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

315-342-3840

NewYorkPower Authority

Michael J. Colomb
Site Executive Officer

January 14, 2000
JAFP-00-0011

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-99-015 (DER-99-02976)

Traversing Incore Probe (TIP) Containment Isolation Ball Valve Open Without Automatic Containment Isolation Capability

Dear Sir:

This report is submitted in accordance with 10 CFR 50.73(a)(2)(i)(B), "Any operation or condition prohibited by the plant's Technical Specifications."

There are no commitments contained in this report.

Questions concerning this report may be addressed to Mr. Steigerwald at (315) 349-6209.

Very truly yours,

MICHAEL J. COLOMB

MJC:RS:las
Enclosure

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

IE22 1/1

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 5

TITLE (4)

Traversing Incore Probe (TIP) Containment Isolation Ball Valve Open Without Automatic Containment Isolation Capability

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
12	15	99	99	015	00	01	14	00	FACILITY NAME: N/A	DOCKET NUMBER: 05000

OPERATING MODE (9)	N
POWER LEVEL (10)	100

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

	20.2201(b)	20.2203(a)(2)(v)	X 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)	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. Robert Steigerwald, Sr. Licensing Engineer	315-349-6209

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
D	IG	ISV	G080	N						

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X	YES (If yes, complete EXPECTED SUBMISSION DATE).	NO		02	29	00

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On December 15, 1999, it was discovered that the Traversing Incore Probe (TIP) system containment isolation ball valve for one of three TIP machines was left in the open position and it's associated containment isolation capability inoperable. This condition existed for approximately 13 days between October 21 and November 3. The containment isolation function was inoperable due to a switch on the TIP ball valve Motor Control Unit panel being in the wrong position disabling the containment isolation function. The Root Cause Analysis is not yet completed. The apparent cause is attributed to control of work associated with a temporary procedure that was being used to established a nitrogen purge on the "C" TIP index tubes. NYPA has evaluated the dose consequences of simultaneous guillotine shear of all 3 TIP tubes inboard of the explosive shear valve (penetrations would not be isolable under this scenario) coincident with a LOCA and has determined that the offsite dose consequences are within the limits set forth in 10 CFR Part 100. Corrective actions include dissemination of lessons learned concerning the issues associated with this event. The final cause identification and corrective actions will be reported in a supplemental report.

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
James A. FitzPatrick Nuclear Power Plant	05000333	99	015	00	2 OF 5

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

EIIS Codes in [ ]

Event Description

The Traversing Incore Probe (TIP) system [IG] is designed to measure the gamma flux profile of the reactor core [AC] to determine the axial power distribution. Three TIP subsystems (A, B, and C) each have a traversing probe that enters the containment through a main guide tube. A Containment Isolation Valve assembly is provided for each of the three main guide tubes entering the containment. Each valve assembly contains a solenoid operated ball valve and a squib actuated cable shearing valve mounted in the guide tubing just outside containment. The guide tube solenoid ball valve is normally closed when the TIP detector is withdrawn. When the TIP probe is driven slightly past the zero position a relay switch is actuated that opens the TIP ball valve to allow the TIP probe to enter the containment and drive into the core. The normal configuration during plant operations is with the ball valve closed, and to ensure it is disabled, the Drive Unit breaker is maintained in the OPEN/OFF position and the Drive Control switch is left in the "Manual ON" position. In this configuration the ball valve is closed and the TIP detector drive unit has no power to drive the TIP probe forward to actuate the switch that opens the ball valve.

During a forced outage, work on the "C" TIP machine tubing inside the drywell was performed. There were protective tags on the TIP Drive Unit breaker and Drive Control switch due to the maintenance that was performed on the tubing during the forced outage. The type of protective tag that was used to perform the maintenance was a "striped" tag and is hung and cleared by Operations but allows the in charge maintenance group to control the positions of the associated equipment while the tags are in place. Following the completed maintenance, on October 20, 1999, a nitrogen purge was initiated for the "C" TIP machine via a temporary procedure (IMP-T7.1). However, the protective tags on the Drive Unit breaker and Drive Control switch were not yet cleared.

A temporary modification was in place that allowed nitrogen to be connected to the TIP machine tubing outside containment. The TIP ball valve is open during this procedure by driving the TIP probe slightly forward to just pass the zero position to actuate the switch that opens the ball valve, thus allowing the nitrogen purge to be applied. During the temporary procedure IMP-T7.1 line-up to initiate the nitrogen purge the "C" TIP machine Drive Unit breaker is placed in the ON position and the Drive Control switch is left in the Manual OFF position. With the Drive Control switch in the Manual OFF position the Primary Containment Isolation System (PCIS) [JM] function for the TIP ball valve is maintained. Therefore, during the nitrogen purge the TIP ball valve is open without the TIP probe penetrating the containment and the PCIS function maintained to isolate the penetration if required. The status of the breaker and switch positions were being controlled by the temporary procedure IMP-T7.1.

