

August 22, 1944

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Mr. J. H. Schaefer,
Ethyl Corporation,
Chrysler Building,
New York City 17.

Dear Mr. Schaefer:

I am quite in agreement with the suggestion in your letter of August 10, that the lead concentration within tank cars that are being repaired might be well above the figure of 0.002 mgs. per cubic foot under the precautionary conditions that are established for such work. Actually as you are probably aware, the above figure is well within the limits of safety for prolonged exposure without any protective respiratory equipment at all. Therefore, this standard is the one that would be adopted if men were to enter the tank cars without any protective equipment, provided, of course, that there were no other noxious gases or vapors present to produce difficulty. So long as complete protective equipment is to be used, the figure could well be several times that cited above. Actually as you probably realize, the only importance of setting such a level is to make sure that there is not available a gross quantity of tetraethyl lead to contaminate the equipment and clothing and perhaps the skin of the individual worker.

I should be very much interested in finding out the results of your observations on the lead content of the atmosphere in the tank car after the work of welding has been started. On the basis of such information we ought to be able to know how to simplify the procedure considerably.

As to any final discussion of this problem, I think it would be wise if the group concerned could get together some time for a comprehensive discussion. I shall make it a point to look into the matter in some detail at my next opportunity.

Very truly yours,

Robert A. Kehoe, M. D.

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ETHYL CORPORATION

MANUFACTURING AND TRAFFIC DEPARTMENT

cc: Mr. C. W. Bond
Dr. O. E. Kurt
Mr. C. Wasserman
Dr. C. Calingaert

August 10, 1944

PLEASE ADDRESS REPLY TO
CHRYSLER BUILDING
405 LEXINGTON AVE., NEW YORK 17, N.Y.

Dr. R. A. Kehoe
College of Medicine
University of Cincinnati
Eden and Bethesda Avenues
Cincinnati 19, Ohio

Dear Dr. Kehoe:

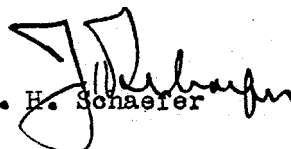
The present procedure agreed upon for cleaning Ethyl Fluid tank cars preparatory for welding in new rivet pans calls for reducing the lead concentration to 0.002 before allowing workmen inside. Meeting that specification is a lengthy undertaking and with up to a hundred cars to be processed the burden will be severe. It has been our thought that for two reasons a somewhat higher limit might be permissible, thus simplifying the preparatory cleaning work. First, workmen entering will be protected by special clothing, gloves, air-line masks, etcetera, therefore the safe working limit may not need to be quite so low. Certainly we are forced to protect against much higher concentrations in other operations, cleaning TEL equipment on the wash-pads, for example. Secondly, no matter how low the concentration is reduced to before the workman enters, when he starts banging around inside the car and applying heat the lead concentration will go up, probably to an extent that makes the original 0.002 specification meaningless.

By a joint program between Maintenance and Development Sections at Baton Rouge we are undertaking to find (1) what the concentration becomes after the workman starts welding and (2), if possible, a means of simplifying tank car cleaning. In this program we would appreciate your advice and guidance concerning TEL concentrations. If, for example, tests show the concentration goes to 0.05 as soon as the workman starts welding, I wonder how justified is all the time spent getting down to 0.002 before he enters.

I have asked those at Baton Rouge to take this question up directly with your representative there as the work goes along toward the end of developing a simpler procedure if that is possible but, at the same time, to make sure we do not get off base in any changes which we might make.

I should appreciate your comment on this problem and, also, any suggestions you might have as to possible ways and means to simplify the cleaning operation.

Yours very truly


J. H. Schaefer

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