

March 1, 1965

Christopher C. Vogel
Ethyl Corporation
100 Park Avenue
New York, New York 10017

Dear Chris:

I wrote earlier in response to your letter of February 23rd, not to put any pressure on you; but to express my own point of view in the use of the word "smog". This obviously was of personal significance.

Having had opportunity to review the second draft of the "white paper", I have a few more significant comments to make, and with these behind me, below, I shall desist.

I think it improper, because it is untrue, to say on page 6, line 3, and on page 26, line 7, that the "manufacturing..... are carried out in completely enclosed systems". Not only is this untrue, since batch operations are known, technically, to require opening of the system, but it bears some of the aspect of naivete' for other reasons. I would delete this phrase and substitute something which is much more indicative of sound practice, namely, "carefully designed and meticulously maintained equipment". This expression to any experienced chemical operator indicates a sound understanding of the necessities of the situation.

On page 34, paragraph 4, line 3, I would simply delete, "where it is entrapped", ending the sentence without this clause. The reason is that this, as stated, is not true. The material so deposited can be and is, in part, pulverized by later traffic and redispersed into the atmosphere. It is neither necessary nor wise to say this, for no one knows the extent to which it occurs, but, by the same token, it should not be denied in a technically correct paper.

On page 34, last line, add, after "suspended in it", "for considerable periods of time", or preferably, restate the case by saying "tends to remain suspended".

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KE 0012767

Mr. Christopher Vogel (2) March 1, 1965

On page 35, first paragraph, next to last and last lines change "is well within accepted safety limits" to "poses no hazard to the public health". The statement as revised is true; the unaltered statement is false or, at least, misleading, for there are no "accepted safety limits". No standard has ever been set for lead in the general atmosphere. The safety of the situation has been demonstrated not in terms of "accepted limits" but by extensive human experience. This need not be stated either, for the revised statement can be defended by sound evidence which need not be presented here.

I have not found any other statements of fact to which I would take exception.

Sincerely yours,

Robert A. Kehoe, M.D.

RAK:meh

RF 0012768

UNIVERSITY OF CINCINNATI
DEPARTMENT OF PREVENTIVE MEDICINE AND INDUSTRIAL HEALTH

March 25, 1961

THE KETTERING LABORATORY
COLLEGE OF MEDICINE — EDEN AVENUE
CINCINNATI 19, OHIO

CABLE ADDRESS: KETLAB, CINCINNATI
TELEPHONE: AVON 1-2568

Mr. Frederick P. Warne
Ethyl Corporation - Legal
100 Park Avenue
New York 17, New York

Dear Fred:

I am sending some material to you for examination, since this seems to be the best way for you to find out whether or not it may be useful. I have noted the parts of it of which I have copies, as well as those of which I have no copies. You can, of course, have any of this material reproduced for your files if you so desire, but I'd like to have those parts of which I have no copies returned to me.

Unfortunately, when I came to the point of going over the material obtained from my files, I was unable to locate some of that which I want for you. The files of the Medical Department of Ethyl Corporation have been separated so as to provide first Dr. Kitzmiller and now Dr. Princi with what has seemed to be appropriate to their immediate and more remote needs. I should have supervised this very carefully, in person, but being busy, and considering that I would have access to any and all of it if this became necessary, I gave only general instructions for the handling of my files, and delegated the job to the respective secretaries. This has resulted in relocating some of the files that are needed in this particular matter, and while I shall be able to find this material, I cannot put my hands on it in time to give you the maximum of help in this situation. I shall have to cite from memory some things I would like to be able to document and to deal with in more detail.

In addition to the "bootleg" plants in the U.S.A. to which reference is made in the material I am sending you, there is reference to the difficulties associated with the manufacture of TEL in Italy, and you may be interested in my concern about this, and my effort to assist the appropriate person and Department in the Italian Government. I have attached notes to the various items of information which I am sending to you, so that you can identify their relationship readily.

There were, so far as I know, three different groups of manufacturers of TEL in Italy. The first was Montecatini, who learned the process by sending a technical man to du Pont, and who built two plants which I have visited, both of which were structurally not too bad. The Italians are not schooled in industrial hygiene and preventive medicine, and, therefore, neither of these plants was operated with proper care. Both were dangerous in some respects, although not nearly so dangerous as those that came later.

The company known to us as S.L.O.I. began its operations later, and

started out with a miserably designed and constructed plant which resulted in quite a number of casualties. It has since improved its operations at Ravena, but is still far from being up to standard. I can't be sure how many severe and fatal cases of intoxication came out of their early operations, but there were quite a number, some of which have been reported in the literature.

of the other Company in Italy I have little or no information. Ethyl representatives who visited S.L.O.I. some years ago have told me all I know about it, and I'm sure you have access to their report.

