

July 8, 1950

R. A. Gibson, Esq.,  
Deputy Commissioner,  
Administration of the Northwest Territories,  
Ottawa.

Dear Mr. Gibson:

The situation with respect to the safe and economic disposal of arsenic tri-oxide which will be collected from the Cottrell plant that we are installing here, was very carefully considered with Dr. Kay and Mr. Homulos during the last week.

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The sand plain area west of the Airport was studied, in conjunction with Mr. Christie's report on this method. Since Dr. Kay left for Ottawa, we have had three trenches excavated in this area. These show that water is present a few feet below the surface of the plain and we feel, therefore, that this method of disposal can no longer be considered as practicable.

As I advised you last Fall, we have also been considering the possibility of using a relatively small lake, in the granite some distance west of our plant, for the disposal of dry arsenic tri-oxide. The topography of this lake appears to be exceptionally suitable as it has steep banks with little incoming waters. The outlet, which is only open for a very limited period in the Spring, can be completely cut off by a suitable dam. We consider that, by the damming of the few inlets through which Spring run-off waters enter the lake, evaporation would take care of the normal precipitation in the lake area itself.

Even without raising the lake level, which could be done reasonably easily, the capacity of the lake to its present level would be sufficient for approximately forty years.

When this proposal was under active consideration last Fall, we reached tentative agreement with Bell-Bry Mines Limited, the owners of the property which underlies the lake, for the right to deposit arsenic tri-oxide. It is probable that Bell-Bry could not sell the surface rights as such under the Quartz Mining Regulations but could agree to an easement for a long period of time to this effect. We would, of course, be governed by the decision of your Department in this respect.

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I believe that we could complete this agreement with Bell-Bry immediately, but, before doing so, we would like to know whether this method of disposal would have favourable consideration from the interested officials in Ottawa. We would have to make an optional payment of \$1000., and would then have to make additional expenditures to drain the lake.

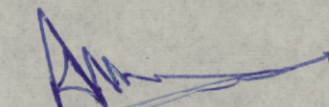
I would therefore be glad to have your comments on this proposal, which appears to us to be practicable. As Dr. Kay waited over a day in order to examine this proposal in the field, he is fully conversant with it and I am sending him a copy of this letter.

We are also giving very serious consideration to the possibility of excavating a large chamber underground for the storage of arsenic tri-oxide. I believe that Mr. McNiven has discussed this proposal with members of your staff here, and this week, the mine staffs of Negus and Giant have carefully analyzed this proposal. We believe that we can locate a completely dry underground area, from which no migration of water would take place. In our case, it would probably lie beneath the arsenic collection plant, thus eliminating mechanical handling to a large extent. It is also possible that it would be located in a "permafrost" zone, similar to several in our No. 2 Shaft workings, where frozen ground persists to the 250 ft. level.

I have outlined these two proposals in the foregoing paragraphs so that you would be fully informed of the methods now being considered.

With kind personal regards,

Yours sincerely



A. K. Muir  
General Manager

AKM/sm  
cc: Dr. K. Kay ✓