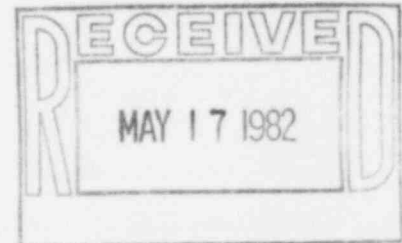




Public Service Company of Colorado

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

May 12, 1982
Fort St. Vrain
Unit No. 1
P-82138



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. 50-267/82-011, Final, submitted per the requirements of Technical Specification AC 7.5.2(b)2.

Also, please find enclosed one copy of the Licensee Event Report for Reportable Occurrence Report No. 50-267/82-011.

Very truly yours,

Don Warembourg by Milt McBride

Don Warembourg
Manager, Nuclear Production

DW/clS

Enclosure

cc: Director, MIPC

*IE 22
S111*

REPORT DATE: May 12, 1982

REPORTABLE OCCURRENCE 82-011

ISSUE 0

OCCURRENCE DATE: April 12, 1982

Page 1 of 8

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

REPORT NO. 50-267/82-011/03-L-0

Final

IDENTIFICATION OF
OCCURRENCE:

During the period April 12, 1982, to April 20, 1982, with the reactor at power operation, the plant was operated in a degraded mode of LCO 4.2.11 on three separate occasions and LCO 4.2.10 on one occasion. These events are reportable per Fort St. Vrain Technical Specification AC 7.5.2(b)2.

EVENT
DESCRIPTION:

Event #1

With the reactor operating at approximately 10% power, the moisture level measured by dewpoint exceeded limits set by LCO 4.2.11. At 2200 hours, April 12, 1982, with an average core outlet temperature of 754°F, the calculated reactor dewpoint was -15°F. This is in the "limited acceptable" region of Figure 4.2.11-1 of LCO 4.2.11. This condition continued until 0912 hours on April 13, 1982, when the reactor scrammed, making LCO 4.2.11 not applicable. (See Table 1)

Event #2

With the reactor operating at approximately 5% power, the moisture level measured by dewpoint again exceeded LCO 4.2.11 limits. At 0400 hours on April 14, 1982, with an average core outlet temperature of 747°F, the calculated reactor dewpoint was -2°F. This is in the "limited acceptable" region of Figure 4.2.11-1 of LCO 4.2.11. This condition persisted until 2200 hours the same day, when the reactor dewpoint entered the "non-acceptable" region of Figure 4.2.11-1 of LCO 4.2.11. The dewpoint remained in this region for a total of 12 hours, when at 1000 hours on April 15, 1982, the calculated dewpoint returned to the limited acceptable region. At 1545 hours on April 15, 1982, the reactor scrammed, thereby making LCO 4.2.11 not applicable. (See Table 1)

Event #3

At 2000 hours on April 16, 1982, with the reactor operating at approximately 15% power, the limits of LCO 4.2.11 were exceeded once again. With the average core outlet temperature at 1041°F, the calculated reactor dewpoint of -19°F resulted in operation in the "limited acceptable" region of Figure 4.2.11-1 of LCO 4.2.11. This condition of limited acceptable continued until 1600 hours on April 18, 1982. At that time, the reactor dewpoint had moved into the "acceptable" region of Figure 4.2.11-1 of LCO 4.2.11. (See Table 1)

Event #4

At 1805 hours on April 19, 1982, with the reactor at approximately 28% power, the average core outlet temperature increased above 1200°F. This temperature made LCO 4.2.10 applicable and LCO 4.2.11 not applicable. LCO 4.2.10 restricts operation to under 10 parts per million (ppm) of total oxides which includes carbon monoxide (CO), carbon dioxide (CO₂), and water (H₂O). The chemistry sample taken at 1815 hours indicated 0 ppm of CO, 29.9 ppm of CO₂, and 6.4 ppm of H₂O, for a total oxidant ppm of 36.3. This constituted a degraded mode of LCO 4.2.10. Forty minutes later, at 1845 hours, the average core outlet temperature was decreased below 1200°F, making LCO 4.2.10 no longer applicable. (See Figure 1)

CAUSE
DESCRIPTION:

The reactor plant had been in a shutdown or low power operation condition over a five month period for a major system modification outage. During this period, the prestressed concrete reactor vessel had been at subatmospheric pressure several times for various activities. These conditions allowed for a gradual buildup of moisture within the prestressed concrete reactor vessel. Subsequent operation caused off-gassing of the moisture from the core graphite, which resulted in the four events.

