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September 30, 2009 Reference No. 042271-03

Supervisor Mary Ellen Heyman
Town of Irondequoit
1280 Titus Avenue
Rochester, New York
U.S.A. 14617

Dear Ms. Heyman:

Re: Vapor Intrusion Assessment Results
Waterfront Property Development, Rochester, New York

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) was retained by Lighthouse Pointe Property Associates LLC (Lighthouse) to undertake a soil vapor intrusion assessment of two residences adjacent to Lighthouse's proposed waterfront property development (Site) located in the City of Rochester and the Town of Irondequoit, Monroe County, New York. The Site location is presented on Figure 1. This work was undertaken to investigate the possibility of indoor air contamination in residences adjacent to the site caused by volatile organic compounds (VOCs) from the Site. This letter is organized as follows:

1.0 Introduction
2.0 Summary of Field Investigation Activities
3.0 Evaluation of Results
4.0 Conclusions

2.0 SUMMARY OF FIELD INVESTIGATION ACTIVITIES

CRA's field investigation activities were completed between July 30 and August 18, 2009 and included the following:

i) Update of site-specific health and safety plan (HASP).
ii) Pre-sampling inspection of each residence and completion of the New York State Department of Health (NYSDOH) Indoor Air Quality Questionnaire and Building Inventory Form. The completed forms are attached as Attachment A.

iii) Installation of soil vapor probes near each residence, on the side facing the site. Soil vapor probes were field screened for methane, sampled for VOCs, methane, and helium (tracer gas), and subsequently abandoned.

iv) Installation of sub-slab soil vapor probes through the concrete floors in the basement of each residence. Sub-slab vapour probes were field screened for methane, sampled for VOCs, methane, and helium (tracer gas), and subsequently abandoned.

v) Collection of an indoor air sample in the basement of each residence for laboratory analysis of methane and VOCs.

vi) Collection of an outdoor (upwind) air sample for laboratory analysis of VOCs and methane to characterize ambient air quality.

Soil Vapor Probes – Installation and Sampling

Soil vapor probes were installed at 97 and 105 Timrod Drive on July 30, 2009 to facilitate the characterization of soil vapor adjacent to the residences. The soil vapor probe locations are presented on Figure 2. Note that the exact limit of buried waste associated with the Site is unknown in this area and it is suspected, based on inspections of the buildings and delineation of waste in the area, that these homes are constructed either on or adjacent to buried waste associated with the Site.

The soil vapor probe installed at 97 Timrod Drive was approximately 10 feet from the residence and was advanced to a depth of 6 feet below ground surface (bgs); fill material including glass shavings were observed. The probe was constructed of 1-inch PVC with a screened interval from 4 to 6 feet below ground surface. A bentonite surface seal was constructed.

The soil vapor probe installed at 105 Timrod Drive was approximately 10 feet from the residence and was advanced to a depth of 8 feet bgs; fill material including metals shavings and plastic were observed. The probe was constructed of 1-inch PVC with a screened interval from 4 to 7 feet bgs. A bentonite surface seal was constructed.

One round of soil vapor monitoring was conducted at the soil vapor probes on August 17, 2009. The monitoring was conducted for methane, carbon dioxide, oxygen, and total organic vapors (TOVs) using a Landgem and a photoionization detector (PID). Soil vapor probe monitoring results are presented in Table 1.

One round of soil vapor sampling was conducted over the period of August 17 and 18, 2009. This sampling was conducted concurrently with the indoor air sampling. Soil vapor samples were collected over an approximate 24-hour period using SUMMA® canisters and flow

controllers. Helium tracer gas was used during sampling to allow evaluation of sample dilution by ambient air. A new piece of Teflon® tubing, and appropriate fittings connected the soil vapor probe sample port and the canister. Samples were shipped to TestAmerica in North Canton, Ohio under chain-of-custody protocols. Soil vapor samples were analyzed for VOCs, methane, and helium.

The analytical results are presented in Table 2 (97 Timrod Drive) and Table 3 (105 Timrod Drive). The laboratory report is provided in Attachment B.

Sub-Slab Vapor Probes – Installation and Sampling

Sub-slab soil vapor probes were installed at 97 and 105 Timrod Drive on July 30, 2009 to facilitate the characterization of sub-slab soil vapor beneath the residences. The sub-slab soil vapor probe locations are presented on Figure 2. Note that the exact limit of buried waste associated with the Site is unknown in this area and it is suspected, based on inspections of the buildings and delineation of waste in the area that these homes are constructed either on or adjacent to buried waste associated with the Site.

The sub-slab vapor probes were advanced through the concrete floor in the basement. The probes were constructed by sealing a brass pipe into the surrounding concrete floor to a depth just below the concrete.

One round of sub-slab vapor monitoring was conducted at the soil vapor probes on August 17, 2009. The monitoring was conducted for methane, carbon dioxide, oxygen, and TOVs using a Landgem and a PID. Sub-slab vapor probe monitoring results are presented in Table 1.

One round of sub-slab vapor sampling was conducted over the period of August 17 and 18, 2009. This sampling was conducted concurrently with the indoor air sampling. Sub-slab vapor samples were collected over an approximate 24 hour time period using SUMMA® canisters and flow controllers. Helium tracer gas was used during sampling to allow evaluation of sample dilution by ambient air. A new piece of Teflon® tubing, and appropriate fittings connected the soil vapor probe sample port and the canister. Sub-slab vapor samples were shipped to TestAmerica in North Canton, Ohio under chain-of-custody protocols. Sub-slab vapor samples were analyzed for VOCs, methane, and helium.

The analytical results are presented in Table 2 (97 Timrod Drive) and Table 3 (105 Timrod Drive). The laboratory report is provided in Attachment B.

Indoor Air Sampling

One round of indoor air sampling was conducted at both residences (97 Timrod Drive and 105 Timrod Drive) over the period of August 17 and 18, 2009. Indoor air samples were collected over an approximate 24-hour period in the basements of the homes. Indoor air sampling locations are presented on Figure 2. Indoor air samples were collected over an approximate 24-hour period using Summa canisters and flow controllers. Samples were shipped to TestAmerica in North Canton, Ohio under chain-of-custody protocols. Indoor air samples were analyzed for VOCs and methane.

