

## (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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

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

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REPORTABLE OCCURRENCE 80-58

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. 50-267/80-58/03-X-1

Final

IDENTIFICATION OF  
OCCURRENCE:

From 0830 hours to 1830 hours on October 9, 1980, the plant was operated at power with the emergency feedwater header supply to Loop 1 circulators isolated.

| This event constitutes operation in a degraded mode of LCO 4.2.2a) and was reportable per Fort St. Vrain Technical Specification AC 7.5.2(b)2.

EVENT  
DESCRIPTION:

Fort St. Vrain Technical Specification LCO 4.2.2 specifies the conditions which must be met for circulator operability. Item a) of LCO 4.2.2 requires that a supply of emergency feedwater be available to drive the circulator water turbines. This LCO further allows for isolation of the emergency feedwater supply for up to 24 hours without the affected helium circulators being considered inoperable.

| A pressure control system is provided to control emergency feedwater in each loop under flow or no-flow conditions. Refer to Figure 1 for a simplified diagram of this system. Emergency feedwater is supplied to Loop 1 and Loop 2 helium circulator water turbine drives via two separate flow paths (A and B). The main pressure control valves (1 and 2) are designed to control feedwater supply pressure under flow conditions. Additional pressure control valves (3 and 4) are provided to bleed off any leakage from the main valves to the turbine water drain tank under the no-flow conditions which normally exist.

| On October 9, 1980, graveyard shift, with the plant operating at 27% thermal power and approximately 65 MWe, Operations personnel performing routine rounds observed a leak at the line between PV-21243-1 and the turbine water drain tank (see point C of Figure 1). The line was isolated at 0830 hours to begin repair work.

H005  
1/1

Separate valves ( ⑤ and ⑥ ) are provided for isolation of each loop. During isolation of the Loop 1 system, a 1/2" pipe nipple was replaced. Repairs were completed by 1830 hours, and the system returned to service within the 24 hours allowed by the LCO.

Had it been necessary during this period, the Loop 1 circulators could have been operated on water turbine drive at reduced speed utilizing a supply from the emergency condensate or fire water systems.

CAUSE

DESCRIPTION:

| Component Failure.

| The line leakage was determined to be a result of erosion caused by high pressure/temperature water.

CORRECTIVE  
ACTION:

| The emergency feedwater header to the Loop I helium circulator water turbine drives was isolated, the defective portion of piping replaced, and the system returned to service within the time allowed by LCO 4.2.2.

| Public Service Company Change Notice No. 1421 installed bolted flanges downstream of the pressure control valves to facilitate any future valve or piping repair work.

| Public Service Company Change Notice No. 1687 changed the valve body of PV-21243-1 and PV-21244-1, and a portion of the downstream piping from carbon steel to stainless steel, as stainless steel is much more erosion resistant.

| No further corrective action is anticipated or required.

Emergency Feedwater Header

To Backup  
Bearing Water

(B)

(A)

(5) V-211615

(1) PV-21243

To Loop 1 Helium Circulator  
Water Turbine Drives

(3) PV-21243-1

To Turbine Water  
Drain Tank

(C) Location of  
Line Leakage

(6) V-211616

(2) PV-21244

To Loop 2 Helium Circulator  
Water Turbine Drives

(4) PV-21244-1

To Turbine Water  
Drain Tank

Emergency Feedwater Pressure Control

FIGURE 1

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