SITE CHARACTERIZATION INVESTIGATION REPORT

115 OLD COUNTRY ROAD, CARLE PLACE, NY SITE
ORDER ON CONSENT: A1-0625-08-09
SITE: 1-30-199

CLIENT:
COUNTRY GLEN, LLC
143 OLD COUNTRY ROAD
CARLE PLACE, NY 11514

APRIL 2013

Submitted by:

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1.0 INTRODUCTION

PURPOSE AND OBJECTIVE

On behalf of Country Glen, LLC, (Respondent), Edgewater Environmental, Inc. (Edgewater) prepared this Site Characterization (SC) Investigation Report to present the findings of the investigation, the scope of which was outlined in the SC Work Plan dated July 19, 2012. This work was completed as required by the Order on Consent and Administrative Settlement (Order on Consent) between the New York State Department of Environmental Conservation (NYSDEC) and the Respondent, Index # A1-0625-08-09 for Site Number 1-30-199. The purpose of this investigation was to determine whether a release of volatile organic compounds occurred at the site and are related to the soil vapors found beneath certain areas of the building slab.

Country Glen LLC is the current owner of the Site, which is described on the Nassau County tax records as 115 Old Country Road, Carle Place, NY. The *115 Old Country Road Site* will be abbreviated as the *115 OCR Site* in this report.

The *115 OCR Site* is not listed on the Registry of Inactive Hazardous Waste Disposal Sites in New York.

BACKGROUND INFORMATION

The *115 OCR Site* is located at 115 Old Country Road, Carle Place, NY, on the north side of Old Country Road and west of Glen Cove Road. The *115 OCR Site* is located in Nassau County and the Town of North Hempstead, and is identified as Section 9 - Block 670 - Lot 55. The *115 OCR Site* is 4.65 acres and is currently a commercial shopping center. See Figure 1, Location Map.

As noted in the previously submitted and approved Record Search Report, dated October 28, 2010 and the addendum thereto, dated December 20, 2010, Country Glen Associates, a predecessor to the

Respondent, purchased the *115 OCR Site* in 1977. Prior to the purchase, the *115 OCR Site* was owned/operated by Laboratory Furniture, Inc., (Laboratory Furniture). As noted in the Record Search Report, Laboratory Furniture operated at the *115 OCR Site* beginning in the early 1950s, and ceased operations in 1985. Most of the building used by Laboratory Furniture was demolished, and replaced with the current layout of buildings and parking areas.

The *115 OCR Site* is generally flat with a strip shopping center facing Old Country Road surrounded by asphalt parking lots. It is located approximately 106 feet above mean sea level. The upper glacial deposits are located directly below the surface and extend to a depth of 144 feet bgs. The soil consists primarily of coarse grained sand and is characteristic of outwash plain deposits. The water table is located at approximately 50 feet bgs, and the groundwater flows south-southeast. See Appendix B - groundwater elevation contours and flow direction as measured on 9/24/2012 and 11/13/2012. The Magothy aquifer lies below the upper glacial aquifer. This aquifer is 600 feet thick and consists of moderately to highly permeable sediments. The Magothy formation is a primary source of drinking water for this portion of Long Island. The Lloyd aquifer lies below the Magothy aquifer and is 350 feet thick. Below the Lloyd aquifer is bedrock.

The surrounding properties include:

North: LIRR Tracks, commercial buildings, and retail stores
South: Old Country Road, residential dwellings, and office buildings
East: Glen Cove Road, and shopping center
West: Five-story office building

PRIOR INVESTIGATION AND REMEDIATION SUMMARY

The Record Search Report prepared by Edgewater provides a summary of the prior investigations conducted on the Site. The following is an abbreviated summary of the prior investigation and remedial work. The scope of the SC investigation was based, in part, on the findings of these earlier actions.

Johnson & Hoffman Manufacturing (J&H) Site: Off-Site Vapor Intrusion Investigation Results

Beginning in 1962 and continuing for several decades, J&H manufactured metal specialty products at its facility located at 40 Voice Road in Carle Place, which included the use of several chlorinated solvents, including tetrachloroethene (PCE) and trichloroethene (TCE). The J&H Site is located north of the *115 OCR Site*, on the other side of the LIRR tracks. J&H's activities contaminated the soil and groundwater. J&H entered into an agreement with the NYSDEC to investigate and remediate its on-site and off-site contamination. As part of J&H's required off-site investigation, in March and April 2008, ERM, J&H's consultant, conducted a Soil Vapor Investigation (SVI) to assess conditions at the *115 OCR Site* and at an unrelated property located to the west of the 115 OCR Site. ERM collected sub-slab soil vapor, indoor air and outdoor air samples as part of its SVI. The sub-slab soil vapor and indoor air samples taken by ERM at the *115 OCR Site* were collected from a then-vacant unit.

ERM reported that the sub-slab soil vapor and indoor air samples from the vacant space contained 1,1,1-trichloroethane (TCA) and PCE. As noted above, PCE was used at the J&H site. Although J&H's consultant, ERM, suggested that the dry cleaner located at the *115 OCR Site* may be a source of PCE in these samples if historic releases occurred, there were no such documented releases from the dry cleaner. (See EDR report included with the previously-submitted Record Search Report.) ERM also suggested that the presence of TCA in the samples was unrelated to J&H Site, since this chemical was allegedly not used by J&H. There is no documented historic or current use of TCA at the 115 OCR Site.

Impact Environmental - March 2009 Soil Vapor Sampling Report

Impact Environmental conducted sampling in March 2009 to evaluate the conditions in the vacant tenant space at the *115 OCR Site*. Impact Environmental reported finding TCA at 1,160 $\mu g/m^3$, PCE at 540 $\mu g/m^3$, and TCE at 3.4 $\mu g/m^3$ in the sub-slab soil vapor sample. It also reported finding PCE at 346 $\mu g/m^3$ and TCE at 4.2 $\mu g/m^3$ in the indoor air sample.

December 2009 Sub-Slab Vapor Monitoring

Edgewater, on behalf of the Respondent, collected one sub-slab soil vapor sample from the existing probe located in the vacant tenant space at the *115 OCR Site* on December 1, 2009.

The sub-slab soil vapor concentrations of PCE and TCE detected in the sample collected by Edgewater were significantly lower and were about half of concentrations detected by ERM in 2008. The TCA sub-slab soil vapor concentration was about the same as detected by ERM in 2008. Relatively low concentrations of gasoline components and trichlorofluoromethane (Freon) were also found in the December 2009 sampling.

Sub-Slab Depressurization System (SSDS) Installation - February 2010

Respondent retained Edgewater to install a sub-slab depressurization system in the vacant space prior to its being leased to a tenant. A standard blower-type system was installed.

The construction of the SSDS was as follows:

- Two separate systems were installed; one along the east wall and one along the west wall in the tenant space with two separate extraction wells installed approximately 40 feet from the front wall.
- All piping was six-inch diameter PVC pipe.
- The extraction wells were constructed of slotted schedule 40 PVC pipe and hand-dug to a depth of approximately 40 inches below the slab. The annular spaces around the wells were packed with pea gravel and the slab grade finished with concrete. The installation work generated one drum of non-hazardous/non-RCRA regulated waste. A copy of the manifest is attached.
- The piping continued vertically along the walls and then above the drop ceiling toward the rear of the building.
- Two 220 CFM radon-type blowers (one for each extraction well) were installed immediately outside the tenant space in the enclosed alleyway and the blowers exhausted to the roof level. The exhaust piping extends two feet above the roof line.
- Three flush-mount soil vapor probes were installed in the front of the tenant space and the vapor probe previously installed in the rear of the space was re-installed so it was flush to the slab and not causing a tripping hazard. These vapor probes were used to pilot test the system.

Following the installation of the system, a sub-slab vacuum test was conducted on February 12, 2010. The purpose of the pilot test was to document the negative pressure beneath the slab. Sufficient vacuum was documented beneath the slab with the blowers operating in tandem or independently. The system has been operating continuously since that time, although it was turned off at the direction of the NYSDEC, for a few days prior to the sub-slab soil vapor testing described in Section 2.5.

June 2010 Sub-Slab Vapor Monitoring

After operating the SSDS for several months, on June 18, 2010, Edgewater collected sub-slab soil vapor samples from the two probes located in the vacant tenant space. The samples were collected following standard sampling protocol and analyzed by EPA Method TO-15. The TCA concentrations in the two samples were 360 $\mu g/m^3$ and 1,309 $\mu g/m^3$, both of which were much lower than the results from the samples collected in March 2008 by ERM and December 2009 by Edgewater.

