

December 4, 1961

Gujarati Type Foundry
Gaiwadi - Girgaon
Bombay 14
INDIA

Gentlemen:

A letter from a representative of your organization (name indecipherable from signature) dated November 11th and addressed to The Secretary of the American Medical Association, concerning the potential hazard from a lead alloy used in type casting in your foundry, was forwarded to me with the request that I reply. As a member of the Council on Occupational Health of the A.M.A., and the Chairman of the Council's Committee on Scientific matters, as well as one widely experienced in the industries concerned with the use of lead compounds, I am pleased to answer as well as I can.

It is hardly possible to answer your question definitely, and to give you satisfactory advice on the subject of your inquiry, for the reason that I cannot visit your foundry, and learn the details of your operations at first hand. If what is said in your letter can be taken to be entirely true, your opinion concerning the lack of hazard would seem to be entirely correct. I cannot be sure, from this distance, that these are the facts, however, and I hesitate to contradict the statement and advice of the Chief Inspector of Factories, who has seen your plant and its operations.

What should be done to settle the question at issue, is to sample and analyse the air at proper points in relation to the operations and so to find out just what concentration of lead fumes or particles are dispersed in the air under the conditions associated with the operations. That is to say that the question here is not one of opinion, but of fact. The facts can readily be established by suitable means, and I repeat that this should be done.

In my experience there is little hazard associated with the conditions which you describe, and if you have described them fully and as they exist at all times, air analyses will demonstrate that this is the case. The principal problem in printing establishments is that of the cleanliness of the personnel and the maintenance of excellent house-keeping. If dross of molten metal or the dust associated therewith is allowed to collect, hazardous conditions can be created. If there is strict cleanliness, such a situation does not arise.

So far as measures of environmental control may be necessary, the advice given you by the Chief Inspector would appear to be good. If,

however, there is no real hazard, such measures are unnecessary. As I have stated above, the facts should be established. I should think it likely that he has or can obtain access to proper equipment for establishing the facts.

You ask about governmental regulations which apply to situations similar to your own. In this country, these are matters to be dealt with in the individual States. In some the provisions for inspection and testing are excellent; in others little attention is paid regularly or systematically to industrial establishments unless cases of poisoning occur, when the hygienic agencies of government or the representatives of insurance companies get busy and do something about the situation. The usual technique is that of determining the degree of contamination of the air around workmen; or the employees may be examined and tested for their absorption of lead (by analyses of urine or blood or both). The chief impetus to correct unhygienic conditions is provided by concern for the health of the employees in some instances, but there is always the cost of insurance rates and compensation for occupational illness as the spurs to action.

The precaution in printing establishments, as I have indicated consist of maintaining the cleanliness of floors, equipment, and the use of ventilation if necessary. (The cleaning is best done by means of vacuum cleaners.) The personal precautions consist of cleanliness of clothing and hands, the avoidance of eating in work spaces, or of putting unclean objects into the mouth. This, of course, requires clean and sanitary washing facilities and a satisfactory place in which to eat.

There is no point in describing the symptoms and signs of lead poisoning to you. This is a physicians problem, and if there is any question of this type, a qualified physician should be relied upon to determine the facts.

If I can be of any service to you or perhaps to the Chief Inspector, by way of further advice, or information as to methods of sampling and analysing the air, or on any other matter in this connection, I would be glad to do what I can. We, in this Laboratory, have been studying the problems of the lead trades for many years, and can provide information to professional people in industrial hygiene on all aspects of these matters. We have had graduate physicians from your country in training here on several occasions, and we are pleased to be of any assistance that may be possible.

Sincerely yours,

Robert A. Kehoe, M. D.
Director, The Kettering Laboratory

RAK:ss

cc: Mr. Howard N. Schulz