The analytical results are presented in Table 2 (97 Timrod Drive) and Table 3 (105 Timrod Drive). The laboratory report is provided in Attachment B.

The indoor air analytical results obtained during this investigation do not represent worst-case conditions. Worst-case conditions would exist during the winter heating season when there is a greater pressure differential between sub-slab vapor and indoor air.

3.0 EVALUATION OF RESULTS

The analytical results were evaluated in consideration of the NYSDOH, Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, 2006; NYSDOH Guidance).

97 Timrod Drive

- Ten indoor air parameters exceeded the mean background values from the NYSDOH Control Home Database (1997).
- Fifteen sub-slab parameters exceeded the mean background values from the NYSDOH Control Home Database (1997).
- Thirty parameters were detected in soil vapor, sub-slab vapor, and indoor air.
- Twenty-eight parameters exhibited a concentration gradient from soil vapor to indoor air. These 28 parameters are listed below:

1,2,3-Trimethylbenzene	Benzene	Napthalene
1,2,4,5-Tetramethylbenzene	Butane	N-Dodecane
1,2,4-Trimethylbenzene	Carbon disulfide	N-Heptane
1,2-Dichlorotetrafluoroethane (CFC 114)	Chloroethane	Octane

1,3,5-Trimethylbenzene	Cyclohexane	o-Xylene
1,4-Dichlorobenzene	Dichlorodifluoromethane (CFC-12)	Pentane
2,2,4-Trimethylpentane	Ethylbenzene	Turt-Butyl alcohol
2-Butanone (Methyl Ethyl Ketone)	Hexane	Trichlorofluoromethane (CFC-11)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Isopropyl alcohol	
Acetone	Methylene Chloride	

Of these parameters, all but one were analyzed for in landfill gas samples collected at the Site in 2009 and, of those, all were detected.

- Twenty parameters exhibited a concentration gradient from the sub-slab vapor to the indoor air.
- Methane was detected in the soil vapor sample (39%; above the explosive limit) and the sub-slab vapor sample (6.9%/7.7%; within the explosive range).
- Helium, the tracer gas used to evaluate dilution by ambient air, was detected in the sub-slab vapor sample (15%/16%) and the soil vapor sample (4.9%). Therefore, the samples were significantly diluted by the tracer gas (and potentially by ambient air), and actual VOC concentrations in those media are likely greater than reported.

105 Timrod Drive

- Twelve indoor air parameters exceeded the mean indoor air background values from the NYSDOH Control Home Database (1997).
- Four sub-slab parameters exceed the mean indoor air background values from the NYSDOH Control Home Database (1997).
- Twenty-two parameters were detected in soil vapor, sub-slab vapor, and indoor air.
- Twenty-six parameters exhibited a concentration gradient from the outdoor soil vapor to the indoor air sample. These 26 parameters are listed below:

1,2,3-Trimethylbenzene	Butane	N-Dodecane
1,2,4-Trimethylbenzene	Carbon disulfide	N-Heptane
1,2-Dichlorotetrafluoroethane (CFC 114)	Cyclohexane	Nonane
1,3,5-Trimethylbenzene	Dichlorodifluoromethane (CFC-12)	Octane

2,2,4-Trimethylpentane	Ethylbenzene	o-Xylene
2-Butanone (Methyl Ethyl Ketone)	Hexane	Pentane
4-Ethyl toluene	m&p-xylene	Turt-Butyl alcohol
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Methylene chloride	Trichloroethane
Benzene	Napthalene	

Of these parameters, all were analyzed for in landfill gas samples collected at the Site in 2009 and all but one were detected.

- Two parameters exhibited a concentration gradient from the sub-slab vapor to the indoor air. The consistently lower concentrations detected in the sub-slab vapor sample are likely anomalous because of the high level of correlation between the soil vapor and the indoor air samples. The sub-slab vapor results may not be representative of actual sub-slab conditions along the contaminant migration pathway from soil vapor to indoor air.
- Methane was detected in the soil vapor sample (55%; above the explosive limit) but not in the sub-slab vapor or the indoor air samples.
- Helium was detected in the sub-slab vapor sample (8.7%) and the soil vapor sample (15%). Therefore, the samples were diluted by the tracer gas (and potentially by ambient air), and actual VOC concentrations in those media are likely greater than reported.

4.0 CONCLUSIONS

Based on review of the results of the soil vapor intrusion evaluation, the following conclusions are drawn:

1. Soil vapor, sub-slab vapor, and indoor air at 97 and 105 Timrod have been contaminated by landfill gas constituents from the Site. This is demonstrated by i) the high level of VOC parameter correlation and concentration gradients between on-Site landfill gas, soil vapor, sub-slab vapor, and indoor air; and ii) the presence of methane in significant quantities in soil vapor and sub-slab vapor.
2. Any future development on or near the Site must include measures to prevent the migration of VOCs and methane from landfill gas to indoor air.
3. The indoor air results presented herein are not worst-case. Worst-case results would be obtained during the winter heating season.

4. The limit of waste from the adjacent landfill likely extends onto the residential properties as indicated by the waste material observed during the advancement of the soil vapor probes.

Should you have any questions regarding this letter, please do not hesitate to contact us.