The following table compares Edgewater's December 2009 and June 2010 sampling results with ERM's March 2008 sampling results and Impact Environmental's March 2009 sampling results. The March 2008, March 2009 and December 2009 samples were all taken from ERM's original vapor sampling point in the rear of the store. The June 2010 sampling locations are about fifty feet from the original vapor sampling point installed by ERM.

	Middle Vapor point	**Middle-Front Vapor Point**		**Original Vapor Point Rear of Store**	
Analyte	**June 2010 (Edgewater)**	**June 2010 (Edgewater)**	**December 2009 (Edgewater)**	**March 2009 (Impact)**	**March 2008 (ERM)**
Vinyl chloride	ND	ND	<0.51	--	<4.40
1,1-dichloroethene	8.32	55.5	107.19	--	19
Methylene chloride	ND	ND	<0.69	--	<12
cis-1,2-dichloroethene	ND	ND	<2.03	--	6.8
TCA	360	1309	2620	1160	2700
Carbon tetrachloride	ND	ND	<2.52	--	<0.96
TCE	16.1	ND	3.49	3.4	7.0
PCE	746	1830	882.05	540	1600

Concentrations are in micrograms per cubic meter.

Relatively low concentrations of gasoline components and trichlorofluoromethane (Freon) were also found in the June 2010 sampling.

Records Search Addendum

The NYSDEC provided information from its files that was incorporated into the Record Search Addendum about Laboratory Furniture's historic operations at the 115 OCR Site. This information included the location that Laboratory Furniture had used as a hazardous waste storage area. That area was identified as being near the north-west corner of the former building and photographs showed the area to be bermed and located atop an asphalt surface. No chlorinated solvent use by Laboratory Furniture has ever been identified in the regulatory files.

Record Search Conclusion

Based on the information reviewed, there is no record of TCA or TCE use or historical chemical spills at the *115 OCR Site*. The manifest records for Laboratory Furniture do not refer to any halogenated solvent wastes (such as TCA, TCE or PCE). In addition, although the on-site dry cleaner uses PCE, there is no documented discharge of PCE from the dry cleaner. Thus, the only known source of halogenated VOCs is from off-site sources, including the J&H Site.

No discharge to the recharge basin is documented in the 1951 Well Permit documents and the 1951 engineering report states that the water from Laboratory Furniture’s production well was discharged to the on-site sanitary system at the south-west corner of the Site. The on-site sanitary septic system was closed and its use was discontinued when the facility was connected to the Nassau County Publicly Owned Sewage Treatment Works (POTW).

The focus of the Site Characterization Investigation was the south-western area of the *115 OCR Site* in the general location of the existing dry cleaner, the historical location of Laboratory Furniture’s paint booth, the historical location of Laboratory Furniture’s waste storage area, the former recharge basin area, and former sanitary disposal system. The Figure 2 – the Site Characterization Sample Location illustrates an overlay of the former structures and current building.

2.0 SCOPE OF THE INVESTIGATION

2.1 AREAS AND COMPOUNDS OF CONCERNS

Based on the scoping meeting and subsequent discussion with the NYSDEC, the Areas of Concern (AOC) and the Compounds of Concern (COC) were identified. The AOCs are:

- Areas near the existing dry cleaner
- The historical location of Laboratory Furniture's paint booth
- The historical location of Laboratory Furniture's waste storage area
- The former recharge basin area
- The location of the closed on-site sanitary system

The primary COC are chlorinated volatile organic compounds. However, the initial round of soil and groundwater samples were analyzed for the full Target Analyte List (TAL) for inorganic compounds and Target Compound List plus 30 non-targeted compounds (TCL + 30) for organic compounds as required by the NYSDEC Division of Environmental Remediation. If any subsequent rounds of sampling are required, the analytical list will be limited to the COCs identified in the initial round.

Compound	**EPA Method**
Volatile Organic Compounds (TCL + 10)	8260
Semi-Organic Compounds (TCL + 20)	8270
Polychlorinated Biphenyls	8082
Pesticides	8081A
Metals (except mercury)	6010B
Mercury	7471
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods	SW-846

2.2 GEOPHYSICAL SURVEY

A geophysical survey was performed in the outdoor areas by X-Ray Utility Locating, Inc. to identify any subsurface structures of concern (i.e., underground storage tanks, pumping well pits, etc.). No geophysical survey was performed in the indoor areas, since these areas were excavated during construction of the Shopping Center and no structures of concern were identified. X-Ray Locating Services used a Schonstedt Magnetic Locator and a Noggin 250 SmartCart (Sensor & Software, Inc.) Ground Penetrating Radar (GPR) fitted with a Noggin 250 MHz antenna for this survey work. The areas were initially screened with the magnetic locator to detect the magnetic field of iron and steel objects and energized power lines. The GPR equipment was passed over the site on an approximately 3 to 4 foot transect grid (except in areas were vehicles were parked). The AOCs were cordoned off, so there were no vehicles in these areas.

2.3 SOIL

Areas of Concern

Soil samples were collected in each of the AOCs. A total of five borings were drilled. The soil samples were collected continuously from grade to the water table level, and were field screened for VOCs, and visually examined for indications of spills. One sample from each boring was submitted to the laboratory for analyses based on field observations and screening results.

The boring designations for these areas are as follows:

AOC	BORING DESIGNATION
The location of the closed on-site sanitary system	SB-10
Area near the existing dry cleaner	SB-11
The historical location of Laboratory Furniture’s paint booth	SB-12
The former recharge basin area	SB-14
The historical location of Laboratory Furniture’s waste storage area	SB-15

Additional Areas

Based on the findings of the April 2012 soil vapor screening (see Appendix F of the SC Work Plan), two areas were identified for further investigation. These include the following.

- The first area is the electrical room located near the north-west corner of the building, immediately adjacent to the dry cleaners. This soil sample was collected using a hand-auger after core cutting the concrete. The hand-dug boring extended to the maximum depth physically possible. One sample was collected from this boring, identified as SB-16.

- The second area is in the rear parking lot approximately 170 feet from north (rear) property line and 40 feet from west property line. One vertical profile boring (SB-13) was advanced in the area of the previously documented highest reading. The vertical profile boring was advanced to a depth of 20 feet and screened for VOCs with a PID. The boring was advanced until two consecutive intervals did not exhibit elevated VOC readings.

  Two additional borings were advanced to bracket the central boring; boring SB-17 to the west of SB-13, and SB-18 to the east. The sample intervals in each boring with the highest PID reading were collected and held for analysis. The soil sample collected from the central boring were expedited for laboratory analysis of VOCs and the results reviewed with the NYSDEC to determine which of the bracketed samples were analyzed for VOCs. The laboratory was thereafter instructed which of the selected samples was to be analyzed.

The approximate locations of the soil borings are shown on Figure 2. The sampling work and analytical procedures are outlined in the Project QAPP (Appendix B of the SC Work Plan).

2.4 GROUNDWATER

Three shallow groundwater monitoring wells were installed to bridge the water table. The shallow water table wells installed as part of the SC investigation were approximately 50 to 60 feet deep with 10-foot of screen set based on field determination of the depth to the water table. Groundwater samples were collected from the existing monitoring well installed by ERM at the southwest corner of the site. The shallow well installed by ERM is 85 feet deep with a 10-foot screen. In addition to groundwater samples collected as part of this investigation, the groundwater quality data previously collected by ERM is being used in the assessment.

The well locations and the casing elevations were surveyed and the water table elevations were determined from the water levels measured at the onsite monitoring wells. A map showing on-site water level elevations is provided in Appendix B. The locations of the wells are shown on Figure 2.

2.5 SOIL VAPOR INTRUSION (SVI) INVESTIGATION

On March 8, 2012, temporary soil vapor sampling ports were installed in the now vacant Tiger Schulmann and Sprint tenant spaces and concurrent sub-slab soil vapor, indoor air samples and outdoor air samples were collected in accord with the NYSDOH guidelines. This work was authorized by the NYSDEC and permitted to proceed prior to approval of the SC Work Plan, so the work could be completed within the heating season. The May 15, 2012 letter report summarizing the findings is included in Appendix F of the SC Work Plan (2012 Soil Vapor Investigations). Based on the findings of the SVI investigation, the sub-slab concentrations indicated that further monitoring and mitigation was required. The SVI investigation was thereafter modified to include the investigation of two additional tenant spaces during the 2012-2013 heating season. Samples were collected in the rear of the Bagel Boss store and the front of the vacant store on the south-east corner of building. Additional areas were added to the SVI investigation and tested in the same heating season as per discussions with the NYSDEC and NYSDOH.

