

ETHYL GASOLINE CORPORATION
CHRYSLER BUILDING

New York, January 24, 1938

Circular Letter No. W-268

COPY FOR MR. Dr. Machle

TO ALL DIVISION MANAGERS

Gentlemen:

We recently ^{received} ~~sent~~ a section of air hose which had been in use by one of the major oil companies for about two years. We understand this hose had been used in cleaning between 75 and 100 gasoline storage tanks and while it appeared from casual observation to be in satisfactory condition, the workmen complained of the smell of vapors in the air which came through the hose. We sent the hose to the laboratories for analysis and have the following report from Dr. Machle:

"The tests on the Davis hose which you sent us December 20 have been completed. This hose is interesting to us from two points of view; first, in spite of its excellent appearance, it is easily permeable to gasoline and no longer meets the minimum requirements, enough gasoline having permeated the hose in three hours to give an unsafe concentration in the effluent; secondly, significant amounts of lead were present in the effluent air. As more lead was found in the effluent air than could be explained by the presence of amounts of gasoline vapor which were found, it seems possible at least that there might have been an accumulation of tetraethyl lead in the hose wall as a consequence of repeated soaking in lead containing liquids and subsequent drying. To check this we analyzed one-inch pieces of this hose and compared the results with those of one-inch unused Davis hose and M.S.A. hose. The results clearly indicate that there has been an accumulation of lead in the walls of the used hose as we found about 5 milligrams per inch of used hose as compared to 1.3 milligrams in the unused.

"Without for the moment going farther into the possible implications of these results, it becomes apparent that it is not safe to rely upon the appearance of hose lines as evidence of their safety from permeation by gasoline or T.E.L. The occurrence of any degree of odor of gasoline or other vapor at the facepiece should be taken as sufficient evidence of failure of the hose line and a new one should be substituted. It is likely that some amplification of the rules and regulations for tank cleaning to include the working equipment may ultimately be made and until such time our safety representatives should be instructed in accordance with the advice in this paragraph."

Please make observations of the equipment being used and include remarks on this in your weekly reports.

Very truly yours,