

May 9, 1960

Charles H. Hine, M.D.
Shell Development Company
Emeryville
California

Dear Charlie:

At the request of representatives of both Shell and Ethyl in New York, I am sending herewith one copy of each of two reports that bear on the use of tetramethyl lead as a substitute in whole or in part for tetraethyl lead in gasoline.

The brief report on the immediate toxicity of TEL and certain other lead alkyls summarizes the result of some observations made in this laboratory years ago. We are reexamining the facts in this regard and are extending the toxicologic work to answer the more important questions on which procedures of industrial hygiene must depend eventually. Therefore, we have no intention of reporting the early work in detail. The present work indicates some differences in the behavior of the several compounds, but in the main points to their general similarities.

In as much as the rate of these materials in the internal combustion engine is the same, the problem of lead in the air remains unchanged, and the primary problem within the petroleum industry resides in the extent of the potential hazard visited upon the handlers of gasoline. That is, there is no special problem of public health, but rather a question concerning the order of magnitude of the occupational hazard.

We have undertaken to answer the question so presented through the investigation described in the other report. I believe this question has been answered satisfactorily for present purposes. The final answer, of course, can be given only on the basis of prolonged experience, but by reason of the negative results thus far, and on the background of previous experience with TEL, this final answer, in my opinion, can reasonably be predicted.

If questions come to your mind after you examine these reports, please do not hesitate to raise them. I may or may not be able to answer them, but I'll be interested in them. I suspect that there may be a number of questions from abroad, and the more critical they are, the better we shall be able to guide our work to obtain the answers.

Sincerely yours,

Robert A. Kehoe, M. D.

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