May 4, 1949

Mr. J. E. Underwood,
Director of Research,
Diamond Alkali Company,
P. O. Box 430,
Painesville, Ohio.

Dear Mr. Underwood:

I am very pleased to have heard from you, and I shall be glad to send you a series of reprints relating to the problem of lead absorption. Unfortunately you will not find much in these articles which would deal with the practical problem of handling lead compounds so as to avoid dusty industrial conditions. The reason for this is that, because of the very large number of operations concerned with lead compounds in which dust and fume are produced and disseminated, it is almost an impossible task to discuss the problem in detail. One has to rely upon certain general principles.

By and large, I should point out to you that the handling of lead compounds in most of the older industries is done very badly. There are exceptions to this rule, but industry has been complacent about this problem for a long time and until some new blood can be introduced into it, we cannot expect much progress. If this sounds a bit pessimistic, I can only say that I have been working at this problem for twenty years. It is the industry that I know most about. Despite the fact that methods are now available for the complete elimination of lead poisoning from industry, it is very doubtful if the incidence of the disease has been materially reduced in the last two decades. The severity of the illness has been reduced by a gradual but inadequate progress in the control, but the number of cases that occur is still many times too great. Therefore, I strongly advise you to be cautious and to start right in dealing with this problem.

If your company is intending to handle materials that come to you in dry form, you should make careful plans based on carefully considered engineering design to avoid the dissemination of dust in any part of your plant. If you plan to handle them in a wet state, by all means introduce them into the wet medium by means of carefully enclosed systems that will take care of the dust. Then be careful not to throw the dust out through a stack that will contaminate the air which returns to your working rooms or which will be distributed about in the immediate neighborhood of your plant. Then if the wet materials have an opportunity to dry out elsewhere in your plant, you should take every precaution to see that this does not occur under conditions which will contaminate the plant areas. You should consider every possibility during the whole chain of processes so as to avoid any more than the minimum of exposure of well instructed and carefully supervised (medically) personnel. Otherwise, if you do not do better than most of the industries that handle these compounds, you will find yourself

with cases of lead poisoning on your hands.

You will recognize that I am taking a rather dim view of this situation. If so, this is because of my experience. In my feeling industrial processes involving the handling and use of lead compounds should be carried out only under the continual direction and supervision of hygienic organizations that are familiar with the problem and with the methods for the avoidance of exposure and illness. The latter can be accomplished quite satisfactorily, but only by the kind of experience that will enable one to avoid the repetition of the numerous errors of the past and present.

If I can be of any further assistance to you in dealing with your problem, please do not hesitate to call upon me.

Sincerely yours,

Robert A. Kehoe, M. D.

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