Table 5-6
Soil Vapor Intrusion Evaluation Results
Metropolitan Former MGP Site, Brooklyn, New York

Type of Sample	CAS No.	Typical Background Indoor Air Concentrations (Non-Residential)[3]	Ambient	Indoor Air	Sub-Slab Soil Vapor	Indoor Air	Indoor Air	Sub-Slab Soil Vapor	Ambient	Indoor Air	Sub-Slab Soil Vapor	Ambient	Indoor Air	Sub-Slab Soil Vapor
Sample ID			AMB-1	IA-1	SV-1	IA-2	IA-2 Dup	SV-2	AMB-3	IA-3	SV-3	AMB-2	IA-4	SV-4
Sampling Date			3/31/2010	3/31/2010	3/31/2010	3/31/2010	3/31/2010	3/31/2010	4/2/2011	4/2/2011	4/2/2011	3/19/2011	3/19/2011	3/19/2011
Compound (µg/m³)														
Possibly MGP Related or Other Sources [1]														
1,2,4-Trimethylbenzene	95-63-6	9.5	0.75 U	**0.88**	0.76 U	**0.82**	**1.0**	0.79 U	0.787 U	**2.85**	**1.43**	0.787 U	**2.16**	**2.90**
1,3,5-Trimethylbenzene	108-67-8	3.7	0.75 U	0.78 U	0.76 U	0.79 U	0.78 U	0.79 U	0.787 U	**0.885**	0.787 U	0.787 U	0.787 U	**0.787**
2,2,4-Trimethylpentane	540-84-1	NL	3.6 U	3.7 U	3.6 U	3.8 U	3.7 U	3.8 U	3.74 U	**5.56**	3.74 U	3.74 U	3.74 U	3.74 U
2,3-Dimethylpentane	565-59-3	NL	3.1 U	3.2 U	3.2 U	3.3 U	3.2 U	3.3 U	3.28 U	**0.820 J**	3.28 U	3.28 U	3.28 U	3.28 U
2-Methylpentane	107-83-5	NL	2.7 U	2.8 U	2.7 U	2.8 U	2.8 U	2.8 U	**0.634 J**	**3.52**	2.82 U	2.82 U	**0.881 J**	2.82 U
4-Ethyltoluene	622-96-8	3.6	0.75 U	0.78 U	0.76 U	0.79 U	**0.88**	0.79 U	3.93 U	**0.787 J**	3.93 U	3.93 U	**0.836 J**	**1.18 J**
Benzene	71-43-2	9.4	**0.57**	**1.0**	**3.9**	**0.88**	**0.84**	**0.60**	**0.671**	**4.82**	0.511 U	**0.543**	**0.703**	0.511 U
Carbon Disulfide	75-15-0	4.2	2.4 U	2.5 U	**6.3**	2.5 U	2.5 U	2.5 U	2.49 U	2.49 U	2.49 U	2.49 U	2.49 U	**0.934 J**
Cyclohexane	110-82-7	NL	0.52 U	0.54 U	1.2	0.55 U	0.54 U	**0.75**	2.75 U	**0.688**	2.75 U	2.75 U	2.75 U	2.75 U
Ethylbenzene	100-41-4	5.7	0.66 U	0.69 U	0.67 U	0.70 U	0.69 U	0.70 U	0.695 U	**6.56**	**0.956**	0.695 U	**0.782**	0.695 U
Heptane	142-82-5	NL	0.62 U	**0.80**	0.64 U	0.66 U	**0.67**	**1.0**	3.28 U	**1.48 J**	3.28 U	3.28 U	**0.820 J**	3.28 U
Hexane	110-54-3	10.2	0.54 U	**0.66**	0.55 U	**1.0**	**0.88**	**1.6**	**0.634 J**	**2.26 J**	2.82 U	2.82 U	**0.811 J**	2.82 U
Indan	496-11-7	NL	3.7 U	3.8 U	3.7 U	3.9 U	3.8 U	3.9 U	3.87 U	3.87 U	3.87 U	3.87 U	3.87 U	3.87 U
Indene	95-13-6	NL	3.6 U	3.8 U	3.7 U	3.8 U	3.8 U	3.8 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Isopentane	78-784	NL	2.2 U	**40**	2.3 U	**45**	**54**	2.4 U	**12.1**	**31.8**	**1.56 J**	**4.07**	**10.1**	**1.83 J**
