



Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038  
Salem Generating Station

December 5, 1989

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

Dear Sir:

SALEM GENERATING STATION  
LICENSE NO. DPR-75  
DOCKET NO. 50-311  
UNIT NO. 2  
LICENSEE EVENT REPORT 89-019-00

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,

A handwritten signature in cursive script that reads "L. K. Miller".

L. K. Miller  
General Manager -  
Salem Operations

MJP:pc

Distribution

8912130008 891205  
PDR ADOCK 05000311  
S PDC

The Energy People

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) **Salem Generating Station - Unit 2** DOCKET NUMBER (2) **0 5 0 0 0 3 1 1** PAGE(S) **1 OF 0 4**

TITLE (4)  
**Tech. Spec. 3.0.3 Entry - 2 SF/FF Mismatch Channels Inop. Due To An Equipment Problem**

EVENT DATE (6)			LER NUMBER (8)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)			
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)		
11	05	89	89	019	00	12	05	89		0 5 0 0 0		
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OPERATING MODE (9) **1** THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)

POWER LEVEL (10) <b>0.17</b>	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(a)	<input type="checkbox"/> 20.405(a)(1)	<input type="checkbox"/> 20.405(a)(2)	<input type="checkbox"/> 20.405(a)(3)	<input type="checkbox"/> 20.405(a)(4)	<input type="checkbox"/> 20.405(a)(5)	<input type="checkbox"/> 20.405(a)(6)	<input type="checkbox"/> 20.405(a)(7)	<input type="checkbox"/> 20.405(a)(8)	<input type="checkbox"/> 20.405(a)(9)	<input type="checkbox"/> 20.405(a)(10)	<input type="checkbox"/> 20.405(a)(11)	<input type="checkbox"/> 20.405(a)(12)	<input type="checkbox"/> 20.405(a)(13)	<input type="checkbox"/> 20.405(a)(14)	<input type="checkbox"/> 20.405(a)(15)	<input type="checkbox"/> 20.405(a)(16)	<input type="checkbox"/> 20.405(a)(17)	<input type="checkbox"/> 20.405(a)(18)	<input type="checkbox"/> 20.405(a)(19)	<input type="checkbox"/> 20.405(a)(20)	<input type="checkbox"/> 20.405(a)(21)	<input type="checkbox"/> 20.405(a)(22)	<input type="checkbox"/> 20.405(a)(23)	<input type="checkbox"/> 20.405(a)(24)	<input type="checkbox"/> 20.405(a)(25)	<input type="checkbox"/> 20.405(a)(26)	<input type="checkbox"/> 20.405(a)(27)	<input type="checkbox"/> 20.405(a)(28)	<input type="checkbox"/> 20.405(a)(29)	<input type="checkbox"/> 20.405(a)(30)	<input type="checkbox"/> 20.405(a)(31)	<input type="checkbox"/> 20.405(a)(32)	<input type="checkbox"/> 20.405(a)(33)	<input type="checkbox"/> 20.405(a)(34)	<input type="checkbox"/> 20.405(a)(35)	<input type="checkbox"/> 20.405(a)(36)	<input type="checkbox"/> 20.405(a)(37)	<input type="checkbox"/> 20.405(a)(38)	<input type="checkbox"/> 20.405(a)(39)	<input type="checkbox"/> 20.405(a)(40)	<input type="checkbox"/> 20.405(a)(41)	<input type="checkbox"/> 20.405(a)(42)	<input type="checkbox"/> 20.405(a)(43)	<input type="checkbox"/> 20.405(a)(44)	<input type="checkbox"/> 20.405(a)(45)	<input type="checkbox"/> 20.405(a)(46)	<input type="checkbox"/> 20.405(a)(47)	<input type="checkbox"/> 20.405(a)(48)	<input type="checkbox"/> 20.405(a)(49)	<input type="checkbox"/> 20.405(a)(50)	<input type="checkbox"/> 20.405(a)(51)	<input type="checkbox"/> 20.405(a)(52)	<input type="checkbox"/> 20.405(a)(53)	<input type="checkbox"/> 20.405(a)(54)	<input type="checkbox"/> 20.405(a)(55)	<input type="checkbox"/> 20.405(a)(56)	<input type="checkbox"/> 20.405(a)(57)	<input type="checkbox"/> 20.405(a)(58)	<input type="checkbox"/> 20.405(a)(59)	<input type="checkbox"/> 20.405(a)(60)	<input type="checkbox"/> 20.405(a)(61)	<input type="checkbox"/> 20.405(a)(62)	<input type="checkbox"/> 20.405(a)(63)	<input type="checkbox"/> 20.405(a)(64)	<input type="checkbox"/> 20.405(a)(65)	<input type="checkbox"/> 20.405(a)(66)	<input type="checkbox"/> 20.405(a)(67)	<input type="checkbox"/> 20.405(a)(68)	<input type="checkbox"/> 20.405(a)(69)	<input type="checkbox"/> 20.405(a)(70)	<input type="checkbox"/> 20.405(a)(71)	<input type="checkbox"/> 20.405(a)(72)	<input type="checkbox"/> 20.405(a)(73)	<input type="checkbox"/> 20.405(a)(74)	<input type="checkbox"/> 20.405(a)(75)	<input type="checkbox"/> 20.405(a)(76)	<input type="checkbox"/> 20.405(a)(77)	<input type="checkbox"/> 20.405(a)(78)	<input type="checkbox"/> 20.405(a)(79)	<input type="checkbox"/> 20.405(a)(80)	<input type="checkbox"/> 20.405(a)(81)	<input type="checkbox"/> 20.405(a)(82)	<input type="checkbox"/> 20.405(a)(83)	<input type="checkbox"/> 20.405(a)(84)	<input type="checkbox"/> 20.405(a)(85)	<input type="checkbox"/> 20.405(a)(86)	<input type="checkbox"/> 20.405(a)(87)	<input type="checkbox"/> 20.405(a)(88)	<input type="checkbox"/> 20.405(a)(89)	<input type="checkbox"/> 20.405(a)(90)	<input type="checkbox"/> 20.405(a)(91)	<input type="checkbox"/> 20.405(a)(92)	<input type="checkbox"/> 20.405(a)(93)	<input type="checkbox"/> 20.405(a)(94)	<input type="checkbox"/> 20.405(a)(95)	<input type="checkbox"/> 20.405(a)(96)	<input type="checkbox"/> 20.405(a)(97)	<input type="checkbox"/> 20.405(a)(98)	<input type="checkbox"/> 20.405(a)(99)	<input type="checkbox"/> 20.405(a)(100)
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LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
<b>M. J. Pollack - LER Coordinator</b>	<b>6 0 9 3 1 3 1 9 - 1 4 0 2 1 2</b>

