NRC FORM 366
(7-77)

LICENSEE EVENT REPORT

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

0 1	N J S G S 2 (2)	0 0 - 0 0 0 0 0 - 0 0 (3)	4 1 1 1 1 (4)	(5)
7 8	9 LICENSEE CODE 14	15 LICENSE NUMBER 25	26 LICENSE TYPE 30	57 CAT 58

CON'T

0 1	REPORT SOURCE L (6)	0 5 0 0 0 3 1 1 (7)	0 4 1 8 8 3 (8)	0 5 1 1 8 3 (9)
8	60	61 DOCKET NUMBER 68	69 EVENT DATE 74	75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 On two separate occasions, on April 18, and April 22, 1983, small amounts of low-level
0 3 liquid radioactive waste were released to the utility-controlled area. In both
0 4 cases, liquid waste was being released from No. 21 Waste Monitoring Tank via the cross-
0 5 connect to the Circulating Water System; leakage from the common discharge portion of
0 6 the Non-Radioactive Liquid Waste System then occurred. In both instances the leakage
0 7 was absorbed by the soil, and no Environmental Technical Specification (ETS) limits
0 8 were exceeded. The event is reportable in accordance with ETS Section 5.6.2.1.

0 9	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
	M A (11)	D (12)	Z (13)	V A L V E X (14)	D (15)	D (16)

(17) LER/RO REPORT NUMBER

EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
8 3	—	0 1 6	/	0 4	L	—	0

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
D (18)	G (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	N (24)	A (25)	X 9 9 9 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 In both cases immediate repairs of the non-radwaste system were performed.
1 1 Investigation revealed that procedures did not limit use of the alternate cross-
1 2 connect flowpath. The procedures will be revised to specify use of the line only in
1 3 an emergency.
1 4

1 5	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
	D (28)	0 0 0 (29)	NA	A (31)	Supervisor Observation

1 6	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
	L (33)	Z (34)	35 uCi	Non-Radwaste System to Ground

PERSONNEL EXPOSURES

1 7	NUMBER	TYPE	DESCRIPTION (39)
	0 0 0 (37)	Z (38)	NA

PERSONNEL INJURIES

1 8	NUMBER	DESCRIPTION (41)
	0 0 0 (40)	NA

8305250501 830511
PDR ADOCK 05000311
S PDR

LOSS OF OR DAMAGE TO FACILITY (43)

1 9	TYPE	DESCRIPTION
	Z (42)	NA

PUBLICITY

2 0	ISSUED	DESCRIPTION (45)	NRC USE ONLY
	Y (44)	Response to subsequent media questions	

NAME OF PREPARER R. Frahm PHONE: (609) 935-6000 Ext. 3078

PSEG

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

Salem Generating Station

May 18, 1983

Mr. J. Allan
Acting Regional Administrator
USNRC
Region 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Allan

LICENSE NO. DPR-75
DOCKET NO. 50-311
REPORTABLE OCCURRENCE 83-016/04L

Pursuant to the requirements of Salem Generating Station Unit No. 2, Environmental Technical Specifications, Section 5.6.2.1, we are submitting Licensee Event Report for Reportable Occurrence 83-016/04L. This report is required within thirty (30) days of the occurrence.

Sincerely yours,

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

RF:kls

CC: Distribution

IE22

Report Number: 83-016/04L

Report Date: 05-11-83

Occurrence Date: 04-18-83

Facility: Salem Generating Station Unit 2
Public Service Electric & Gas Company
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Unplanned Releases of Low-level Liquid Radioactive Waste to Owner-controlled Area.

This report was initiated by Incident Reports 83-073 and 83-074.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 5 - Rx Power 0 % - Unit Load 0 MWe.

DESCRIPTION OF OCCURRENCE:

On two separate occasions, on April 18, 1983, and April 22, 1983, small amounts of low-level liquid radioactive waste were released to the utility-controlled area. In both cases, during the release of liquid waste from No. 21 Waste Monitoring Tank to the Circulating Water System, waste flowed into adjacent portions of the Non-radioactive Liquid Waste System via the common discharge. Leakage from non-radwaste system components then resulted in releases to the adjacent area. In both cases, due to the low concentrations of the radioactivity involved and absorption of the spill effluent by soil, no significant health hazard to plant personnel was involved. Neither event resulted in exceeding Environmental Technical Specification (ETS) limits for liquid or gaseous radioactive effluents to uncontrolled areas.