Naphthalene	91-20-3	5.1	4.0 U	4.1 U	4.1 U	4.2 U	4.1 U	4.2 U	4.19 U	4.19 U	4.19 U	4.19 U	4.19 U	**1.42 J**
Styrene	100-42-5	1.9	0.65 U	0.67 U	0.66 U	0.68 U	0.67 U	0.68 U	0.682 U	**1.32**	0.682 U	0.682 U	0.682 U	0.682 U
Thiophene	110-02-1	NL	2.6 U	2.7 U	2.7 U	2.8 U	2.7 U	2.8 U	2.75 U	2.75 U	2.75 U	2.75 U	2.75 U	2.75 U
Toluene	108-88-3	43	**1.9**	**3.0**	**1.8**	**3.7**	**3.2**	**4.0**	**1.09**	**16.1**	**4.18**	**0.64**	**10.6**	**5.24**
m/p-Xylenes	136777-61-2	22.2	**0.94**	**1.4**	0.67 U	**2.0**	**1.7**	0.70 U	0.695 U	**12.2**	**3.87**	0.695 U	**2.08**	**2.48**
o-Xylene	95-47-6	7.9	0.66 U	0.69 U	0.67 U	0.70 U	0.69 U	0.70 U	0.695 U	**5.52**	0.912	1.912	**0.869**	**0.869**
1,2,3-Trimethylbenzene	526-73-8	NL	3.7 U	3.9 U	3.8 U	4.0 U	3.9 U	4.0 U	3.93 U	3.93 U	3.93 U	3.93 U	3.93 U	3.93 U
1,2,4,5-Tetramethylbenzene	95-93-2	NL	(TIC) U	(TIC) U	(TIC) U	(TIC) U	(TIC) U	U	4.39 U	4.39 U	4.39 U	4.39 U	4.39 U	4.39 U
1-Methylnaphthalene	90-12-0	NL	(TIC) U	(TIC) U	(TIC) U	(TIC) U	(TIC) U	U	11.6 UJ	11.6 UJ	11.6 UJ	11.6 UJ	11.6 UJ	11.6 UJ
2-Chlorotoluene	95-49-8	NL	(TIC) U	(TIC) U	(TIC) U	(TIC) U	(TIC) U	U	NS	NS	NS	NS	NS	NS
2-Methylnaphthalene	91-57-6	NL	(TIC) U	(TIC) U	(TIC) U	(TIC) U	(TIC) U	U	11.6 UJ	11.6 UJ	11.6 UJ	11.6 UJ	11.6 UJ	11.6 UJ
Not MGP Related [2]														
1,1,1-Trichloroethane (1,1,1-TCA)	71-55-6	20.6	0.83 U	0.86 U	**3.6**	0.88 U	0.86 U	**4.4**	0.873 U	0.873 U	**1.75**	0.873 U	0.873 U	0.873 U
1,1,2,2-Tetrachloroethane	79-34-5	NL	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U	1.10 U
1,1,2-Trichloroethane	79-00-5	<1.5	0.83 U	0.86 U	0.84 U	0.88 U	0.86 U	0.88 U	0.873 U	0.873 U	0.873 U	0.873 U	0.873 U	0.873 U
1,1-Dichloroethane	75-34-3	<0.7	0.62 U	0.64 U	0.63 U	0.65 U	0.64 U	0.65 U	0.648 U	0.648 U	**0.648**	0.648 U	0.648 U	0.648 U
1,1-Dichloroethene	75-35-4	<1.4	0.60 U	0.63 U	0.61 U	0.64 U	0.63 U	0.64 U	0.634 U	0.634 U	**1.18**	0.634 U	0.634 U	0.634 U
1,2,4-Trichlorobenzene	120-82-1	<6.8	5.6 U	5.9 U	5.8 U	6.0 U	5.9 U	6.0 U	5.94 U	5.94 U	5.94 U	5.94 U	5.94 U	5.94 U
1,2-Dibromoethane (EDB)	106-93-4	<1.5	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.23 U	1.23 U	1.23 U	1.23 U	1.23 U	1.23 U
1,2-Dichlorobenzene	95-50-1	<1.2	0.91 U	0.95 U	0.93 U	0.97 U	0.95 U	**2.1**	0.962 U	0.962 U	0.962 U	0.962 U	0.962 U	0.962 U
