

LICENSEE EVENT REPORT

CONTROL BLOCK: _____

(PLEASE PRINT ALL REQUIRED INFORMATION)

LICENSEE NAME: 01 MICHAEL V. ULLI LICENSE NUMBER: 01-01010101-010 LICENSE TYPE: 01 EVENT TYPE: 01

CATEGORY: 01 CONT REPORT TYPE: 01 REPORT SOURCE: 01 DOCKET NUMBER: 0150-0267 EVENT DATE: 052876 REPORT DATE: 060776

EVENT DESCRIPTION

02 AFTER LOSS OF OUTSIDE ELECTRICAL POWER SURVEILLANCE TEST WAS LAUNCHED

03 LOOP 2 HELIUM CIRCULATORS HAD BEEN RETURNED TO SELF-TURBING OPERATION

04 WHEN LOOP 2 HE CIRC STEAM TURBINE TRIPS WERE RESET, THIS CLEARED

05 LOOP 2 SHUTDOWN AND ALLOWED A PREVIOUS TRIP, THAT HAD LATCHED IN, TO

06 TRIP HELIUM CIRCULATOR 1B ON LOOP 1. (A0-050-267-76/12)

SYSTEM CODE: 07 C3 CAUSE CODE: 01 D COMPONENT CODE: 01 INSTRU PRIME COMPONENT SUPPLIER: 01 N COMPONENT MANUFACTURER: 01 G305 VIOLATION: 01 N

CAUSE DESCRIPTION

08 THE SYSTEM OPERATING PROCEDURE FOR RESET FOLLOWING A TRIP DUE TO BUFFER

09 SEAL MALFUNCTION HAD NOT BEEN REVISED FOLLOWING A MODIFICATION OF THE

10 LATCHING CIRCUIT.

FACILITY STATUS: 01 G % POWER: 000 OTHER STATUS: _____ METHOD OF DISCOVERY: 01 A DISCOVERY DESCRIPTION: 01 NA

FORM OF ACTIVITY RELEASED: 01 Z CONTENT OF RELEASE: 01 NA AMOUNT OF ACTIVITY: _____ LOCATION OF RELEASE: 01 NA

PERSONNEL EXPOSURES

NUMBER: 01 000 TYPE: 01 Z DESCRIPTION: 01 NA

PERSONNEL INJURIES

NUMBER: 01 000 DESCRIPTION: 01 NA

OFFSITE CONSEQUENCES

01 NA

LOSS OR DAMAGE TO FACILITY

TYPE: 01 Z DESCRIPTION: 01 NA

PUBLICITY

01 NA

8311110225 760528
PDR ADOCK 05000267
S PDR

ADDITIONAL FACTORS

01 EVENT DESCRIPTION, CONT'D: PROCEDURES TO BE REVISED, AS

01 APPROPRIATE.

NAME: H. W. HILLIARD, JR PHONE: 303-785-2253

REPORT DATE: June 7, 1976

ABNORMAL OCCURRENCE 76/12

Page 1 of 3

OCCURRENCE DATE: (Determined) May 28, 1976

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

REPORT NO. 50-267/76/12

Final

IDENTIFICATION OF
OCCURRENCE:

On May 27, 1976, an unexpected trip of helium circulator 1B occurred. This is identified as an abnormal occurrence per Fort St. Vrain Technical Specifications, Section 2.1, paragraph g.

CONDITIONS PRIOR
TO OCCURRENCE:

<u> </u>	Steady State Power	<u> </u>	Routine Shutdown
<u> </u>	Hot Shutdown	<u> </u>	Routine Load Change
<u> X </u>	Cold Shutdown	<u> </u>	Other (specify)
<u> </u>	Refueling Shutdown	<u> </u>	
<u> </u>	Routine Startup	<u> </u>	

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

Power	RTR	<u> 0 </u>	MWth
	ELECT	<u> 0 </u>	MWe
Secondary Coolant	Pressure	<u> 0 </u>	psig
	Temperature	<u> 90 </u>	°F
	Flow	<u> 0 </u>	#/hr.
Primary Coolant	Pressure	<u> 283 </u>	psig
	Temperature	<u> 94 </u>	°F Core Inlet
		<u> 103 </u>	°F Core Outlet
	Flow	<u> 0 </u>	#/hr.

