February 16, 1942.

Mr. L. B. F. Raycroft, Manager,
Public and Industrial Relations,
The Electric Storage Battery Company,
Allegheny Ave. and 19th Street,
Philadelphia, Pennsylvania.

Dear Mr. Raycroft:

Thanks for your trouble in sending me the article of Smucker and Kistler. As a matter of fact, I had seen it, and although it is of considerable interest, and although it confirms certain of our conclusions, it does not establish the threshold of intoxication, since the conditions of exposure were manifestly far above such a level.

The work of the Public Health Service in battery manufacturing plants, ("The Control of the Lead Hazard in the Storage Battery Industry" by W. C. Dreesen, et al, Public Health Service Bulletin No. 262, 1941, is more in point, because it shows correlations between air analyses and urine analyses of a rather extensive type. These results are not strictly comparable to our own, but they suggest without proving the point that the standards which we have adopted in terms of urinary lead concentrations are on the safe side. I feel quite certain it will be found that the urinary lead concentration is much the best measure of lead exposure. It seems almost certain to me that the safe level of lead concentration in the air will vary extensively with the nature of the lead compound in suspension and with the predominant size of the particle in the air. Thus, I believe, there will be a whole series of standards in terms of lead concentration in the air. There will be only one, on the other hand, for urinary or blood lead concentration, since after all is said, real safety or danger depends upon the actual lead absorption into the tissues. There is much work to be done after these relationships can be clearly established, and I think there is very little use in talking about it until the work has been done. I believe on the whole, that the 1.5 milligram per 10 cubic meters of air is the thing at which we had better shoot until more facts are available. If this is done, it is certain that the largest proportion of our difficulties in the lead trades will have been eliminated. I realize that this is difficult to do in some industries, especially in older plants, and also during this present period of pressure. However, I believe, it would be possible to design new plants for most of our industrial activities in such a way as to

meet this standard.

Sincerely yours,

Robert A. Kehoe, M. D.

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