

February 18, 1955

Dr. William M. Aldredge
National Zinc Company, Inc.
Bartlesville, Oklahoma

Dear Doctor Aldredge:

Your letter of November 16 to me has gone unanswered for so long as to have little or perhaps no usefulness to you, but I shall fulfill the purpose of courtesy, at least, in replying at long last. The fact is that I've been so swamped with things that demanded my immediate attention ever since my return from a necessary trip abroad as to have no time for my correspondence.

Meanwhile, I believe that you will have answered your own questions insofar as the apparent effectiveness of the masks worn by your men are concerned. I cannot interpret the data in this relationship since I do not have the detailed data on the men involved, but it appears from the results that I have before me that the actual absorption of lead by your men has not been excessive.

There are a number of things that should be said about air analyses. Granting that the samples of air are actually representative of the environmental conditions, i.e. that they are taken in proper places and in sufficient numbers to maintain their representative character, and granting that they are analysed and interpreted properly, they serve the very useful purpose of establishing the extent of the potential hazard. The actual hazard, however, is not confined to the inhalation of lead compounds, nor is the fate of that which is in the air determinable without obtaining very good information on the size of the particles, the extent of the use of respirators and other protective devices, etc. You will note from your own data that what is in the air need not be taken into the body, since apparently the respirators exclude it. It is the combination of these factors that tend to reduce the significance of air analyses as compared to analyses of the urine or blood or tissues of the exposed person. However, wise people in the lead trades use both methods. In practice one uses air analyses for quick and convenient appraisal of the air-borne hazard, while he uses biological analyses to measure the hygienic significance of the total actual hazard. The one is the tool of the engineer to keep his sights clear, in relation to equipment and its efficiency, while the other is the tool of the doctor to keep himself in a sound position in relation to his professional responsibilities.

Sincerely yours,

Robert A. Kehoe, M. D.

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