NRC FORM 366
(7-77)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

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

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

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 On May 2, 1982, while testing Valve 11SW122 following maintenance, a No. 1A Safe-
0 3 guards Equipment Control (SEC) Cabinet actuation occurred. No. 1A Diesel Generator
0 4 started and all safety related loads, with the exception of No. 11 Safety Injection
0 5 Pump, energized. No. 11 Safety Injection Pump was declared inoperable and Action
0 6 Statement 3.5.2.a was entered. This occurrence constituted operation in a degraded
0 7 mode in accordance with Technical Specification 6.9.1.9.b (82-017, 81-119, 81-085,
0 8 81-083, 81-014)

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

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 2	—	0 3 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
A (18)	Z (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	Y (24)	N (25)	A 6 4 0 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The supply breaker to No. 11 Safety Injection Pump locked out on the anti-pump
1 1 feature due to the spurious nature of the SEC actuation. The SEC signal was
1 2 caused by a failed card file assembly. The card file assembly was replaced and
1 3 the SEC satisfactorily tested. Following testing of No. 11 SAfety Injection Pump
1 4 and associated supply breaker, Action Statement 3.5.2.a was terminated.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	E (28)	0 6 5 (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

8602250116 860214
PDR ADOCK 05000272
S PDR

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	N/A

IE 22/1/1

PUBLICITY

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

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

GPO 917-926

PSE&G

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

Salem Generating Station

February 14, 1986

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Dear Sir:

SALEM GENERATING STATION
LICENSE NO. DPR-70
DOCKET NO. 50-272
UNIT NO. 1
LICENSEE EVENT REPORT 82-031/03X-1
SUPPLEMENTAL REPORT

This update report is being submitted pursuant to the requirements of Technical Specification 6.9.1.9.b.

Sincerely yours,

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

JLR:ama

C Distribution

IE22
1/1

Report Number: 82-031/03X-1

Occurrence Date: 05/02/82

Report Date: 02/14/86

Facility: Salem Generating Station Unit 1
Public Service Electric & Gas Company
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

No. 11 Safety Injection Pump Inoperable

This report was initiated by Incident Reports 82-112 and 82-113

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 - Rx Power 65 % - Unit Load 660 MWe

DESCRIPTION OF OCCURRENCE:

At 1358 hours, May 2, 1982, during post maintenance testing of 11SW122 (Component Cooling Water Heat Exchanger Service Water Inlet Valve), an actuation of No. 1A Safeguards Equipment Control (SEC) Cabinet occurred. This spurious actuation resulted in the starting of No. 1A Diesel Generator and the energization of all associated safety related loads, with the exception of No. 11 Safety Injection Pump. Because the inoperability of No. 11 Safety Injection Pump resulted in one (1) inoperable Emergency Core Cooling System (ECCS) subsystem, Technical Specification Action Statement 3.5.2.a was entered retroactive to the time of occurrence.

Technical Specification Action Statement 3.5.2.a states:

> With one (1) ECCS subsystem inoperable, restore the inoperable subsystem to operable status within seventy-two (72) hours, or be in hot shutdown within the next twelve (12) hours.

APPARENT CAUSE OF OCCURRENCE:

The SEC signal was due to a failed card file assembly in the cabinet, although the root cause of the card failure could not be determined. An investigation of the failure of No. 11 Safety Injection Pump to start revealed that the supply breaker closing springs were charged; however, the breaker was locked out on the anti-pump feature. Subsequent testing of the breaker, pump and the SEC were satisfactory, and the breaker lock out was attributed to the spurious nature of the SEC actuation.

ANALYSIS OF OCCURRENCE:

The operability of two (2) independent ECCS subsystems ensure that sufficient emergency core cooling capability will be available in the event of a Loss of Coolant Accident (LOCA), assuming the loss of one (1) subsystem through any single failure consideration.

ANALYSIS OF OCCURRENCE: (cont'd)

Either subsystem operating in conjunction with the accumulators is capable of supplying sufficient core cooling to limit the peak fuel cladding temperatures within acceptable limits for all postulated break sizes, ranging from the double ended break of the largest Reactor Coolant System cold leg pipe downward. In addition, each ECCS subsystem provides long term core cooling capability in the recirculation mode during the accident recovery period.

One ECCS subsystem was operable throughout the occurrence. No. 11 Safety Injection Pump and the ECCS subsystem were returned to service within the time required by the Technical Specifications. This event therefore involved no undue risk to the health or safety of the public. However, due to operation in a degraded mode which was permitted by a limiting condition for operation, the event was reported to the Commission on May 26, 1982, in accordance with the requirements of Technical Specification 6.9.1.9.b.

CORRECTIVE ACTION:

At 1427 hours, May 2, 1982, the SEC signal was reset and all safety related loads were returned to normal. The failed card file assembly was replaced and the SEC satisfactorily tested. At 2105 hours, following the satisfactory testing of the breaker and motor windings, No. 11 Safety Injection Pump was declared operable and Action Statement 3.5.2.a was terminated.

As previously stated, this problem originated while testing 11SW122 following maintenance activities on that valve. At the time, it was believed that the electromotive force (emf), which was generated when the valve solenoid deenergized, possibly caused the card file assembly in the SEC cabinet to fail. The original report stated that Design Change 1ET-1429, which was actually an engineering test, was issued to review the effects of placing a diode across the closing solenoid of 11SW122 to suppress the back emf. However, further investigations revealed that this was not necessary. The card failure was considered isolated in nature, and the design change was subsequently cancelled. Since that event, there have been no similar occurrences involving spurious actuations of 1A SEC, and no further actions are deemed necessary.

FAILURE DATA:

Automation Industries, Inc.
Vitro Engineering Division
Card File Assembly
Vitro Dwg. No. 1964-1033

Prepared By: J. L. Rupp

General Manager-
Salem Operations

SORC Meeting No. 86-008