

April 20, 1932

Re: Employees of Standard Oil Co (Indiana)
Detroit, Michigan

On Friday April 15, 1932 a large empty storage tank was cleaned by five employees. It has been empty for the preceeding two months and has always been used for storage of Ethyl Gasoline. Its capacity is (60,000) barrels (40 gal) and is approximately (120) feet in diameter and with a floating roof. This roof when empty is from six to seven feet above the floor it being an inverted shell. The floor only was cleaned and has a layer of rust, debris, etc. varying from very little to about an inch in thickness and it was damp throughout. A neighboring tank that was similar and ^{was} to have been cleaned had small pools of water on the floor some of which were two inches or more in depth. The dry walls and shell were not touched excepting accidentally. The men began work in the morning and five were used. Three worked for a period of eight to nine hours and two for four hours - finishing cleaning by evening.

In the cleaning process the floor is scooped and then swept, and the debris shoveled out a man hole. On this particular day it was quite cold outside but by noon and afternoon the sun shining on the roof made it quite warm inside of the tank. So warm that a vapor could be seen at times rising from the wet floor. In scraping the scale however, it was noticed that the men would sneeze and their nose would become irritated. On a number of occasions all excepting one would leave the tank for fresh air. One man was in the tank the entire day excepting a short time out for lunch. He however was not the sickest of the group.

In the past for a number of years this and similar tanks have been cleaned in a like manner without any ill effects. However the orders to clean the remaining empty tanks has been cancelled.

After finishing Friday evening excepting being tired the men apparently were well. They were restless at home and report they slept very little Friday night. They came to work on the following day and at the time did not report being sick. They quit at noon it being Saturday and nothing was thought of the work until Monday when two did not report for work. The superintendent then made inquiries and found that all had been having somewhat the same symptoms - insomnia, restlessness, anorexia, nausea, weakness, headache, and dizziness. One man took castor oil and some milk and raw eggs on Saturday and felt improved. None had cramps or vomiting. Two were constipated.

The superintendent then took them all (five) to the Henry Ford Hospital where their accident cases are taken. Monday morning when they were put to bed. In light of the history of working in an ethyl gasoline tank and their symptoms a diagnosis of acute plumbism was made and treatment begun consisting of pushing milk, cathartics and administration of calcium.

They improved and slept better Monday night. On Tuesday, I made rounds with Dr. Durham who had charge of them and all had improved markedly. All had been up excepting one - two were not in their rooms, and one was discharged that day. One patient the oldest was still weak and content to remain in bed. Excepting some

nervousness and complaining of inability to sleep they were free from symptoms.

The symptoms in general of this group, and each patient had practically the same excepting in degree, were as enumerated above.

The physical findings in general were:

Temperatures were all afebrile - some ninety-seven.

Pulses were all slow - some as low as fifty-two.

General Appearance when seen Tuesday was that of normal men.

On admission Dr. Durham said they had a more or less cyanotic flush.

Their extremities were cold and more or less cyanotic - quite marked in one case.

No lead line present.

No symptoms were referable to chest and they were not examined Tuesday. Blood pressure were all low - three were under (100) syst. and two with moderate arterio-sclerosis under (124) syst.

Abdomens were all negative for pain or tenderness.

Knee jerks present in all cases and only slightly exaggerated in one or two. No tremor of fingers.

Urines were negative excepting one with albumin ++ and acid.

Specimen (24) hours, had been obtained and were at laboratory for Pb. analysis.

Red blood cells showed nothing unusual - no stippling seen.

White blood counts varied from below (6000) in three cases (one was under 5000) to above (13000) in the other two.

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Samples of material from bottom of tank, sides, and from a support about a foot from the bottom above the water, were brought for analysis. Also some water from floor of near by tank.

Impression: Acute intoxications possibly due to lead but probably due to vapors present in the tank.

Names of Men: [REDACTED] (48 years) first men sick
[REDACTED] (55 years) (unconscious on way to hospital)
[REDACTED] (24 years)
[REDACTED] (50 years) took castor oil Saturday
[REDACTED] (? years)

Dr. L. Schradin

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