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VIA OVERNIGHT COURIER AND EMAIL

January 20, 2012

Mr. Payson Long, PE
Environmental Engineer I
Bureau D, Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, NY 12233-7013

Re: **Pre-Demolition Investigation Report
American Drive-In Cleaners Site #130049
3801 Hempstead Turnpike, Levittown, NY
FPM File No. 696-11-06 (001)**

Dear Payson:

FPM Group (FPM) has completed the pre-demolition investigation activities documented in the New York State Department of Environmental Conservation (NYSDEC)-approved Demolition Plan (November 2010) for the above-referenced site. We are hereby providing the results of this investigation. This report includes a discussion of the investigation procedures and results, copies of the lab data on CD, summary data tables, data usability summary reports (DUSRs), and site plans showing the sampling locations and results. The NYSDEC electronic data deliverables (EDDs) have also been prepared and submitted. We have also included a discussion of the results and our recommendations.

Please note that at the time the Demolition Plan was prepared, it was planned to completely remove the building at the site and to redevelop the site solely as a parking lot. The activities in the Demolition Plan were commensurate with this approach. Since that time, it has been determined that although the current site building (including slab and foundation) will be completely removed, the site owner now intends to construct a new building in the footprint of the former building. This new building will be used for retail purposes. This report addresses this issue.

A sub-slab vapor mitigation system for the adjoining Beverage Center building has also been installed and monitored in accordance with the Demolition Plan. This work will be documented in a separate submittal.

Pre-Demolition Soil Vapor Sampling

Soil vapor sampling was conducted in accordance with the Demolition Plan using existing soil vapor extraction (SVE) and sub-slab depressurization (SSDS) wells to further evaluate soil vapor conditions at the site. The SVE and SSDS wells were inactive at the time of sampling and had been turned off for a period of three weeks before the sampling was conducted. Sub-slab soil vapor was sampled at six locations in the former dry cleaner unit (SSDS-1 through SSDS-4, SVE-8, and SVE-10), and soil vapor was sampled at five outdoor locations (SVE-1, SVE-3, SVE-4, SVE-6, and SVE-7). These sample locations are shown on Figure 1. Sampling was conducted in April 2011; although this was not during the heating season, this issue is irrelevant as the building has been vacant for an extended period and no HVAC system was present.

Samples were collected, managed, and analyzed in accordance with the procedures in the NYSDEC-approved Demolition Plan. The results are summarized in Table 1 and the tetrachloroethene (PCE) and trichloroethene (TCE) results are also shown on Figure 2. The canister sampling records for each sample are included in Attachment A and the DUSR for the laboratory report is included in Attachment B. The complete laboratory report is provided on the CD included with this report.

Sub-Slab Vapor Results and Discussion

The sub-slab soil vapor data were compared to the previous sub-slab soil vapor data obtained in August 2010 by the NYSDEC's environmental contractor (summarized in Attachment C on Figure 4 and Table 4) and to New York State Department of Health (NYSDOH) soil vapor intrusion guidance using the indoor air data obtained previously while the remedial and mitigation systems were turned off (Figure 5 and Table 5 in Attachment C).

A comparison of the 2010 sub-slab soil vapor data with the 2011 pre-demolition soil vapor data shows that the samples collected from beneath the building slab within the former dry cleaner unit were generally lower in 2011 than in 2010. Sub-slab PCE levels in the former dry cleaner ranged from 470 to 790 ug/m³ in 2010 (SS-1 and SS-2, Table 4 in Attachment C) and from 4.91 to 586 ug/m³ in 2011. These levels are not highly elevated and do not suggest a potential PCE source beneath the building. TCE levels were non-detect or very low in both 2010 and 2011, also indicating no TCE source beneath the building.

The 2011 pre-demolition sub-slab soil vapor results were used together with the 2010 indoor air results to evaluate the potential need for monitoring or mitigation in accordance with NYSDOH guidance. This evaluation shows the following Matrix 2 responses for the paired PCE data:

- For the SSDS-2, SSDS-3 and SV-8 sub-slab data vs. the IA-1 data, the responses are "take reasonable and practical actions to identify sources and reduce exposures" and "monitor/mitigate"; and
- For the SSDS-1 and SSDS-4 data vs. the IA-2 data, the responses are "take reasonable and practical actions to identify sources and reduce exposures" and "monitor/mitigate".

The TCE data show that no further action is required.

In conclusion, although the levels of PCE in sub-slab soil vapor are not highly elevated and do not suggest a potential PCE source beneath the building, the appropriate responses do include mitigation. Therefore, it is planned to install a vapor barrier and sub-slab piping for an SSDS system during construction of the new building. The design for these features will be provided in a separate submittal.

Soil Vapor Results and Discussion

The soil vapor data for nearly all of the samples collected exterior to the site building showed PCE and TCE at concentrations several orders of magnitude greater than the sub-slab soil vapor results. In addition, the PCE and TCE levels increased with proximity to the former cesspools on the east side of the building, with the highest concentrations noted at the former south (primary) cesspool, as shown in Figure 1. These data indicate that a source of PCE vapors likely remains present in association with the former south (primary) cesspool.

The soil vapor data also suggested the possibility of source material in proximity to SVE-1 and SVE-3/SVE-4. Therefore, two additional soil borings (SB-14 and SB-15) were added to the soil sampling program to evaluate potential sources of soil vapors in proximity to SVE-1 and SVE-3/SVE-4, respectively,

Pre-Demolition Soil Sampling

Soil sampling has been completed in accordance with the Demolition Plan at seven interior locations within the former dry cleaner (SB-5 through SB-9, SS-1, and SS-2), in the two former cesspools (SB-3A and SB-4A), and at six exterior locations (SB-1A, and SB-11 through 15). Soil sample locations are shown on Figure 2.

Soil samples were collected, managed, and analyzed in accordance with the procedures in the NYSDEC-approved Demolition Plan. A soil boring log was completed for each location; the boring logs are included in Attachment A. A DUSR was completed for the laboratory data package and is included in Attachment B. Low estimated concentrations of chloroform and/or methylene chloride were noted in several samples; these detections appear to be related to field and/or lab contamination and are not further considered herein. The soil sample results are summarized in Table 2 and are compared to the 6 NYCRR Part 375 Soil Cleanup Objectives (SCOs) for unrestricted use and for commercial use.

Soil Sample Results and Discussion

Chlorinated VOCs, including PCE and TCE, were noted in several of the retained samples. However, the only constituent that exceeded the SCO for unrestricted use was PCE in one sample from the former south cesspool (SB-3A). This exceedance was noted in the sample from 15 to 20 feet below grade (fbg) and in the duplicate sample from the same interval. The detected concentrations did not exceed the SCO for commercial use. The sample collected from the 25 to 27 fbg at this location contained only a low concentration of PCE, well below the unrestricted use SCO. No other exceedances of the SCOs were noted for any constituents in any of the other interior or exterior soil samples.

The soil chemical analytical data are consistent with the observations of the environmental professional who screened the soil samples. The soil in all borings except for the borings through the former cesspools was found to generally consist of sand with some fine gravel. No odor or staining were noted on any of these samples and the photoionization detector (PID)

readings were all non-detect, including at SB-10, which was performed in proximity to the soil vapor sampling location SVE-1, and at SB-15, which was performed in proximity to the soil vapor sampling locations SVE-3 and SVE-4. Analytical data from these borings indicated only very low constituent detections. At boring SB-3A (south cesspool) a void space was noted from the top of the pool (1.5 fbg) to 13 fbg. The material recovered from the 15 to 20-fbg interval consisted of sand and gravel with an odor and a PID reading of 725 ppm, consistent with the SCO exceedance noted in this interval. Below 20 fbg, the materials did not exhibit an odor; PID readings ranged from 39 ppm at 20 fbg down to 4 ppm at 26 fbg; these results are consistent with the very low constituent detections in the intervals below 25 fbg. At boring SB-4A (north cesspool) a similar void was noted from 3 to 13 fbg. Although sample could not be recovered until 20 feet, the materials from 20 to 25 fbg appeared to be backfill, suggesting that the interval of no recovery is unlikely to contain source material. None of the materials below 20 fbg exhibited odors or PID detections.

These data indicate that source material remains present in the former south (primary) cesspool from approximately 13 to 20 feet. Source material does not appear to be present below this depth nor in the former north (overflow) cesspool. Although a limited removal of impacted soils was performed in August 1999 under the direction of the NYSDEC, it appears that this removal was incomplete and that subsequent remedial efforts with SVE have been insufficient to complete the removal of source material. It was also reported that both cesspools were backfilled during the 1999 soil removal; our observations indicate that void spaces remain present in both cesspools.

Conclusions and Recommendations

Based on the results of the pre-demolition soil and soil vapor sampling program, we have the following conclusions and recommendations for this site with the understanding that it is planned to demolish the existing site building (including slab and foundation) and construct a new building in the same footprint. This new building will be used for retail purposes.

- The levels of PCE in sub-slab soil vapor beneath the current building are not highly elevated and do not suggest a potential PCE source beneath the building. However, mitigation of sub-slab vapors is indicated by the current data;
- As it is planned to construct a new building for retail purposes on the footprint of the current building (the slab will be removed), it is planned to install a vapor barrier and sub-slab piping for an SSDS system during construction of the new building. The design for these features will be provided in a separate submittal;
- We note that the recent soil vapor data were obtained while a source of PCE vapors remained present in the former south cesspool. It is likely that soil vapors will decrease following source soil removal. Therefore, the submittal for the proposed SSDS system for the new site building will include provisions for testing sub-slab soil vapor and indoor air after the building is constructed and prior to occupancy to determine if operating the SSDS will be necessary;
- To effectively remediate the source of soil vapor that continues to affect this site, we recommend that source soil be removed from the south cesspool after the existing site building is removed and prior to the construction of the new building. The source soil removal should be performed as an Interim Remedial Measure (IRM) and should

include properly backfilling both cesspools. An IRM Work Plan for this activity will be submitted separately;

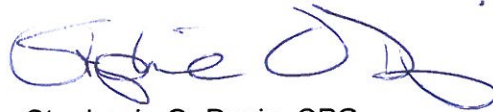
- As none of the soil sample results (other than those from the south cesspool) show any exceedances of the SCOs for unrestricted use and none suggest the potential for additional sources of soil vapors, in accordance with Section 2.1.2 of the NYSDEC-approved Demolition Plan, the demolition (which will not involve the south cesspool) will not be conducted using soil management procedures included in the Soil Management Plan (SoMP, Appendix B of Demolition Plan).

Please confirm NYSDEC approval of the above-described conclusions and recommendations. We anticipate shortly submitting the IRM Work Plan.

