Indian Point 3
Nuclear Power Plant
P.O. Box 215
Buchanan, New York 10511
914 736.8001

NewYork Power Authority

John H. Garrity
Resident Manager

June 17, 1993
IPN-93-064

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

SUBJECT: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
Licensee Event Report LER 93-020-00,
"Missed Preventive Maintenance on Emergency Diesel Generator Air Start System Due to Personnel Error"

Dear Sir:

The attached Licensee Event Report LER 93-020-00 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)(i)(B). Also attached are the commitments made by the Authority in this LER.

Very truly yours,

John H Garrity

John H. Garrity
Resident Manager
Indian Point Three Nuclear Power Plant

JHG/fp
Attachments

cc: Thomas T. Martin
Regional Administrator
Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

INPO Records Center
700 Galleria Parkway
Atlanta, Georgia 30339-5957

U.S. NRC Resident Inspector's Office
Indian Point Unit 3

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ATTACHMENT
LIST OF COMMITMENTS MADE IN LETTER IPN-93-064

Number	Commitment	Due
IPN-93-064-01	The Authority will train maintenance engineers and managers who are responsible for performing evaluations that affect safety, on 10 CFR 50.59 and 10 CFR 50.92 requirements that govern changes to FSAR and technical specifications.	Before startup from the current outage.
IPN-93-064-02	Maintenance will resolve any discrepancies identified during the review of the ALCO Engine Maintenance Schedule (Diesel Matrix).	August 1, 1993
IPN-93-064-03	Maintenance will replace all air start relief valves using Design Equivalent Modification 90-03-090 EDG. The replacement valves are manufactured by Anderson, Greenwood and Company (AGCO) and are type 83 gas flanged relief valves.	Before startup from the current outage.
IPN-93-064-04	To determine the extent of this condition, besides reviewing the EDG PMs, the Authority has Performance Improvement Plan Item # 174, "Enhancement of Station PM Program" as a long term action. Using this PIP item, the Authority will systematically review and evaluate plant systems and components for their potential inclusion in the PM program. The Authority will then review the vendor manuals for these systems and make the appropriate changes to existing PM procedures or develop new ones as required to ensure that they are performing the appropriate PMs on these systems.	These actions will be completed in accordance with the PIP schedule.

NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Indian Point 3	05000286	1 OF 4

TITLE (4) Missed Preventive Maintenance On Emergency Diesel Generator Air Start System Due to Personnel Error

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 NAME	DOCKET NUMBER
05	20	93	93	-- 020 --	00	06	17	93		05000
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	N
POWER LEVEL (10)	000

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	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
	20.405(a)(1)(iii)	✓	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in Abstract below and in Text, NRC Form 366A)
	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 (Include Area ode)
Bernadette Wiggin, Maintenance Engineer	(914) 736-8636

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
				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 15 single-spaced typewritten lines) (16)

On May 20, 1993, with the plant in the cold shutdown condition, an NRC inspector noted that Indian Point 3 had not performed the vendor recommended preventive maintenance (PM) on the twelve (12) Crosby model JMBU safety relief valves used on the three emergency diesel generator (EDG) air start systems. These valves were overdue for their vendor recommended 12-year PM inspection. Technical Specification 4.6.A.4, states, "Each diesel generator shall be inspected and maintained following the manufacturer's recommendations for this class of stand-by service." The cause of this event was personnel error - inattention to detail. The Authority has counseled and will train appropriate maintenance personnel. The Authority will replace the relief valves and ensure that all the required maintenance, surveillance and testing for the EDGs are correct and complete.

DESCRIPTION OF THE EVENT

On May 20, 1993, at 2005 hours, while the plant was at cold shutdown an NRC inspector noted, and Indian Point 3 (IP3) personnel agreed, that the Authority had not performed the vendor recommended preventive maintenance (PM) inspection on the emergency diesel generator (EDG) air start relief valves(EK)(RV). The vendor, GE-ALCO, recommends that the relief valves be removed, reconditioned and reinstalled once every 12 years. Technical Specification 4.6.A.4 states that "Each diesel generator shall be inspected and maintained following the manufacturer's recommendations for this class of stand-by service." The subject relief valves are Crosby style JMBU. ALCO supplies these as safety relief valves on the diesel air start receiver tanks and associated piping used with the ALCO 251 diesels.

The 12-year interval for vendor recommended maintenance on these Crosby relief valves began on December 12, 1975, the day IP3 Technical Specifications became effective. Therefore, the 12-year PM inspection for these valves became due on December 12, 1987.

