

CONTROL BLOCK:

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

CON'T

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)7 8CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

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REPORT DATE: August 13, 1979

REPORTABLE OCCURRENCE 78-27

OCCURRENCE DATE: July 18, 1979

ISSUE 5

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

REPORT NO. 50-267/78-27/03-X-5

Supplemental Report - Additional Information

IDENTIFICATION OF  
OCCURRENCE:

On May 8, 1979, during performance of the monthly check of the helium circulator seal malfunction pressure differential switches, it was discovered that three of nine switches tripped outside the limits specified in LCO 4.4.1, Table 4.4-3.

The reactor had been shutdown for refueling since February 1, 1979.

On June 15, 1979, during performance of the monthly check of the helium circulator seal malfunction pressure differential switches, it was discovered that three of twelve switches tripped outside the limits specified in LCO 4.4.1, Table 4.4-3.

On July 18, 1979, during performance of the monthly check of the helium circulator seal malfunction pressure differential switches, it was discovered that five of twelve switches either would not trip or tripped outside the limits specified in LCO 4.4.1, Table 4.4-3.

The latter two occurrences are reportable per Fort St. Vrain Technical Specifications AC 7.5.2(b)1 and AC 7.5.2(b)2. This report is submitted as a supplement to Reportable Occurrence Report No. 50-267/78-27/03-L-0, Preliminary, to provide additional information on the problems experienced with the helium circulator seal malfunction switches.

EVENT  
DESCRIPTION:

On May 8, 1979, and on June 15, 1979, while the reactor was in a shutdown condition, instrument personnel performed the circulator seal malfunction (buffer-mid-buffer) switch operability check. Due to the problems cited in Reportable Occurrence Report No. 50-267/78-27, Preliminary, a check of buffer-mid-buffer switch trip settings on a monthly basis has been undertaken as an interim measure to test operability.

EVENT

DESCRIPTION (continued):

As stated in Issue 3 to this report, three (3) of the pressure differential switches were sent to ITT Barton for testing and evaluation. Therefore, only nine switches were included in the operability check on May 8, 1979.

On July 18, 1979, while operating at 9% thermal power and zero electrical power, instrument personnel again performed the monthly switch operability check.

The trip settings for the switches are listed in Tables 1, 2, 3, and 4.

CAUSE

DESCRIPTION:

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

CORRECTIVE

ACTION:

All switches which were out of tolerance or did not trip were cleaned and re-calibrated.

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

Three (3) of the pressure differential indicating switches were sent to ITT Barton in California for testing and evaluation to determine what can be done to correct this situation. The results will be reported in a future supplemental report.

TABLE 1 - CIRCULATOR 1A

May 8, 1979

PDIS	AS FOUND		AS LEFT	
21149	Inc.	+74 Inches Water	Inc.	+74 Inches Water
	Dec.	-6 Inches Water	Dec.	-6 Inches Water
21151	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec. ①	-20 Inches Water	Dec.	-5 Inches Water
21153	Inc.	+74 Inches Water	Inc.	+74 Inches Water
	Dec.	-4 Inches Water	Dec.	-4 Inches Water

June 15, 1979

PDIS	AS FOUND		AS LEFT	
21149	Inc.	+76 Inches Water	Inc.	+76 Inches Water
	Dec.	-8 Inches Water	Dec.	-8 Inches Water
21151	Inc.	+77 Inches Water	Inc.	+77 Inches Water
	Dec. ①	-17 Inches Water	Dec.	-7 Inches Water
21153	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec.	-5 Inches Water	Dec.	-5 Inches Water

① Denotes switch(es) out of tolerance.

TABLE 1 - CIRCULATOR 1A (continued)

July 18, 1979

PDIS	AS FOUND		AS LEFT	
21149	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec. ①	-40 Inches Water	Dec.	-8 Inches Water
21151	Inc.	+73 Inches Water	Inc.	+73 Inches Water
	Dec. ①	-25 Inches Water	Dec.	-9 Inches Water
21153	Inc.	+74 Inches Water	Inc.	+74 Inches Water
	Dec.	-4 Inches Water	Dec.	-4 Inches Water

① Denotes switch(es) out of tolerance.

