

March 5, 1935

Mr. W. A. Raine, Asst. Chief Chemist,
The Pure Oil Co.,
35 E. Wacker Drive,
Chicago, Ill.

Dear Mr. Raine:

The description of the onset of the illness of the workman described in your letter to Mr. [REDACTED] dated February 14th, 1935, corresponds with what would be expected as a result of the inhalation of gasoline vapors. Considering the precautionary measures which are commonly taken against such possibility it seems surprising that this man evidently entered the tank without an air-line mask, or at least with a defective one. It is quite certain that he was overcome by gasoline vapors, since no other material capable of inducing unconsciousness is present in such tanks. The development of pneumonia is not to be regarded as an unusual consequence of such an incident.

As to the effects of the antioxidant ingredient of the gasoline, I can not give you any definite information, though in general they have no high immediate toxicity, but as to the effects of the lead content there is adequate information. Gasoline containing tetraethyl lead in the commercial amounts does not give rise to the danger of lead absorption by skin contact or by inhalation. I send you herewith an article which discusses these matters and refers to the literature of the subject. The lead deposits which may accumulate on the sides and bottom of the tank are a source of danger to which I shall refer in the succeeding paragraph but the absorption of these materials produces characteristic symptoms which bear no resemblance to those described in this case. Such effects may be entirely ruled out therefore.

KE 0012138

Despite the fact that the case in question is clearly one of gasoline intoxication from the inhalation of fumes, I cannot fail to take this opportunity to call attention to the precautions which have been advised (and with which your company has been circularized) for the cleaning of storage tanks which have been used for leaded gasoline. No man should ever be permitted to enter one of these tanks without strict attention to the details of these precautions, - not because he is in danger of being overcome by anything other than gasoline, but rather because in the absence of significant concentrations of gasoline vapors he may be exposed to the inhalation of significant amounts of finely divided lead compounds from the sides and bottom of the tank. Such compounds if inhaled to a sufficient degree will produce a delayed illness on the following day or days. If there is no mechanism in the operation of your company to see that the precautions advised for protection of such workmen are carried out in detail in the cleaning of such tanks, such a mechanism should be established at once, for otherwise trouble is in waiting. I should appreciate it, therefore, if you would see that the matter is brought to the attention of the proper person or persons, who, if they are in any doubt as to what should be done, should communicate with me at once.

Very truly yours,

Robert A. Kehoe, M.D.