Very truly yours,



Ben T. Cancemi, CPG
Senior Hydrogeologist

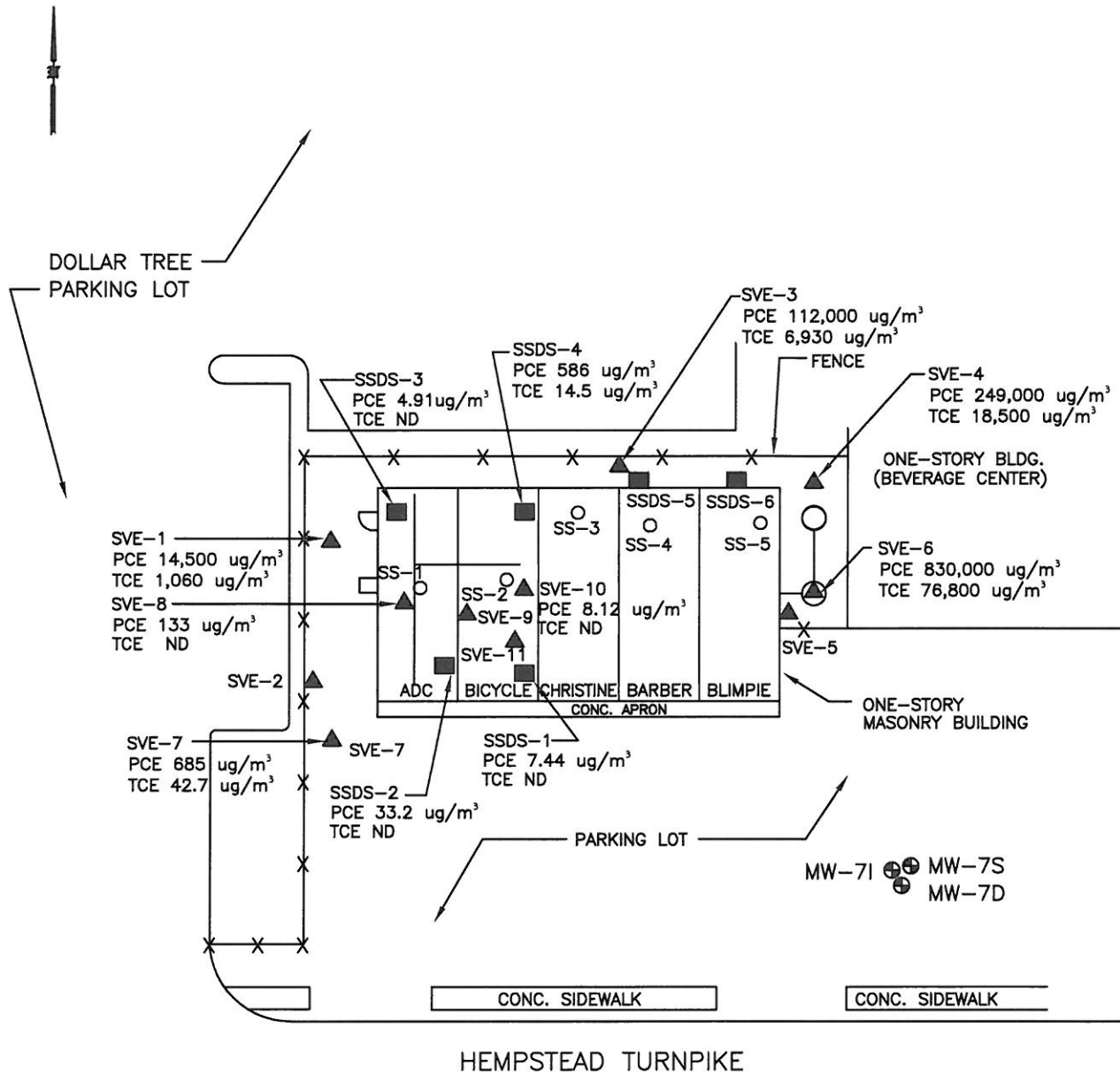


Stephanie O. Davis, CPG
Senior Hydrogeologist
Department Manager

BTC/SOD:tac
Attachments

cc: Richard Kasper

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LEGEND:

- MW-7S ⊕ GROUNDWATER MONITORING WELL LOCATION
- S=SHALLOW
I=INTERMEDIATE
D=DEEP
- FORMER CESSPOOL
- SVE-1 ▲ SOIL VAPOR EXTRACTION WELL
- SSDS-1 ■ SUB-SLAB DEPRESSURIZATION WELL
- SS-1 ○ SUB-SLAB MONITORING POINT
- FORMER PIPING TRENCH
- ND NOT DETECTED

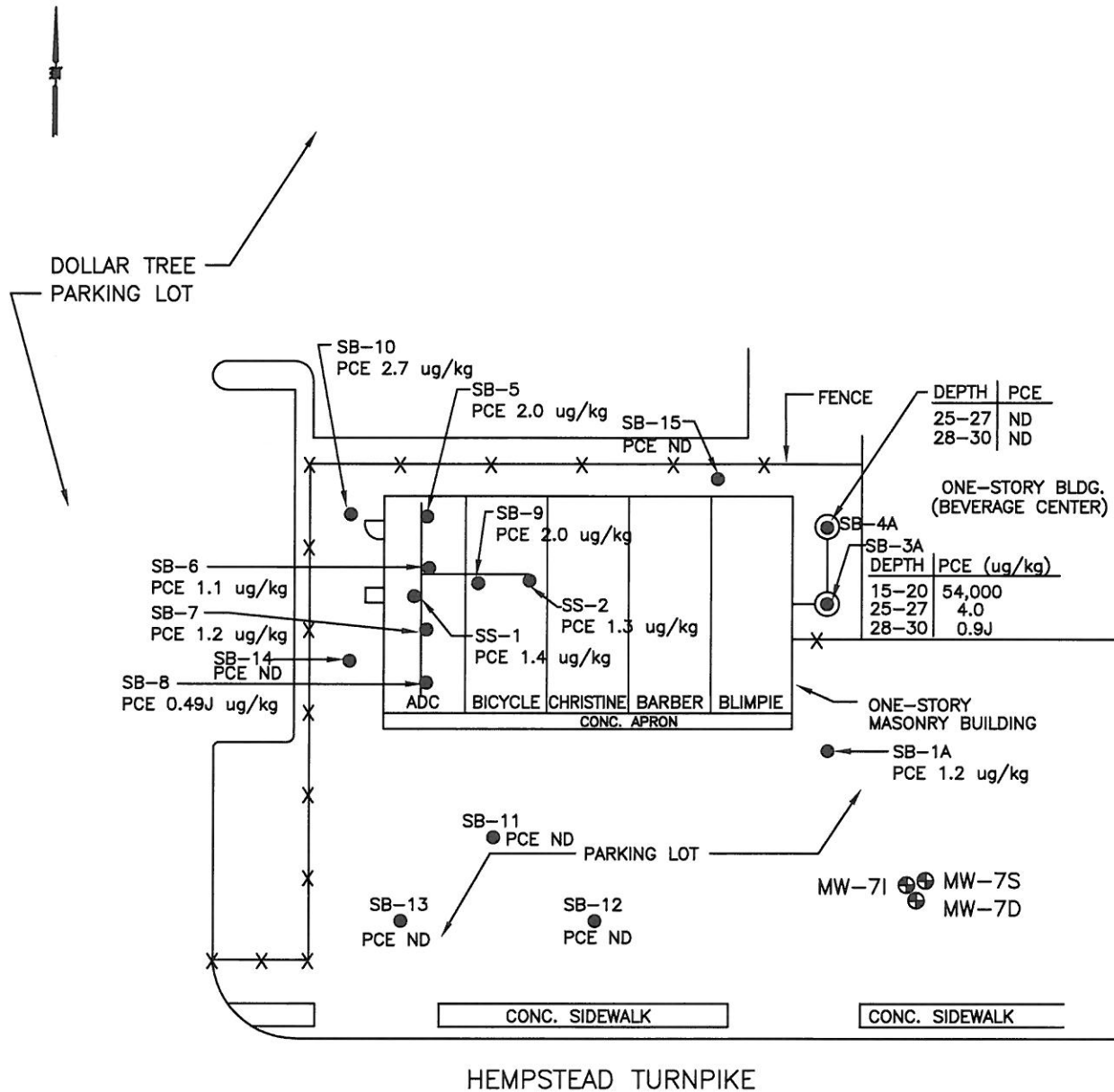


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**FIGURE 1
SOIL VAPOR SAMPLING RESULTS
FOR PCE & TCE**

AMERICAN DRIVE-IN CLEANERS SITE
3801 HEMPSTEAD TURNPIKE
LEVITTOWN, NY

Drawn By: H.C. Checked By: S.D. Date: 01/09/12



LEGEND:

- MW-7S ⊕ GROUNDWATER MONITORING WELL LOCATION
- S=SHALLOW
I=INTERMEDIATE
D=DEEP
- FORMER CESSPOOL
- SB-4 ● SOIL BORING
- FORMER PIPING TRENCH



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**FIGURE 2
SOIL SAMPLING RESULTS FOR PCE**

AMERICAN DRIVE-IN CLEANERS SITE
3801 HEMPSTEAD TURNPIKE
LEVITTOWN, NY

Drawn By: H.C. Checked By: S.D. Date: 01/09/12

TABLE 1
SOIL VAPOR SAMPLING RESULTS
AMERICAN DRIVE-IN CLEANERS SITE
3801 HEMPSTEAD TURNPIKE, LEVITTOWN, NEW YORK

Well Type	Sub-Slab Depressurization Wells				Soil Vapor Extraction Wells								Trip Blank
Sample Location	Building Interior						Outside						
Sample No.	SSDS-1	SSDS-2	SSDS-3	SSDS-4	SVE-8	SVE-10	SVE-1	SVE-3	SVE-4	SVE-6	SVE-6 Duplicate	SVE-7	
Volatile Organic Compounds in ug/m ³													
Propylene	ND	ND	0.960	27.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	2.31	8.16	2.20	ND	2.37	2.18	ND	ND	ND	ND	ND	2.38	ND
Chloromethane	1.36	1.66	1.13	ND	6.91	5.32	ND	ND	ND	ND	ND	1.28	ND
Freon 114	ND	4.85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	10.2	13.5	9.61	45.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	17.9	30.0	32.5	352	259	49.6	ND	ND	ND	ND	ND	43.2	ND
Trichlorofluoromethane	ND	1.56	1.64	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropanol	ND	2.40	1.26	32.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (methyl ethyl ketone)	2.95	3.20	5.75	144	10.9	8.77	30.0	152	ND	ND	ND	8.96	ND
cis-1,2 Dichloroethene	ND	ND	ND	ND	ND	ND	25.9	132	431	1,580	1,630	2.27	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.17	ND
Tetrahydrofuran	ND	2.87	10.2	3.37	11.0	3.22	31.4	72.5	248	ND	ND	34.2	ND
n-Hexane	ND	ND	1.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5.04	63.9	9.96	24.5	188	25.5	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	14.5	ND	ND	1,060	6,930	18,500	76,800	80,900	42.7	ND
4-Methyl-2-pentanone	ND	ND	ND	7.35	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	6.95	6.54	9.52	7.00	8.48	9.65	ND	ND	ND	ND	ND	5.95	ND
2-Hexanone	ND	ND	ND	47.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	7.44	33.2	4.91	586	133	8.12	14,500	112,000 D	249,000 D	830,000 D	863,000 D	685	1.40
Ethylbenzene	ND	1.17	14.4	ND	2.48	2.08	ND	ND	ND	ND	ND	ND	ND
m&p-Xylene	ND	3.26	45.2	ND	7.78	6.20	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	0.881	1.37	ND	ND	1.90	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ND	1.03	10.3	ND	2.21	1.91	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene	2.86	2.78	2.64	ND	3.87	4.07	ND	ND	ND	ND	ND	2.75	ND
1,3,5-Trimethylbenzene	2.98	2.59	2.87	ND	3.95	4.08	ND	ND	ND	ND	ND	2.89	ND
1,2,4-Trimethylbenzene	10.6	7.82	10.7	9.11	14.6	14.0	ND	ND	ND	ND	ND	11.1	ND
1,4-Dichlorobenzene	4.28	2.13	3.35	ND	5.61	5.36	ND	ND	ND	ND	ND	4.87	ND

Notes:

All samples analyzed using Method TO-15

Only compounds detected in one or more samples are reported herein. See lab report for complete data.

ug/m³ = micrograms per cubic meter

ND = Not detected

J = Analyte was detected at or below quantitation limit but above the method detection limit.

