

ETHYL CORPORATION
Inter-Office Correspondence

TO: Mr. K. Swartwood

FROM: Harold J. Gibson

SUBJECT: Present Status of TML

December 28, 1959

This memorandum will summarize our understanding of present interest in TML in our customer companies. It should be emphasized that our contacts are almost entirely with research personnel.

California Research Corporation

Our early contacts with California Research people indicated that their primary interest in TML was for use in super premium and premium gasolines with possible future use in regular, if there was economic justification. Their estimates of potential use have been based on super premium and premium gasoline usage.

Shortly after it became known that the results of the toxicity study were favorable, there were indications that the California Research proposal to use TML had run into difficulty in the parent company. The marketing people were said to oppose the use of a more costly antiknock which did not give them an increase in Research octane number. We were led to believe, however, that the use of TML was supported by Howard Vesper, head of California Western Operations. When Earl Bartholomew and John Koehnle visited Mr. Vesper briefly late in November, they were told that the Cal. Research people were attempting to jam the use of TML down the throats of the parent company. Likewise, they were told that California's principal interest in TML was in regular gasolines and that they were not finding enough benefit in regular gasoline to justify the increased cost. Mr. Vesper seemed to show an almost complete lack of interest in TML.

Recently Mr. MacGregor of Cal. Research called to inquire as to whether we would agree to relatively minor changes in the toxicity report which had been prepared by Dr. Kehoe. MacGregor placed a similar call to the other TEL supplier and both of us agreed to the changes which Cal. Research proposed. These were discussed with Dr. Kehoe by Mr. MacGregor, and Dr. Kehoe has agreed that the changes should be made. He has further agreed, according to Mr. MacGregor, to make whatever approach he deems necessary to the Surgeon General's office early in January. At the time of this conversation with Mr. MacGregor the writer asked him when California was going to reach a decision as to commercial use and he said "I wish I knew." He then went on to say that he was trying

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to get the toxicity report off top center so that the participants in the program would know where they stood in this area, at least.

Some of the changes proposed for the report can best be described as of a public relations nature since they are intended to indicate that the same amount of lead will ultimately reach the atmosphere regardless of the lead alkyl placed in the gasoline tank. This may indicate some degree of concern by California management people about the public relations problem which a new lead compound might introduce. Comments by Mr. Vesper to Mr. Bartholomew, coupled with comments made by one of Cal. Research's engineers when he visited Detroit recently, indicate that the cost penalty for TML is giving California considerably more concern than it did at the beginning of the cooperative investigation. The engineer confirmed also that California Research is finding very few regular gasolines in which TML has any superiority to TEL.

To summarize, it appears to us at Detroit that the chances that the California companies will use TML commercially are considerably less than we thought they were in late summer or early fall.

Socony Mobil Laboratories

Interest in this company which was initially for use of TML by Mobil International has switched to use of TML domestically by Mobil. The laboratory at Paulsboro is carrying out a large vehicle antiknock evaluation program and a certain amount of durability work in the laboratory. We in Detroit are evaluating TML in a Renault engine because of the Paulsboro laboratories' interest in durability in cars which are marginal from a valve durability standpoint. There seems no question of the fact that some of the enthusiasm at Paulsboro was generated by the fact that they found gains in Research octane number due to substituting TML for TEL. We have not seen their data, but have reservations about such results since they are contrary to everything that we know about TML. It is to be expected that the current program of vehicle ratings at Paulsboro will clarify the situation insofar as gains to be had from TML are concerned. There is no question that the people at the Socony Mobil Laboratories have a very great interest in the possible use of TML domestically. I think it is likely that they also continue to have an interest in the use of TML in offshore gasoline, but that this is secondary.

Esso R & E

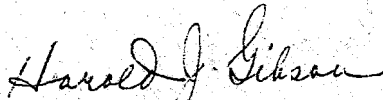
Recently Esso Research and Engineering personnel have shown renewed interest in TML, probably as a result of our budget presentations. Discussions have been held with Messrs. Sweeney, Campbell, Hakala, and McNab within the last few weeks. There is no question that the interest which Esso has in use of TML is for foreign gasolines. Dr. Sweeney

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indicated that if the price were favorable and medical approval could be obtained, they would like to see TML used in most of western Europe. Dr. Hakala indicated that they would also be interested in its use in South Africa. A telephone call from Mr. Hulse on December 23 again indicated Italy as their preferred location for initial use. We may receive a request for a considerable amount of TML for evaluation use, probably at Esso's European laboratory at Abbingdon, England. Our position with Esso is, of course, complicated by their relationship to Associated Ethyl.

To summarize, the interest of the research people of the three companies seems to indicate that, subject to approval of TML from a medical standpoint, there is almost certain to be a substantial market for TML. The timing for the start of this market and the rate of development of the market are somewhat indeterminate at the present time. People from a fourth company, Sun, have requested a discussion of TML. This is scheduled for December 30 at Marcus Hook. The extent of their interest is unknown. Our own work on TML is being held at a relative minimum pending clarification of the toxicity aspects and the extent of customer interest.


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