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Proton Systems Ltd  
820 Marine Building  
355 Burrard Street  
Vancouver, B.C.  
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Attention: P. Taggart, P.E.

Dear Peter;

Re: Arsenic Trioxide Recla

We are currently involved to upgrade crude arsenic recovering gold from the program, other than the crown pillars in the underground substantial storage costs

Though it is still too early for detailed engineering, you may be interested in looking at our conceptual ideas for both underground and surface facilities.

As you can see from the sketches, we intend to collect the dust using a remotely controlled vacuum line combined with a pneumatic conveying system to transfer the dust to surface storage. We believe the material classification code to be A45RX with a repose angle of 47 deg. and we have found that the sluggish flow characteristics strictly limit choices of reclaim methods.

The surface plant will produce 20 to 40 stpd of >99% arsenic trioxide and will utilize some existing equipment. Pilot testing will be done by The Research and Productivity Council of Fredericton, N.B. and work will be done in three distinct stages on a variety of feedstocks.

As this process has been tested only in lab scale we want to be certain that pilot testing is comprehensive and fully representative of full scale conditions. We feel that careful groundwork here will result in a plant that performs as expected without a lot of unexpected startup problems and without the need for major revisions. At the same time we are anxious to complete the preproduction phase without delay.

*Ken -*  
*Do you have any problems with my sending out a letter similar to this? Proton has an ex. Lard refinery Supd, Phil Claridge, on their staff who could be useful in plant design.*  
*Could send a duplicate to Hillbarn for their comments as well.*  
*Ken*

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## ROUTING - REQUEST

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Date 19 Nov 87

To Ken  
If you desire that we return as Edwards design firm then you should initiate bids from a minimum of 3 firms.  
Please check with J. Loratto through Sadek for recommendations  
*Ken*

The following is a tentative program schedule.

Nov 1987 - Apr 1988	RPC fuming testwork, underground recovery testing.
Mar 1988 - Jul 1988	Detailed engineering of fuming plant and underground recovery system.
Jul 1988 - Jan 1989	Surface plant construction, installation of underground equipment.

As far as we are aware this plant will be unique and it is unlikely that your process design engineers will be familiar with this particular process in its entirety. The various unit operations are however, quite conventional, the single exception being the hot baghouse, which must operate at a temperature of 400 deg. C.. The fuming reactor is simply a small fluosolids roaster operated in such a way that arsenic trioxide dust is sublimed and the fume carried off to a multistage condenser for crystallization. Non-volatile particulates are entrained in the gas stream and removed in the hot baghouse. Dust captured at this stage is slurried and sent to the existing CIP circuit for gold recovery.

If you feel that your firm can assist us in flowsheet design, detailed engineering and/or construction management for this project, we would be pleased to discuss the matter with you as pilot testing proceeds.

Yours truly

K.Morton  
Tech. Proj. Sup'v.

c.c. K.Blower