

COPY

PLUMLEY ENGINEERING, P.C.
Civil and Environmental Engineering

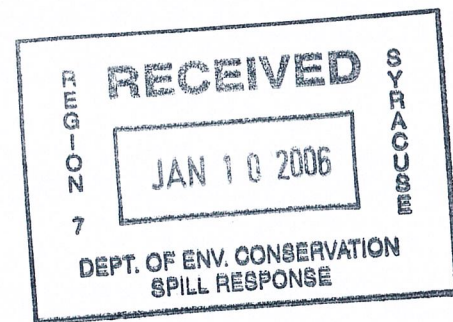
8232 LOOP ROAD, BALDWINVILLE, NEW YORK 13027
Telephone: (315) 638-8587 Fax: (315) 638-9740 Internet: www.plumleyeng.com

January 10, 2006

VIA HAND DELIVERY

Mr. Kevin Kelly, P.E.
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
Region 7, Division of Environmental Remediation
615 Erie Boulevard West
Syracuse, New York 13204-2400

RE: Data Report
Voluntary Cleanup Program (VCP)
North Star Cleaners, Town of Cicero
DEC Site No. V00150
Project No. 2003074



Dear Mr. Kelly:

This is to provide the analytical results and groundwater elevation data from the recently completed investigation activities. The scope of the work was outlined in the Post-Excavation Requirements Plan, dated October 6, 2005 and revised by letter dated November 9, 2005. The work completed included:

- Installation of 3 shallow and 4 deep groundwater wells on the site
- Installation of 3 shallow groundwater wells on the Dunn Tire site.
- Collection and analysis groundwater samples from 17 wells.
- Measurement of groundwater elevations.
- Collection and analysis soil vapor samples at 10 locations on the site.
- Collection and analysis of a subsurface soil sample from one soil boring.

The following work that was included in the Plan was not completed:

- Collection of groundwater sample from well CES MW-2 - this well could not be located after an exhaustive search. The well head may have been dislodged during soil removal operations that occurred on the site last year.
- Collection of a soil sample from MW-10 soil boring – this sample was inadvertently not collected during the field work.
- Collection of a soil vapor sample from the southeast corner of the site – groundwater was too shallow (less than 1 foot below grade) at the time of the sampling.
- Collection of a soil vapor sample from under the slab in the basement of the former restaurant – due to shallow groundwater, this sample was relocated to outside the building.

The following information is attached:

Tables

- 1A Groundwater Elevations
- 1B Groundwater Target Compound List VOCs
- 1C Groundwater Samples - Target Compound List SVOCs
- 1D Summary of Historical Groundwater Analytical Results - Total VOCS
- 1E Groundwater Samples - RCRA Metals
- 2 Soil Sample - Target Compound List and STARS VOCs
- 3 Soil Vapor - Target Compound List VOCs

Plans

- Sheet GW-1 Site Plan - Groundwater
- Sheet SL-1 Site Plan – Contaminant Data

Mr. Kevin Kelly, P.E.
January 10, 2006
Page 3

As set forth in the Post-Excavation Requirements Plan, the Final Report will not be due until after the Interim Remedial Measures ("IRM") is completed. Before implementing the IRM, however, we would like to request a meeting at your earliest convenience to discuss these results. If you have any questions, please contact me.

Sincerely,

PLUMLEY ENGINEERING, P.C.

Dale R. Vollmer, P.E.

DRV/drv

cc: Wendy Marsh, Esquire w/encl. (2 copies)
Nathan Walz, NYSDOH w/encl.
Mary Jane Peachey, P.E. w/ encl.
James E. Burke, P.E. w/ encl.

Site No. V-00150-7
VCA No. A7-0466-0702□
Town of Cicero, Onondaga County, New York

GROUNDWATER TABLES NOTES:

¹ State standard is in reference to the NYSDEC Division of Water's Technical and Operational Guidance Series (TOGS) (1.1.1),
Ambient Water Quality Standards and Guidance Values, reissued June 1998.

µg/L micrograms per liter (equivalent to parts per billion, ppb)

A blank cell indicates that the specified analyte was not detected at a concentration greater than the method detection limit (MDL).

Compounds that exceeded State Standards are denoted in **BOLD**.

J Indicates the presence of a compound that meets the identification criteria at less than the quantitation limit but greater than zero.

B Indicates compounds was detected in the method blank.

D Indicates diluted sample analysis due to compound concentration exceeding instrumentation calibration range.

0.4* Applies to the sum of cis- and trans-1,3-dichloropropene

1* Applies to the general phenolic standard

ND< Not detected less than

--- No promulgated State Standard

Site No. V-00150-7
VCA No. A7-0466-0702
Town of Cicero, Onondaga County, New York

