

## LICENSEE EVENT REPORT

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

01 C 0 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 37 CAT 58

CON'T  
01 L 6 0 5 0 0 0 2 6 7 7 0 8 0 7 8 1 8 0 6 0 6 8 3 9  
7 8 9 REPORT SOURCE 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10  
02 During August testing, one of the twelve helium circulator seal malfunction pressure  
03 differential switch units was discovered to have a trip point outside the limits of  
04 LCO 4.4.1, Table 4.4-3. This is reportable per Fort St. Vrain Technical Specifi-  
05 cations AC 7.5.2(b)1 and AC 7.5.2(b)2. No affect on public health or safety. Redun-  
06 dant systems available and operable. Similar reports are RO's 77-47, 78-27, 79-32,  
07 79-56, 80-07, 80-16, 80-20, 80-26, 80-34, 80-41, 80-51, 80-72, 81-006, 81-016, and  
08 81-024.  
7 8 9

09 C B 11 E 12 E 13 I N S T R U 14 S 15 Z 16  
7 8 9 SYSTEM CODE 9 10 CAUSE CODE 11 12 CAUSE SUBCODE 13 14 COMPONENT CODE 18 19 COMP. SUBCODE 20 21 VALVE SUBCODE 20 21

17 8 1 0 4 7 0 3 X 1 1  
7 8 9 LER/RO REPORT NUMBER 21 22 EVENT YEAR 23 24 SEQUENTIAL REPORT NO. 25 26 OCCURRENCE CODE 27 28 REPORT TYPE 29 30 REVISION NO. 31 32

X 18 X 19 Z 20 Z 21 0 0 0 0 Y 23 Y 24 N 25 B 0 8 0 26  
33 34 ACTION TAKEN 35 36 FUTURE ACTION 37 38 EFFECT ON PLANT 39 40 SHUTDOWN METHOD 41 42 HOURS 43 44 ATTACHMENT SUBMITTED 45 46 NRPD-4 FORM SUB. 47 48 PRIME COMP. SUPPLIER 49 50 COMPONENT MANUFACTURER 51 52

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS 27  
10 ITT Barton Model 289 pressure differential switch failed to actuate at trip point due  
11 to dirt accumulation in electrical switch. The ITT Barton pressure differential indi-  
12 cating switches were replaced with ITT Barton Model 752 pressure transmitters and bi-  
13 stable trip modules (Model PT-3D, manufactured by General Atomic Company) via Change  
14 Notice 1110. No further corrective actions are anticipated or required.  
7 8 9

15 E 28 0 7 0 29 N/A C 31 Operability Test  
7 8 9 FACILITY STATUS 10 11 % POWER 12 13 OTHER STATUS 30 31 METHOD OF DISCOVERY 32 33 DISCOVERY DESCRIPTION 34 35

16 Z 33 Z 34 N/A N/A N/A  
7 8 9 ACTIVITY CONTENT 35 36 RELEASED OF RELEASE 37 38 AMOUNT OF ACTIVITY 39 40 LOCATION OF RELEASE 41 42

17 0 0 0 37 Z 38 N/A  
7 8 9 PERSONNEL EXPOSURES 39 40 NUMBER 41 42 TYPE 43 44 DESCRIPTION 45 46

18 0 0 0 40 N/A  
7 8 9 PERSONNEL INJURIES 41 42 NUMBER 43 44 DESCRIPTION 45 46

19 Z 42 N/A  
7 8 9 LOSS OF OR DAMAGE TO FACILITY 43 44 TYPE 45 46 DESCRIPTION 47 48

20 N 44 N/A  
7 8 9 PUBLICITY 45 46 ISSUED 47 48 DESCRIPTION 49 50

NAME OF PREPARER ASULL PHONE: (303) 785-2224

8306280313 830606  
PDR ADOCK 05000267  
S PDR

NRC USE ONLY  
68 69 80 90 91 92 93 94 95 96 97 98 99

GPO 917-226

REPORT DATE: June 6, 1983

REPORTABLE OCCURRENCE 81-047

OCCURRENCE DATE: August 7, 1981

ISSUE 1

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

REPORT NO. 50-267/81-047/03-X-1

Final

IDENTIFICATION OF  
OCCURRENCE:

During the August performance of the monthly check of the helium circulator seal malfunction pressure differential switches, it was discovered that one of the twelve switch units tripped outside the limits specified in LCO 4.4.1, Table 4.4-3.

This is reportable per Fort St. Vrain Technical Specifications AC 7.5.2(b)1 and AC 7.5.2(b)2.

EVENT  
DESCRIPTION:

On August 7, 1981, while operating at 69% thermal power and 220 MWe electrical, instrument personnel performed the circulator seal malfunction (buffer-mid-buffer) switch operability check. The switches are normally calibrated on an annual basis; however, due to the problems cited in the previous reports as listed on the LER, a check of buffer-mid-buffer trip settings on a monthly basis was undertaken as an interim measure to test operability.

There are twelve buffer-mid-buffer switch units, three per circulator. Each switch unit contains two electrical switches. The range of the sensing element is from (-) 100 inches of water to zero to (+) 100 inches of water. One of the electrical switches in each unit must operate at greater than or equal to (-) 10 inches water (negative buffer-mid-buffer), and the other electrical switch must operate at less than or equal to (+) 80 inches of water (positive buffer-mid-buffer) per Table 4.4-3.

The trip settings for the twelve switches are listed in Table 1.

The switch setting, which was found to be less conservative than those established by the Technical Specification, did not prevent the fulfillment of the functional requirements of the system.

CAUSE  
DESCRIPTION:

Dirt buildup and accumulation in the electrical switches prevented them from making proper contact.

CORRECTIVE  
ACTION:

The trip setting of the electrical switch was re-adjusted to the proper trip point and the test satisfactorily completed.

Due to the continuing problems being experienced with the electrical switches, the interim check of the trip settings was conducted on a monthly basis.

The problem was investigated, and the process activated pressure differential switches were replaced with pressure differential transmitters and solid state dual bistable trip modules. The new units eliminate the use of electrical contacts and, therefore, reduce the probability of fouling by dirt and/or corrosion from the working environment. This modification was performed via Public Service Company Change Notice 1110.

No further corrective actions are anticipated or required.

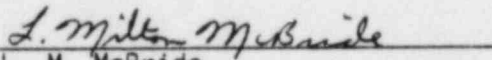
TABLE 1

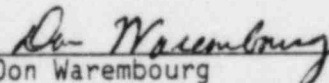
		As Found Inches H <sub>2</sub> O		As Left Inches H <sub>2</sub> O	
		Increasing Trip Point	Decreasing Trip Point	Increasing Trip Point	Decreasing Trip Point
1A Circulator	PDIS-21149	+76	- 5	+76	-5
	PDIS-21151	+76	- 7	+76	-7
	PDIS-21153	+77	- 8	+77	-8
1B Circulator	PDIS-21155	+74	- 4	+74	-4
	PDIS-21157	+72	-15 ①	+72	-9
	PDIS-21159	+77	- 4	+77	-4
1C Circulator	PDIS-21150	+75	- 8	+75	-8
	PDIS-21152	+73	- 9	+73	-9
	PDIS-21154	+75	- 4	+75	-4
1D Circulator	PDIS-21156	+74	- 3	+74	-3
	PDIS-21158	+73	- 8	+73	-8
	PDIS-21160	+74	- 6	+74	-6

① Denotes switch which was out of tolerance.

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