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REPORT DATE: January 22, 1979
OCCURRENCE DATE: January 12, 1979

REPORTABLE OCCURRENCE 78-27
ISSUE 2
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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-2

Supplemental Report - Additional Information

IDENTIFICATION OF
OCCURRENCE:

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.

This is reportable per Fort St. Vrain Technical Specification 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:

While operating at 62% thermal power and 190 Mw electrical power, instrument personnel performed the circulator seal malfunction (buffer-mid-buffer) switch operability check. These switches are normally calibrated and tested annually. However, 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.

The trip settings for twelve 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.

The electrical switches are not enclosed units, and a spray cleaner is the most practical method of contact cleaning. Since this method cannot assure that all dirt which may be "trapped" in the switches will be flushed out, switch malfunctions similar to those reported in Reportable Occurrence Report No. 77-47 and Reportable Occurrence Report No. 77-27, Preliminary, recurred.

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CORRECTIVE
ACTION:

The electrical contacts in the indicating switches were cleaned by use of a spray cleaner and the trip settings readjusted as necessary.

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.

The problem is under investigation to determine what can be done to correct this situation. The results will be reported in a future supplemental report.

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TABLE 1 - CIRCULATOR 1A

PDIS	AS FOUND		AS LEFT	
21149	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec.	-5 Inches Water	Dec.	-5 Inches Water
21151	Inc.	+74 Inches Water	Inc.	+74 Inches Water
	*Dec.	-22 Inches Water	Dec.	-6 Inches Water
21153	*Inc.	>100 Inches Water	Dec.	+74 Inches Water
	Dec.	-7 Inches Water	Dec.	-7 Inches Water

TABLE 2 - CIRCULATOR 1B

PDIS	AS FOUND		AS LEFT	
21155	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec.	-7 Inches Water	Dec.	-7 Inches Water
21157	Inc.	+76 Inches Water	Inc.	+76 Inches Water
	Dec.	-6 Inches Water	Dec.	-6 Inches Water
21159	Inc.	+76 Inches Water	Inc.	+76 Inches Water
	Dec.	-6 Inches Water	Dec.	-6 Inches Water

*Denotes switch(es) out of tolerance.

TABLE 3 - CIRCULATOR 1C

PDIS	AS FOUND		AS LEFT	
21150	Inc.	+74 Inches Water	Inc.	+74 Inches Water
	Dec.	-7 Inches Water	Dec.	-7 Inches Water
21152	Inc.	+80 Inches Water	Inc.	+75 Inches Water
	Dec.	-7 Inches Water	Dec.	-7 Inches Water
21154	Inc.	+75 Inches Water	Inc.	+75 Inches Water
	Dec.	-5 Inches Water	Dec.	-5 Inches Water

TABLE 4 - CIRCULATOR 1D

PDIS	AS FOUND		AS LEFT	
21156	Inc.	+74 Inches Water	Inc.	+74 Inches Water
	Dec.	-5 Inches Water	Dec.	-5 Inches Water
21158	Inc.	+77 Inches Water	Inc.	+77 Inches Water
	Dec.	-3 Inches Water	Dec.	-5 Inches Water
21160	Inc.	+73 Inches Water	Inc.	+73 Inches Water
	*Dec.	-55 Inches Water	Dec.	-6 Inches Water

*Denotes switch(es) out of tolerance.