TABLE 1A - GROUNDWATER ELEVATIONS

MONITORING WELL CONSTRUCTION DATA	MONITORING WELL																	
	CES- MW-1	CES- MW-2	MW-1	MW-2	MW-3	MW-4	TW-5	MW-6D	MW-7D	MW-8D	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15D	RW-1
Top-of-Casing Elevation	102.71	104.93	103.07	103.42	103.80	104.35	107.75	104.51	102.98	104.59	104.98	103.84	101.83	102.09	102.11	101.96	104.31	104.58
Ground Elevation	102.91	105.23	103.72	103.94	104.08	104.98	104.69	104.71	103.32	105.01	105.51	104.13	102.10	101.80	102.33	102.36	104.57	NS
Total Well Depth	12.10	NM	11.76	11.46	11.47	11.56	15.13	49.60	54.00	40.00	13.60	13.08	11.10	12.06	11.93	13.58	54.00	13.00
Bottom of Well Elevation	90.61	NM	91.31	91.96	92.33	92.79	92.62	54.91	48.98	64.59	91.38	90.76	90.73	90.03	90.18	88.38	50.31	NS
Diameter (inches)	1	1	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	6
MEASUREMENT DATE	GROUNDWATER ELEVATIONS ¹																	
07/26/04	98.09	100.62	99.66	98.42	98.46	99.30	101.34	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
11/15/05	100.40	NL	102.36	100.94	100.14	102.54	103.03	96.01	96.19	96.59	101.60	100.20	99.63	101.36	99.09	99.18	95.72	103.06

Notes:

¹ Relative groundwater elevations are based on an arbitrary datum of 100.0 feet.

- NS Not surveyed
NI Not installed
NL Well Could Not Be Located

Site No. V-00150-7
VCA No. A7-0466-0702
Town of Cicero, Onondaga County, New York

TABLE 1B - GROUNDWATER SAMPLES - TARGET COMPOUND LIST VOCs

Date Sampled: November 15, 2005 Matrix: Groundwater

Compound	State Standard ¹ (µg/L)	Monitoring Well Location				
		CES-MW-1	MW-1	MW-2	MW-3	MW-4
		Compound Concentration (µg/L)				
1,1,1-Trichloroethane (1,1,1-TCA)	5	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND
1,1,2-Trichloroethane (1,1,2-TCA)	1	ND	ND	ND	ND	ND
1,1-Dichloroethane (1,1-DCA)	5	ND	ND	ND	ND	ND
1,1-Dichloroethene (1,1-DCE)	5	ND	ND	1	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND
1,2-Dichloroethane (1,2-DCA)	0.6	ND	ND	ND	ND	ND
1,2-Dichloroethene (total) (1,2-DCE)	5	25	67	470 D	260	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND
2-Butanone (MEK)	50	ND	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND	ND
4-Isopropyltoluene (cymene)	5	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone (MIBK)	---	ND	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND
Carbon Disulfide	60	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND
Chloromethane (methyl chloride)	5	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.4*	ND	ND	ND	ND	ND
Dibromochloromethane	50	ND	ND	ND	ND	ND
Ethyl Benzene	5	ND	ND	ND	ND	ND
Isopropylbenzene (Cumene)	5	ND	ND	ND	ND	ND
Methyl tert-butyl Ether (MTBE)	10	ND	2	5	10	ND
Methylene Chloride	5	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND	ND
tert-Butyl Alcohol (TBA)	---	ND	ND	ND	ND	ND
tert-Butylbenzene	5	ND	ND	ND	ND	ND
Tetrachloroethene (PCE)	5	ND	180 D	1900 D	86	ND
Toluene	5	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.4*	ND	ND	ND	ND	ND
Trichloroethene (TCE)	5	ND	39	570 D	100	ND
Vinyl Chloride	2	27	8	170 D	66	ND
Xylenes (total)	5	ND	ND	ND	ND	ND
Total VOCs	---	52	295	3,116	522	ND

Site No. V-00150-7
VCA No. A7-0466-0702
Town of Cicero, Onondaga County, New York

TABLE 1B - GROUNDWATER SAMPLES - TARGET COMPOUND LIST VOCs

Date Sampled: November 15, 2005

Matrix: Groundwater

Compound	State Standard ¹ (µg/L)	Monitoring Well Location			
		TW-5	MW-6D	MW-7D	MW-8D
		Compound Concentration (µg/L)			
1,1,1-Trichloroethane (1,1,1-TCA)	5	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND
1,1,2-Trichloroethane (1,1,2-TCA)	1	ND	ND	ND	ND
1,1-Dichloroethane (1,1-DCA)	5	ND	ND	ND	2
1,1-Dichloroethene (1,1-DCE)	5	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND
1,2-Dichloroethane (1,2-DCA)	0.6	ND	ND	ND	ND
1,2-Dichloroethene (total) (1,2-DCE)	5	7	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND
2-Butanone (MEK)	50	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND
4-Isopropyltoluene (cymene)	5	ND	ND	ND	ND
4-Methyl-2-Pentanone (MIBK)	---	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND
Carbon Disulfide	60	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	2
Chloroform	7	ND	ND	ND	ND
Chloromethane (methyl chloride)	5	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.4*	ND	ND	ND	ND
Dibromochloromethane	50	ND	ND	ND	ND
Ethyl Benzene	5	ND	ND	ND	ND
Isopropylbenzene (Cumene)	5	ND	ND	ND	ND
Methyl tert-butyl Ether (MTBE)	10	ND	ND	ND	9
Methylene Chloride	5	ND	ND	ND	5
Naphthalene	10	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND
tert-Butyl Alcohol (TBA)	---	ND	ND	ND	ND
tert-Butylbenzene	5	ND	ND	ND	ND
Tetrachloroethene (PCE)	5	23	ND	ND	ND
Toluene	5	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.4*	ND	ND	ND	ND
Trichloroethene (TCE)	5	5	ND	ND	ND
Vinyl Chloride	2	2	ND	ND	ND
Xylenes (total)	5	ND	ND	ND	ND
Total VOCs	---	36	ND	ND	18

