July 11, 1967

Dr. David F. Herring
Staff Member
General Atomic
P.O. Box 608
San Diego, California 92112

Dear Doctor Herring:

I am most grateful to you for your letter of June 6, and the enclosed memorandum, despite the tardiness of my response. I would like to go ahead on the experiment at the earliest possible time, but the time and the place at which the various items of work can be done are matters that find me undecided, and this has delayed my reply.

It seems to me that there are several matters that need to be resolved before I can visualize the smooth performance of the steps required. Perhaps my best way of approach would be to relate my uncertainties and then to raise certain direct questions.

I must first know how it may be possible to complete all preliminary steps of the experiment within the space of 52 hours. I assume that this is essential. If it is not - that is, if not all of the quantitation need be done within the duration of the half-life of Pb^{203}, then what additional period of time is available for precise observations?

Even if more than 52 hours were available, how could one synthesize tetraethyl-lead for use in the experiment, after getting it from you to the chemist, and then getting it to the experimental site, and into the subject in time for making the observations required to trace the radioactive material quantitatively?

It seems possible that I am creating difficulties that need not exist, out of my lack of technical understanding of the procedures, and I may need some advice or instructions as to what to do and how to do it, in words of one syllable, so to speak. In any case, it is essential that I should be able to visualize the mechanics of the experiment.

One other point that is open to some question, at the moment, is the time at which to perform the experiment. At present, it appears that it would be best to wait until the Autumn, at which time we shall have a respiratory chamber entirely free of other scheduled work. This may or may not be the most convenient time, but if it is feasible, we might work toward that time - that is any time between the middle of September and the end of the year 1967.

If you can see your way through your end of the task, you might work out the steps, together with a budget, and let me know what is required of us by way of assistance, facilities and funds. I can then proceed to secure the funds (which should not take much time), and get things underway at this end.

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Please do not hesitate to tell me what you are willing and able to do, and what you can arrange for others to do, technically, and what you will require of me. If this could be done before I leave on my vacation (July 30th), it would suit me perfectly. If it is not possible to move that rapidly, perhaps you can propose a time-table later.

Again my thanks and regards.

Sincerely yours,

Robert A. Kehoe, M.D.
Professor Emeritus of
Occupational Medicine

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