



memorandum

NorskeCanada

to Michelle Vessey date July 15, 2003

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from Cal Eurich

subject Executive Summary of Air Monitoring Report Submitted to the Ministry of Water,  
 Land and Air Protection for the Period April to June 2003.

**SUMMARY**

**T.R.S. EMISSION - RECOVERIES**

		ACHIEVED					
	PERMIT  DAILY MAX	April		May		June	
		DAILY MAX	MONTHLY AVG	DAILY MAX	MONTHLY AVG	DAILY MAX	MONTHLY AVG
No. 3 recovery TRS mg/m <sup>3</sup>	<9.2	2.2	.64	1.18	.55	3.84	.73
SO <sub>2</sub> ppm	NL	450	330	40	23	160	120
No. 4 recovery TRS mg/m <sup>3</sup>	<9.2	4.5	1.76	5.76	1.11	3.0	1.53
SO <sub>2</sub> ppm	NL	280	260	30	20	400	173

NL = No Limit

**PARTICULATE EMISSIONS**

	<b>QUARTER NO. 2</b>	<b>PERMIT</b>
No. 3 Recovery mg/m <sup>3</sup>	28.7	230
No. 4 Recovery mg/m <sup>3</sup>	43.8	230
Lime Kilns mg/m <sup>3</sup>	55.6	230
No. 3 Dis. Stack kg/ADUt	0.04	0.20
No. 4 Dis. Stack kg/ADUt	0.05	0.20
No. 4 P. Boiler April		
Total mg/m <sup>3</sup>	27.8	230
Salt Free	10.7	
No. 4 P. Boiler May		
Total mg/m <sup>3</sup>	28.5	230
Salt Free	23.4	
No. 4 P. Boiler June		
Total mg/m <sup>3</sup>	36.1	230
Salt Free	17.6	
No. 4 P. Boiler - 4 month rolling average Total mg/m <sup>3</sup>	49.9	115

## T.R.S. EMISSIONS

### 1. RECOVERY BOILERS

	AVERAGE TRS EMISSION (mg/m <sup>3</sup> )		
	April	May	June
#3 Recovery	0.64	0.55	1.73
#4 Recovery	1.76	1.11	1.53

\* new analyzer installed but the results are unreliable

### 2. MISCELLANEOUS SOURCES

April	Kg Sulphur/day	ADUt/day	Kg S/ADUt
#3 Dissolving stack	10.6	1163	.009
#4 Dissolving stack	18.0	1163	.015
Kilns	19.2	1206	.016
Foam and Seal Tanks	16.0	1138	.014
A Brown Washers	52.4	1138	.046
B Seal Tanks	29.8	1138	.026
B&K Brown Washers	18.4	1138	.016
TRS EMISSIONS	(Permit 0.225 kg/ADUt)		.143

May	Kg Sulphur/day	ADUt/day	Kg S/ADUt
#3 Dissolving stack	27.7	1411	.020
#4 Dissolving stack	23.3	1411	.017
Kilns	26.5	1171	.023
Foam and Seal Tanks	20.2	824	.024
A Brown Washers	54.6	824	.066
B Seal Tanks	33.1	824	.040
B&K Brown Washers	27.1	824	.033
TRS EMISSIONS	(Permit 0.225 kg/ADUt)		.222

June	Kg Sulphur/day	ADUt/day	Kg S/ADUt
#3 Dissolving stack	19.7	1314	.015
#4 Dissolving stack	16.1	1314	.012
Kilns	12.6	1289	.010
Foam and Seal Tanks	5.9	1103	.005
A Brown Washers	59.6	1103	.054
B Seal Tanks	31.4	1103	.028
B&K Brown Washers	22.4	1103	.020
TRS EMISSIONS	(Permit 0.225 kg/ADUt)		.145

**3. % NCG VENTING TIME**

	Digesters	Concentrator *	Evaporators		
			No. 1 *	No. 2 *	No. 3 *
<b>April</b>	7.8	0	0	0	0
<b>May</b>	7.8	0	0	0	0
<b>June</b>	6.4	0	0	0	0

\* NCG venting emissions from the concentrator and the No. 1, No. 2, and No. 3 evaporator trains are treated through the #3 recovery boiler dissolving tank scrubber using weak wash as the scrubber medium.

