## LICENSEE EVENT REPORT

CJNTROL BLOCK: $\square_{1}|1| 1| |_{6}^{1}$
(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)



EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10
012 During September testing, five of the twelve helium circulator seal malfunction pres013 sure differential switch units were discovered to have a trip point outside the limits」 014 of LCO 4.4.1, Table 4.4-3. These are reportable per Fort St. Vrain Technical Soecifi-1 OT5 cations AC $7.5 .2(b) 1$ and $1 C 7.5 .2(b) 2$. No affect on public health or safety. Redun$0 \cdot 6$ dant system available and operable. Similar reports are R0's 77-47, 78-27, 79-32, $07{ }^{79-56}, 80-07,80-16,80-20,80-26,80-34$, and $80-41$. CAUSE OESCRIPTION AND CORRECTIVE ACTIONS (27)
10 LITT Barton Model 289 pressure differential switches failed to actuate at trip point
11 Ldue to dirt accumulation in electrical switches. The ITT Barton pressure differential
[12] indicating switches were replaced with ITT Barton Model 752 pressure transmitters and
113 bistable trip modules (Model PT-3D, manufactured by General Atomic Comoany) via Change $1]_{8}$ Notice 1110. No further corrective action is anticipated or required,


$\qquad$ June 6, 1983

OCCURRENCE DATE: September 22, 1980

REPORTABLE OCCURRENCE 80-51 ISSUE 1
Page 1 of 4

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

REPORT NO. $50-267 / 80-51 / 03-X-1$
Final

## IDENTIFICATION OF OCCURRENCE:

During the September monthly check of the helfum circulator seal malfunction pressure differential switches, it was discovered that five of twelve witch units tripped outside the limits specified in LCO 4.4.1, Table 4.4-3.

These are reportable per Fort St. Vrain Technical Specifications $A C$ 7.5.2(b)1 and $A C$ 7.5.2(b)2.

## EVENT <br> DESCRIPTION:

During a maintenance shutdown period, 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 to 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 trip settings for the twelve switch units are listed in Table 1.
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.

```
REPORTABLE OCCURRENCE 80-51
ISSUE 1
Page 2 of 4
```

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.

REPORTABLE OCCURPENCE $80 \sim 51$
ISSUE 1
Page 3 of 4

## TABLE 1

|  |  | As Found Inches $\mathrm{H}_{2} \mathrm{O}$ |  | As Left Inches $\mathrm{H}_{2} \mathrm{O}$ - |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | \| Increasing|Decreasing| Increasing| Decreasing| Trip Point|Trip Point |Trip Point|Trip Point | |  |  |  |
| 1 A Circulator | POIS-21149 | +74 | - 6 | +74 | -6 |
|  | POIS-21151\| | +75 | - 6 | +75 | -6 |
|  | PDIS-21153 | +76 | - 5 | +76 | -5 |
| 18 Circulator | PDIS-21155 | +77 | - 7 | +77 | -7 |
|  | PDIS-21157 | +75 | - 24 (1) | +75 | -6 |
|  | PDIS-21159 | +75 | -100 (1) | +75 | -6 |
| 1C Circulator | PDIS-211501 | +76 | - 20 (1) | +76 | -9 |
|  | POIS-21152 | +77 | - 17 (1) | +77 | -9 |
|  | POIS-21154 | +76 | - 5 | +76 | -5 |
| 110 Circulator | PDIS-21156 | +73 | $-7$ | +73 | -7 |
| I | POIS-21158 | +73 | $-7$ | +73 | -7 |
|  | PDIS-21160\| | +75 | -100 (1) | +75 | -6 |

(1) Denotes switches which were out of tolerance.

```
REPORTABLE OCCURRENCE 80-51
ISSUE 1
Page 4 of 4
```


## Prepared By:



Reviewed By:


Technical Services Engineering Supervisor


Approved By:

