

French Operations - Ethyl S.A.  
Thenault - Dacquín - Roffey

**"NORWOOD"**

**BRAND**

**TO DUPLICATE THIS FOLDER ORDER**

**Globe-Vernicle**

**NO. 91-1/3**

**MADE IN U. S. A.**

KE 0010019

November 3, 1936

Colonel G. Thenault  
25 Avenue Victor Emmanuel III  
Room 527  
Paris  
France

Dear Mr. Thenault:

The question raised in your letter of September 23rd is one on which we have very little information from direct observation. However it may be said, categorically, that the quantity of tetraethyl lead which occurs in lubricating oil as a consequence of engine operation is too small to be of any significance from the point of view of skin absorption. Thus the hazards of workmen in contact with such lubricating oil involve no danger.

The repair of engines with certain quantities of lead deposits within them, (in the carbon) is not without some hypothetical hazard. It seems entirely possible that if workmen were engaged continuously in scraping the carbon out of engines in a dry state, there would be some exposure to dusts. We have not encountered any situations in which this exposure is hazardous, and in general this work is not continuous enough to result in significant exposure. Lead occurs in the carbon deposits in the form of a bromide, sulphate and oxide. Under ordinary conditions the removal of carbon does not give rise to much finely divided dusts and the exposure, unless continuous for weeks and months, may be expected to be insignificant. Where such work is going on continuously, I should consider it wise to remove the carbon in such a way as not to give rise to dusts. This can be done by working on oiled surfaces from which dust will not rise, and I should regard this as the simplest precautionary measure.

The reason this point has not been dealt with in any of our articles is that it has not arisen as a practical matter. As you know, we have studied garage mechanics who do all kinds of work with engines, without finding any evidence of any significant lead absorption. Even in the most severe and continuous exposure to dust from carbon in motors, the hazard would not be great, and one would not expect any difficulty as

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a result of intermittent work of this kind. Only where it is continuous would there be even theoretically, such an amount of exposure as to result in difficulties. Incidentally one is dealing here with inorganic lead compounds and the limits of danger are fairly well recognized in this field. Thus it is now generally believed, on fairly sound evidence, that if the lead content of the atmosphere does not exceed 1-1/2 mgs. of lead per 10 cubic meters of air, through the entire working day, cases of poisoning will not develop even after months or years of exposure. I think you will realize that here the hazard is not very great.

I have written Mr. Bevan a letter calling attention to your report of July 16th of your inspection of Saint-Ouen refinery of Standard Francaise des Petroles. He will undoubtedly call your attention to my comments, but I may augment them by calling your attention to the fact that we are not willing to authorize the use of more than one group of men at any one mixing plant, since to do this is to reduce the exposure in the plant by purely artificial means. In our point of view no plant is adequate in size and capacity unless it can maintain its work without exceeding the permitted frequency of mixing operations. Where this frequency is exceeded, you should look into the facilities for mixing, determine what is the matter and recommend the necessary changes. Usually, I believe, it will be found that storage tank facilities are not adequate.

Dr. Machle calls my attention to the fact that you did not have copies of two reprints of ours which we felt you should have in your office for the information of persons who might request them. Therefore I am sending you under separate cover two copies of "An Appraisal of the Lead Hazards Associated with the Distribution and Use of Gasoline Containing Tetraethyl Lead. Part I", and half a dozen copies of our study on "The Occupational Lead Exposure of Men Engaged in Mixing Tetraethyl Lead with Gasoline".

Very truly yours,

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Robert A. Kehoe, M.D.

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