Site No. V-00150-7
VCA No. A7-0466-0702
Town of Cicero, Onondaga County, New York

TABLE 1B - GROUNDWATER SAMPLES - TARGET COMPOUND LIST VOCs

Date Sampled: November 15, 2005
Matrix: Groundwater

Compound	State Standard ¹ (µg/L)	Monitoring Well Location			
		MW-9	MW-10	MW-11	MW-12
		Compound Concentration (µg/L)			
1,1,1-Trichloroethane (1,1,1-TCA)	5	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND
1,1,2-Trichloroethane (1,1,2-TCA)	1	ND	ND	ND	ND
1,1-Dichloroethane (1,1-DCA)	5	4	ND	ND	ND
1,1-Dichloroethene (1,1-DCE)	5	ND	ND	ND	1
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND
1,2-Dichloroethane (1,2-DCA)	0.6	ND	ND	ND	ND
1,2-Dichloroethene (total) (1,2-DCE)	5	ND	60	250 D	360 D
1,2-Dichloropropane	1	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND
2-Butanone (MEK)	50	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND
4-Isopropyltoluene (cymene)	5	ND	ND	ND	ND
4-Methyl-2-Pentanone (MIBK)	---	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND
Carbon Disulfide	60	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND
Chloromethane (methyl chloride)	5	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.4*	ND	ND	ND	ND
Dibromochloromethane	50	ND	ND	ND	ND
Ethyl Benzene	5	ND	ND	ND	ND
Isopropylbenzene (Cumene)	5	ND	ND	ND	ND
Methyl tert-butyl Ether (MTBE)	10	ND	3	2	4
Methylene Chloride	5	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND
tert-Butyl Alcohol (TBA)	---	ND	ND	ND	ND
tert-Butylbenzene	5	ND	ND	ND	ND
Tetrachloroethene (PCE)	5	ND	2	ND	350 D
Toluene	5	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.4*	ND	ND	ND	ND
Trichloroethene (TCE)	5	ND	16	ND	290 D
Vinyl Chloride	2	ND	1	63	77
Xylenes (total)	5	ND	ND	ND	ND
Total VOCs	---	4	82	315	1,082

Site No. V-00150-7
VCA No. A7-0466-0702
Town of Cicero, Onondaga County, New York

TABLE 1B - GROUNDWATER SAMPLES - TARGET COMPOUND LIST VOCs

Date Sampled: November 15, 2005

Matrix: Groundwater

Compound	State Standard ¹ (µg/L)	Monitoring Well Location			
		MW-13	MW-14	MW-15D	RW-1
		Compound Concentration (µg/L)			
1,1,1-Trichloroethane (1,1,1-TCA)	5	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND
1,1,2-Trichloroethane (1,1,2-TCA)	1	ND	ND	ND	ND
1,1-Dichloroethane (1,1-DCA)	5	ND	ND	ND	ND
1,1-Dichloroethene (1,1-DCE)	5	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND
1,2-Dichloroethane (1,2-DCA)	0.6	ND	ND	ND	ND
1,2-Dichloroethene (total) (1,2-DCE)	5	2 D	95	ND	4
1,2-Dichloropropane	1	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND
2-Butanone (MEK)	50	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND
4-Isopropyltoluene (cymene)	5	ND	ND	ND	ND
4-Methyl-2-Pentanone (MIBK)	---	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND
Carbon Disulfide	60	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND
Chloromethane (methyl chloride)	5	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.4*	ND	ND	ND	ND
Dibromochloromethane	50	ND	ND	ND	ND
Ethyl Benzene	5	ND	ND	ND	ND
Isopropylbenzene (Cumene)	5	ND	ND	ND	ND
Methyl tert-butyl Ether (MTBE)	10	ND	2	ND	ND
Methylene Chloride	5	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND
tert-Butyl Alcohol (TBA)	---	ND	ND	ND	ND
tert-Butylbenzene	5	ND	ND	ND	ND
Tetrachloroethene (PCE)	5	ND	ND	13	3
Toluene	5	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.4*	ND	ND	ND	ND
Trichloroethene (TCE)	5	ND	2	ND	1
Vinyl Chloride	2	ND	16	ND	ND
Xylenes (total)	5	ND	ND	ND	ND
Total VOCs	---	2	115	13	8

