

November 13, 1948.

Mr. C. H. Van Hartesveldt,
Thompson Vita-Meter Corporation,
6402 Cedar Avenue,
Cleveland 3, Ohio.

Dear Mr. Van Hartesveldt:

I send you herewith certain reports which are the result of observations made in the Detroit Laboratory of Ethyl Corporation on certain aspects of the problem of safety or hazard in the handling of "Vitol" fluid.

Certainly additional comments may be useful, in view of our previous conversations and correspondence.

I am informed by members of the staff of the Detroit Laboratory of Ethyl Corporation, that they have examined "Vitol" fluid purchased on the open market in Columbus and that the product still separates on standing. Apparently there is an agglomeration of the inhibitor phase into droplets which form small pools floating on the surface of the liquid. Centrifugation at 1800 RPM for two hours brings about a definite separation with a layer of the inhibitor phase formed at the top surface. I am also informed that the color of the fluid as purchased is not very distinctive, and is only dubiously to be regarded as capable of imparting a warning.

The evidence obtained previously in the evaporation experiments would seem to indicate that the peculiar characteristics of the mixture from the aspect of evaporation, are due to the water content of the fluid. This brings me to raise the question as to whether it may not be possible and advisable to make up "Vitol" fluid with methanol and "Ethyl" antiknock compound without any water, thereby achieving a liquid which will have the properties of tetraethyl lead in gasoline.

I cannot but regard this feature of the high rate of evaporation as constituting a very serious obstacle to the handling of this product in bulk quantities. From the best information which is available to me I would feel that the hazard of the handling of your present "Vitol" mixture, from the aspect of evaporation of tetraethyl lead, would be approximately equivalent to that of handling gasoline containing 350 c.c. tetraethyl lead per gallon. This is a very serious matter and, in my opinion, it could easily create an insurmountable obstacle to the distribution of large quantities of the fluid.

Cordially yours,

Robert A. Kehoe, M. D.