

REPORT DATE: November 19, 1979

REPORTABLE OCCURRENCE 79-53

OCCURRENCE DATE: October 24, 1979

ISSUE 0

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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

REPORT NO. 50-267/79-53/03-L-0

Final

IDENTIFICATION OF
OCCURRENCE:

At approximately 1730 hours on October 24, 1979, with average core outlet temperature greater than 1,200°F, total primary coolant oxidants (the sum of water, carbon dioxide, and carbon monoxide) exceeded ten parts per million. This constitutes operation in a degraded mode of LCO 4.2.10 and is reportable per Fort St. Vrain Technical Specification AC 7.5.2(b)2.

EVENT
DESCRIPTION:

On October 24, 1979, with total primary coolant oxidants at less than 10 parts per million reactor power was being increased in preparation for approved fluctuation testing. At approximately 1600 hours average core outlet temperature exceeded 1,200°F. The total of primary coolant oxidants at that time was approximately 7.5 parts per million. Following the reactor power increase to approximately 60%, primary coolant oxidants began to follow an upward trend. At approximately 1730 hours, primary coolant oxidant levels exceeded ten parts per million (reference Figure 1, point 1). During the period of fluctuation testing, average core outlet temperature remained above 1,200°F and total oxidants continued to increase.

Fluctuation testing was completed at 2230 hours on October 25, 1979, and an orderly shutdown was initiated for plant maintenance. Core outlet temperature was less than 1,200°F by 0600 hours on October 26, 1979, (reference Figure 1, point 2) and no further LCO 4.2.10 degraded mode operation occurred.

CAUSE
DESCRIPTION:

The increase in total oxidants is due in part to off-gassing of carbon monoxide and carbon dioxide as residual primary coolant moisture reacted with the core graphite at increased temperatures.

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7912040 335

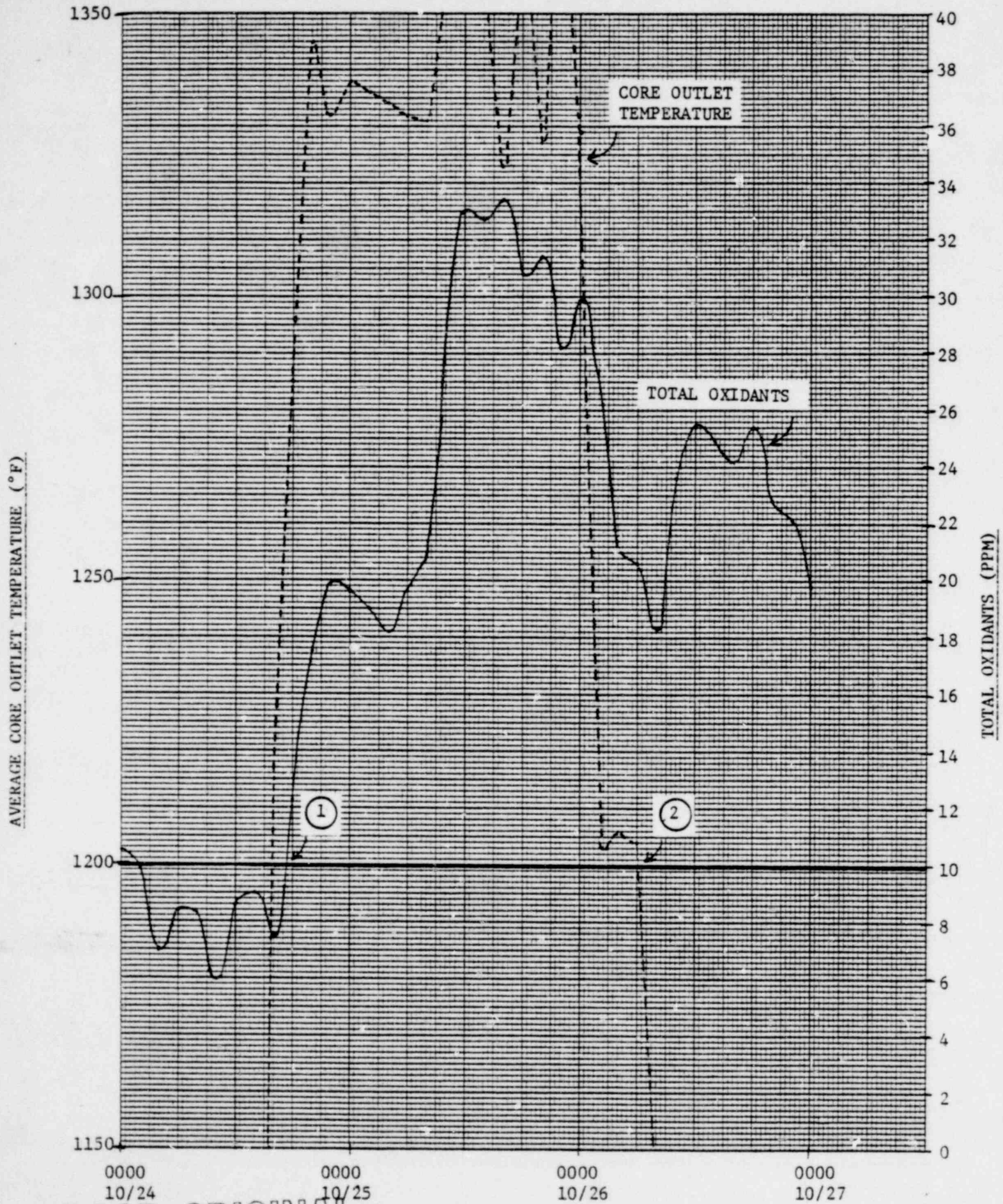
CORRECTIVE
ACTION:

