

July 24, 1961

Mr. J. R. MacGregor, Vice-President
California Research Corporation
200 Bush Street
San Francisco 20, California

Dear Jack:

It was generous of you to remind me of your wish to have a further report from me on the activities of the Kettering Laboratory which have a bearing upon the interests of California Research Corporation, as a justification, in principle, for the further support of our researches by the Corporation.

Let me say, as a preliminary statement of policy, that it is my firm belief that many units of American industry, and especially, perhaps, the petroleum industry, might find it advantageous to themselves, ultimately, to aid in the maintenance and furtherance of our activities on behalf of industry, in research, in advice on certain matters of industrial and public health, and in the training of personnel in industrial medicine and hygiene. What we have done in the past, what we are now doing, and what we shall do in the future, have a significant impact upon the success and well-being of industry in terms of the safety and health of its employees, and in its relations with the government of the nation and of the states. As the oldest and most experienced group in the country, in this field of endeavor, and as much the most accessible university group to industry, our strength and influence and the scope of our work have depended, and will continue to do so, on the breadth of the support - moral and financial - which we obtain from industry. I would like to have such support on the basis of modest continuing contributions of a general type, spread across a goodly number of industrial organizations.

Now, as to the matters in which your people may have some special reason for interest, I shall mention, briefly, some items of work during the past year.

1. With reference to the use of TML, we have, as you know, participated with the Medical Department of the California Company, in the investigation of the extent of the hazard, if any, to which the employees of the California Company are being subjected in the regular commercial handling of gasoline containing TML. Of course we have had the capable assistance of Dr. Curtis and his group, and that of technical people in the organizations of Ethyl Corporation and du Pont, but the formal report of this work will be a product of this Laboratory.

2. In the course of the investigation referred to above, we have

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sought and obtained information about the lead in the air and the absorption of lead by people, in San Francisco as compared with Los Angeles, in such a manner as to bear importantly on the setting of a maximum permissible concentration by the State Health Department of California.

3. These investigations are being supplemented by a survey in which we are collaborating with the U.S.P.H.S., and the California State Health Department, the American Petroleum Institute and the TEL - TML manufacturing industries (a working group representative of the foregoing groups, and composed of their technical and medical representatives have planned a general investigation and have selected methods, under the influence, to a considerable extent, of our work and experience). The three cities, Los Angeles, Philadelphia and Cincinnati are the sites of a co-ordinated investigation of lead in the air and lead in people.

4. The capstone on these investigations is a continuation of our work on the fate of inhaled lead in the human being. We have just completed an experiment which, we hope, will enable us to put the finger on the amount of lead in the air which can safely be inhaled over the lifetime of the normal individual. It may be that this work will have to be extended to prove the point, and we have plans for so doing. Incidentally the cost of this somewhat elaborate but crucial experimental work is about \$100,000.00 per year. This cost is borne by Ethyl Corporation and du Pont, Ethyl taking the lion's share of it, as it has done for more than a quarter of a century.

5. Turning now to other matters of interest to the petroleum industry, our work on the carcinogenicity of petroleum components derivatives and products, has borne fruit, in addition to the information obtained in the project sponsored for eleven years by A.P.I., in the form of experimental leads and methods for the extension of knowledge in the field. This work, under the capable leadership of Drs. Horton and Cleveland, of our staff, has found out much about the petroleum compounds that accelerate carcinogenesis. They are continuing the examination of certain petroleum products for practical hygienic reasons, and are extending the basic knowledge in this field.

6. The toxicologic work of the Laboratory on pesticides is, and, I believe, will continue to be, of interest to industries other than those now supporting investigative work on specific compounds of this type. The principal reason for a common interest in this and in similar toxicologic works in the Laboratory lies in the efforts which we are making to find better and more productive methods of investigation. We are very much disturbed by the growing complexity, and especially, the increasing tendency toward following elaborate and prescribed procedures (mostly governmental specifications or legislative prescriptions), of this investigative field. We have cultivated good relationships within professional circles in the government, and we have reason to believe that a degree of scientific liberalism can be introduced into these matters. This will take time, patience and the development of methods. For your private ear, I must say that I am somewhat unhappy over the tendency of many of the investigators in this field to accept governmental guidance in this type of work without protest and apparently without much thought. The result is a rapidly growing and costly

rigamarole of methodology, much of which has little meaning. We are trying to do something about this for our own sake as well as in the interest of industry and, even more importantly, that of the public.

7. Finally, without reciting other investigative fields in which our work continues, I should like to speak very briefly of our educational efforts. This past year has been a good one, in terms of both numbers and competence in our student body, and the year which begins officially in September looks even more promising. The graduate school continues to grow and to improve in the quality of its training. This is a great source of satisfaction to me. I recognize, however, that we must find further means of financing this part of our work separately, so as not to allow it to burden our research activities unduly with "overhead" expense.

This, I think, covers the situation fairly well. If I have incited questions, please raise them.

I'm heading for a vacation in the mountains in Colorado, from which I shall return on September first. Until then, I shall not be wholly inaccessible but well out of circulation.

Sincerely yours,

Robert A. Kehoe, M. D.

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