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
James A. FitzPatrick Nuclear Power Plant	05000333	99	015	00	3 OF 5

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

Event Description (cont'd.)

On October 21 the protective tags that allowed work on the "C" TIP machine tubing was released and cleared. It is believed that temporary procedure tags, denoting the procedure in use, were removed when the protective tags were removed on October 21. At this point the clearing of the protective tag repositioned the breaker and switch not in accordance with the temporary procedure. The cleared position for the protective tag was to place the "C" TIP machine Drive Unit breaker in the OPEN/OFF position and the Drive Control switch in the Manual ON position. This is the normal position described above that ensures the TIP ball valve is closed and that the TIP machine cannot be operated from the control room. However, the nitrogen purge procedure was still in progress and sometime between October 21 and October 27 the breaker for the TIP Drive Unit breaker was repositioned to the ON position. This returned power to the TIP ball valve which opened since the valve was still getting an open signal from the slightly extended TIP probe. The PCIS function was not operable during this period because the Drive Control switch was left in the Manual ON position per the released protective tag.

The reactor was restarted on October 26 requiring containment to be established. The TIP ball valve containment isolation capability was not operable when required between October 26 and November 3. This was a condition not allowed by the plant's Technical Specifications and is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B). The TIP system containment isolation valve was restored to its correct configuration on November 3, 1999. (It was not discovered until December 15, 1999, during the Deviation and Event Report (DER) Analysis of the temporary tag being removed, that the containment isolation function of the TIP ball valve was determined to be not operable during October 26 and November 3.)

Cause

The root cause investigation is not yet completed. Thus far, the cause has been attributed to inadequate conduct of work activities associated with a temporary procedure that was being used to establish the nitrogen purge on the "C" TIP index tubes. The issues identified thus far are: (1) the protective tags for the maintenance on the tubing was not cleared prior to establishing the nitrogen purge and hanging of the temporary procedure tags, (2) the temporary procedure tags were removed prior to questioning why it was on the switch or breaker, (3) once the temporary tag was discovered to have been removed by Operations the system was incorrectly verified to be in the proper alignment due to poor communications between I&C supervisors and the technician who was tasked with verifying the switch/breaker line-up, (4) and the TIP purge was re-established (TIP ball valve breaker was re-positioned) not in accordance with the temporary procedure.

Safety Analysis

The licensing and design basis for these penetrations is the "some other defined basis" clause of GDC 56 of 10 CFR 50 Appendix A. Specifically, the TIP lines are considered to be instrument lines and the containment isolation design is in accordance with Safety Guide 11 (Reg Guide 1.11). NYPA has evaluated the dose consequences of simultaneous guillotine shear of all 3 TIP Tubes inboard of the explosive shear valve (penetrations would not be isolable under this scenario) coincident with a LOCA and has determined that the offsite dose consequences are well within the limits set forth in 10 CFR Part 100. The consequences are further reduced since only one of the three TIP ball valves were open. (Note: The TIP tubing does not communicate directly with the containment atmosphere. A failure of the tubing integrity would be required to establish a release path.) The event had minimal safety significance.

Extent of Condition

A review of other plant procedures indicates there are no potential problems with use of procedure tags to maintain status of operable equipment.

Corrective Actions

1. Management expectations will be discussed with I&C personnel that temporary procedure tags should not be hung over protective tags. **(Scheduled completion date: 02/01/00)**

2. The Root Cause Analysis will be reviewed by the Operations department to emphasize the importance of equipment status control and to emphasize the importance of questioning the removal of any tag prior to understanding why it is hanging on a piece of equipment. **(Scheduled completion date: 03/15/00)**

3. The I&C department will review the Root Cause Analysis and the Lessons learned and emphasize the importance of good communications between shifts, supervisors, and technicians and the importance of establishing system line-ups in accordance with procedures. **(Scheduled completion date: 03/15/00)**

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
James A. FitzPatrick Nuclear Power Plant	05000333	99	015	00	5 OF 5

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

Corrective Actions (Cont'd)

4. Complete the Root Cause Analysis and submit a supplemental report to the NRC. **(Scheduled completion date: 02/29/00)**

5. The I&C department will revise IMP-T7.1, prior to next use, to ensure adequate controls exist to maintain equipment status control of the TIP equipment. **(Scheduled completion date: 02/17/00)**

Additional Information

Previous Similar Events: **None.**

Safety System Functional Failure Review

The above described condition does not constitute a Safety System Functional Failure as defined in NEI 99-02 (Draft Rev. D) because it alone would not have prevented the containment from performing its intended function, 10 CFR 100 limits would not have been exceeded, and the associated TIP explosive sheer valve was operable.