

(Copy)

COMMISSIONER OF HEALTH
Stanley H. Osborn, M.D., C.P.H.

BUREAU OF SANITARY ENGINEERING
Warren J. Scott, S.B.
Director

STATE OF CONNECTICUT
DEPARTMENT OF HEALTH
Hartford

Mr. Peter H. Mortensen
91 Nott Street
Wethersfield, Conn.

Dear Mr. Mortensen:

Through the cooperation of yourself and the Standard Oil Company, we ran three tests involving the steaming of two trucks and subsequent filling with drinking water. We are enclosing for the information of your committee tabulations of the results.

The first test was made on one of your trucks on February 13. This truck had been carrying kerosene prior to the steaming. After steaming, the truck was drained, filled with water, disinfected and emptied. It was then refilled a second time with cold water. After this, it was drained again and filled a third time with cold water. After the first filling, there was a decided chlorine taste as would be expected. After the second filling, there was a faint kerosene taste. After the third filling, there was no taste and even after storage for some time in the laboratory, there was no taste, and the odor disappeared rapidly after standing in an open container. Our sanitary engineer who made the test reported that the water was readily drinkable from both the second and third fillings. The bacteriological analyses showed no dangerous types of organisms.

The other two tests were made on a truck carrying leaded gasoline on February 18. Two separate compartments in the truck were used. On one test, the compartment was steamed, filled with water and disinfected and drained. After this, it was flushed out and refilled. At that time the water was allowed to stand in the compartment for four hours, after which the tank was again drained and partially refilled a third time.

As noted in the table which is headed "A", the water after the first filling and disinfection had a chlorinous taste as would be expected. After the second filling, the water had a faint oily taste although the water was drinkable. This oily taste and odor seemed to disappear on standing in the laboratory. After a four hour contact in the truck, the water had a distinct gasoline taste and odor although it was still drinkable. The water as noted after a short contact in the truck in connection with the third filling had no taste and odor.

The other compartment was filled without chlorination. This test is indicated by the tabulation headed "B". After steaming, the truck was filled and then drained. It was then refilled. The water after the first filling had a faint oil taste. After the second filling, it had only a very faint oily taste. It was then drained and refilled a third time. After the third filling, it had no taste or odor after short standing in the truck. However, after standing for four hours in the truck following this third filling, the water picked up a gasoline taste and odor. This taste and odor disappeared upon further standing in an open container. The water was drinkable at all times. The test indicated that the chlorine tended to accentuate the taste and odor but we feel that chlorination is necessary.

N 5305

Mr. Peter H. Mortensen

March 4, 1942

"A" were satisfactory, showing the absence of any dangerous types of organisms.

We found that practically no lead was picked up by the water standing in the truck which had previously contained leaded gasoline where the water stayed in the truck a relatively short time. However, after the water had stood in the truck for four hours it would pick up some lead. Where the water in the tank was not subjected to chlorination, this lead amounted to 0.16 parts per million. In the truck where the water in the tank was chlorinated, the lead in the water after four hours standing in the truck was 0.3 parts per million. This difference may not have been due to the effect of the chlorine. It might have been due to variation in the condition of the two compartments.

The amounts of lead indicated are not high enough to constitute a health hazard under the conditions of use that would prevail. We are, however, interested to know if the water were allowed to stand for still longer periods in trucks which had formerly carried leaded gasoline, if there would be a decided increase in the amount of lead absorbed.

I have discussed this with Mr. H. C. Hobbs and Mr. William Hannan of the Standard Oil Company and they have agreed to cooperate with us on a further test next Wednesday. In connection with this test, we will follow out the same procedure as outlined on test "A" at their plant except that after the first filling and disinfection, we will refill the truck with city water and then allow the water to stand in the truck overnight. This will give us additional data on any desirable limits for contact between the water and the trucks.

After we make this test, we would like then to drain the truck and fill it once more, possibly allowing it to stand another four hours. This would give us information as to whether the amount of lead dissolved will decrease as the refillings continue.

I am sending copies of this letter and the tabulations to Doctor Burgdorf, health officer of Hartford, and to Mr. Caleb M. Saville of the Metropolitan District of Hartford, who was represented by Mr. Gentner at the meeting we held.

