of seal water. The low seal water flow switch (Codes X,KE,FS, Z999 - Universal Flow Monitors, Inc. No. MN-WIB20GM-6-31.5V1.03-2WR-8D-4D) on No. 33 CWP was found to be failed and was replaced. A similar switch on No. 31 CWP was also tested and found to be operating intermittently. This switch will be replaced and both circulating water pumps will be inspected during the ongoing refueling outage.

In order to preclude similar unit trips and SI actuations, an evaluation of the IB instrument separation design will be conducted. The failed level switch which caused the voltage perturbation on IB No. 33 was repaired. The unit was synchronized to the bus at 0431 hours on April 18, 1987.

This event is reportable under 10CFR 50.73 (a)(2)(iv) as a reactor protection system/engineered safeguards actuation. Similar events were reported in LER's 85-001-00 and 87-002-00.

Indian Point 3
Nuclear Power Plant
P.O. Box 215
Buchanan, New York 10511
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New York Power Authority

May 18, 1987
IP3-WAJ-029Z
IP3-JJA-136H

Docket No. 50-286
License No. DPR-64

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

Dear Sir:

The attached Licensee Event Report LER 87-004-00 is hereby submitted in accordance with the requirements of 10CFR50.73. This event is of the type defined in Paragraph 50.73 (a) (2) (iv).

Very truly yours,

William A. Josiger
Resident Manager
Indian Point 3 Nuclear Power Plant

JJA:sn:04
Attachment

cc: Mr. William Russell
Regional Administrator
Region 1
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

INPO Records Center
Suite 1500
1100 Circle 75 Parkway
Atlanta, Georgia 30339

IE22
1/1

LER-87-004

bcc: IP3 Resident Inspectors' Office
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