* = US EPA BASE Study 2001

**TABLE 2
SOIL SAMPLE CHEMICAL ANALYTICAL DATA
AMERICAN DRIVE-IN CLEANERS SITE
3801 HEMPSTEAD TURNPIKE, LEVITTOWN, NY**

Boring No.	SS-1	SS-2	SB-1A	SB-3A				SB-4A		SB-5	SB-6	SB-7	NYSDEC Soil Cleanup Objectives* (Unrestricted)	NYSDEC Soil Cleanup Objectives** (Commercial)
Boring Location	Interior	Interior	Exterior	Former Cesspool (South)				Former Cesspool (North)		Interior	Interior	Interior		
Sample Depth (feet)	1-3	1-3	1-3	15-20 (Primary)	15-20 (Duplicate)	25-27	28-30	25-27	28-30	1-3	1-3	1-3		
Sample Date	11/22/11	11/22/11	11/21/11	11/21/11				11/22/11		11/21/11	11/22/11	11/22/11		
Target Compound List Volatile Organic Compounds in micrograms per kilogram														
Methylene Chloride	2.4	1.6	9.3	ND	ND	ND	ND	0.81 J	ND	0.71 J	0.75 J	1.7	50	500,000
Tetrachloroethene	1.4	1.3	1.2	54,000	69,000	4.0	0.90 J	ND	ND	2.0	1.1	1.2	1,300	150,000
Trichloroethene	ND	ND	ND	210 J	250	ND	ND	ND	ND	ND	ND	ND	470	200,000
cis-1,2-Dichloroethene	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	250	500,000
1,2-Dichloroethane	0.46 J	ND	0.54 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	30,000

Boring No.	SB-8	SB-9	SB-10	SB-11	SB-12	SB-13	SB-14	SB-15	Field Blank		Trip Blank	NYSDEC Soil Cleanup Objectives* (Unrestricted)	NYSDEC Soil Cleanup Objectives** (Commercial)
Boring Location	Interior	Interior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior					
Sample Depth (feet)	1-3	1-3	1-3	8-10	8-10	8-10	1-3	3					
Sample Date	11/22/11	11/22/11	11/21/11	11/21/11	11/21/11	11/21/11	11/21/11	11/21/11	11/21/11	11/22/11	11/21/11		
Target Compound List Volatile Organic Compounds in micrograms per kilogram													
Methylene Chloride	4.9	4.2	7.0	0.49 J	ND	ND	ND	0.63 J	3.2	2.7	2.8	50	500,000
Tetrachloroethene	0.49 J	2.0	2.7	ND	ND	ND	ND	ND	ND	ND	ND	1,300	150,000
1,2-Dichloroethane	0.62 J	0.63 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	30,000
1,2-Dichloropropane	ND	0.44 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	0.20 J	0.17 J	0.23 J	370	350,000

Notes:

Only those analytes detected in one or more samples are reported herein. See laboratory report for complete data.

NYSDEC = New York State Department of Environmental Conservation

* = 6 NYCRR Subpart 375-6.8(a) Soil Cleanup Objectives for unrestricted use.

** = 6 NYCRR Subpart 375-6.8(b) Soil Cleanup Objectives for commercial use.

ND = Not detected.

B = Analyte detected in an associated laboratory blank.

J = Estimated concentration below the reporting limit but

Boxed values exceed NYSDEC Soil Cleanup Objectives (Unrestricted Use).

FPM

ATTACHMENT A

- **Canister Sampling Forms**
- **Soil Boring Logs**

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 377

Sampler BE/ATM

Location ADG Levee/road

Sample ID SSDS-1

Sample Type (subslab, soil gas, ambient, indoor)

Date Cleaned

Certification (batch/individual)

Flow Controller ID

Flow Setting (ml/min)

Initials

101
14/112

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	902	-29.7		4/27/11	
Final Field Reading	1003	-7.10		↓	

Weather Conditions: clearly 55°

Comments:

Purge 3-5 Volumes - TURN ON SSDS 22 minutes

Helium Check -N/A

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 205

Sampler BC/ATM

Location ADC - Leontown

Sample ID SSDS-2

Sample Type (subslab, soil gas, ambient, indoor)

Date Cleaned _____

Certification (batch/individual) _____

Flow Controller ID _____

Flow Setting (ml/mi) _____

Initials _____

360

10/HR

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	914	-29.9	-	4/27/11	
Final Field Reading	1008	-6.70	-	↓	

Weather Conditions: cloudy 55°

Comments:

Purge 3-5 Volumes TURN ON SSDS ~ 2 MIN

Helium Check - N/A

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 480

Sampler BC/ATM

Location ADC - Levee Area

Sample ID SSPS-3

Sample Type (subslab, soil gas, ambient, indoor)

Date Cleaned _____

Certification (batch/individual) _____

Flow Controller ID _____

Flow Setting (ml/min) _____

Initials _____

DTG
IC/HR

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	1033	-29.8	-	4/27/11	
Final Field Reading	1136	-7.62	-	↓	

Weather Conditions:

Comments: IN boiler rm. No direct access. utilized port on outside of building

Purge 3-5 Volumes TURK O.V. SSDS ~ 2m

Helium Check -NA

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 523

Sampler BC/ATM

Location ADC - LEFTHOWN

Sample ID SSDS-4

Sample Type (subslab, soil gas, ambient, indoor)

Date Cleaned —

Certification (batch/individual)

Flow Controller ID 037

Flow Setting (ml/min) 16/HR

Initials —

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	908	-30.0	—	4/27/11	
Final Field Reading	958	-6.10	—	↓	

Weather Conditions: cloudy 65°

Comments:

Purge 3-5 Volumes - TURN ON SSDS ~2M

Helium Check - N/A

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 119

Sampler BC/ITM

Location APC - Leathum

Sample ID SUE-1

Sample Type (subslab, soil gas, ambient, indoor)

Date Cleaned

Certification (batch/individual)

Flow Controller ID

Flow Setting (ml/mi)

Initials

189
10/HR

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	936	-29.2	-	4/27/11	
Final Field Reading	1025	-2.0	-	↓	

Weather Conditions: cloudy 55°

Comments:

Purge 3-5 Volumes TURN ON SUE w/min

~~Helium Check~~

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 409

Sampler B.C. ATM.

Location ADC - Leontowick

Sample ID SUE-3

Sample Type (subslab, soil gas, ambient, indoor)

Date Cleaned

Certification (batch/individual)

Flow Controller ID

Flow Setting (ml/min)

Initials

258
12/12

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	938	-29.9	-	4/27/11	
Final Field Reading	1047	-3.7	-	↓	

Weather Conditions: cloudy 55°

Comments:

Purge 3-5 Volumes TURN ON SUE 2 IN

Helium Check -NA

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 135

Sampler BC/ATM.

Location ADC - Leathen

Sample ID SUE-4

Sample Type (subslab, soil gas, ambient, indoor)

Date Cleaned _____
 Certification (batch/individual) _____
 Flow Controller ID _____
 Flow Setting (ml/min) 100
 Initials IL/AR

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	<u>1110</u>	<u>-30.5</u>	<u>-</u>	<u>4/26/11</u>	
Final Field Reading	<u>1214</u>	<u>-7.60</u>	<u>-</u>	<u>↓</u>	

Weather Conditions: cloudy 55°

Comments:

Purge 3-5 Volumes TORNON SUE 2/m.

Helium Check - NA

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 411

Sampler BC/ATM

Location ADC- Levee/Hollow

Sample ID SUE-7

Sample Type (subslab, soil gas, ambient, indoor)

Date Cleaned _____
 Certification (batch/individual) _____
 Flow Controller ID _____
 Flow Setting (ml/min) _____
 Initials _____

458
1 L/HR

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	932	-30.4	-	4/27/11	
Final Field Reading	1043	-29.8	-	4/27/11	

Weather Conditions: sun cloudy 55°

Comments:

Purge 3-5 Volumes TURN ON SUE ~ 1M

Helium Check -N/A

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 1740

Sampler Bc

Location ADC-Levittown

Sample ID SUE-6

Sample Type (subslab, soil gas, ambient, indoor)

Date Cleaned

Certification (batch/individual)

Flow Controller ID

Flow Setting (ml/mi)

Initials

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	7.54	-29.3	—	4/29/11	
Final Field Reading	900	-6.3	—		

Weather Conditions: Sunny 55°

Comments:

Purge 3-5 Volumes TGRN SUE ON 2 min

Helium Check *NA*

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 455

Sampler BC

Location ADC crater

Sample ID SUE-65

Sample Type (subslab, soil gas, ambient, indoor)

Date Cleaned —

Certification (batch/individual)

Flow Controller ID 336

Flow Setting (ml/min) 14/12

Initials —

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	754	-29.1	—	4/29/11	
Final Field Reading	900	-6.7	—	↓	

Weather Conditions: sunny 55°

Comments: duplicate of SUE-6

Purge 3-5 Volumes TORN SUE ON ~ 1m

Helium Check -NA

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 261

Sampler BC/ATM

Location ADC - Leontown

Sample ID SUE-8

Sample Type (subslab, soil gas, ambient, indoor)

Date Cleaned _____

Certification (batch/individual) _____

Flow Controller ID 343

Flow Setting (ml/mi) 1L/12

Initials _____

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	1124	-29.9	-	4/27/11	
Final Field Reading	1215	-71	-	↓	

Weather Conditions: cloudy 55°

Comments:

Purge 3-5 Volumes - TURN ON SUE 2/m

Helium Check - NA

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 149

Sampler BC/m

Location ADC - Leontowick

Sample ID SUE-10

Sample Type (subslab, soil gas, ambient, indoor)

Date Cleaned _____
 Certification (batch/individual) _____
 Flow Controller ID _____
 Flow Setting (ml/mi) _____
 Initials _____

329 359
14/12

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	1123	-29.8	—	4/27/11	
Final Field Reading	1224	-7.8	—	↓	

Weather Conditions: Cloudy 55°

Comments:

Purge 3-5 Volumes - 700ml SUE on 2/11

Helium Check - N4

CANISTER FIELD SAMPLING RECORD

Canister Serial No. 201

Sampler BC/ATM

Location ADC - Leutkern

Sample ID TRP BLANK

Date Cleaned —
 Certification (batch/individual) —
 Flow Controller ID —
 Flow Setting (ml/mi) —
 Initials —

Sample Type (subslab, soil gas, ambient, indoor)

Reading	Time	Vacuum	Height	Date	Initials
Initial Field Vacuum Check	—	~280*	—	—	
Final Field Reading	—	—	—	—	

Weather Conditions: cloudy 55°

Comments: UPROX noted by LAB.

Purge 3-5 Volumes NA

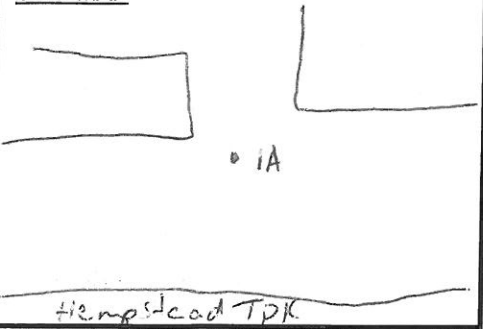
Helium Check NA

FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3801 Hempstead Tpk Levittown
 BORING/WELL SB-1A TOTAL DEPTH _____ DIAMETER 3"
 TOC ELEV. _____ WATER LEVEL INITIAL _____ STATIC _____
 SCREEN DIA. _____ LENGTH _____ SLOT SIZE _____
 CASING DIA. _____ LENGTH _____ TYPE _____
 DRILLING COMP AES DRILLING METHOD DP
 DRILLER Tim LOG BY GH/BC DATE DRILLED 11/21/11



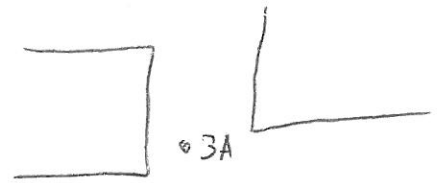
DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2	SB-1A 1-3	○			0-4" asphalt 4' recovery 4"-1' base 1'-3' grey silt w/some clay 3'-5' orange-tan medium coarse sand w/some fine gravel
4					
6					
8					
10					
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					

FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3801 Hempstead Tpk Levittown
 BORING/WELL SB-3A TOTAL DEPTH 11 DIAMETER 3"
 TOC ELEV. - WATER LEVEL INITIAL - STATIC -
 SCREEN DIA. - LENGTH - SLOT SIZE -
 CASING DIA. - LENGTH - TYPE -
 DRILLING COMP AES DRILLING METHOD DP
 DRILLER Tin LOG BY GA/BC DATE DRILLED 11/21/11



