

August 15, 1949

Mr. E. O. Jones
Ethyl Corporation
Chrysler Building
New York (17) New York

Dear Ollie:

I have just returned from my vacation and want to get started on the tank survey as soon as possible. You will remember our conversation in Detroit and our agreement that it would be advantageous for small tank cleaning and repair schedules to be investigated on a national scale since the local companies operating in this general area have not furnished enough available subjects.

If we could find a company which had a contract for the repair of a large number of tanks and which was using several different crews, that would constitute our best possibility for expediting the survey. That was precisely the situation which we hoped would obtain with Tank Cleaners Incorporated of Jacksonville but as you know their work was deferred and we do not know when it can be started.

It would, of course, be advantageous to work with crews within a radius of five hundred miles of Cincinnati but if this can not be done we shall have to do the work elsewhere. It is entirely possible that if such work can be found in the vicinity of New York, Dr. Gregorius might be enlisted in the work as the actual examinations take very little time. The Safety Engineer's work and that of the laboratory are the immediate time-consuming factors.

I am enclosing an interim report which we discussed and which you may find advantageous.. If you find it advantageous or expedient to discuss the small tank situation with Mr. Shea, I prefer that he see the report rather than an interpretation of it.

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Please let me know at your earliest opportunity what you think can be done in digging up repair companies which might be willing to cooperate.

Cordially yours,



Lester W. Sanders, M.D.

LWS:vr

cc - Dr. R.A. Kehoe

Encl.

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W. H. H. H.

MEMORANDUM ON SMALL TANK CLEANING AND REPAIR SURVEY

To date it has been possible to study only four tank repair crews consisting of a total of 14 men. The observations cover a total of 462 man days and include a total of 538 lead determinations on individual urine samples. On each tank entry, before, during, and after tank cleaning lead-in-air determinations were made.

Work has not proceeded far enough to arrive at any sound conclusions. Certain pertinent facts have been established but beyond those facts only surmise can be made concerning the over all picture.

The facts which are well established are:

- (1) Dangerous concentrations of lead exist very frequently in the type of tank being observed.
- (2) In the group of men so far observed and for the period of time observed no individual entry has been sufficiently prolonged in spite of high lead in air concentrations to be regarded as severely hazardous.
- (3) In the group of men so far observed and for the period of time observed the total time spent within a tank has not been sufficient to be regarded as severely hazardous.
- (4) The data so far collected do not clearly reflect a relationship between tank entry and lead absorption.

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- (5) The mean concentration of lead in urine of the individual crews indicates very definitely an industrial lead exposure.
- (6) The mean concentration of lead in urine of individuals indicates very definitely an industrial lead exposure.
- (7) Both the group lead in urine means and the individual means fall within the category where lead intoxication could be expected.
- (8) Disregarding the means and considering individual results over shorter periods of time, lead in urine concentrations are seen which are consistent with severe intoxication.
- (9) With the exception of one observed man no clinical evidence of lead intoxication has been observed.

It is believed at the present (without sufficient evidence to adequately support the belief) that:

- (1) In at least many instances the source of lead is not organic lead within the tank.
- (2) The principal source of lead may prove to be paint burning.
- (3) Lead intoxication may occur in workmen involved in the work under observation.
- (4) Lead intoxication may have occurred in the past in the group without our knowledge.

- (5) If by coincidence longer entry were to be made into such tanks as have been observed and/or continual daily repeated tank entries were to be made over a considerable period of time it would be possible and probable that organic lead intoxication would occur in the exposed men.

† It is believed that even if we had certain knowledge that the source of lead in these men is not T.E.L. and therefore beyond our control as an industry we must put ourselves in a position to properly advise the oil and tank cleaning industries and to defend ourselves from false allegations if an intoxication should develop from inorganic lead sources.

Lester W. Sanders, M.D.

August 15, 1949

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