TABLE 1C - GROUNDWATER SAMPLES - TARGET COMPOUND LIST SVOCs

Date Sampled: November 15, 2005

Matrix: Groundwater

Compound	State Standard ¹ (µg/L)	Monitoring Well Location				
		MW-6D	MW-7D	MW-8D	MW-10	MW-15D
		Compound Concentration (µg/L)				
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	1*	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	1*	ND	ND	ND	ND	ND
2,4-Dichlorophenol	1*	ND	ND	ND	ND	ND
2,4-Dimethylphenol	50	ND	ND	ND	ND	ND
2,4-Dinitrophenol	10	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	5	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	5	ND	ND	ND	ND	ND
2-Chloronaphthalene	10	ND	ND	ND	ND	ND
2-Chlorophenol	1*	ND	ND	ND	ND	ND
2-Methylnaphthalene	---	ND	ND	ND	ND	ND
2-Methylphenol (o-cresol)	1*	ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol (dinitrocresol)	---	ND	ND	ND	ND	ND
2-Nitroaniline	5	ND	ND	ND	ND	ND
2-Nitrophenol	1*	ND	ND	ND	ND	ND
3,3-Dichlorobenzidine	5	ND	ND	ND	ND	ND
3+4-Methylphenols (m- and p-cresol)	1*	ND	ND	ND	ND	ND
3-Nitroaniline	5	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	---	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	1*	ND	ND	ND	ND	ND
4-Chloroaniline	5	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	---	ND	ND	ND	ND	ND
4-Nitroaniline	5	ND	ND	ND	ND	ND
4-Nitrophenol	1*	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND
Acenaphthylene	---	ND	ND	ND	ND	ND
Anthracene	50	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.002	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.002	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.002	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	0.002	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.002	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)methane	5	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	1	ND	ND	ND	ND	ND
bis(2-chloroisopropyl)ether	5	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	5	ND	ND	ND	ND	ND
Butylbenzylphthalate	50	ND	ND	ND	ND	ND
Carbazole	---	ND	ND	ND	ND	ND
Chrysene	0.002	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	50	ND	ND	ND	ND	ND
Dibenzofuran	---	ND	ND	ND	ND	ND
Diethylphthalate	50	ND	ND	ND	ND	ND
Dimethylphthalate	50	ND	ND	ND	ND	ND
Di-n-butylphthalate	50	ND	ND	ND	ND	ND
Di-n-octyl phthalate	50	ND	ND	ND	ND	ND
Fluoranthene	50	ND	ND	ND	ND	ND
Fluorene	50	ND	ND	ND	ND	ND
Hexachlorobenzene	0.04	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.5	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	5	ND	ND	ND	ND	ND
Hexachloroethane	5	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.002	ND	ND	ND	ND	ND
Isophorone	50	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND
Nitrobenzene	0.4	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	---	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	50	ND	ND	ND	ND	ND
Pentachlorophenol	1*	ND	ND	ND	ND	ND
Phenanthrene	50	ND	ND	ND	ND	ND
Phenol	1*	ND	ND	ND	ND	ND
Pyrene	50	ND	ND	ND	ND	ND
Total SVOCs	---	ND	ND	ND	ND	ND

Site No. V-00150-7
VCA No. A7-0466-0702
Town of Cicero, Onondaga County, New York

TABLE 1D - SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS - TOTAL VOCs

MONITORING INFORMATION		MONITORING WELL								
ANALYTICAL METHOD	SAMPLING DATE	CES-MW-1	CES-MW-2	MW-1	MW-2	MW-3	MW-4	TW-5	MW-6D	MW-7D
		Total Compound Concentration (µg/L)								
EPA 8260 (TCL)	07/26/04	207	5	560	2,960	247	ND	1,162	NI	NI
EPA 8260 (TCL/STARS)	11/15/05	52	NS	295	3,115	522	ND	36	ND	ND

MONITORING INFORMATION		MONITORING WELL								
ANALYTICAL METHOD	SAMPLING DATE	MW-8D	MW-9	MW-10	MW-11 **	MW-12	MW-13	MW-14	MW-15D	RW-1 *
		Total Compound Concentration (µg/L)								
EPA 8260 (TCL)	07/26/04	NI	NI	NI	1,198	NI	NI	NI	NI	164,800
EPA 8260 (TCL/STARS)	11/15/05	18	4	82	315	1,081	2	115	13	8

Notes:

NI Not installed

NS Not sampled

µg/L micrograms per liter, equivalent to parts per billion (ppb)

* RW-1 installed into former sump after soil excavation to replace TW-4 installed into sump prior to soil excavation

** 07/26/04 data shown for MW-11 was collected from Test Pit 3-A/3-B as a grab water sample, MW-11 was installed within a few feet of these Test Pits.

Site No. V-00150-7
VCA No. A7-0466-0702
Town of Cicero, Onondaga County, New York

TABLE 1E - GROUNDWATER SAMPLES - RCRA Metals

Date Sampled: November 15, 2005

Matrix: Groundwater

Compound	State Standard ¹ (µg/L)	Monitoring Well Location				
		MW-6D	MW-7D	MW-8D	MW-10	MW-15D
		Compound Concentration (µg/L)				
Arsenic	25	ND	ND	ND	47 B	17 B
Barium	1,000	860	780	ND	410	600
Cadmium	5	ND	ND	ND	ND	ND
Chromium	50	ND	11	ND	55	20
Lead	25	ND	ND	ND	73	ND
Mercury	2	ND	ND	ND	0.25	ND
Selenium	10	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND

Site No. V-00150-7
VCA No. A7-0466-0702
Town of Cicero, Onondaga County, New York

SOIL ANALYTICAL SUMMARY TABLES NOTES:

¹DEC Technical Administration Guidance Memorandum (TAGM) No. 4046, *Determination of Soil Cleanup Objectives and Cleanup Levels*, dated January 24, 1994, as modified by DEC Memorandum of April 10, 2001.

Allowable concentration with no dilution/attenuation factor. See TAGM 4046.

Soil cleanup objectives are developed for soil organic carbon content of 1% and should be adjusted for actual carbon content, if known.

²DEC Spill Technology and Remediation Series (STARS) Memo #1 - *Petroleum-Contaminated Soil Guidance Policy*, dated August 1992.