The approximate locations of the SVI samples are shown on the site plan in Appendix A. The sampling work and analytical procedures are outlined in the QAPP.

2.6 QUALITY ASSURANCE/QUALITY CONTROL

The sampling and analytical methods and procedures are outlined in Quality Assurance Project Plan (Appendix B of the Site Characterization Work Plan).

Appropriate Quality Assurance/Quality Control (QA/QC) Procedures have been prepared to ensure that suitable and verifiable results from sampling and analysis are collected. The sample preservation requirements, holding times, and frequency for field blanks, field duplicates, matrix spike and matrix spike duplicates and equipment rinse blanks were consistent with the NYSDEC Analytical Services Protocol (ASP).

The quality assurance (QA) objective is to develop and implement standard procedures to record field measurements, collection of samples, laboratory analyses, and report laboratory results to provide consistent quality data.

Upon NYSDEC's acceptance of this report, all data generated will be submitted in an electronic data deliverable (EDD) that complies with the DEC's Electronic Data Warehouse Standards (EDWS). The laboratory will provide the analytical data in EqUIS format consistent with the NYSDEC Format template files. Reports will be provided in pdf-format.

2.7 HEALTH AND SAFETY AND COMMUNITY AIR MONITORING PLAN

A site-specific Health and Safety Plan was developed for the project (see Appendix D of SC Work Plan). The plan was followed by the field personnel involved in the investigation. Included in the plan was a section on community air monitoring (CAMP) with measures to ensure that the public working near the site are protected from exposure to site contaminants during intrusive site activities. No incidents were observed during the conduct of the investigation field work.

3.0 INVESTIGATION RESULTS

3.1 GEOPHYSICAL SURVEY

On August 23, 2012, X-Ray Locating Service, Inc. conducted a subsurface utility survey at the site. X-Ray located, toned and marked out underground utility lines in the AOCs, scanned the site to locate, tone and mark out unmapped underground utility lines, and perform a complete utility survey of the subject area and mark the ground with appropriate paint color.

No previously unidentified subsurface structures were identified during the survey, such as buried tanks, vaults, sumps or drywells. The subsurface utilities were marked out prior to starting the subsurface work.

3.2 SUBSURFACE SOIL

As discussed in the scope section, soil samples were collected in the five areas of concern. None of the results from the samples collected exceeded the Part 375 Unrestricted Soil Cleanup Objectives (SCO) for VOCs, Pesticides, or PCBs.

None of the soil sample results exceeded the SCO for metals, except for soil sample *SB-11 (20-25') Duplicate A* located in the parking lot in front of the dry cleaner. That sample contained four SVOCs that exceed the SCOs, specifically benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and ideno(1,2,3-cd)pyrene. The results for these compounds did not exceed the SCO in the primary sample. These concentration do not appear to be signficantly elevated and do not appear to be associated with the past site operations. These compounds are most likely related to the parking lot asphalt. Sample *SB-11 (20-25') Duplicate A a*lso exceeded the SCO for trivalent chromium, which also did not exceed the SCO in the primary sample.

Soil boring SB-13 was advanced in the area of the relatively elevated reading measured during the soil vapor screening survey. Two samples were collected from the boring, SB-13(0-5) and SB-13(15-20), based on field observations and discussion with the NYSDEC representative. Neither of these samples exceeded the SCOs, and no VOCs were detected in SB-13(15-20). The NYSDEC representative directed Edgewater's sampling subconsultant to advance two soil borings west and east of Boring SB-13; the western borings is designated SB-17 and the eastern boring SB-18. No VOCs were detected in soil samples SB-17(10-15) and SB-18(15-20). The soil sampling results indicate that no release of VOCs occurred at the site.

3.3 GROUNDWATER

Three monitoring wells that bridged the water table were installed as part of this investigation in accord with the work plan. These wells are designated MW-1 (north-west corner), MW-2 (north-east corner) and MW-3 (south-east corner). The well construction logs are included in Appendix A. In addition to these monitoring wells the shallow monitoring well installed for the J&H investigation was used, and designated MW-4 for the SC investigation (south-west corner). The well casing were surveyed by NAC Consultants relative to the J&H well, and the water table elevations based on ERM's well construction logs. The depth to groundwater from grade was 42 to 45 feet.

The well casing elevations based on the J&H well construction logs for Well MW-4 (well depth 86') are as follows:

- MW-1: 107.446 above Mean Sea Level (MSL)
- MW-2: 107.03 above MSL
- MW-3: 106.322 above MSL
- MW-4: 106.53 above MSL

Based on the water table elevations collected on September 24 and November 13,2012, the groundwater flows to the south - southeast.

Of the chlorinated VOCs of concern, PCE was the only compound detected, with no 111-TCA and TCE detected. The PCE was found at concentrations of 2.0 µg/L (microgram per liter of water) in MW-1 and MW-4, 1.4 µg/L in MW-2, and 1.1 µg/L in MW-3 . No VOCs exceeded the NYS groundwater standards or guidelines.

No SVOCs, pesticides or PCBs were detected in the groundwater samples. No metals exceeded the NYS groundwater standards or guidelines, except for manganese (1030 µg/L)in the sample collected from monitoring well MW-4. This compound is not a concern since it is naturally occurring and likely to be caused by suspended solids in the groundwater.

The groundwater sampling results indicate that no release of VOCs occurred at the site.

3.4 SOIL VAPOR INTRUSION INVESTIGATION

The VOCs of concern for the three sampling events completed as part of the Site Characterization investigation are summarized below. The full summary tables are presented in Table 11, 12, and 13.

March 8 2012

	111-TCA	TCE	PCE
SPRINT MOBILE PHONE STORE			
Sub-Slab Vapor			
SSV-1	2,782	26.9	2,169
SSV-1 duplicate	2,564	32.2	1,898
Indoor Air			
IA-1	0.49	ND	2.51
TIGER SHULMANN			
Sub-Slab Vapor			
SSV-2	7638	29.6	949
Indoor Air			
IA-2	0.49	0.16	5.29
OUTDOOR (west end of building)			
AA-1	ND	0.16	56.3

November 16, 2012

	111-TCA	TCE	PCE
CUPS FROZEN YOGURT SHOP			
Sub-Slab Vapor			
SSV-5	48	141	5,350
SSV-5 duplicate	128	59.6	17,970
Indoor Air			
IA-1	ND	ND	14.8
BAGEL BOSS - KITCHEN			
Sub-Slab Vapor			
SSV-6	1707	44.6	4,204
Indoor Air			
IA-2	0.93	1.29	3,485
OUTDOOR (Rear of building)			
AA-1	ND	ND	0.41

December 21, 2012

	111-TCA	TCE	PCE
CUPS FROZEN YOGURT SHOP			
Sub-Slab Vapor			
SSV-5	16.4	26.9	1,695
SSV-5 duplicate	ND	ND	2.92
Indoor Air			
IA-1	ND	ND	2.92
BAGEL BOSS - KITCHEN			
Sub-Slab Vapor			
SSV-6	50.2	1.83	198
Indoor Air			
IA-2	0.71	ND	22.4
BABI NAILS			
Sub-Slab Vapor			
SSV-7	12,003	0.54	2.78
Indoor Air			
IA-3	1.25	ND	5.90
OUTDOOR (Front of building)			
AA-1	0.16	ND	2.85

All units: micrograms per cubic meter -- µg/M^3

Abbreviations

111-TCA:	111-Trichloroethane
TCE:	Trichloroethene
PCE:	Tetrachloroethene
ND:	None Detected

Some of the results from each of the tested areas fall within the mitigation range found in the NYSDOH 2006 Soil Vapor Intrusion Guidance document.

The indoor air sample collected in the Bagel Boss kitchen (IA-2) during the November 2012 sampling event was inconsistently higher than any other indoor air reading. Upon further testing and investigation, it was believed to have been attributed to emissions from the drycleaner traveling through the rear corridor of the building. Following the November sampling event, the Respondent constructed a floor-to-ceiling impervious wall in the rear corridor to cut off the pathway between the dry cleaner, which is the corner store on the western side of the building and all other stores that share the rear corridor. The December 2012 sample collected in the Bagel Boss kitchen was 22.4 µg/M^3 versus the 3,485 µg/M^3 found in November, demonstrating that the wall was an effective mitigative measure.