1,2-Dichloroethane	107-06-2	<0.9	0.62 U	0.64 U	0.63 U	0.65 U	0.64 U	0.65 U	0.648 U	**0.809**	0.648 U	0.648 U	0.648 U	0.648 U
1,2-Dichloropropane	78-87-5	<1.6	0.70 U	0.73 U	0.72 U	0.74 U	0.73 U	0.74 U	0.739 U	**4.76**	0.739 U	0.739 U	0.739 U	0.739 U
1,3-Butadiene	106-99-0	<3.0	0.34 U	0.35 U	0.34 U	0.36 U	0.35 U	0.36 U	1.77 U	1.77 U	1.77 U	1.77 U	1.77 U	1.77 U
1.3-Dichlorobenzene	541-73-1	<2.4	0.91 U	0.95 U	0.93 U	0.97 U	0.95 U	0.97 U	0.962 U	0.962 U	0.962 U	0.962 U	0.962 U	0.962 U
1,4-Dichlorobenzene	106-46-7	5.5	0.91 U	**5.8**	0.93 U	**2.5**	**2.6**	0.97 U	0.962 U	0.962 U	0.962 U	0.962 U	0.962 U	0.962 U
1,4-Dioxane	123-91-1	NL	0.55 U	0.57 U	0.56 U	0.58 U	0.57 U	0.58 U	2.88 U	2.88 U	2.88 U	2.88 U	2.88 U	2.88 U

Notes:
µg/Kg - micrograms per kilogram
[1] These compounds may be related to either MGP sources or non-MGP sources, or both. MGP sources include MGP tars and petroleum feedstocks used in MGP processes, such as the carburetted water gas process. Non-MGP sources include cleaning products, floor wax and polish, vehicle exhaust, construction materials, and cigarette smoke.
[2] These compounds are not related to MGP sources and are present due to non-MGP sources, such as vehicle exhaust, heating and air conditioning systems, cleaning agents, art supplies, paints, etc.
[3] Typical non-residential background indoor air concentrations are equal to the 90th percentile values observed by the USEPA in a 2001 study which are the values recommended for comparison in the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (NYSDOH, October
ND = Not Detected
NL = Not Listed
NS = Analyte was not measured because it was not part of the QAPP target compound list.
J = The associated numerical value is an estimated quantity.
TIC - Compound was analyzed using a GC/MS library search.
U = The analyte was analyzed for but not detected at, or above, the Method Detection Limit (MDL). The associated numerical value is the Practical Quantitation Limit (PQL).
UJ = The analyte was not detected at or above the PQL. However, the reported PQL is approximate and may be inaccurate or imprecise.
Bold indicates the analyte detected at a concentration greater than the MDL.
Bold and Green Highlighting indicate that the ambient air and/or indoor air result is above the NYSDOH Background Indoor Air Concentrations. Soil Vapor results are not highlighted based on a comparison to these background concentrations.