TCL Target Compound List of organic compounds

TAL Target Analyte List of organic compounds

mg/kg milligrams per kilogram (parts per million, ppm)

--- No DEC recommended soil cleanup guideline

SB Site background determined cleanup level.

* Indicates compound concentration obtained from sample confirmation reanalysis (RE qualified sample) or sample dilution reanalysis (DL qualified sample).

** Duplicate analysis not within control limits.

*** See specific language in NYSDEC TAGM No. 4046, Table 4 - Heavy Metals regarding Cyanide.

ND< Not detected less than

J Indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero.

D Indicates diluted sample analysis due to compound concentration exceeding instrumentation calibration range.

--- No promulgated State Standard or Guidance Value

B The compound was found in the laboratory blank as well as the sample.

N Spiked sample recovery not within control limits.

P Greater than 25% difference for detected concentrations between the 2 GC columns. The lower of the two values is reported.

0.4* Applies to the sum of cis- and trans-1,3-dichloropropene

1.2* Applies to the sum of xylene isomers (o-, m-, and p-)

Compounds that exceeded Recommended Soil Cleanup Levels are denoted in **BOLD**.

Background levels for lead vary widely. Average background levels in metropolitan areas typically range from 300 to 500 ppm.

TABLE 2 - SOIL SAMPLE - TCL and STARS VOCs

Date Sampled: November 4, 2005

Matrix: Soil

Compound	State Standard ¹ (µg/L)	MW-11
		10' - 12'
1,1,1-Trichloroethane (1,1,1-TCA)	5	ND
1,1,2,2-Tetrachloroethane	5	ND
1,1,2-Trichloroethane (1,1,2-TCA)	1	ND
1,1-Dichloroethane (1,1-DCA)	5	ND
1,1-Dichloroethene (1,1-DCE)	5	ND
1,2,4-Trichlorobenzene	5	ND
1,2-Dichloroethane (1,2-DCA)	0.6	ND
1,2-Dichloroethene (total) (1,2-DCE)	5	4 J
1,2-Dichloropropane	1	ND
1,3,5-Trimethylbenzene	5	ND
2-Butanone (MEK)	50	ND
2-Hexanone	50	ND
4-Isopropyltoluene (cymene)	5	ND
4-Methyl-2-Pentanone (MIBK)	---	ND
Acetone	50	ND
Benzene	1	ND
Bromodichloromethane	50	ND
Bromoform	50	ND
Bromomethane	5	ND
Carbon Disulfide	60	ND
Carbon Tetrachloride	5	ND
Chlorobenzene	5	ND
Chloroethane	5	ND
Chloroform	7	ND
Chloromethane (methyl chloride)	5	ND
cis-1,3-Dichloropropene	0.4*	ND
Dibromochloromethane	50	ND
Ethyl Benzene	5	ND
Isopropylbenzene (Cumene)	5	ND
Methyl tert-butyl Ether (MTBE)	10	ND
Methylene Chloride	5	ND
Naphthalene	10	ND
n-Butylbenzene	5	ND
n-Propylbenzene	5	ND
sec-Butylbenzene	5	ND
Styrene	5	ND
tert-Butyl Alcohol (TBA)	---	ND
tert-Butylbenzene	5	ND
Tetrachloroethene (PCE)	5	ND
Toluene	5	ND
trans-1,3-Dichloropropene	0.4*	ND
Trichloroethene (TCE)	5	ND
Vinyl Chloride	2	ND
Xylenes (total)	5	ND
Total VOCs	---	4

Site No. V-00150-7
VCA No. A7-0466-0702
Town of Cicero, Onondaga County, New York

SOIL VAPOR ANALYTICAL SUMMARY TABLE NOTES:

¹ Values obtained from NYSDOH Draft Guidance for Evaluating Soil Vapor Intrusion in the State of New York (Feb 2005), Section 3.2.4 table referencing to the unpublished summary of indoor levels of VOCs from fuel oil heated homes from 1997 through 2003.

² Values obtained from NYSDOH Draft Guidance for Evaluating Soil Vapor Intrusion in the State of New York (Feb 2005), Table 3.1 - air guideline values derived by NYSDOH.

µg/m³ micrograms per cubic meter

ND Not detected greater than reporting limit

NS No screening for this compound

NA No toxicity factor information available to determine a screening level.

--- No promulgated State Standard

Compounds that exceeded State Standards are denoted in ***BOLD*** .

