Public Service Company of Colorado
P. O. Box 361, Platteville, Colorado 80651

April 16, 1975

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U.S. ATOMIC ENERGY COMMISSION
REGION IV
ARLINGTON, TEXAS

Mr. E. Morris Howard, Director
Nuclear Regulatory Commission
Region IV
Office of Inspection and Enforcement
611 Ryan Plaza Drive
Suite 1000
Arlington, Texas 76012

REF: Facility Operating License
No. DPR-34

Docket No. 50-267

Dear Mr. Howard:

Enclosed please find a copy of Abnormal Occurrence Report No. 50-267/74/24A, Final, submitted per the requirements of the Technical Specifications.

Very truly yours,

H Larry Brey

H. Larry Brey
Superintendent-Operations
Fort St. Vrain Nuclear
Generating Station

HLB:il

cc: Mr. Angelo Giambusso

50-267
inquiry

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COPY SENT REGION IV

REPORT DATE: January 25, 1975 ABNORMAL OCCURRENCE

OCCURRENCE DATE: December 22, 1974

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO
P. O. BOX 361
PLATTEVILLE, COLORADO 80651

REPORT NO, 50-267/74/24A

FINAL

IDENTIFICATION OF OCCURRENCE:

The static seal on C-2101 ("A" helium circulator) was possibly accidentally released during removal of temporary jumpers following a test of the feedwater system. This is identified as an Abnormal Occurrence per definition 2.1.c of the Technical Specifications.

CONDITIONS PRIOR TO OCCURRENCE:

	Steady State Power		Routine Shutdown
	Hot Shutdown		Routine Load Change
X	Cold Shutdown	X	other (specify)
	Refueling Shutdown		Plant essentially shut down following initial performance of RT-241 (Feedwater system testing).
	Routine Startup		

The major plant parameters at the time of the event were as follows:

Power	PTR	0	MWth
	ELECT.	0	MWe
Secondary Coolant	Pressure	0	psig
	Temperature	N/A	°F
	Flow	N/A	#/hr.
Primary Coolant	Pressure	25	psig
	Temperature	101	°F Core Inlet
		101	°F Core Outlet
	Flow	0	#/hr.

DESCRIPTION OF OCCURRENCE:

The static seal on C-2101 helium circulator was possibly released while replacing plant protective system modules and jumpers previously required to run RT-241 (initial filling of the steam generators and feedwater control system test).

There are two seal release valves in series. A fuse blown while removing the jumpers caused one of those valves to open. Buffer-midbuffer instrumentation indicated flow up the circulator shaft implying that the remaining seal release valve is leaking.

The normal buffer helium system was placed on the circulator to prevent any primary coolant leakage.

Analysis of the primary coolant taken on December 20, 1974 indicated no detectable gamma activity, therefore an accidental release of primary coolant would not have represented a hazard to plant personnel or the public. A continuous air monitor located at the PCRV support ring indicated background radiation levels. An analysis of primary coolant on December 23, 1974 indicated no increase in contaminants.

APPARENT CAUSE OF OCCURRENCE:

___	Design	___	Unusual Service Cond. Including Environment
___	Manufacture	X	Component Failure
___	Installation/Const.	___	Other (specify)
X	Operator		
___	Procedure		

While removing a jumper across the "A" logic circulator brake and seal interlock contacts of C-2101, the jumper apparently contacted station ground resulting in a blown fuse. This de-energized a relay whose contacts hold the appropriate brake and seal valves closed or open as required.

Because of redundant valving in the system, valve HV-21191-3 had to be leaking for the seal release to occur.

ANALYSIS OF OCCURRENCE:

Blowing a fuse in the brake and seal circuit should not in itself release the circulator seal. There are two series brake and seal release valves and the blown fuse would only affect one of the seal and one of the brake release valves. The seal and brake helium pressure supply valves are in parallel and are also separately fused, but the blown fuse would effect one brake and one seal supply valve.

CORRECTIVE ACTION:

A check was made of all circulator brake and seal vent valves. This was done by checking each valve in service. The results of that test indicated that of 16 vent valves (2 per circulator for the brake and 2 per circulator for the seal) seven (7) were leaking. The valves were repaired and checked again to ensure that each valve is capable of preventing inadvertent releasing of the seal or brake. Analyzing the brake and seal piping and controls it is advisable that we do not isolate the seal release line. The control room operator would have no indication the seal had not been released and could possibly attempt to rotate the circulator with the brake and seal applied.

FAILURE DATA/ SIMILAR REPORTED OCCURRENCES:

Abnormal Occurrence 50-267/74/13 dealt with the inability of "A" helium circulator static seal to remain actuated. A ruptured actuating bellows was the cause of this Abnormal Occurrence.

PROGRAMMATIC IMPACT:
None

CODE IMPACT:
None

Recommended: H. Larry Brey
H. Larry Brey
Superintendent-Operations
Fort St. Vrain Nuclear
Generating Station

Approved: Frederic E. Swart
Frederic E. Swart
Supt. Nuclear Production
Fort St. Vrain Nuclear
Generating Station