

October 22, 1968

Mr. R. K. Scales
Ethyl Corporation
1600 West Eight Mile Road
Ferndale, Detroit, Michigan 48220

Dear Dick:

I am sending to you, herewith, a copy of a report of the progress of the investigation of the fate of inhaled lead, in its present relation to the tolerable concentration of lead in the ambient air.

This is an interim report, in lieu of a full account of the experimental procedures and results, which was made at the request of Dr. Plancey, who was to report on this (and other projects) at a meeting of API on October 18. I expect to work up a full account of all of the experiments done in pursuit of this objective during the next several months, but special interest attaches, at this time, to the results of the exposure to Subject S.S. to air containing 20 micrograms of lead. A further man, Subject D.H., is paired, in a sense, with Subject H.R. who started out with Subject S.S. /whose experience is described (only in certain essentials) in the report which is presented at this time/, but quit, with our approval, before completing the experiment. Subject D.H., after a period of preliminary observation, began where Subject H.R. left off, and is expected to continue to the end of the experiment.

You will note that Subject S.S. responded positively to the inhalation of air containing 20 micrograms of lead in the air of the chamber during the period in which he was spending 42 hours per week in the chamber. He continued to respond increasingly as the time in the chamber increased. This obviously is not a tolerable concentration of lead in the general or ambient atmosphere, and therefore the end of this series of experiments is in sight.

I shall have to work up all of the data of these experiments while Subject D.H. is completing his scheduled exposure. I have no doubt that he will behave much the same as Subject S.S. I believe it will be possible to arrive at the appropriate level for the ambient air, although it may turn out that another experiment will have to be designed and carried out in order to establish a single number for the tolerable concentration, rather than a range. Meanwhile, I have thought that you would wish to know where we are.

I have not attempted to provide numbers of these reports for wide distribution, but have limited them to 10 copies. I shall send copies to George Roush as well as yourself in Ethyl Corporation, to Don Diggs and Gordon Stopps in duPont, to Don Fowler in Lead Industries Association, and to Mel Plancey in A.P.I. A more complete report, when finished, will be provided in much larger numbers.

With best regards,

Sincerely yours,

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