TABLE 3 - SOIL VAPOR - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS

Date Sampled: As Shown Matrix: Soil Vapor

Compound	NYSDOH Study ¹ (µg/m ³)	NYSDOH Standard ² (µg/m ³)	Compound Concentration (µg/m ³)				
			SVE-1	SVE-2	SVE-3	SVE-4	SVE-5
			11/15/05	11/15/05	11/15/05	11/15/05	11/15/05
Acetone (2-propanone)	10 - 46	---	ND	ND	ND	ND	ND
Benzene	1.2 - 5.7	---	1	19	1	5	6
Benezyl chloride (Chloromethylbenzene)	NS	---	ND	ND	ND	ND	ND
Bromodichloromethane	NA	---	ND	ND	ND	ND	ND
Bromoform	NA	---	ND	ND	ND	ND	ND
Bromomethane (Methyl Bromide)	<0.25	---	ND	ND	ND	ND	ND
1,3-Butadiene	NS	---	ND	ND	ND	ND	ND
2-Butanone (MEK)	NS	---	ND	ND	ND	ND	ND
Carbon Disulfide	NS	---	ND	41	0 J	6	4
Carbon Tetrachloride	<0.25 - 0.68	---	ND	ND	ND	ND	ND
Chlorobenzene	<0.25	---	ND	ND	ND	ND	ND
Chloroethane	NS	---	ND	ND	ND	ND	ND
Chloroform	<0.25 - 0.54	---	ND	ND	ND	1	5
Chloromethane (Methyl Chloride)	<0.25 - 2.0	---	ND	ND	ND	ND	ND
Cyclohexane	NS	---	ND	21	ND	7	5
Dibromochloromethane	NA	---	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	<0.25	---	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	<0.25	---	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	<0.25	---	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	NA	---	1	2	2	ND	2
Dichlorodifluoromethane (Freon 12)	NA	---	3	8	3	3	15
1,1-Dichloroethane	<0.25	---	ND	ND	ND	ND	ND
1,2-Dichloroethane	<0.25	---	ND	ND	ND	ND	ND
1,1-Dichloroethene	<0.25	---	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	<0.25	---	ND	13	ND	38	38
trans-1,2-Dichloroethene	NS	---	ND	ND	ND	5	ND
1,2-Dichloropropane	<0.25	---	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	NS	---	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	NS	---	ND	ND	ND	ND	ND
1,4-Diethyldioxide (1,4-Dioxane)	NS	---	ND	ND	ND	ND	ND
Dichlorotetrafluoroethane (Freon 114)	NS	---	ND	ND	ND	ND	ND
Ethyl Acetate	NS	---	ND	ND	ND	ND	ND
Ethyl Benzene	0.43 - 2.8	---	0	14	3	6	6
4-Ethyltoluene	NS	---	1	4	1	2	2
n-Heptane	NS	---	1 J	42	1	11	9
Hexachloro-1,3-butadiene	NS	---	ND	ND	ND	ND	ND
n-Hexane	0.63 - 6.5	---	1	47	1	11	10
2-Hexanone (MBK)	NS	---	ND	ND	ND	ND	ND
Isopropyl alcohol (2-Propanol)	NS	---	ND	ND	ND	ND	ND
Methylene Chloride	0.38 - 6.3	60	19	7	45	38	47
4-Methyl-2-Pentanone (MIBK)	NS	---	ND	ND	ND	ND	ND
Methyl tert-Butyl Ether (MTBE)	<0.25 - 6.7	---	ND	3	ND	ND	ND
Propylene	NS	---	ND	ND	ND	ND	ND
Styrene	<0.25 - 0.68	---	6	16	9	9	10
1,1,2,2-Tetrachloroethane	<0.25	---	D	ND	ND	ND	ND
Tetrachloroethene (PCE)	<0.25 - 1.2	100		7	1	8	281
Tetrahydrofuran	NS	---	ND	ND	ND	ND	ND
Toluene	4.2 - 25	---	5	69	7	18	23
1,2,4-Trichlorobenzene	NS	---	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	<0.25 - 1.4	---		ND	ND	ND	1
1,1,2-Trichloroethane	<0.25	---	ND	ND	ND	ND	ND
Trichloroethene (TCE)	<0.25	5	ND	ND	ND	1	222
Trichlorofluoromethane (Freon 11)	NS	---	2	1	2	2	2
1,1,2-Trichlorotrifluoroethane (Freon 113)	NS	---	ND	ND	ND	ND	1
1,2,4-Trimethylbenzene	<0.25	---	3	10	5	7	7
1,3,5-Trimethylbenzene	<0.25	---	2	5	3	4	4
2,2,4-Trimethylpentane (Isooctane)	NS	---	ND	3	ND	2	2
Vinyl Acetate	NS	---	ND	ND	ND	ND	ND
Vinyl Bromide (Bromoethene)	NS	---	ND	ND	ND	ND	ND
Vinyl Chloride	<0.25	---	ND	2,400	ND	297	1
Vinylacetonitrile (Allyl chloride)	NS	---	ND	ND	ND	ND	ND
m/p-Xylenes	0.52 - 4.7	---	5	39	8	13	14
o-Xylene	0.39 - 3.1	---	2	10	2	4	4
Xylene (total)	---	---	7	49	10	17	19

