

March 26, 1932

Mr. A. R. Riddell,  
Division of Industrial Hygiene,  
Department of Health,  
Toronto, Ontario.

Dear Mr. Riddell:

I wish to thank you very much indeed for your letter of March 17th replying to my comments of some time ago. I find that in the main we are not in any serious disagreement, though perhaps there is one point at which I did not make myself entirely clear. I refer to the matter of the finding of lead in the urine. The facts in this particular matter are not as simple as we have previously thought. In the first place, all persons in or out of the lead trades are excreting measurable quantities of lead in their urine. The only difficulty of finding it is associated with a sensitivity of chemical methods, as well as the employment of a sufficiently large sample of urine. The variations in normal individuals are fairly considerable. Thus, the mere finding of lead in the urine is entirely without any value whatsoever, and the only value of an analysis arises from a knowledge of the actual quantity present. It is not feasible to have either a qualitative or quantitative method of analysis which is so comparatively insensitive as to show the presence of lead only when more than normal amounts are present, for the reason that there are no methods which will give invariable results of such an order of accuracy. Thus, methods that are comparatively unsatisfactory yield high results sometimes, and low results at other times. Thus, it is not safe to employ any except a very refined method of analysis. If one goes to this extent then it is not possible to come to any conclusion unless the amount found is in excess of that which may normally be present. I recognize that this will sound like a somewhat arbitrarily expressed point of view, but the evidence back of it is overwhelming, and the conclusion is hence entirely unavoidable. I think this makes my position on this matter entirely clear. I hope shortly to publish the data which form the background of this opinion.

Cordially yours,

RAK:EJT

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