



STATE OF NEW YORK  
DEPARTMENT OF HEALTH

Syracuse Field Office

677 South Salina Street

Syracuse, NY 13202-3592

Lorna McBarnette  
Exec. Dep. Comm.

October 18, 1991

OFFICE OF PUBLIC HEALTH  
Linda Randolph, M.D., M.P.H.  
Director

Ithaca, NY 14850

RE: Morse Industrial Corp. No. 755010

Dear

The New York State Department of Health collected air samples on May 7, 1991, from the basement and first floor of your property at ~~South Cayuga Street~~, Ithaca, New York, from a nearby outdoor location and from nine other houses located near Morse Industrial Corporation's Ithaca plant. The purpose of the investigation was to determine if the underground pollutants from the plant were producing a measurable indoor air impact on neighboring homes. Groundwater contamination at the plant site has been documented and includes substantial levels of trichloroethene. Lower levels of tetrachloroethene, 1,1-dichloroethane, 1,1,1-trichloroethane and methylene chloride were also found in certain test wells. The chemical contamination may have been caused by past disposal practices, leaks and losses in the plant drain system and possibly via other routes. Results from downgradient test wells show very low levels of contamination and remedial steps to curtail any further discharges are being implemented. The sample results indicate that the indoor air in your house was probably impacted at the the time of sampling.

A total of 23 air samples were collected from 10 houses located near the Morse plant site. Houses were selected for air sampling based on the potential for the contaminated groundwater to impact the indoor air. Most of the study houses are located directly downhill from the plant and as such are those most likely to be impacted. Four houses located away from the Morse plant area were also sampled to provide a basis with which to compare the study area results. These houses are referred to as control houses.

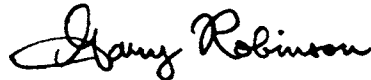
The attached chart presents your results and a summary of the study area and control area results. In addition, I've included another chart which provides information for comparison from the EPA National Ambient Volatile Organic Chemicals (VOCs) Data Base Update. This document is a summary of indoor and outdoor air sampling results from studies performed nationwide. The five compounds in the chart were identified in groundwater near the Morse plant. The level of trichloroethene in your basement was higher than the levels found in control houses and in other indoor air studies.

Trichloroethene was not detected in the outdoor air and the level in your basement was higher than on the first floor, indicating a potential source in the basement. The house was vacant and no household products were found which contained trichloroethene. Trichloroethene was the chemical detected in the highest concentration in the groundwater near the plant and your house is one of the closest to the plant. The attached lab results show that several other chemicals were detected at low levels inside your house. The presence of these other chemicals at low levels is not unexpected.

The level of trichloroethene detected in your house may present a slightly increased exposure to trichloroethene compared to the control houses. Attached is a table which lists the potential health effects associated with exposure to trichloroethene. Health effects are not expected at the levels in your house.

If you have any questions about your results or the site in general, please call me at (315) 426-7613.

Sincerely,



Gary Robinson  
Senior Sanitarian  
Syracuse Field Office

#12240574

Attachments

cc: Mr. Hudson  
Mr. Parratt  
Mr. Andersson  
Mr. Litwin

Air Sample Results (mcg/m<sup>3</sup>)  
May, 1991

Target Chemical	Your House	Comparison Houses		Study Houses	
		Minimum	Maximum	Minimum	Maximum
<b>OUTDOORS</b>					
trichloroethene	< 0.5	< 0.5	1.0	< 0.5	< 0.5
tetrachloroethene	<0.5	< 0.5	<0.5	< 0.5	11
1,1-dichloroethane	<25	<25	<25	<25	<25
1,1,1-trichloroethane	1.3	1.2	1.9	1.0	8.9
methylene chloride	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
<b>BASEMENT</b>					
trichloroethene	46	< 0.5	4.1	< 0.5	46
tetrachloroethene	3.4	< 0.5	0.6	0.5	6.7
1,1-dichloroethane	<25	<25	<25	10	<25
1,1,1-trichloroethane	9.6	1.3	3.3	1.0	120
methylene chloride	<3.0	< 3.0	3.0	< 3.0	39
<b>FIRST FLOOR</b>					
trichloroethene	4.6	0.5	7.5	< 0.5	4.6
tetrachloroethene	< 0.5	< 0.5	4.8	< 0.5	2.8
1,1-dichloroethane	<25	<25	<25	<25	<25
1,1,1-trichloroethane	3.2	1.4	50	1.3	8.1
methylene chloride	< 3.0	< 3.0	3.0	< 3.0	<3.0

mcg/m<sup>3</sup> - micrograms of chemical per cubic meter of air

#12400216

Indoor and Outdoor Average and Median Concentrations<sup>1</sup>  
 All values micrograms per cubic meter (mcg/cu.m) of air

