

May 17, 1967

Mr. Victor H. Sussman, Director
Division of Air Pollution Control
Commonwealth of Pennsylvania
Department of Health
P.O. Box 90
Harrisburg, Pennsylvania 17120

Dear Mr. Sussman:

Thanks for your letter of April 27 and for the complete representation of the calculation whereby you arrived at the figure of 8.3 micrograms of lead as the permissible concentration in the ambient atmosphere. I was intrigued by the fact that I had made a somewhat different calculation and had arrived at the figure of 18 micrograms.

I then calculated the actual quantities of lead absorbed per day in accordance with the postulations in the table attached to my statement, and came out with the figure of 2.14 micrograms when the calculation was based upon the lead retained in the respiratory tract during respiration, and as 3.09 micrograms when calculated on the basis of that inhaled (rather than that retained). If then one accepts the likelihood that he may absorb 24 micrograms per day from the air with safety, the tolerable concentration might be regarded as approximately 8 to 15 times the present level (which has been taken as 1.5 micrograms per cubic meter).

I can find no great fault in your method of making the calculation, nor is there any basis that I can find for quarreling with the procedure which I employed. However, I doubt that any of these methods can give us useful information, and with this somewhat academic and hypothetical consideration behind us, and with the recognition of its quantitative vulnerability in any case, I am content to leave it there and await the results of experimental observations.

With best regards,

Cordially,

Robert A. Kehoe, M.D.
Professor Emeritus of
Occupational Medicine