Indian Point 3
Nuclear Power Plant
P.O. Box 215
Buchanan, New York 10511
914 739.8200

New York Power Authority

July 27, 1990
IP3-90-052

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

Document Control Desk
Mail Station PI-137
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

The attached Licensee Event Report LER 90-004-00 is hereby submitted in accordance with the requirements of 10CFR50.73. This event is of the type defined in the requirements per 10CFR50.73(a)(2)(iii).

Very truly yours,

Joseph Russell
Resident Manager
Indian Point Three Nuclear Power Plant

VC/rj
Attachment

cc: Mr. William Russell
Regional Administrator
Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

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

IE22
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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 3	0 5 0 0 0 2 8 6	1 OF 0 3

TITLE (4)

REACTOR TRIP AS A RESULT OF 345KV BREAKER PROTECTIVE RELAY MISOPERATION

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 6	2 9	9 0	9 0	— 0 0 4	— 0 0	0 7	2 7	9 0		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	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) X	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Vincent Coulehan	AREA CODE 9 1 4 7 3 6 8 0 4 7

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 fifteen single-space typewritten lines) (16)

On June 29, 1990 with the reactor at 100 percent power, a unit trip was initiated as the result of actuation of the main generator lockout relays. All plant systems functioned properly following the trip. It was determined that the actuation of the generator lockout relays resulted from the mechanical failure of protective relay, MCT1, which provides expanded breaker protection for the 345KV electrical output breakers. This relay was replaced and tested successfully. The reactor was brought critical on June 30, 1990 at 1852 hours and full power operations reached on July 2, 1990 at 0515 hours.

DESCRIPTION OF THE EVENT

At 1254 hours on June 29, 1990, with the plant operating at 100 percent power a reactor trip occurred. The trip occurred as the result of actuation of the main generator lockout relays 86P and 86BU. Low-low steam generator (SG) water levels following the trip initiated an auto start of the three auxiliary feedwater (AFW) pumps. The plant was stabilized in the hot shutdown condition; all systems responded according to design.

INVESTIGATION OF THE EVENT

The tripping of the main turbine generator lockout relays was caused by a direct trip signal from the Buchanan substation relay TR-1 via MTC1. At the time of the trip, Consolidated Edison technicians were performing tests on protective relays for 345KV feeder W97 (Reference 1). An isolation switch was placed in the "off" position to electrically isolate the relay coil for MCT1 to prevent its actuation via the various relay devices being tested. (Note: This prevents electrical activation of MCT1 but does not block a signal off of its contacts.) These devices are used on the 345KV system as part of "an expanded protection system" to prevent catastrophic breaker failure.

The actuation of relay TR-1 was initiated by a mechanical failure of relay MCT1 and occurred during this testing. The failure mode for relay MCT1 is most probably mechanical since MCT1 was electrically isolated from the relays being tested.

Mechanical actuation of MCT1 could have been the result of:

1. Vibration
2. A faulty latching mechanism
3. An incompletely reset relay

CAUSE OF THE EVENT

The following root cause was determined from the investigation of this event:

The mechanical misoperation of lockout relay MCT1 resulted in the actuation of relay TR-1. Relay TR-1 sent a trip signal to the main generator lockout relays 86P and 86BU.

CORRECTIVE ACTIONS

The following actions were undertaken as the result of this incident:

