

## (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	N	S	S	G	S	1	2	0	0	-	0	0	0	0	0	0	-	0	0	3	4	1	1	1	1	4					5
7	8	LICENSEE CODE						14	LICENSE NUMBER												25	LICENSE TYPE				30	CAT				58	

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REPORT SOURCE

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60 61 68 69 74 75 80

DOCKET NUMBER

EVENT DATE

REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 On September 20, 1983, during routine operation, the Control Room Operator observed

0 3 that the Delta Tsat - Delta Psat chart recorder indication had failed. The associated

0 4 Reactor Coolant System (RCS) subcooling monitor was declared inoperable, and Limiting

0 5 Condition for Operation 3.3.3.7 Action 5 was entered. Wide range RCS temperature and

0 6 pressure indication as well as steam tables were available in the Control Room allowing

0 7 calculation of the subcooling margin. The event constituted operation in a degraded

0 8 mode per Technical Specification 6.9.1.9b.

09		SYSTEM CODE I E		11	CAUSE CODE B		12	CAUSE SUBCODE A		13	COMPONENT CODE I N S T R U					14	COMP. SUBCODE Y		15	VALVE SUBCODE Z		16				
7	8	9	10		11		12		13					18		19		20								
17		LER RO REPORT NUMBER		EVENT YEAR 8 3		21	22	SEQUENTIAL REPORT NO. 0 4 3		24	26	OCCURRENCE CODE /		27	REPORT TYPE L		30	REVISION NO. 0		32						
ACTION TAKEN X		18	FUTURE ACTION F		19	EFFECT ON PLANT Z		20	SHUTDOWN METHOD Z		21	HOURS 0 0 0 0		22	ATTACHMENT SUBMITTED Y		23	NPRD-4 FORM SUB. N		24	PRIME COMP. SUPPLIER A		25	COMPONENT MANUFACTURER W 1 2 0		26
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 Investigation revealed that the P-250 computer had electronically locked up,  
1 1 rendering the related RCS subcooling monitor inoperable. Upon discovery of the  
1 2 computer problem the computer was rebootstrapped; the RCS subcooling monitor was  
1 3 restored to operable status, and the action statement was terminated.

1	4																80							
7	8	9																80						
FACILITY STATUS			% POWER			OTHER STATUS			30	METHOD OF DISCOVERY			DISCOVERY DESCRIPTION										32	
1	5	E	28	0	9	5	29	N/A			44	A	31	Operator Observation										80
7	8	9	10	11	12	13				44	45	46											80	

ACTIVITY CONTENT  
RELEASED OF RELEASE

1 6 Z (33) (34) N/A (35)

7 8 9 10 11 44

LOCATION OF RELEASE (36)

N/A

45 80

PERSONNEL EXPOSURES									
NUMBER			TYPE	DESCRIPTION					
1	7	0	0	0	(37)	Z	(38)	N/A	(39)

		PERSONNEL INJURIES			DESCRIPTION	
		NUMBER				
1	2	0	0	0	40	N/A

7		8	9	11	12			80
		LOSS OF OR DAMAGE TO FACILITY						
		TYPE		DESCRIPTION				
1	9	Z	(42)	N/A				

7	8	9	10											80
PUBLICITY				8310280024 831014										
ISSUED				PDR ADQCK 05000272										NRC USE ONLY
DESCRIPTION				S PDR										
2	0	N	44											
7	8	9	10											68 69 80

NAME OF PREPARER R. Frahm

PHONE: (609) 935-6000 Ext. 4309



**PSEG**

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

Salem Generating Station

October 14, 1983

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

Dear Dr. Murley:

LICENSE NO. DPR-70  
DOCKET NO. 50-272  
REPORTABLE OCCURRENCE 83-043/03L

Pursuant to the requirements of Salem Generating Station  
Unit No. 1, Technical Specifications, Section 6.9.1.9.b,  
we are submitting Licensee Event Report for Reportable  
Occurrence 83-043/03L. This report is required within  
thirty (30) days of the occurrence.

Sincerely yours,

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

RF:k11 *JW*

CC: Distribution

Report Number: 83-043/03L  
Report Date: 10-14-83  
Occurrence Date: 09-20-83  
Facility: Salem Generating Station Unit 1  
Public Service Electric & Gas Company  
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Accident Monitoring Instrumentation - Reactor Coolant System  
Subcooling Margin Monitor - Inoperable.

This report was initiated by Incident Report 83-172.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 - Rx Power 95 % - Unit Load 1030 MWe.

DESCRIPTION OF OCCURRENCE:

At 0250 hours, September 20, 1983, during routine operation, the Control Room Operator noted that the Delta Tsat - Delta Psat chart recorder indication had failed. The recorder provides indication for the Reactor Coolant System (RCS) subcooling monitor. The monitor was accordingly declared inoperable, and Technical Specification Limiting Condition for Operation 3.3.3.7 Action 5 was entered. The wide range RCS temperature and pressure indications were operable and steam tables were available in the Control Room throughout the occurrence, allowing manual calculation of the subcooling margin.

APPARENT CAUSE OF OCCURRENCE:

Subsequent investigation of the problem revealed that the P-250 Computer was electronically locked up. Intermittent operation of certain instrumentation contactors during high power operation can occasionally result in conflicting logic states which can cause this condition. Since the RCS subcooling monitor utilizes a portion of the computer, such malfunctions also affect the dependent monitor. It should be noted that the computer is not a safety related piece of equipment.

It is generally only necessary to load the bootstrap program to return the computer to operation. This is routinely performed by the operating shift immediately following discovery of the problem, and operability of the subcooling monitor is maintained. In this instance, the locked-up condition of the computer was interpreted as a failure of the recorder, and the bootstrap operation was not immediately performed.

ANALYSIS OF OCCURRENCE:

Operability of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. As noted, wide range indication and steam tables were available allowing determination of the subcooling margin; the event therefore involved no undue risk to the health and safety of the public. Due to the loss of redundancy involved, the occurrence constituted operation in a degraded mode permitted by a limiting condition for operation. The incident is therefore reportable in accordance with Technical Specification 6.9.1.9b.

Limiting Condition for Operation 3.3.3.7 Action 5 requires:

With the number of operable accident monitoring channels less than the required number of channels, operation may proceed provided that steam tables are available in the Control Room and Reactor Coolant wide range temperature and pressure indications are operable to provide an alternate means of calculating RCS subcooling margin.

CORRECTIVE ACTION:

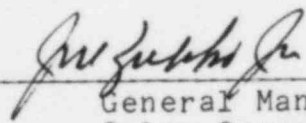
The P-250 Computer was electronically cleared and the bootstrap program was successfully loaded. All operator functions were restored and the computer was returned to service. The RCS subcooling margin monitor was satisfactorily tested, and Limiting Condition for Operation 3.3.3.7 Action 5 was terminated at 0840 hours, September 20, 1983. To insure proper operator response to computer malfunctions, the incident will be addressed in a weekly information directive to all shifts.

Design of a Safety Parameter Display System (SPDS) is presently underway; installation is expected to be started late in 1984. Associated with installation of the system, the RCS subcooling monitor will be disconnected from the process computer and connected to the safety grade SPDS computer.

FAILURE DATA:

Westinghouse Electric Corp.  
PRODAC 250 Computer

Prepared By R. Frahm

  
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General Manager -  
Salem Operations

SORC Meeting No. 83-128