



ROYAL OAK MINES INC.
NWT Division - Giant Mine

Mill Fax No.: (403) 920-2627
Telephone No.: (403) 873-6301

FAX TRANSMISSION

DATE: MARCH 8/95 8730221
DESTINATION: COLOMAC 9206396
ATTENTION: ~~DAVE ANTHONY~~ JIM SPARLING
FAX NO.: _____
SENT BY: ALLEN JONES
NO. OF PAGES: SEVEN (7)
(Including Cover Sheet)

COMMENTS:

INFO. PACKAGE REGARDING BAGHOUSE

amj

CROSIBLE, LTD.
FILTRATION

DATE: March 29/94

TO: Allen Jones-General Mill Foreman

OF: Royal Oak Mills-Giant Mine-Yellowknife

FROM: Chris Golding

PAGE 1 OF 4 PAGES

MESSAGE: Allan,

Ref: Fax March 22/94

I am in receipt of your fax of March 22 requesting specs on our Oralon material. I am sorry that I have taken a week to get back to you, but I was out of town all of last week, and today is my first day back in the office. As per your request, I have listed below the specs on our Oralon fabric:

Fibre: Homopolymer Acrylic Oralon IWeight: 9.5oz/sq/yd.CFM: 15-35Thread count: 44 x 36Weave: 3 x 1 twillComposition: Cotton/spun methodFinish: heat setTemperature: 284°F 140°C

I have also sent you some further information on Oralon, as per the following pages. Please call me if you have any questions concerning the above.

Phil Golding from our office will be coming to Yellowknife on April 12th, and I'm sure will make a point of meeting with you.

Respectfully,

Chris Golding

Chris Golding

INLET VELOCITY EST. 4000-4500 F.P.M.

300 BAGS PER SECTION X 8 (SECTIONS)

SIZE 5" DIA X 127"

AIR/CLOTH RATIO APPROX 1:1

Table 1
SUMMARY OF SOURCE EMISSION TEST RESULTS
GOLD ROASTER STACK

ROYAL OAK MINES
YELLOWKNIFE

OCTOBER 29-30, 1991
FILE NUMBER 7640/9101

PARAMETER	TEST 1	TEST 2	TEST 3	AVERAGE
Test Date	91/10/29	91/10/29	91/10/30	
Test Period	11:45-14:31	18:48-18:36	08:48-11:35	
Average Gas Temperature - deg. C	93.3	94.3	93.5	93.7
Average Gas Velocity - m/s	2.95	2.84	3.14	2.98
Total Effluent Flow Rate - m ³ /s	13.86	13.28	14.60	13.91
Dry Effluent Flow Rate - m ³ /s	13.44	12.22	13.47	13.04
Water Concentration - mole %	8.01	8.02	7.77	8.27
Arsenic				
- mg/m ³ dry @ ref.	23.824	25.823	19.795	23.047
- kg/h	1.159	1.123	0.960	1.078
Sulphur Dioxide				
- g/m ³ dry @ ref.	40.275	43.884	47.852	43.837
- kg/h	1049.029	1021.492	2310.530	2083.350
Isokinetic - %	98.8	100.6	100.4	

* - At 25 Deg. C and 760 mm Hg.

ENTECH ENVIRONMENTAL SERVICES LTD., CALGARY, ALBERTA

225.9
Kg/h
49.5
Tonne

ROYAL OAK MINES Inc.**NWT Division - Giant Mine**Theoretical SO₂ Emissions - 1994

Revised Dec 19/94

Month	Roaster Feed			Roaster Calcine			Tons S Emmitted	Tons SO ₂ Emmitted	Tons SO ₂ Emmitted /day
	Tons	Grade %S	Tons S	Tons	Grade %S	Tons S			
Jan	4,365	17.13	747.7	3,717	2.96	110.0	637.7	1,275	41.1
Feb	4,126	17.08	704.7	3,807	3.10	118.0	586.7	1,173	41.9
Mar	4,476	16.24	726.9	4,213	3.10	130.6	596.3	1,193	38.5
Apr	4,152	16.44	682.6	3,663	3.16	115.8	566.8	1,134	37.8
May	4,649	17.18	798.7	3,749	3.38	126.7	672.0	1,344	43.4
Jun	4,576	16.30	745.9	4,168	2.84	118.4	627.5	1,255	41.8
Jul	4,226	15.85	669.8	3,828	2.66	101.8	568.0	1,136	36.6
Aug	4,675	16.39	766.2	4,250	2.56	108.8	657.4	1,315	42.4
Sep	4,360	17.08	744.7	3,536	2.85	100.8	643.9	1,288	42.9
Oct	4,561	16.91	771.2	3,815	2.70	103.0	668.3	1,337	43.1
Nov	3,863	17.39	671.8	3,350	3.30	110.6	561.2	1,122	37.4
Dec									
YTD								13,572	40.6