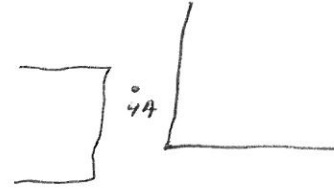
DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2		0			0-4" asphalt
4		44200			4" - 1.5' bench fill
6					1.5' Top of pool
8					13' Bottom of Pool
10		VOID			
12					
14		NO recovery			15'-20'
16	SB-3A 15-20	725			Tan medium-coarse sand odor some fine gravel Duplicate
18					
20		39			20'-25'
22		10			Tan medium-fine sand 3' recovery some banding
24		5			25'-30'
26	SB-3A 25-27	4			SAA
28					30'-35'
30	SB-3A 28-30				DTW - 30' Tan medium-coarse sand w/ some gravel

FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3801 Hempstead TPK, Lorton, VA
 BORING/WELL SB-4A TOTAL DEPTH _____ DIAMETER 3"
 TOC ELEV. _____ WATER LEVEL INITIAL _____ STATIC _____
 SCREEN DIA. _____ LENGTH _____ SLOT SIZE _____
 CASING DIA. _____ LENGTH _____ TYPE _____
 DRILLING COMP AES DRILLING METHOD DP
 DRILLER Tim LOG BY BC DATE DRILLED 11/21/11



HEMP. TPK

DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2		0			0-4" Asphalt
4					4"-3' backfill
6					3' Top soil
8					13' Bottom soil
10		Void			13'-20' No Recovery
12					20'-25'
14					TAN med SAND - BACKFILL?
16					2.5' recovery
18					25'-30'
20					TAN med COARSE FINE GRAVEL
22					SOME BANDING. IRON STAINING.
24					30'-35'
26	25-27				SAA, Moist
28		0			DTW @ 230'
30	28-30				

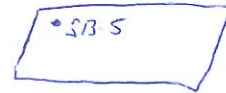
FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ABC FPM JOB # _____
 SITE ADDRESS 3501 Hempstead TPK, Leffert, NY
 BORING/WELL SB-5 TOTAL DEPTH 4.5' DIAMETER _____
 TOC ELEV. - WATER LEVEL INITIAL - STATIC _____
 SCREEN DIA. - LENGTH - SLOT SIZE - _____
 CASING DIA. - LENGTH - TYPE - _____
 DRILLING COMP - DRILLING METHOD Hand Perc
 DRILLER - LOG BY CH/B.C. DATE DRILLED 11/21/11

P.N.



Hempstead TPK

DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
------------	--------	---------------	-------------------	-------------	--

2	SB-5 1-3	○			0-4.5' Brown medium-coarse sand no odor no stain
4					
6					0-6" concrete
8					
10					
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					

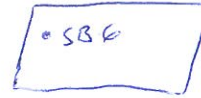
FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME #ADC FPM JOB #
 SITE ADDRESS 3801 Hempstead Tpk Lev. A town
 BORING/WELL SB-6 TOTAL DEPTH 5' DIAMETER 2"
 TOC ELEV. — WATER LEVEL INITIAL — STATIC —
 SCREEN DIA. — LENGTH — SLOT SIZE —
 CASING DIA. — LENGTH — TYPE —
 DRILLING COMP — DRILLING METHOD Hand Auger
 DRILLER — LOG BY GH DATE DRILLED 11/22/11

↑ N



Hempstead Tpk

DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2	1-3	0			0-6" concrete
4		0			6"-3'
6					Brown fine silty-sand with some fine gravel no o/s
8					3'-5'
10					Brown medium-fine sand w/ some fine gravel no o/s
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					

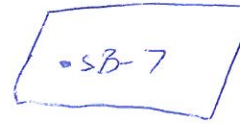
FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3801 Hempstead Turnpike
 BORING/WELL SB-7 TOTAL DEPTH 5 DIAMETER 3"
 TOC ELEV. _____ WATER LEVEL INITIAL _____ STATIC _____
 SCREEN DIA. _____ LENGTH _____ SLOT SIZE _____
 CASING DIA. _____ LENGTH _____ TYPE _____
 DRILLING COMP _____ DRILLING METHOD H4
 DRILLER _____ LOG BY BC DATE DRILLED 11/22/11

PN

Hempstead Turnpike

DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2	1-3	0			0-6" concrete
4		0			6"-3.5"
6					BRN S. HY SAND, LITTLE FINE GRAIN No 4/5
8					3.5-5'
10					BRN-TKN MED-FINE SAND, LITTLE GRAIN
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					

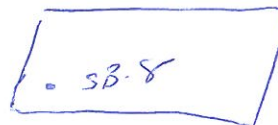
FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3861 Hempstead Turnpike
 BORING/WELL SB-8 TOTAL DEPTH 4.5 DIAMETER 3"
 TOC ELEV. - WATER LEVEL INITIAL - STATIC -
 SCREEN DIA. - LENGTH - SLOT SIZE -
 CASING DIA. - LENGTH - TYPE -
 DRILLING COMP - DRILLING METHOD HA
 DRILLER - LOG BY B.C. DATE DRILLED 11/2/11

N



Hempstead Turnpike

DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2	1-3	0			0-6" concrete
4		0			6" - 3.5" BRN silty SAND. LITTLE FINE GRADE No G/S
6					3.5 - 4.5 BRN medium SAND. LITTLE GRADE No G/S
8					
10					
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					

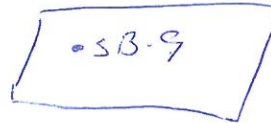
FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3801 Hempstead Tpk
 BORING/WELL SB-9 TOTAL DEPTH _____ DIAMETER 2"
 TOC ELEV. _____ WATER LEVEL INITIAL _____ STATIC _____
 SCREEN DIA. _____ LENGTH _____ SLOT SIZE _____
 CASING DIA. _____ LENGTH _____ TYPE _____
 DRILLING COMP _____ DRILLING METHOD Hand Auger
 DRILLER _____ LOG BY GH DATE DRILLED 11/22/11

↑N

Hempstead Tpk

DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
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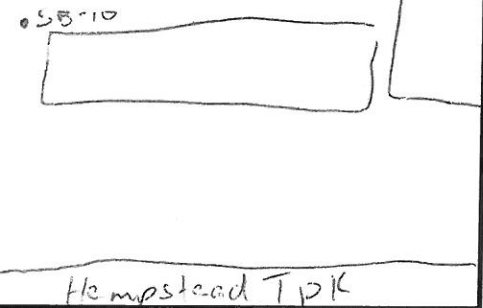
2	1-3	0			0-4" concrete
4		0			4"-2.5'
6					Brown silty sand w/ 1. Hbl fine gravel No o/s
8					2.5'-4.5'
10					Brown medium sand w/ some gravel No o/s
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					

FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3801 Hempstead Tpk
 BORING/WELL SB-10 TOTAL DEPTH 10' DIAMETER 3"
 TOC ELEV. _____ WATER LEVEL INITIAL _____ STATIC _____
 SCREEN DIA. _____ LENGTH _____ SLOT SIZE _____
 CASING DIA. _____ LENGTH _____ TYPE _____
 DRILLING COMP AES DRILLING METHOD DP
 DRILLER Tin LOG BY 6# DATE DRILLED 11/21/11



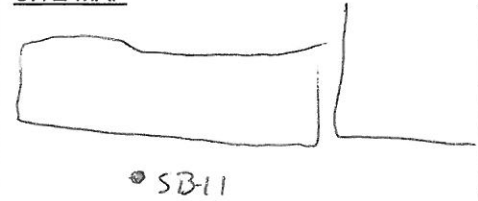
DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2	SB-10 1-3	0			0-1' Topsoil
4					1'-3' silty clay Brown
6		0			3'-5' Tan medium-coarse sand w/ some gravel No o/s
8					5'-10' SAA
10					
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					

FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3801 Hempstead Tpk Levittown
 BORING/WELL SB-11 TOTAL DEPTH _____ DIAMETER 3"
 TOC ELEV. _____ WATER LEVEL INITIAL _____ STATIC _____
 SCREEN DIA. _____ LENGTH _____ SLOT SIZE _____
 CASING DIA. _____ LENGTH _____ TYPE _____
 DRILLING COMP ACS DRILLING METHOD DP
 DRILLER Tim LOG BY GH DATE DRILLED 11/21/11



Hempstead Tpk

DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
------------	--------	---------------	-------------------	-------------	--

2					0-4" asphalt
4					4'-1' base
6					1'-5'
8					medium - coarse sand w/ some gravel
10	SB-11 8-10				5'-10' NO O/S
12					4' recovery
14					Tan medium - coarse sand w/
16					some fine gravel NO O/S
18					10'-15'
20					Tan medium coarse sand w/
22					coarse gravel medium gravel
24					NO O/S
26					15'-20'
28					SHH
30					

FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ~~ADD~~ ADC FPM JOB #

SITE ADDRESS 3801 Hempstead Tpk Levittown

BORING/WELL SB-12 TOTAL DEPTH 20' DIAMETER 3"

TOC ELEV. - WATER LEVEL INITIAL - STATIC -

SCREEN DIA. - LENGTH - SLOT SIZE -

CASING DIA. - LENGTH - TYPE -

DRILLING COMP AES DRILLING METHOD DP

DRILLER Tim LOG BY GH DATE DRILLED 11/21/11

SB-12

Hempstead Tpk

DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
------------	--------	---------------	-------------------	-------------	--

2		○			0-4" asphalt 4"-1' base 1'-3'
4					light brown medium-coarse sand w/gravel fill material
6		○			3'-5'
8	SB-12				Ten medium-coarse sand w/
10	8-10				fine gravel
12		○			5'-10'
14					3.5' recovery orange-tan medium-coarse sand w/some fine gravel
16		○			10'-15'
18					SAA
20		○			15'-20'
22					Ten medium coarse sand with some coarse gravel
24					
26					
28					
30					

FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3801 Hempstead Tpk Levittown
 BORING/WELL SB-13 TOTAL DEPTH _____ DIAMETER 3"
 TOC ELEV. _____ WATER LEVEL INITIAL _____ STATIC _____
 SCREEN DIA. _____ LENGTH _____ SLOT SIZE _____
 CASING DIA. _____ LENGTH _____ TYPE _____
 DRILLING COMP AKS DRILLING METHOD DP
 DRILLER Tia LOG BY GH DATE DRILLED 11/21/11

SB-13

Hempstead Tpk

DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2		○			0-4" asphalt 4"-1' base
4					1'-5'
6					Tan medium-coarse sand w/some gravel NO O/S hand cleared
8		○			5'-10'
10	SB-13 8-10				4' recovery Tan medium-fine sand w/some fine gravel MS/MSD
12		NO recovery			10'-15'
14					no recovery
16					15'-20'
18		○			light-tan medium-coarse sand w/ gravel NO O/S
20					2' recovery
22					
24					
26					
28					
30					

FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3801 Hempstead Tpk. Levittown
 BORING/WELL SB-14 TOTAL DEPTH 10' DIAMETER 3"
 TOC ELEV. - WATER LEVEL INITIAL - STATIC -
 SCREEN DIA. - LENGTH - SLOT SIZE -
 CASING DIA. - LENGTH - TYPE -
 DRILLING COMP ACS DRILLING METHOD DP
 DRILLER Tim LOG BY GH DATE DRILLED 11/21/11

SB-14

Hempstead Tpk

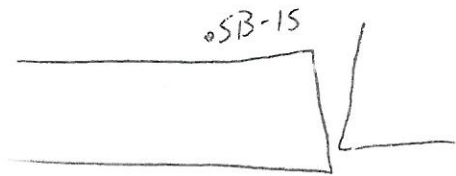
DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2	SB-14 1-3	0			0-4" asphalt 4"-1' base
4					1'-5'
6					Tan medium-fine sand w/ some fine gravel NO O/S
8		0			5'-10'
10					Tan medium-coarse sand w/ some fine gravel NO O/S
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					

FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3801 Hempstead Tpk. Levittown
 BORING/WELL SB-15 TOTAL DEPTH _____ DIAMETER 3"
 TOC ELEV. _____ WATER LEVEL INITIAL _____ STATIC _____
 SCREEN DIA. _____ LENGTH _____ SLOT SIZE _____
 CASING DIA. _____ LENGTH _____ TYPE _____
 DRILLING COMP HES DRILLING METHOD DP HAND AUGER
 DRILLER Tin LOG BY GH DATE DRILLED 11/21/11



