THE LAKE ERIE CHEMICAL COMPANY

B. C. GOSS
PRESIDENT

2200 SCRANTON RD.
CLEVELAND, OHIO

CABLE ADDRESS
"LECCO
CLEVELAND"

May 12, 1943

Dr. Robert A. Kehoe
Kettering Laboratory
Eden Avenue
Cincinnati, Ohio

CONFIDENTIAL

Dear Sir:

It was suggested by Mr. E. O. Jones of Ethyl Gasoline Corporation that we contact you with reference to the use of tetraethyl-lead.

Our problem is the preparation of Ethyl arsenious dichloride ($C_2H_5AsCl_2$) for the Chemical Warfare Service. The usual methods are long and produce poor yields. We believe we can make the compound using tetraethyl-lead as an ethylating agent. The procedure would be to react arsenic trichloride and tetraethyl-lead at a temperature of about 100°C. The ethyl arsenious dichloride formed in this redistribution type reaction could then be distilled off under reduced pressure. The residue consisting of organo-lead compounds and inorganic lead would be handled in a manner dictated by its make-up.

The information we can give you is sketchy but we can supplement it at a later date as Mr. Jones is arranging to send us a small lot of tetraethyl-lead with which we can determine more exactly our procedure.

We would appreciate very much receiving any suggestions you have either on the reaction itself or in regard to the safe handling of Ethyl fluid. We have your booklet of regulations which we will study carefully before proceeding.

The writer recalls having heard you lecture on the subject of the toxicity of lead, while doing graduate work under Dr. Wayland M. Burgess at the University of Cincinnati.

Very truly yours,
THE LAKE ERIE CHEMICAL COMPANY

L. E. Edelman

L. E. Edelman,
Director of Research