

June 21, 1948

Mr. Manfred Bowditch,
Lead Industries Association,
420 Lexington Avenue,
New York City.

Dear Manfred:

I am sending you a copy of the paper on BAL in response to your letter of June 9.

Your earlier letter concerning the influence of painted roofs on water collected in tanks from such roofs, raises a question which is not readily answered. In fact, I think a very comprehensive investigation would be required to answer this question with any degree of assurance. The solubility of paints of a variety of kinds in water is certainly not very great. There is little question in my mind that scales of disintegrated paint will be found in rain water collected in this manner. Whether there will be more on a newly painted roof than on an old one is something which should be determined by experiment rather than by guess work, since the factors that would influence the outcome cannot all be visualized immediately. Undoubtedly most of the flecks of paint which would find their way into the water would settle out to the bottom and remain undissolved. Some portion undoubtedly would go into solution. My guess would be that such water would be very little higher in its lead content than is water carried in streams and brooks. However, I can imagine circumstances associated with the "chalking out" of the pigment, in which the lead content of somewhat carbonated rain water would be appreciable. I would not know how to determine the facts except through an experimental approach.

I do know that drinking water gets to be contaminated with lead from a variety of sources in various parts of the earth. To the best of my knowledge, this usually occurs as the result of contact of the water with metallic lead in alloys, solder and the like.

Regardless of the authority of the American Water Works Association, I should consider the use of red lead primers in water storage tanks as undesirable. Also despite the present point of view which permits drinking water to have a concentration of lead up to 0.1 mg. per liter, I do not consider any drinking water as really satisfactory for use, if the lead concentration is in excess of .03 to .04 mg. per liter. I consider that the Australians are just a little bit precious on this subject, but they have had some reason for their anxiety, and their present efforts to reduce the ingestion of lead in their country to the least possible level are not wholly realistic in view of medical viewpoints and certain types of medical evidence within their country.

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As to the appropriate coatings for roofs of this type, I have no ready answer.

Sincerely yours,

Robert A. Kehoe, M. D.

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Enc.

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It occurs to me that your research department may be able to answer a question which has arisen several times in localities which depend upon rain for drinking water such as the dry islands in the Caribbean, where, as you know, many Americans are building or acquiring homes.

Most of these houses have metal roofs which require paint for protection. The taste is for white or pastel colored paint and these shades not being procurable in roofing paints the question arises of the danger of lead poisoning present in outside white paint.

If lead paint can safely be used for covering roofs used to catch drinking water; or, of after a certain drying period, it can safely be used; or if, by some special treatment it can safely be used, will you please advise me?

If lead paint cannot safely be recommended for such a purpose, will you be good enough to suggest the proper paint material?