

LICENSEE EVENT REPORT

CONTROL BLOCK: [] [] [] [] [] [] [] [] [] []

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	N	J	S	G	S	2	2	0	0	-	0	0	0	0	0	-	0	0	3	4	1	1	1	1	4			5
7	8	9						14	15	25										26	30					35	36		
		LICENSEE CODE								LICENSE NUMBER											LICENSE TYPE						CAT	SE	

CON'T

REPORT SOURCE 01 60 61 0 5 0 0 0 3 1 1 1 7 68 0 8 0 2 8 3 74 8 75 0 8 2 9 8 3 80 9

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

On two separate occasions, on August 2, and August 11, 1983, surveillance of the control console revealed a Control Rod Position Indicator (RPI) channel indicated greater than 12 steps different than the associated group demand indication. In the first instance, No. 2C1 RPI indicated 18 steps less than group demand indication; in the second case, No. 2D3 channel was 14 steps greater than group demand. In each case, Action Statement 3.1.3.2a was entered. No actual changes in rod position were apparent, and the remaining RPI channels in each group were operable. The event constituted operation in a degraded mode per Technical Specification 6.9.1.9b.

09		SYSTEM CODE		CAUSE CODE		CAUSE SUBCODE		COMPONENT CODE								COMP. SUBCODE		VALVE SUBCODE	
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
		R	B	B		A	I	N	S	T	R	U	I		Z				
17 LER RO REPORT NUMBER		EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE		REPORT TYPE		REVISION NO.									
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38		
8	3			0	4	2	0	3	L		0	E	Z	Z	Z	0	0		
ACTION TAKEN		FUTURE ACTION		EFFECT ON PLANT		SHUTDOWN METHOD		HOURS		ATTACHMENT SUBMITTED		NPRD-4 FORM SUB.		PRIME COMP. SUPPLIER		COMPONENT MANUFACTURER			
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50		
E	18	Z	19	Z	20	Z	21	0	0	0	0	Y	23	N	24	A	25		
																B	0		

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 In the first case, the channel indicator was found to be reading low. In the second

1 1 instance, the problem involved drift of the channel signal conditioner module. Each

1 2 time the components were recalibrated, indication returned to within specification and

1 3 the action statement was terminated. Problems with RPI channels calibration drift

1 4 also involve change in sensor output due to ambient temperature changes, and are

7 8 9 isolated in nature.

Isolated in nature.

FACILITY STATUS (1) 5 (2) E (28) % POWER (3) 0 (4) 3 (5) 6 (29) OTHER STATUS (30) NA

METHOD OF DISCOVERY (31) A (32) Operator Observation

ACTIVITY CONTENT RELEASED OF RELEASE (1) 6 (2) Z (33) (4) Z (34) NA AMOUNT OF ACTIVITY (35)

LOCATION OF RELEASE (36) NA

PERSONNEL EXPOSURES									
NUMBER			TYPE	DESCRIPTION					
1	7	0	0	0	(37)	2	(38)	NA	(39)

PERSONNEL INJURIES	
NUMBER	DESCRIPTION
1 H	NA

LOSS OF OR DAMAGE TO FACILITY (43)
TYPE DESCRIPTION
1 9 2 (42) NA
S PDR
IE22

PUBLICITY
 ISSUED DESCRIPTION (45)
 2 0 N (44) NA
 7 8 9 10 6R 69 80
 NRC USE ONLY

NAME OF PREPARER

R. Frahm

PHONE: (609) 935-6000 Ext. 4309



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

Salem Generating Station

August 29, 1983

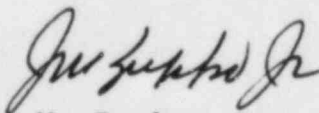
Dr. Thomas E. Murley
Regional Administrator
USNRC
Region 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Dr. Murley:

LICENSE NO. DPR-75
DOCKET NO. 50-311
REPORTABLE OCCURRENCE 83-042/03L

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 83-042/03L. This report is required within thirty (30) days of the occurrence.

Sincerely yours,


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

RF:k11 *jsf*

CC: Distribution

Report Number: 83-042/03L

Report Date: 08-29-83

Occurrence Dates: 08-02-83
08-11-83

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

IDENTIFICATION OF OCCURRENCE:

Reactivity Control Systems - Nos. 2C1 and 2D3 Rod Position Indicators - Inoperable.

