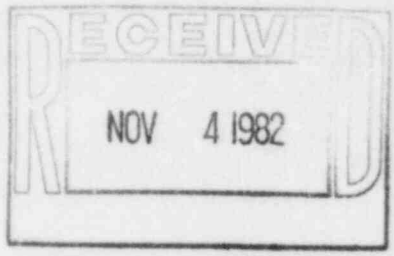
Public Service Company of Colorado

16805 Road 19 1/2, Platteville, Colorado 80651-9298

November 1, 1982
Fort St. Vrain
Unit No. 1
P-82494



Mr. John T. Collins, Regional Administrator
Region IV
Nuclear Regulatory Commission
611 Ryan Plaza Drive
Suite 1000
Arlington, Texas 76011

Reference: Facility Operating License
No. DPR-34

Docket No. 50-267

Dear Mr. Collins:

Enclosed please find a copy of Reportable Occurrence Report No. 50-267/82-040, Preliminary, submitted per the requirements of Technical Specification AC 7.5.2(b)1 and AC 7.5.2(b)2.

Also, please find enclosed one copy of the Licensee Event Report for Reportable Occurrence Report No. 50-267/82-040.

Very truly yours,

Don Warembourg
Manager, Nuclear Production

DW/cls

Enclosure

cc: Director, MIPC

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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. 50-267/82-040/03-L-0

Preliminary

IDENTIFICATION OF OCCURRENCE:

During performance of scheduled surveillance tests, all six steam pipe rupture (under prestressed concrete reactor vessel) and seven of twelve steam pipe rupture (pipe cavity) ultrasonic detector channels were found inoperable. Since the reactor had been operated during the test interval, the channels must be considered to have been inoperable when the reactor was at power.

This is a degraded mode of LCO 4.4.1, Table 4.4-2, and is reportable per Fort St. Vrain Technical Specification AC 7.5.2(b)1 and 2.

EVENT DESCRIPTION:

On October 2 and October 8, 1982, while the reactor was shutdown for plant maintenance, SR 5.4.1.2.2j-R and SR 5.4.1.2.1j-R, respectively, were performed. The former is a test and calibration of the steam pipe rupture detection system under the prestressed concrete reactor vessel. The latter is a test and calibration of the steam pipe rupture detection system in the pipe cavity.

SR 5.4.1.2.2j-R, under the prestressed concrete reactor vessel, requires that a calibrated noise source be applied to the individual microphones, and that the channel response be between 40% and 90% of full scale at the channel's trip module.

SR 5.4.1.2.1j-R, pipe cavity, requires that a calibrated ultrasonic noise source be applied to the microphone to be tested, and the response of the channel indicate between 20% and 80% of full scale at the channel's trip module.

Data taken during the tests are given in Table 1 and 2.

As is shown in Table 1, there were no channels that could be considered operable as per LCO 4.4.1, Table 4.4-2, Note(s). Note(s) states that both microphones for one channel must be operable in order for the channel to be considered operable.

However, during performance of scheduled monthly tests, just prior to SR 5.4.1.2.2j-R, all channels were shown to be responsive to a louder but uncalibrated noise source, and did in fact trip as required.

As Table 2 shows, each major channel (location) is composed of three microphones connected in a two of three trip circuit. Also, it can be seen that all four major channels were degraded. In the case of Loop 2 north, one individual microphone channel was degraded, but in a conservative direction.

Even though these individual channels were found degraded using a calibrated noise source, they were found to trip when an uncalibrated noise source was used during scheduled monthly tests just prior to SR 5.4.1.2.1j-R.

CAUSE
DESCRIPTION:

The cause of these instrument channels being outside the limits required by LCO 4.4.1 is attributed to instrument calibration drift.

CORRECTIVE
ACTION:

The individual microphone and/or transmitter gain was adjusted to an acceptable value for all microphones, and the surveillance tests were successfully completed.

Ultrasonic Detector Check, SR-RE-17-SA is being performed, as scheduled, on a semi-annual basis.

Public Service Company's Nuclear Engineering Division is currently evaluating the steam pipe rupture detection system, the results of which will be included in a future supplemental report.

TABLE 1

Under PCRV - Range 40% to 90%

Microphone No.	Transmitter No.	As Found Meter Reading	As Left Meter Reading
XE-93470A		50%	50%
XE-93480A	XT-93470A	10% (1)	45%
XE-93470B		35% (1)	45%
XE-93480B	XT-93470B	4% (1)	45%
XE-93470C		45%	45%
XE-93480C	XT-93470C	20% (1)	45%
XE-93471A		40%	40%
XE-93479A	XT-93471A	0% (1)	45%
XE-93471B		90%	45%
XE-93479B	XT-93471B	10% (1)	45%
XE-93471C		50%	50%
XE-93479C	XT-93471C	10% (1)	45%

TABLE 2

Outside PCRV - Range 20% to 80%

Location	Microphone No.	As Found Meter Reading	As Left Meter Reading
	XE-93457A	10% (1)	22%
Loop 1,	XE-93457B	3% (1)	33%
South	XE-93457C	3% (1)	30%
	XE-93455A	45%	45%
Loop 1,	XE-93455B	15% (1)	20%
North	XE-93455C	40%	40%
	XE-93456A	0% (1)	50%
Loop 2,	XE-93456B	5% (1)	30%
South	XE-93456C	35%	35%
	XE-93454A	85% (2)	40%
Loop 2,	XE-93454B	30%	30%
North	XE-93454C	42%	42%

(1) Instruments found out of limits.

(2) Instrument found out of limits, but in a conservative direction.

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