Hempstead Tpk

DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2	SB-15 1-3	0			0-1' loam w/organics
4					1'-5' Tan medium - coarse sand w/some gravel NO O/S
6					
8					
10					
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					

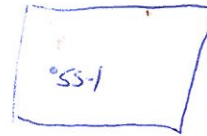
FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3801 Hempstead Tpk Levittown
 BORING/WELL SS-1 TOTAL DEPTH 5' DIAMETER 2"
 TOC ELEV. _____ WATER LEVEL INITIAL _____ STATIC _____
 SCREEN DIA. _____ LENGTH _____ SLOT SIZE _____
 CASING DIA. _____ LENGTH _____ TYPE _____
 DRILLING COMP _____ DRILLING METHOD Hand Auger
 DRILLER _____ LOG BY GH DATE DRILLED 11/22/11

7H



Hempstead Tpk

DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2	1-3	0			0-6" concrete
4		0			6"-3'
6					Red Brown Medium-fine silt/sand w/ some fine gravel
8					3'-5'
10					Brown Medium-fine sand w/ some gravel
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					

FPM GROUP

Ronkonkoma, NY

SITE MAP

PROJECT NAME # ADC FPM JOB # _____
 SITE ADDRESS 3861 Hempstead Tpke
 BORING/WELL SS-2 TOTAL DEPTH _____ DIAMETER 3"
 TOC ELEV. _____ WATER LEVEL INITIAL _____ STATIC _____
 SCREEN DIA. _____ LENGTH _____ SLOT SIZE _____
 CASING DIA. _____ LENGTH _____ TYPE _____
 DRILLING COMP _____ DRILLING METHOD HA
 DRILLER _____ LOG BY BC DATE DRILLED 11/22/11



Hempstead Turnpike

DEPTH (FT)	SAMPLE	OVA/PID (PPM)	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
------------	--------	---------------	-------------------	-------------	--

2	1-3	0			0-6" concrete
4		0			6"-2.5' BRN Silty SAND. Little GRAVEL No G/S
6					2.5-4.5' BRN Med. FINE SAND. Some GRAVEL No G/S
8					
10					
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					

ATTACHMENT B

- **Data Usability Summary Reports**

**DATA USABILITY SUMMARY REPORT
FOR APRIL 2011 SOIL VAPOR SAMPLING
LAB REPORT # L1106057
AMERICAN DRIVE-IN CLEANERS SITE, LEVITTOWN, NEW YORK**

This DUSR was prepared using the entire original laboratory report, including the sample data summary report and the extended data package. The sampling event included soil vapor from existing sub-slab depressurization wells and soil vapor extraction wells situated inside the existing building and around the building perimeter. Primary environmental sample numbers include SSDS-1, SSDS-2, SSDS-3, SSDS-4, SVE-1, SVE-3, SVE-4, SVE-6, SVE-7, SVE-8, and SVE-10. The duplicate sample is SVE-6D and is associated with primary sample SVE-6.

Sample Collection Procedures

The samples were collected in laboratory-provided individual certified six-liter Summa canisters equipped with flow controllers. Collection of each soil vapor sample was performed over an approximate one-hour period, using laboratory-provided calibrated flow controllers. Each of the flow controllers was closed when the vacuum in the canister was nearly depleted but some vacuum remained. The flow controller for the canister associated with sample SVE-7 showed minimal vacuum reduction after one hour; however, the laboratory reported a small negative vacuum upon receipt at the laboratory and no issues with sample volume for this sample. It was concluded that the flow controller gauge was inaccurate.

Sample Analyses

The samples were transported to the lab and analyzed by Alpha Analytical at their Mansfield, Massachusetts facility, which is NYSDOH-certified for the analyses performed. The samples were analyzed for volatile organic compounds (VOCs) using Method TO-15. The analytical method and analytes are appropriate for the intended use of the data. The sample holding times were met and no problems with sample receipt or handling were reported by the laboratory.

The laboratory reported that the flow controller associated with sample SSDS-4 was out of calibration upon receipt at the laboratory. A review of the canister sampling data sheet for this sample did not show any irregularities during collection and, therefore, the regulator may have been damaged during transport to the laboratory. It is also noted that the pre- and post-sampling calibrations performed by the laboratory were both within NYSDOH criteria.

Sample dilution due to non-target compounds was noted in samples SSDS-1, SSDS-4, SVE-7, SVE-8, and SVE-10. The affected samples were diluted and reanalyzed, with resultant elevated detection limits.

Sample dilution due to target compound concentrations was required for primary samples SVE-1, SVE-3, SVE-4, SVE-6, and SVE-6D, and a laboratory control sample (LCS). The affected samples have elevated detection limits. Tetrachloroethene (PCE), which is a compound of concern for the site, was noted to exceed calibration limits in samples SVE-3, SVE-4, SVE-6, and SVE-6D. Accordingly, these samples were reanalyzed for PCE upon dilution to quantify this analyte within the calibration range.

A trip blank sample was used to verify that cross-contamination between samples did not occur in the field or laboratory. The trip blank sample did not contain detectable VOCs, with the

exception of a low concentration (1.40 ug/m^3) of PCE. Therefore, cross-contamination between samples does not appear to affect the sample data with the possible exception of low-level detections of PCE.

Two method blank (MB) samples were analyzed by the laboratory to evaluate the potential for cross-contamination associated with the sample preparation and analysis. The MB results did not show detectable concentrations of VOCs and, therefore, cross-contamination associated with sample preparation or analysis does not appear to affect the sample data.

Two LCSs were used by the laboratory to verify the accuracy and precision of the analyses. The LCS percent recoveries (%Rs) were all within established guidelines, except for several petroleum-related VOCs, which were detected above their respective %R acceptance limits in one LCS, and acrolein, which was detected below its %R acceptance limit in the same LCS. These VOCs were not detected in any of the primary samples and are not VOCs of concern for this site. Therefore, the analytical results should be precise and accurate for VOCs of concern at this site.

Questions and Responses

1. Is the data package complete as defined under the current requirements for the NYSDEC ASP Category B or USEPA CLP deliverables?

The data package is complete. The external and internal chain of custody forms are present and complete. The case narrative and sample analysis summaries are present and complete. The analytical QA/QC summary forms, including surrogate recovery forms, LCS forms, IDL forms, initial and continuing calibration summary forms, standards raw data, tuning criteria report, and MB data are all present and complete. The data report forms, including sample prep logs, injection logs, canister cleaning logs, and examples of the calculations used to determine the sample concentrations are all present and complete. The raw data used to identify and quantify the contract-specified analytes are present and complete.

Data completeness for the field program was also verified. The numbers and types of samples collected are in agreement with the work plan.

2. Have all holding times been met?

All samples were received and analyzed within the EPA-recommended holding times for the analyses performed.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data, fall within the protocol-required limits and specifications?

No – several petroleum-related VOCs in the LCS were detected above their respective %R acceptance limits and one VOC was detected below its %R acceptance limit. These VOCs were not detected in the primary samples and are not VOCs of concern for this site. Therefore, this issue does not appear to affect the sample data for the VOCs of concern for this site.

4. Have all of the data been generated using established and agreed-upon analytical

protocols?

Yes – all of the data were generated using the Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?

Yes – a representative number of raw data results were compared with the reported data results to confirm that the reported analytical results (identification and quantification) are substantiated by the raw data.

6. Have the correct data qualifiers been used?

Yes

7. Have any quality control (QC) exceedances been specifically noted in the DUSR and have the corresponding QC summary sheets from the data package been attached to the DUSR?

Yes – The affected QC summary sheets are attached to this DUSR.

Conclusions

The soil vapor samples were collected in accordance with NYSDOH guidance. No field or laboratory conditions occurred that would result in non-valid analytical data for the VOCs of concern at this site. The data appear to be adequate for their intended purpose.

Attachments

S:\Kasper 77 Trust-ADC\Demo Investigation\DUSR Air-Vapor april2011.Docx

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERICAN DRIVE-IN

Project Number: 696-11-06 (001)

Lab Number: L1106057

Report Date: 05/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-13 Batch: WG466423-3								
Chlorodifluoromethane	81		-		70-130	-		
Propylene	96		-		70-130	-		
Propane	84		-		70-130	-		
Dichlorodifluoromethane	89		-		70-130	-		
Chloromethane	91		-		70-130	-		
Freon-114	88		-		70-130	-		
Methanol	70		-		70-130	-		
Vinyl chloride	92		-		70-130	-		
1,3-Butadiene	88		-		70-130	-		
Butane	90		-		70-130	-		
Bromomethane	86		-		70-130	-		
Chloroethane	85		-		70-130	-		
Ethyl Alcohol	82		-		70-130	-		
Dichlorofluoromethane	94		-		70-130	-		
Vinyl bromide	81		-		70-130	-		
Acrolein	67	Q	-		70-130	-		
Acetone	82		-		70-130	-		
Acetonitrile	85		-		70-130	-		
Trichlorofluoromethane	81		-		70-130	-		
iso-Propyl Alcohol	83		-		70-130	-		
Acrylonitrile	86		-		70-130	-		

Lab Control Sample Analysis Batch Quality Control

Project Name: AMERICAN DRIVE-IN

Project Number: 696-11-06 (001)

Lab Number: L1106057

Report Date: 05/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-13 Batch: WG466423-3								
Pentane	82		-		70-130	-		
Ethyl ether	78		-		70-130	-		
1,1-Dichloroethene	80		-		70-130	-		
tert-Butyl Alcohol	88		-		70-130	-		
Methylene chloride	78		-		70-130	-		
3-Chloropropene	74		-		70-130	-		
Carbon disulfide	81		-		70-130	-		
Freon-113	83		-		70-130	-		
trans-1,2-Dichloroethene	77		-		70-130	-		
1,1-Dichloroethane	82		-		70-130	-		
Methyl tert butyl ether	76		-		70-130	-		
Vinyl acetate	91		-		70-130	-		
2-Butanone	85		-		70-130	-		
cis-1,2-Dichloroethene	85		-		70-130	-		
Ethyl Acetate	102		-		70-130	-		
Chloroform	91		-		70-130	-		
Tetrahydrofuran	83		-		70-130	-		
2,2-Dichloropropane	78		-		70-130	-		
1,2-Dichloroethane	83		-		70-130	-		
n-Hexane	85		-		70-130	-		
Isopropyl Ether	89		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERICAN DRIVE-IN

Project Number: 696-11-06 (001)

Lab Number: L1106057

Report Date: 05/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-13 Batch: WG466423-3								
Ethyl-Tert-Butyl-Ether	86		-		70-130	-		
1,1,1-Trichloroethane	84		-		70-130	-		
1,1-Dichloropropene	87		-		70-130	-		
Benzene	92		-		70-130	-		
Carbon tetrachloride	84		-		70-130	-		
Cyclohexane	90		-		70-130	-		
Tertiary-Amyl Methyl Ether	83		-		70-130	-		
Dibromomethane	88		-		70-130	-		
1,2-Dichloropropane	95		-		70-130	-		
Bromodichloromethane	88		-		70-130	-		
1,4-Dioxane	96		-		70-130	-		
Trichloroethene	95		-		70-130	-		
2,2,4-Trimethylpentane	94		-		70-130	-		
Heptane	89		-		70-130	-		
2,4,4-Trimethyl-1-Pentene	83		-		70-130	-		
cis-1,3-Dichloropropene	100		-		70-130	-		
4-Methyl-2-pentanone	92		-		70-130	-		
2,4,4-Trimethyl-2-Pentene	88		-		70-130	-		
trans-1,3-Dichloropropene	85		-		70-130	-		
1,1,2-Trichloroethane	103		-		70-130	-		
Toluene	107		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERICAN DRIVE-IN

Project Number: 696-11-06 (001)

