

May 13, 1940

Dr. Graham Edgar
Ethyl Gasoline Corporation
Chrysler Building
New York City
New York

Dear Graham:

We are now making preparations for the study of the lead in the street dusts and in various parts of the atmosphere of Cincinnati, as a preliminary to the study of other cities. Our present plans are rather comprehensive in nature and we expect to use Cincinnati as a proving ground for the work. We shall probably carry out some laboratory observations in order to settle certain questions that are not entirely clear, but our first observations will consist of a series of samples obtained by electro-static means at a considerable number of spots in Cincinnati. With these data at hand, we shall be able to plan further observations. It is not our plan to proceed rapidly, but rather carefully, and I anticipate that we will probably spend the greater portion of the year at our observations in Cincinnati and our laboratory experimentation. I shall keep you acquainted with our progress as time goes on, but do not expect anything very dramatic in the near future.

My present letter concerns itself with our need for available data on the composition of exhaust gas with respect to the end products of the combustion of Ethyl Fluid. Several questions present themselves to us which have probably been answered by various types of investigation. First, we need to know whether there are any conditions under which unchanged tetraethyl lead can escape in the exhaust gas. Second we need to know the composition, particle size and various other chemical and physical properties of the lead compounds which occur in the exhaust gas, which are deposited in the motor and in the exhaust system. It would probably also be useful for us to know as much as possible about the variability of the concentrations of hydrobromic acid as well as carbon monoxide, carbon dioxide etc. Not to go into further detail, what is really required is all of the potentially useful available data from any source but chiefly unpublished data which are in the hands

of the technical staff of Ethyl Gasoline Corporation. I am more or less familiar with some of the facts but it seems wise to get together all of the available data and to make a very careful study of the facts as they are now known before devising further experimentation. I realize that you do not have all of this information in your own hands, but you probably know more about where it can be obtained than does anyone else in the Corporation. I would appreciate it very much if you would take such steps as are convenient to see that I am supplied with this information. I shall also be very grateful if you or Cal, or any of the other technical men, would make such suggestions as seem feasible for the identification of the lead which is derived from exhaust gas.

With my thanks in advance
for your help and with kindest personal regards, I
am

Sincerely yours,

RAK:is

Robert A. Kehoe, M.D.