Table 5-6 continued
Soil Vapor Intrusion Evaluation Results
Metropolitan Former MGP Site, Brooklyn, New York

Type of Sample	CAS No.	Typical Background Indoor Air Concentrations (Non-Residential)[3]	Ambient	Indoor Air	Sub-Slab Soil Vapor	Indoor Air	Indoor Air	Sub-Slab Soil Vapor	Ambient	Indoor Air	Sub-Slab Soil Vapor	Ambient	Indoor Air	Sub-Slab Soil Vapor
Sample ID			AMB-1	IA-1	SV-1	IA-2	IA-2 Dup	SV-2	AMB-3	IA-3	SV-3	AMB-2	IA-4	SV-4
Sampling Date			3/31/2010	3/31/2010	3/31/2010	3/31/2010	3/31/2010	3/31/2010	4/2/2011	4/2/2011	4/2/2011	3/19/2011	3/19/2011	3/19/2011
Compound (µg/m³)														
2-Butanone (MEK)	78-93-3	12	**1.3**	**0.97**	**2.3**	**2.3**	**1.0**	**3.4**	**0.649 J**	**3.98**	**1.30 J**	**0.531 J**	**1.33 J**	**2.27 J**
2-Hexanone	591-78-6	NL	3.1 U	3.2 U	3.2 U	3.3 U	3.2 U	3.3 U	3.28 U	3.28 U	3.28 U	3.28 U	3.28 U	3.28 U
4-Methyl-2-pentanone (MIBK)	108-10-1	6	0.62 U	0.65 U	0.63 U	0.66 U	0.65 U	0.66 U	3.28 U	3.28 U	3.28 U	3.28 U	3.28 U	3.28 U
Acetone	67-64-1	98.9	**6.4**	**16**	**18**	**20**	**15**	**120**	**6.37**	**73.0**	**3.68**	**4.66**	**31.5**	**6.89**
Benzyl chloride	100-44-7	NL	0.79 U	0.82 U	0.80 U	0.83 U	0.82 U	0.83 U	0.828 U	0.828 U	0.828 U	0.828 U	0.828 U	0.828 U
Bromodichloromethane	75-27-4	NL	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	**1.3**	5.36 U	5.36 U	5.36 U	5.36 U	5.36 U	5.36 U
Bromoform	75-25-2	NL	1.6 U	1.6 U	1.6 U	1.7 U	1.6 U	1.7 U	8.27 U	8.27 U	8.27 U	8.27 U	8.27 U	8.27 U
Bromomethane	74-83-9	<1.7	0.59 U	0.61 U	0.60 U	0.62 U	0.61 U	0.62 U	0.622 U	0.622 U	0.622 U	0.622 U	0.622 U	0.622 U
Carbon Tetrachloride	56-23-5	<1.3	0.96 U	0.99 U	0.98 U	1.0 U	0.99 U	1.0 U	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U
Chlorobenzene	108-90-7	<0.9	0.70 U	0.73 U	0.71 U	0.74 U	0.73 U	0.74 U	0.737 U	0.737 U	0.737 U	0.737 U	0.737 U	0.737 U
Chloroethane	75-00-3	<1.1	0.40 U	0.42 U	0.41 U	0.42 U	0.42 U	0.42 U	0.422 U	0.422 U	0.422 U	0.422 U	0.422 U	0.422 U
Chloroform	67-66-3	1.1	0.74 U	**2.0**	**6.8**	**1.1**	**1.1**	**36**	0.781 U	**0.830**	**1.12**	0.781 U	**0.826**	**1.42**
Chloromethane	74-87-3	3.7	**1.2**	0.33 U	0.32 U	**1.3**	**1.5**	0.33 U	**0.929**	**0.909**	0.330 U	**0.950**	0.330 U	0.330 U
cis-1,2-Dichloroethene	156-59-2	<1.9	0.60 U	0.63 U	0.61 U	0.64 U	0.63 U	0.64 U	0.634 U	0.634 U	0.634 U	0.634 U	0.634 U	0.634 U
