

June 8, 1936

Professor J. C. Burns  
Department of Chemistry  
University of Western Ontario  
London, Canada

Dear Professor Burns:

Your letter of May 13th addressed to the Ethyl Gasoline Corporation, 56 Church Street, Toronto has been referred to me for reply. In accordance with your request I am sending along to you some articles which bear on the subject. However, I can not pass over the first sentence in your letter without comment in as much as you state that cases of lead poisoning have been caused by faulty use of Ethyl Gasoline. I should appreciate very much your letting me know the nature of the cases which have come to your attention, as well as such details of the manner in which these cases have come about. I should presume from past experience that you are referring to cases of skin irritation, but I do not want to make any assumptions in the matter and I would be glad to have more precise information.

I should like to call your attention to the fact that after a good many years of search, we have been unable to find any cases of lead poisoning associated with the handling of Ethyl Gasoline. Moreover both the experimental and clinical evidence indicate that no absorption of lead through the skin takes place on contact with leaded gasoline no matter what the nature of the contact. As a matter of fact we have reason to feel that there is no greater danger of lead poison in the handling of leaded gasoline than there is in the handling of any other commercial gasoline. Despite the warning signs, lead gasoline is used by many people, especially garage mechanics, for all purposes for which gasoline may be used. It is not an uncommon practice to use it for cleaning tools and other equipment around garages. Despite this fact no evidences of lead absorption have been found among men who engage in this practice, nor have been able to discover any cases of lead intoxication.

On the other hand, leaded gasolines as well as other gasolines, and particularly "cracked" gasolines, are quite irritating to the skin and may produce a distressing type of dermatitis in persons with sufficiently sensitive skins. This is a property of the gasoline base and is associated with the presence of substances of complex structure which are not natural to gasoline, but which are chiefly the result of the

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manufacturing processes. The materials which form gum are particularly offensive in this regard, or at least so it would seem from a limited number of observations. In this connection you may be interested in an article written some time ago by my associate Dr. Willard F. Machle, copy of which I am sending you.

From what I have said about the lack of danger in the handling of gasoline, I would not have you believe that we have discouraged in any way the use of precautions originally devised in connection with leaded gasoline. At present, however, the chief usefulness of a warning sign is to prevent the use of leaded gasoline in gasoline stoves and in lamps in which, for a variety of reasons, it is an undesirable fuel. In so far as the sign aids in limiting the use of leaded gasoline for cleaning purposes of all kinds, it is also an advantage for a variety of reasons. Thus we hope the signs serve some useful purpose. On the other hand, I must point out to you that the instructions for the handling of leaded gasoline were suggested by the United States Public Health Service in the early period of the use of this fuel. Although the Service had found only negative results in its investigation, it took the position not been long enough  
therefore, that some warning should be issued to the public in order that the consumer might know whether or not he was using such fuel, and might also take certain precautions. Now that leaded gasoline has been used continuously for more than ten years, I think we may regard the hygienic problem as settled. It is opinion, therefore, (although one for obvious reasons publicly proclaimed), that the use of leaded gasoline is hazardous from the point of view of lead absorption consumer or to the handlers of gasoline

Very

RAK:is

cc Mr. Fitzgerald

Robert A. Kehoe, M.D.

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