



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

January 17, 1990

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 89-036-00

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

Sincerely yours,

L. K. Miller
General Manager -
Salem Operations

MJP:pc

Distribution

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Salem Generating Station - Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 2 7 2	PAGE (3) 1 OF 0 3
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TITLE (4)
No. 13 S/G Blowdown Automatic Isolation Due To Failure of The 1R19C RMS Channel

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)
1	2	20	8	9	0	0	1	1			0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (9) I

POWER LEVEL (10) 1 0 0

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

20.402(b)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	<input type="checkbox"/>	73.71(b)	<input type="checkbox"/>
20.406(a)(1)(i)	<input type="checkbox"/>	50.73(a)(2)(v)	<input type="checkbox"/>	73.71(c)	<input type="checkbox"/>
20.406(a)(1)(ii)	<input type="checkbox"/>	50.73(a)(2)(vii)	<input type="checkbox"/>	OTHER (Specify in Abstract below and in Text, NRC Form 366A)	<input type="checkbox"/>
20.406(a)(1)(iii)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)	<input type="checkbox"/>		<input type="checkbox"/>
20.406(a)(1)(iv)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)	<input type="checkbox"/>		<input type="checkbox"/>
20.406(a)(1)(v)	<input type="checkbox"/>	50.73(a)(2)(ix)	<input type="checkbox"/>		<input type="checkbox"/>

LICENSEE CONTACT FOR THIS LER (12)

NAME M. J. Pollack - LER Coordinator	TELEPHONE NUMBER AREA CODE 6 0 9 3 3 9 - 4 0 2 2
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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	L	D	E	T				
			L	L	8	5			Y

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 December 20, 1989 at 0345 hours, the No. 13 Steam Generator (S/G) blowdown Radiation Monitoring System (RMS) channel, 1R19C, failed high. The channel failure caused isolation of No. 13 S/G Blowdown. Previously, the 1R19C channel had been declared inoperable, on December 19, 1989 at 1150 hours, due to alternating illumination/clearance of the Control Room 1R19C channel fail light and periodic spiking of the radiation indication above the warning setpoint. The root cause of the 1R19C channel failure has been attributed to an equipment failure. The channel's detector and connector had failed. The 1R19C detector is a NaI Gamma Scintillator model LFE MD5C. The 1R19C detector and associated connector were replaced and a channel calibration successfully completed. The channel was declared operable on December 21, 1989 at 2235 hours and Technical Specification Table 3.3-12 Action 27 was subsequently exited.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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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:

No. 13 Steam Generator Blowdown automatic isolation due to failure of the 1R19C Radiation Monitoring System channel

Event Date: 12/20/89

Report Date: 1/17/90

This report was initiated by Incident Report Nos. 89-783 and 89-784.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 Reactor Power 100% - Unit Load 1155 MWe

DESCRIPTION OF OCCURRENCE:

On December 20, 1989 at 0345 hours, during normal plant operations, the No. 13 Steam Generator (S/G) blowdown {WI} Radiation Monitoring System (RMS) {IL} channel, 1R19C, failed high. The channel failure caused isolation of No. 13 S/G Blowdown. Previously, the 1R19C channel had been declared inoperable, on December 19, 1989 at 1150 hours, due to alternating illumination/clearance of the Control Room 1R19C channel fail light and periodic spiking of the radiation indication above the warning setpoint.

On December 19, 1989 at 1150 hours Technical Specification 3.3.3.8 Table 3.3-12 Action 27 was entered. It states:

"With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided grab samples are analyzed for gross radioactivity (beta or gamma) at a limit of detection of at least 10^{-7} microcuries/gram:

- a. At least once per 8 hours when the specific activity of the secondary coolant is greater than 0.01 microcuries/gram DOSE EQUIVALENT I-131.
- B. At least once per 24 hours when the specific activity of the secondary coolant is less than or equal to 0.01 microcuries/gram DOSE EQUIVALENT I-131."

S/G Blowdown Isolation is considered an Engineered Safety Feature. Subsequently, on December 20, 1989 at 0435 hours, the Nuclear Regulatory Commission was notified of the automatic actuation of SGBI in accordance with Code of Federal Regulations 10CFR 50.72(b)(2)(ii).

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APPARENT CAUSE OF OCCURRENCE:

The root cause of the 1R19C channel failure has been attributed to an equipment failure. The channel's detector and connector had failed. The 1R19C detector is a NaI Gamma Scintillator model LFE MD5C.

Initial investigation of this event identified a bad high voltage cable connector. After replacing the cable connector, a channel calibration was conducted. The calibration identified the detector as not performing to its full capabilities.

Channel calibration of the 2R1A channel is performed quarterly in accordance with manufacturers recommendations. The calibration was last performed, prior to this event, on September 27, 1989. It was scheduled to be done January 3, 1990.

ANALYSIS OF OCCURRENCE:

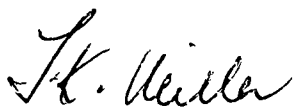
The 1R19 RMS channels monitor S/G blowdown water from the individual S/Gs for radioactivity. An alarm of this channel may indicate a significant primary to secondary leak. The alarm setpoint is set at a release rate which is less than the limits set by the Technical Specifications and the Updated Final Safety Analysis Report. Upon receipt of a channel alarm indication, the SGBI valve (GB4), for the respective S/G, will automatically close, resulting in SGBI. During this event the No. 13 SGBI GB4 valve closed as designed.

The 1R15 Condenser Air Ejector radiation monitor is used as the corroborating channel for the 1R19 radiation monitors. However, an alarm from this channel would not identify the specific S/G where a primary to secondary leak has occurred.

A review of this event has shown that the 1R19C alarm was not actuated due to high radiation levels in the No. 13 S/G blowdown line. Therefore, the health and safety of the public was not affected by this event. However, since SGBI is considered an ESF system, this event is reportable in accordance with Code of Federal Regulations 10CFR 50.73(a)(2)(iv).

CORRECTIVE ACTION:

The 1R19C detector and associated connector were replaced and a channel calibration successfully completed. The channel was declared operable on December 21, 1989 at 2235 hours and Technical Specification Table 3.3-12 Action 27 was subsequently exited.


General Manager -
Salem Operations