

August 8, 1944

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Mr. G. L. Stewart
Vice President
Imperial Oil Limited
Imperial Oil Building
Toronto 1, Canada

Re: Mr. Glen Wright

Dear Mr. Stewart:

Your letter of July 27th addressed to Mr. W. M. Turnley, Ethyl Corporation, 405 Lexington Avenue, New York, has been referred to this laboratory for comment.

It is obvious from the record that Mr. [REDACTED] has had significant industrial exposure to gasoline. [REDACTED] in all probability has developed mild chronic gasoline intoxication with associated peripheral neuritis of the hands.

Usually the first symptoms to appear in chronic intoxication of this type are those of a general nature or psychasthenic and neurasthenic manifestation and they are followed by muscular weakness and cramps, listlessness and a feeling of dullness, fatigue and loss of weight.

Symptoms on the part of the central nervous system occur in wide variety and degree. They may be listed as follows: mental confusion, loss of memory, a sense of impaired mental faculties, depression, irritability and nervousness, listlessness, dullness, occasional tremor, numbness, paresthesia, muscular pain perhaps lancinating, pains in the limbs, nerve tenderness, neuritis, and paralysis of peripheral or cranial nerves of the chronic type and associated with but little pain and either motor, sensory or mixed. Vertigo frequently occurs and may be severe and associated with tinnitus and impairment of hearing. Drowsiness by day may be followed by insomnia at night.

In the subacute and chronic intoxication the blood changes are not characteristic and there may be no significant alteration in the red and white counts or hemoglobin level.

With respect to therapy it is advisable to terminate the gasoline exposure temporarily and to establish general hygienic and tonic measures which will improve the general state of health.

KE 0016374

August 8, 1941

Upon return to work measures should be taken to prevent undue exposure to gasoline. It may be desirable to use rubber or synthetic rubber gloves or a protective skin cream. In regard to the suggestion that lead poisoning may be present in this case as indicated in the phrase "particularly the kind containing tetraethyl lead," no experimental or clinical evidence has been developed over a number of years to substantiate this inference. On the contrary, all of the data support the conclusion that there is nothing to indicate that any greater dangers from contact with leaded gasoline in its liquid or vaporized state exist than from similar contact with the base gasoline alone. Tetraethyl lead has been used in gasoline continuously since 1926 in concentrations not exceeding 1 to 1,260 parts by volume. During this period of time no single case of lead poisoning has resulted from the use of leaded gasoline as it is usually handled in commerce.

It has been well established that the hydrocarbon content of gasoline is the portion that causes poisoning and this may vary widely depending upon the nature and source of the crude oil base stock as well as upon the method of refinement. Vapor phase cracked gasoline is highly unsaturated and quite reactive chemically and physiologically.

If for any reason you feel that a urine sample should be examined to determine the presence of unusual amounts of lead, we shall be very glad to send a container and carry out the analysis upon your request.

Very truly yours,

KVK:rms

K. V. Kitzmiller, M.D.

Most of the foregoing material was obtained from the following sources:

"An Appraisal of the Lead Hazard Associated with the Distribution and Use of Gasoline Containing Tetraethyl Lead." Robert A. Kehoe, Frederick Thamann and Jacob Cholak. Journal of Industrial Hygiene and Toxicology, vol. 18, no. 1, January 1936.

"Hazards in the Handling of Ethyl Fluid and Leaded Gasoline." Robert A. Kehoe, M.D. Reprinted from the Proceedings of the Ninth All-Ohio Safety Congress, May, 1938.

"Gasoline Intoxication." Willard Machle, M.D. Journal of the American Medical Association, December 6, 1941, vol. 117, pp. 1965-1971.

KE 0016375

ETHYL CORPORATION

INTER-OFFICE
CORRESPONDENCE

TO Dr. R. A. Kehoe ADDRESS Cincinnati

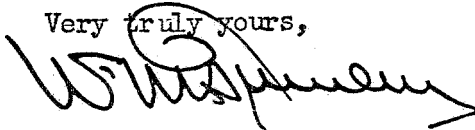
FROM Mr. W. M. Turnley ADDRESS New York

SUBJECT Imperial Oil [REDACTED] ina Refinery DATE August 1, 1944
Case of [REDACTED]

Attached is the original letter, dated July 27th, from Mr. G. L. Stewart, Imperial Oil Limited, Toronto, Canada, and file, covering the case of Mr. [REDACTED] of their Regina Refinery, whose family physician feels that he is suffering from neuritis as a result of handling gasoline, particularly the kind containing Tetraethyl lead.

Also attached is my reply to Mr. Stewart's letter. I am sure he would appreciate any information you could give him regarding this case.

Very truly yours,



WMT/h
Encls. (8)

RE 0016376

R. A. Kehoe
O. B. Lewis
Mr. H. Kuhe

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August 1, 1944

Mr. G. L. Stewart
Imperial Oil Limited
Imperial Oil Building
Toronto 1, Canada

Dear Mr. Stewart:

We are in receipt of your letter of July 27th, together with correspondence covering the case of Mr. [REDACTED], of your Regina Refinery, whose family physician feels that he is suffering from neuritis as a result of handling gasoline "particularly the kind containing Tetra-ethyl lead".

We are forwarding this complete file to our Dr. Robert A. Kehoe, College of Medicine, Eden Avenue, Cincinnati, Ohio, and no doubt you will hear from him regarding his opinion of the case.

Very truly yours,

W. M. Turnley

WMT/h

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IMPERIAL OIL LIMITED

IMPERIAL OIL BUILDING

TORONTO 1, CANADA July 27, 1944

G. L. STEWART
VICE-PRESIDENT

Mr. W.M. Turnley,
Ethyl Corporation,
405 Lexington Avenue,
NEW YORK 17, N.Y.

Dear Mr. Turnley:

We have had a peculiar case arise at Regina refinery in that of Mr. [REDACTED] whose family physician feels he is suffering from neuritis as a result of handling gasoline "particularly the kind containing Tetra Ethyl lead." That the files of your Medical Department may be complete we are attaching copies of the following correspondence:

Dr. M.G. Israels to Mr. C.R. Moore, dated June 22,
Mr. C.R. Moore to Dr. R. Macleod, " June 23,
Dr. Austin Evans to Mr. C.R. Moore, " July 3,
Dr. F.A. Corbett to Mr. C.R. Moore, " July 11,
Mr. C.R. Moore to Dr. R. Macleod, " July 18,
Dr. Austin Evans to Mr. C.R. Moore, " July 21.

You may rest assured that we will run this case to the limit, since we are satisfied there is no substantiation of lead poisoning and we will either prove or disprove this point.

We thought when your medical man next visits Regina he might wish to go into the matter at that point.

Yours very truly,

G. L. Stewart

Atts.

KE 0016378