NRC FORM 366
(7-77)

LICENSEE EVENT REPORT

CONTROL BLOCK: | | | | | | | (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

Line	Field	Value
01	LICENSEE CODE (2)	N J S G S 2
	LICENSE NUMBER (3)	0 0 - 0 0 0 0 0 - 0 0
	LICENSE TYPE (4)	4 1 1 1 1
	CAT (5)	
01 CON'T	REPORT SOURCE (6)	L
	DOCKET NUMBER (7)	0 5 0 0 0 3 1 1
	EVENT DATE (8)	0 7 1 1 8 3
	REPORT DATE (9)	0 7 2 9 8 3

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 From July 5 to July 7, 1983, during routine surveillance testing, four steam generator
03 safety valves were found to have lift settings less than required by the Technical
04 Specifications. The valves were reset immediately in each case. The valves had been
05 satisfactorily tested prior to commencing power operation in October 1981. Evaluation
06 of the deviations revealed no adverse safety impact. The event involved operation in
07 a degraded mode in accordance with Technical Specification 6.9.1.9b.
08

Line	Field	Value
09	SYSTEM CODE (11)	C C
	CAUSE CODE (12)	D
	CAUSE SUBCODE (13)	Z
	COMPONENT CODE (14)	V A L V E X
	COMP. SUBCODE (15)	H
	VALVE SUBCODE (16)	B
(17) LER/RO REPORT NUMBER	EVENT YEAR	8 3
		—
	SEQUENTIAL REPORT NO.	0 3 7
		/
	OCCURRENCE CODE	0 3
	REPORT TYPE	L
		—
	REVISION NO.	0
	ACTION TAKEN (18)	F
	FUTURE ACTION (19)	G
	EFFECT ON PLANT (20)	Z
	SHUTDOWN METHOD (21)	Z
	HOURS (22)	0 0 0 0
	ATTACHMENT SUBMITTED (23)	Y
	NPRD-4 FORM SUB. (24)	N
	PRIME COMP. SUPPLIER (25)	N
	COMPONENT MANUFACTURER (26)	C 7 1 0

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 Investigation revealed that the deviation from specification limits in two cases
11 apparently involved inadequacies in the surveillance procedures; in the remaining
12 instances maintenance had been performed on the valves subsequent to power operation.
13 The valves were in each case reset; they were satisfactorily tested and the action
14 statement was terminated. The procedures will be reviewed for improvement.

Line	Field	Value
15	FACILITY STATUS (28)	C
	% POWER (29)	0 0 0
	OTHER STATUS (30)	NA
	METHOD OF DISCOVERY (31)	B
	DISCOVERY DESCRIPTION (32)	Surveillance Testing
16	ACTIVITY RELEASED (33)	Z
	CONTENT OF RELEASE (34)	Z
	AMOUNT OF ACTIVITY (35)	NA
	LOCATION OF RELEASE (36)	NA
17	PERSONNEL EXPOSURES NUMBER (37)	0 0 0
	TYPE (38)	Z
	DESCRIPTION (39)	NA
18	PERSONNEL INJURIES NUMBER (40)	0 0 0
	DESCRIPTION (41)	NA
19	LOSS OF OR DAMAGE TO FACILITY TYPE (42)	Z
	DESCRIPTION (43)	NA
20	PUBLICITY ISSUED (44)	N
	DESCRIPTION (45)	NA

8308120165 830729
PDR ADOCK 05000311
S PDR

IE22

NRC USE ONLY

NAME OF PREPARER R. Frahm PHONE (609)935-6000 Ext. 4309

PSE&G

Public Service Electric and Gas Company P.O. Box E Hancocks Bridge, New Jersey 08038

Salem Generating Station

August 4, 1983

Dr. Thomas E. Murley
Regional Administrator
USNRC
Region 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Dr. Murley:

LICENSE NO. DPR-75
DOCKET NO. 50-311
REPORTABLE OCCURRENCE 83-037/03L

Pursuant to the requirements of Salem Generating Station Unit No. 2, Technical Specifications, Section 6.9.1.9.b, we are submitting Licensee Event Report for Reportable Occurrence 83-037/03L. This report is required within thirty (30) days of the occurrence.

Sincerely yours,

J. M. Zupko, Jr.
General Manager -
Salem Operations

RF:kll

CC: Distribution

IE22

Report Number: 83-037/03L

Report Date: 07-29-83

Occurrence Date: 07-11-83

Facility: Salem Generating Station Unit 2
Public Service Electric & Gas Company
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Plant Systems - Main Steam Safety Valves - Inoperable.