Following completion of fluctuation testing at approximately 2230 hours on October 25, 1979, orderly reactor shutdown was initiated. Core outlet temperature was less than 1,200 ° F. by approximately 0600 hours on October 26, 1979, and no further degraded mode operation was observed.

No further corrective action is anticipated or required.

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FIGURE 1: AVERAGE CORE OUTLET TEMPERATURE VERSUS PRIMARY COOLANT OXIDANTS




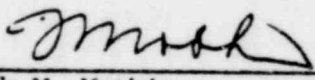
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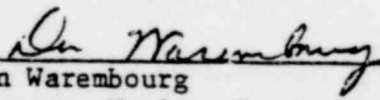
DATE/TIME

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LICENSEE EVENT REPORT

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

0	1	C	0	F	S	V	1	2	0	0	-	0	0	0	0	0	0	-	0	0	3	4	1	1	2	0	4		5
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
CON'T		REPORT SOURCE		DOCKET NUMBER		EVENT DATE		REPORT DATE																					

0	1	L	6	0	5	0	0	0	2	6	7	7	1	0	2	4	7	9	8	1	1	1	9	7	9	9	
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | At approximately 1730 hours on October 24, 1979, with average core outlet temperature

0 3 | greater than 1,200°F, total primary coolant oxidants exceeded 10 parts per million.

0 4 | This is operation in a degraded mode of LCO 4.2.10 and is reportable per Technical

0 5 | Specification AC 7.5.2(b)2. No affect on public health and safety. Similar occur-

0 6 | rences reported in RO's 77-36, 78-12, 78-18, 78-37, 78-39, 79-01, 79-02, 79-24, 79-30,

0 7 | and 79-45.

0	9	C	B	11	X	12	Z	13	Z	Z	Z	Z	Z	Z	14	Z	15	Z	16		
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
LER/RO REPORT NUMBER		EVENT YEAR		CAUSE CODE		CAUSE SUBCODE		COMPONENT CODE		COMP. SUBCODE		VALVE SUBCODE		SEQUENTIAL REPORT NO.		OCCURRENCE CODE		REPORT TYPE		REVISION NO.	
17		7 9		11		12		13		14		15		16		17		18		19	
ACTION TAKEN		FUTURE ACTION		EFFECT ON PLANT		SHUTDOWN METHOD		HOURS		ATTACHMENT SUBMITTED		NPRD-4 FORM SUB.		PRIME COMP. SUPPLIER		COMPONENT MANUFACTURER					
18		19		20		21		22		23		24		25		26					
X		Z		Z		Z		0 0 0 0		Y		N		Z		Z Z Z Z					

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | Cause of occurrence was off-gassing of oxidants due to reaction of moisture with core

1 1 | graphite. When power was decreased to initiate maintenance shutdown, no further de-

1 2 | graded mode operation occurred.

1 3 |

1 4 |

1	5	X	28	0	6	0	29	N/A	30	Z	31	Personnel Observation	32
7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	6	Z	33	Z	34	N/A	35	N/A	36
7	8	9	10	11	12	13	14	15	16

1	7	0	0	0	37	Z	38	N/A	39
7	8	9	10	11	12	13	14	15	16

1	8	0	0	0	40	N/A	41
7	8	9	10	11	12	13	14

1	9	Z	42	N/A	43
7	8	9	10	11	12

2	0	N	44	N/A	45
7	8	9	10	11	12

NAME OF PREPARER

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U.S. NRC FORM 7-72