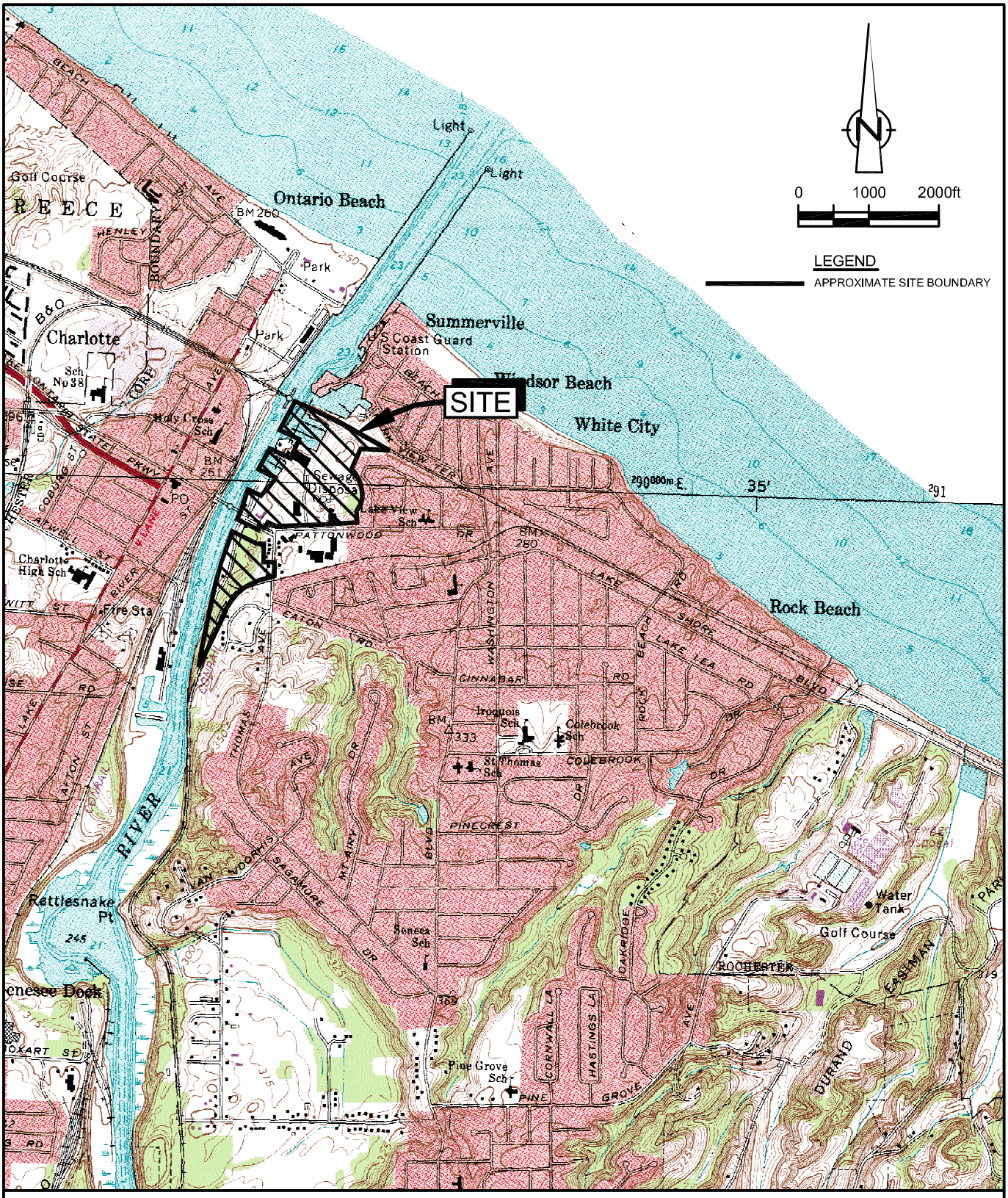
Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Ian K. Richardson, PE

WA/ev/1
Encl.

cc: Alan Knauf, Knauf Shaw LLP
Charlie Morgan, Lighthouse Pointe Property Associates LLC

