

To D. J. Emery

Date January 7, 1980

Copies To P.J. Raleigh, L.S. Price, F.G.T. Pickard, J. Walsh,  
K.S. Morton, L. Connell, G. Aaltonen

Ref. ....

From W. A. Moore

Subject Arsenic Sales

In comparing the costs and benefits of various methods and ways of dealing with the problem, one must not forget that as far as Giant Mines in Yellowknife is concerned there are two parts to the problem of Arsenic

- i) Selling  $As_2O_3$  instead of storing it UG
- ii) At the same time removing the soluble As from the tailings going to the tailings pond.

In any calculation one makes about the relative benefits of a method of dealing with the first part of the problem, one must ask the question--

"Will this method also remove the soluble arsenic from the Cottrell dust?"

If the answer is affirmative, then one can reasonably deduct the capital and operating costs of treating the Cottrell dust with one of the DPAT methods.

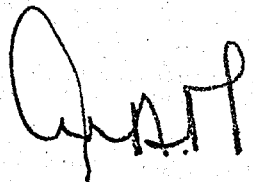
But if the answer is negative, then one should add on the capital and operating costs of one of the DPAT methods.

Regardless of anything else that we do at Giant in 1980, we are going to install the necessary equipment to remove the soluble arsenic from the Cottrell dust. If this equipment and method will also upgrade the baghouse dust, FINE. Then we can kill two birds with one stone.

We have enclosed a comparison calculation which demonstrates our thinking. In the final analysis, the cost or benefit to Giant of dealing with the arsenic problem must recognize the cost of removing the soluble arsenic from our tailings effluent.

We have nothing against selling some raw baghouse dust for 12 months, as long as it is understood that we must address ourselves quickly to the problem of installing an upgrading facility that will also treat the Cottrell dust.

WAM:vb



A COMPARISON OF THREE METHODS  
OF TREATING GIANT BAGHOUSE & COTTRELL DUST

	LEACH METHOD	FUMING METHOD	CRUDE As <sub>2</sub> O <sub>3</sub> WITHOUT TREATMENT
QUANTITY:	8 X 10 <sup>6</sup> lbs As <sub>2</sub> O <sub>3</sub> /year	same	same (Actually would be 10% greater weight if dust shipped since it only contains 90% As <sub>2</sub> O <sub>3</sub> )
CAPITAL:	<div> <div>\$2.2 X 10<sup>6</sup></div> <div>over 6 years</div> <div>150,000 storage facility</div> <div>75,000 vehicle</div> <div>less 175,000 DPAT</div> <div>\$2,250,000</div> </div>	<div> <div>\$600,000 over 6 years</div> <div>150,000 storage</div> <div>75,000 emergency vehicle</div> <div>less 175,000 DPAT</div> <div>\$650,000</div> </div>	<div> <div>\$ 5,000</div> <div>150,000 storage facility</div> <div>75,000 emergency vehicle</div> <div>pluss 175,000 DPAT</div> <div>\$405,000</div> </div>
REVENUE:	8 X 10 <sup>6</sup> lbs X 27 = 2,160,000	8 X 10 <sup>6</sup> X 27 = 2,160,000	8 X 10 <sup>6</sup> x 7¢/lb = 560,000
OPERATING PROFIT:	<div> <div>6.5¢ X 8 X 10<sup>6</sup> 520,000</div> <div>Frt 13¢ X " 1,040,000</div> <div>1,560,000</div> <div>less DPAT 400,000</div> <div>1,160,000</div> <div>Operating Profit 1,000,000</div> <div>less Cap. W.O. 375,000</div> <div>Net 625,000</div> </div>	<div> <div>same as for leach = 1,000,000</div> <div>less Cap. W.O. 109,000</div> <div>Net 891,000</div> </div>	<div> <div>Raleigh 60,000</div> <div>DPAT 400,000</div> <div>460,000</div> <div>Operating Profit 100,000</div> <div>Less Cap. W.O. 68,000</div> <div>32,000</div> </div>