

March 8, 1948

Dr. J. G. Townsend, Medical Director,
Chief, Industrial Hygiene Division,
Federal Security Agency,
U. S. Public Health Service,
Washington 25, D. C.

Dear Dr. Townsend:

Thanks very much for your letter of February 26, with the question raised concerning the addition of tetraethyl lead to gasoline to be used in commercial aircraft, in concentrations not to exceed 4.6 c.c. per American gallon. I am glad to give you my opinion on this subject. For practical purposes, there is no significant difference between the use of 4.5 c.c., as now approved by the Surgeon General, and 4.6 c.c. Actually, if I am not mistaken, military gasolines containing 4.6 c.c. have been used to some considerable extent, but again I repeat that one would have no justification for making a differentiation between 4.5 and 4.6, except that there might be some later tendency to make the same statement with respect to 4.7 or 4.8 or for that matter 5 c.c. per gallon. Inasmuch as 4.6 c.c. has been used, and inasmuch as there has been some question in the minds of a number of people as to whether 4.6 is not approved at the present time, I should consider it worth while to resolve this issue, by approving the 4.6 concentration.

From the hygienic viewpoint I think I should make my position clear. I should be disposed to keep the lead concentration in automobile gasoline at its present level of 3 c.c. per American gallon and to make no further extension of this approved level. There is a difference, however, in the case of aviation gasolines in that the problem of the ultimate disposition of the exhaust gases, in connection with the operation of aeroplanes, is substantially non-existent from the viewpoint of the public health. That is to say that the contamination of the atmosphere, at the breathing level of the general public, is negligible. In the case of automobile traffic this is not the case, and although I have no evidence that would suggest that there is any danger in the present situation, the fact is that the extent of the atmospheric contamination has been increasing progressively, at least theoretically, throughout the whole period of the use of leaded gasoline, in that more tetraethyl lead has been introduced into automobile fuels from year to year since 1926. We do not know just what the safety factor is, and we shall not know any too well what it is, until certain rather exhaustive investigations have been carried out. The problem is not an insoluble one, but it is certainly not one that we should walk into

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unwittingly, until some fairly adequate solution has been obtained.

For fairly obvious reasons I do not wish to be quoted as opening up the question of automobile exhaust gases for re-examination, except in very responsible circles. I do think, however, considering the relationships that I have had with the Public Health Service over a period of years, that I am fully justified in bringing my point of view of your attention.

With kindest regards,

Sincerely yours,

Robert A. Kehoe, M. D.

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