## SULPHUR DIOXIDE EMISSIONS

### 1. RECOVERY BOILERS

	AVERAGE SO2 EMISSION (ppm)		
	April	May	June
#3 Recovery	330	23	120
#4 Recovery	260	20	173

### 2. POWER BOILER

	SO2 EMISSION (Kg SO2)		
	April	May	June
#4 Power Boiler	6674	0	31271

### 3. KILNS

	SO2 EMISSION (Kg SO2)		
	April	May	June
Kiln	3325	9267	33266

**PARTICULATE EMISSIONS**

**1. RECOVERY BOILERS**

RECOVERY BOILER NO.	DATE	B.L. FIRING RATE SOLIDS t/day	FLOW m <sup>3</sup> /min. (1)	%O <sub>2</sub>	PARTICULATE mg/m <sup>3</sup>		
					TEST	AVG.	PERMIT
3	May 14	966	3460	7.7	31.2	28.7	230
	May 14	966	3490	7.7	27.0		
	May 14	966	3480	7.7	27.9		
4	May 13	1684	5500	6.7	38.5	43.8	230
	May 13	1684	5520	6.3	47.1		
	May 13	1984	5540	6.2	45.9		

		QUARTER NO. 2	
		NO. 3 Boiler	NO. 4 Boiler
		Average	Average
1	Average Firing Rate For Quarter (t/day)	764	1419
2	90 <sup>th</sup> Percentile rate (t/day) For 90 Days Prior to Test	1009	1665
3	Maximum Operating Rate in Quarter (t/day)	1221	1973

2. DISSOLVING STACKS

TANK NO.	DATE	PROD'N RATE		AIR FLOW	PARTICULATE (kg/ADU <sub>t</sub> )		
		SOLIDS FIRED t/day	PULP ADU <sub>t</sub> t/day	m <sup>3</sup> /min (1)	TEST	AVG.	PERMIT
3	May 14	966	1025	545	.04	.04	.20
	May 14	966	1025	534	.05		
	May 14	966	1025	546	.04		
4	May 13	1684	1074	570	.04	.05	.20
	May 13	1684	1074	607	.05		
	May 13	1684	1074	593	.05		

3. LIME KILNS

DATE	PROD'N RATE t/day	90 <sup>th</sup> percentile t/day	FLOW m <sup>3</sup> /min	PARTICULATE mg/cu.m		
				TEST	AVERAGE	PERMIT
May 12	333	345	690	59.5	55.6	230
May 12	333	345	675	49.0		
May 12	333	345	677	58.4		

4. POWER BOILERS

ITEM	TEST 1	TEST 2	TEST 3	AVG
No. 4 Power Boiler:	April 22	April 22	April 22	
Steam Flow LB/HR	399300	410624	410472	406799
Steam from Hog LB/HR	350162	356079	361633	355958
Air Flow m <sup>3</sup> /min	4090	4320	4150	4190
% CO <sup>2</sup>	14.0	14.5	15.0	14.5
90 <sup>th</sup> percentile LB/HR	367000	367000	367000	367000
Particulate mg/m <sup>3</sup> :				
Total	22.5	28.5	32.5	27.8
Salt Free	8.8	11.6	11.7	10.7

**4. POWER BOILERS (continued)**

ITEM	TEST 1	TEST 2	TEST 3	AVG
No. 4 Power Boiler:	May 22	May 22	May 22	
Steam Flow LB/HR	429622	416609	412511	419581
Steam from Hog LB/HR	377004	362418	355006	364809
Air Flow m <sup>3</sup> /min	5310	5000	4950	5090
% CO <sup>2</sup>	12.7	12.7	13.3	12.9
90 <sup>th</sup> percentile LB/HR	376000	376000	376000	376000
Particulate mg/m <sup>3</sup> :				
Total	26.7	28.3	30.5	28.5
Salt Free	21.7	24.3	24.2	23.4

ITEM	TEST 1	TEST 2	TEST 3	AVG
No. 4 Power Boiler:	June 16	June 16	June 16	
Steam Flow LB/HR	322921	322921	356351	334064
Steam from Hog LB/HR	302135	302135	311968	305413
Air Flow m <sup>3</sup> /min	4520	4420	4270	4400
% CO <sup>2</sup>	10.3	11.3	11.0	10.9
90 <sup>th</sup> percentile LB/HR	376000	376000	376000	376000
Particulate mg/m <sup>3</sup> :				
Total	20.8	40.7	46.7	36.1
Salt Free	12.9	22.0	17.8	17.6