Compound	Indoor Concentrations		Outdoor Concentrations	
	Average	Median	Average	Median
trichloroethene	7.2	0.67	2.7	.85
tetrachloroethene	20.7	5.0	5.8	2.4
1,1-dichloroethane	NA	NA	.15	0.36
1,1,1-trichloroethane	267	10	5.0	0.9
methylene chloride	NA	NA	5.6	2.7
benzene	16.5	10.0	9.0	5.3
toluene	NA	31.7	32	7
ethylbenzene	12.5	4.8	19.5	2.6
m/p xylenes	76	29	95	13
o xylene	12	4.8	33	3
carbon tetrachloride	2.5	0	1.0	.76
1,3-dichlorobenzene	24	1.7	5.3	.18
methylene chloride	NA	NA	5.6	2.7
chloroform	4.1	.49	3.1	.3

<sup>1</sup>Taken from: National Ambient Volatile Organic Compounds (VOC's) Data Base Update, EPA, 1988.

#12390718

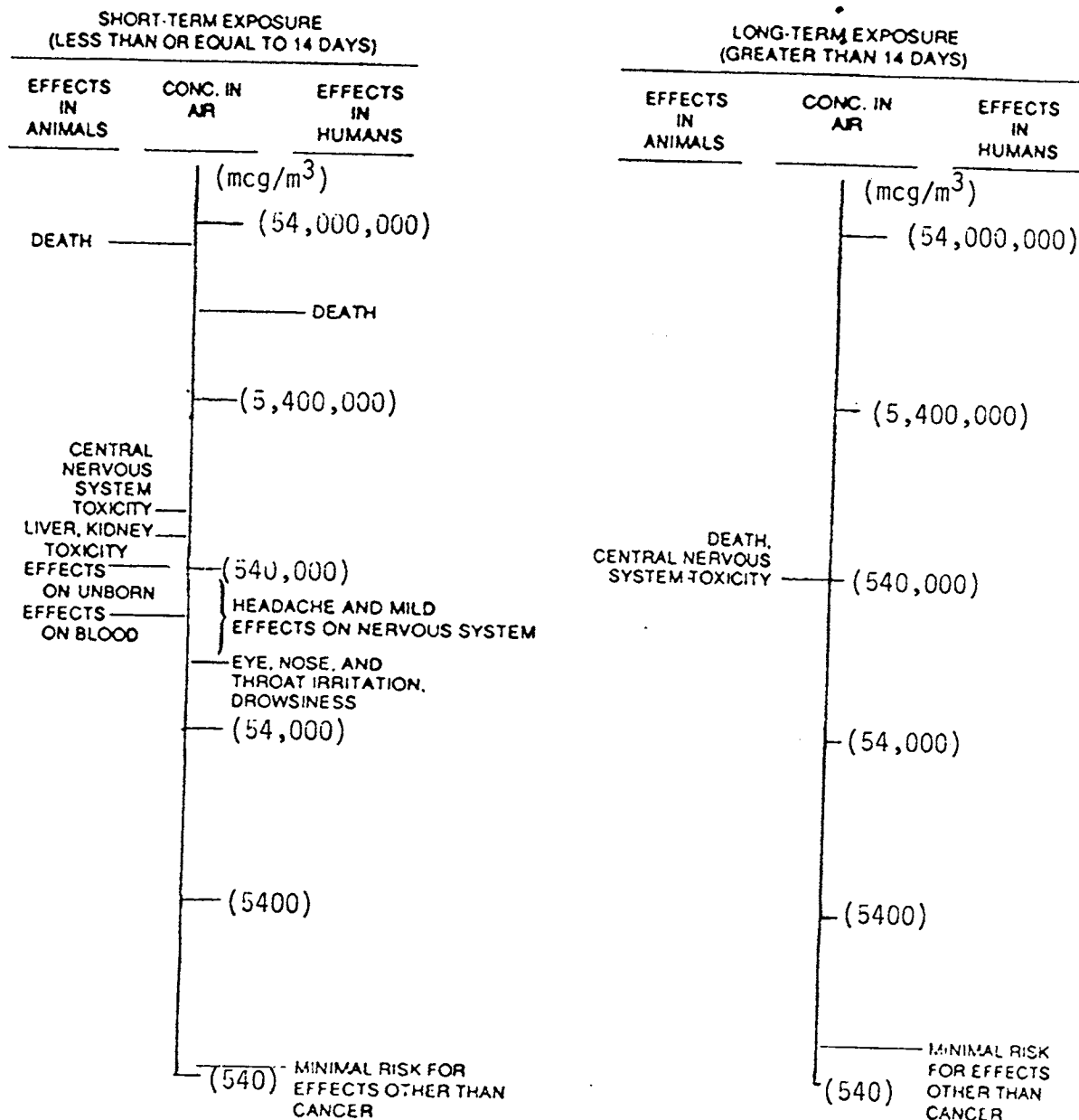


Fig. 1.1. Health effects from breathing trichloroethylene.

