

April 21, 1932

Mr. A. N. Bredlow
c/o Standard Oil of Indiana
Detroit, Michigan

My dear Mr. Bredlow:

I have talked over the matter of the illness of your men with Dr. Schradin who saw them at the Ford Hospital a few days ago. It is a little difficult to make certain of the nature of their illness though I think we shall be able to arrive at a fairly reasonable conclusion when we have analyzed the samples from the tank which Dr. Schradin brought back with him. It is quite certain that the rust samples contain some quality of lead and my guess is that such lead as is present, will be found to be Tri-Ethyl lead compounds.

The symptoms which the men described and the physical findings which have been obtained, coincide very satisfactorily with lead intoxication from inhalation of Tri-Ethyl lead compound. Furthermore, the sneezing which the men described, is almost certainly due to the presence of such compound in the air which they breathe. The only question at issue is as to the quantity of such material actually inhaled and absorbed. Since these compounds are extremely effective in producing respiratory irritation, one can get no idea of the actual quantity present from the degree of irritation experienced. On the other hand, the general symptoms could be satisfactorily explained on the basis of gasoline irritation. I would not attempt at this time to be too definite in my conclusion but I strongly suspect that the condition was the result of a mild and fleeting lead intoxication. In such cases if the exposure is brief, as it was in this case, the symptoms are very likely to disappear rapidly, and to leave no prolonged or permanent bad effect. I should consider it wise regardless of the conclusion which we may arrive at later to obtain samples of the excreta of these men for the purpose of analysis. Therefore, I am sending to you by express, containers for the collection of faeces and urine. It would be wise,

I believe to obtain these at the earliest possible time after the men have been discharged from the Hospital. The faecal sample should be a single large evacuation collected directly into the container. It is especially important that no intermediate container be used in the collection and the greatest care should be taken against contamination from the dust on clothing or hands of the subject. Each man should be carefully warned against any possibility of contamination. After collection, the container should be carefully closed, labeled and sent on to us. In the same manner, the urinary sample should be collected directly into the container using extreme care against contamination, and we should have not less than two quarts of urine from each subject.

I shall send you information later on the analyses which we are doing on the material from the tank together with a more definite conclusion as to the significance of the lead exposure which these men may have obtained. Furthermore, when we have studied the matter a little more carefully, I shall wish to make certain recommendations as to the manner in which future work of this sort should be done consistent with the practice in different parts of the country. This is the first time this matter has come up in any important way and I believe we shall have to take cognizance of it.

I should appreciate your sending on to me any further information which presents itself on these men.

Very truly yours,

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