

LICENSEE EVENT REPORT

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

01 | 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 14 15 25 26 30 57 CAT 58

CON'T
01 | L | 6 | 0 | 5 | 0 | 0 | 0 | 2 | 6 | 7 | 7 | 0 | 3 | 2 | 2 | 8 | 0 | 8 | 0 | 6 | 0 | 6 | 8 | 3 | 9
7 8 60 61 68 69 74 75 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)
02 | During testing, it was discovered that four of twelve helium circulator seal mal-
03 | function pressure differential switch units tripped outside the limits of LCO 4.4.1,
04 | Table 4.4-3. Reactor operation during test interval. Reportable per Fort St. Vrain
05 | Technical Specifications AC 7.5.2(b)1 and AC 7.5.2(b)2. No affect on public health or
06 | safety. Redundant system available and operable. Similar reports are RO's 77-47,
07 | 78-27, 79-32, 79-56, and 80-07.

09 | C | B | 11 | E | 12 | E | 13 | I | N | S | T | R | U | 14 | S | 15 | Z | 16
7 8 9 10 11 12 13 18 19 20

17 | LER/RO REPORT NUMBER | 80 | 21 | 22 | _____ | 23 | 016 | 24 | 26 | _____ | 27 | 03 | 28 | 29 | X | 30 | _____ | 31 | 1 | 32
18 | X | 19 | Z | 20 | Z | 21 | 0000 | 22 | 23 | Y | 24 | Y | 25 | N | 26 | B080 | 27
33 34 35 36 37 40 41 42 43 44 47

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

15 | G | 28 | 000 | 29 | N/A | 30 | C | 31 | Operability Test | 32
7 8 9 10 12 13 44 45 46

16 | Z | 33 | Z | 34 | N/A | 35 | N/A | 36
7 8 9 10 11 44 45

17 | 000 | 37 | Z | 38 | N/A | 39
7 8 9 10 11 12 13

18 | 000 | 40 | N/A | 41
7 8 9 10 11 12

19 | Z | 42 | N/A | 43
7 8 9 10 11 12

20 | N | 44 | N/A | 45
7 8 9 10 11 12

NAME OF PREPARER _____

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PDR ADOCK 05000267
S PDR

NRC USE ONLY

REPORT DATE: June 6, 1983

REPORTABLE OCCURRENCE 80-16
ISSUE 1

OCCURRENCE DATE: March 22, 1980

Page 1 of 4

FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO
16805 WELD COUNTY ROAD 19 1/2
PLATTEVILLE, COLORADO 80551-9298

REPORT NO. 50-267/80-16/03-X-1

Final

IDENTIFICATION OF
OCCURRENCE:

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

Since reactor operation had taken place during the test interval, this is reportable per Fort St. Vrain Technical Specifications AC 7.5.2(b)1 and AC 7.5.2(b)2.

EVENT
DESCRIPTION:

While the reactor was in a shutdown condition, 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 water (positive buffer-mid-buffer) per Table 4.4-3.

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

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

CAUSE
DESCRIPTION:

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

CORRECTIVE
ACTION:

The trip settings of the electrical switches were re-adjusted to the proper trip points.

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.

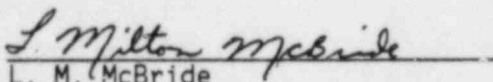
TABLE 1

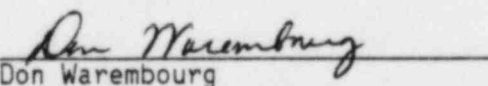
		As Found Inches H ₂ O		As Left Inches H ₂ O	
		Increasing Trip Point	Decreasing Trip Point	Increasing Trip Point	Decreasing Trip Point
1A Circulator	PDIS-21149	+75	- 5	+75	-5
	PDIS-21151	+76	- 8	+76	-4
	PDIS-21153	+72	- 7	+72	-7
1B Circulator	PDIS-21155	+78	- 6	+76	-6
	PDIS-21157	+81 ①	- 5	+76	-5
	PDIS-21159	+73	- 8	+73	-8
1C Circulator	PDIS-21150	+77	-28 ①	+77	-8
	PDIS-21152	+78	-35 ①	+78	-8
	PDIS-21154	+77	- 5	+77	-5
1D Circulator	PDIS-21156	+73	-30 ①	+73	-6
	PDIS-21158	+74	- 5	+74	-5
	PDIS-21160	+75	- 8	+75	-8

① Denotes switches which were out of tolerance.

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