

August 23, 1940

Dr. Samuel Rubin
203 Patapsco Avenue
Baltimore, Maryland

Dear Doctor Rubin:

At the request of my associate Dr. L. J. Schradin, I am sending you herewith the results of our analyses on samples of urine and blood obtained from the group of men involved in the cleaning of a gasoline storage tank at the Curtis Bay Terminal of the Tidewater Associated Oil Company.

A few comments are justified in connection with these data. First, the blood findings on the group of five men who were most seriously exposed are uniformly low as compared to the results obtained in cases of inorganic lead poisoning of corresponding severity. The results are in good agreement for the two methods of analysis, although in the one instance of W. T. Witter, we are dealing with a somewhat larger analytical variation than is ordinarily seen. The average of these two results in each instance can be accepted as somewhat more accurate than either single result alone. In any case the blood values are low as compared to the urinary values, except in the case of Rogalski who, presumably, had very little actual exposure. This discrepancy between the blood and the urinary results is characteristic of tetraethyl lead poisoning, in which case the lead compound tends to be distributed more widely, and especially in the fatty tissues of the body, rather than to collect in high concentration in the blood. Perhaps on this account, but possibly because of the differences in the distribution of lead in the body in the case of this compound, the urinary lead excretion tends to be considerably more rapid than in the case of inorganic lead poisoning. For this reason the urinary concentrations in severe cases are likely to be very much higher than any value in inorganic lead poisoning. From our experience it can be accepted that urinary values give the best clue to the relative magnitude of the lead exposure, and in the case of this group of men, this would seem to be borne out by the occupational histories of the men and by their clinical course.

These analytical data are obviously of scientific and academic interest only in connection with these cases, but I felt you would probably be interested in our interpretation of these results on the basis of our previous experience.

If there is anything which I can do for the benefit of these men, I would be glad if you would call upon me.

Very truly yours,

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Robert A. Kehoe, M.D.

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