Stephen B. Bram
Vice President

Consolidated Edison Company of New York, Inc.
Indian Point Station
Broadway & Bleakley Avenue
Buchanan, NY 10511
Telephone (914) 737-8116

October 23, 1990

Re: Indian Point Unit No. 2
Docket No. 50-247
LER 90-10-00

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

The attached Licensee Event Report LER 90-10-00 is hereby submitted in accordance with the requirements of 10 CFR 50.73.

Very truly yours,

Michael L. Miele

Attachment

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

Mr. Donald S. Brinkman, Senior 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

IE22
1/1

NRC FORM 366 (6-89)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WTH 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)	DOCKET NUMBER (2)	PAGE (3)
Indian Point Unit No. 2	0 5 0 0 0 2 4 7	1 OF 0 3

TITLE (4)
ESF Actuation Due to Electrical Spike on Radiation Monitors

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 9	2 3	9 0	9 0	—	0 1 0	—	0 0	1 0	2 3	9 0		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)	9 7	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
George Dahl, Engineer	AREA CODE 9 1 4 — 5 2 6 - 5 1 8 6

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	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)

During the performance of a pressure relief of containment on September 23, 1990, with the plant at 97.5% power, the Containment Radiogas Monitor (R-12) and the Plant Vent Gaseous Activity Monitor (R-14) simultaneously experienced a spurious electrical spike, which in turn initiated Containment Ventilation Isolation and partially actuated the Weld Channel and Containment Penetration Pressurization system. After determining there had been no actual increase in gaseous activity, both radiation monitors were reset and pressure relief was reinstituted. The health and safety of the public were not affected by this event.

PLANT AND SYSTEM IDENTIFICATION:

Westinghouse 4-Loop Pressurized Water Reactor

IDENTIFICATION OF OCCURRENCE:

Engineered Safety Feature (ESF) actuation due to a simultaneous spurious electrical spike in the Containment Radiogas Monitor (R-12) and the Plant Vent Gaseous Activity Monitor (R-14).

REPORTABILITY DETERMINATION DATE:

September 23, 1990

REPORT DUE DATE:

October 23, 1990

REFERENCES:

Significant Occurrence Report (SOR) 90-473

PAST SIMILAR OCCURRENCES:

LER 90-08: ESF actuation due to spurious electrical spike in R-14
LER 90-04: ESF actuation due to spurious electrical spike in R-12
LER 90-03: ESF actuation due to spurious electrical spike in R-12
LER 89-05: ESF actuation due to spurious electrical spike in R-14
LER 87-12: ESF actuation due to spurious electrical spike in R-11 (Containment Air Particulate Monitor)

DESCRIPTION OF OCCURRENCE:

On September 23, 1990, during the performance of a pressure relief of containment, the Containment Radiogas Monitor (R-12) and the Plant Vent Gaseous Activity Monitor (R-14) simultaneously experienced a spurious electrical spike at approximately 0505 hours which resulted in ESF actuation of the Weld Channel and Containment Penetration Pressurization (WCCPP) system and isolation of the Containment Ventilation system, which includes the pressure relief line. These safety systems functioned as required in accordance with plant design.

A review of other radiation monitoring instrumentation was conducted to verify that the instrument behavior was not due to an actual increase in gaseous activity. After confirming there was no actual increase of radiation, monitors R-12 and R-14 were reset and pressure relief was reinstituted at 0515 hours.

CAUSE OF OCCURRENCE:

Simultaneous spurious electrical spikes in the circuitry of the Containment Radiogas Monitor (R-12) and the Plant Vent Gaseous Activity Monitor (R-14) initiated ESF actuation of the WCCPP system and isolation of the Containment Ventilation System. As described in LER 90-04 and repeated below, electrical circuits in general can be subject to spurious electrical spikes of indeterminate cause.

ANALYSIS OF OCCURRENCE:

The Containment Ventilation system can be automatically isolated by a Containment Isolation Phase A signal, containment spray actuation, or a high radiation indication from Containment Air Particulate Monitor R-11, Containment Radiogas Monitor R-12, or Plant Vent Gaseous Activity Monitor R-14. Any of these three initiating signals results in the isolation of the containment purge and supply lines and the containment pressure relief line, which are the components of the Containment Ventilation system. Coincident actuation of that portion of the WCCPP system that supplies sealing air to the three ventilation lines also occurs.

Electrical circuits can be subject to infrequent spurious electrical spikes to some degree. Occasionally, the spike is of sufficient amplitude to produce an undesired effect. For this particular event, setpoints on monitors R-12 and R-14 were exceeded and a Containment Ventilation isolation signal was generated. These setpoints are set conservatively low to provide early warning of an increase in gaseous activity. In this instance, there was no actual increase in activity and Containment Ventilation isolation and WCCPP system actuation were not required to mitigate any adverse condition.

The chart recorders for R-12 and R-14 indicated radiation levels within the same ranges before, during and after the event. The chart recording for monitor R-11 indicated no increase in activity for that instant of time. Subsequent investigation determined that monitor R-14 had not failed and did not require repair or recalibration.

CORRECTIVE ACTION:

A program is ongoing to replace certain radiation monitors, including R-12 and R-14. The existing monitors are original installed equipment of an early vintage. The newer instruments have improved voltage regulation, shielding and signal processing circuitry and will be less susceptible to electrical spikes. Several monitors have already been replaced and monitors R-12 and R-14 are currently scheduled for replacement in 1991.