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

914-736-8000

New York Power Authority

July 24, 1992
IP3-NRC-92-053

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 92-010-00 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)(ii).

Very truly yours,

Joseph E. Russell
Resident Manager
Indian Point Three Nuclear Power Plant

jer/jm/rj
Attachment

cc: Mr. Thomas T. Martin
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

290024

IE22

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 3

TITLE (4)

Emergency Diesel Generator Blown Control Power Fuse During CO2 System Testing

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 5 0 0 0
0 6	2 5	9 2	9 2	- 0 1 0	-	0 0	0 7	2 4	9 2		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)			
N	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 0 0 0	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)	X 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
Joseph Macchiarulo, Plant Engineer	AREA CODE 9 1 4 7 3 6 8 0 4 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)	NO				

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

On June 25, 1992, while the unit was at cold shutdown and #33 Emergency Diesel Generator (EDG) was out of service for maintenance, a functional test was performed on the Carbon Dioxide fire protection system in #31 EDG cell. During the test, the control power fuse for #31 EDG blew rendering #31 EDG inoperable. The plant did not meet technical specification requirements for two EDGs because #33 EDG was out of service for maintenance. The fuse was replaced in thirty minutes restoring #31 EDG to service. The cause of the event was a design deficiency in the Carbon Dioxide fire protection system auxiliary circuitry. The deficiency created the potential for a short across the DC power supply to EDG control power when a CO2 actuation was concurrent with exhaust fan operation. The design deficiency was corrected on June 30, 1992.

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	9 2	— 0 1 0	— 0 0	0 2 OF 0 3

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

DESCRIPTION OF THE EVENT

On June 25, 1992, at 0520 hours, while the unit was at cold shutdown and #33 Emergency Diesel Generator (EDG) was out of service for maintenance, the IP3 test group was performing CO2 functional test PT-R082 in #31 EDG cell. During the test, the control room received the auto start defeat alarm for #31 EDG. At 0550 hours, investigation revealed that a control fuse had blown in #31 EDG control panel rendering #31 EDG inoperable.

A control fuse was immediately taken from the #33 EDG control panel and placed in the control panel for #31 EDG to regain operability as quickly as possible. A proper fuse was then obtained and placed in the control panel for #33 EDG. A one hour report was then made to the Nuclear Regulatory Commission.

INVESTIGATION OF THE EVENT

Investigation by I&C Engineering revealed that if a CO2 actuation occurs in an EDG cell while the exhaust fans for that cell are in operation, the respective EDG control fuse will blow. This is caused by a contact that closes during a CO2 actuation which can create a short across DC control power to the EDGs when the exhaust fans are in operation.

On June 27, 1992, at 1100 hours, the staff simulated a CO2 actuation coincident with operating exhaust fans on #33 EDG (#33 EDG was out of service for maintenance). The test resulted in a blown control power fuse on #33 EDG.

Investigation revealed that this condition was the result of a design deficiency that occurred when the CO2 system was originally installed in 1980 (under IP3 Modification 80-03-020-FP). Apparently, a contact was added to the exhaust fan circuit to close the exhaust dampers in the EDG cells upon a CO2 actuation.

(Refer to Attachment 1.) Contact C was added to the circuit when the CO2 system was installed. When the exhaust fans are in operation the fan relay is energized, closing contact B to energize the damper solenoid which opens the dampers. When a CO2 actuation occurs, the CO2 relay energizes to open contact A (de-energizing the fan relay) and close contact C (de-energizing the damper solenoid). Contact C is unnecessary because when the fan relay is de-energized it opens contact B to de-energize the damper solenoid. A momentary short across the DC power supply to the EDGs can occur if contact C closes before contact B opens.

CAUSE OF THE EVENT

This event was caused by a design deficiency in IP3 Modification 80-03-20-FP when the CO2 Fire Protection system was originally installed.

CORRECTIVE ACTIONS

The identified design deficiency was corrected on June 30, 1992 under IP3 RES 92-3-205 by removing the unnecessary set of contacts in each EDG exhaust fan circuit.

ANALYSIS OF THE EVENT

This event is reportable under 10CFR50.73 (a) (2) (ii) (B) because the plant was outside technical specifications for 30 minutes on June 25, 1992, from 0520 to 0530 hours, when #31 EDG was inoperable due to a blown control power fuse and #33 EDG was out of service for maintenance. Although the plant was outside technical specifications for 30 minutes, this event did not affect decay heat removal because normal offsite power was available. The event did not impact public health or safety.

The Indian Point 3 Appendix R Analysis postulates a fire in the control building coincident with a loss of offsite power. This analysis shows alternate shutdown protection assuming a loss of all three EDGs. (Vital loads are supplied by the Appendix R diesel in this event.) The design deficiency identified as a result of this event would cause the loss of a single EDG if a fire occurred in a given EDG cell. Therefore, the potential effects of this deficiency are bounded by the postulated event in the Appendix R Analysis.

SECURING FROM THE EVENT

On June 25, 1992, at 0550 hours, the operability of #31 EDG was restored by replacing the blown control power fuse.

ATTACHMENT 1