NRC FORM 366
(7-77)

LICENSEE EVENT REPORT

CONTROL BLOCK: | | | | | | | (1) (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)
LICENSEE CODE | LICENSE NUMBER | LICENSE TYPE | CAT

CON'T 0 1 REPORT SOURCE L (6) | 0 5 0 0 0 3 1 1 (7) | 1 1 2 1 8 2 (8) | 1 2 1 6 8 3 (9)
DOCKET NUMBER | EVENT DATE | REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 On two separate occasions, on November 21 and December 4, 1982, during routine operation,
0 3 the control room operator discovered that the P-250 Computer was inoperable due to a
0 4 parity error. Since it utilizes the computer for inputs and calculations, the Reactor
0 5 Coolant System (RCS) subcooling monitor was declared inoperable and Action Statement
0 6 3.3.3.7a was entered. Wide range RCS temperature and pressure indications and steam
0 7 tables were available throughout the occurrence. The event constituted operation in a
0 8 degraded mode in accordance with Technical Specification 6.9.1.9b.

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	I E (11)	B (12)	A (13)	I N S T R U (14)	Y (15)	Z (16)

(17) LER/RO REPORT NUMBER

EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
8 2	—	1 4 1	/	0 3	X	—	1

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
D (18)	F (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	Y (24)	A (25)	W 1 2 0 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The malfunctions of the computer were apparently related with periodic increases in
1 1 ambient temperature due to insufficient ventilation. In each case, the computer was
1 2 reprogrammed and the action statement terminated. The power supply breaker was replaced
1 3 and the air conditioning units were repaired. DCRs are being formulated to install
1 4 Safety Parameter Display Systems.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	E (28)	0 8 1 (29)	NA	A (31)	Operator Observation

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
1 6	Z (33)	Z (34)	NA	NA

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	NA

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	NA

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	NA

8312300129 831216
PDR ADOCK 05000311
S PDR

PUBLICITY

	ISSUED	DESCRIPTION (45)	NRC USE ONLY
2 0	N (44)	NA	

NAME OF PREPARER J. L. Rupp PHONE: (609) 339-4309

PSE&G

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

Salem Generating Station

December 16, 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 82-141/03X-1
SUPPLEMENTAL REPORT

Pursuant to the requirements of Salem Generating Station Unit No. 2 Technical Specifications, Section 6.9.1.9b, we are submitting supplemental Licensee Event Report for Reportable Occurrence 82-141/03X-1.

Sincerely yours,

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

JR:kll

CC: Distribution

1/1
IE22

Report Number: 82-141/03X-1

Report Date: 12-16-83

Occurrence Dates: 11-21-82
12-04-82

Facility: Salem Generating Station Unit 2
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 Reports 82-482 and 82-486.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 - RX Power 81 % - Unit Load 890 MWe.

DESCRIPTION OF OCCURRENCE:

On two separate occasions, at 1420 hours, November 21, 1982, and at 0730 hours, December 4, 1982, during routine operation, the Control Room Operator discovered that the P-250 Computer was inoperable due to a parity error; attempts to bootstrap the computer failed. Since it utilizes the computer for inputs and calculations, the Reactor Coolant System (RCS) subcooling margin monitor in both cases was declared inoperable, and Technical Specification Action Statement 3.3.3.7a was entered. The wide range RCS temperature and pressure indications were operable and steam tables were available in the Control Room throughout both occurrences.

APPARENT CAUSE OF OCCURRENCE:

The malfunctions of the P-250 Computer were apparently due to the power supply breaker tripping in association with periodic increases in cabinet ambient temperatures (approximately 80° F). The temperature increases were attributed to inadequate capacity of the cabinet cooling system. Previous malfunctions of the P-250 Computer were documented in LER 82-131/03L.

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.

Action Statement 3.3.3.7a requires:

> With the number of operable accident monitoring channels less than the required number of channels, restore the inoperable channel(s) to operable status within 7 days, or be in at least hot shutdown within the next 12 hours.

ANALYSIS OF OCCURRENCE: (cont'd)

As noted, wide range indication and steam tables were available, allowing determination of the subcooling margin. The RCS subcooling margin monitor was returned to operation within the time specified by the action requirement. The events therefore involved no undue risk to the health and safety of the public. Due to the loss of redundancy, the occurrences constituted operation in a degraded mode permitted by a limiting condition for operation and were reported in accordance with Technical Specification 6.9.1.9b on December 8, 1982.

CORRECTIVE ACTION:

In each case, following investigation of the problem, the tripped breaker was reset and the bootstrap program was successfully loaded. In the first instance, the P-250 Computer was returned to service and the RCS subcooling margin monitor was satisfactorily tested. Action Statement 3.3.3.7a was terminated at 2000 hours, November 21, 1982.

Following the second occurrence, a temporary fan was installed in the cabinet to increase air circulation and improve cooling. The computer was returned to operation and the monitor was satisfactorily tested. Action Statement 3.3.3.7a was terminated at 1000 hours, December 4, 1982.

Subsequently, the power supply breaker was replaced and the air conditioning units were repaired. Since then, Unit 2 P-250 Computer has performed satisfactorily. Due to occurrences involving Unit 1 P-250 Computer (documented in LER's 83-039/03L, 83-043/03L and 83-045/03L), the following actions have been taken:

1. An information directive was issued to operations personnel to ensure proper response to P-250 Computer malfunctions.

2. Due to the recurrence of ventilation problems, an Engineering Department investigation will be performed for possible improvements to the system.

3. DCR's 1EC-1365 and 2EC-1366 are being formulated for the design of Safety Parameter Display Systems (SPDS). Installation is expected to be started late in 1984. Associated with installation of these systems, the RCS subcooling monitors would be disconnected from the process computers and connected to the safety related SPDS computers. (The P-250 Computers are not safety related equipment)

FAILURE DATA:

Westinghouse Electric Corp.
PRODAC 250 Computer

Prepared By J. Rupp

General Manager -
Salem Operations

SORC Meeting No. 83-152