

January 7, 1941

Mr. Russell Schell
Ethyl Gasoline Corporation
Chrysler Building
New York, New York

Dear Russ:

The point brought up in your letter of November 28, is theoretically of considerable interest to us.

If we assume that there is zero ventilation in a tank and that the tank is then thoroughly cleaned, but as a consequence of the absence of this ventilation, the air is in equilibrium and saturated with hydrocarbon and lead vapors as determined by the temperatures and concentrations of each in the sludge, we are forced to recognize that the tank is practically just as hazardous as though it had not been entered and cleaned at all. In view of the fact that repairmen may in instances enter tanks immediately after the cleaning operation has been completed, it might be possible for accidents to occur to them in spite of the precautions taken.

From the practical point of view, however, we do not believe that this hazard is a great one. In the first place the safety engineer is on hand to establish that the tank is free from dust or odors of lead compounds before repairmen enter it and secondly, since both hydrocarbon and lead vapors will have their origin from the residues in the tank, it would follow that the tank would have to be of necessity ventilated to a sufficient degree to eliminate the hydrocarbon vapors and the lead vapors would be taken out at the same time.

It is our experience that lead vapors will volatilize from sludge at least as rapidly as will hydrocarbon vapors and accordingly in instances where ventilation is minimal we would not be likely to encounter a situation in which the hydrocarbon vapors would all have come off and been removed while

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lead vapors were still being involved. In other words, we believe that it is safe to assume that the presence of hydrocarbon vapor will prevent men entering tanks without respirators after cleaning procedures have been completed until such ventilation (as is operating) has reduced the concentration of both hydrocarbon and lead vapors to safe levels.

I think it would be advantageous to get information on certain aspects of this problem and I would like to see you and Oscar or both of you when I am in New York on January 16 or 17.

With best wishes, I am

Cordially,

Willard Machle, M. D.

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