January 15, 1941

Mr. O. B. Lewis

Dear Oscar:

The attached memorandum from M. Soroos will show you that the sample of lead sludge submitted by Turbo Mixer Corporation looks indeed like an autoclave reaction mass. I believe the Turbo Mixer people should be warned strongly against handling this material without taking the full precautions regarding ventilation, clothing, washing etc., that are necessary when handling concentrated tetraethyllead.

In addition to helping them out, it might be just as well if you could obtain information regarding the source of the material, and particularly the nature of the problem. My guess is that the Mexicans are running into trouble in their steam stills, and are looking for a mechanical solution to the problem of keeping the lead sludge in suspension.

truly yours,

[signature]

e Calingaert

GC:AMC
Encl.

cc: Dr. R.A.Kehoe

1600

January 15, 1941

Memorandum to:

Dr. George Calingaert

The sample of turbo-fixing Corporation lead sludge submitted by Mr. O. B. Lewis (12/24/40) has been examined for the presence of tetraethyllead.

A fairly representative sample (60.0 g.) of the sludge (a mixture of water and grayish solid) was extracted three times with 50-cc portion of hexane. Analysis of the hexane extracts, after filtration, showed 3.287 g. of lead, corresponding to 5.13 g. TEL, or 8.5% by weight, of the original sludge sample.

The sludge mixture, after extraction with hexane, was filtered and washed with a small portion of water. Analysis of the filtrate gave 0.0108 g. lead as water soluble lead compounds.

Steam distillation of the remainder of the original sludge sample (77 g.) gave 11.5 g. (15% by weight) of an oil having a density of 1.0 and which had the odor of TEL.

The results indicate conclusively that the sludge contains an appreciable amount of TEL, about 12% by weight based on the above two tests.

H.H.
Harold Soroos

HS:AMC