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March 25, 1976

Mr. William Lee
Industrial Hygienist
Occupational Safety and Health Administration
U. S. Department of Labor
Washington, D. C. 10210

Dear Mr. Lee:

Please accept my thanks for your letter of March 15, and for the Proposed Standard (5 copies) for Occupational Exposure to Inorganic Lead.

I am sorry that I shall not be able to promptly comment on the Proposed Standards. It so happens that I am having considerable difficulties with my eyes (bilateral cataracts and retinal degeneration) and I have to read fairly slowly now.

I should tell you, however, that a series of experimental invertigations carried out over a period of some twenty years, are being prepared by colleagues of mine for presentation in the not too distant future. It was my misfortune to become so busy in the years of my Professorship that I had insufficient time to accomplish more than the direction of these experiments.

You may understand this when I tell you that I subjected a group of persons (who trsuted me) to the ingestion of lead in fixed dosages, and developed a pair of chambers in which another group of human subjects inhaled lead daily (excepting Sunday) under conditions simulating occupational exposure, over a range of dosages (within safe limits). That is within limits which I had observed to be safe in industry, using the criteria developed successfully in industry.

I considered it necessary to maintain the exposure for long periods of time. One of my ingestion experiments continued for four years. Others continued for six months to two years. I attempted in these experiments to test the criteria employed in industry, by quantitative methods, so as to fix, to my satisfaction, the suitability of the criteria for every variable, which I could control precisely.

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I consider, now, that it will not be possible in the future, to conduct such experiments, and quite frankly I do not believe that such experimentation can or should be done except by highly experienced and throughly conscientious persons, which, of course, I consider myself to be. Incidentally, the subjects were examined weekly by an entirely competent physician who had the authority (given by me) to conclude (summarily) the experiment, for the safety of the subject. Actually, this was done in one instance, that of a subject who ingested lead at the highest level tested. This man was not ill, but it was feared that he might be later. It was, of course, essential that no such thing should occur, or even be suspected.

We have investigated the problem of childhood plumbism extensively also, but not by experiment. I am a physician, and I do not intend to take chances with children. On the other hand, in the face of industry which, until lately has given little thought to the acceptance of danger for its thousands of employees, complete controlled experimentation is, I have no doubt, a valid medical procedure. But how does one obtain complete control.

The full data of these experiments is being put together by a colleague of mine, with the assistance of thoroughly competent people and it is my hope and belief that they will answer quite a number of questions to which we need answers. Various persons will be able to make use of these data, as they choose, to develop criteria of the type which your department is sponsoring.

Coridally yours,

Robert A. Kehoe, M.D.

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