

September 19, 1960

Mr. F. L. Craise  
Standard Oil Company of California  
225 Bush Street  
San Francisco 20, California

Dear Mr. Craise:

Thanks for your letter of September 16th and the enclosure of the minutes of the meeting of September 13, 1960. The minutes are concise and generally accurate, except for two items.

It was reported that the general atmosphere of San Francisco, contained about  $1/3$  of the lead of the atmosphere of Los Angeles. I believe that the L.A. figure was given as 3.7 micrograms/ $M^3$  and the San Francisco value as 1.3 or 1.5 micrograms/ $M^3$ . I do not recall giving any value of 7 for San Francisco, but did say that in a study carried out 6 years ago in Los Angeles, the average concentration was about 6 micrograms/ $M^3$ . Will you please have Table 2 corrected accordingly?

In discussing the Richmond blending plant data, it was pointed out that the concentration during the brief period of the spill exceeded the threshold limit, but that the spill was cleaned up immediately and the concentration diminished to a safe level shortly thereafter. I have marked a copy with these corrections in case you wish to revise the minutes, or if you want to call attention to the changes by letter.

Sincerely yours,

J. Cholak

JC:br

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RE 0007835



# STANDARD OIL COMPANY OF CALIFORNIA

225 BUSH STREET • SAN FRANCISCO 20 • CALIFORNIA

PRODUCT ENGINEERING DEPARTMENT

F. L. CRAISE  
MANAGER

H. R. PORTER  
G. L. NEELY  
ASSISTANT MANAGERS

September 16, 1960

VIA AIR MAIL

File 045.0  
121.22

Mr. J. Cholak  
The Kettering Laboratory  
College of Medicine  
Eden Avenue  
University of Cincinnati  
Cincinnati 18, Ohio

Dear Mr. Cholak:

We are attaching Harry Sigworth's write-up of the September 7 meeting with you.

We will appreciate any comments or corrections that you have to offer. We also wish to express our appreciation for your continued support in this program.

Very truly yours,



F. L. Craise

HWSigworth:me

Attach - Report, Meeting on Environmental  
Samples of Lead-In-Air, 9/13/60

RE 0007330

PRODUCT ENGINEERING DEPARTMENT  
STANDARD OIL COMPANY OF CALIFORNIA  
San Francisco, California

MEETING ON ENVIRONMENTAL SAMPLES OF LEAD-IN-AIR

September 13, 1960

On September 7, a meeting was held of representatives of Ethyl, duPont and Standard Oil Company of California with Mr. Jack Cholak of Kettering Laboratory to discuss the results and test methods of the subject study. A list of those in attendance is attached as Table 1.

Mr. Cholak reported the results that are being obtained by Ethyl and duPont field representatives at service stations, loading racks and in leading plants in SOCal's installations in both Northern and Southern California. The results of these lead-in-air analyses are shown on the attached Table 2.

The data generally show extremely low lead concentrations. Mr. Cholak pointed out that lead concentrations of up to 200 micro-grams per cubic meter are generally okayed by industrial hygienists as a normal working atmosphere for industrial workers in a lead environment. Table 2 shows that in service stations the level is extremely low, and incidentally, is almost too low to measure. Only in lead blending operations do the concentrations of lead even come close to approximating the safe limit.

The only values <sup>exceeding</sup> ~~approaching~~ the limit were obtained at the Richmond Blending Plant when a small spill occurred on connecting a tank car to the delivery hoses. This spill was wiped up and subsequent readings several minutes later in the same area indicated that the lead-in-air concentration was diminishing.

Mr. Cholak indicated that these lead concentrations were entirely within the safe range, and ~~looked very much like data he has obtained over many years' experience with TEL operations.~~ He was quick to point out, however, that these data are much too limited to be conclusive, and should be continued through the year as originally planned.

The group studied the question of test standardization at some length, and it was the consensus that differences in sampling air at service stations should be continued. The Ethyl method and duPont method should not be made identical because the differences themselves may provide a stronger case for the nontoxic nature of TML.

