

May 4, 1949

Dr. B. B. Reeve,
Medical Director,
Standard Oil Company (Indiana),
910 South Michigan Avenue,
Chicago, Illinois.

Dear Doctor Reeve:

I apologize for the delay in replying to your letter of April 12, and can only plead that certain enforced absences from my office have resulted in an accumulation of correspondence.

I could wish that I could really improve upon the statements in my letter of 1939 sent you in reply to your earlier question on the same subject. I fear that it is not possible to do much along that line, but I can add a few comments that might be useful.

The hazard of spray painting has, of course, a quantitative aspect. A paint that contains a low percentage of lead (1 to 2 per cent) presents relatively little hazard as compared with one of low lead content, but the real question at issue relates to the manner of exposure. For outside work there is, generally speaking, little risk of lead absorption from the use of a paint of low lead content, but in enclosed spaces that are unventilated or poorly ventilated some hazard would exist. This could be determined by analysis of the air at the breathing zone of the workmen, or alternatively by analysis of their blood and/or urine, following a period of some weeks of characteristic exposure. Respirators, of course, could be used, and one feels that this should be done under appropriate supervision, except under the conditions of adequate ventilation when the work is done in well designed spray booths.

Another problem relates to the removal of such paint by scraping, sanding, grinding or burning operations. These operations may suspend significant amounts of dust or fume in the air breathed by workmen. Again analyses will suffice to measure the hazard, and protective measures can be taken accordingly.

It is quite certain that a slight increase in the lead concentration in the paint, as, for example, from slightly less than 1 per cent to a full 1 per cent, would have very little influence on the hazard. Therefore, if your problem consists merely in allowing an increase up to and including the concentration of 1 per cent, I do not consider it much of a problem.

A still further problem, in all spray painting, relates to exposure

Dr. B. B. Reeve - (2) - May 4, 1949

to the solvent or solvents. Exposure can be limited by the exercise of care on the part of the workman, in out-of-door work, but this is difficult if not impossible, in enclosed spaces. Generally speaking, it is bad policy to do much or regular spray painting under any other conditions than that of good natural or artificial ventilation. Short periods of exposure occasionally are of little importance, but regularly sustained exposure to the solvents without the protection of satisfactory ventilation is likely to be productive of trouble. Respiratory protection can be provided against the solvents by means of charcoal filters, and under certain conditions of intermittent spray-painting, this type of protection may prove to be effective.

I trust these remarks may be of some help.

Cordially yours,

Robert A. Kehoe, M. D.

RAK ef

STANDARD OIL COMPANY

(INDIANA)

DR. BRYCE B. REEVE,
DIRECTOR OF MEDICAL DEPT.

910 SOUTH MICHIGAN AVENUE

CHICAGO, ILL.

April 12, 1949

Robert A. Kehoe, M.D.
College of Medicine
University of Cincinnati
Cincinnati, Ohio

Dear Dr. Kehoe:

I am enclosing a copy of a letter you wrote to me on October 5, 1939 and also a copy of my letter to you of September 29, 1939. I had inquired for information pertaining to the safe maximum lead content for paints used for spraying purposes.

I would like to inquire at this time whether you have any further information or data in regard to this matter. For safety purposes, we have, in the past, required the lead content to be kept at less than one per cent. We have been advised that there will be a saving in the cost of paint purchases if the lead content requirement is raised to one per cent.

I would appreciate any further remarks in regard to this matter. I am enclosing a self-addressed, stamped envelope.

Yours very truly,

B B Reeve M.D.
Medical Director

BBR:L
Encl.

N 6209.01

UNIVERSITY OF CINCINNATI
College of Medicine
General Hospital

Laboratory of Applied Psychology

October 5, 1939

Dr. B. B. Reeve
Standard Oil Company
910 South Michigan Avenue
Chicago, Illinois

Dear Doctor Reeve:-

I am not quite certain that it is possible to answer the question raised in your letter of September 29th in a categorical fashion. The safe limits of lead as spray droplets in the atmosphere have not been adequately determined so far as my knowledge goes. Nevertheless there has been a practice in some circles of regarding paint as essentially lead-free if its lead content is not in excess of 2%. I am not in position to vouch definitely for the correctness of this assumption, but the experience of others would seem to indicate that this establishes a reasonable basis for safety. If the only source of lead in the paint which you use arises from the containers which have previously contained lead paint, I should think that the percentage of lead would be well under the limit which I have mentioned. I think, however, it might be well for you to investigate this point. Our own experience with so-called lead-free paints has been that the expression is used somewhat loosely. Even so, I should feel that the use of respirators by your workmen should provide reasonably adequate protection providing the respirators are well fitted and kept in good condition.

I am sorry I cannot give you more definite information but I trust that what I have given you will be of some use.

Very truly yours,

/s/ Robert A. Kehoe
Robert A. Kehoe, M.D.

RAK:is

N 6209.02

C
O
P
Y

C
O
P
Y

September 29, 1939

Dr. Robert A. Kehoe
College of Medicine
University of Cincinnati
Cincinnati, Ohio

Dear Dr. Kehoe:

As you know, our company at all times is attempting to keep our working conditions safe, and a problem has been presented to me in regard to the use of lead in our spray paint. Due to your wide knowledge in the use of lead, I shall appreciate receiving your opinion in regard to the following:

What do you consider the safe maximum lead content for paints that are used for spraying purposes? The paint we obtained is called lead free paint, but the various companies which put this out claim that due to the mixing of the paint in containers that had previously been used for lead paint, a certain amount of lead content will be found in the lead free paint if tests are made.

It is the desire of our company, and also of the paint companies, for us to establish what we consider a safe amount of lead in this type of paint. I might state that our employees use charcoal respirators while spraying.

I hope you will be able to furnish me with this information as soon as possible. I am enclosing a stamped addressed envelope.

Yours very truly,

M.D.

N 6209.03