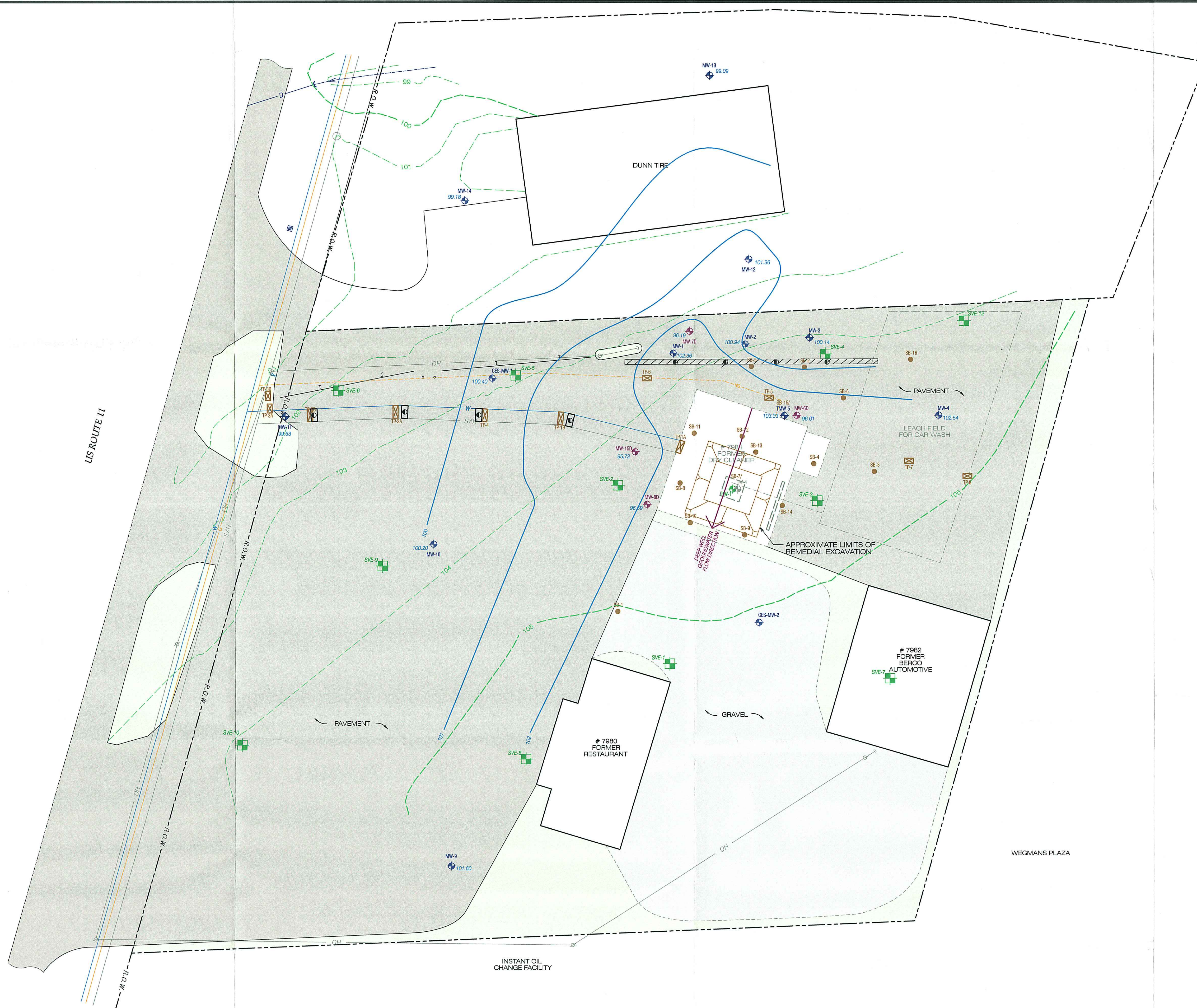
TABLE 3 - SOIL VAPOR - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS

Date Sampled: As Shown

Matrix: Soil Vapor

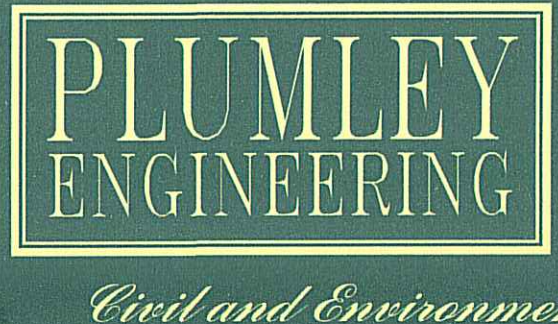
Compound	NYSDOH Study ¹ (µg/m ³)	NYSDOH Standard ² (µg/m ³)	Compound Concentration (µg/m ³)				
			SVE-6	SVE-7	SVE-8	SV-9	SV-10
			11/15/05	11/15/05	11/15/05	11/15/05	11/15/05
Acetone (2-propanone)	10 - 46	---	ND	ND	ND	ND	ND
Benzene	1.2 - 5.7	---	3	2	1	10	5
Benezyl chloride (Chloromethylbenzene)	NS	---	ND	ND	ND	ND	ND
Bromodichloromethane	NA	---	ND	ND	ND	ND	ND
Bromoform	NA	---	ND	ND	ND	ND	ND
Bromomethane (Methyl Bromide)	<0.25	---	ND	ND	ND	ND	ND
1,3-Butadiene	NS	---	ND	ND	ND	ND	ND
2-Butanone (MEK)	NS	---	ND	ND	ND	ND	ND
Carbon Disulfide	NS	---	19	3	0 J	66	5
Carbon Tetrachloride	<0.25 - 0.68	---	ND	ND	ND	ND	ND
Chlorobenzene	<0.25	---	ND	ND	ND	ND	ND
Chloroethane	NS	---	ND	ND	ND	ND	ND
Chloroform	<0.25 - 0.54	---	ND	ND	ND	1	ND
Chloromethane (Methyl Chloride)	<0.25 - 2.0	---	ND	ND	ND	ND	ND
Cyclohexane	NS	---	14	140	ND	76	5
Dibromochloromethane	NA	---	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	<0.25	---	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	<0.25	---	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	<0.25	---	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	NA	---	ND	ND	2	ND	
Dichlorodifluoromethane (Freon 12)	NA	---	5	3	3	ND	3
1,1-Dichloroethane	<0.25	---	ND	ND	ND	ND	ND
1,2-Dichloroethane	<0.25	---	ND	ND	ND	ND	ND
1,1-Dichloroethene	<0.25	---	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	<0.25	---	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	NS	---	ND	ND	ND	ND	ND
1,2-Dichloropropane	<0.25	---	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	NS	---	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	NS	---	ND	ND	ND	ND	ND
1,4-Diethyldioxide (1,4-Dioxane)	NS	---	ND	ND	ND	ND	ND
Dichlorotetrafluoroethane (Freon 114)	NS	---	ND	ND	ND	ND	ND
Ethyl Acetate	NS	---	ND	ND	ND	ND	ND
Ethyl Benzene	0.43 - 2.8	---	7	5	3	10	7
4-Ethyltoluene	NS	---	2	2	1	5	2
n-Heptane	NS	---	21	6	1	50	9
Hexachloro-1,3-butadiene	NS	---	ND	ND	ND	ND	ND
n-Hexane	0.63 - 6.5	---	65	1,350	1	103	17
2-Hexanone (MBK)	NS	---	ND	ND	ND	ND	ND
Isopropyl alcohol (2-Propanol)	NS	---	ND	ND	ND	ND	ND
Methylene Chloride	0.38 - 6.3	60	44	53	7	ND	
4-Methyl-2-Pentanone (MIBK)	NS	---	ND	ND	ND	ND	ND
Methyl tert-Butyl Ether (MTBE)	<0.25 - 6.7	---	ND	ND	ND	ND	ND
Propylene	NS	---	ND	ND	ND	ND	ND
Styrene	<0.25 - 0.68	---	9	10	8	14	10
1,1,2,2-Tetrachloroethane	<0.25	---	ND	ND	ND	ND	ND
Tetrachloroethene (PCE)	<0.25 - 1.2	100	6	ND	ND	4	3
Tetrahydrofuran	NS	---	ND	ND	ND	ND	ND
Toluene	4.2 - 25	---	22	28	7	52	33
1,2,4-Trichlorobenzene	NS	---	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	<0.25 - 1.4	---	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	<0.25	---	ND	ND	ND	ND	ND
Trichloroethene (TCE)	<0.25	5	ND	ND	ND	ND	ND
Trichlorofluoromethane (Freon 11)	NS	---	1	2	2	ND	1
1,1,2-Trichlorotrifluoroethane (Freon 113)	NS	---	ND	ND	1 J	ND	ND
1,2,4-Trimethylbenzene	<0.25	---	7	7	5	15	7
1,3,5-Trimethylbenzene	<0.25	---	3	3	3	9	3
2,2,4-Trimethylpentane (Isooctane)	NS	---	3	ND	ND	102	1
Vinyl Acetate	NS	---	ND	ND	ND	ND	ND
Vinyl Bromide (Bromoethene)	NS	---	ND	ND	ND	ND	ND
Vinyl Chloride	<0.25	---	ND	ND	ND	ND	ND
Vinylacetonitrile (Allyl chloride)	NS	---	ND	ND	ND	ND	ND
m/p-Xylenes	0.52 - 4.7	---	16	14	7	32	20
o-Xylene	0.39 - 3.1	---	5	4	2	8	5
Xylene (total)	---	---	21	18	9	41	24

...\\plumley\gwc11-15-05.dwg 17/10/2006 10:01:31 AM



- Existing**
- SB-5 Soil Boring
 - MW-2 Shallow Monitoring Well Location
 - MW-8D Deep Monitoring Well Location
 - RW-2 Remedial Well
 - TP-5 Test Pit
 - SVE-1 Soil Vapor Sampling Location
 - Injection Pit Location
 - Injection Trench Location
 - Injection Well
 - OH Overhead Electric Line
 - W Water Service Line
 - NG Natural Gas Service
 - SAN Sanitary Sewer Line
 - Drainage Swale
 - D Drainage Pipe
 - 101 Shallow Groundwater Contour (Based on 11-15-05 Data)
 - 100.20 Groundwater Elevation (Based on 11-15-05 Data)

Note:
Contamination data is shown only for sample locations with contaminant concentration exceeding state soil clean up guidelines (TAGM4046).



PLUMLEY ENGINEERING, P.C.
8232 LOOP ROAD
BALDWINVILLE, NY 13027
TELEPHONE: (315) 638-8587
FAX: (315) 638-9740
WWW.PLUMLEYENG.COM

REVISIONS:	DATE:	BY:
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

NOTE: NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

PROJECT: **VOLUNTARY CLEANUP PROGRAM**
VCA No. A7-0466-0702
CLIENT: **HANCOCK & ESTABROOK, LLP**
LOCATION: **TOWN OF CICERO, ONONDAGA COUNTY, NEW YORK**

DWG. TITLE: **SITE PLAN - GROUNDWATER**
RPT. TITLE: **DATA REPORT (1/10/06)**

PROJECT No.: 2003074
FILE NAME: GWC11-15-05
SCALE: 1" = 20'
DATE: JAN. 2006
ENG'D BY: WJS
DRAWN BY: JMD
CHECKED BY: WJS
SHEET NO.: **GW-1**
© Plumley Engineering, P.C. 2006