1. Lockout relay MCT1 in the Buchanan substation was replaced.

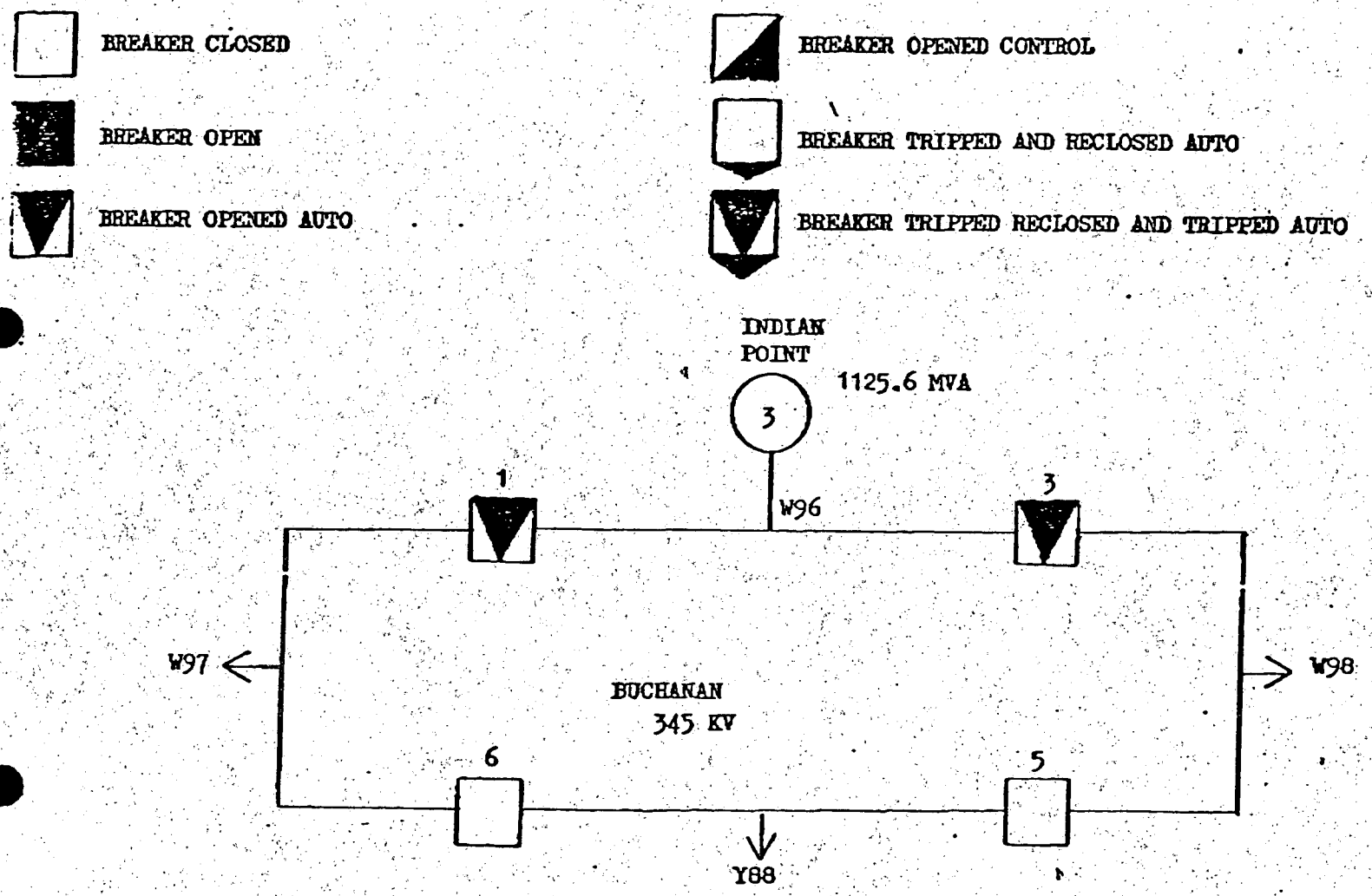
2. All associated circuits and trips for relay MCT1 were tested.

ANALYSIS OF THE EVENT

This event is reportable by 10CFR50.73(a)(2)(iv). An evaluation has determined that this event has been considered under the guidelines of the plant's FSAR and Technical Specifications. No safety concerns exist as the result of this event. Additionally, a loss of electrical load/generator trip is an analyzed event in Chapter 4 of the FSAR.

SECURING FROM THE EVENT

All testing and repairs to the relays concerning this event were complete by 1700 hours on June 30, 1990. The reactor was brought critical at 1852 hours. The generator was synchronized to the 345KV electrical system on July 1, 1990 at 0127 hours. 100 percent operations was achieved on July 2, 1990 at 0515 hours.



JUNE 29, 1990