

TETRA ETHYL LEAD PLANT

December 21, 1931

DR. W.E. DEUEL:

A series of air tests for lead has been completed in C Building. The results indicate that the status of this building in respect to the amount of lead exposure encountered therein is the same as it was at the time of the series of tests made previous to this one.

The most exposure seems to be encountered on the still floor and since all the previous tests made in the main building of this area show this to be quite consistently true, a larger number of samples was taken than usual in order to establish the nature of the exposure. A compilation of the results obtained at this point for the particular purpose just mentioned shows that the nature of the exposure differs radically from that of a year or more ago. At that time, the lead seemed to diffuse into the room from the different machines at rather regular intervals in relatively high concentrations of short duration. Some units were much worse in this respect than others, and at this time a program of operation was instituted as a means of reducing this hazard. The effect of this program can be seen in the nature of the exposure encountered at the present time, inasmuch as the lead diffuses slowly in quite low concentrations from the machines. Under normal conditions, there seems to be neither any real "clear" spots nor any very "high" spots, so that it may be said that the lead exposure on this particular floor is "general" in location, "moderate" in concentration, and "persistent" in duration. It is felt that further improvement can be made on this floor by careful adherence to the operating rules that are now in effect.

Exposure in the rest of the building seems to be slight. No lead was detected on the first floor, and only a trace on the fourth. The top floor, however, did show some, but this should be taken care of by the rigorous application of the principles of good housekeeping and careful operating.

J. L. STECHER, SUPT.

KE 0007732

| Place                                                | Pb as Mg/cu.ft.air |       |       |       |       |       |
|------------------------------------------------------|--------------------|-------|-------|-------|-------|-------|
| Air duct by Lewis Pump #1                            |                    |       |       |       |       | ng    |
| " " opposite " " "                                   |                    |       |       |       |       | "     |
| " " by centrifugal pump                              |                    |       |       |       |       | "     |
| " " by Lewis pump #2                                 |                    |       |       |       |       | "     |
| Third floor (five different runs made at six points) |                    |       |       |       |       |       |
| Duct between 1-3                                     | .0059              | .0019 | .0019 | ng.   | ng.   |       |
| 5-7                                                  | .ng                | .0059 | .0019 | .0059 | "     |       |
| 9-11                                                 | .0059              | .0019 | .0019 | .0019 | .0019 | .0019 |
| 13-15                                                | .0019              | .0004 | .0059 | .ng   | ng    |       |
| 10-12                                                | ng                 | ng    | ng    | .0059 | ng    |       |
| 14-16                                                | .0019              | .0019 | .0004 | ng    | .0004 |       |
| Fourth Floor                                         |                    |       |       |       |       |       |
| Front 13                                             |                    |       |       | Trace |       |       |
| 14                                                   |                    |       |       | ng    |       |       |
| 15                                                   |                    |       |       | "     |       |       |
| 16                                                   |                    |       |       | "     |       |       |
| Top floor                                            |                    |       |       |       |       |       |
| Air duct by #15                                      |                    | .0019 |       |       |       |       |
| " " " #13                                            |                    | ng    |       |       |       |       |

NOTE: All runs made at rate of 1 liter of air per minute for a period of 24 hours. The inlet cone was placed at a point about 1 foot from the air duct and 6 inches above the floor.

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