

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

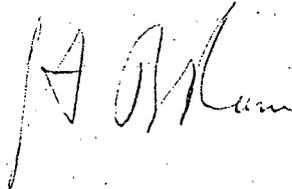
November 4, 1991

Re: Indian Point Unit No. 2  
Docket No. 50-247  
LER 91-21-00

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

The attached Licensee Event Report LER 91-21-00 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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FDR: ABACK 05000247  
FDR

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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) <b>Indian Point Unit No. 2</b>	DOCKET NUMBER (2) <b>0 5 0 0 0 2 4 7</b>	PAGE (3) <b>1 OF 0 3</b>
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TITLE (4)  
**Inadvertent Actuation of Hydrogen Cyanide Toxic Gas Monitor**

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)							
1	0	0	4	9	1	9	1	0	2	1	0	5	0	0	0		
												0	5	0	0		

OPERATING MODE (8) <b>N</b>	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10) <b>9 9</b>	20.402(b)		20.405(c)	<input checked="" type="checkbox"/>	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)(ix)					

LICENSEE CONTACT FOR THIS LER (12)									
NAME <b>Richard Louie, Engineer</b>							TELEPHONE NUMBER		
							AREA CODE		
							<b>9 1 4 5 2 6 1 - 5 6 7 8</b>		

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	
<b>X</b>	<b>VI</b>	<b>IMON</b>	<b>W 2 4 0</b>	<b>N</b>						

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 October 4, 1991, at approximately 2340 hours, with reactor power at 99.5%, the Hydrogen Cyanide (HCN) toxic gas monitor channel 2 alarmed inadvertently, resulting in the transfer of the Central Control Room (CCR) Ventilation System from the normal mode to the incident mode. Subsequent toxic gas monitor channel actuations occurred on October 11, 12 and 17.

As designed, the detection of the respective gas by either Channels 1 or 2 of the toxic gas monitors will generate an alarm in the CCR and isolate the CCR Ventilation System. The Toxic Gas Monitoring System is classified as an Engineered Safety Feature (ESF). No Technical Specification or NRC limits were exceeded.

**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	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 1	- 0 2 1	- 0 0	0 1	2	OF 0 3

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:**

Inadvertent actuation of the Hydrogen Cyanide (HCN) toxic gas monitoring channels, initiating operation of an Engineered Safety Feature (ESF).

**EVENT DATE:**

October 4, 11, 12 and 17, 1991

**REPORT DUE DATE:**

November 4, 1991

**REFERENCES:**

Significant Occurrence Report (SOR) 91-494, 91-508, 91-510, 91-520, and 91-521

**PAST SIMILAR OCCURRENCE:**

Licensee Event Report (LER) 90-07-00, 90-09-00, 90-15-00, 90-17-00, 91-03-00, 91-12-00, 91-11-00, 91-14-00, 91-15-00, 91-16-00, 91-17-00

**DESCRIPTION OF OCCURRENCE:**

On October 4, 1991, at about 2340 hours, with reactor power at 99.5%, the Central Control Room (CCR) ventilation system was automatically aligned from the normal mode to the incident mode and an ESF was actuated. The cause of ESF actuation was due to an alarm generated by the HCN toxic gas monitor system. On October 11, 12 and 17, the CCR ventilation system was automatically aligned to the incident mode due to alarms generated by the toxic gas monitors.

Immediate investigation determined that the cause of the inadvertent actuations of the toxic gas monitor channels was due to tears in the paper tape which senses the respective gas being monitored. Rips or tears in the paper tape cause a fiber optic monitor in the toxic gas monitor to generate a false alarm. In one case, the cause of the inadvertent actuation could not be determined. No toxic gas was sensed in the area at the time and the redundant channel read normal. In all other cases, the paper was replaced, the alarm reset, and the ventilation system returned to normal mode.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

TEXT (If more space is required, use additional NRC Form 386A's) (17)

**ANALYSIS OF OCCURRENCE:**

This report is being made since actuation of an ESF occurred. Any manual or automatic actuation of an ESF is reportable under 50.73(a)(2)(IV). There were no safety implications, and all safety systems performed in accordance with design.

**CAUSE OF OCCURRENCE:**

The hydrogen cyanide toxic gas monitors have inlet and outlet air sample pumps which draw air across a moving tape. When the respective gas is detected the tape changes color. The tape is continuously monitored by a fiber optic sensor which generates an alarm in the CCR when the initiating color is achieved. Rips or tears in the paper tape cause the fiber optic monitor to generate a false alarm. In four of the five occurrences, the cause was attributed to a tear in the paper tape. The cause of one of the occurrences was inconclusive. However, due to the absence of an alarm condition on the redundant channel and the lack of any toxic gas in the area at the time, this occurrence is being regarded as an inadvertent actuation.

**CORRECTIVE ACTION:**

- 1) The immediate corrective action taken was the replacement of the paper tape cassette.
- 2) The project to replace the existing toxic gas monitors is well underway. A modification package has been prepared and was reviewed and approved by the Station Nuclear Safety Committee. The package is expected to be issued shortly. Based upon equipment procurement and installation time requirements, it is projected that completion of this project will occur during the first quarter of 1992.