

February 23, 1965

Reg. - H. Gerwerberat Stöfen
Gewerbeaufsichtsamt
für den Regierungsbezirk
5430 Montabaur, Rheinland-Pfalz
West Germany

Dear Mr. Stöfen:

Your letter of December 28th has been on my desk without reply, for the reason that I have been overburdened with heavy demands on my time since the first of the new year. There was a further difficulty that the questions raised in your letter could not be answered briefly, and that they seemed to be unduly complicated by extraneous issues.

For example, you refer to the views of the Soviets with respect to the permissible limits of the concentration of lead in the air, and to the opinions of Arthur Stern on this matter. Stern is a good investigator in his own field, but he is an engineer, not a physiologist. Moreover, the Russian investigators have not provided evidence on the point you have queried, but only opinion.

However, it is not my purpose to engage in an argument with you or anyone else over these matters, but rather to supply you with such evidence from our experimental work as has been published. The behavior of lead in the human organism has been the subject of study in this Laboratory since it was founded in 1930, as has also been the investigation of lead poisoning, from the aspect of diagnosis, prevention and, to a lesser extent, therapy. The results of some of this work have been studied and published, while many of the details have been left for the careful, critical examination which is costly in time. I have not had such time at my disposal, and I have postponed such study until after my retirement from the headship of this Department (this will come at the end of June of this year).

What I have said about the concentration of lead in the air breathed by human beings has been based upon carefully designed experiments in the Laboratory, together with extensive

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observations made in industry for many years. These have shown (among other facts) that the concentration of lead in the blood of persons subjected to exposure to lead provides excellent information as to the extent of the absorption of lead by such persons, and demonstrated conclusively, whether they are or are not in danger of being poisoned by lead. This is what is meant by my statement that the degree of risk can be determined in advance of any harmful consequence. That is, men employed in industry can be removed from further exposure and shielded from danger, before any injury of any kind has been sustained. Not only can this be done, but it has been done with complete success in certain industries which we have had the means of following, for the past 25 years. There is no question here of theory; rather, this is fact.

The same principle applies to people in a community. By measuring the lead in the air, one can appraise the environmental situation; by measuring, with precision, the lead in the blood of persons in such an atmospheric environment one can perceive the coming of danger before it has induced any unfavorable results. Again this is not theory but fact. There is no doubt that lead in the air, in food, or in the human body, may be dangerous, but it is also perfectly clear, that certain quantities of lead in each and all of these, is entirely without any potentiality for harm. It is in the establishment of the quantitative relationships here, that we in this Laboratory have contributed importantly to the knowledge of the behavior of lead. Those who have not been accustomed to thinking in quantitative terms will find the facts somewhat difficult to believe. After some forty years of experience in toxicological investigations, it has become clear, however, that the quantitative relationships are fundamental in almost all physiological processes.

With reference to the statements which I have made in the literature on this subject, I would not be concerned, if I were you, about my having to revoke or repudiate them. There is little likelihood, indeed, that I shall be put to that necessity. This is not to claim that I cannot be mistaken in my interpretation of our experimental results. On the other hand, I have not rushed into print, nor have I ventured upon brash statements. What I have said has been based upon years of critical observation carried out in search of facts which would enable me to take a responsible position in a matter involving human safety. I have never spoken hastily, but only after careful examination of the facts. My position has been peculiarly responsible, as a physician, and I have attempted to bear such responsibility faithfully, and in the true spirit of the physician. I am fully aware, in speaking

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Mr. Stöfen

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thus, that no man can speak convincingly of his own integrity and competence. Only his acts can speak for him. I am a bit too old, however, to be concerned about the immediate acceptance of my views or that of our work. My concern is to be right, for at this stage of my life, that is the only thing that has importance.

I am sending you some of the more recent publications that bear on questions which you have raised or implied. I expect, in the near future, to be able to publish more of our work on this subject. Suffice it, for the present, however, to give you some of the background information.

Cordially yours,

Robert A. Kehoe, H.D.
Director

RAK:men

Enclosures - The Harben Lectures, 1960
(other publications under separate cover)

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Gewerbeaufsichtsamt
für den Regierungsbezirk
Montabaur

5430 Montabaur, den
Tiergartenstr. 17
Fernruf 321
Postfach 148

28. Dez. 1964

Az.: Tgb.-Nr.

(bei Antwort stets angeben)

Gewerbeaufsichtsamt Montabaur

Mr.
R. Kehoe
c/o Lettering Laboratory
of the University

Cincinnati/Ohio

Dear Mister Kehoe,

As chief factory inspector of this place I'm competent for a metallurgic lead plant and so have dealt with the problems of air pollutions by lead dust. So I met your researches about loaded motor fuel and have studied them with keen interest and great profit. They really helped me in understanding better. Now I have two problems for which I address myself to you.

1) I darkly remember that Mr. Stern, whom you probably know, has referred somewhere about the Soviet studies on lead dust. You will know that the Soviets allow only very low lead concentrations in the air, but I don't know the scientific reason of this decision. I hope that Mr. Stern could be informed. Could you be kind enough to give me his address or to contact him yourself by forwarding this letter to him?

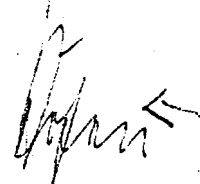
2) In your report "Public Health Aspects of Increasing Tetraethyl Lead Content in Motor Fuel" abstracted by Mr. N. R. Dyle, you say - and I completely agree - that time is the important factor in the development of a physiologic response to the absorption of minute quantities of lead. You pretend that by applying the methods of your investigation you could establish the effects in advance of any harmful consequences. I must admit that I don't agree with this opinion. I'm rather sure I have found in the environment of the lead plant for which

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which are evident still 100 years after the inhalation of the lead dust by the mother. Fortunately I succeeded in interesting 2 scholars of the University of Mainz for my ideas. Although I'm sure that my ideas and experiences will be acknowledged, I should be happy, if you too would examine them. Your possibilities are far superior of course. The effects of the leaded gasoline touch the problem of the defense of the West against the Soviet Union, that's to say the common sake of your country and mine and that of the other non-communist states. On the other hand I'm conscious that it would be very delicate for you to revoke your results after they have been forwarded to the Congress. So I hesitate to inform you completely. If however they are welcome to you - perhaps you can examine them without public discussion and then send the results to the Department of Health, Education and Welfare - I should be pleased to cooperate with you. I should especially appreciate, if I could meet you or a member of your staff. Maybe, I pay a visit to the States Eastern 1965. If you or a member of your team should come to Europe, please let me know. I could come to almost all countries of Europe without difficulties, when there is a chance of personal contact.

Sincerely yours


Stefan

PS

When continuing the study of your report, I see that you were able to make out the lead "body burden". If this means that you are able to determine the lead content of the bones and other tissues too, that would be very important for the German science, I think, and I should be thankful to you, if you could tell me, how this procedure goes on.

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