cis-1,3-Dichloropropene	10061-01-5	<2.3	0.69 U	0.72 U	0.70 U	0.73 U	0.72 U	0.73 U	0.726 U	0.726 U	0.726 U	0.726 U	0.726 U	0.726 U
Dibromochloromethane	124-48-1	NL	1.3 U	1.3 U	1.3 U	1.4 U	1.3 U	1.4 U	6.81 U	6.81 U	6.81 U	6.81 U	6.81 U	6.81 U
Ethanol	64-17-5	NL	**13 J**	**330 J**	**4.4 J**	**230 J**	**260 J**	**5.4 J**	**4.88**	**60.2**	**1.66**	**5.99**	**48.1**	**10.6**
Trichlorofluoromethane (Freon 11)	75-69-4	18.1	**7.3**	**16**	**7.5**	**19**	**21**	**20**	**1.57**	**5.23**	**3.88**	**1.63**	**2.3**	**41.5**
1,1,2-Trichlorotrifluoroethane (Freon 113)	76-13-1	NL	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.23 U	1.23 U	1.23 U	1.23 U	1.23 U	1.23 U
1,2-Dichlorotetrafluoroethane	76-14-2	NL	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.12 U	1.12 U	1.12 U	1.12 U	1.12 U	1.12 U
Dichlorodifluoromethane (Freon 12)	75-71-8	16.5	**6.2**	**5.1**	**18**	**7.4**	**8.2**	**43**	**2.52**	**2.27**	**2.67**	**2.52**	**2.08**	**2.13**
Hexachlorobutadiene (C-46)	87-68-3	<6.8	8.1 U	8.4 U	8.3 U	8.6 U	8.4 U	8.6 U	8.53 U	8.53 U	8.53 U	8.53 U	8.53 U	8.53 U
Methyl tert-Butyl Ether (MTBE)	1634-04-4	11.5	0.55 U	0.57 U	0.56 U	0.58 U	0.57 U	0.58 U	2.88 U	2.88 U	2.88 U	2.88 U	2.88 U	2.88 U
Methylene Chloride (Dichloromethane)	75-09-2	10	**1.0**	1.1 U	1.1 U	**1.7**	**1.6**	1.1 U	6.95 U	9.98 U	6.95 U	6.95 U	6.95 U	6.95 U
2-Propanol	67-63-0	NL	**2.8**	**40**	1.9 U	**26**	**29**	**14**	**2.46**	**3.96**	**1.30 J**	**4.01**	**4.25**	**2.16**
Propene	115-07-1	NL	1.3 U	1.4 U	1.3 U	1.4 U	1.4 U	1.4 U	1.38 U	**3.53**	1.38 U	1.38 U	1.38 U	1.38 U
Tetrachloroethene (PCE)	127-18-4	15.9	1.0 U	1.1 U	**3.5**	1.1 U	1.1 U	**21**	1.09 U	**1.22**	**12.3**	1.09 U	1.09 U	**11.5**
Tetrahydrofuran	109-99-9	NL	2.2 U	2.3 U	2.3 U	2.4 U	2.3 U	2.4 U	2.36 U	2.36 U	2.36 U	2.36 U	2.36 U	2.36 U
trans-1,2-Dichloroethene	156-60-5	NL	0.60 U	0.63 U	0.61 U	0.64 U	0.63 U	0.64 U	3.17 U	3.17 U	3.17 U	3.17 U	3.17 U	3.17 U
trans-1,3-Dichloropropene	10061-02-6	<1.3	0.69 U	0.72 U	0.70 U	0.73 U	0.72 U	0.73 U	0.726 U	0.726 U	0.726 U	0.726 U	0.726 U	0.726 U
Trichloroethene (TCE)	79-01-6	4.2	0.82 U	0.85 U	**0.84**	0.86 U	0.85 U	0.86 U	0.860 U	0.860 U	0.860 U	0.860 U	0.860 U	0.860 U
Vinyl Chloride	75-01-4	<1.9	0.39 U	0.40 U	0.40 U	0.41 U	0.40 U	0.41 U	0.409 U	0.409 U	0.409 U	0.409 U	0.409 U	0.409 U
Helium (percent)	7440-59-7	NA			0.078 U			0.080 U			0.12			0.15

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