In the first instance, at 1620 hours, April 18, 1983, the Senior Shift Supervisor was notified by a Chemistry Department Supervisor that leakage had been observed emanating from a flange on Valve 1LW13. The release of liquid waste was immediately terminated by closing Valve 2WL51 from the Control Room. The area involved was immediately isolated, and the spill was contained with sand and Herculite. When sampling showed the water to be radioactive, a Significant Event was declared and the appropriate notifications were made. Investigation revealed that approximately 250 gallons of mildly radioactive water (3.46E-5uCi/ml) were spilled over an area of approximately 100 square feet adjacent to the Non-Radwaste Basin. Approximately 500 cu. ft. of soil was contaminated; no drains, sewers or other direct paths to the unrestricted area were in the immediate vicinity. An estimated 33 uCi. of activity were released; principle isotopes involved were Co58 and Co60.

On the second occasion, at 0910 hours, April 22, 1983, a leak was discovered emanating from Valve 11LW16. The Senior Shift Supervisor was again immediately notified, the liquid release was terminated by

DESCRIPTION OF OCCURRENCE: (cont'd)

the Control Room Operator, and appropriate radiation protection measures were taken. A Significant Event was initiated, and the necessary notifications were performed. Subsequent investigation showed that approximately 2 gallons of low level liquid radioactive waste (1.74E-5uCi/ml) was released to the area adjacent to the valve. A total of approximately 0.2 uCi. was released; predominant isotopes were Co58, Co60 and Mn54.

APPARENT CAUSE OF OCCURRENCE:

As noted, in both instances the releases resulted from leakage from components in adjacent portions of the Non-radioactive Liquid Waste System. Design Change Request (DCR) 1EC1525 has been issued to upgrade the entire system.

The flowpath from the Liquid Radioactive Waste System to the Circulating Water System was intended to be used as an alternate release path. A cross-connect line was installed to provide a discharge path from Salem Unit 1 during the construction phase of Unit 2 (unit service water discharges are to the opposite unit, hence the normal service water path was not available). Following completion of the Unit 2 Circulating Water System, however, the temporary path continued to be used.

The operating procedure for release of liquid waste from the waste monitor tanks did not specify a preferred flowpath. Steps in the liquid radwaste procedure to isolate adjacent portions of the non-radwaste system did not reflect changes in non-radwaste system configuration associated with interim repairs to the system.

ANALYSIS OF OCCURRENCE:

As noted, due to the circumstances involved and the prompt application of radiation protection measures, the spills were contained within the owner-controlled area. No ETS limits were exceeded and therefore no adverse impact on the environment or the health of the public was involved. The occurrences constituted unusual events that had high public or potential public interest concerning environmental impact from plant operation. The events are reportable in accordance with ETS Section 5.6.2.1.

CORRECTIVE ACTION:

In both cases, immediate repairs of the non-radwaste system were performed. In the first instance, the flange on Valve 1LW13 was tightened and the leakage was stopped. On the second occasion, investigation revealed the diaphragm on Valve 11LW16 had failed. The diaphragm was replaced and the valve was satisfactorily tested.

An Engineering Field Directive is in preparation stating the preferred flowpath for releases is to the Service Water System. Use of the cross-connect to the Non-radioactive Liquid Waste System will be recommended for use only as an emergency flowpath. Liquid release procedures will be revised to reflect the recommendations of the

CORRECTIVE ACTION: (cont'd)

directive and to provide improved isolation of the non-radwaste system. An interim DCR to improve isolation is also under consideration. Combined with the upgrading of the non-radwaste system, the increased procedural controls should preclude similar problems in the event the alternative flowpath is utilized.

FAILURE DATA:

Not Applicable

Prepared By R. Frahm

General Manager -
Salem Operations

SORC Meeting No. 83-065