ATSDR, 1989. Toxicological Profile for Trichloroethylene. Oak Ridge National Laboratory, Oak Ridge, TN. p. 3.

mcg/m<sup>3</sup> - micrograms of chemical per cubic meter of air.

WADSWORTH CENTER FOR LABORATORIES AND RESEARCH

PAGE 1

RESULTS OF EXAMINATION

FINAL REPORT (REV)

SAMPLE ID: 911598 SAMPLE RECEIVED: 91/05/09/ CHARGE: 8.00  
 PROGRAM: 110: STATE SUPERFUND ANALYTICAL SERVICES  
 SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE: 5401  
 POLITICAL SUBDIVISION: ITHACA C. COUNTY: TOMPKINS  
 LATITUDE: LONGITUDE: Z DIRECTION:  
 LOCATION: 755010 MORSE INDUSTRIAL CORP., ITHACA  
 DESCRIPTION: S. CAYUGA ST., 1ST FLOOR LIVING RM  
 DESCRIPTION: CART #AB9577-27.5 LITERS/BB9574-26.2 LITERS  
 REPORTING LAB: TOX: LAB FOR ORGANIC ANALYTICAL CHEMISTRY  
 TEST PATTERN: RNV2: VOLATILE ORGANICS IN AIR - DR. R. NARANG  
 SAMPLE TYPE: 902: AMBIENT AIR - INDOOR  
 TIME OF SAMPLING: 91/05/07 11:26 TO 91/05/07 12:30 DATE PRINTED: 91/07/25

REVISION DATE 91/07/24, TEST PATTERN CODE CHANGED, WAS: RNV3

ANALYSIS: RNV2 VOLATILES IN AIR (DR. R. NARANG METHOD)  
 DATE PRINTED: 91/07/25 FINAL REPORT

PARAMETER	RESULT
BENZENE	2.0 MCG/CU. M.
TOLUENE	< 2.0 MCG/CU. M.
CHLOROBENZENE	< 2.0 MCG/CU. M.
ETHYLBENZENE	< 2.0 MCG/CU. M.
M/P-XYLENE	2.0 MCG/CU. M. [PL]
O-XYLENE	2.0 MCG/CU. M. [PL]
NAPHTHALENE	< 2.0 MCG/CU. M.
1,1-DICHLOROETHANE	< 25. MCG/CU. M.
CHLOROFORM	4.0 MCG/CU. M.
1,2-DICHLOROETHANE	< 25. MCG/CU. M.
1,1,1-TRICHLOROETHANE	3.2 MCG/CU. M.
CARBON TETRACHLORIDE	0.7 MCG/CU. M.
TRICHLOROETHENE	4.6 MCG/CU. M.
BROMODICHLOROMETHANE	0.5 MCG/CU. M. [PL]
1,2-DICHLOROPROPANE	< 25. MCG/CU. M.
TRANS-1,3-DICHLOROPROPENE	< 5.0 MCG/CU. M.
1,1,2-TRICHLOROETHANE	< 1.0 MCG/CU. M.
DIBROMOCHLOROMETHANE	< 0.5 MCG/CU. M.
TETRACHLOROETHENE	< 0.5 MCG/CU. M.
CIS-1,3-DICHLOROPROPENE	< 5.0 MCG/CU. M.
BROMOFORM	< 1.0 MCG/CU. M.
1,1,2,2-TETRACHLOROETHANE	< 1.0 MCG/CU. M.
1,3-DICHLOROBENZENE	< 2.0 MCG/CU. M.
1,2-DICHLOROBENZENE	< 2.0 MCG/CU. M.
1,4-DICHLOROBENZENE	< 2.0 MCG/CU. M.
PHENOL	[NA]
AIR VOLUME	0.027 CU. M.

\*\*\*\* CONTINUED ON NEXT PAGE \*\*\*\*

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 ALBANY, NY 12237 INTERAGENCY MAIL

SUBMITTED BY: S HOUSE

WADSWORTH CENTER FOR LABORATORIES AND RESEARCH

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RESULTS OF EXAMINATION

FINAL REPORT (REV)

SAMPLE ID: 911588

SAMPLE RECEIVED: 91/05/09/

CHARGE: 8.00

POLITICAL SUBDIVISION: ITHACA C.