Lab Number: L1106057

Report Date: 05/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-13 Batch: WG466423-3								
1,3-Dichloropropane	108		-		70-130	-		
2-Hexanone	108		-		70-130	-		
Dibromochloromethane	100		-		70-130	-		
1,2-Dibromoethane	114		-		70-130	-		
Butyl Acetate	118		-		70-130	-		
Octane	103		-		70-130	-		
Tetrachloroethene	106		-		70-130	-		
1,1,1,2-Tetrachloroethane	103		-		70-130	-		
Chlorobenzene	108		-		70-130	-		
Ethylbenzene	110		-		70-130	-		
p/m-Xylene	110		-		70-130	-		
Bromoform	109		-		70-130	-		
Styrene	115		-		70-130	-		
1,1,2,2-Tetrachloroethane	118		-		70-130	-		
o-Xylene	117		-		70-130	-		
1,2,3-Trichloropropane	104		-		70-130	-		
Nonane (C9)	110		-		70-130	-		
Isopropylbenzene	112		-		70-130	-		
Bromobenzene	103		-		70-130	-		
o-Chlorotoluene	109		-		70-130	-		
n-Propylbenzene	113		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERICAN DRIVE-IN

Project Number: 696-11-06 (001)

Lab Number: L1106057

Report Date: 05/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 01-13 Batch: WG466423-3								
p-Chlorotoluene	108		-		70-130	-		
4-Ethyltoluene	112		-		70-130	-		
1,3,5-Trimethylbenzene	112		-		70-130	-		
tert-Butylbenzene	110		-		70-130	-		
1,2,4-Trimethylbenzene	118		-		70-130	-		
Decane (C10)	116		-		70-130	-		
Benzyl chloride	112		-		70-130	-		
1,3-Dichlorobenzene	125		-		70-130	-		
1,4-Dichlorobenzene	125		-		70-130	-		
sec-Butylbenzene	112		-		70-130	-		
p-Isopropyltoluene	107		-		70-130	-		
1,2-Dichlorobenzene	126		-		70-130	-		
n-Butylbenzene	123		-		70-130	-		
1,2-Dibromo-3-chloropropane	122		-		70-130	-		
Undecane	139	Q	-		70-130	-		
Dodecane (C12)	165	Q	-		70-130	-		
1,2,4-Trichlorobenzene	163	Q	-		70-130	-		
Naphthalene	161	Q	-		70-130	-		
1,2,3-Trichlorobenzene	164	Q	-		70-130	-		
Hexachlorobutadiene	156	Q	-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERICAN DRIVE-IN

Lab Number: L1106057

Project Number: 696-11-06 (001)

Report Date: 05/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 05,08,12-13 Batch: WG466423-8								
Propylene	80		-		70-130	-		
Dichlorodifluoromethane	104		-		70-130	-		
Chloromethane	84		-		70-130	-		
Freon-114	94		-		70-130	-		
Vinyl chloride	84		-		70-130	-		
1,3-Butadiene	87		-		70-130	-		
Bromomethane	88		-		70-130	-		
Chloroethane	85		-		70-130	-		
Ethyl Alcohol	94		-		70-130	-		
Vinyl bromide	94		-		70-130	-		
Acetone	102		-		70-130	-		
Trichlorofluoromethane	113		-		70-130	-		
iso-Propyl Alcohol	114		-		70-130	-		
1,1-Dichloroethene	97		-		70-130	-		
Methylene chloride	90		-		70-130	-		
3-Chloropropene	92		-		70-130	-		
Carbon disulfide	79		-		70-130	-		
Freon-113	98		-		70-130	-		
trans-1,2-Dichloroethene	85		-		70-130	-		
1,1-Dichloroethane	91		-		70-130	-		
Methyl tert butyl ether	97		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERICAN DRIVE-IN

Project Number: 696-11-06 (001)

Lab Number: L1106057

Report Date: 05/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 05.08.12-13 Batch: WG466423-8								
Vinyl acetate	107		-		70-130	-		
2-Butanone	89		-		70-130	-		
cis-1,2-Dichloroethene	90		-		70-130	-		
Ethyl Acetate	81		-		70-130	-		
Chloroform	99		-		70-130	-		
Tetrahydrofuran	80		-		70-130	-		
1,2-Dichloroethane	111		-		70-130	-		
n-Hexane	78		-		70-130	-		
1,1,1-Trichloroethane	103		-		70-130	-		
Benzene	80		-		70-130	-		
Carbon tetrachloride	105		-		70-130	-		
Cyclohexane	76		-		70-130	-		
1,2-Dichloropropane	85		-		70-130	-		
Bromodichloromethane	97		-		70-130	-		
1,4-Dioxane	84		-		70-130	-		
Trichloroethene	86		-		70-130	-		
2,2,4-Trimethylpentane	83		-		70-130	-		
Heptane	82		-		70-130	-		
cis-1,3-Dichloropropene	92		-		70-130	-		
4-Methyl-2-pentanone	90		-		70-130	-		
trans-1,3-Dichloropropene	82		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERICAN DRIVE-IN

Project Number: 696-11-06 (001)

Lab Number: L1106057

Report Date: 05/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 05,08,12-13 Batch: WG466423-8								
1,1,2-Trichloroethane	92		-		70-130	-		
Toluene	80		-		70-130	-		
2-Hexanone	86		-		70-130	-		
Dibromochloromethane	92		-		70-130	-		
1,2-Dibromoethane	86		-		70-130	-		
Tetrachloroethene	86		-		70-130	-		
Chlorobenzene	87		-		70-130	-		
Ethylbenzene	87		-		70-130	-		
p/m-Xylene	88		-		70-130	-		
Bromoform	93		-		70-130	-		
Styrene	88		-		70-130	-		
1,1,2,2-Tetrachloroethane	85		-		70-130	-		
o-Xylene	95		-		70-130	-		
4-Ethyltoluene	91		-		70-130	-		
1,3,5-Trimethylbenzene	93		-		70-130	-		
1,2,4-Trimethylbenzene	98		-		70-130	-		
Benzyl chloride	87		-		70-130	-		
1,3-Dichlorobenzene	92		-		70-130	-		
1,4-Dichlorobenzene	94		-		70-130	-		
1,2-Dichlorobenzene	97		-		70-130	-		
1,2,4-Trichlorobenzene	96		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERICAN DRIVE-IN

Project Number: 696-11-06 (001)

Lab Number: L1106057

Report Date: 05/09/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air (Low Level) - Mansfield Lab Associated sample(s): 05,08,12-13 Batch: WG466423-8								
Hexachlorobutadiene	98		-		70-130	-		

**DATA USABILITY SUMMARY REPORT
FOR NOVEMBER 2011 SOIL SAMPLING
LAB REPORT #460-34024-1
AMERICAN DRIVE-IN CLEANERS SITE, LEVITTOWN, NEW YORK**

This DUSR was prepared using the entire original laboratory report, including the sample data summary report and the extended data package. This sampling event included twenty soil samples collected using direct push equipment. The primary environmental sample numbers include SB-1A, SB-3A (three sample depths), SB-4A (two sample depths), SB-5 through SB-14, SS-1, and SS-2. The duplicate sample is SB-3AD (15-20), and is associated with primary sample SB-3A (15-20).

Sample Collection Procedures

The samples were collected into laboratory-provided glassware directly from the decontaminated direct-push sampling equipment. Samples for Quality Assurance/Quality Control (QA/QC) were also obtained to evaluate field sampling methods and laboratory procedures. All sample collection was conducted under Chain of Custody (COC) procedures and in accordance with the QA/QC procedures presented in the approved Demolition Plan (November 2010).

Sample Analyses

The samples were transmitted via overnight courier and analyzed by Test America Laboratories, Inc. at their Edison, New Jersey facility, which is NYSDOH-certified for the analyses performed. The samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) using Method 5030B/8260B. The analytical methods and analytes are appropriate for the intended use of the data. The sample holding times were met and no problems with sample receipt or handling were reported by the laboratory.

The laboratory case narrative indicated that the surrogate recovery for sample SB-3A (15-20) was outside of control limits. The sample was reanalyzed with similar results and the original results were reported. A duplicate (SB-3AD, 15-20) of this primary sample was also run and produced similar results. Based upon this comparison, the surrogate recovery issues do not appear to have affected the sample data.

The matrix spike (MS) and/or matrix spike duplicate (MSD) percent recovery (%R) and relative percent difference (RPD) for tetrachloroethene and/or 1,1,2,2-tetrachloroethene in batch 94311 were outside of control limits. The %Rs were also noted to be low for these analytes in the MSD for batch 94301. The associated laboratory control sample (LCS) met acceptance criteria. These exceedances are likely due to high sample concentrations in the associated samples, SB-3A (15-20)/SB-3AD (15-20), relative to the spike amounts.

The MS/MSD RPDs for batch 94301 were outside the control limits for chloromethane, chloroethane and vinyl chloride. The associated LCS/LCSD met acceptance criteria. These analytes may be present in the associated samples at levels below the elevated detection limits and may have affected the MS/MSD results.

Samples SB-3A (15-20) and SB-3AD (15-20) were diluted to the abundance of target analytes, resulting in elevated detection limits.

A trip blank sample was used to verify that cross-contamination of samples did not occur in the field or laboratory. No VOCs were detected in the trip blank, with the exception of a low concentration of methylene chloride (a common lab contaminant) and a low estimated concentration of chloroform. The detected levels are well below regulatory criteria. Chloroform was not detected in any of the primary samples and, therefore, does not present a concern. Methylene chloride was detected at comparable concentrations in many of the primary samples; these low-level detections are likely due to field and/or laboratory cross-contamination. Cross-contamination between samples of VOCs of concern for this site does not appear to present an issue.

Two equipment blank samples were collected to evaluate potential contamination from field sampling procedures. No VOCs were noted, with the exception of a low estimated concentration of methylene chloride, a common lab contaminant, and a low concentration of chloroform in each sample. As discussed above, these constituents indicate the possibility of contamination from field procedures. However, the data for the constituents of concern at this site appear unaffected.

Method blank (MB) samples were analyzed by the laboratory to evaluate the potential for cross-contamination associated with the sample preparation and analysis. The MB results did not show detections of VOCs and, therefore, cross-contamination associated with sample preparation or analysis does not appear to have significantly affected the sample data.

LCSs were used by the laboratory to verify the accuracy and precision of the analyses. The LCS percent recoveries (%Rs) and relative percent differences (RPDs) were all within established guidelines and, therefore, the data appear to be accurate and precise for their intended purpose.

Two matrix spike/matrix spike duplicate (MS/MSD) samples were prepared to evaluate the effect of the matrix on the reliability of the analytical results. Spiking occurs in the laboratory prior to sample preparation and analysis. One MS/MSD sample was collected during this sampling event and one additional MS/MSD was prepared by the laboratory. Based on information provided by the analytical laboratory, the MS/MSD results for VOCs were all within QC limits except as noted above for batches 94311 and 94301. Based on an evaluation of the primary sample results relative to the MS/MSD QC results, it appears that matrix-related effects have not significantly affected the analytical results.

Questions and Responses

1. Is the data package complete as defined under the current requirements for the NYSDEC ASP Category B or USEPA CLP deliverables?

The data package is complete. The external and internal chain of custody forms are present and complete. The case narrative and sample analysis summaries are present and complete. The analytical QA/QC summary forms, including surrogate recovery forms, LCS forms, IDL forms, initial and continuing calibration summary forms, standards raw data, tuning criteria report, and MB data are all present and complete. The data report forms, including sample prep logs, injection logs, and examples of the calculations used to determine the sample concentrations are all present and complete. The raw data used to identify and quantify the contract-specified analytes are present and complete.

Data completeness for the field program was also verified. The numbers and types of

samples collected are in agreement with the work plan.

2. Have all holding times been met?

All samples were received and analyzed within the EPA-recommended holding times for the analyses performed.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data, fall within the protocol-required limits and specifications?

Yes – all of the QC data were reviewed and found to fall within the protocol-required limits and specifications, with the exception of the MS/MSD results for batches 94301 and 94311, as noted above.

4. Have all of the data been generated using established and agreed-upon analytical protocols?

Yes - all of the data were generated using Method 5030B/8260B (VOCs).

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?