(continued)

CONDITIONS PRIOR
TO OCCURRENCE (continued):

Helium Circulator Status	Circulator 1A	<u>Shutdown</u>
	Circulator 1B	<u>Self-turbining</u>
	Circulator 1C	<u>Self-turbining</u>
	Circulator 1D	<u>Self-turbining</u>

DESCRIPTION OF
OCCURRENCE:

A loss of electrical power test (LOEP) was run on the afternoon of May 27, 1976, which tripped helium circulators 1C and 1D, and initiated a Loop 2 automatic shutdown from the Plant Protective System as expected. After the surveillance test was concluded, the Loop 2 helium circulators were returned to self-turbining operation. When the Loop 2 helium circulator steam turbine trips were reset, 1B circulator tripped on buffer seal malfunction.

APPARENT CAUSE OF
OCCURRENCE:

	Design	Unusual Service Conditions Including Environmental
	Manufacture	Component Failure
	Installation/Const.	Other (specify)
	Operator	
<input checked="" type="checkbox"/> X	Procedure	

ANALYSIS OF
OCCURRENCE:

A Loop 2 shutdown initiates an inhibit signal to prevent the seal malfunction trip of the Loop 1 helium circulators, and vice versa. In addition, a recent modification to the 2 of 3 logic output for seal malfunction of each circulator, added a holding circuit such that following a buffer seal malfunction, it is necessary to manually reset the holding circuit before returning the circulator to service. During the loss of electrical power test, the buffer seal malfunction of B circulator was tripped causing the holding circuit to be energized. No circulator trip of 1B occurred, however, because the Loop 2 shutdown inhibit was also energized. (Note circulator 1A was shutdown at the time.)

ANALYSIS OF
OCCURRENCE (continued):

Following the loss of electrical power test, circulator auxiliaries were restarted and self-turbining speeds were achieved for helium circulators 1C and 1D. When the operator manually reset the Plant Protective System steam/water drain latching bistables on circulators 1C and 1D, the Loop 2 shutdown signal reset as it should, which cancelled the inhibit of seal malfunction for helium circulator 1B. Because the holding circuit was energized, a buffer seal malfunction trip signal was actuated for circulator 1B, even though the buffer seal differential pressure was normal, and the circulator tripped.

The procedure governing operator action for this situation, which is alarmed in the control room, was found to be inadequate. Because of the lag in issuing procedural changes corresponding to hardware changes, the revised reset procedure incorporating the changed nomenclature had not been issued.

CORRECTIVE
ACTION:

The system operating procedure will be revised to provide correct reset action for the holding circuit, following its actuation. No further corrective action is planned or required.

FAILURE DATA/SIMILAR REPORTED OCCURRENCES:

None

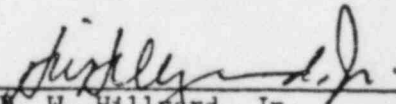
PROGRAMMATIC IMPACT:

None

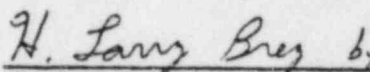

CODE IMPACT:

None

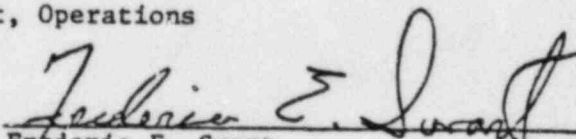
Submitted by:


H. W. Hillyard, Jr.
Technical Services Supervisor

Reviewed by:

 by 
H. Larry Brey
Superintendent, Operations

Approved by:


Frederic E. Swart
Superintendent, Nuclear Production

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

June 7, 1976
Fort St. Vrain
Unit No. 1
P-76122

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

REF: Facility Operating License
No. DPR-34

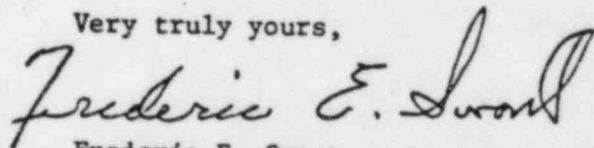
Docket No. 50-267

Dear Mr. Howard:

Enclosed please find a copy of Abnormal Occurrence Report No. 50-267/76/12, Final, submitted per the requirements of the Technical Specifications.

Also please find enclosed one copy of the Licensee Event Report for Abnormal Occurrence Report No. 50-267/76/12.

Very truly yours,



Frederic E. Swart
Superintendent, Nuclear Production
Fort St. Vrain Nuclear
Generating Station

FES/alk

cc: Mr. Roger S. Boyd

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