3.5 DATA VALIDATION

EnviroAnalytics completed the data validation and prepared the Data Usability Summary Report (DUSR) for the soil, groundwater, and air/soil vapor samples for the Site Characterization investigation. Based on the findings presented in the DUSRs, the analytical data was found to be usable for qualitative and quantitative purposes. The DUSRs are presented in Appendix C.

3.6 HEALTH AND SAFETY AND COMMUNITY AIR MONITORING PLAN

The Health and Safety and CAMP procedures were followed during the field operations completed on September 12, 13 and 14, 2012. No PID readings were observed during the work, and the dust meter readings ranged from 0.010 to 0.043 milligrams per cubic meter air, indicating no adverse impacts during or caused by the field work.

4.0 CONCLUSIONS

Based on the findings of the Site Characterization Investigation, no contamination or evidence of a release or spill was found.

The findings of the SVI investigation indicate elevated sub-slab concentrations of VOCs that will require mitigation. The Respondent is proposing to proceed with a pilot test, design and installation of a sub-slab depressurization system (SSDS) to control the sub-slab vapors. Respondent is simultaneously submitting a proposed SSDS Remedial Design Work Plan and is requesting that the NYSDEC approve that plan. A copy can be found in Appendix D.

FIGURES

Figure 1 Location Map

115 Old Country Road Site Location

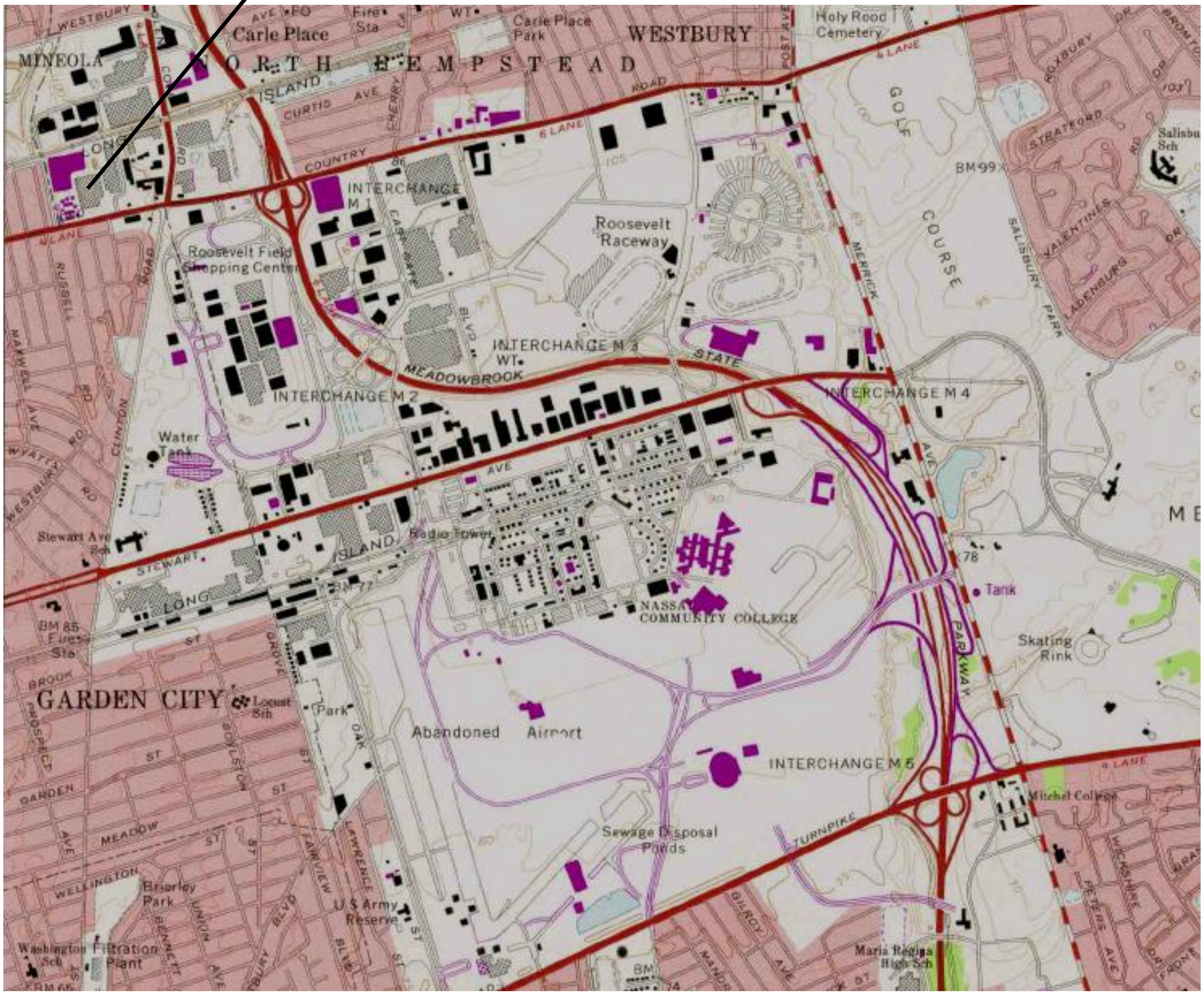
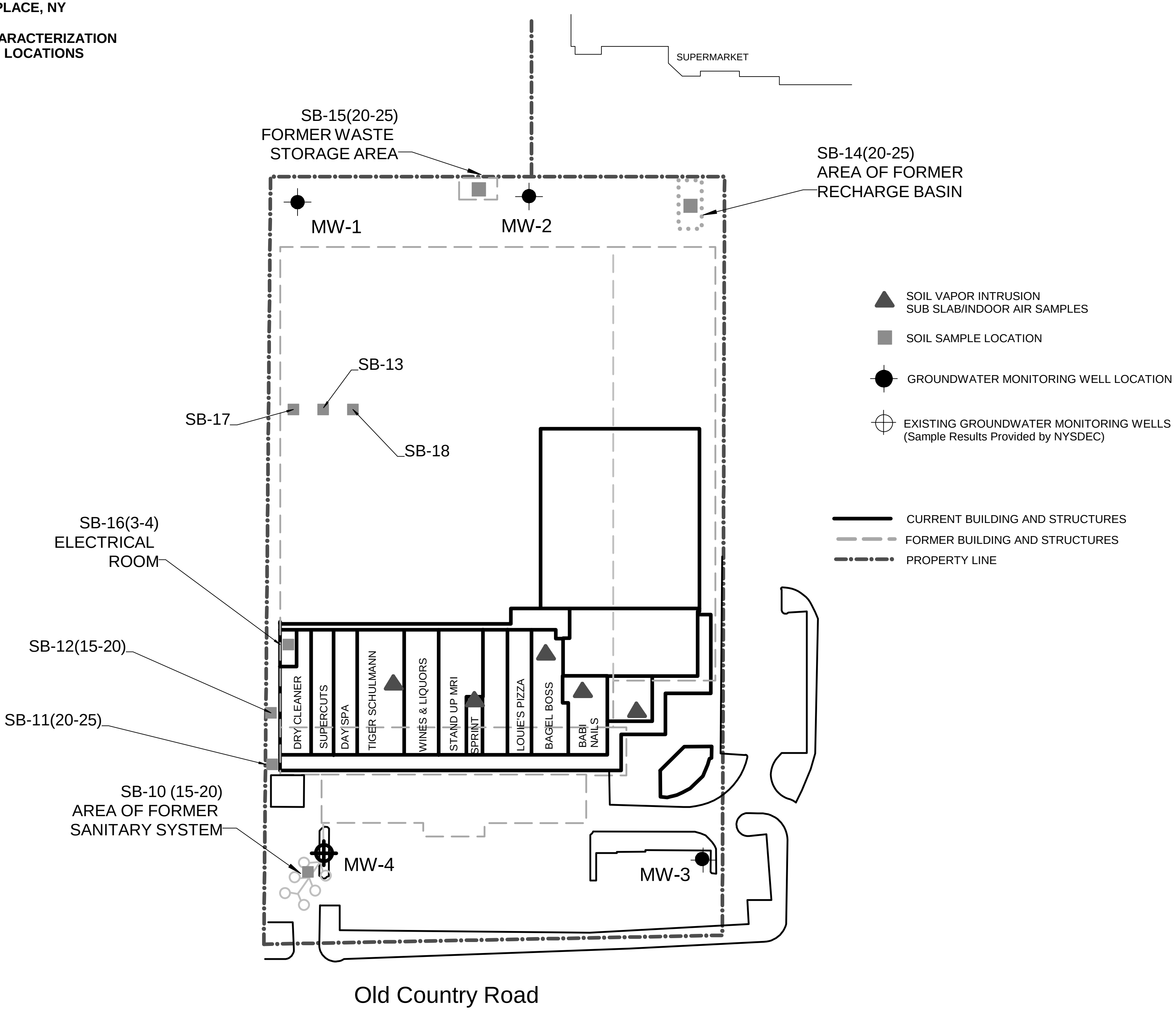