The group agreed on the following changes in the program.

1. Sampling should start at the lead blending plant as soon as the dome is opened on the tank car.
2. Weekend samples of the atmosphere in San Francisco and Los Angeles should occasionally be obtained. Saturday was considered to be satisfactory by Mr. Cholak.
3. The sampling apparatus should be operated as follows:
  - A. Use a double scrubber in series.
  - B. Air sampling should be conducted at the rate of  $\frac{1}{4}$  cubic foot per minute.

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C. An iodine solution of 1 Normal should be used. 115 0307007

D. Eight cubic feet of air should be sampled with an occasional 12 cubic-foot sample being drawn.

4. Sampling frequencies should be as follows:

A. Service stations reduced from three to two per month.

B. The blending plants and loading racks should be sampled every other week.

C. Other samples should be drawn as in the past.

*H. W. Sigworth*  
H. W. SIGWORTH

Dr. L. E. Curtis  
Mr. J. T. Higgins (CHA)  
Mr. W. L. Ingraham (JAS)  
Mr. J. H. Young (DRL)

Please note.

F. L. CRAISE  
9/13/60

HWS:kh

cc: Mr. J. R. MacGregor - 2  
Mr. F. W. Kavanagh - 3

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TABLE 1

ATTENDANCE AT SEPTEMBER 7 MEETING WITH MR. JACK CHOLAK

E. I. duPont de Nemours & Company

E. H. Kiehn  
James Lilly  
J. G. McIlhiney  
W. M. Hillman

Ethyl Corporation

J. F. Koehnle  
G. A. Lofquist

Kettering Laboratory

J. Cholak

Standard Oil Company of California

S. H. Judd  
D. R. Lockwood  
H. R. Porter  
Karl Schulze  
H. W. Sigworth

TABLE 2

AVERAGE LEAD-IN-AIR RESULTS

| <u>LOCATION</u>                                    | <u>NO. SAMPLES</u> | <u>TOTAL LEAD-IN-AIR<br/>MICROGM./M<sup>3</sup></u> |
|----------------------------------------------------|--------------------|-----------------------------------------------------|
| <u>Service Stations</u>                            |                    |                                                     |
| San Francisco                                      | 88                 | 7.4                                                 |
| Los Angeles                                        | 66                 | 6.0                                                 |
| <u>General Atmosphere</u>                          |                    |                                                     |
| San Francisco (Roof of Pauson's)                   | -                  | <del>7.0</del> 1.3                                  |
| Los Angeles (Roof of Ethyl Bldg.)                  | -                  | <del>5.5</del> 3.7                                  |
| <u>Refinery Lead Plants</u>                        |                    |                                                     |
| Richmond: Dome                                     | -                  | 152                                                 |
| Weigh Tank                                         | -                  | 0                                                   |
| External                                           | -                  | 53                                                  |
| El Segundo: Dome                                   | -                  | 14                                                  |
| Weigh Tank                                         | -                  | 18                                                  |
| External                                           | -                  | 0                                                   |
| <u>Loading Racks</u>                               |                    |                                                     |
| Richmond: Dome                                     | 20                 | 22                                                  |
| Ground                                             | 20                 | 0                                                   |
| Bakersfield: Dome                                  | 5                  | 21                                                  |
| Ground                                             | 5                  | 88                                                  |
| <u>Barrel Filling</u>                              |                    |                                                     |
| Richmond                                           | 3                  | 0                                                   |
| <u>Inspection Labs (Richmond)</u>                  |                    |                                                     |
| On Wharf                                           | 4                  | 3.5                                                 |
| Chemical Lab. (Close to<br>distillation apparatus) | -                  | 0                                                   |

NOTE: Data from Southern California obtained by Ethyl.

Data from Northern California obtained by Dupont.

Standard Oil Company of California  
Product Engineering Department  
September 13, 1960

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