COUNTY: TOMPKINS

LOCATION: 755010 MORSE INDUSTRIAL CORP., ITHACA

TIME OF SAMPLING: 91/05/07 11:26 TO 91/05/07 12:30

DATE PRINTED: 91/07/25

-----PARAMETER-----  
METHYLENE CHLORIDE (DICHLOROMETHANE)

-----RESULT-----  
< 3.0 MCG/CU. M.

\*\*\*\* END OF REPORT \*\*\*\*

SAMPLE ID: 911589 SAMPLE RECEIVED: 91/05/09/ CHARGE: 8.00  
 PROGRAM: 110: STATE SUPERFUND ANALYTICAL SERVICES  
 SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE: 5401  
 POLITICAL SUBDIVISION: ITHACA C. COUNTY: TOMPKINS  
 LATITUDE: LONGITUDE: Z DIRECTION:  
 LOCATION: 755010 MORSE INDUSTRIAL CORP., ITHACA  
 DESCRIPTION: ██████████ S. CAYUGA ST., BASEMENT.  
 DESCRIPTION: CART #A89571-26.0 LITERS/B89565-26.0 LITERS  
 REPORTING LAB: TOX: LAB FOR ORGANIC ANALYTICAL CHEMISTRY  
 TEST PATTERN: RNV2: VOLATILE ORGANICS IN AIR - DR. R. NARANG  
 SAMPLE TYPE: 902: AMBIENT AIR - INDOOR  
 TIME OF SAMPLING: 91/05/07 11:19 TO 91/05/07 12:24 DATE PRINTED: 91/07/25

REVISION DATE 91/07/24, TEST PATTERN CODE CHANGED, WAS: RNV3

ANALYSIS: RNV2 VOLATILES IN AIR (DR. R. NARANG METHOD)  
 DATE PRINTED: 91/07/25 FINAL REPORT

PARAMETER	RESULT
BENZENE	2.0 MCG/CU. M. [PL]
TOLUENE	2.0 MCG/CU. M. [PL]
CHLOROBENZENE	< 2.0 MCG/CU. M.
ETHYLBENZENE	< 2.0 MCG/CU. M.
M/P-XYLENE	< 2.0 MCG/CU. M.
O-XYLENE	< 2.0 MCG/CU. M.
NAPHTHALENE	< 2.0 MCG/CU. M.
1,1-DICHLOROETHANE	< 25. MCG/CU. M.
CHLOROFORM	28. MCG/CU. M.
1,2-DICHLOROETHANE	< 25. MCG/CU. M.
1,1,1-TRICHLOROETHANE	9.6 MCG/CU. M.
CARBON TETRACHLORIDE	0.7 MCG/CU. M.
TRICHLOROETHENE	46. MCG/CU. M.
BROMODICHLOROMETHANE	2.7 MCG/CU. M.
1,2-DICHLOROPROPANE	< 25. MCG/CU. M.
TRANS-1,3-DICHLOROPROPENE	< 5.0 MCG/CU. M.
1,1,2-TRICHLOROETHANE	< 1.0 MCG/CU. M.
DIBROMOCHLOROMETHANE	< 0.5 MCG/CU. M.
TETRACHLOROETHENE	3.4 MCG/CU. M.
CIS-1,3-DICHLOROPROPENE	< 5.0 MCG/CU. M.
BROMOFORM	< 1.0 MCG/CU. M.
1,1,2,2-TETRACHLOROETHANE	< 1.0 MCG/CU. M.
1,3-DICHLOROBENZENE	< 2.0 MCG/CU. M.
1,2-DICHLOROBENZENE	< 2.0 MCG/CU. M.
1,4-DICHLOROBENZENE	< 2.0 MCG/CU. M.
PHENOL	[NA]
AIR VOLUME	0.026 CU. M.

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SAMPLE ID: 911589 SAMPLE RECEIVED: 91/05/09/ CHARGE: 8.00  
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LOCATION: 755010 MORSE INDUSTRIAL CORP., ITHACA  
TIME OF SAMPLING: 91/05/07 11:19 TO 91/05/07 12:24 DATE PRINTED: 91/07/25

-----PARAMETER-----                      -----RESULT-----  
METHYLENE CHLORIDE (DICHLOROMETHANE)                      < 3.0 MCG/CU. M.

\*\*\*\* END OF REPORT \*\*\*\*