CORRECTIVE
ACTION:

Events #1 and #2

The reactor scrammed during both of these events making LCO 4.2.11 no longer applicable.

Event #3

Reactor power was reduced to allow off-gassing of the moisture to stabilize. Normal operation of the purification system subsequently reduced the moisture level, measured by dewpoint, to the "acceptable region" of Figure 4.2.11-1 of LCO 4.2.11.

Event #4

Reactor power was reduced to decrease the average core outlet temperature below 1200°F. Once back below 1200°F, LCO 4.2.10 was no longer applicable.

No further corrective action is anticipated or required.

TABLE 1

Date	Time	Average Core Outlet Temperature (°F)	Calculated Reactor Dewpoint (°F)	Figure 4.2.11-1 Region
4-12-82	2000	683	-16	Acceptable
-----Event 1-----				
	2200	754	-15	Limited Acceptable
4-13-82	0000	870	-12	Limited Acceptable
	0200	1001	- 7	Limited Acceptable
	0400	978	8	Limited Acceptable
	0600	989	7	Limited Acceptable
	0800	985	10	Limited Acceptable
	0912	Reactor Scram - LCO 4.2.11 No Longer Applicable		
4-14-82	0200	666	- 7	Acceptable
-----Event 2-----				
	0400	747	- 2	Limited Acceptable
	0600	940	- 1	Limited Acceptable
	0800	978	- 2	Limited Acceptable
	1000	1075	- 1	Limited Acceptable
	1200	1063	1	Limited Acceptable
	1400	1031	3	Limited Acceptable
	1600	1006	5	Limited Acceptable
	1800	1024	- 3	Limited Acceptable
	2000	1035	4	Limited Acceptable
	2200	1105	0	Non-Acceptable

TABLE 1 (Cont'd)

Date	Time	Average Core Outlet Temperature (°F)	Calculated Reactor Dewpoint (°F)	Figure 4.2.11-1 Region
4-15-82	0000	1108	7	Non-Acceptable
	0200	1110	7	Non-Acceptable
	0400	1104	7	Non-Acceptable
	0600	1121	7	Non-Acceptable
	0800	1103	6	Non-Acceptable
	1000	1074	- 2	Limited Acceptable
	1200	1048	- 2	Limited Acceptable
	1400	1038	- 1	Limited Acceptable
	1545	Reactor Scram - LCO 4.2.11 No Longer Applicable		
4-16-82	1800	1011	-23	Acceptable
-----Event 3-----				
4-17-82	2000	1041	-19	Limited Acceptable
	2200	1054	-16	Limited Acceptable
	0000	1061	-16	Limited Acceptable
	0200	1075	-16	Limited Acceptable
	0400	1063	-13	Limited Acceptable
	0600	1091	-12	Limited Acceptable
	0800	1068	-10	Limited Acceptable
	1000	1060	-11	Limited Acceptable
	1200	1077	-11	Limited Acceptable
	1400	1117	-10	Limited Acceptable

TABLE 1 (Cont'd)

Date	Time	Average Core Outlet Temperature (°F)	Calculated Reactor Dewpoint (°F)	Figure 4.2.11-1 Region
4-18-82	1600	1102	-12	Limited Acceptable
	1800	1103	-12	Limited Acceptable
	2000	1111	-12	Limited Acceptable
	2200	1106	-15	Limited Acceptable
	0000	1112	-15	Limited Acceptable
	0200	1129	-15	Limited Acceptable
	0400	1113	-14	Limited Acceptable
	0600	1112	-15	Limited Acceptable
	0800	1114	-15	Limited Acceptable
	1000	1130	-15	Limited Acceptable
	1200	1107	-18	Limited Acceptable
	1400	1103	-19	Limited Acceptable
	1600	1099	-22	Acceptable

