

James A. FitzPatrick  
Nuclear Power Plant  
P.O. Box 41  
Lycoming, New York 13093  
315 342-3840



**New York Power  
Authority**

Harry P. Salmon, Jr.  
Resident Manager

February 4, 1995  
JAFF-95-0056

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

SUBJECT: DOCKET NO. 50-333  
LICENSEE EVENT REPORT: LER-95-001:

Reactor Safety Relief Valve Setpoint Drift

Dear Sir:

This report is submitted in accordance with  
10CFR50.73(a)(2)(i).

Questions concerning this report may be addressed to  
Mr. James Foley at (315) 349-6362.

Very truly yours,

A handwritten signature in cursive script, appearing to read 'H. P. Salmon, Jr.'.

HARRY P. SALMON, JR.

HPS:JF:tlc

Enclosure

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

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## LICENSEE EVENT REPORT (LER)

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

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.

FACILITY NAME (1)  
James A. FitzPatrick Nuclear Power PlantDOCKET NUMBER (2)  
05000333PAGE (3)  
01 OF 04TITLE (4)  
Reactor Safety Relief Valve Setpoint Drift

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
01	06	95	95	001	00	02	04	95	FACILITY NAME	DOCKET NUMBER
										05000
										05000

OPERATING MODE (9)	N	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)	
POWER LEVEL (10)	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	
		20.405(a)(1)(iii)	x	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  
Mr. James Foley, Senior Licensing EngineerTELEPHONE NUMBER (Include Area Code)  
(315) 349-6362

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs
B	AD	Y	TO20						

## SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X					

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

During the 1994/95 refueling outage, the pilot assemblies for six safety relief valves were removed for testing and recertification. On 1/6/95 the Authority received notification from the test facility that the test results for five of the six valves exceeded the 1 percent tolerance allowed by Technical Specifications for valve actuation. Setpoint drift ranged from 1.05% to 11.28%. A plant specific analysis performed previously envelopes the as-found setpoints. This analysis determined that setpoint drift greater than that found would have no significant safety impact on vessel overpressure margin, thermal limits, or Emergency Core Cooling system performance. Corrective action included replacing the SRV pilot assemblies with recertified assemblies composed of a material that we believe will reduce seat bonding and continued participation in the BWR Owners Group addressing setpoint drift.

LER numbers 94-002, 92-016, 90-018, 89-026, 88-010, 88-004, 87-004, 85-013, and 85-009 are similar events involving SRV setpoint drift.

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TEXT CONTINUATION

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			95	001	00	

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

EIIIS Codes are in []

Event Description

During the 1994/95 refueling outage, the actuating mechanisms (pilots) from six safety relief valves (SRVs) [AD] were removed and sent to a test facility for testing, refurbishment and recertification. On January 6, 1995, the Authority received facsimile notification that five of the pilot mechanisms had actuated outside the 1 percent setpoint tolerance that is required by Technical Specification 2.2.1.B. The initial set pressure observed for the SRV pilots were:

Plant Valve No.	Pilot Assembly Serial No.	Nameplate Set Pressure (PSIG)	Observed Initial Set Pressure (PSIG)	Deviation From Nameplate Percentage
02RV-71G	1052	1140	1206	5.79%
02RV-71F	1053	1140	1173	2.89%
02RV-71A	1045	1140	1152	1.05%
02RV-71B	1110	1140	1167	2.37%
02RV-71J	1218	1140	1147	0.61%
02RV-71K	1051	1090	1213	11.28%

Each pilot mechanism are tested four times. For each of the five pilot mechanisms that were out of tolerance, the initial actuation was the maximum out of tolerance. 02RV-71J was never out of tolerance.

Cause

The pilot mechanisms are tested then disassembled, inspected and repaired (as needed) prior to recertification. Because the initial lift setpoint drift was high for all pilot mechanisms, it is possible that there was some pilot disc to seat corrosion induced bonding. This observation is supported by subsequent test runs which showed uniformly lower lift setpoints.

All six pilot mechanisms required refurbishment because of leakage observed at normal operating pressure both before and after the test runs.



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

Analysis

The observed setpoint of five of six SRV pilot mechanism deviated by more than 1 percent from the values specified in Technical Specification 2.2.1.B. Technical Specification Amendment 217, issued on September 28, 1994, modifies SRV performance limits to provide a single nominal setpoint for all valves to 1110 psig, a setpoint tolerance of 3 percent, and to allow for two SRV's to be inoperable during continuous power operation. This occurrence is, however, being reported under the provision of 10CFR50.73(a)(2)(i)(B) as an operation of the plant in a condition prohibited by the Technical Specification that were in effect during the past cycle. The remote actuation (operator demand) and automatic depressurization system (ADS) functions would not have been effected by this event. An analysis to determine the effects of SRV setpoint drift was initiated as a result of earlier similar events (LER-88-004 and LER-94-002) and has been completed.

This analysis considered plant operation with two ADS SRVs inoperable and established an upper bound for the remainder of the SRVs. The analysis showed that continuous operation of the plant would be acceptable with nine SRVs actuating at 1195 psig. The acceptance criteria for this analysis was a 50 psi margin to the ASME code upset reactor vessel pressure limit of 1375 psig during the limiting overpressure event. Additionally, the analysis confirmed that setpoint drift of nine SRVs to the 1195 psig limit would not adversely affect the following:

- High Pressure Coolant Injection (HPCI) [BJ] system
- Reactor Core Isolation Cooling (RCIC) [BN] system
- Primary Containment [NH] integrity
- Fuel Thermal Limits
- Emergency Core cooling System (ECCS)/Loss of Coolant Accident (LOCA) performance

Corrective Actions

1. The pilot assemblies were replaced with refurbished and recertified assemblies prior to startup following the maintenance outage. The removed pilot assemblies will be refurbished and recertified for future installation.
2. All SRVs, rather than half as specified in the Technical Specifications, will continue to be subjected to test, refurbishment and recertification once each operating cycle.

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3. Four currently installed pilots (S/N's 1050, 1062, 1088 and 1217) have platinum alloy pilot discs which is the latest effort by the BWR owner's group that provides an alternate disc material in an effort to limit disc to seat bonding due to corrosion. In addition, pilot S/N 1047 was retrofitted with a platinum alloy disc and has been in operating service for seven months. As found testing of this pilot is expected to be done during Spring, 1995. This test will provide information as to effectiveness of the disc material changes.
4. The Authority will continue its participation in the BWR owners group to address the SRV setpoint drift issue.

Additional Information

Failed Component Identification:      Manufacturer:      Target Rock Corp  
Model Number:      7567F-010  
NPRDS Manufacturer Code: T020  
NPRDS Component Code:      Valve

Similar Events:      LER-85-009, 85-013, 87-004, 88-004, 88-010, 89-026, 90-018, 92-016 and 94-002, are similar events which reported SRV setpoint drift.