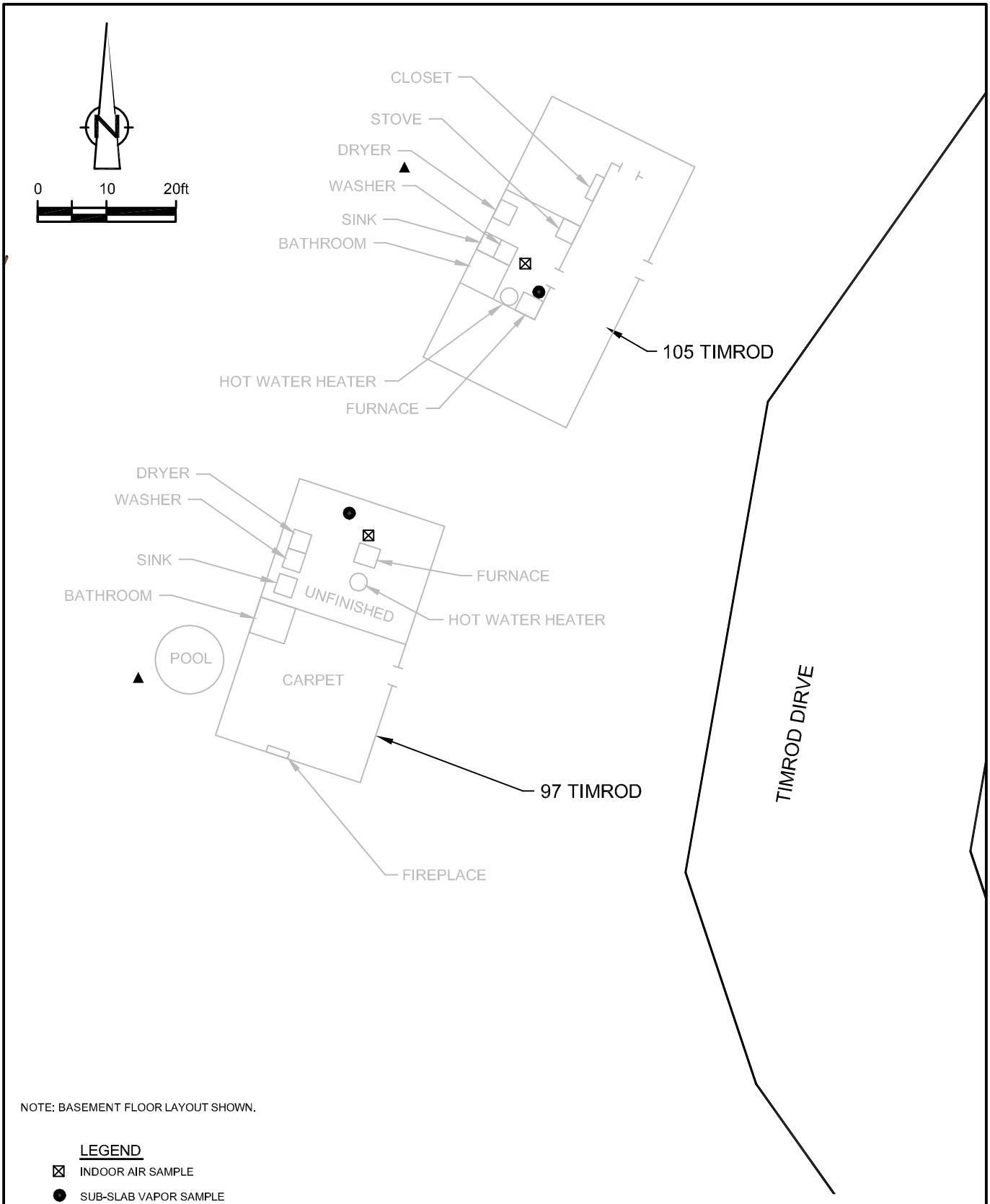


SOURCE: USGS QUADRANGLE MAPS:
ROCHESTER EAST, NEW YORK
ROCHESTER WEST, NEW YORK

figure 1

SITE LOCATION
WATERFRONT PROPERTY DEVELOPMENT
Rochester, New York

42271-03(MORG011)GN-WA001 SEP 25/2009



NOTE: BASEMENT FLOOR LAYOUT SHOWN.

LEGEND

- ⊠ INDOOR AIR SAMPLE
- ● SUB-SLAB VAPOR SAMPLE
- ▲ SOIL VAPOR SAMPLE (APPROXIMATE LOCATION)

figure 2

INVESTIGATION LOCATIONS
WATERFRONT PROPERTY DEVELOPMENT
Rochester, New York

SOURCE: CRA SURVEY, JUNE 2008. NYSP WEST NAD83.

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TABLE 1

RESIDENTIAL AIR MONITORING RESULTS SUMMARY
ROCHESTER, NEW YORK

Sample Date:		***8/17/2009***	***8/17/2009***	***8/17/2009***	***8/17/2009***
Sample Location:		***95 Timrod Drive***	***105 Timrod Drive***	***95 Timrod Drive***	***105 Timrod Drive***
Sample Type:		***Soil Vapour Probe***	***Soil Vapour Probe***	***Sub-slab Probe***	***Sub-slab Probe***
Parameter:	*Unit:*				
Total Organic Vapors	ppm	0.0	0.0	0.5	2.2
Methane	%	5.0	21.0	12.0	0.1
Carbon Dioxide	%	2.1	6.0	11.0	0.2
Oxygen	%	17.1	14.7	7.2	19.0

