

SUBJECT:

Lead Poisoning.

NORFOLK AND WESTERN RAILWAY COMPANY

OFFICE OF CHIEF SURGEON

ROANOKE, VA.

W. R. WHITMAN, M. D.
CHIEF SURGEON

M. A. JOHNSON, JR., M. D.
ASSISTANT CHIEF SURGEON

July 20, 1937.

Dr. Robert A. Kehoe,
Laboratory of Applied Physiology,
University of Cincinnati,
Cincinnati, Ohio.

Dear Doctor Kehoe:

On February 19, 1937, I wrote you that we had among employees of the Norfolk & Western Railway Company several cases of alleged lead poisoning. Some of these patients reported as lead poisoning victims were, in the course of their duties, using acetylene torches in the process of removing rivets from old painted surfaces on cars, most of which work was done in the open air; others were engaged in applying a composition containing 25% lead, using the compressed air method, some of this work being done out-of-doors, and some of it indoors. You replied giving me a very complete and exhaustive resume' of your experiences.

In writing to the General Claim Department of the Norfolk & Western Railway Company upon the subject of lead poisoning, I quoted extensively from your letters and from your articles in The Journal of Industrial Hygiene, and recommended that the alleged cases of lead poisoning which have come under our observation be accepted as Railway Company liabilities.

The Chemical Department of the Railway Company seemingly has taken exception to the stand that our Medical Department has taken, based upon the scientific work you have done in your laboratories, along with the work of other investigators.

I am quoting report of an experiment which was made in our Chemical Department, and shall appreciate a frank statement of your opinion as to the reliability of this test:

"To be inhaled into the system through the respiratory organs it would be necessary for the lead to be converted into a gaseous state and we have never known of lead being converted into such a form.

"It is true that lead does sublime at extremely high temperatures, which is similar to vaporizing the lead, but this is not in a form that could be inhaled into the respiratory system.

"To substantiate our theory as set forth above

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a section of sheet metal, approximately 3 ft. long and 2 ft. wide, was coated heavily with red lead. A small hood was improvised with a delivery tube leading from the top of the hood to a solution through which was being passed hydrogen sulphide. The metal coated with the red lead was placed under this hood and cut into strips with an acetylene torch burning off all the red lead. Air was blown upward through the hood so that the drafting effect carried all fumes from the burning operation into the hydrogen sulphide saturated solution. Had lead been present, even in the slightest trace, a black precipitate would have formed. This test was negative which shows conclusively that no lead is contained in the fumes inhaled from the cutting operation.

"As a result of our investigation, and the foregoing history of lead poisoning, it is our opinion that the claim is without foundation. We are convinced that from whatever illness Mr. Statome may have suffered it was not chronic lead poisoning, and consequently no responsibility of the railway company."

We shall greatly appreciate any information you may be able to give us that may be of value to us in the solving of, and settlement of, the above mentioned problem.

Thanking you for your past courtesies, and with kindest personal regards, I am

Sincerely yours,
W. R. Whitman.
Chief Surgeon.WRW.