

April 21, 1950

Dr. A. F. Lecklider,
Medical Director,
Fisher Body Division,
General Motors Corporation,
Piquette and St. Antoine,
Detroit 2, Michigan.

Dear Doctor Lecklider:

I am sorry that the pressure of work has delayed my comments on your booklet, and I am also somewhat apologetic for the hasty notations, which may not be too easily legible, which I have jotted down opposite certain paragraphs. I have changed or reworded certain statements, and have commented on others.

I must be frank and say that I do not think the instructions to your staff are adequate. I do not believe they will understand either the problem or the significance of the analytical control measures unless the instructions are more precise and more extensive.

You can, I am sure, eliminate all lead poisoning from your plants, if you will apply proper criteria for the recognition of danger, and put the burden for prevention where it belongs - not on the doctors but on the engineering and protective measures. Otherwise, the only choice presented to you and your staff is to remove men summarily from work involving lead exposure, when they reach dangerous levels of lead absorption. If you do this, you will put the pressure where it belongs, automatically. Dangerous exposure is subject to entirely adequate definition at present, best in terms of urinary lead excretion, but reasonably satisfactory in terms of lead concentration in the blood.

I regard an occupational exposure to lead which is sufficiently severe to cause dangerous absorption within 4 1/2 months (i.e. blood lead concentrations of 0.08 mg. and more, per 100 grams, and urinary levels of 0.15 mg. or more, per liter as being too severe to be tolerated in a well managed industrial establishment. We have not had a case of lead poisoning in the manufacture of tetraethyl lead, which is much the most dangerous of the lead trades, since the middle period of the war, and we had had none up to that time since 1928. We were compelled by the pressure of the war to relax our standards and we got into trouble. I shall never be caught again in that situation. Moreover, the cost of having cases of poisoning in compensation costs and in terms of morale and anxiety and bad employee relations of one kind or

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another, is too great to be endured, and this cost is becoming greater every year. It is even greater if one appreciates fully the necessity of keeping men out of exposure until they excrete the abnormal quantities of lead from their bodies, before returning to work.

Our procedure is to maintain the plant operations in such safety, that representative groups of workmen in the different occupations do not go above levels of lead in blood and urine which we have found to be safe. This fixes the general environmental pattern, and establishes the measures of control and supervision required. If occasional incidents of unusual character involve certain individuals in risk, so that they move upward into potentially dangerous ranges of lead excretion or blood lead content, we remove them at once, having the authority to do so summarily.

By this means we avoid cases of lead poisoning and the worries and wear and tear associated therewith. If this is to be done, it must be founded on the presently certain evidence, that occupational lead exposure can be kept entirely safe as defined by present physiological standards, and that if this is done, no cases - not a few, but absolutely none - will occur. If you have any doubts about this, I shall be only too happy to supply the evidence.

Sincerely yours,

Robert A. Kehoe, M. D.

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