

March 8, 1946

Dr. V. B. Beam,
Plant Physician,
E. I. du Pont de Nemours and Co.,
East Chicago, Indiana.

Dear Dr. Beam:

The problem raised in your letter of February 25 is a very easy one so far as lead exposure is concerned, and a very difficult one in its relationship to arsenic. So far as I have been able to establish, chronic arsenic poisoning in industry is extremely rare, if it occurs at all. This does not mean that there may not be minor toxic symptoms which are generally ignored or unrecognized. However, if one thinks in terms of the characteristic signs of chronic arsenic poisoning, they are certainly rare in their occurrence. It is for this reason that the matter of what is safe and what is dangerous is rather difficult to determine. Dr. Folger's observations represent an attempt to find functional changes before any significant organic damage has occurred. These findings, therefore, represent something more than warnings in that they indicate that functional disturbances are taking place. These functional disturbances are non-specific, and thus a considerable amount of work is required to run them down and give them their proper weight.

We can carry out analyses on the blood and urine of your exposed people, and we would be pleased to do so, if it were recognized by yourself and the management that these are frankly experimental in character. We should be interested in knowing something of the order of magnitude of the arsenic absorption of these people, and we should like to be able to correlate these data with careful clinical observations. However, we cannot assume that there will be such a correlation nor can we tell you what level of arsenic concentration in blood or urine is to be regarded as safe on the one hand or dangerous on the other. The background of information would have to be provided by careful studies of this type.

If this is to be done, we will supply you with the necessary containers and with suitable instructions for the collection of the samples. Considering the distribution of the men, I should say that we would take all of the men working on towers, batch tanks and dryers. In addition we could take 8 to 10 of the men in the packing crew and about 5 men working on the Litharge furnaces. The selection should be made on the basis of the length and severity of the exposure of the men, ^{and} upon their probable reliability and willingness to cooperate in obtaining samples. I think it would be advisable in connection with these samples to have a fairly full clinical record.

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The cost of doing this work would be about that of the work we have done on lead. I should consider it advisable to wait until the first set of samples has been collected before attempting any expression of opinion on the advisability of carrying out such observations repeatedly.

If this work is to be done, I think it would be desirable in the not too distant future for me to visit the plant and see the conditions and discuss with you the nature and frequency of the physical examinations. As I indicated above, the analyses will be of little use unless the results can be correlated in some fashion with adequate clinical data.

Cordially yours,

Robert A. Kehoe, M. D.

RAK ef

C.C.: Dr. G. H. Gehrmann

Dictated but not read.

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