NRC F[illegible] 366
(7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

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

0	1	C O F S V 1 (2)	0 0 - 0 0 0 0 0 - 0 0 (3)	4 1 1 2 0 (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 2 6 7 (7)	1 2 0 7 8 2 (8)	0 5 3 1 8 4 (9)
7	8	60 61	DOCKET NUMBER 68	69 EVENT DATE 74	75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 On December 7, 1982, with the reactor plant at low power operation and performing a
0 3 special leak isolation test, it was determined that a primary coolant to purification
0 4 cooling water system leak was present. The leak was identified as being in the "B"
0 5 purification train, helium purification cooler. The cooler is a single pass, coil
0 6 tube heat exchanger. The purification cooling water system is designed to confine any
0 7 leakage, therefore, there was no potential effect on public health or safety. This
0 8 event was reported per AC 7.5.2(b)4 of the Fort St. Vrain Technical Specifications. No similar reports.

0 9	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
	C G (11)	E (12)	X (13)	H T E X C H (14)	C (15)	Z (16)
7 8	9 10	11	12	13 18	19	20

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 2	—	0 4 8	/	0 3	X	—	1
	21 22	23	24 26	27	28 29	30	31	32

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
C (18)	Z (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	Y (24)	N (25)	G 2 1 0 (26)
33	34	35	36	37 40	41	42	43	44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The failure of the cooler is attributed to corrosion caused by the normal operating
1 1 environment. For the short term, Public Service Company Change Notice 1599 was
1 2 initiated to modify the cooler piping to more efficiently vent the leaking gas to the
1 3 gas waste system. In February, 1984, the cooler was replaced with a qualified spare.
1 4 No further corrective action is anticipated or required.

1 5	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
	E (28)	0 0 2 (29)	N/A	C (31)	Special Leak Detection Test
7 8	9	10 12	13 44	45	46 80

1 6	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
	Z (33)	Z (34)	N/A	N/A
7 8	9	10	11 44	45 80

PERSONNEL EXPOSURES

1 7	NUMBER	TYPE	DESCRIPTION (39)
	0 0 0 (37)	Z (38)	N/A
7 8	9 11	12	13 80

PERSONNEL INJURIES

1 8	NUMBER	DESCRIPTION (41)
	0 0 0 (40)	N/A
7 8	9 11	12 80

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PDR ADOCK 05000267
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LOSS OF OR DAMAGE TO FACILITY (43)

1 9	TYPE	DESCRIPTION
	Z (42)	N/A
7 8	9	10 80

PUBLICITY

2 0	ISSUED	DESCRIPTION (45)	NRC USE ONLY
	N (44)	N/A	
7 8	9	10 68	69 80

NAME OF PREPARER [signature] PHONE: (303) 785-2224

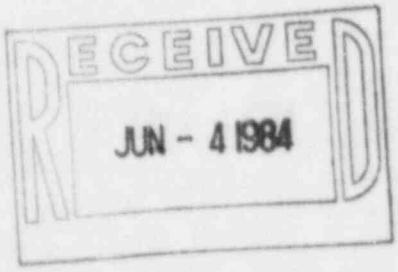
GPO 917-928

Public Service Company of Colorado

16805 WCR 19 1/2, Platteville, Colorado 80651

50-267

May 31, 1984
Fort St. Vrain
Unit #1
P-84163



Mr. E. H. Johnson, Chief
Reactor Project Branch 1
Region IV
Nuclear Regulatory Commission
611 Ryan Plaza Drive
Suite 1000
Arlington, TX 76011

Reference: Facility Operating License
No. DPR-34

Docket No. 50-267

Dear Mr. Johnson:

Enclosed please find a copy of Reportable Occurrence Report No. 50-267/82-048, Final, submitted per the requirements of Technical Specification AC 7.5.2(b)4.

Also, please find enclosed one copy of the Licensee Event Report for Reportable Occurrence Report No. 50-267/82-048.

Very truly yours,

Don Warembourg
Manager, Nuclear Production

Enclosure

cc: Director, MIPC

DW/djm

H005
1/1

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO
16805 WELD COUNTY ROAD 19 1/2
PLATTEVILLE, COLORADO 80651-9298

REPORT NO. 50-267/82-048/03-X-1

Final

IDENTIFICATION OF OCCURRENCE:

On December 7, 1982, with the reactor operating at less than 2% power, it was determined that the helium purification cooler (E-2302) on the "B" purification train had a primary coolant (helium) to purification cooling water leak. This occurrence was reported per Section AC 7.5.2(b)4 of the Fort St. Vrain Technical Specifications.

EVENT DESCRIPTION:

During the month of November, 1982, the reactor plant was maintained in either a non-critical or low power condition due to maintenance and primary coolant chemistry considerations. During this period, the presence of "gas" was noted within the purification cooling water system.

Normally, entrained gas is collected within the purification cooling water system expansion tanks and is then manually vented to the radioactive gas waste system. Because this venting process was becoming more frequent, investigations were undertaken to determine possible points of ingress. At the end of November, these investigations led to the process of isolating each major component served by the cooling water system.

On December 7, 1982, it was determined that a primary coolant (helium) to purification cooling water leak was present in the heat exchanger tubes within the "B" purification train cooler. Due to the location and design of the cooler, the exact location of the leak within the cooler was not known.

CAUSE
DESCRIPTION:

Component Failure.

The "B" purification train cooler failure is attributed to corrosion caused by the normal operating environment of the cooler. The cooling tubes are encased within the shell of the cooler and are continually submerged in the water of the purification cooling water system. The primary coolant system (helium) is subject to various operating conditions, cycles, and transients which may not be conducive to maximum protection of system components.

The purification system is designed to remove impurities (such as moisture) from the primary coolant helium and may be subject to corrosion by those impurities. However, the possibility of a tube leak, for any reason, does not pose a threat to the health and safety of the public as the entire purification cooling water system is designed for the PCRV Reference Pressure of 845 psig, and any gas that is vented from the system is contained and processed by the radioactive gaseous waste system in a normal manner.

The cooler was manufactured by Graham Manufacturing Company, Inc. It is a shell and tube type heat exchanger, serial number 4851-68-2 with carbon steel coiled tubes rated at 845 PSI at 800°F. The shell is carbon steel rated at 845 PSI at 150°F.

CORRECTIVE
ACTION:

For the short term, Public Service Company Change Notice 1599 was initiated to modify the cooler piping to more efficiently vent the leaking helium gas to the gas waste system. Controlled Work Procedure 82-255 provided guidelines for the installation of the Change Notice.

In February, 1984, during a plant outage for refueling and maintenance, the "B" purification train cooler was replaced with a qualified spare, using Controlled Work Procedure 83-197.

No further corrective action is anticipated or required.

Prepared By: Duane L. Frye
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