TABLE 2

RESIDENTIAL AIR SAMPLING RESULTS SUMMARY
97 TIMROD DRIVE
ROCHESTER, NEW YORK

Sample Location:		*Background*	*97 Timrod Basement Air*	*97 Timrod Basement Sub-Slab*	*97 Timrod Basement Sub-Slab*	*97 Timrod Exterior Soil Probe*	*Upwind Background Air*	*Summary of 2009 On-Site Soil Vapor Results*		
Sample ID:		*NYSDOH 1997:*	*IA-42271-081709-JDW-001*	*SS-42271-081709-JDW-001*	*SS-42271-081709-JDW-002*	*SV-42271-081709-JDW-002*	*UW-42271-081709-JDW-001*			
Sample Type		*Control Home*	*Indoor Air*	*Sub-slab Vapor*	*Sub-slab Vapor*	*Soil Vapor*	*Background Outdoor Air*	*Number of Samples*	*Number of Detections*	*Maximum Detected Concentration*
Sample Date			*8/18/2009*	*8/18/2009*	*8/18/2009 (Duplicate)*	*8/18/2009*	*8/18/2009*			
Parameter	*Units*									
Volatile Organic Compounds										
1,1,1-Trichloroethane	µg/m3	9.17	**12**	4.1	4.4	ND (11)	ND (1.1)	11	1	0.16
1,1,2,2-Tetrachloroethane	µg/m3	1.86	ND (1.4)	ND (2.7)	ND (2.7)	ND (14)	ND (1.4)	11	0	N/A
1,1,2-Trichloroethane	µg/m3	1.72	ND (1.1)	ND (2.2)	ND (2.2)	ND (11)	ND (1.1)	11	0	N/A
1,1-Dichloroethane	µg/m3	2.11	ND (0.81)	**57**	**62**	ND (8.1)	ND (0.81)	11	0	N/A
1,1-Dichloroethene	µg/m3	0.68	ND (0.79)	**0.92 J**	**0.72 J**	3.3 J	ND (0.79)	11	2	2.5
1,2,3-Trimethylbenzene	µg/m3	NC	2.8	4.5	5.2	39	ND (0.98)	11	2	69
1,2,4,5-Tetramethylbenzene	µg/m3	NC	1.3	7.1	6.6	290	ND (1.1)	NA	NA	NA
1,2,4-Trichlorobenzene	µg/m3	2.32	ND (7.4)	1.6 J	ND (15)	ND (74)	ND (7.4)	11	0	N/A
1,2,4-Trimethylbenzene	µg/m3	6.28	5.9	2.0	1.7 J	11	0.65 J	11	5	34
1,2-Dibromoethane (Ethylene Dibromide)	µg/m3	0.80	ND (1.5)	ND (3.1)	ND (3.1)	ND (15)	ND (1.5)	11	0	N/A
1,2-Dichlorobenzene	µg/m3	2.02	ND (1.2)	ND (2.4)	ND (2.4)	140	ND (1.2)	11	2	19
1,2-Dichloroethane	µg/m3	2.11	1.3	0.44 J	ND (1.6)	ND (8.1)	ND (0.81)	11	0	N/A
1,2-Dichloropropane	µg/m3	2.11	ND (0.92)	ND (1.8)	ND (1.8)	ND (9.2)	ND (0.92)	11	0	N/A
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m3	0.80	0.48 J	**81**	**82**	690	ND (1.4)	11	11	480
1,3,5-Trimethylbenzene	µg/m3	2.99	1.8	0.96 J	1.1 J	5.2 J	ND (0.98)	11	2	64
1,3-Butadiene	µg/m3	NC	ND (0.88)	ND (1.8)	ND (1.8)	ND (8.8)	ND (0.88)	11	0	N/A
1,3-Dichlorobenzene	µg/m3	2.10	ND (1.2)	ND (2.4)	ND (2.4)	11 J	ND (1.2)	11	9	11
1,4-Dichlorobenzene	µg/m3	9.23	1.9	1.6 J	1.4 J	250	ND (1.2)	11	4	100
1,4-Dioxane	µg/m3	NC	0.33 J	6.9	6.2	ND (18)	ND (1.8)	11	0	N/A
1-Methylnaphthalene	µg/m3	NC	ND (15)	ND (29)	ND (29)	ND (150)	ND (15)	11	0	N/A
2,2,4-Trimethylpentane	µg/m3	NC	2.5	30	30	35	0.61 J	11	8	140
2-Butanone (Methyl Ethyl Ketone)	µg/m3	NC	4.3	5.8	6.3	9.0 J	3.2	11	11	32
2-Chlorotoluene	µg/m3	NC	ND (2.1)	ND (4.1)	ND (4.1)	ND (21)	ND (2.1)	11	0	N/A
2-Ethylthiophene	µg/m3	NC	ND (0.92)	ND (1.8)	ND (1.8)	ND (9.2)	ND (0.92)	NA	NA	NA
2-Hexanone	µg/m3	NC	0.27 J	ND (4.1)	ND (4.1)	ND (20)	0.27 J	11	2	0.82
2-Methylnaphthalene	µg/m3	NC	ND (15)	ND (29)	ND (29)	ND (150)	ND (15)	11	0	N/A
2-Methylthiophene	µg/m3	NC	ND (0.80)	ND (1.6)	ND (1.6)	ND (8.0)	ND (0.80)	NA	NA	NA
3-Methylthiophene	µg/m3	NC	ND (0.80)	ND (1.6)	ND (1.6)	ND (8.0)	ND (0.80)	NA	NA	NA
4-Ethyl toluene	µg/m3	NC	2.7	ND (3.9)	ND (3.9)	ND (20)	0.41 J	11	2	4.7
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/m3	NC	0.68 J	24	25	39	0.34 J	11	4	200
Acetaldehyde	µg/m3	NC	23	ND (36)	39	ND (180)	22	NA	NA	NA
Acetone	µg/m3	NC	43	52	57	45 J	26	11	7	160
Acrolein	µg/m3	NC	5.2	1.5 J	ND (3.7)	ND (18)	3.1	11	5	0.89
Allyl chloride	µg/m3	NC	ND (0.63)	ND (1.3)	ND (1.3)	ND (6.3)	ND (0.63)	11	0	N/A
Benzene	µg/m3	4.64	**5.8**	**8.4**	**8.4**	110	0.82	11	7	160
Benzo(b)thiophene	µg/m3	NC	ND (2.6)	ND (5.3)	ND (5.3)	ND (26)	ND (2.6)	NA	NA	NA
Bromodichloromethane	µg/m3	2.67	0.48 J	ND (2.7)	ND (2.7)	ND (13)	ND (1.3)	11	0	N/A
Bromoform	µg/m3	2.69	ND (2.1)	ND (4.1)	ND (4.1)	ND (21)	ND (2.1)	11	0	N/A
Bromomethane (Methyl Bromide)	µg/m3	0.64	ND (0.78)	ND (1.6)	ND (1.6)	ND (7.8)	ND (0.78)	11	0	N/A
Butane	µg/m3	NC	17	220	240	550	2.7	11	11	620
Carbon disulfide	µg/m3	NC	0.21 J	ND (3.1)	ND (3.1)	53	ND (1.6)	11	10	6.2
Carbon tetrachloride	µg/m3	2.17	0.63 J	ND (2.5)	ND (2.5)	ND (13)	0.54 J	11	3	0.45
Chlorobenzene	µg/m3	2.00	ND (0.92)	**6.1**	**5.7**	1900	ND (0.92)	11	5	600
Chloroethane	µg/m3	0.50	0.25 J	**320**	**330**	1.7 J	ND (0.53)	11	3	3.4
Chloroform (Trichloromethane)	µg/m3	2.81	2.7	**15**	**16**	ND (9.8)	0.19 J	11	3	0.93

