James A. FitzPatrick
Nuclear Power Plant
268 Lake Road
P.O. Box 41
Lycoming, New York 13093

315-342-3840

NewYork Power Authority

Michael J. Colomb
Site Executive Officer

October 30, 2000
JAFP-00-0253

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, D.C. 20555

Subject: **Docket No. 50-333**
LICENSEE EVENT REPORT: LER-00-013 (DER 00-04546)

High Pressure Coolant Injection System Declared Inoperable Due To Closed Steam Supply Valve

Dear Sir:

This report is submitted in accordance with 10CFR 50.73 (a)(2)(v).

There are no commitments contained in this report.

Questions concerning this report may be addressed to Mr. Mark Abramski at (315) 349-6305.

Very truly yours,

MICHAEL J. COLOMB

MJC:MA:las

Enclosure

cc: USNRC, Region 1
USNRC, Project Directorate
USNRC Resident Inspector
INPO Records Center

IE22

NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
James A. FitzPatrick Nuclear Power Plant	05000333	1 OF 4

TITLE (4)

High Pressure Coolant Injection System Declared Inoperable Due To Closed Steam Supply Valve

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
									N/A	05000
10	02	00	00	013	00	10	30	00	FACILITY NAME	DOCKET NUMBER
									N/A	05000

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)					
POWER LEVEL (10)	100	20.2201(b)	20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)
		20.2203(a)(1)	20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
		20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
		20.2203(a)(2)(iii)	50.36(c)(1)	X	50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Mr. Mark Abramski, Sr. licensing Engineer	315-349-6305

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED	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 October 2, 2000 the plant was at 100% power. An engineering review determined that the steam supply inboard isolation valve (23MOV-15) for the High Pressure Coolant Injection System (HPCI) may not have fully closed against design basis differential pressure (dP). The HPCI steam supply inboard isolation valve was declared inoperable as a containment isolation valve and manually closed in accordance with Technical Specification 3.7.D.2 at 1220 on October 2, 2000. This action rendered the HPCI system inoperable. This event therefore constituted a condition (lack of steam to HPCI) that alone could have prevented the fulfillment of the safety function of a system needed to mitigate the consequences of an accident. Subsequent engineering review of test data taken in 1995 for this valve indicated that the valve was in fact, operable. The HPCI system was therefore declared operable at 1547 on October 2, 2000. Corrective actions include procedure revisions, an operating experience notification and preparation of an Engineering Design Standard.

EIIS Codes in [ ]

Event Description

On October 2, 2000 the plant was at 100 percent power. An engineering review determined that the steam supply inboard isolation valve (23MOV-15) for the High Pressure Coolant Injection System (HPCI) [BJ] may not have fully closed against design basis differential pressure (dP). The HPCI steam supply inboard isolation valve was declared inoperable as a containment isolation valve and manually closed in accordance with Technical Specification 3.7.D.2 at 1220 on October 2, 2000. This action rendered the HPCI system inoperable. This event therefore constituted a condition (lack of steam to HPCI) that alone could have prevented the fulfillment of the safety function of a system needed to mitigate the consequences of an accident. This event was reported under 10CFR50.72 (b)(2)(iii)(D).

Subsequent engineering review of test data taken in 1995 for this valve indicated that the valve was in fact, operable. The HPCI system was therefore declared operable at 1547 on October 2, 2000.

Cause

The cause of this event was a decision to declare the steam admission valve inoperable. This decision was the result of an inadequate understanding of a critical design parameter in 1995 when applying the position seating design strategy to Limitorque Type SB actuator motor operated valve (MOV) set-up (Cause Code B).

Analysis

During 1995, the 23MOV-15 (HPCI steam supply inboard isolation valve) motor operator was rewired to include limit close control logic. This design change placed a set of position limit switch contacts in series with torque switch contacts such that power to the motor operator was interrupted based on either valve position or motor torque (whichever came first).

In October 2000, during discussions regarding future implementation of this design change to other MOVs with Type SB actuators, engineers became aware of problems with this design at another utility.

Analysis (cont'd.)

This design is based on the existence of a known relationship between the position of the position limit switch and the valve stem/disc. Under design basis differential pressure conditions, some of the thrust force is absorbed by compression in the valve spring-pack. This compression introduces an error in the relationship between the position of the position limit switch and the valve stem/disc. The magnitude of this error is dependent on the relative difference in dP and spring-pack stiffness.

The determination that 23MOV-15 may not have fully closed against design basis dP was based on recognition that this condition was applicable to 23MOV-15 and recognition that the procedures used to set the position limit switch did not specifically address this concern. The containment isolation function of this valve was therefore considered inoperable. Subsequent analysis of MOV test data enabled engineers to establish a relationship between closing force, limit switch/torque switch position and time. This analysis indicated that 23MOV-15 was, in fact, operable.

The safety significance of this event was low because 23MOV-15 was operable and the HPCI system was inoperable for approximately 3 1/2 hours.

This event does not constitute a Safety System Functional Failure in the context of NEI 99-02 Rev 0.

Extent of Condition

All safety related MOVs were reviewed to determine if this condition was applicable. No other MOVs were identified with this condition.

Corrective Actions

1. Applicable procedures will be revised to ensure the position switch settings and test acceptance criteria account for error in the relationship between the position of the position limit switch and the valve stem/disc.
   (Scheduled to be complete: March 1, 2001)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
James A. FitzPatrick Nuclear Power Plant	05000333	00	013	00	4 OF 4

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

Corrective Actions (cont'd.)

2. An operating experience report will be prepared and submitted to notify other utilities of this condition.
   (Scheduled to be complete: December 1, 2000)

3. An Engineering Design Standard will be prepared to capture the lessons learned from this event for consideration in future MOV design activities.
   (Scheduled to be complete: March 1, 2001)

Additional Information

LER 99-008-02 is a similar event in which, closing a containment isolation valve rendered HPCI inoperable.