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

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 November 5, 1989, at 0118 hours, during startup operations, Operations shift personnel observed low readings for No. 24 Steam Generator (S/G) steam flow channel I and feed flow channel II when compared to the other respective channels. They were declared inoperable and Technical Specification 3.3.1 Table 3.3-1 Action 7 was implemented. In accordance with the Action Statement, the channel bistables were placed in a tripped condition. However, since the Technical Specification Table Action Statement addresses the actions required for one steam flow/feed flow mismatch channel circuit to be inoperable and both channels were inoperable (for No. 24 S/G), Technical Specification 3.0.3 was entered. The root cause of this event has been attributed to an equipment problem. The transmitter for No. 24 S/G steam flow channel I and the transmitter for No. 24 S/G feed flow channel II static "zero" was found to be low. The static zero was adjusted for both channels successfully. Upon comparison with the other feed flow channels, Technical Specification 3.0.3 was exited at 0204 hours on November 5, 1989. Also, upon comparison with the other steam flow channels, Technical Specification 3.3.1 Table 3.3-1 Action 7 was exited at 0440 hours on November 5, 1989.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Salem Generating Station	DOCKET NUMBER	LER NUMBER	PAGE
Unit 2	5000311	89-019-00	2 of 4

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 3.0.3 Entry; Two Steam Flow/Feed Flow Mismatch Channels for One Main Steamline Inoperable Due To An Equipment Problem

Event Date: 11/05/89

Report Date: 12/05/89

This report was initiated by Incident Report No. 89-685.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 Reactor Power 17% - Unit Load 0 MWe