TABLE 2

RESIDENTIAL AIR SAMPLING RESULTS SUMMARY
97 TIMROD DRIVE
ROCHESTER, NEW YORK

Sample Location:		*Background*	*97 Timrod Basement Air*	*97 Timrod Basement Sub-Slab*	*97 Timrod Basement Sub-Slab*	*97 Timrod Exterior Soil Probe*	*Upwind Background Air*	*Summary of 2009 On-Site Soil Vapor Results*		
Sample ID:		*NYSDOH 1997:*	*IA-42271-081709-JDW-001*	*SS-42271-081709-JDW-001*	*SS-42271-081709-JDW-002*	*SV-42271-081709-JDW-002*	*UW-42271-081709-JDW-001*			
Sample Type		*Control Home*	*Indoor Air*	*Sub-slab Vapor*	*Sub-slab Vapor*	*Soil Vapor*	*Background Outdoor Air*	*Number of Samples*	*Number of Detections*	*Maximum Detected Concentration*
Sample Date			*8/18/2009*	*8/18/2009*	*8/18/2009 (Duplicate)*	*8/18/2009*	*8/18/2009*			
Parameter	*Units*									
Chloromethane (Methyl Chloride)	µg/m3	1.08	**2.0**	**1.3 J**	**1.3 J**	ND (10)	2.1	11	4	1.5
cis-1,2-Dichloroethene	µg/m3	2.04	ND (0.79)	**3.7**	**3.5**	9.8	ND (0.79)	11	4	7.1
cis-1,3-Dichloropropene	µg/m3	2.21	ND (0.91)	ND (1.8)	ND (1.8)	ND (9.1)	ND (0.91)	11	0	N/A
Cyclohexane	µg/m3	NC	2.4	120	120	160	ND (1.7)	11	7	1200
Dibromochloromethane	µg/m3	2.66	ND (1.7)	ND (3.4)	ND (3.4)	ND (17)	ND (1.7)	11	0	N/A
Dichlorodifluoromethane (CFC-12)	µg/m3	0.77	**4.9**	**49**	**51**	200	2.5	11	11	940
Ethanol	µg/m3	NC	480	22	19	65	9.7	NA	NA	NA
Ethylbenzene	µg/m3	3.21	**6.0**	2.2	2.1	13	0.54 J	11	4	26
Hexachlorobutadiene	µg/m3	1.24	ND (11)	ND (21)	ND (21)	ND (110)	ND (11)	11	0	N/A
Hexane	µg/m3	3.75	**6.3**	**350**	**380**	170	0.97 J	11	11	810
Indane	µg/m3	NC	ND (0.97)	ND (1.9)	2.0	240	ND (0.97)	11	2	63
Indene	µg/m3	NC	ND (1.9)	ND (3.8)	ND (3.8)	ND (19)	ND (1.9)	11	1	48
Isopropyl Alcohol	µg/m3	NC	11	1.8 J	1.8 J	22 J	0.79 J	11	11	290
m&p-Xylene	µg/m3	7.43	**20**	5.9	4.6	12	2.1	11	5	130
Methyl Tert Butyl Ether	µg/m3	NC	ND (3.6)	ND (7.2)	ND (7.2)	ND (36)	ND (3.6)	11	1	4
Methylene chloride	µg/m3	13.28	1.6 J	2.5 J	3.6	7.6 J	5.1	11	11	9.4
Naphthalene	µg/m3	4.07	1.1 J	**5.5**	3.5 J	7.1 J	0.64 J	11	1	17
N-Decane	µg/m3	NC	3.8 J	ND (12)	ND (12)	ND (58)	0.45 J	11	1	7.6
N-Dodecane	µg/m3	NC	2.1 J	21	14	68 J	ND (7.0)	11	5	29
N-Heptane	µg/m3	NC	3.3	45	50	130	0.82 J	11	10	940
Nonane	µg/m3	NC	2.5 J	ND (5.2)	ND (5.2)	ND (26)	ND (2.6)	11	0	N/A
N-Undecane	µg/m3	NC	1.7 J	ND (13)	ND (13)	ND (64)	ND (6.4)	11	1	0.48
Octane	µg/m3	NC	1.8 J	7.9	7.9	18 J	0.28 J	11	5	43
o-Xylene	µg/m3	3.71	**7.2**	2.0	1.9	28	0.75 J	11	6	37
Pentane	µg/m3	NC	15	160	160	320	1.7 J	11	9	380
Styrene	µg/m3	2.21	1.1	ND (1.7)	ND (1.7)	ND (8.5)	ND (0.85)	11	0	N/A
Tert-Butyl Alcohol	µg/m3	NC	1.3 J	37	40	2.0 J	0.32 J	11	7	10
Tetrachloroethene	µg/m3	4.78	ND (1.4)	**12**	**11**	3.9 J	ND (1.4)	11	4	57
Thiophene	µg/m3	NC	ND (0.69)	ND (1.4)	ND (1.4)	ND (6.9)	ND (0.69)	11	0	N/A
Toluene	µg/m3	18.52	**44**	7.5	6.6	36	3.1	11	10	750
trans-1,2-Dichloroethene	µg/m3	4.52	ND (0.79)	1.2 J	1.4 J	2.6 J	ND (0.79)	11	2	4.4
trans-1,3-Dichloropropene	µg/m3	2.21	ND (0.91)	ND (1.8)	ND (1.8)	ND (9.1)	ND (0.91)	11	0	N/A
Trichloroethene	µg/m3	2.17	ND (1.1)	1.8 J	1.6 J	5.4 J	ND (1.1)	11	4	5.4
Trichlorofluoromethane (CFC-11)	µg/m3	2.08	**8.1**	**3.0**	**3.3**	10 J	2.1	11	7	1.9
Trifluorotrichloroethane (Freon 113)	µg/m3	0.95	0.70 J	ND (3.1)	ND (3.1)	ND (15)	0.48 J	11	6	0.61
Vinyl Bromide (Bromoethene)	µg/m3	NC	ND (0.87)	ND (1.7)	ND (1.7)	ND (8.7)	ND (0.87)	11	0	N/A
Vinyl chloride	µg/m3	0.70	ND (0.51)	**24**	**27**	54	ND (0.51)	11	5	33
Helium	%	NC	-	15	16	4.9	-			
Methane	%	NC	ND (0.24)	7.7	6.9	39	0.71			

Notes:

NA- Not analyzed for this parameter
ND()- Not present at or above the associated value.
J- Estimated concentration.
D- Result was obtained from the analysis of a dilution
Exceedance of background.