FIGURE 2

115 OLD COUNTRY ROAD SITE
CARLE PLACE, NY

SITE CHARACTERIZATION
SAMPLE LOCATIONS



TABLES

SUMMARY TABLES - NOTES AND QUALIFIERS

Notes

Boxed values indicated detected compound concentrations
Bold/Highlighted values indicate concentration that exceed Soil Cleanup Objectives (SCOs)/Standards/Guidance Values.
SCO/Standards/Guidance Values provided for detected compounds only

Laboratory Qualifiers

U - The compound was not detected at the indicated concentration.
N (Organics) - Presumptive Evidence of a Compound
N (Inorganics) - The matrix spike recovery was outside control limits
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
* (Organics) - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.
* (Inorganics) - The sample/duplicate %RPD was above the control limit.
E (Organics) - Indicates the analyte ‘s concentration exceeds the calibrated range of the instrument for that specific analysis.
E (Inorganics) - The reported value is estimated because of the presence of interference.
D - The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
NR - Not analyzed

TABLE 1
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID		SB-10(15-20)	SB-11(20-25)	SB-11(20-25)RE	SB-12(15-20)
Lab Sample Number		**D4185-01**	**D4185-02**	**D4185-02RE**	**D4185-03**
Sampling Date	**NYS Part 375**	**9/13/2012**	**9/13/2012**	**9/13/2012**	**9/13/2012**
Matrix	**Unrestricted use**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor	**SCO**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND					
1,1,1-Trichloroethane	680	2.65 U	2.6 U	2.6 U	2.6 U
1,1,2,2-Tetrachloroethane		2.65 U	2.6 U	2.6 U	2.6 U
1,1,2-Trichloroethane		2.65 U	2.6 U	2.6 U	2.6 U
1,1,2-Trichlorotrifluoroethane		2.65 U	2.6 U	2.6 U	2.6 U
1,1-Dichloroethane		2.65 U	2.6 U	2.6 U	2.6 U
1,1-Dichloroethene		2.65 U	2.6 U	2.6 U	2.6 U
1,2,3-Trichlorobenzene		2.65 U	2.6 U	2.6 U	2.6 U
1,2,4-Trichlorobenzene		2.65 U	2.6 U	2.6 U	2.6 U
1,2,4-Trimethylbenzene	NS	2.65 U	2.6 U	2.6 U	2.6 U
1,2-Dibromo-3-Chloropropane		2.65 U	2.6 U	2.6 U	2.6 U
1,2-Dibromoethane		2.65 U	2.6 U	2.6 U	2.6 U
1,2-Dichlorobenzene		2.65 U	2.6 U	2.6 U	2.6 U
1,2-Dichloroethane		2.65 U	2.6 U	2.6 U	2.6 U
1,2-Dichloropropane		2.65 U	2.6 U	2.6 U	2.6 U
1,3,5-Trimethylbenzene		2.65 U	2.6 U	2.6 U	2.6 U
1,3-Dichlorobenzene		2.65 U	2.6 U	2.6 U	2.6 U
1,4-Dichlorobenzene		2.65 U	2.6 U	2.6 U	2.6 U
2-Butanone		13 U	13 U	13 U	13 U
2-Hexanone		13 U	13 U	13 U	13 U
4-Methyl-2-Pentanone		13 U	13 U	13 U	13 U
Acetone	50	13 U	13 U	13 U	13 U
Benzene		2.65 U	2.6 U	2.6 U	2.6 U
Bromochloromethane		2.65 U	2.6 U	2.6 U	2.6 U
Bromodichloromethane		2.65 U	2.6 U	2.6 U	2.6 U
Bromoform		2.65 U	2.6 U	2.6 U	2.6 U
Bromomethane		2.65 U	2.6 U	2.6 U	2.6 U
Carbon Disulfide		2.65 U	2.6 U	2.6 U	2.6 U

TABLE 1
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID		**SB-10(15-20)**		**SB-11(20-25)**		**SB-11(20-25)RE**		**SB-12(15-20)**	
Lab Sample Number		**D4185-01**		**D4185-02**		**D4185-02RE**		**D4185-03**	
Sampling Date	**NYS Part 375**	**9/13/2012**		**9/13/2012**		**9/13/2012**		**9/13/2012**	
Matrix	**Unrestricted use**	**SOIL**		**SOIL**		**SOIL**		**SOIL**	
Dilution Factor	**SCO**	**1**		**1**		**1**		**1**	
Units		**ug/Kg**		**ug/Kg**		**ug/Kg**		**ug/Kg**	
COMPOUND									
Carbon Tetrachloride		2.65	U	2.6	U	2.6	U	2.6	U
Chlorobenzene		2.65	U	2.6	U	2.6	U	2.6	U
Chloroethane		2.65	U	2.6	U	2.6	U	2.6	U
Chloroform		2.65	U	2.6	U	2.6	U	2.6	U
Chloromethane		2.65	UQ	2.6	UQ	2.6	U	2.6	UQ
cis-1,2-Dichloroethene		2.65	U	2.6	U	2.6	U	2.6	U
cis-1,3-Dichloropropene		2.65	U	2.6	U	2.6	U	2.6	U
Cyclohexane		2.65	U	2.6	U	2.6	U	2.6	U
Dibromochloromethane		2.65	U	2.6	U	2.6	U	2.6	U
Dichlorodifluoromethane		2.65	U	2.6	U	2.6	U	2.6	U
Ethyl Benzene		2.65	U	2.6	U	2.6	U	2.6	U
Isopropylbenzene		2.65	U	2.6	U	2.6	U	2.6	U
m/p-Xylenes	NS	5.5	U	5	U	5	U	5	U
Methyl Acetate		2.65	U	2.6	U	2.6	U	2.6	U
Methyl tert-butyl Ether		2.65	U	2.6	U	2.6	U	2.6	U
Methylcyclohexane		2.65	U	2.6	U	2.6	U	2.6	U
Methylene Chloride	50	2.65	U	2.6	U	2.6	U	2.6	U
n-Butylbenzene		2.65	U	2.6	U	2.6	U	2.6	U
n-propylbenzene		2.65	U	2.6	U	2.6	U	2.6	U
o-Xylene		2.65	U	2.6	U	2.6	U	2.6	U
sec-Butylbenzene		2.65	U	2.6	U	2.6	U	2.6	U
Styrene		2.65	U	2.6	U	2.6	U	2.6	U
t-1,3-Dichloropropene		2.65	U	2.6	U	2.6	U	2.6	U
tert-Butylbenzene		2.65	U	2.6	U	2.6	U	2.6	U
Tetrachloroethene	1300	2.65	U	2.6	U	2.6	U	2.6	U
Toluene		2.65	U	2.6	U	2.6	U	2.6	U
Total Xylenes		8	U	8	U	8	U	7.5	U

TABLE 1
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID		SB-10(15-20)	SB-11(20-25)	SB-11(20-25)RE	SB-12(15-20)
Lab Sample Number		**D4185-01**	**D4185-02**	**D4185-02RE**	**D4185-03**
Sampling Date	**NYS Part 375**	**9/13/2012**	**9/13/2012**	**9/13/2012**	**9/13/2012**
Matrix	**Unrestricted use**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor	**SCO**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND					
trans-1,2-Dichloroethene		2.65 U	2.6 U	2.6 U	2.6 U
Trichloroethene		2.65 U	2.6 U	2.6 U	2.6 U
Trichlorofluoromethane		2.65 U	2.6 U	2.6 U	2.6 U
Vinyl Chloride		2.65 U	2.6 U	2.6 U	2.6 U
Total Concentration.		0	0	0	0

