

August 27, 1946

Mr. H. D. Roffey,
The Associated Ethyl Company Limited,
Artillery House, Artillery Row,
London, S. W. 1, England.

Dear Mr. Roffey:

The problem of the hazards associated with the fueling of aeroplanes, as raised in your letter of August 21, is not easy to answer. On the other hand, my approach to this problem would be quite different from that apparently contemplated by the people of the Burmah Oil Company who have raised the question. Without knowing more about the technique of this work it is not possible for me to say whether the hazards are actual or negligible. On the other hand, I can say that in my opinion there is no excuse for the existence of important hazards of lead absorption in work of this type. If the work is done properly in relation to the avoidance of fire and explosion, as well as exposure to gasoline and lead vapors, there should be not the slightest likelihood of lead poisoning among these men. The problem is not one of temperatures or of the lead content of the gasoline, but is rather one of the avoidance of unnecessary spillage of gasoline on surfaces from which evaporation will occur promptly and substantially completely. In my opinion, therefore, every attention ought to be put on the development of proper technique in the conduct of the day's work. If this is done, medical examination for the detection of lead poisoning will not be required.

I do not share Bachelor's optimism with respect to the detection of lead poisoning by medical examinations. In general it is fair to say that medical men in general have missed the diagnosis of illness of this type even when it was existent in rather dramatic form. There are few, if any, prodromal symptoms of this type of poisoning, and in view of the possibility of the confusion of such symptoms with those of gasoline intoxication, it is scarcely probable that medical examinations will serve any useful purpose. The only thing that could be done which would really be useful would be the quantitative analysis of representative samples of the urine of exposed personnel. Such analyses are not possible under the circumstances, and therefore need not be referred to.

Considering the above facts and opinions, it is my feeling that you and your associates ought to deal with matters of this sort on the basis of advice for the completely safe handling of gasoline. If the gasoline is handled properly and safely, neither you nor the gasoline distributor need fear the occurrence of lead poisoning. Neither you nor we can provide the facilities required

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for the detection of lead poisoning if conditions should be such as to bring it about. Therefore, we must all exercise our influence for the purpose of avoiding unnecessary exposure.

Sincerely yours,

Robert A. Kehoe, M. D.

RAK ef

Copy by Air Mail.
Original by Steamer.

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THE ASSOCIATED ETHYL COMPANY LIMITED

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OUR REF. SM/11

YOUR REF.

21st August, 1946

Doctor Robert A. Kehoe,
College of Medicine,
University of Cincinnati,
Ohio,
U.S.A.

Dear Doctor Kehoe,

AVIATION FUELLING STAFF T.E.L. HAZARDS.

We have received a query from the Burmah Oil Company which we feel we are unable to answer, having no data on this type of activity.

The query arises from a question put to Jack Bachelor when he was in Bombay, as to whether he considered that aviation fuelling staff and in particular nozzle crew men were subjected to undue T.E.L. hazards. Jack replied that, in his opinion, they were not subjected to undue hazards. He further stated his opinion that any trace of lead poisoning, due to their work, would become apparent in a medical test within a period of a year. A medical test was therefore arranged at Karachi of two of their fuelling nozzle crew men, both of whom had had eleven months' service. Both were passed by the doctor as "fit and well, with no trace of poisoning or illness".

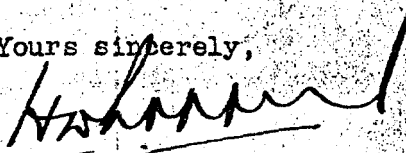
The Burmah Oil Company have asked us for our views on whether or not regular medical tests should be arranged for crew men engaged in the work of refuelling aircraft with, presumably, 100 octane gasoline.

It would seem to us that there is just a possibility of the same type of lead exposure as exists in certain badly arranged small container filling points, of which, as you know, we have had experience in the past.

We should be very grateful therefore, if you would give us the benefit of your views on this question.

With kindest personal regards,

Yours sincerely,



H.D. ROOFFEY

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