

July 1st, 1935

Mr. J. W. Proulx
Canadian National Railways
Room 301, 355 McGill Street
Montreal, Quebec
Canada

Dear Sir:

Your letter of June 15th addressed to the Canadian representative of the Ethyl Gasoline Corporation has been referred to me from the New York office of the Corporation.

I take it from the brief description of the type of work engaged in by the claimant whom you mention in your letter, that he has had no exposure to lead which might be regarded in any way as significant as the result of whatever handling of Ethyl gasoline he has done. However, if there has been anything unusual in the character of the exposure of this man, I should appreciate hearing further details.

Ethyl Gasoline is prepared in such a way as to contain not more than 1 part of tetraethyl lead in 1260 parts of gasoline by volume. I do not know as to the precise lead content of the gasoline involved in this complaint, but it could not have been in excess of the above concentration. It has been shown both experimentally and clinically that no actual exposure to lead occurs as a consequence of contact of the skin with such gasoline, or as the result of the inhalation of vapors arising from such gasoline. Tetraethyl lead in its concentrated form is absorbed directly through the skin with moderate rapidity. Its absorption is greatly hindered by dilution with gasoline and in concentrations below 1 part per thousand by volume, absorption of lead apparently does not take place through the skin of either experimental animals or men. Then, too, the volatility of the gasoline is so much greater than that of the tetraethyl lead that in the diluted form of commercial leaded gasoline the quantities of lead which appear in the vapors in the early stages of evaporation are not appreciable. This, I believe, accounts for the fact that the actual lead exposure involved in the normal handling of leaded gasoline is inconsequential. The study of persons exposed to the potential dangers of Ethyl gasoline

W. Proulx

over a period of now more than ten years has failed to show evidence of any lead absorption by reason of occupation. For your information I am attaching herewith an article which details the most recent published work on the subject. I believe you will see from examination of this article that there is little likelihood of the occurrence of lead absorption and lead intoxication under even the most severe occupational conditions.

The association of tuberculosis with lead absorption has been regarded as an important matter for some period of time. I do not believe, however, that there could be any relationship in a situation of this sort in which the evidence against the occurrence of lead absorption is so strong. The development of tuberculosis without any such basis is, of course, too frequent to call for comment.

If I can be of any further assistance to you in this matter, please call upon me.

Very truly yours,

RAK:is

Robert A. Kehoe, M.D.

KE 0011389