This report was initiated by Incident Report 83-122.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 3 - Rx Power 0 % - Unit Load 0 MWe.

DESCRIPTION OF OCCURRENCE:

In the period from July 5 to July 7, 1983, during a routine plant startup following refueling, routine surveillance testing revealed four steam generator safety valves with the lift setting less than required by the Technical Specifications. The valves involved were: Valve 22MS14 (15 psig low), Valve 23MS14 (2 psig low), Valve 23MS15 (64 psig low), and Valve 24MS12 (42 psig low). The low setting in each instance rendered the valve inoperable; in each case Technical Specification 3.7.1.1a applied, and the valve was readjusted to within specification within the time period required by the action statement.

All main steam safety valves had been satisfactorily tested prior to commencing power operation in October 1981. In a secondary pressure transient which occurred on January 14, 1982, the plant performed as analyzed, with no overpressurization of the secondary system (see LER 82-004/03X-1) Evaluation of the impact of the setpoint deviations revealed no potential for adverse safety impact.

APPARENT CAUSE OF OCCURRENCE:

Due to seat leakage, Valve 22MS14 had been reworked during the previous refueling. Valve 23MS15 had been gagged closed on July 6, 1982, due to a failed manual actuator (see LER 82-059/03L); the Power Range Neutron Flux High trip setpoints had been reduced and operation continued as allowed by the Technical Specifications. During the subsequent refueling shutdown, the valve was replaced with a spare. The "as found" data on these valves did not therefore reflect any change in the valve setting.

Investigation of the procedure for surveillance testing of lift settings revealed that the acceptance criteria for the valves was the same as required by the Technical Specifications, and a valve could be tested and left with a setting close to the Technical Specification limits. The valve could therefore be found out of specification after only a minor change in setpoint or due to expected error in the

APPARENT CAUSE OF OCCURRENCE: (cont'd)

testing method. This may have been the case with Valve 23MS14, which only deviated 11 psig from the previous "as left" value (the allowed tolerance is ± 1% or a range of approximately 22 psig).

Another potential problem discovered was that the procedure does not specify any criteria for what constitutes a valve actuation ("simmering" or "popping" of the device). Experience has indicated that with some valves these events may occur at pressures which may differ as much a 50 psig. This potential error is clearly significant when compared to the allowable range of 22 psig. Premature operation of main steam safety valves had been previously suspected and was involved in the Valve 23MS15 incident. Investigation confirmed that different interpretations of a lift event may have been made during previous testing and setpoint adjustment. This factor would only result in conservative deviation in the lift setting.

ANALYSIS OF OCCURRENCE:

The operability of the main steam line code safety valves insures that the secondary system pressure will be limited to within 110% of its design pressure of 1085 psig during the most severe anticipated system operational transient. The maximum relieving capacity is associated with a turbine trip from 100% rated thermal power coincident with an assumed loss of condenser heat sink.

As noted, all valve setpoints which were out of specification were found to be lower than required, and investigation into the problems indicated that any potential for unusual setpoint deviation was likely in that direction. Such deviation would not degrade the performance of a safety valve in any analyzed transient. The event therefore involved no undue risk to the health or safety of the public. Due to operation in a degraded mode permitted by a limiting condition for operation, the event is reportable in accordance with Technical Specification 6.9.1.9b.

Action Statement 3.7.1.1a requires:

> With one or more main steam line code safety valves inoperable, operation in Modes 1, 2, and 3 may proceed provided that within 4 hours either the inoperable valve is restored to operable status or the Power Range Neutron Flux High trip setpoint is reduced in accordance with the number of valves per generator which are inoperable.

CORRECTIVE ACTION:

As noted, the valves were all returned to within specification and satisfactorily tested, in compliance with the action statement. Following completion of testing, on July 7, 1983, the plant startup was continued.

A review of the valve surveillance procedure and the Technical Specifications will be performed to identify possible changes which would allow for normal setpoint drift or expected testing deviation.

CORRECTIVE ACTION: (cont'd)

In co-ordination with the valve manufacturer, an engineering investigation will be conducted to determine the exact lifting event criteria. Appropriate changes to procedural controls will be made to incorporate the results of such investigations.

FAILURE DATA:

Crosby Valve and Gauge Co.
1500 lb. Flanged Inlet Safety Valve
Mark F-12

Prepared By R. Frahm

J. M. Fulton

General Manager -
Salem Operations

SORC Meeting No. 83-102