

October 21, 1968

George Roush, Jr., M.D.
Ethyl Corporation
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1315 Gravier Street
New Orleans, Louisiana 70112

Dear George:

I have been delayed in my answer to your letter of October 7 by the necessity of getting out two reports, one on the investigation of the hair dye, and the other a progress report on the fate of inhaled lead in relation to a tolerable level of lead concentration in the ambient air. I am sending you a copy of the latter for such use as it may be to you. Incidentally, this was made necessary at this time, which is not the most logical time for a report, by the request of Dr. Plancey of A.P.I. I gave him a very brief resume of the status of the work by letter, and then proceeded to study the more important data for the purpose of a more informative report. I put some pertinent remarks in the introduction because I had my doubts as to the depth of the understanding of the essential features of the problem by the group concerned.

I have gone over the report of Mr. Ter Haar with considerable interest. I have been aware, without specific information, of the work going on in the Detroit Laboratory, and I'm glad to have a look at it. I gather that the report was put together rather hastily, and if such is the case, I have no special criticism to offer. If, however, a report is to be made at the ACS Meeting, it should be put together with a great deal more care and precision. A single example of what I mean may suffice. On the first page, first paragraph, under the heading, Effects of Lead in Air on Crops (a title, which of itself is ambiguous. Is it effects, or is it deposits, on crops, or on their uptake of lead? One must be precise in these matters or risk being misunderstood or misquoted), the statement is made that "lead in rainwater had no effect," whereas the next sentence says it "doubled the lead concentration in grass."

There are numerous examples of loose statements throughout the report, which should have been edited by someone before it went out. It is this which gives me the feeling that Mr. Ter Haar should not be given much leeway in investigating or discussing such biological phases of the problem as the lead in bones and teeth and food materials for human consumption. He seems to know little of what has been done, but is quite free with his opinions as to what should be done. For example, the lead in "wheat, beef, pork and potatoes," and that on cows and milk, as well as the remark concerning the lead in the skeletons of the ancient Incas: "We believe this may be due to diet." What does he mean; that the low result is due to diet, or that the lead, in the first place, is due to diet? Incidentally, where is the report of this work? I've been expecting to see it and to learn what was found, and how, and how the results (concentration) are expressed. If you know of it, please let me know, for I'm very anxious to learn what, precisely, has been done and said.

The discussion on the teeth is more than a little naive, and yet is indicative of the inventive curiosity of Mr. Ter Haar. The relationships here are very much too uncertain to justify the type of investigation that Mr. Ter Haar has in mind. The

first step, prior to such an investigation would be the establishment of these relationships on a sound basis. Otherwise, one would have a great mass of expensively obtained but meaningless data.

I wonder what may be the extent of Mr. Ter Haar's examination of the literature in the fields indicated, and what basis in critique he may have. I wonder also as to the possible advantage of some discussions with you or me, or both of us, in these relationships. Certainly there is quite enough dabbling around in this whole area by relatively uninformed people, without having similar types of data and half-baked conclusions coming out of the laboratories of Ethyl Corporation.

I am sure you are aware that I would not put obstacles in the way of any investigator, much less a seemingly imaginative investigator such as this man seems to be. Nor would I have him pursue such a course as I would choose. But I would not have him barging into areas that are new to him, without knowing the extent to which they have been charted.

Despite what I've said in this letter, I am delighted by the efforts of the people in the Detroit Laboratory to throw more light on the consequences of air-borne lead in the environment. It is, of course, impossible to consider this matter without getting into its biological aspects, since vegetation and animal life, including man are an inextricable part of the whole, but there are so many facets of the problem, and such a mountain of published data, that one should, indeed must, be careful, for the sake both of economy and the avoidance of utter chaos, to keep to a well-designed course of inquiry.

I'm afraid this letter is somewhat of an expression of my acquired habit of discussing many things with you, at length. I miss you much in this, as well as in other matters. In any case, I hope our paths will cross soon, and that I can bring you up-to-date on matters here, and learn how they have developed there.

With kindest regards to yourself and family,

Sincerely,

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

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enclosure

P.S. I'm not sure that I told you of the Symposium in Amsterdam and of my intention to attend it. I'll be going on November 24 and returning on December 7.

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