Very truly yours,

(Signed) Warren J. Scott
Director
Bureau of Sanitary Engineering

WJS:VAH

Encs. 3

cc: Dr. Burgdorf
Mr. Saville

KE 0000234

TABULATION OF PROCEDURE FOLLOWED IN TEST CLEANING OF FUEL OIL TRUCK
OWNED BY PETER H. MORTENSEN, WETHERSFIELD
COMPARTMENT CAPACITY, 1550 GALLONS. COMPARTMENT PREVIOUSLY CARRIED KERO
PERSONS PRESENT: DRS. R. B. McDONALD AND J. A. FARNHAM OF HTFD. CITY HEALTH
AND MR. PETER MORTENSEN

Approx. Time for Each Operation	Operation	Samples following Each Operation			
		Taste	Odor	Color	Res. Chlor.
150 min.	Steamed with high pressure Jenny 185° C. and 100#/sq.in.				
5 min.	Condensate drained				
65 min.	Compartment filled from street hydrant and disin- fected with about 13 oz. of HTH or 40 ⁺ p.p.m. Allowed to stand 1 hour	Decided disinfectant	Chlorinous		O.T.Red
20 min.	Compartment emptied				
25 min.	Compartment filled with cold water and emptied.	Faint kerosene	Kerosene		O.T. 0.1 p.p.m.
5 min.	Compartment filled with cold water	None	None		O.T. 0.0 p.p.m.
	Sample for Laboratory	None	Faint Hydro- carbon	10	0.0 p.p.m.

F.O.A.Almquist

February 13, 1942

Bacteriological
organisms of t

"A"

TABULATION OF PROCEDURE FOLLOWED IN TEST CLEANING OF COMPARTMENT NO.6 OF GASOLINE
TRUCK OF STANDARD OIL COMPANY OF NEW YORK IN HARTFORD
COMPARTMENT CAPACITY 250 GALLONS. TRUCK HAD CARRIED LEADED GASOLINE 220,000 MIL.
PERSONS PRESENT: DR. A.L. BURGDORF, HEALTH OFFICER: MR. WM. HANNAN, STANDARD OIL CO. O.

APPROX. TIME OF OPERATION	OPERATION	SAMPLES		FOLLOWING		OPERATION	
		TASTE	ODOR	COLOR	LEAD	RES.	CHLOR.
20 min.	Steamed with low pressure						
5 min.	Flushed with hose and hot water.						
55 min.	Filled with cold water 3 oz. HTH added and allowed to stand 30 min.	Decided disinfectant	Faint chlorine				O.T. Red
10 min.	Emptied tank						
5 min.	Flushed with cold water						Flush water 0.35
55 min.	Refilled with cold water and allowed to stand 30 min.	Faint oily	Faint oily				
	Sample to lab.	None	Very faint hydrocarbon	0	<.01		No ta quick
4 hrs.	Water allowed to stand 4 hrs. in tank.	Distinct gasoline	Distinct gasoline				
	Sample to lab.	Distinct disagreeable	Distinct Hydrocarbon	30	0.3		Taste for 2
15 min.	Tank partly refilled.	None	None				

J.K.Sherman February 18, 1942

Bacteri-
showed
isms.

KS/DAT

"B"

TABULATION OF PROCEDURE FOLLOWED IN TEST CLEANING OF COMPARTMENT NO. 5 OF GASO
TRUCK OF STANDARD OIL COMPANY OF NEW YORK IN HARTFORD
COMPARTMENT CAPACITY 250 GALLONS. TRUCK HAD CARRIED LEADED GASOLINE 220,000 MI
PERSONS PRESENT: DR. A.L.BURGDORF, HEALTH OFFICER; MR.WM. HANNAN, STANDARD OIL CO. OF

APPROX TIME OF OPERATION	OPERATION	SAMPLES		FOLLOWING		OPERATION	
		TASTE	ODOR	COLOR	LEAD	R.F.S.	CHL
20 min.	Steamed with low pressure						
5 min.	Flushed with hose and hot water.						
55 min.	Filled with cold water and allowed to stand 30 min.	Faint oily	None				
40 min.	Emptied and refilled with cold water.	Very faint oily	None				
50 min.	Tank emptied, flushed, refilled and allowed to stand 10 min.	None	None				
	Sample to lab.	None	Faint Hydrocarbon	0	<.01		
4 hrs.	Water allowed to stand 4 hrs. in tank.	Distinct gasoline	Distinct gasoline				
	Sample to lab.		Distinct hydrocarbon	15	0.16		

L.K.Sherman Feb. 18, 1942

LKS/DAT