TABLE 3

RESIDENTIAL AIR SAMPLING RESULTS SUMMARY
105 TIMROD DRIVE
ROCHESTER, NEW YORK

Sample Location:		*Background*	*105 Timrod Basement Air*	*105 Timrod BasementSub-Slab*	*105 Timrod Exterior Soil Probe*	*Upwind Background Air*	*Summary of 2009 On-Site Soil Vapor Results*		
Sample ID:		*NYSDOH 1997:*	*IA-42271-081709-JDW-003*	*SS-42271-081709-JDW-003*	*SV-42271-081709-JDW-001*	*UW-42271-081709-JDW-001*			
Sample Type		*Control Home*	*Indoor Air*	*Sub-slub Vapor*	*Soil Vapor*	*Background Outdoor Air*	*Number of Samples*	*Number of Detections*	*Maximum Detected Concentration*
Sample Date			*8/18/2009 (Duplicate)*	*8/18/2009*	*8/18/2009*	*8/18/2009*			
Parameter	*Units*								
Volatile Organic Compounds									
1,1,1-Trichloroethane	µg/m3	9.17	0.30 J	0.33 J	ND (11)	ND (1.1)	11	1	0.16
1,1,2,2-Tetrachloroethane	µg/m3	1.86	ND (1.4)	ND (1.4)	ND (14)	ND (1.4)	11	0	N/A
1,1,2-Trichloroethane	µg/m3	1.72	ND (1.1)	ND (1.1)	ND (11)	ND (1.1)	11	0	N/A
1,1-Dichloroethane	µg/m3	2.11	ND (0.81)	ND (0.81)	ND (8.1)	ND (0.81)	11	0	N/A
1,1-Dichloroethene	µg/m3	0.68	ND (0.79)	ND (0.79)	ND (7.9)	ND (0.79)	11	2	2.5
1,2,3-Trimethylbenzene	µg/m3	NC	2.8	ND (0.98)	2100	ND (0.98)	11	2	69
1,2,4,5-Tetramethylbenzene	µg/m3	NC	ND (1.1)	ND (1.1)	480	ND (1.1)	NA	NA	NA
1,2,4-Trichlorobenzene	µg/m3	2.32	ND (7.4)	ND (7.4)	7.9 J	ND (7.4)	11	0	N/A
1,2,4-Trimethylbenzene	µg/m3	6.28	**7.4**	0.91 J	2700	0.65 J	11	5	34
1,2-Dibromoethane (Ethylene Dibromide)	µg/m3	0.80	ND (1.5)	ND (1.5)	ND (15)	ND (1.5)	11	0	N/A
1,2-Dichlorobenzene	µg/m3	2.02	ND (1.2)	ND (1.2)	46	ND (1.2)	11	2	19
1,2-Dichloroethane	µg/m3	2.11	0.63 J	0.45 J	ND (8.1)	ND (0.81)	11	0	N/A
1,2-Dichloropropane	µg/m3	2.11	ND (0.92)	ND (0.92)	ND (9.2)	ND (0.92)	11	0	N/A
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m3	0.80	**3.0**	**3.0**	500	ND (1.4)	11	11	480
1,3,5-Trimethylbenzene	µg/m3	2.99	2.1	0.51 J	1600	ND (0.98)	11	2	64
1,3-Butadiene	µg/m3	NC	ND (0.88)	ND (0.88)	ND (8.8)	ND (0.88)	11	0	N/A
1,3-Dichlorobenzene	µg/m3	2.10	ND (1.2)	ND (1.2)	ND (12)	ND (1.2)	11	9	11
1,4-Dichlorobenzene	µg/m3	9.23	ND (1.2)	ND (1.2)	41	ND (1.2)	11	4	100
1,4-Dioxane	µg/m3	NC	ND (1.8)	0.44 J	ND (18)	ND (1.8)	11	0	N/A
1-Methylnaphthalene	µg/m3	NC	ND (15)	ND (15)	ND (150)	ND (15)	11	0	N/A
2,2,4-Trimethylpentane	µg/m3	NC	10.0	ND (2.3)	74	0.61 J	11	8	140
2-Butanone (Methyl Ethyl Ketone)	µg/m3	NC	9.5	2.9 J	9.7 J	3.2	11	11	32
2-Chlorotoluene	µg/m3	NC	ND (2.1)	ND (2.1)	ND (21)	ND (2.1)	11	0	N/A
2-Ethylthiophene	µg/m3	NC	ND (0.92)	ND (0.92)	ND (9.2)	ND (0.92)	NA	NA	NA
2-Hexanone	µg/m3	NC	0.72 J	0.38 J	ND (20)	0.27 J	11	2	0.82
2-Methylnaphthalene	µg/m3	NC	ND (15)	ND (15)	ND (150)	ND (15)	11	0	N/A
2-Methylthiophene	µg/m3	NC	ND (0.80)	ND (0.80)	ND (8.0)	ND (0.80)	NA	NA	NA
3-Methylthiophene	µg/m3	NC	ND (0.80)	ND (0.80)	ND (8.0)	ND (0.80)	NA	NA	NA
4-Ethyl toluene	µg/m3	NC	ND (2.0)	ND (2.0)	58	0.41 J	11	2	4.7
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/m3	NC	1.9 J	1.5 J	48	0.34 J	11	4	200
Acetaldehyde	µg/m3	NC	29	120	ND (180)	22	NA	NA	NA
Acetone	µg/m3	NC	92	140	ND (120)	26	11	7	160
Acrolein	µg/m3	NC	5.3	0.91 J	ND (18)	3.1	11	5	0.89
Allyl chloride	µg/m3	NC	ND (0.63)	ND (0.63)	ND (6.3)	ND (0.63)	11	0	N/A
Benzene	µg/m3	4.64	**8.9**	1.0	30	0.82	11	7	160
Benzo(b)thiophene	µg/m3	NC	ND (2.6)	ND (2.6)	ND (26)	ND (2.6)	NA	NA	NA
Bromodichloromethane	µg/m3	2.67	0.44 J	ND (1.3)	ND (13)	ND (1.3)	11	0	N/A
Bromoform	µg/m3	2.69	ND (2.1)	ND (2.1)	ND (21)	ND (2.1)	11	0	N/A
Bromomethane (Methyl Bromide)	µg/m3	0.64	ND (0.78)	ND (0.78)	ND (7.8)	ND (0.78)	11	0	N/A
Butane	µg/m3	NC	84	1.8	1000	2.7	11	11	620
Carbon disulfide	µg/m3	NC	0.17 J	0.25 J	2.2 J	ND (1.6)	11	10	6.2
Carbon tetrachloride	µg/m3	2.17	0.57 J	0.53 J	ND (13)	0.54 J	11	3	0.45
Chlorobenzene	µg/m3	2.00	ND (0.92)	ND (0.92)	8.2 J	ND (0.92)	11	5	600
Chloroethane	µg/m3	0.50	0.098 J	0.093 J	2.5 J	ND (0.53)	11	3	3.4