At 2143 hours, on May 20, 1993, the Authority made a four-hour non-emergency notification pursuant to 10 CFR 50.72 (b)(2)(i) to the NRC. Maintenance personnel submitted Problem Identifications (PIDs) to replace the valves using a Design Equivalent Modification (DEM) 90-03-090 EDG. The Technical Services department issued this DEM in response to NRC Information Notice No. 90-18, entitled "Potential Problems with Crosby Safety Relief Valves Used on Diesel Air Start Receiver Tanks." On April 3, 1993, also in response to the information notice, the Technical Services department issued a Justification for Continued Operation.

In Inspection Report No. 50-286/88-21, the Nuclear Regulatory Commission cited the Authority for a violation of Technical Specification 4.6.A.4, specifically because, IP3 procedures did not address the long term diesel engine maintenance recommendations. As a result, the Authority agreed to carry out a two-phase program for emergency diesel generator maintenance. Phase I was to incorporate a revised standby preventive maintenance program. The Authority retained ALCO to provide enhancements to the existing program. Phase II would revise procedures necessary to address the requirements of the new program. Although this was the plan, and ALCO recommended that these relief valve inspections be included in the 12-year maintenance schedule, maintenance personnel overlooked this PM when they wrote and revised the procedures.

CAUSE OF THE EVENT

The cause of this event was personnel error - inattention to detail. This resulted in the PM for the relief valves not being incorporated into a plant preventive maintenance program.

CORRECTIVE ACTIONS

To prevent recurrence of this event the following corrective actions will be performed:

1. Maintenance engineers have been counseled on the significance of this event and the potential effect on safety. Before startup from the current outage, the authority will train maintenance engineers and managers who are responsible for performing evaluations that affect safety, on 10 CFR 50.59 and 10 CFR 50.92 requirements that govern changes to FSAR and technical specifications.

2. Maintenance has performed a complete review of the ALCO Engine Maintenance Schedule (Diesel Matrix) to verify that all maintenance, testing and surveillance activities required by the vendor are included in a station procedure and that maintenance, surveillance and testing are being performed within the manufacturer's recommended interval. Maintenance will resolve any discrepancies by August 1, 1993.

3. Maintenance will replace all air start relief valves using Design Equivalent Modification 90-03-090 EDG. The replacement valves are manufactured by Anderson, Greenwood and Company (AGCO) and are type 83 gas flanged relief valves. Maintenance will replace all the valves before startup from the current outage.

ANALYSIS OF THE EVENT

This event is reportable under 10 CFR 50.73(a)(2)(i)(B). The licensee shall report any operation or condition prohibited by the plant's technical specifications. Technical specification section 4.6.A.4 states that "Each diesel generator shall be inspected and maintained following the manufacturer's recommendations for this class of stand-by service." The Authority had not performed the vendor recommended PM inspection on the EDG air start system relief valves. Specifically, we did not remove and recondition these relief valves by December 12, 1987 as required by the vendor. Similar events were reported in LER 93-011-00 and 93-019-00.

SAFETY SIGNIFICANCE

This event did not affect the health and safety of the public. Three independent EDGs with independent air start systems are available at IP3. Any two EDGs can provide the emergency power necessary to mitigate the consequences of design basis events. The air start system for each diesel consists of one air compressor, one accumulator tank, and associated piping and valves.

The potential consequence of missing this PM is failure of the safety relief valves. The failure could manifest itself either as an overpressurization because the valve did not open when it should or the valve failing to close when it should, following an actuation. Both mechanisms could result in inadequate air pressure to start a diesel. In both cases, a component failure (i.e., a pressure control valve fails open, a pressure switch fails to actuate or a valve is positioned incorrectly) is a necessary precursor to the overpressure condition.

The three independent EDG starting air systems are interconnected but are normally isolated from one another by means of manual isolation valves that are administratively controlled. Therefore, in the unlikely event that a valve failure was to occur coincident with a design basis event, two diesels would be available to mitigate the consequences of an accident. Throughout the period when the PM was due, there were no failures to the diesel air system that could have led to overpressurization

To determine the extent of this condition, besides reviewing the EDG PMs, the Authority has Performance Improvement Plan Item # 174, "Enhancement of Station PM Program" as a long term action. Using this PIP item, the Authority will systematically review and evaluate plant systems and components for their potential inclusion in the PM program. The Authority will then review the vendor manuals for these systems and make the appropriate changes to existing PM procedures or develop new ones as required to ensure that they are performing the appropriate PMs on these systems. These actions will be completed in accordance with the PIP schedule.