

Attachment

Memorandum on a Proposed Environmental Study

The following program is proposed for the San Francisco and Los Angeles areas. The environmental program has been designed to supplement the medical investigation as part of the investigation outlined in a meeting of Dr. Kehoe with representatives of the lead suppliers and Standard Oil Company of California in San Francisco on April 8, 1960. The following program was discussed during a meeting with representatives of the same group on April 13, 1960, in San Francisco. The sampling schedules on which the costs have been estimated have been set up at the maximum levels, on the assumption that all of the indicated observations will be carried out over the period of one year. Three alternative proposals are made.

Facilities:

It is suggested that each of the lead suppliers should undertake to carry out the sampling program in a single area. Accordingly each company will need to assign one man, full time, to the project. Another man should be available on one or two days of each week, to relieve the regular man and to permit the scheduling of night sampling if necessary.

The Lead-In-Air Analyzers and the reagents will be furnished by the lead suppliers. The Kettering Laboratory will supply the filter heads, the filter media, and all other equipment which will be needed for parts 4, 5 and 6 of the investigation. Sampling and analyzing procedures will be standardized and agreed upon at the start of the work. A representative of The Kettering Laboratory will visit each area at the beginning of the program in order to

inspect the sampling sites and to work out any special details which may be necessary.

The sites to be investigated, the frequency of sampling, and the costs to be incurred by The Kettering Laboratory in the conduct of this work are outlined below:

1. Antiknock Blending Plants

Sites: Richmond and El Segundo refineries

Type of Samples: Organic lead only.

Frequency: One day each week, at three locations
(a) Dome of tank car, (b) at weigh tank, and
(c) ground level (outside) below vent line.

Number of observations 300

2. Truck Loading Racks

Site: Richmond and Bakersfield

Types of Samples: Organic lead only.

Frequency: Richmond: One day each week, at breathing zone
of loader during 2 to 3 different loadings.
One sample at level of ground.

Bakersfield: One day every two weeks, same
as above.

Number of observations..... 300

3. Miscellaneous

Site: Richmond refinery

Types of Samples: Organic lead only

Frequency: (a) Barrel Filling Area

One day each week3 samples

Number of observations150

(b) Sampling points at Long Wharf - Inspection
Laboratory

One day each week 1 sample

Number of observations.....50

(c) Chemical Laboratory

One day each week 1 sample

Number of observations.....50

4. Service Stations:

Sites: 10 stations in San Francisco
10 stations in Los Angeles
1 station in Bakersfield

Types of Samples: Lead in air + filter (millipore) for
organic and inorganic lead

Frequency: Each station to be visited once each month,
and on each visit 3 samples are to be taken.

Number of observations at each station 36

Total number of observations..... 396

Cost of analysing 396 filters at \$10.00\$3960.00

5. Underground Garages:

Sites: Union Square in San Francisco
Pershing Square in Los Angeles

Types of Samples: (a) Lead in air + filter (millipore)
for organic and inorganic lead.

Visits: One day each week, 3 samples per visit, of which
one can be organic lead only.

Number of observations 300

Cost of analysing 200 filters at \$10.00 \$2000.00

(b) A.I.S.I. smoke sampler to determine
diurnal variations in inorganic lead.
Machines to be operated one week out
of each month.

Cost of analysing samples obtained from two sites..... \$2000.00*

* Cost calculated on basis of estimated time required to complete
the analyses by a simplified procedure

6. Urban Atmosphere

Sites: One station in each of San Francisco and Los Angeles.

Types of Samples: High Volume; 24 hour periods.

Frequency: One sample every two days.

Total number of observations.....730

Cost of analysing samples from two sites \$4000.00*

* Cost calculated on basis of estimated time required to complete the analyses by a simplified procedure

Signed: J. Cholak

Dated: April 15, 1960