PSEG

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

Salem Generating Station

June 30, 1989

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 89-023-00

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

Sincerely yours,

L. K. Miller
General Manager -
Salem Operations

MJP:pc

Distribution

IE22
1/1

8907130178 890630
PDR ADOCK 05000272
S PNU

NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Salem Generating Station - Unit 1	0 5 0 0 0 2 7 2	1 OF 0 5

TITLE (4)

Technical Specification 3.0.4 Non-Compliance Due To Personnel Error

EVENT DATE (5)			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 6	0 3	8 9	8 9	0 2 3	0 0	0 6	3 0	8 9		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	3
POWER LEVEL (10)	0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
M. J. Pollack - LER Coordinator	AREA CODE 6 0 9 — 3 3 9 - 4 0 2 2

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
B	I G	D E T	W 1 2 0	Y					

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

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

On 6/3/89, the Unit entered an operational condition without satisfying the conditions of a Limiting Conditions of Operation as per Tech. Spec. Table 3.3-1. This is contrary to the requirements of Tech. Spec. 3.0.4. The operational condition requirement entered involved having only one source range channel operable instead of two channels. On 6/2/89 source range channel No. 1N31 was declared inoperable due to erratic indications. On 6/3/89, with the 1N31 detector inoperable, control rod bank calibration was initiated in support of post outage startup preparations. This calibration required operation of the control rod banks. The root cause of this event has been attributed to personnel error. The procedural precautions of IOP-3, "Hot Standby to Minimum Load" and OP IV-8.3.1, "Rod Control System - Normal Operation" were not fully complied with. Contributing to the cause of this event was a lack of clarity in the Tech. Specs. and inadequate management follow-up. This event will be reviewed with licensed Operators to ensure a thorough understanding is assured for the need to fully comply with all procedural requirements in addition to the correct application of Table 3.3-1 requirements. A License Change Request will be issued requesting clarification of Tech. Spec. Table 3.3-1. This LER will be reviewed by the PSE&G Nuclear Training Center for incorporation into applicable training programs. Procedure OP IV-8.3.1, "Rod Control System - Normal Operation" has been revised to include a check-off sheet addressing the requirements for energizing the Control Rods. The 1N31 detector was replaced and declared operable on 6/4/89.

PLANT AND SYSTEM IDENTIFICATION:

Westinghouse - Pressurized Water Reactor

Energy Industry Identification System (EIIS) codes are identified in the text as {xx}

IDENTIFICATION OF OCCURRENCE:

Technical Specification 3.0.4 Non-Compliance Due To Personnel Error

Discovery Date: 06/03/89

Report Date: 06/30/89

This report was initiated by Incident Report No. 89-328.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 3 Reactor Power 0% - Unit Load 0 MWe

DESCRIPTION OF OCCURRENCE:

On June 3, 1989, the Unit entered an operational condition without satisfying the specified conditions of a Limiting Conditions of Operation as per Technical Specification Table 3.3-1. This is contrary to the requirements of Technical Specification 3.0.4. The specified condition requirement entered involved having only one source range channel operable instead of two channels.

Technical Specification 3.0.4 states:

> "Entry into an OPERATIONAL MODE or other specified condition shall not be made unless the conditions of the Limiting Condition for Operation are met without reliance on provisions contained in the ACTION statements requirements. This provision shall not prevent passage through OPERATIONAL MODES as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual specifications."

Technical Specification Table 3.3-1 identifies the reactor trip system instrumentation required to be operable. The source range detectors are part of this instrumentation. Specifically, the Limiting Condition for Operation requires one channel to be operable during "Shutdown", applying to Modes 3, 4, and 5. Two channels are required to be operable during "Startup", applying to Mode 2 and specified condition "*". The notation,"*" is defined in the Table Notation Section; it states, "With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal."

DESCRIPTION OF OCCURRENCE: (cont'd)

On June 2, 1989 source range channel No. 1N31 {IG} was declared inoperable due to erratic indications. On June 3, 1989, with the 1N31 detector inoperable, control rod bank {AA} calibration was initiated in support of post outage startup preparations. This calibration required operation of the control rod banks.

