

cc: Dr. G. Edgar
Dr. J. H. Schaefer
Dr. R. A. Kehoe

December 8, 1941

Mr. W. B. Lewis

Dear Oscar:

We have been carrying out tests for some time on the prevention of sludging in Ethyl Fluid and in Ethyl Gasoline by the use of lecithin. We found lecithin very effective in Fluid where it gives, if anything, even better protection than the use of a blanket of glycerin. In gasoline the conditions of our storage tests have not been drastic enough to give spectacular sludging, but visual inspection has clearly indicated that a small amount of sludge keeps on separating from stored gasoline in all cases except when lecithin is present.

I understand that the glycerin blanketing of fluid tanks is quite successful, and unless under this system it is still necessary to do a lot of tank cleaning, there would seem to be no reason for our considering any changes. If, however, the use of lecithin will cut down the sludging of finished gasoline to the point where the cleaning of a storage tank will present no lead hazard, it seems to me that this would certainly be worth some expense to us. I find it rather difficult to conceive of a laboratory or semi-works test which will answer this question. I am wondering whether it would be possible to run a full scale test somewhat as follows:

Set aside one not too large tank in the field, preferably a brand new one, or of course, one which has never been used for leaded gasoline, if such can be found. Clean it thoroughly and use it under normal service for the handling of Ethyl Gasoline, using in blending only fluid containing the proper amount of lecithin. After the normal time required for a cleaning job to be necessary, clean out the tank and inspect and analyze thoroughly for sludge (this time might conceivably be cut down to the minimum which is likely to show significant results.) The test might be intensified by picking out, if possible, a location where sludging is accelerated by climate, impurities in the water, type of gasoline, etc. In an ideal set-up there should, of course, be a parallel tank operating as a blank, containing no lecithin.

I will greatly appreciate your comments to the above.

Very truly yours,

George Calinbert

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