

January 11, 1950

Dr. W. E. Bones,
Southern California Plant,
General Motors Corporation,
2700 Tweedy Boulevard,
South Gate, California.

Dear Doctor Bones:

On my return to my desk I found that the analyses of samples received from your people had just been completed. I have looked them over in a somewhat cursory manner and have arrived at certain conclusions which are indicated below. Inasmuch as I do not have information on the length of employment of the individuals, or on such details of their work as would enable me to draw valid conclusions concerning individuals, I am put to the necessity of merely summarizing the general facts with reference to the occupational groups involved. You will have to interpret the situation with respect to specific individuals, singled out for comment, on the basis of your more complete information. However, if you choose to do so, you can send me more detailed information on these individuals and I shall be glad to give you my opinion.

If the facts on certain individuals are not in accord with your expectations, I should be glad to have your comments on the individuals in question, together with such information as you are able to supply. On the whole, however, it is evident from the high degree of correspondence in the two sets of results by the two methods of analysis, that the results are precise and valid. Where there is a significant discrepancy between the results obtained on a single individual I would suggest the advisability of using the average of the two results as the most valid. On the other hand, it may be pointed out here, that the results obtained by the Dithizone method are somewhat less variable than those of the Spectrographic method, and therefore if one has to choose between two results, that obtained by the Dithizone method is the one of choice. In this instance it makes little difference, since there are no very important discrepancies.

From the inspection of the results as a whole, it is quite apparent that the environmental conditions under which this group of men is employed, are not remarkably hazardous. The large proportion of the results are within normal limits, a number of them are slightly elevated, and only a few (8) are of the order of magnitude that suggest an occupational hazard of borderline significance. It is apparent, therefore, that the control measures used for the protection of these men are generally adequate.

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Examination of the results on men engaged in specific occupations indicates clearly that the filers as a group are subjected to the most significant exposure. Five of the 48 filers show average results ranging from 0.07 to 0.10 mg./100 grams, while only 3 out of 45 of the assemblers have given results above 0.07 mg./100 grams. The proportions here are of the same order of magnitude, but inspection would indicate that the severity of exposure of the filers is just a little greater than that of the assemblers. Two of 6 spot welders show results above 0.07, and of these, one, James Ferris, has a lead level in his blood that is indicative of recent hazardous exposure. Only one other man, a filer named Wilson Sarpy, is in a corresponding situation.

For your further information I should regard every man who has yielded a result above 0.07 mg./100 grams as being involved in potentially hazardous exposure, though I should not anticipate the occurrence of any symptomatology except as the blood level was at 0.08 mg./100 grams or somewhat higher. For practical purposes I should be disposed to look into the historical background and the manner of working of individuals who differentiate themselves in this manner from other members of their occupational group. I would expect that there was something unusual either in the duration or the severity of the exposure of such individuals.

The one analytical result obtained on the urine of John Contrino is in correspondence, physiologically, with the results obtained on the blood. It is apparent that this man has had no recent hazardous exposure to, or absorption of, lead.

At the time of my visit to the plant, I found reason to suspect that opportunities might well exist for a certain amount of exposure on the part of individuals by reason of lack of uniformity in the control measures and something less than perfection in the house-keeping facilities and practices. Frankly, I am surprised somewhat, and pleased, that these results are generally as good as they are, since, as I have indicated above, it is clear that with a few exceptions, the control measures are being applied satisfactorily. It looks to me from these results that all that is required is to maintain the situation as it is now, while putting the finishing touches on a few precautionary measures so that there will be no exceptions to the general safety of the working conditions and work practices.

I would appreciate it if you would convey my kindest greetings to Doctor Lambie, if he is still there, and to Mr. Clark.

Sincerely yours,

Robert A. Kehoe, M. D.