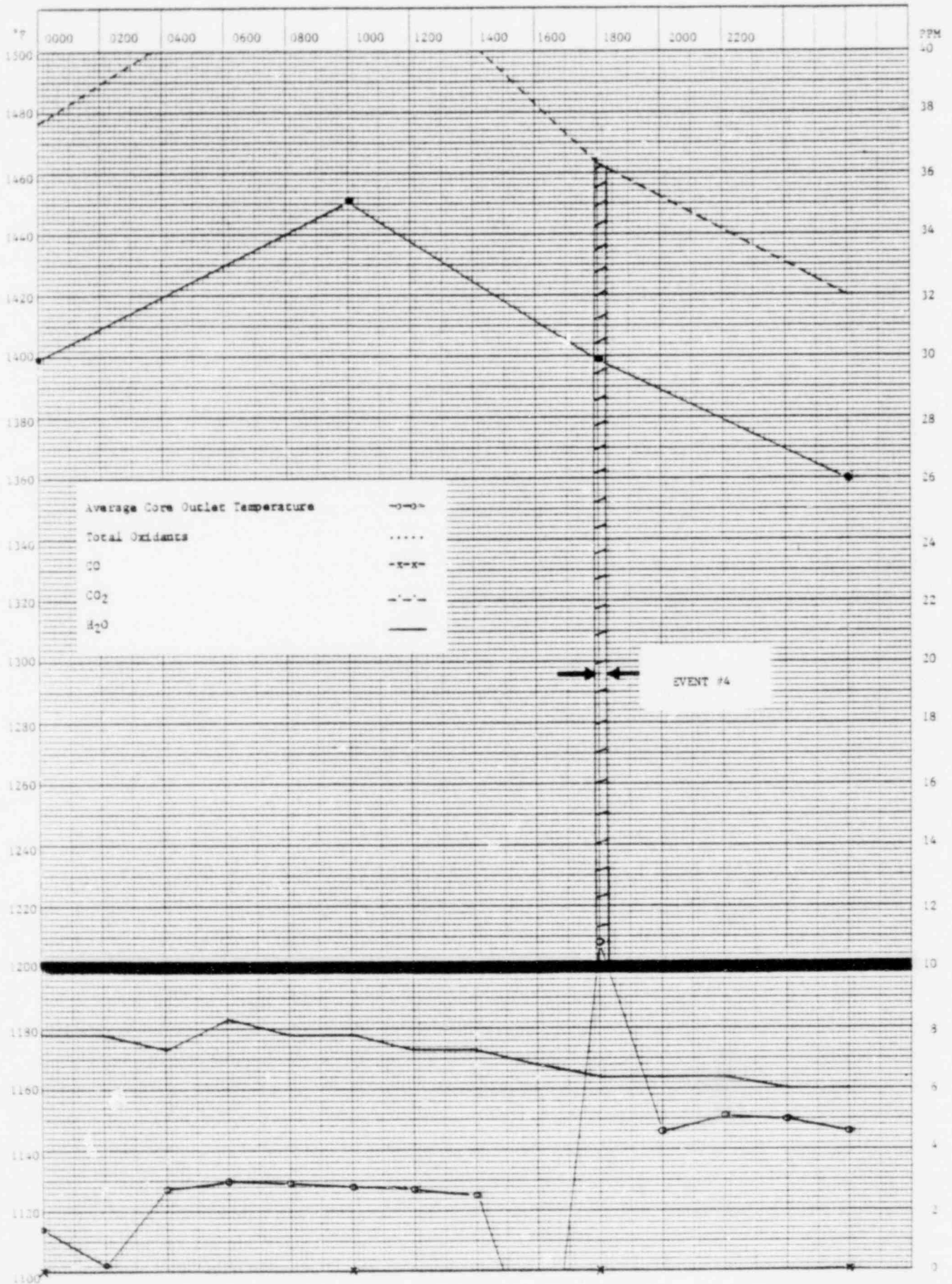
FIGURE 1

REPORTABLE OCCURRENCE 82-011

ISSUE 0

Page 7 of 8

APRIL 19, 1982



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