TABLE 1
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID	**NYS Part 375 Unrestricted use SCO**	**SB-11(20-25) DUP-A**	**SB-13(0-5)**	**SB-13(15-20)**	**SB-14(20-25)**	**SB-15(20-25)**
Lab Sample Number		**D4185-04**	**D4185-09**	**D4185-10**	**D4216-01**	**D4216-04**
Sampling Date		**9/13/2012**	**9/13/2012**	**9/13/2012**	**9/14/2012**	**9/14/2012**
Matrix		**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor		**1**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND						
1,1,1-Trichloroethane	680	2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,1,2,2-Tetrachloroethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,1,2-Trichloroethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,1,2-Trichlorotrifluoroethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,1-Dichloroethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,1-Dichloroethene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,2,3-Trichlorobenzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,2,4-Trichlorobenzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,2,4-Trimethylbenzene	NS	2.75 U	2.7 J	2.6 U	2.8 J	2.55
1,2-Dibromo-3-Chloropropane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,2-Dibromoethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,2-Dichlorobenzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,2-Dichloroethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,2-Dichloropropane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,3,5-Trimethylbenzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,3-Dichlorobenzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
1,4-Dichlorobenzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
2-Butanone		14 U	14.5 U	13 U	13.5 U	12.5
2-Hexanone		14 U	14.5 U	13 U	13.5 U	12.5
4-Methyl-2-Pentanone		14 U	14.5 U	13 U	13.5 U	12.5
Acetone	50	14 U	46	13 U	13.5 U	12.5
Benzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Bromochloromethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Bromodichloromethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Bromoform		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Bromomethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Carbon Disulfide		2.75 U	2.9 U	2.6 U	2.65 U	2.55

TABLE 1
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID		**SB-11(20-25) DUP-A**	**SB-13(0-5)**	**SB-13(15-20)**	**SB-14(20-25)**	**SB-15(20-25)**
Lab Sample Number		**D4185-04**	**D4185-09**	**D4185-10**	**D4216-01**	**D4216-04**
Sampling Date	**NYS Part 375**	**9/13/2012**	**9/13/2012**	**9/13/2012**	**9/14/2012**	**9/14/2012**
Matrix	**Unrestricted use**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor	**SCO**	**1**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND						
Carbon Tetrachloride		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Chlorobenzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Chloroethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Chloroform		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Chloromethane		2.75 UQ	2.9 UQ	2.6 UQ	2.65 U	2.55
cis-1,2-Dichloroethene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
cis-1,3-Dichloropropene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Cyclohexane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Dibromochloromethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Dichlorodifluoromethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Ethyl Benzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Isopropylbenzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
m/p-Xylenes	NS	5.5 U	1.2 J	5 U	5.5 U	5
Methyl Acetate		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Methyl tert-butyl Ether		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Methylcyclohexane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Methylene Chloride	50	2.75 U	1.9 J	2.6 U	2.65 U	2.55
n-Butylbenzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
n-propylbenzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
o-Xylene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
sec-Butylbenzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Styrene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
t-1,3-Dichloropropene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
tert-Butylbenzene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Tetrachloroethene	1300	2.75 U	2.9 U	2.6 U	2.65 U	2.55
Toluene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Total Xylenes		8.5 U	8.5 U	8 U	8 U	7.5

TABLE 1
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID		**SB-11(20-25) DUP-A**	**SB-13(0-5)**	**SB-13(15-20)**	**SB-14(20-25)**	**SB-15(20-25)**
Lab Sample Number		**D4185-04**	**D4185-09**	**D4185-10**	**D4216-01**	**D4216-04**
Sampling Date	**NYS Part 375**	**9/13/2012**	**9/13/2012**	**9/13/2012**	**9/14/2012**	**9/14/2012**
Matrix	**Unrestricted use**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor	**SCO**	**1**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND						
trans-1,2-Dichloroethene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Trichloroethene		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Trichlorofluoromethane		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Vinyl Chloride		2.75 U	2.9 U	2.6 U	2.65 U	2.55
Total Concentration.		0	51.8	0	2.8	0

TABLE 1
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID			**SB-16(3-4)**		**SB-17(10-15)**		**SB-18(15-20)**		**SB-15(20-25)** **DUP-B**	
Lab Sample Number			**D4216-05**		**D4216-06**		**D4216-07**		**D4216-08**	
Sampling Date	**NYS Part 375**		**9/14/2012**		**9/14/2012**		**9/14/2012**		**9/14/2012**	
Matrix	**Unrestricted use**		**SOIL**		**SOIL**		**SOIL**		**SOIL**	
Dilution Factor	**SCO**		**1**		**1**		**1**		**1**	
Units			**ug/Kg**		**ug/Kg**		**ug/Kg**		**ug/Kg**	
COMPOUND										
1,1,1-Trichloroethane	680	U	2.8	U	2.65	U	2.8	U	2.6	U
1,1,2,2-Tetrachloroethane		U	2.8	U	2.65	U	2.8	U	2.6	U
1,1,2-Trichloroethane		U	2.8	U	2.65	U	2.8	U	2.6	U
1,1,2-Trichlorotrifluoroethane		U	2.8	U	2.65	U	2.8	U	2.6	U
1,1-Dichloroethane		U	2.8	U	2.65	U	2.8	U	2.6	U
1,1-Dichloroethene		U	2.8	U	2.65	U	2.8	U	2.6	U
1,2,3-Trichlorobenzene		U	2.8	U	2.65	U	2.8	U	2.6	U
1,2,4-Trichlorobenzene		U	2.8	U	2.65	U	2.8	U	2.6	U
1,2,4-Trimethylbenzene	NS	U	2.8	U	2.65	U	2.8	U	2.6	U
1,2-Dibromo-3-Chloropropane		U	2.8	U	2.65	U	2.8	U	2.6	U
1,2-Dibromoethane		U	2.8	U	2.65	U	2.8	U	2.6	U
1,2-Dichlorobenzene		U	2.8	U	2.65	U	2.8	U	2.6	U
1,2-Dichloroethane		U	2.8	U	2.65	U	2.8	U	2.6	U
1,2-Dichloropropane		U	2.8	U	2.65	U	2.8	U	2.6	U
1,3,5-Trimethylbenzene		U	2.8	U	2.65	U	2.8	U	2.6	U
1,3-Dichlorobenzene		U	2.8	U	2.65	U	2.8	U	2.6	U
1,4-Dichlorobenzene		U	2.8	U	2.65	U	2.8	U	2.6	U
2-Butanone		U	14	U	13.5	U	14	U	13	U
2-Hexanone		U	14	U	13.5	U	14	U	13	U
4-Methyl-2-Pentanone		U	14	U	13.5	U	14	U	13	U
Acetone	50	U	14	U	13.5	U	14	U	13	U
Benzene		U	2.8	U	2.65	U	2.8	U	2.6	U
Bromochloromethane		U	2.8	U	2.65	U	2.8	U	2.6	U
Bromodichloromethane		U	2.8	U	2.65	U	2.8	U	2.6	U
Bromoform		U	2.8	U	2.65	U	2.8	U	2.6	U
Bromomethane		U	2.8	U	2.65	U	2.8	U	2.6	U
Carbon Disulfide		U	2.8	U	2.65	U	2.8	U	2.6	U