"Posmol" ← There was some kind of plant in Spain, and it must have been a complete "mess", considering the manner in which they distributed their product. However, I never saw the plant, and what I know about it is such hearsay that I cannot trust it. This was, however, a thoroughly unsatisfactory episode in the history of TEL.

You must have reasonably good information on the Mexican and Japanese plants. What I send you in this relationship will be of little help. I cannot find a lengthy report which I should have on the Mexican plant. It may have been returned to its sender, but I shall have to look further to establish the facts.

An example of a development of the Germans and an unfavorable outcome may be of use to you, especially as it represents a serious mistake made by generally competent people. At their war-time plant in the Harz Mountains (which was in an area occupied by the Russians very soon after I saw it and has not been heard from since, by me), they undertook to modify the procedure of disposing of the sludge from the autoclaves, by resorting to a centrifugal method of separating it out. Despite their supposed knowledge and experience, they failed to house and ventilate this operation properly, with the result that one man was fatally poisoned and certain others were made ill. Thus you can see how nearly hopeless it would be for an inexperienced group of technical people to understand the seriousness of these problems. The Germans never succeeded in developing a proper relationship of their technical people to their medical people, and therefore, the technical people went ahead and did things they should not have done.

Of course you will realize, from the available information, how much worse the Japanese attitude and performance were.

The French plant, built under Ethyl's technical and medical tutelage, and put under a suitable hygienic and medical regimen by ourselves, was satisfactory until, after the war, they put it back into operation by their own unaided efforts. If operated badly, and there were several cases of illness and at least one fatality.

I have had little information about the Russian performance, and such as I have is not pertinent to your purposes. They have plants in operation, and they had plants of their own building before the war. I have my own opinion of how this was handled, and some vague reports are suggestive but not very enlightening.

Mr. Frederick P. Warne

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March 25, 1961

I feel sure that I have forgotten one or more of the items of information which came to me, but I am also sure that these were not very satisfactory.

I am afraid this is the best I can do for you. I hope, without much faith, that it may be helpful.

Sincerely,



Robert A. Kehoe, M. D.

RAK:ss

Enclosures

RE 0012771

February 26, 1965

Christopher C. Vogel
Ethyl Corporation
100 Park Avenue
New York, New York 10017

Dear Chris:

Thanks for your letter of February 23. I shall look forward to the examination of the second draft.

Let me say, however, that it was not my purpose to press your writing into the pattern that I would choose. There is no point, therefore, in your undertaking to "satisfy" me, except in so far as it is necessary to consider the factual background with critical eye. Anything that I indicated with reference to style or verbiage was merely suggestive or even more tenuous.

With reference to the use of the word "smog", however, in any of its forms, "photochemical" or otherwise, the case is somewhat different. It is true, as I am fully aware, that the terms are in common use. That is true of so many ill-chosen terms, in our day, as to have little validity. The difficulty is that these words are used so loosely and so indiscriminately that they have no meaning. They are the result of a poverty of vocabulary or of precise representational speech, as though all of us were illiterate. It will be only a short time until these words will have been discarded by all persons who know or care what they are talking about. I realize that for your immediate purposes they convey the idea. We shall soon, however, have to talk in specific terms rather than riddles. Therefore, I prefer to abandon them now, in favor of descriptive terms that have, at least, the semblance of precision. You are aware, I am sure, that the word "smog" was originally a short-cut term for a mixture of fog and smoke. It is now anything at all that obscures vision. "Photochemical smog" is the result of the interreaction of petroleum hydrocarbons, oxides of nitrogen and oxidant, the density of which is influenced greatly by other constituents. There are other chemical and photochemical reactions in the atmosphere that produce aerosols, and only because these are not known in such detail as

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the interreaction indicated above, can these be spoken of in the same terms with any degree of accuracy. I agree that until the facts are better known, the blanket term may be applied, but what a linguistic weakness is here displayed. It would be my opinion, out of respect for your writer's craftsmanship, that you would wish to discard such silly jargon, and use descriptive language. If this is heresy, or preciosity, I stand corrected, but unashamed. I have lived too long to be impressed by the linguistic jargon of the moment.

Sincerely yours,

Robert A. Kehoe, M.D.

RAK:meh

KE 0012773

ETHYL CORPORATION

INTER-OFFICE CORRESPONDENCE

Robert A. Kehoe	ADDRESS	Cincinnati
Christopher C. Vogel	ADDRESS	New York
Re Paper	DATE	February 23, 1965

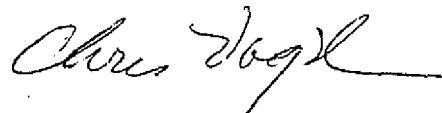
Mr. Kehoe:

Under separate cover you will be receiving from Bureau a copy of the revised white paper on antiknock fuels.

First, I want to thank you for the great care and effort you put into the review of the first draft. I have tried to incorporate as many of your changes as possible, and hope that the second draft is satisfactory with you. In some instances, I had to go along with accepted current usage. For example, "smog" or "photochemical smog" has become a part of our vocabulary, and I felt we had to make a special point in this respect.