TABLE 2 - CIRCULATOR 1B

May 8, 1979

PSID	AS FOUND		AS LEFT	
21155	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec. ①	-18 Inches Water	Dec.	-8 Inches Water
21157	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec.	-5 Inches Water	Dec.	-5 Inches Water
21159	Inc.	+80 Inches Water	Inc.	+74 Inches Water
	Dec.	-6 Inches Water	Dec.	-6 Inches Water

June 15, 1979

PSID	AS FOUND		AS LEFT	
21155	Inc.	+77 Inches Water	Inc.	+77 Inches Water
	Dec.	-6 Inches Water	Dec.	-6 Inches Water
21157	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec. ①	-40 Inches Water	Dec.	-9 Inches Water
21159	Inc.	+72 Inches Water	Inc.	+72 Inches Water
	Dec. ①	-60 Inches Water	Dec.	-6 Inches Water

① Denotes switch(es) out of tolerance.

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TABLE 2 - CIRCULATOR 1B (continued)

July 18, 1979				
PDIS	AS FOUND		AS LEFT	
21155	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec.	-5 Inches Water	Dec.	-5 Inches Water
21157	Inc.	+73 Inches Water	Inc.	+73 Inches Water
	Dec.	-6 Inches Water	Dec.	-6 Inches Water
21159	Inc.	+74 Inches Water	Inc.	+74 Inches Water
	Dec. ②	Would Not Trip	Dec.	-6 Inches Water

① Denotes switch(es) out of tolerance.

② Denotes switch(es) which would not trip.

TABLE 3 - CIRCULATOR 1C

May 8, 1979 - Switches were out for testing and evaluation.

June 15, 1979

PDIS	AS FOUND		AS LEFT	
21150	Inc.	+77 Inches Water	Inc.	+77 Inches Water
	Dec.	-6 Inches Water	Dec.	-6 Inches Water
21152	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec.	-8 Inches Water	Dec.	-8 Inches Water
21154	Inc.	+78 Inches Water	Inc.	+78 Inches Water
	Dec.	-7 Inches Water	Dec.	-7 Inches Water

July 18, 1979

PDIS	AS FOUND		AS LEFT	
21150	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec.	-7 Inches Water	Dec.	-7 Inches Water
21152	Inc.	+77 Inches Water	Inc.	+77 Inches Water
	Dec.	-6 Inches Water	Dec.	-6 Inches Water
21154	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec.	-8 Inches Water	Dec.	-8 Inches Water



TABLE 4 - CIRCULATOR 1D

May 8, 1979

PDIS	AS FOUND		AS LEFT	
21156	Inc.	+74 Inches Water	Inc.	+74 Inches Water
	Dec.	-6 Inches Water	Dec.	-6 Inches Water
21158	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec.	-7 Inches Water	Dec.	-7 Inches Water
21160	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec. ①	-15 Inches Water	Dec.	-7 Inches Water

June 15, 1979

PDIS	AS FOUND		AS LEFT	
21156	Inc.	+73 Inches Water	Inc.	+73 Inches Water
	Dec.	-6 Inches Water	Dec.	-6 Inches Water
21158	Inc.	+74 Inches Water	Inc.	+74 Inches Water
	Dec.	-6 Inches Water	Dec.	-6 Inches Water
21160	Inc.	+74 Inches Water	Inc.	+74 Inches Water
	Dec.	-7 Inches Water	Dec.	-7 Inches Water

① Denotes switch(es) out of tolerance.

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TABLE 4 - CIRCULATOR 1D (continued)

July 18, 1979

PDIS	AS FOUND		AS LEFT	
21156	Inc.	+73 Inches Water	Inc.	+73 Inches Water
	Dec.	-4 Inches Water	Dec.	-4 Inches Water
21158	Inc. ①	+83 Inches Water	Inc.	+74 Inches Water
	Dec. ①	-12 Inches Water	Dec.	-7 Inches Water
21160	Inc.	+74 Inches Water	Inc.	+74 Inches Water
	Dec. ①	-14 Inches Water	Dec.	-4 Inches Water

① Denotes switch(es) out of tolerance.

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