This report was initiated by Incident Reports 83-138 and 83-143.

CONDITIONS PRIOR TO OCCURRENCE:

08-02-83 - Mode 1 - Rx Power 36 % - Unit Load 275 MWe.

08-11-83 - Mode 1 - Rx Power 100 % - Unit Load 1100 MWe.

DESCRIPTION OF OCCURRENCE:

At 1205 hours, August 2, 1983, during routine surveillance of the control console, the Control Room Operator noticed that No. 2C1 Control Rod Position Indicator (RPI) indicated 18 steps below the group demand position for the group. This is greater than the maximum deviation of 12 steps allowed by the Technical Specifications. No abnormalities in power level or Reactor Coolant System temperature indications were evident, indicating no change in rod position. The RPI channel was declared inoperable and Technical Specification Action Statement 3.1.3.2a was entered. The remaining channels in the group remained operable. Investigation revealed that the calibration of the channel indicator had drifted; the indicator was recalibrated and the channel was returned to service within the time interval required by the action statement.

On a second occasion, at 0200 hours, August 11, 1983, the Control Room Operator observed that No. 2D3 RPI was indicating 14 steps greater than its associated group demand indication. No abnormalities in power level or Reactor Coolant System temperature indications were evident in this case either. The RPI channel was declared inoperable and Technical Specification Action Statement 3.1.3.2a was entered for a second time. The remaining RPI channels in the group remained operable; Nos. 2D3 RPI was repaired and was also restored to operability in a timely fashion.

APPARENT CAUSE OF OCCURRENCE:

Calibration of the Channel 2C1 indicator was checked, and the indicator was found to be reading lower than required; the indicator was recalibrated, and the channel reading returned to within 8 steps of group demand indication. The signal conditioner module on Channel

APPARENT CAUSE OF OCCURRENCE: (cont'd)

2D3 was recalibrated, and the channel indication returned to within specification.

A number of previous, similar problems with RPI channels have been noted (see LERs 82-026/03L, 82-108/03L, and 82-150/03L); the occurrences involve relatively isolated instances of drift in the calibration of the channel components and the position sensor outputs. The present problems followed recalibration of the channels during a refueling shutdown. Corrections for thermal effects of plant heatup on the position sensor outputs are incorporated into calibration data but may not exactly predict actual changes in output.

ANALYSIS OF OCCURRENCE:

Operability of the control rod position indicators is required to determine control rod positions and thereby insure compliance with the control rod alignment and insertion limits. The action statements which permit limited variations from the basic requirements are accompanied by additional restrictions which insure that the original criteria are met.

Action Statement 3.1.3.2a requires:

With a maximum of one rod position indicator channel per group inoperable either determine the position of the non-indicating rod(s) indirectly by the movable incore detectors at least once per 8 hours and immediately after any motion of the non-indicating rod which exceeds 24 steps in one direction since the last determination of the rod's position, or reduce thermal power to less than 50% of rated thermal power within 8 hours.

As noted, the channels were repaired and actual control rod positions were demonstrated to be within specification within 8 hours. The incident therefore involved no undue risk to the health or safety of the public. The event involved variation from the basic control rod system requirements, and constituted operation in a degraded mode permitted by a limiting condition for operation. The occurrence is therefore reportable in accordance with Technical Specification 6.9.1.9b.

CORRECTIVE ACTION:

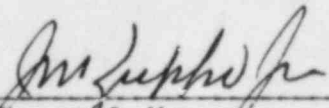
No. 2C1 RPI recalibrated and returned to within specification at 1645 hours, August 2, 1983, and Action Statement 3.1.3.2a was terminated. Channel 2D3 was also recalibrated and, at 0608 hours, August 11, 1983, the action statement was terminated for the second time. In view of the nature of the occurrences, no further action was deemed necessary.

FAILURE DATA:

Bailey Instrument Co., Inc.
Bailey Edgewise Indicator
Model RY2

Magnetics, Inc.
Signal Conditioning Module
Type E2786

Prepared By R. Frahm



General Manager -
Salem Operations

SORC Meeting No. 83-111B