DESCRIPTION OF OCCURRENCE:

On November 5, 1989 at 0118 hours, during startup operations, Operations shift personnel observed low readings for No. 24 Steam Generator (S/G) steam flow channel I and feed flow channel II when compared to the other respective channels. They were declared inoperable and Technical Specification 3.3.1 Table 3.3-1 Action 7 was implemented. In accordance with the Action Statement, the channel bistables were placed in a tripped condition. However, since the Technical Specification Table Action Statement addresses the actions required for one steam flow/feed flow mismatch channel circuit to be inoperable and both channels were inoperable (for No. 24 S/G), Technical Specification 3.0.3 was entered.

Technical Specification 3.3.1 Table 3.3-1 Functional Unit #15 addresses the channel requirements for the Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level trip. The minimum channels operable is required to be 1/loop level and 2/loop-flow mismatch or 2/loop-level and 1/loop-flow mismatch.

Technical Specification 3.0.3 states:

"When a Limiting Condition for Operation is not met except as provided in the associated ACTION requirements, within one hour action shall be initiated to place the unit in a MODE in which the specification does not apply by placing it, as applicable, in:

1. At least HOT STANDBY within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Salem Generating Station	DOCKET NUMBER	LER NUMBER	PAGE
Unit 2	5000311	89-019-00	3 of 4

DESCRIPTION OF OCCURRENCE: (cont'd)

Where corrective measures are completed that permit operation under the ACTION requirements, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition of Operation. Exceptions to these requirements are stated in the individual specifications."

APPARENT CAUSE OF OCCURRENCE:

The root cause of this event has been attributed to an equipment problem. The transmitter for No. 24 S/G steam flow channel I and the transmitter for No. 24 S/G feed flow channel II static "zero" was found to be low.

The type transmitters used are differential pressure transmitters. The feed flow transmitter is manufactured by Fischer & Porter Co. (# 10B2496PBBABB). The steam flow transmitter is manufactured by Rosemount (# 1153HD5PA).

ANALYSIS OF OCCURRENCE:

The Feedwater System (SJ) feedwater flow and the Main Steam System (SB) steamline flow signals are used as input for S/G Feed Pump speed control and S/G water level control. In addition, these signals are used for input for determining steam flow/feed flow mismatch. Steam flow/feed flow mismatch when coupled with "Low S/G Level" will initiate a reactor trip signal.

The low steam flow or feed flow indications would not affect S/G Feed Pump speed control or S/G water level control since the other steam flow channel was operable during this event.

The No. 24 S/G steam flow channel I and the transmitter for No. 24 S/G feed flow channel II inaccuracy may delay the "Steam flow/feed flow mismatch with Low S/G Level" reactor trip. However, this trip is not taken credit for in the accident analysis. Loss of heat sink protection is provided by the Low-Low S/G Level trip.

Based upon the analysis above, this event did not affect the health or safety of the public. However, since Technical Specification 3.0.3 was required to be entered, this event is reportable in accordance with Code of Federal Regulations 10CFR 50.73(a)(2)(i)(B).

CORRECTIVE ACTION:

Upon entry into Technical Specification 3.0.3, Operations procedure IOP-3, "Hot Standby to Minimum Load" was suspended. Power level was maintained (not increased) and no attempt to load the turbine was made. The steam dump valves remained in operation. The plant remained in Technical Specification 3.0.3 for less than one (1) hour.

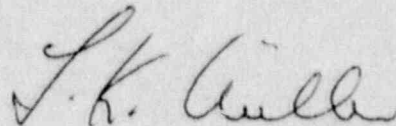
The static zero was adjusted for both channels successfully. Upon

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Salem Generating Station	DOCKET NUMBER	LER NUMBER	PAGE
Unit 2	5000311	89-019-00	4 of 4

CORRECTIVE ACTION:

comparison with the other feed flow channels, Technical Specification 3.0.3 was exited at 0204 hours on November 5, 1989. Also, upon comparison with the other steam flow channels, Technical Specification 3.3.1 Table 3.3-1 Action 7 was exited at 0440 hours on November 5, 1989.



General Manager -  
Salem Operations

MJP:pc

SORC Mtg. 89-118