

March 31, 1930

Dr. W. E. Deuel,
E. I. DuPont de Nemours and Co.,
Dye Works Hospital,
Pennsgrove, N. J.

Dear Dr. Deuel:

Thanks for your letter of March 21 enclosing the data of the analyses of air at various points in the workrooms. As you have no doubt observed, the lead content of the air is much too high in the alloy building and it is especially bad around the pot room door. However, the lead in the air around the grinder scales on the first floor is also much too high. I have no doubt it will be possible to correct these matters and that their correction should lead to a considerable improvement.

In the furnace building the results are entirely satisfactory. I take these to be the result of normal operation when nothing has stirred up dust upon the floor. It occurred to me when I was there last that such lead dust as might be in the air in this room would be the result of sweeping and cleaning operations rather than the effect of normal operation. It therefore occurred to me that it might be that an insufficient amount of attention was being given to the dust on the floor of this building and what was being done to dispose of it. I do not believe that the lead vapor as the result of pigging would ever reach any very significant figure. It is, therefore, important in the case of these men to see how clean they are, how carefully they watch themselves against the ingestion of lead in their chewing tobacco and whatnot, and also how much dust they raise when they clean up the place.

As to the high results among men who are working in the autoclaves and stills. I am inclined to believe that these are due to the fact that from time to time as changes are made in the building and as things go wrong in the course of operation (such as plugging a valve), high concentrations of tetraethyl lead vapor exists for short periods of time. During the past six months there has been a fair amount of removal and revamping of equipment, especially in the old building. I am inclined to think that it is this sort of thing which gives us our results. In fact, the last time I was there one of the units of equipment was being revamped. There were pipes of

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various sorts lying on the floor and there were a certain number of open connections. Around these pieces of equipment and in the general area in which the men were working, the smell of tetraethyl lead was distinctly perceived.

We have not received any smears since the first three sets which you sent us. The last time I was in Wilmington I talked with Dr. Gehrmann and with you and we felt that at that time we should probably be sent at regular intervals slides which would give us a cross-sectional notion of the stippling among the men in exactly the same way that we are now from time to time determining the excretion of lead. I should suspect that exactly the same group of men that we have selected for the purpose of providing us with specimens of excreta would serve our purpose excellently for following the progress of the stippling. Undoubtedly I will see you soon and we will discuss this entire matter. Meantime I should be pleased to know how the results which you obtained on your smears have checked with the results which we have sent you.

Very truly yours,

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