

Shipments prior to revision of contract,
or up to end of January, 1924.....46,226 pounds or
3,556 gallons.

Feb. 1 to July 1 -	2,600	pounds	(200	gallons)	per	working	day
July 1 to Aug. 15,	5,200	"	(400	gallons)	"	"	"
Aug. 15 to date							
of completion							
contract	- 7,800	"	(600	gallons)	"	"	"

Minimum
Contract Commitment

Shortage

*-Overage

Total Delivered - Feb. to Sept. incl. -
64,741

Balance 1,100,000 lb. contract
to be delivered -

19,874

841,643

258,357

Shortage each month - February
to October, inclusive, (except
June and October), or total
net shortage to end October

16,059

216,557

GENERAL MOTORS CHEMICAL COMPANY

Dayton, Ohio.

July 18, 1924.

Doctor Paul Nicholas Leech,
American Medical Association,
535 North Dearborn Street,
Chicago, Illinois.

Dear Sir:

Your letter of July 11th addressed to Mr. Midgley has been referred to me. You are quite right in assuming that the General Motors Company and the Standard Oil Company would hardly have placed upon the market a substance containing lead without having the possible toxic effects carefully examined. Although no data have been published a comprehensive research on the possible danger to the general public have lead poisoning has been carried on by the Bureau of Mines in cooperation with the Department of Public Health. A preliminary report on this investigation will be available shortly. At present I may say that all indications are that there is no danger of acquiring lead poisoning through even prolonged exposure to the exhaust gases of cars using Ethyl Gas. Poisoning from carbon monoxide would arise long before the concentration of lead would reach a point where even cumulative poisoning is to be feared. Full details of this investigation will be available at a somewhat later date. I should be very glad to give you any further information which may be available.

Very truly yours,

(Signed) Graham Edgar,
Graham Edgar,
Director of Research

October 2, 1924. RRM/SJD

Mr. W. P. Yant.
U. S. Bureau of Mines,
Pittsburgh, Pa.

SUBJECT: Tetra-ethyl lead investigation.

Dear Mr. Yant:

The following statement was prepared by Dr. Hayhurst to be incorporated in the paper on tetra-ethyl lead:

Delayed lead poisoning, or that condition in which exposed persons or animals may have absorbed and retained lead without immediate symptoms, but with symptoms exhibited later, is fully recognized by a number of authorities. In fact, the symptoms of lead poisoning may come on years afterwards, probably depending upon some change in the acid-base equilibrium of the tissue fluids in the body. Suffice it to say that in all of these instances lead has been definitely stored, usually in large amounts, in the body tissues. According to Aub and others, this storage has been found to occur to the extent of 80 per cent in the skeleton. Obviously, without evidence of storage or deposition of lead in the tissues following exposure to ethyl gasoline exhaust fumes, the possibility of delayed symptoms from lead poisoning from this source may be dismissed as untenable.

I have not had the opportunity to go over the paper as I have been working on the helium article, although I haven't accomplished much even on that.

Yours very truly,

R. R. SAYERS
Chief Surgeon, U.S.B. of M.
Surgeon, U.S.P.H.S.

1018669 (Hayhurst)

725

RRM

Hiles

October 4, 1924.

Mr. W. P. Yant,
U.S. Bureau of Mines, Experiment Station,
Pittsburgh, Pa.

Dear Mr. Yant:

In view of the apparent confusion in several centers of the country and especially on the part of the Dayton Central Labor Union and Mr. Henry W. Yost, 29 Central Block, Dayton, Ohio, between the alleged toxicity of Ethyl Gasoline and certain of the chemicals which go into its manufacture and blending, I would recommend that the forthcoming report by the Bureau upon which you are at work should make the following points clear:

(1) That certain of the chemicals which are utilized for the manufacture of ethyl gasoline are poisonous.

(2) That experience has shown that the mere blending of certain of these substances has resulted in the poisoning of employees in the past although improved methods of handling are now claimed to have entirely eliminated this manufacturing hazard.

(3) That the finished product Ethyl Gasoline as marketed and used both pure or diluted in gasoline retains none of the poisonous characteristics of the ingredients concerned in its manufacture and blending.

It might be well in this connection to cite an analogous situation such as the substance "bakelite" in whose manufacture employees have been poisoned by the benzol and phenol which enter into its composition, but the substance itself, as is well known from public experience, is harmless, being used for pipe stems, cigarette holders, etc.

(4) That no evidence of poisoning of human beings by Ethyl Gasoline has yet been reported officially or otherwise to the Bureau.

Yours very truly,

E. R. Hayhurst, M. D.
Prof. of Hygiene.

Copy to Dr. R. R. Meyers, Washington, D.C.
Dr. Graham-Edgar, Dayton, O.

101861192101

UNITED STATES

DEPARTMENT OF THE INTERIOR
DEPARTMENT OF COMMERCE
BUREAU OF MINES~~CHIEF SURGEON~~

OCT 5 AM 11 04

BUREAU OF MINES
WASHINGTON D.C.

EXPERIMENT STATION, PITTSBURGH, PA.

October 3, 1925.

SUBJECT: Report of Ethyl Gas In-
vestigation.

Dear Dr. Sayers:

Thursday of this week I had conferences with Mr. Webb and Dr. Edgar of the Ethyl Gasoline Corporation in New York. I presented the proposition of publishing the entire ethyl gasoline investigation in a single bulletin to Mr. Webb. He gave me his assurance that his company would finance the publication. We tentatively thought that possibly 1000 copies should be printed.

It was agreed that the work of preparing the manuscript should go on vigorously to bring it to the point where it can be brought to the attention of our advisory board and criticised by all concerned, and submitted to the publishers for printing, if possible, by December 1.

Very truly yours,



A. C. Fieldner.

cc Director
cc Mr. Yant
cc file

101869 (84007)

725