This event was discovered by Technical Department personnel upon review of another event involving control rod bank withdrawal (reference LER 272/89-022-00).

APPARENT CAUSE OF OCCURRENCE:

The root cause of this event has been attributed to personnel error. The procedural precautions of IOP-3, "Hot Standby to Minimum Load" and OP IV-8.3.1, "Rod Control System - Normal Operation" were not fully complied with.

IOP-3 and OP-8.3.1 procedure precautions specify that two source range channels are required to be operable prior to energizing the Rod Control System and closing the reactor trip breakers. This precaution was not fully complied with.

Contributing to the cause of this event was a lack of clarity in the Technical Specifications and inadequate management follow-up. Technical Specification Table 3.3-1, as written, does not clearly state the requirement for operability of both source range channels as part of the limiting conditions for reactor trip breaker closure. The terms "Startup" and "Shutdown" are used to address the mode applicable requirements. These terms, since not capitalized, are not defined. The same words when capitalized are clearly defined in the Technical Specifications. The Technical Specification definition for STARTUP is "Mode 2". The Operators did not recognize this subtle difference (in capitalization) when applying the Technical Specification Table. Since the plant was not in the defined startup mode of operation, the operators applied the requirements for Mode 3; only one source range channel required to be operable instead of two.

This unclear wording was first identified in October 1987 when a similar event occurred. An LER was not issued at that time based on a management determination that the Technical Specification had not been violated. However, a request for a license change was to have been issued correcting the wording to what is believed to be the original intent; both source range channels operable with the reactor trip breakers closed and the control rods capable of withdrawal. This license change request has not been issued nor has a modification to Operations Directive OD-12, "Technical Specification Interpretations", documenting the correct interpretation, been issued.

ANALYSIS OF OCCURRENCE:

The intent of Technical Specification 3.0.4 is to insure that

ANALYSIS OF OCCURRENCE: (cont'd)

facility operation is not initiated with either required equipment or systems inoperable or other specified limits being exceeded. This includes ensuring the necessary redundancy for safe and reliable plant operation.

Operability of the Source Range neutron flux monitoring instrumentation is necessary to provide shutdown flux monitoring capabilities. During reactor startup, the source range channels provide a reactor trip in the event of a power excursion initiated from below the point of adding heat to the Reactor Coolant System {AB}. This trip is not taken credit for in the accident analyses; however, the source range channels functional capability is required to enhance the overall reliability of the Reactor Protection System.

Technical Specification Table 3.3-1 Action 4 applies if the limiting conditions for operation are not met (i.e., only one source range channel inoperable). It states:

> "With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:
>
> a. Below P-6, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 Setpoint.
>
> b. Above P-6, operation may continue."

Since a source range channel was operable with its related trip function, this event posed no risk to the health or safety of the public. Also, thermal power was not increased above the P-6 setpoint as specified by the Action Statement. However, since Technical Specification 3.0.4 was not complied with, this event is reportable per Nuclear Regulatory Commission 10CFR 50.73(a)(2)(i).

CORRECTIVE ACTION:

This event will be reviewed with licensed Operators to ensure that a thorough understanding is assured in the need to fully comply with all procedural requirements in addition to the correct application of Technical Specification Table 3.3-1 requirements.

A License Change Request will be sent to the Nuclear Regulatory Commission requesting clarification of Technical Specification Table 3.3-1 to ensure the incorrect interpretation resulting in this event does not recur. Until receipt of an Amendment, OD-12 will be revised to address the concerns associated with Table 3.3-1.

This Licensee Event Report will be reviewed by the PSE&G Nuclear Training Center for incorporation into applicable training programs.

Procedure OP IV-8.3.1 has been revised to include a check-off sheet

CORRECTIVE ACTION:

addressing the requirements for energizing the Control Rods. A specific check off identifying the requirement to have both source range channels operable is included.

The 1N31 detector was replaced and declared operable on June 4, 1989.

General Manager -
Salem Operations

MJP:pc

SORC Mtg. 89-069