Notes: Roaster calcine tons include HCD tons

It is assumed that the S grade of the HCD is the same as the calcine
and that the BHD has no sulphur

The tonnage numbers are reconciled as per the monthend reports

(4)

ROYAL OAK MINES Inc.
Yellowknife Division - Giant Mine
Mill Department

To: K. Kim
CC: A. Jones
From: P. O'Hara
Date: October 22, 1993
Subject: STACK TESTING RESULTS - OCTOBER 14, 1993

The stack was sampled on Oct. 14 and the results are summarized below. The feed rate was steady at 55 seconds during the test. The test was started at 2:05 pm and completed at 5:15 pm.

Volumetric Flowrate 39,948 m³/hr
Arsenic Concentration 27.04 mg/m³
Arsenic Emission Rate 29.2 kg/day -> 64.4 lb/day

Data for recent stack tests is summarized below:

Date	Flowrate (m ³ /hr)	Arsenic Conc (mg/m ³)	Arsenic Emission Rate	
			kg/day	lb/day
Oct 14/93	39,948	27.04	29.2	64.4
Jun 24/91	38,718	16.34	15.2	33.5
Aug 17/90	45,041	34.29	37.1	81.8
Oct 11/89	45,321	24.04	26.2	57.7

ROYAL OAK MINES Inc.

NWT Division - Giant Mine

To: K. Kim

CC: K. Weston/A. Jones/L. Connell

From: P. O'Hara

Date: March 11, 1994

Subject: THEORETICAL SO₂ EMISSIONS

The following table summarizes the theoretical SO₂ emissions for January and February of 1994, and August 28 and 29, 1991 (during the western research stack testing). The SO₂ level is determined by the difference in sulphur grade between the roaster feed and the roaster calcine multiplied by the roaster feed tonnage. This gives the sulphur loss through roasting. Assuming that all sulphur lost is in the form of SO₂, the amount of SO₂ can be determined as SO₂ is 50.06% sulphur. This gives a theoretical maximum emission of SO₂.

Date	Roaster Feed		Roaster Calcine	Theoretical Emissions	
	Tons	%S	%S	S tons/d	SO ₂ tons/d
Aug 28/91	157	18.20	3.13	23.7	47.2
Aug 29/91	167	18.99	3.27	26.2	52.3
Jan 94	4,658	17.13	2.96	21.3	42.5
Feb 94	3,940	17.08	3.10	19.7	39.3

Roaster Feed tonnages noted are
not reconciled as per month end
reports

Paul A. - as per P. O'Hara
941024

ROYAL OAK MINES Inc.**NWT Division - Giant Mine****Theoretical SO₂ Emissions - 1990**

Month	Roaster Feed			Roaster Calcine			Tons S Emmited	Tons SO ₂ Emmited	Tons SO ₂ Emmited /day
	Tons	Grade %S	Tons S	Tons	Grade %S	Tons S			
Jan	3,933	18.50	727.6	3,720	3.48	129.5	598.2	1,196	38.6
Feb	3,572	17.76	634.4	3,411	3.38	115.3	519.1	1,038	37.1
Mar	3,446	18.49	637.2	3,308	3.23	106.8	530.4	1,061	34.2
Apr	3,982	19.80	788.4	3,701	3.88	143.6	644.8	1,290	43.0
May	3,418	18.86	644.7	3,414	3.11	106.2	538.5	1,077	34.7
Jun	3,420	18.37	628.2	3,357	2.97	99.7	528.5	1,057	35.2
Jul	3,959	19.69	779.6	3,791	3.42	129.6	649.9	1,300	41.9
Aug	3,928	18.48	725.9	3,650	3.27	119.4	606.6	1,213	39.1
Sep	3,772	18.05	680.9	3,229	3.16	102.0	578.9	1,158	38.6
Oct	3,835	18.32	702.6	3,596	3.33	119.8	582.8	1,166	37.6
Nov	3,412	19.62	669.5	3,094	4.42	136.7	532.7	1,065	35.5
Dec	3,811	19.34	737.0	3,440	4.12	141.7	595.3	1,191	38.4
YTD								13,812	37.8

Notes: Roaster calcine tons include HCD tons

It is assumed that the S grade of the HCD is the same as the calcine
and that the BHD has no sulphur

The tonnage numbers are reconciled as per the monthend reports