Yes – a representative number of raw data results were compared with the reported data results to confirm that the reported analytical results (identification and quantification) are substantiated by the raw data.

6. Have the correct data qualifiers been used?

Yes – results below the quantitation limit and above the method detection limit have been J-qualified. No other qualifiers were indicated or applied.

7. Have any quality control (QC) exceedances been specifically noted in the DUSR and have the corresponding QC summary sheets from the data package been attached to the DUSR?

No QC exceedances were noted except for the MS/MSDs, as described above. The corresponding QC summary sheets are attached to this DUSR.

Conclusions

The soil samples were collected in accordance with NYSDEC guidance. No field or laboratory conditions occurred that would result in non-valid analytical data for the constituents of concern. The data appear to be adequate for their intended purpose.

Attachments

Quality Control Results

Client: FPM Group Limited

Job Number: 460-34024-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 460-94218

Method: 8260B

Preparation: 5035

MS Lab Sample ID: 460-34024-8
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 11/29/2011 1027
Prep Date: 11/28/2011 1342
Leach Date: N/A

Analysis Batch: 460-94301
Prep Batch: 460-94218
Leach Batch: N/A

Instrument ID: VOAMS12
Lab File ID: o54219.d
Initial Weight/Volume: 5.92 g
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 460-34024-8
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 11/29/2011 1052
Prep Date: 11/28/2011 1345
Leach Date: N/A

Analysis Batch: 460-94301
Prep Batch: 460-94218
Leach Batch: N/A

Instrument ID: VOAMS12
Lab File ID: o54220.d
Initial Weight/Volume: 5.26 g
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloromethane	93	119	50 - 151	36	30		*
Vinyl chloride	83	107	67 - 133	37	30		*
Chloroethane	79	99	56 - 146	35	30		*
1,1-Dichloroethene	112	101	71 - 126	1	30		
Methylene Chloride	115	105	74 - 137	2	30		
trans-1,2-Dichloroethene	106	96	75 - 122	2	30		
1,1-Dichloroethane	111	100	76 - 125	2	30		
cis-1,2-Dichloroethene	104	95	80 - 120	2	30		
Chloroform	109	98	77 - 120	1	30		
1,1,1-Trichloroethane	106	97	78 - 117	2	30		
Carbon tetrachloride	102	94	79 - 118	3	30		
1,2-Dichloroethane	113	100	76 - 118	0	30		
Trichloroethene	107	97	79 - 119	2	30		
1,2-Dichloropropane	108	95	82 - 122	1	30		
Bromodichloromethane	106	96	79 - 119	1	30		
cis-1,3-Dichloropropene	106	95	80 - 123	2	30		
trans-1,3-Dichloropropene	99	92	67 - 121	4	30		
1,1,2-Trichloroethane	96	90	73 - 118	5	30		
Tetrachloroethene	103	92	80 - 120	0	30		
Dibromochloromethane	95	91	68 - 120	8	30		
Chlorobenzene	100	92	80 - 120	3	30		
1,1,2,2-Tetrachloroethane	93	88	79 - 122	5	30		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
1,2-Dichloroethane-d4 (Surr)	115		117	70 - 138			
Toluene-d8 (Surr)	103		106	66 - 126			
Bromofluorobenzene	102		108	72 - 132			

Quality Control Results

Client: FPM Group Limited

Job Number: 460-34024-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 460-94218

Method: 8260B

Preparation: 5035

MS Lab Sample ID: 460-34024-8 Units: ug/Kg
 Client Matrix: Solid
 Dilution: 1.0
 Analysis Date: 11/29/2011 1027
 Prep Date: 11/28/2011 1342
 Leach Date: N/A

MSD Lab Sample ID: 460-34024-8
 Client Matrix: Solid
 Dilution: 1.0
 Analysis Date: 11/29/2011 1052
 Prep Date: 11/28/2011 1345
 Leach Date: N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual	
Chloromethane	0.92	U	17.4	19.6	16.2	23.4	*
Vinyl chloride	0.92	U	17.4	19.6	14.5	21.0	*
Chloroethane	0.92	U	17.4	19.6	13.7	19.5	*
1,1-Dichloroethene	0.92	U	17.4	19.6	19.6	19.9	
Methylene Chloride	0.92	U	17.4	19.6	20.1	20.6	
trans-1,2-Dichloroethene	0.92	U	17.4	19.6	18.5	18.9	
1,1-Dichloroethane	0.92	U	17.4	19.6	19.4	19.7	
cis-1,2-Dichloroethene	0.92	U	17.4	19.6	18.2	18.6	
Chloroform	0.92	U	17.4	19.6	19.1	19.2	
1,1,1-Trichloroethane	0.92	U	17.4	19.6	18.6	19.0	
Carbon tetrachloride	0.92	U	17.4	19.6	17.8	18.4	
1,2-Dichloroethane	0.92	U	17.4	19.6	19.7	19.7	
Trichloroethene	0.92	U	17.4	19.6	18.7	19.0	
1,2-Dichloropropane	0.92	U	17.4	19.6	18.8	18.7	
Bromodichloromethane	0.92	U	17.4	19.6	18.5	18.8	
cis-1,3-Dichloropropene	0.92	U	17.4	19.6	18.4	18.7	
trans-1,3-Dichloropropene	0.92	U	17.4	19.6	17.3	18.1	
1,1,2-Trichloroethane	0.92	U	17.4	19.6	16.8	17.6	
Tetrachloroethene	0.92	U	17.4	19.6	18.0	18.0	
Dibromochloromethane	0.92	U	17.4	19.6	16.6	17.9	
Chlorobenzene	0.92	U	17.4	19.6	17.5	18.0	
1,1,2,2-Tetrachloroethane	0.92	U	17.4	19.6	16.3	17.2	

Quality Control Results

Client: FPM Group Limited

Job Number: 460-34024-1

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 460-94219

Method: 8260B
Preparation: 5035

MS Lab Sample ID: 460-34024-6
Client Matrix: Solid
Dilution: 100
Analysis Date: 11/29/2011 1106
Prep Date: 11/28/2011 1337
Leach Date: N/A

Analysis Batch: 460-94311
Prep Batch: 460-94219
Leach Batch: N/A

Instrument ID: VOAMS8
Lab File ID: j05873.d
Initial Weight/Volume: 5.55 g
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 460-34024-6
Client Matrix: Solid
Dilution: 100
Analysis Date: 11/29/2011 1131
Prep Date: 11/28/2011 1337
Leach Date: N/A

Analysis Batch: 460-94311
Prep Batch: 460-94219
Leach Batch: N/A

Instrument ID: VOAMS8
Lab File ID: j05874.d
Initial Weight/Volume: 5.55 g
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloromethane	97	93	52 - 144	4	30		
Vinyl chloride	102	83	55 - 154	21	30		
Chloroethane	81	74	66 - 144	9	30		
1,1-Dichloroethene	106	90	68 - 138	16	30		
Methylene Chloride	104	90	78 - 118	15	30		
trans-1,2-Dichloroethene	105	92	73 - 119	14	30		
1,1-Dichloroethane	103	87	79 - 119	17	30		
cis-1,2-Dichloroethene	115	93	78 - 118	21	30		
Chloroform	108	90	81 - 122	18	30		
1,1,1-Trichloroethane	109	91	78 - 118	17	30		
Carbon tetrachloride	113	91	64 - 130	21	30		
1,2-Dichloroethane	110	95	81 - 121	15	30		
Trichloroethene	115	92	82 - 122	20	30		
1,2-Dichloropropane	108	95	78 - 118	13	30		
Bromodichloromethane	111	93	78 - 118	18	30		
cis-1,3-Dichloropropene	101	83	75 - 120	19	30		
trans-1,3-Dichloropropene	98	82	73 - 118	18	30		
1,1,2-Trichloroethane	97	84	77 - 120	14	30		
Tetrachloroethene	-70	-129	78 - 136	2	30	*	*
Dibromochloromethane	102	91	78 - 118	12	30		
Chlorobenzene	113	92	69 - 124	21	30		
1,1,2,2-Tetrachloroethane	86	75	86 - 145	13	30		*
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
1,2-Dichloroethane-d4 (Surr)	109		109	57 - 135			
Toluene-d8 (Surr)	104		103	46 - 130			
Bromofluorobenzene	113		117	50 - 124			

Quality Control Results

Client: FPM Group Limited

Job Number: 460-34024-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-94219**

**Method: 8260B
Preparation: 5035**

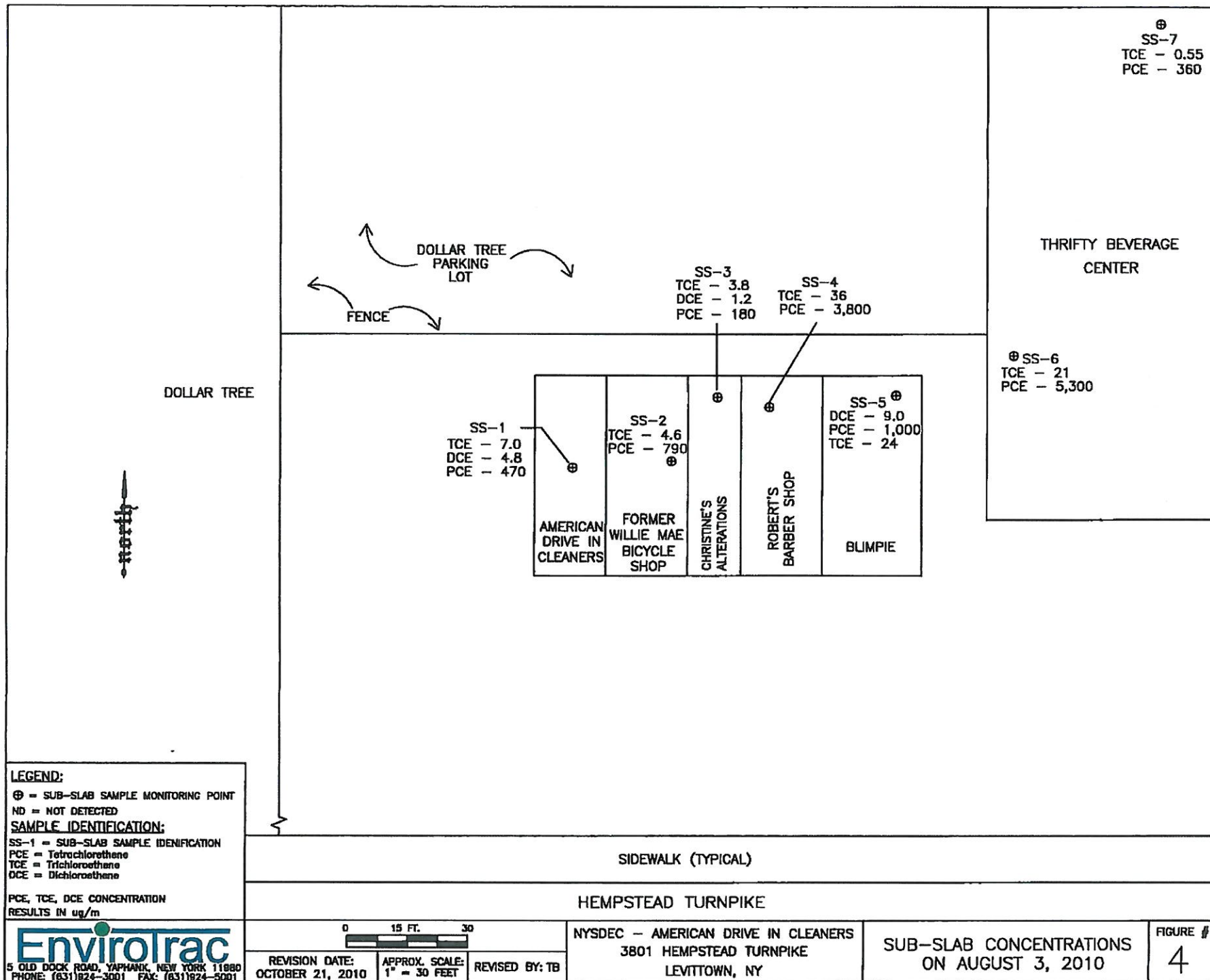
MS Lab Sample ID: 460-34024-6 Units: ug/Kg
Client Matrix: Solid
Dilution: 100
Analysis Date: 11/29/2011 1106
Prep Date: 11/28/2011 1337
Leach Date: N/A

