

June 19, 1962

Roger B. Allen, M.D.
Medical Director
American Optical Company
Southbridge, Mass.

Dear Doctor Allen:

My reply to your letter of June 8th has been delayed somewhat by an out-of-town meeting at Ann Arbor which I agreed to attend some months ago. Otherwise I should have replied to you at once in order to aid you as much as possible in the avoidance of certain difficulties that may need to be dealt with before your people begin to operate in the field to which you have referred.

You must forgive me if I make certain assumptions. I do not know anything about your Company, nor do I know how much you know about lead poisoning and the means of preventing it. It appears to me from your questions, that your people are going about this in the wrong manner, and, therefore, I am trying (perhaps unnecessarily), to indicate the right direction. It also seems to me that you lack experience, and that you have not been well advised. You speak, for example, of the use of respirators as this were the proper means of preventing the inhalation of lead-containing dust. Generally speaking, this is not the case; the dust should not be permitted to reach the breathing zone of the workmen, if this is feasible, as it usually is. You speak also of providing milk. This is both unnecessary and entirely useless. In fact, this is being done only in industries that have not applied satisfactory methods of industrial hygiene, whose people have not learned much in the past quarter of a century. Unless the workmen in your plant are undernourished, they do not need milk in excess of their ordinary use of it, and certainly it will do nothing to protect them against lead poisoning. This is an exploded myth, which has had no scientific or practical standing for many years.

The way to prevent lead poisoning in industry is to design the operations and the operating equipment to lessen the exposure, so far as possible, and then to make use of ventilation and other procedures of industrial hygiene further to control the exposure so as to keep it within safe limits. These are all engineering functions, and in a well-managed and well-operated lead-using industry, these things are done as the inescapable obligation of the technical operators. The role of the physician is to see that the working conditions are safe, in the first instance, and to make sure that they are kept that way. By suitable examinations - clinical

and laboratory, including, in frankly hazardous trades, the analyses of the urine or blood (or both) of workmen - he insures the safety of the men, and if the measures of control begin to deteriorate through poor maintenance or inadequate housekeeping, he sounds the warning and gets the household in order.

You are quite right in believing that facilities for washing bodies, hands and clothing are important, and also facilities in which workmen can eat without a chance of contaminating their food. This, of course, is elementary, for there is no necessity of swallowing lead, and every provision should be made to facilitate the avoidance of swallowing lead. In general, however, the avoidance of respiratory exposure to the dust and fume of lead compounds is of greater, or at least of as great, importance than that of alimentary exposure, and this should be done, to every possible extent, by engineering means rather than by the use of respirators. The latter may have to be used at times, and when they must be used, men should be taught carefully how to use them, the respirators should be cleansed, maintained and supervised by the management, and their use at the right time should be assured by proper supervision.

If I appear to be severe in these matters, I can assure you that I am not, but rather that these are the unavoidable principles of sound practice in the lead trades. It is possible in the glass industry to handle these matters virtually without risk, and this is being done, as I am in position to know. There is no good reason, therefore, why your people should not do this as well as anyone else does it. We have a great many industrial plants in the United States that are attempting to handle lead compounds by improper methods. This is why we still have a high incidence of lead poisoning, usually of the less severe types, but still definite cases of lead intoxication, in the United States. There are satisfactory means of preventing this disease completely, and there is very little excuse for not doing so. What is required is an industrial hygiene engineer who knows his business, to design the operations, and a physician who understands the behavior of lead to act as the reliable and knowledgeable policeman, so to speak (with the appropriate tools of detection), and to determine at all times, whether the working conditions are safe.

I shall be glad to give you any advice and help which you may require, but in order to do so, I must know just what you are up against in terms of the type of operations which are to be carried out. There are no rules of thumb which apply in the first instance, since the adequacy of the measures of industrial hygiene cannot fail to depend upon the nature and the severity of the potential exposure to lead that must be guarded against. It has been a part of our professional

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activity for many years to survey situations in industry by both engineering and medical methods, and to advise sound hygienic measures. If you and your people wish to confer with us on these matters, it would be well if your engineering or operating people were to visit us, describe and illustrate their operations and let us suggest what should be done. Alternatively, we could visit you with this purpose in mind.

I am not in the habit of soliciting for opportunities to render service of any type, but I often find out, after the fact, that industrial people have no knowledge of our willingness to aid them in this practical manner. As a university agency we are not engaged in profitable enterprises, but we do render services of this type at the actual cost, to us, of performing them. Our job is to promote industrial health, and this is the most effective way, aside from research and teaching, to do so.

Cordially yours,

Robert A. Kehoe, M. D.

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P.S. It occurs to me, in view of your location, that you should be able to obtain the kind of advice and assistance you need at a nearer place than Cincinnati. Your State has a Division of Occupational Hygiene at 286 Congress Street in Boston, from which you could obtain help on the engineering aspects of your situation. You may or may not wish to avail yourself of their advice but I believe it can be had. This does not mean that I am "passing the buck"

R. A. K.

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