At any rate, I do appreciate your helpfulness on the first draft and also your kind comments on it as a whole.

Sincerely,



Christopher C. Vogel

N13332.03

KE 0012774

January 27, 1965

Mr. Christopher C. Vogel
Ethyl Corporation
100 Park Avenue
New York, New York (10017)

Dear Chris:

I am returning to you, herewith, the copy of the white paper on anti-knock compounds, with a variety of editorial suggestions in the form of deletions, alterations in the text, and marginal notations which are in the nature of objections or criticisms.

I shall have to ask for your forbearance in the consideration of my alterations of the structure and composition of clauses and sentences. I would not like to be regarded as offensive in my critique of the style of writing. On the other hand, there is much in the current style of technical and reportorial writing that irks me beyond my capacity for silence. Consequently, when I came to the conclusion that I could not comment on this paper with any degree of satisfaction without getting out the so-called blue pencil, I began at the beginning and did a general editorial job. If this is helpful to any extent, I am satisfied to have spent the time. If it is a source of irritation, or if it seems pedantic, please regard it with tolerance. At any rate, I feel a certain satisfaction in having shared in the preparation of this document.

Despite my criticisms, I think it represents an excellent job of digestion, interpretation and representation of the essential facts. There are very few misrepresentations or ambiguities in the text. I might call your attention, briefly, to a few of them, that in my view are significant.

(1) On the first page under the second heading, the reference to the Jersey method for manufacturing tetraethyllead, describes it as "a safe and practical process." It is indeed practical, but do not refer to it as safe, for this process, as it was first carried out, came as near "doing the entire industry in," as it could have done without causing that result. There are people who will remember this and will shudder at sight of this statement.

(2) On the second page under heading 8, is a misstatement, in that iron carbonyl was marketed for some time and in considerable quantity by I. G. Farbenindustrie in Germany, under the trade name of Motolin, I believe.

(3) Under the heading of the Public Responsibility of Ethyl, I have made a number of significant alterations of the text, mostly for reasons of diplomacy, but in the interest of true shades of meaning.

(4) You will note that I have deleted the word "smog" wherever it has occurred. It is to be hoped (although I fear it will not come about) that this word will disappear from our vocabulary. It must do so in all precise technical speech or writing.

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(5) Section 14 is remarkably good, but I have thought it necessary to revise it in a number of respects, so as, again, to bring out the proper shade of meaning, and to respect certain professional relationships.

(6) I have made certain important revisions of the material under heading 16. These are too numerous and technical to justify comment.

(7) My comment with respect to the use of the term "unselfish" in the second paragraph of the page under heading 23, is not intended to be objectionable to you or uncomplimentary to Ethyl Corporation. It is intended, rather, to avoid the kind of criticism that follows, inevitably, from a public declaration of virtue.

With reference to my linguistic criticisms, let me make two remarks in explanation of my behavior. In recent years, especially, the professional writers in governmental, industrial, scientific and reportorial circles, have been cultivating a style of writing which in my opinion does great violence to the best literary uses of the English language. I have had to endure much personal suffering, in carrying out extensive editorial chores. Several especially objectionable practices are engaged in almost regularly, and I'd like to point out a few of these, by way of explaining my inability to endure them silently.

(1) One of the worst of these is the practice of stringing together a series of nouns, used as adjectives. In medical circles this becomes, at its simplest, "patient care." This is intended to mean the care of patients, but how could one know this. The great difficulty with such obscure English is that it cannot be translated into an understandable sentence in any foreign language unless one knows the precise idiomatic meaning. This, in short, is bad use of the language.

(2) Another is the use of jargon ("smog" is a good example) instead of the words that mean, simply what they should mean. I won't bore you with examples.

(3) Split infinitives and split verbal forms are perpetrated regularly even when there is no reason to do so, apparently in defiance of all of the canons of good form. It is all right to do this for euphonious effects when one knows what he is doing, but unfortunately the craftsmanship has been discarded from so much of the most easily available writing, that our students, as a group, have no idea of its existence.

As a teacher in a University, and as a literary man (or perhaps a literary pretender, who knows?) I find myself becoming infuriated by these things, and I work against them at every opportunity, almost compulsively, even when I am in danger of offending people.

I repeat, that if I have helped in the preparation of this statement, I rejoice. If I seem to have been offensive, please shrug it off and consider

Mr. Christopher C. Vogel - (3) - January 27, 1965

the source. I may have to admit, one day, that I am an old man who clings to old ways. Perhaps they are unimportant, but I shall continue to struggle.

With kindest regards.

Sincerely,

RAK:vr

Robert A. Kehoe, M.D.

Encl. - ANTIKNOCK COMPOUND - A Background Report

RE 0012777