

February 4, 1975.

Mr. M. L. Brown,  
Mining Inspector,  
Dept. of Indian Affairs &  
Northern Development,  
P.O. Box 1000,  
YELLOWKNIFE, N.W.T.

Dear Mr. Brown:


Enclosed please find copies of five stack filtration tests taken during 1974. Emission control was adversely affected by numerous process interruptions due to the lack of ore. Roaster down-time was 13.6% versus 7.1% in 1973.

As you are aware, the method of testing was questioned by our Mill Superintendent, Mr. H. E. Dawson, and we had to seek your assistance. A copy of a memo from Mr. Dawson explains the situation.

Mr. Knight of the Mines Branch in Elliot Lake pin-pointed the problem and it now appears that efficiencies are higher than indicated on the attached reports. This may also hold true for as far back as 1970. Unfortunately there is no way we can recalculate old tests to give corrected readings.

No further tests are anticipated until the weather moderates. We are presently looking into the possibility of installing an opacity meter which could give us a better idea of what problems are developing in the Baphouse.

Yours very truly,  
GIANT YELLOWKNIFE MINES LIMITED.

  
D. J. Emery,  
Mine Manager.

DJE\*mb  
Enclosures

c.c. C. A. Lewis  
J. M. Mortimer  
L. S. Price

To .....D.J. Emery; c.c. A.K.C.; H.E.P.

Date.....October 18, 1974

From .....R.J. Tucker

Ref. ....

Subject.....ROASTER STACK FILTRATION TEST

Sampling Date: October 11, 1974

Gas Temperature	150°F
Gas Velocity	9.69 ft/sec.
Gas Volume	36,261 c.f.m.

Weight of Arsenic Lost to Atmosphere 591 lb/day

Arsenic in Roaster Feed	21,680 lbs.
Arsenic in Roaster Calcine	3,180 lbs.
Arsenic in Cottrell Dust	480 lbs.
Arsenic to Baghouse	18,020 lbs.

Baghouse Collection efficiency - 96.72%

Total Collection efficiency - 96.81%

RJT/svh



R.J. Tucker  
Mill Metallurgist

11

To ..... D. J. Emery, A. K. Campbell, H. E. Pawson ✓

Date..... September 19, 1974.

From..... A. Cheng.....

Ref. ....

Subject..... ROASTER STACK FILTRATION TEST.

Sampling Date:	September 13, 1974
Gas Temperature:	163°F
Gas Velocity:	16.66 Ft./Sec.
Gas Volume:	62,375.04 c.f.m.
Weight of Arsenic Lost to Atmosphere:	1,110.47 Lbs./Day
Arsenic in Roaster Feed:	22,020 Lbs.
Arsenic in Roaster Calcine:	3,220 Lbs.
Arsenic in Cottrell Dust:	540 Lbs.
Arsenic in Baghouse:	18,260 Lbs.
Baghouse Collection Efficiency:	93.92%
Total Dust Collection Efficiency:	94.09%

*W. H. S. C. J.*

To ..... D.J.E.; A.K.C.; H.E.P.; .....  
From ..... A. Cheng .....  
Subject ..... ROASTER STACK FILTRATION TEST .....

Date ..... July 30, 1974 .....  
Ref. ....

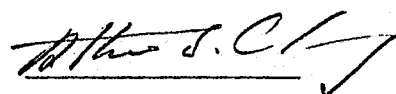
Sampling Date: July 25, 1974

Gas Temperature	171°F
Gas Velocity	16.99 ft./sec.
Gas Volume	63,610.56 c.f.m.

Weight of Arsenic lost to Atmosphere	983.47 lb/day
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Arsenic in Roaster Feed	22,800 lbs.
Arsenic in Roaster Calcine	2,940 lbs.
Arsenic in Cottrell Dust	500 lbs.
Arsenic to Baghouse	19,360 lbs.

Baghouse Collection Efficiency = 94.92%  
Total Collection Efficiency = 95.05%

  
A. Cheng  
Mill Engineer

D.J. Emery; A.K. Campbell; H.E. Pawson

June 24, 1974

A. Cheng

Date.....

from .....

ROASTER STACK FILTRATION TEST

Ref. ....

Subject .....

Sampling Date: June 17, 1974

Gas Temperature

170°F

Gas Velocity

17.86 ft./sec.

Gas Volume

66,868 c.f.m.

Weight of Arsenic lost to Atmosphere

1032 lb/day

Arsenic in Roaster Feed

23,580 lbs.

Arsenic in Roaster Calcine

3,140 lbs.

Arsenic in Cottrell Dust

980 lbs.

Arsenic to Baghouse

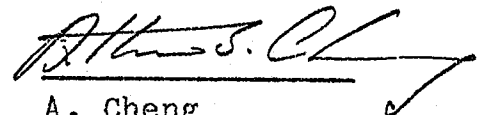
19,460 lbs.

Baghouse Collection Efficiency

94.70%

Total Collection Efficiency

94.95%



A. Cheng

Mill Engineer

D.J. Emery; A.K. Campbell; H.E. Pawson

June 12, 1974

To .....  
A. Cheng

Date.....

From .....  
ROASTER STACK FILTRATION TEST

Ref. ....

Subject .....  
Sampling Date: June 10, 1974

Gas Temperature: 170°F

Gas Velocity: 17.40 ft/sec.

Gas Volume: 65,146 c.f.m.

Weight of Arsenic lost to Atmosphere: 729.84 lbs/day

Arsenic in Roaster Feed 15,700 lbs

Arsenic in Roaster Calcine: 2,460 lbs.

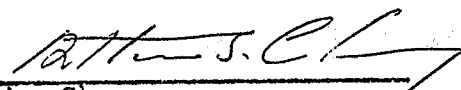
Arsenic in Cottrell Dust: 560 lbs.

Arsenic to Baghouse: 12,680 lbs.

Baghouse Collection Efficiency: 94.24%

Total Dust Collection Efficiency: 94.49%

AC/svh

  
A. Cheng  
Mill Engineer