Report Number: 79-37/03L

Report Date: 5/11/79

Occurrence Date: 4/16/79

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

IDENTIFICATION OF OCCURRENCE:

Source Range Nuclear Instrumentation Channel N-32 Inoperable

CONDITIONS PRIOR TO OCCURRENCE:

Operational Mode 6
Reactor Vessel Head Bolts Removed
Reactor Vessel Head In Place

DESCRIPTION OF OCCURRENCE:

While in Mode 6, prior to reactor vessel head removal, source range nuclear instrumentation channel N-32 indication started becoming erratic. The channel was declared inoperable and the Action Statement for Technical Specification 3.9.2 was implemented. The erratic indication became an intermittent problem while Performance Department personnel were troubleshooting the channel components and the channel was returned to service and removed from service on 4-16, 4-17, 4-19 and 4-21-79. At 1421 hours on 4-21-79, the channel was repaired and tested satisfactorily. The Action Statement for T/S 3.9.2 was terminated at this time.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

Two coaxial cable shield connections were the cause of this occurrence. A connector on the high voltage cable of the source range drawer was found on 4/16/79 to have a broken shield connection. This seemed to cure the problem but when intermittent erratic operation again occurred, further troubleshooting was done. After replacement of the detector and pre-amp assemblies on 4-21-79, a connector on the signal cable at the outboard containment electrical penetration was found to have a broken solder connection on the shield sleeve, resulting in an intermittent open circuit.

ANALYSIS OF OCCURRENCE:

Technical Specification 3.9.2 requires that if two source range neutron flux monitors, each with continuous visual indication in the Control Room and one with audible indication in the containment and Control Room, are not in operation, immediately suspend all operations involving core alterations or positive reactivity changes. The reactor vessel head was in place throughout this occurrence. Source range channel N-31 operated properly to provide shutdown neutron flux monitoring. The reactor plant parameters were stable and remained stable to minimize reactivity changes.

CORRECTIVE ACTION:

The coaxial connector on the channel drawer was cleaned and reworked to provide a good shield connection. The connector at the containment penetration was replaced with a spare connector.

FAILURE DATA:

Not Applicable

Prepared By A. W. Kapple

SORC Meeting No. 34-79

R. J. Schiavoni

Manager - Salem Generating Station

LICENSEE EVENT REPORT

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

0 1 | N J S G S 1 (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 2 7 2 (7) | 0 4 1 6 7 9 (8) | 0 5 1 1 7 9 (9)

DOCKET NUMBER — EVENT DATE — REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 While in Mode 6, prior to reactor vessel head removal, source range N.I. Channel
0 3 N-32 indication became erratic. T/S 3.9.2 Action Statement was implemented. After
0 4 initial repair, intermittent erratic operation required N-32 removal from service on
0 5 4-16, 4-17, 4-19 and 4-21-79. The channel was repaired and tested satisfactory on
0 6 4-21-79 and the Action Statement was terminated. Source range N.I. Channel N-31 was
0 7 operational and plant parameters were stable throughout this occurrence. This is the
0 8 first occurrence of this type.

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	I D (11)	E (12)	A (13)	E L E C O N (14)	Z (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	7 9	—	0 3 7	/	0 3	L	—	0

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
A (18)	Z (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	N (24)	L (25)	A 3 8 0 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The cause of this occurrence was a disconnected shield on the source range high
1 1 voltage drawer connector and a broken solder connection on the shield sleeve of the
1 2 connector for containment electrical penetration 1-19. The drawer connector was
1 3 reworked and the penetration connector was replaced.
1 4

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	H (28)	0 0 0 (29)	N/A	A (31)	Operator Observation

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

PERSONNEL EXPOSURES

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

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	N/A

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	N/A

PUBLICITY

	ISSUED	DESCRIPTION (45)	NRC USE ONLY
2 0	Z (44)	N/A	

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