TABLE 1
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID			**SB-16(3-4)**		**SB-17(10-15)**		**SB-18(15-20)**		**SB-15(20-25) DUP-B**	
Lab Sample Number			**D4216-05**		**D4216-06**		**D4216-07**		**D4216-08**	
Sampling Date	**NYS Part 375**		**9/14/2012**		**9/14/2012**		**9/14/2012**		**9/14/2012**	
Matrix	**Unrestricted use**		**SOIL**		**SOIL**		**SOIL**		**SOIL**	
Dilution Factor	**SCO**		**1**		**1**		**1**		**1**	
Units			**ug/Kg**		**ug/Kg**		**ug/Kg**		**ug/Kg**	
COMPOUND										
Carbon Tetrachloride		U	2.8	U	2.65	U	2.8	U	2.6	U
Chlorobenzene		U	2.8	U	2.65	U	2.8	U	2.6	U
Chloroethane		U	2.8	U	2.65	U	2.8	U	2.6	U
Chloroform		U	2.8	U	2.65	U	2.8	U	2.6	U
Chloromethane		U	2.8	U	2.65	U	2.8	U	2.6	U
cis-1,2-Dichloroethene		U	2.8	U	2.65	U	2.8	U	2.6	U
cis-1,3-Dichloropropene		U	2.8	U	2.65	U	2.8	U	2.6	U
Cyclohexane		U	2.8	U	2.65	U	2.8	U	2.6	U
Dibromochloromethane		U	2.8	U	2.65	U	2.8	U	2.6	U
Dichlorodifluoromethane		U	2.8	U	2.65	U	2.8	U	2.6	U
Ethyl Benzene		U	2.8	U	2.65	U	2.8	U	2.6	U
Isopropylbenzene		U	2.8	U	2.65	U	2.8	U	2.6	U
m/p-Xylenes	NS	U	5.5	U	5.5	U	5.5	U	5	U
Methyl Acetate		U	2.8	U	2.65	U	2.8	U	2.6	U
Methyl tert-butyl Ether		U	2.8	U	2.65	U	2.8	U	2.6	U
Methylcyclohexane		U	2.8	U	2.65	U	2.8	U	2.6	U
Methylene Chloride	50	U	2.8	U	2.65	U	2.8	U	2.6	U
n-Butylbenzene		U	2.8	U	2.65	U	2.8	U	2.6	U
n-propylbenzene		U	2.8	U	2.65	U	2.8	U	2.6	U
o-Xylene		U	2.8	U	2.65	U	2.8	U	2.6	U
sec-Butylbenzene		U	2.8	U	2.65	U	2.8	U	2.6	U
Styrene		U	2.8	U	2.65	U	2.8	U	2.6	U
t-1,3-Dichloropropene		U	2.8	U	2.65	U	2.8	U	2.6	U
tert-Butylbenzene		U	2.8	U	2.65	U	2.8	U	2.6	U
Tetrachloroethene	1300	U	9.5		2.65	U	2.8	U	2.6	U
Toluene		U	2.8	U	2.65	U	2.8	U	2.6	U
Total Xylenes		U	8.5	U	8	U	8.5	U	7.5	U

TABLE 1
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID		**SB-16(3-4)**	**SB-17(10-15)**	**SB-18(15-20)**	**SB-15(20-25) DUP-B**
Lab Sample Number		**D4216-05**	**D4216-06**	**D4216-07**	**D4216-08**
Sampling Date	**NYS Part 375**	**9/14/2012**	**9/14/2012**	**9/14/2012**	**9/14/2012**
Matrix	**Unrestricted use**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor	**SCO**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND					
trans-1,2-Dichloroethene	U	2.8 U	2.65 U	2.8 U	2.6 U
Trichloroethene	U	2.8 U	2.65 U	2.8 U	2.6 U
Trichlorofluoromethane	U	2.8 U	2.65 U	2.8 U	2.6 U
Vinyl Chloride	U	2.8 U	2.65 U	2.8 U	2.6 U
Total Concentration.		9.5	0	0	0

TABLE 2
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID		**SB-10(15-20)**	**SB-11(20-25)**	**SB-12(15-20)**	**SB-11(20-25) DUP-A**
Lab Sample Number		**D4185-01**	**D4185-02**	**D4185-03**	**D4185-04**
Sampling Date	**NYS Part 375**	**9/13/2012**	**9/13/2012**	**9/13/2012**	**9/13/2012**
Matrix	**Unrestricted use**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor	**SCO**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND					
1,1-Biphenyl		175 U	170 U	170 U	185 U
1,2,4,5-Tetrachlorobenzene		175 U	170 U	170 U	185 U
1,4-Dioxane		175 U	170 U	170 U	185 U
2,2-oxybis(1-Chloropropane)		175 U	170 U	170 U	185 U
2,3,4,6-Tetrachlorophenol		175 U	170 U	170 U	185 U
2,4,5-Trichlorophenol		175 U	170 U	170 U	185 U
2,4,6-Trichlorophenol		175 U	170 U	170 U	185 U
2,4-Dichlorophenol		175 U	170 U	170 U	185 U
2,4-Dimethylphenol		175 U	170 U	170 U	185 U
2,4-Dinitrophenol		175 U	170 U	170 U	185 U
2,4-Dinitrotoluene		175 U	170 U	170 U	185 U
2,6-Dinitrotoluene		175 U	170 U	170 U	185 U
2-Chloronaphthalene		175 U	170 U	170 U	185 U
2-Chlorophenol		175 U	170 U	170 U	185 U
2-Methylnaphthalene		175 U	170 U	170 U	185 U
2-Methylphenol (o-cresol)		175 U	170 U	170 U	185 U
2-Nitroaniline		175 U	170 U	170 U	185 U
2-Nitrophenol		175 U	170 U	170 U	185 U
3,3-Dichlorobenzidine		175 U	170 U	170 U	185 U
3+4-Methylphenols (M+P cresol)		175 U	170 U	170 U	185 U
3-Nitroaniline		175 U	170 U	170 U	185 U
4,6-Dinitro-2-methylphenol		175 U	170 U	170 U	185 U
4-Bromophenyl-phenylether		175 U	170 U	170 U	185 U
4-Chloro-3-methylphenol		175 U	170 U	170 U	185 U
4-Chloroaniline		175 UQ	170 UQ	170 UQ	185 UQ
4-Chlorophenyl-phenylether		175 U	170 U	170 U	185 U
4-Nitroaniline		175 U	170 U	170 U	185 U

TABLE 2
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID	NYS Part 375 Unrestricted use SCO	SB-10(15-20)	SB-11(20-25)	SB-12(15-20)	SB-11(20-25) DUP-A
Lab Sample Number		D4185-01	D4185-02	D4185-03	D4185-04
Sampling Date		9/13/2012	9/13/2012	9/13/2012	9/13/2012
Matrix		SOIL	SOIL	SOIL	SOIL
Dilution Factor		1	1	1	1
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND					
4-Nitrophenol		175 U	170 U	170 U	185 U
Acenaphthene	20,000	175 U	170 U	170 U	600
Acenaphthylene		175 U	170 U	170 U	185 U
Acetophenone		175 U	170 U	170 U	185 U
Anthracene	100,000	175 U	170 U	170 U	740
Atrazine		175 U	170 U	170 U	185 U
Benzaldehyde		175 U	170 U	170 U	185 U
Benzo(a)anthracene	1,000	175 U	170 U	170 U	**1,200**
Benzo(a)pyrene	1,000	175 U	170 U	170 U	**1,100**
Benzo(b)fluoranthene	1,000	175 U	170 U	170 U	**1,300**
Benzo(g,h,i)perylene	100,000	175 U	170 U	170 U	560
Benzo(k)fluoranthene	800	175 U	170 U	170 U	560
bis(2-Chloroethoxy)methane		175 U	170 U	170 U	185 U
bis(2-Chloroethyl)ether		175 U	170 U	170 U	185 U
bis(2-Ethylhexyl)phthalate		175 U	170 U	170 U	185 U
Butylbenzylphthalate		175 U	170 U	170 U	185 U
Caprolactam		175 U	170 U	170 U	185 U
Carbazole	NS	175 U	170 U	170 U	280 J
Chrysene	1,000	175 U	170 U	170 U	1200
Dibenz(a,h)anthracene		175 U	170 U	170 U	185 U
Dibenzofuran	NS	175 U	170 U	170 U	230 J
Diethylphthalate		175 U	170 U	170 U	185 U
Dimethylphthalate	NS	270 J	200 J	170 U	270 J
Di-n-butylphthalate		175 U	170 U	170 U	185 U
Di-n-octyl phthalate		175 U	170 U	170 U	185 U
Fluoranthene	100,000	175 U	170 U	170 U	2,900
Fluorene	30,000	175 U	170 U	170 U	390

TABLE 2
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID		**SB-10(15-20)**	**SB-11(20-25)**	**SB-12(15-20)**	**SB-11(20-25) DUP-A**
Lab Sample Number		**D4185-01**	**D4185-02**	**D4185-03**	**D4185-04**
Sampling Date	**NYS Part 375**	**9/13/2012**	**9/13/2012**	**9/13/2012**	**9/13/2012**
Matrix	**Unrestricted use**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor	**SCO**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND					
Hexachlorobenzene		175 U	170 U	170 U	185 U
Hexachlorobutadiene		175 U	170 U	170 U	185 U
Hexachlorocyclopentadiene		175 UQ	170 UQ	170 UQ	185 UQ
Hexachloroethane		175 U	170 U	170 U	185 U
Indeno(1,2,3-cd)pyrene	500	175 U	170 U	170 U	**580**
Isophorone		175 U	170 U	170 U	185 U
Naphthalene	12,000	175 U	170 U	170 U	280 J
Nitrobenzene		175 U	170 U	170 U	185 U
N-Nitroso-di-n-propylamine		175 U	170 U	170 U	185 U
N-Nitrosodiphenylamine		175 U	170 U	170 U	185 U
Pentachlorophenol		175 U	170 U	170 U	185 U
Phenanthrene	100,000	175 U	170 U	170 U	2,500
Phenol		175 U	170 U	170 U	185 U
Pyrene	100,000	175 U	170 U	170 U	2,300
Total Concentration.		270	200	0	16,990

