

GEO. W. BERRY
WM. M. McCULLOCH

BERRY & McCULLOCH
ATTORNEYS AT LAW
PIQUA NATIONAL BANK BUILDING
PIQUA, OHIO

TELEPHONE 220

December 7, 1942

Dr. Robert A. Kehoe
College of Medicine
University of Cincinnati
Cincinnati, Ohio

Dear Dr. Kehoe:

In accordance with the request contained in your letter of October 3, 1942, we are pleased to return the pamphlet in the matter of "Lead Hazard in Ethyl Gasoline."

We thank you for your courtesy in this matter, and, if we can return the favor, we would be pleased to have you call upon us.

Very truly yours,

BERRY & McCULLOCH

By 

WMM:I
Enc.

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N 7060

October 3, 1942.

Mr. William M. McCulloch,
Berry and McCulloch,
Piqua National Bank Building,
Piqua, Ohio.

Dear Mr. McCulloch:

Your letter of September 16 addressed to the Ethyl Corporation, was referred to me for reply, inasmuch as I am the chief medical consultant of Ethyl Corporation, in addition to my activities in this Laboratory.

*For
approval
to send
reports to
Mr. McCulloch
with the
literature
enclosed
for his
information
and
action
10/8/42*

The Laboratory has been responsible for carrying out a number of extensive investigations on behalf of the Ethyl Corporation, and I think I can best reply to your question by sending you one or two articles together with references to the rather extensive medical literature on the subject in question.

To abbreviate this information for practical purposes, I may say that commercial gasolines containing tetraethyl lead have never been known to give rise to a case of lead poisoning. In our initial studies of this problem many years ago, we came to the conclusion based on experiments, that lead would not be absorbed through the skin out of the gasoline, and that it would be impossible to inhale an appreciable amount of lead as the result of exposure to vapors arising from open tanks of leaded gasoline. The reasons for this are rather simple. Tetraethyl lead alone is absorbed through the skin. Dilution with gasoline hinders this absorption, and if the dilution is as great as a thousand parts of gasoline to one of tetraethyl lead, the absorption through the skin is inappreciable. The inhalation of the lead out of gasoline is rendered virtually impossible by reason of the fact that the boiling point of tetraethyl lead is very high, while that of gasoline is relatively low. It thus happens that over ten per cent of a given quantity of a leaded gasoline must be evaporated away before a measurable quantity of lead comes over in the vapors. For these reasons, we believe that the handling of leaded gasoline would be entirely safe, and this belief has been substantiated by practical experience over a period of years. We have failed to find a single case of lead poisoning among the hundreds of thousands of garage mechanics, filling station operators, and

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Mr. William M. McCulloch - (2) - October 3, 1942.

refinery men handling gasoline. Moreover, experimental studies carried out on groups of these men have shown that they do not absorb appreciable quantities of lead as a consequence of their work. Thus, it has come to be generally accepted that the handling of leaded gasoline is not an occupational exposure to lead, and that no dangers of lead poisoning exist in connection with this work. Incidentally, we have been following up cases suspected of having lead poisoning for quite a number of years, and we should be glad to have the opportunity to communicate with this man's doctor so as to carry out for him any tests which might be indicated to establish the correctness of his diagnosis. It might be entirely possible that the man has contracted lead poisoning from some source which has not been identified. This does not happen frequently in our experience, but it does happen occasionally, and if the man has lead poisoning, I believe we would be able to find out the source of his absorption. I think I need say no more than I have above to indicate that in my opinion, it is not possible that he could have absorbed significant quantities of lead from handling Ethyl gasoline.

Very truly yours,

Robert A. Kehoe, M. D.

RAK ef

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