January 4, 1935

Dr. Walter Bauer
Massachusetts General Hospital
Boston, Mass.

Dear Dr. Bauer:

Please accept my thanks for your letter of December 29th. Since you have expressed your willingness to give me further information, I shall take advantage of it by asking for a few details which seem necessary to me. I trust you will not feel that I am heckling you with further requests or with the statement of my own point of view, but since you will see from the nature of my questions that I am somewhat skeptical about the diagnosis in these cases, it seems only fair to explain the reasons for my skepticism.

I should be interested in knowing, (1) the details of the complaints or symptoms of the two men. I should like (2) the amount of stippling of erythrocytes found, and (3) the amount of lead which was found in the urine. The last two questions require a little explanation, I believe.

You are probably aware that for a quite a long period we have been studying the blood changes associated with lead absorption and the occurrence of normal lead in the excreta. It is quite apparent not only from our work but that of others that stippling occurs in a wide variety of conditions, and that in fact, it occurs up to a point in normal individuals without relation to lead exposure or without any relation to disease states, as far as can be determined. To have any significance, therefore, stippling must be expressed on some more or less accurate quantitative basis. The same thing applies, but with even more significance, to the question of lead in urine. All normal individuals excrete lead in urine. There is, therefore, a question of quantity, and the quantity must be expressed with relation to an analytical method of known sensitivity.

With regard to the question of lead absorption from contact with gasoline containing lead, the experimental and clinical evidence which is available is so overwhelmingly opposed to the occurrence, that in my opinion only the most un-assailable evidence that absorption had taken place could

Dr. Walter Bauer

in cases of this type, I should require that the symptoms be characteristic, that the extent of the stippling be well outside the normal range, and that both symptoms and blood changes should not be explainable on the basis of other disease states, and that the quantity of lead excreted should be well outside the normal range of values. Even then, in view of the evidence which has been accumulated, I should be inclined to suspect that the lead absorption had originated from some other source, though I should give the benefit of the doubt to the patient, if I could not obtain further evidence.

I have no right to expect any other clinician to have quite this critical attitude towards this question, for no one else has had quite the responsibility in this matter which I have had, and no one else has had the same experience over a long period of time in looking unsuccessfully for cases of lead absorption and lead poisoning as a result of this type of exposure. On the other hand, I do not think one is justified in making the diagnosis of lead poisoning on these cases without having laboratory evidence which is unquestionable. I say this because the history of exposure in such cases is entirely valueless since there is no record of an incidence of lead poisoning in connection with this exposure. It can not, therefore, be regarded as a significant exposure; moreover, it might be anticipated that in cases of this type any symptomatology which might arise would be so non-specific and so vague, that one would need to identify lead as the specific offending agent.

I have taken the liberty of expressing my point of view quite frankly largely because you have tacitly raised the question in the last paragraph of your letter as to whether these cases should be reported in the literature. You will probably gather from my remarks that I would scarcely consider it advisable to report these as cases of lead poisoning from the handling of gasoline. On the other hand, I am open to conviction and if you would be good enough to supply me with such details as would be convincing, my point of view about reporting cases would be entirely changed.

Very truly yours,

RAK:IS

Robert A. Kehoe, M.D.