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

315-342-3840

NewYorkPower Authority

Michael J. Colomb
Site Executive Officer

May 30, 1997
JAFP-97-0195

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-97-004

Failure of Safety Relief Valve to Open During Set Point Verification Testing Due to Foreign Material Intrusion

Dear Sir:

This report is submitted in accordance with 10 CFR Part 21, "Reporting of Defects and Noncompliances".

There are no commitments contained in this report.

Questions concerning this report may be addressed to Mr. Gordon J. Brownell at (315) 349-6360.

Very truly yours,

MICHAEL J. COLOMB

MJC:GJB:las
Enclosure

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

NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND 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.

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	01 OF 04

TITLE (4)

Failure of Safety Relief Valve to Open During Set Point Verification Testing Due to Foreign Material Intrusion

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
04	28	97	97	004	00	05	30	97	N/A	05000
									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)	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)	X 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)	10 CFR 21

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Mr. Gordon J. Brownell, Licensing Engineer	(315) 349-6360

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
E	SB	RV	T020	Y						

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)

During testing of actuating mechanisms (pilot assemblies) for Main Steam Safety Relief valves (02RV-71A through L) at Wyle Laboratories, valve 02RV-71J (pilot serial number 1217), would not lift at applied test pressures. The Authority completed an equipment failure evaluation on the subject pilot assembly to determine the cause of the failure. During pilot valve disassembly and inspection, a small screw was found wedged in the valve operator subassembly causing the valve not to open when pressurized.

The source of the loose screw was not established, however, the screw was identified as material similar to that which is typically removed from the pilot assembly prior to testing and reattached following completion of testing.

The laboratory has implemented a test procedure revisions to minimize the potential for foreign material intrusion into the valve bonnet area during testing evolutions.

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
James A. FitzPatrick Nuclear Power Plant	05000333	97	-- 004 --	00	02 OF 04

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

EIIS Codes are in []

EVENT DESCRIPTION

During the plants Fall 1996 Refuel Outage, the actuating mechanisms (pilot assemblies) for Main Steam [SB] line Safety Relief valves (02RV-71A through L) were removed and replaced. The subject removed pilot assemblies were sent to Wyle Laboratories for "as-found" set point verification testing in accordance with Technical Specifications sections 2.2.1.B and 4.6.E (valve nominal set point 1110 psig). During diagnostic testing activities, subject pilot for valve 02RV-71J (serial number 1217) failed to open (lift) at up to a 1250 psig applied test pressure. This performance characteristic was considered unusual in that: (1) the valve had been manually opened during a plant shutdown one month prior to commencing the Refuel Outage; and (2) the valve had a platinum alloy pilot disc installed to inhibit valve disc to seat oxide bonding.

In an effort to determine the cause of the test failure, the Authority completed an equipment failure evaluation on the failed pilot assembly. On April 02, 1997, the pilot was disassembled first by removal of the stabilizer and related parts in order to permit visual inspection of the seated pilot disc. No oxide bonding bridge was noted at the interface. Next, the set point sub-assembly was detached. During its removal, it was noted that a screw was present and wedged between the lower spring retainer and the bonnet inside wall. The screw was determined to be similar to a ball lock pin retaining screw (valve part number 050-0024) used in the pilot assembly.

CAUSE OF EVENT

Based on the above noted observations and evidence, it was concluded that the cause for failure of 02RV-71J to lift during "as-found" set point testing was due to the presence of a ball lock pin retaining screw wedged between the lower spring retainer and bonnet of the valve pilot assembly.

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
James A. FitzPatrick Nuclear Power Plant	05000333	97	-- 004 --	00	03 OF 04

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

CAUSE OF EVENT (cont.)

It was noted that the ball lock pin and retaining screws are typically removed from the pilot assemblies by Wyle Laboratories prior to valve testing and reattached upon completion of testing. An examination of the subject valve upon initial receipt (February 1997) by Wyle Laboratories, prior to testing, determined that all parts and materials, including its ball lock pin retaining screws were installed in place. Therefore, the source of the screw was not established. However, reviews of previous (set point) test data for valve pilot assembly serial no. 1217 indicate the last scheduled pressure test was conducted at Wyle Laboratories in November 1994. Therefore, it was concluded that the most probable cause for the foreign material intrusion into the valve bonnet area was less than adequate material controls at Wyle Laboratories during installation of the ball lock pin lanyards, prior to pilot shipment from Wyle Laboratories in November/December 1994.

ANALYSIS

This report identifies the potential failure of Wyle Laboratories' testing facility to maintain material controls which could have resulted in the failure of a safety function of a Main Steam System Safety Relief Valve during operating cycle number 12 (November 30, 1994 to October 26, 1996.

The safety relief valves are self-actuated on Main Steam System overpressurization or pilot assembly actuated by an air operator on Automatic Depressurization System logic or manual operation. Manual operation of the 02RV-71J occurred during a September 1996 plant shutdown. Although the valve functioned as designed, during the pilot disassembly at Wyle Laboratories on April 02,1997, it was found that the bearing area between the pilot rod and retainer had indication of abnormal wear.

Technical Specifications limiting conditions for operation require at least nine of eleven SRVs be operable and maintain an nominal setting of 1110 psig with an allowable setpoint error of plus or minus three percent. "As-found" diagnostic test results for setpoint verification from Wyle Laboratories dated March 06,1997 demonstrated that nine of eleven SRVs were within Technical Specifications limits.

CORRECTIVE ACTIONS

1. Wyle Laboratories has revised Target Rock 2-Stage SRV Assembly test procedures to provide instructions for controlling the covering of the pilot valve vent hole, located in the bonnet valves, to minimize the potential for foreign material intrusion into the bonnet area.

CORRECTIVE ACTIONS (CONT.)

2. New York Power Authority's (NYPA) Quality Assurance (QA) Department now requires notification by Wyle Laboratories prior to conducting valve testing. This requirement will be maintained until Wyle Laboratories completes the next scheduled refurbishment and testing of pilot assemblies at which time QA will conduct a surveillance of work practice activities.

ADDITIONAL INFORMATION

A. Failed Component

Component Identification	-	Main Steam System Safety Relief Valve Pilot
Mark Number	-	02RV-71J
Manufacturer	-	Target Rock Two Stage Safety Relief Valve
NPRDS Code	-	T020
Serial Number	-	1217