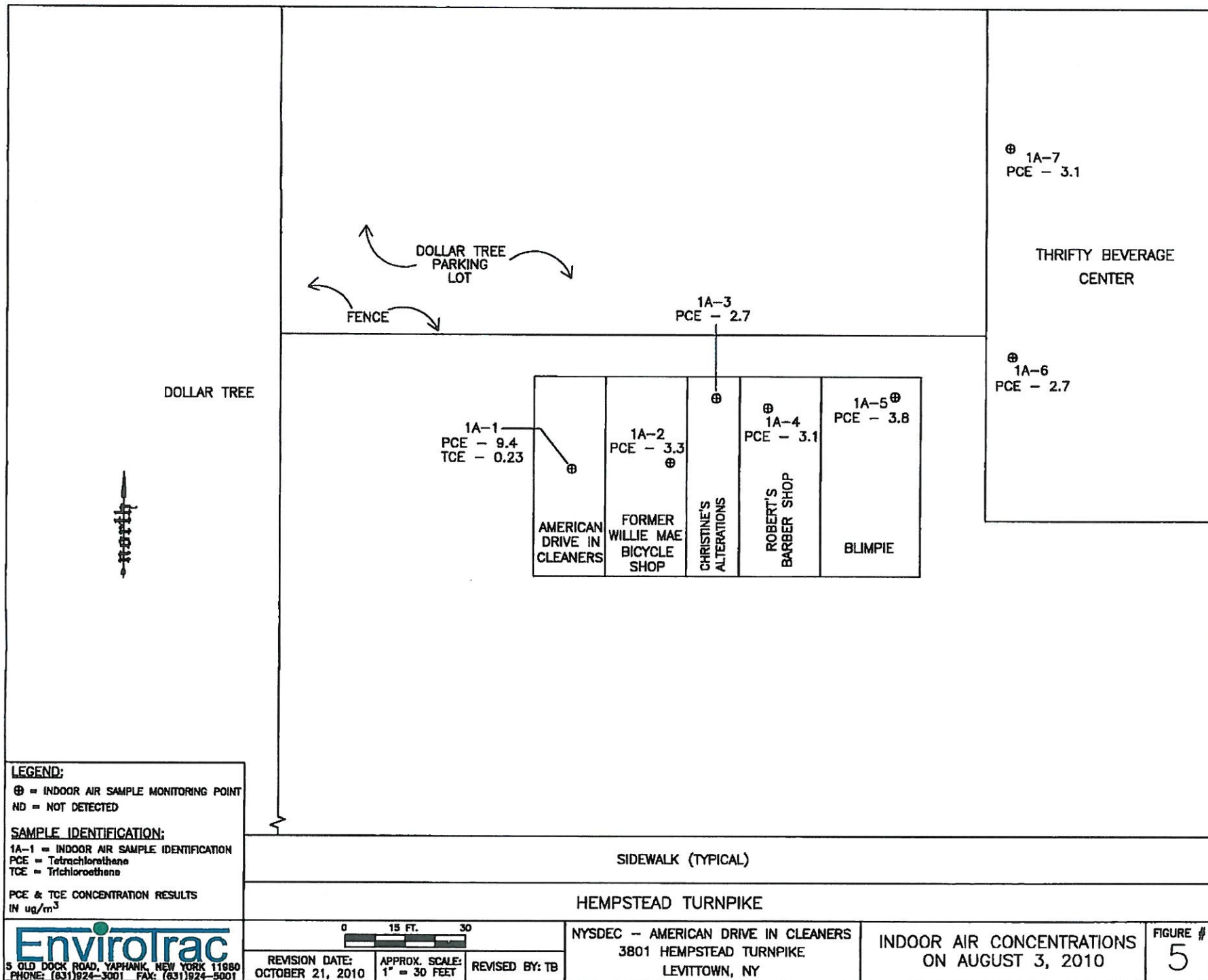
MSD Lab Sample ID: 460-34024-6
Client Matrix: Solid
Dilution: 100
Analysis Date: 11/29/2011 1131
Prep Date: 11/28/2011 1337
Leach Date: N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chloromethane	190	U	1910	1910	1850	1770
Vinyl chloride	190	U	1910	1910	1940	1580
Chloroethane	190	U	1910	1910	1540	1410
1,1-Dichloroethene	190	U	1910	1910	2020	1720
Methylene Chloride	190	U	1910	1910	1990	1710
trans-1,2-Dichloroethene	190	U	1910	1910	2010	1750
1,1-Dichloroethane	190	U	1910	1910	1970	1660
cis-1,2-Dichloroethene	190	U	1910	1910	2200	1780
Chloroform	190	U	1910	1910	2070	1720
1,1,1-Trichloroethane	190	U	1910	1910	2080	1750
Carbon tetrachloride	190	U	1910	1910	2150	1750
1,2-Dichloroethane	190	U	1910	1910	2110	1820
Trichloroethene	250		1910	1910	2450	2000
1,2-Dichloropropane	190	U	1910	1910	2060	1810
Bromodichloromethane	190	U	1910	1910	2110	1770
cis-1,3-Dichloropropene	190	U	1910	1910	1920	1590
trans-1,3-Dichloropropene	190	U	1910	1910	1870	1570
1,1,2-Trichloroethane	190	U	1910	1910	1860	1610
Tetrachloroethene	69000		1910	1910	67400	* 66300 *
Dibromochloromethane	190	U	1910	1910	1950	1730
Chlorobenzene	190	U	1910	1910	2160	1750
1,1,2,2-Tetrachloroethane	190	U	1910	1910	1630	1430 *

ATTACHMENT C

- **Previous Sampling Results**





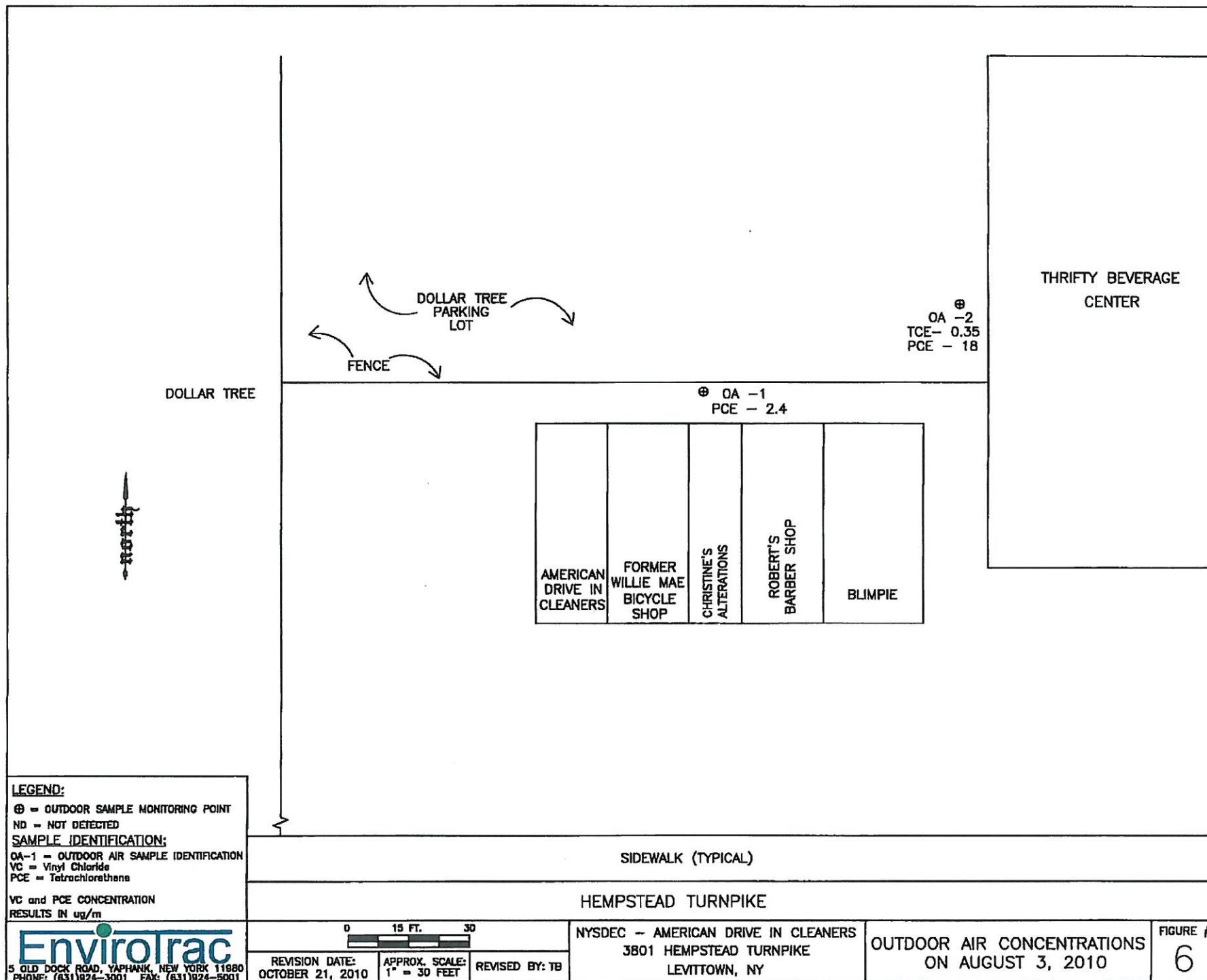


Table 4

Air Sampling Analytical Results for Volatile Organic Compounds - Sub Slab

NYSDEC Spill # 130049

**American Drive-In Cleaners
3801 Hempstead Turnpike
Levittown, New York**

Analytical	Date	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7
Vinyl chloride	8/3/10	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	8/3/10	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	8/3/10	4.8	ND	1.2	ND	9.0	ND	ND
Trichloroethene	8/3/10	7.0	4.6	3.8	36	24	21	0.55
Tetrachloroethene	8/3/10	470	790	180	3,800	1,000	5,300	360

Notes:

1. Concentration Units = $\mu\text{g}/\text{m}^3$.
2. Laboratory analysis via EPA Method TO-15
3. NYSDEC = New York State Department of Environmental Conservation
4. ND = Not detected above the method detection limit of the laboratory



Table 5

Air Sampling Analytical Results for Volatile Organic Compounds - Indoor Air

NYSDEC Spill # 130049

**American Drive-In Cleaners
3801 Hempstead Turnpike
Levittown, New York**

Analytical Parameter	Date	IA-1	IA-2	IA-3	IA-4	IA-5	IA-6	IA-7
Vinyl chloride	8/3/10	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	8/3/10	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	8/3/10	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	8/3/10	0.23	ND	ND	ND	ND	ND	ND
Tetrachloroethene	8/3/10	9.4	3.3	2.7	3.1	3.8	2.7	3.1

Notes:

1. Concentration Units = ug/m³.
2. Laboratory analysis via EPA Method TO-15
3. NYSDEC = New York State Department of Environmental Conservation
4. ND = Not detected above the method detection limit of the laboratory



Table 6

Air Sampling Analytical Results for Volatile Organic Compounds - Outdoor Ambient Air

NYSDEC Spill # 130049

**American Drive-In Cleaners
3801 Hempstead Turnpike
Levittown, New York**

Analytical Parameter	Date	OA-1	OA-2
Vinyl chloride	8/3/10	ND	ND
trans-1,2-Dichloroethene	8/3/10	ND	ND
cis-1,2-Dichloroethene	8/3/10	ND	ND
Trichloroethene	8/3/10	ND	0.35
Tetrachloroethene	8/3/10	2.4	18

Notes:

- 1. Concentration Units = ug/m³.**
- 2. Laboratory analysis via EPA Method TO-15**
- 3. NYSDEC = New York State Department of Environmental Conservation**
- 4. ND = Not detected above the method detection limit of the laboratory**

