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DYE WORKS

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TETRA ETHYL LEAD PLANT,
March 16, 1931.

MANUFACTURING DIVISION,
ATTN: MR. C. D. PORCH, ASS'T. MGR.

INSPECTION OF TETRA ETHYL LEAD PLANT
BY DR. KEHOE, FEBRUARY 23, 1931

In reply to your letter on the above subject, I wish to inform you that the present condition of the air in our buildings is better than it has been since the early part of 1928. This statement is corroborated by the fact that our present analyses of the air in the buildings contains less contamination than any previous test and the stipples, as shown by our hospital record, are lower than they have been. Below is the average number of stipples per man for the years of 1928 and 1931.

Location	1928	1931
4th and 5th floors	2.27	1.57
Still Floors	6.22	1.06
Furnace	5.18	0.66
Alloy Building	3.83	1.04
Blender	1.66	1.80
Yard	6.62	0.37

We give the above information because we do not wish you to have any cause to be alarmed concerning the contents of Dr. Kehoe's letter of February 24th.

We wish to render at this time a brief history on the progress of improving the conditions of our building. During the month of July, 1928, we started our first tests on sampling the air at various places on each floor of every building. We continued this at brief intervals until March, 1930. At that time we felt the information was of such value that we assigned one of our chemists to take continuous samples and submit monthly reports. We then correlated this information, and with the aid of Dr. Deuel, grouped the men under each operation and averaged the stipples of each group. The men showing the highest average would, in most cases, coincide with

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we would find the Smelter contained the highest concentration of lead in the air samples and also the men would show an increase of stippling. With this information, we would concentrate our efforts on eliminating the cause of the contamination. We feel that we are doing everything possible to improve the safety of this plant.

Dr. Kehoe mentioned the blowing of a vigorous stream of cold air on the alloy cones as a possible means of contamination. This, as you know, is done for cooling purposes only and the blast of air is never applied to the cones except when the door of the cooling chamber is closed. We have the quantities of air regulated so that we exhaust 10% more air than is blown into the chamber and consequently there is a negative pressure on these chambers at all times. This was done to prevent any air blowing out into the main room where the men are working.

His suggestion, to eliminate brushing the tops of both alloy cones and hoppers and substitute an oily cloth, will be complied with at once.

He mentioned the use of air masks for workmen repairing the furnaces. This is common practice to equip all men with air masks during dismantling of the furnace. All of this work is done by the men in this operation and the furnace is cleaned before the mechanics are requested to make the necessary repairs. The mechanics are supplied with the necessary clothing and are compelled to bathe before leaving the plant.

The suggestion, of having the Blending plant included in our air testing program, will be done.

Another item Dr. Kehoe mentioned was the high concentration of lead in the air during the time the autoclaves are discharging. He suggests that there may be something wrong in the valve assembly. This is impossible because if the valve assembly is not absolutely tight we would show a decided drop in pressure on the recording pressure chart. We feel that the high concentration of lead is caused from the stem of the valve being exposed when the valve is opened during the discharging period. This however will not come out of the enclosure due to our present method of ventilation. Since the velocity of the air passing by the front doors of the autoclave is approximately 170 ft. per minute it is hardly conceivable that any odors get out into the room. We have an operating rule that not more than two of the pent doors be opened at any one time.

We have several of the smaller doors in front of the autoclave enclosure cut so as to allow the front doors to close while the autoclave discharge valve is opened. Dr. Kehoe suggests that all of these be done. We will comply with his request.

He mentions the use of water on the floor of the Alloy building. We do use saw dust moistened with oil which works very satisfactorily.

As per his request we have submitted to Dr. Deuel the following names of men who have worked in the Alloy and also men

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who will be transferred to the operation within two weeks.

 has worked in Alloy since 1928.

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transferred to Alloy recently.
will be transferred to Alloy within two weeks.

We expect to continue the study and elimination of the hazards in connection with the Lead Ethyl Area and will concentrate our present efforts on the Alloy operation.

I am attaching hereto an extra copy of my reply to you in case you desire to forward it to Dr. Kehoe as we do not intend to reply to his letter, since the practice has been in the past to have correspondence of this nature sent out from your office.

I am also attaching two copies of Mr. Copeland's recent reports on the analyses of the air in the various buildings.

L. S. MUNSON, MANAGER

BY: 

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