

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
Salem Generating Station - Unit 1DOCKET NUMBER (2)
0 5 0 0 0 2 7 2 1 OF 0 4TITLE (4)
Inadvertent Safety Injection Signal

EVENT DATE (6)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)								
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)						
0	7	1	3	8	4	8	4	0	1	8	0	5	0	0	0		
0	7	1	3	8	4	8	4	0	0	0	8	1	0	8	4		

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8: (Check one or more of the following) (11)									
POWER LEVEL (10)	0 0 0	20.402(b)		20.406(e)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)		73.71(b)			
		20.406(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(e)			
		20.406(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER (Specify in Abstract below and in Text, NRC Form 306A)			
		20.406(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)					
		20.406(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)					
		20.406(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(ix)					

LICENSEE CONTACT FOR THIS LER (12)
NAME: J. L. Rupp
TELEPHONE NUMBER: 6 0 9 3 3 9 - 4 3 0 9

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS	
X	I	D	B	D		W	1	2	0	N

SUPPLEMENTAL REPORT EXPECTED (14)
YES (If yes, complete EXPECTED SUBMISSION DATE) ☒ NO ☐
EXPECTED SUBMISSION DATE (15)
MONTH: DAY: YEAR:

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On July 13, 1984, during a refueling outage, Solid State Protection System Multiplexing testing was in progress. The procedure was complicated by troubleshooting problems, when the correct computer output for "Pressurizer Pressure SI Block" did not register on the Sequence of Events printer. Upon resolution of the problem, testing resumed. However, when the testing procedure was reentered, the step for repositioning the Solid State Protection System memory switch to the "OFF" position was omitted. When the error was discovered, the switch was returned to the "OFF" position by the Technician in training. Repositioning of the switch, at that point in the procedure, resulted in a false safety injection actuation signal. Due to the Unit being in Mode 6, all Emergency Core Cooling System injection systems were inoperable, and the actuation signal did not result in any injection into the core. Analysis of the event indicates that a spurious safety injection poses no hazard to the integrity of the Reactor Coolant System, even with the Unit operating at full power. Therefore, this occurrence involved no undue risk to the health or safety of the public. The personnel involved were counseled; better "Trainee" contact was emphasized. In addition, the incident will be discussed in detail with all members of the responsible department.

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PLANT AND SYSTEM IDENTIFICATION:

Westinghouse - Pressurized Water Reactor

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

IDENTIFICATION OF OCCURRENCE:

Inadvertent Safety Injection Signal

Event Date: 07/13/84

Report Date: 08/10/84

This report was initiated by Incident Report No. 84-112

CONDITIONS PRIOR TO OCCURRENCE:

Mode 6 - Rx Power 000 % - Unit Load 0000 MWe

DESCRIPTION OF OCCURRENCE:

On July 13, 1984, during a refueling outage, Solid State Protection System Multiplexing Test (Procedure LPD-18.1.003) was being performed by a qualified technician and a technician in training. During the return of the system to its normal configuration following the satisfactory completion of testing, a false safety injection actuation signal was generated. However, due to all Emergency Core Cooling System (ECCS) injection systems being inoperable (Mode 6), the actuation signal did not result in any injection into the core. Due to the actuation of the Engineered Safety Feature, the Nuclear Regulatory Commission was notified of the event in accordance with the code of Federal Regulations, 10CFR 50.72(b)(2)(ii).

APPARENT CAUSE OF OCCURRENCE:

The cause of this occurrence has been attributed to personnel error, due to the failure to follow the procedural steps in a sequential order. A summary of the events leading to the Engineered Safety Feature actuation is as follows:

While performing the Solid State Protection System Multiplexing Test, the correct computer output for "Pressurizer Pressure SI Block" did not register on the Sequence of Events printer. Investigation revealed a faulty Memory Card in the plant computer demultiplexer. The component was replaced and subsequent retesting commenced. The step which had previously failed was performed satisfactorily, as well as all other output functions related to the replaced Memory Card.

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APPARENT CAUSE OF OCCURRENCE: (cont'd)

At this point in the procedure, the Solid State Protection System memory switch should have been returned to the "OFF" position. However, neither technician involved performed this step; but instead, proceeded with the subsequent steps, which describe the method of restoring the protection train to normal.

The final step in the procedure contains a caution, to ensure that no "General Warning" alarm is present. When this step was reached, the technician observed that there was a "General Warning" alarm present, and proceeded to investigate the problem. The technician in training, also observing the alarm, and realizing that the out of position Memory Switch was the reason, without hesitation, and before he could be stopped by the qualified technician, repositioned the switch to the "OFF" position. This action, with the protection train in service, cleared the "Low Pressurizer Pressure SI Block", resulting in the false safety injection signal from Solid State Protection System Train A.

ANALYSIS OF OCCURRENCE:

As previously stated, the event occurred while the Unit was in Mode 6, during a period when the Emergency Core Cooling System injection systems were inoperable, and the actuation did not result in any injection into the core. The conditions and result would have been the same, had the Unit been in Mode 5. Procedural prerequisites prevent the performance of this test procedure during power operation; therefore, an analysis for Modes 1 and 2 are not required. However, had this event occurred with the Unit in Mode 3 or 4, the high pressure injection sources would have been available, and an injection to the Reactor Coolant System [AB] would have occurred. The safety injection would have lasted for approximately one (1) minute, and resulted in the addition of approximately three-hundred (300) gallons of borated water, before being terminated by the operator.

As stated in the Updated Final Safety Analysis Report, Section 15.2.14.4, a spurious safety injection poses no hazard to the integrity of the Reactor Coolant System (RCS). Although this FSAR section deals with spurious safety injections at full power, the conclusions reached are also valid for a spurious safety injection during Mode 3 or 4, since the thermal transient imposed on the RCS is less severe than that for a safety injection at full power.

This occurrence involved no undue risk to the health or safety of the public. Because of the Engineered Safety Feature actuation, this event is reportable in accordance with the requirements of the Code of Federal Regulations, 10CFR 50.73(a)(2)(iv).

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CORRECTIVE ACTION:

The technicians involved were counseled as to their job responsibilities and the importance for strict adherence to procedures, especially when they are complicated by troubleshooting efforts. The need for better "Trainee" contact was emphasized. Counseling revealed no lack of technical understanding on the part of the qualified technician. The procedure was reviewed for completeness and adequate guidance; no procedural shortcomings were identified. This incident will be discussed in detail with all members of the responsible department.

J. M. Zupko

General Manager-
Salem Operations

JLR:tns

SORC Mtg 84-099B



PSEG

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

Salem Generating Station

August 10, 1984

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 84-018-00

This Licensee Event Report is being submitted pursuant to the requirements of 10CFR 50.73(a)(2)(iv). This report is required within thirty (30) days of discovery.

Sincerely yours,

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

JR:k11

CC: Distribution