TABLE 3

RESIDENTIAL AIR SAMPLING RESULTS SUMMARY
105 TIMROD DRIVE
ROCHESTER, NEW YORK

Sample Location:		*Background*	*105 Timrod Basement Air*	*105 Timrod BasementSub-Slab*	*105 Timrod Exterior Soil Probe*	*Upwind Background Air*	*Summary of 2009 On-Site Soil Vapor Results*		
Sample ID:		*NYSDOH 1997:*	*IA-42271-081709-JDW-003*	*SS-42271-081709-JDW-003*	*SV-42271-081709-JDW-001*	*UW-42271-081709-JDW-001*			
Sample Type		*Control Home*	*Indoor Air*	*Sub-slub Vapor*	*Soil Vapor*	*Background Outdoor Air*	*Number of Samples*	*Number of Detections*	*Maximum Detected Concentration*
Sample Date			*8/18/2009 (Duplicate)*	*8/18/2009*	*8/18/2009*	*8/18/2009*			
Parameter	*Units*								
Chloroform (Trichloromethane)	µg/m3	2.81	1.1	ND (0.98)	ND (9.8)	0.19 J	11	3	0.93
Chloromethane (Methyl Chloride)	µg/m3	1.08	**2.3**	ND (1.0)	ND (10)	2.1	11	4	1.5
cis-1,2-Dichloroethene	µg/m3	2.04	ND (0.79)	ND (0.79)	5.4 J	ND (0.79)	11	4	7.1
cis-1,3-Dichloropropene	µg/m3	2.21	ND (0.91)	ND (0.91)	ND (9.1)	ND (0.91)	11	0	N/A
Cyclohexane	µg/m3	NC	5.7	ND (1.7)	730	ND (1.7)	11	7	1200
Dibromochloromethane	µg/m3	2.66	ND (1.7)	ND (1.7)	ND (17)	ND (1.7)	11	0	N/A
Dichlorodifluoromethane (CFC-12)	µg/m3	0.77	**12**	**12**	140	2.5	11	11	940
Ethanol	µg/m3	NC	230	1700	ND (38)	9.7	NA	NA	NA
Ethylbenzene	µg/m3	3.21	**7.1**	0.53 J	85	0.54 J	11	4	26
Hexachlorobutadiene	µg/m3	1.24	ND (11)	ND (11)	ND (110)	ND (11)	11	0	N/A
Hexane	µg/m3	3.75	**20**	0.73 J	660	0.97 J	11	11	810
Indane	µg/m3	NC	1.2	ND (0.97)	290	ND (0.97)	11	2	63
Indene	µg/m3	NC	ND (1.9)	ND (1.9)	ND (19)	ND (1.9)	11	1	48
Isopropyl Alcohol	µg/m3	NC	8.4	5.9	3.7 J	0.79 J	11	11	290
m&p-Xylene	µg/m3	7.43	**28**	1.8	420	2.1	11	5	130
Methyl Tert Butyl Ether	µg/m3	NC	ND (3.6)	ND (3.6)	ND (36)	ND (3.6)	11	1	4
Methylene chloride	µg/m3	13.28	6.6	2.8	7.7 J	5.1	11	11	9.4
Naphthalene	µg/m3	4.07	**5.0**	ND (2.6)	16 J	0.64 J	11	1	17
N-Decane	µg/m3	NC	5.7 J	1.7 J	ND (58)	0.45 J	11	1	7.6
N-Dodecane	µg/m3	NC	1.2 J	ND (7.0)	51 J	ND (7.0)	11	5	29
N-Heptane	µg/m3	NC	6.6	0.58 J	400	0.82 J	11	10	940
Nonane	µg/m3	NC	3.4	0.64 J	710	ND (2.6)	11	0	N/A
N-Undecane	µg/m3	NC	3.4 J	0.57 J	ND (64)	ND (6.4)	11	1	0.48
Octane	µg/m3	NC	2.2	0.76 J	110	0.28 J	11	5	43
o-Xylene	µg/m3	3.71	**9.0**	0.74 J	190	0.75 J	11	6	37
Pentane	µg/m3	NC	62	1.2 J	490	1.7 J	11	9	380
Styrene	µg/m3	2.21	1.5	0.25 J	ND (8.5)	ND (0.85)	11	0	N/A
Tert-Butyl Alcohol	µg/m3	NC	1.1 J	360 D	2.5 J	0.32 J	11	7	10
Tetrachloroethene	µg/m3	4.78	4.2	**5.8**	ND (14)	ND (1.4)	11	4	57
Thiophene	µg/m3	NC	ND (0.69)	ND (0.69)	ND (6.9)	ND (0.69)	11	0	N/A
Toluene	µg/m3	18.52	**65**	5.9	17	3.1	11	10	750
trans-1,2-Dichloroethene	µg/m3	4.52	ND (0.79)	ND (0.79)	7.1 J	ND (0.79)	11	2	4.4
trans-1,3-Dichloropropene	µg/m3	2.21	ND (0.91)	ND (0.91)	ND (9.1)	ND (0.91)	11	0	N/A
Trichloroethene	µg/m3	2.17	ND (1.1)	ND (1.1)	8.3 J	ND (1.1)	11	4	5.4
Trichlorofluoromethane (CFC-11)	µg/m3	2.08	**6.8**	**6.7**	3.0 J	2.1	11	7	1.9
Trifluorotrichloroethane (Freon 113)	µg/m3	0.95	0.56 J	0.50 J	ND (15)	0.48 J	11	6	0.61
Vinyl Bromide (Bromoethene)	µg/m3	NC	ND (0.87)	ND (0.87)	ND (8.7)	ND (0.87)	11	0	N/A
Vinyl chloride	µg/m3	0.70	ND (0.51)	ND (0.51)	29	ND (0.51)	11	5	33
Helium	%	NC	-	8.7	15	-			
Methane	%	NC	ND (0.22)	ND (0.23)	55	0.71			

Notes:

NA- Not analyzed for this parameter
ND()- Not present at or above the associated value.
J- Estimated concentration.
bold Exceedance of background.