TABLE 2
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID		**SB-14(20-25)**	**SB-15(20-25)**	**SB-16(3-4)**	**SB-15(20-25) DUP-B**
Lab Sample Number		**D4216-01**	**D4216-04**	**D4216-05**	**D4216-08**
Sampling Date	**NYS Part 375**	**9/14/2012**	**9/14/2012**	**9/14/2012**	**9/14/2012**
Matrix	**Unrestricted use**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor	**SCO**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND					
1,1-Biphenyl		175 U	170 U	185 U	170 U
1,2,4,5-Tetrachlorobenzene		175 U	170 U	185 U	170 U
1,4-Dioxane		175 U	170 U	185 U	170 U
2,2-oxybis(1-Chloropropane)		175 U	170 U	185 U	170 U
2,3,4,6-Tetrachlorophenol		175 U	170 U	185 U	170 U
2,4,5-Trichlorophenol		175 U	170 U	185 U	170 U
2,4,6-Trichlorophenol		175 U	170 U	185 U	170 U
2,4-Dichlorophenol		175 U	170 U	185 U	170 U
2,4-Dimethylphenol		175 U	170 U	185 U	170 U
2,4-Dinitrophenol		175 U	170 U	185 U	170 U
2,4-Dinitrotoluene		175 U	170 U	185 U	170 U
2,6-Dinitrotoluene		175 U	170 U	185 U	170 U
2-Chloronaphthalene		175 U	170 U	185 U	170 U
2-Chlorophenol		175 U	170 U	185 U	170 U
2-Methylnaphthalene		175 U	170 U	185 U	170 U
2-Methylphenol (o-cresol)		175 U	170 U	185 U	170 U
2-Nitroaniline		175 U	170 U	185 U	170 U
2-Nitrophenol		175 U	170 U	185 U	170 U
3,3-Dichlorobenzidine		175 U	170 U	185 U	170 U
3+4-Methylphenols (M+P cresol)		175 U	170 U	185 U	170 U
3-Nitroaniline		175 U	170 U	185 U	170 U
4,6-Dinitro-2-methylphenol		175 U	170 U	185 U	170 U
4-Bromophenyl-phenylether		175 U	170 U	185 U	170 U
4-Chloro-3-methylphenol		175 U	170 U	185 U	170 U
4-Chloroaniline		175 U	170 U	185 U	170 U
4-Chlorophenyl-phenylether		175 U	170 U	185 U	170 U
4-Nitroaniline		175 U	170 U	185 U	170 U

TABLE 2
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID		**SB-14(20-25)**	**SB-15(20-25)**	**SB-16(3-4)**	**SB-15(20-25) DUP-B**
Lab Sample Number		**D4216-01**	**D4216-04**	**D4216-05**	**D4216-08**
Sampling Date	**NYS Part 375**	**9/14/2012**	**9/14/2012**	**9/14/2012**	**9/14/2012**
Matrix	**Unrestricted use**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor	**SCO**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND					
4-Nitrophenol		175 U	170 U	185 U	170 U
Acenaphthene	20,000	175 U	170 U	185 U	170 U
Acenaphthylene		175 U	170 U	185 U	170 U
Acetophenone		175 U	170 U	185 U	170 U
Anthracene	100,000	175 U	170 U	240 J	170 U
Atrazine		175 U	170 U	185 U	170 U
Benzaldehyde		175 U	170 U	185 U	170 U
Benzo(a)anthracene	1,000	175 U	170 U	560	170 U
Benzo(a)pyrene	1,000	175 U	170 U	540	170 U
Benzo(b)fluoranthene	1,000	175 U	170 U	570	170 U
Benzo(g,h,i)perylene	100,000	175 U	170 U	370	170 U
Benzo(k)fluoranthene	800	175 U	170 U	200 J	170 U
bis(2-Chloroethoxy)methane		175 U	170 U	185 U	170 U
bis(2-Chloroethyl)ether		175 U	170 U	185 U	170 U
bis(2-Ethylhexyl)phthalate		175 U	170 U	185 U	170 U
Butylbenzylphthalate		175 U	170 U	185 U	170 U
Caprolactam		175 U	170 U	185 U	170 U
Carbazole	NS	175 U	170 U	185 U	170 U
Chrysene	1,000	175 U	170 U	520	170 U
Dibenz(a,h)anthracene		175 U	170 U	185 U	170 U
Dibenzofuran	NS	175 U	170 U	185 U	170 U
Diethylphthalate		175 U	170 U	185 U	170 U
Dimethylphthalate	NS	260 J	310 J	310 J	310 J
Di-n-butylphthalate		175 U	170 U	185 U	170 U
Di-n-octyl phthalate		175 U	170 U	185 U	170 U
Fluoranthene	100,000	175 U	170 U	930	170 U
Fluorene	30,000	175 U	170 U	185 U	170 U

TABLE 2
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL

Sample ID		**SB-14(20-25)**	**SB-15(20-25)**	**SB-16(3-4)**	**SB-15(20-25) DUP-B**
Lab Sample Number		**D4216-01**	**D4216-04**	**D4216-05**	**D4216-08**
Sampling Date	**NYS Part 375**	**9/14/2012**	**9/14/2012**	**9/14/2012**	**9/14/2012**
Matrix	**Unrestricted use**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor	**SCO**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND					
Hexachlorobenzene		175 U	170 U	185 U	170 U
Hexachlorobutadiene		175 U	170 U	185 U	170 U
Hexachlorocyclopentadiene		175 UQ	170 UQ	185 UQ	170 UQ
Hexachloroethane		175 U	170 U	185 U	170 U
Indeno(1,2,3-cd)pyrene	500	175 U	170 U	320 J	170 U
Isophorone		175 U	170 U	185 U	170 U
Naphthalene	12,000	175 U	170 U	185 U	170 U
Nitrobenzene		175 U	170 U	185 U	170 U
N-Nitroso-di-n-propylamine		175 U	170 U	185 U	170 U
N-Nitrosodiphenylamine		175 U	170 U	185 U	170 U
Pentachlorophenol		175 U	170 U	185 U	170 U
Phenanthrene	100,000	175 U	170 U	970	170 U
Phenol		175 U	170 U	185 U	170 U
Pyrene	100,000	175 U	170 U	1,100	170 U
Total Concentration.		260	310	6630	310

TABLE 3
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
METALS IN SOIL

Sample ID	**NYS Part 375 Unrestricted use SCO**	**SB-10(15-20)**		**SB-11(20-25)**		**SB-12(15-20)**		**SB-11(20-25) DUPA**	
Lab Sample Number		**D4185-01**		**D4185-02**		**D4185-03**		**D4185-04**	
Sampling Date		**9/13/2012**		**9/13/2012**		**9/13/2012**		**9/13/2012**	
Matrix		**SOIL**		**SOIL**		**SOIL**		**SOIL**	
Dilution Factor		**1**		**1**		**1**		**1**	
Units		**mg/Kg**		**mg/Kg**		**mg/Kg**		**mg/Kg**	
COMPOUND									
Aluminum	NS	1420		2490		1040		2990	
Antimony	NS	0.98	U	0.96	U	0.885	U	0.95	U
Arsenic	13	0.39	U	0.385	U	0.355	U	0.38	U
Barium	350	13.7		12.9		8.86		17.2	
Beryllium	7	0.08	J	0.09	J	0.05	J	0.11	J
Cadmium	2.5	0.12	U	0.115	U	0.105	U	0.115	U
Calcium	NS	130		2430		104		7630	
Chromium, total	NS	8.17		11.9		16.3		43	
Trivalent Chromium	30	8.17		11.9		16.3		**43**	
Hexavalent Chromium	1	0.21	U	0.206	U	0.204	U	0.222	U
Cobalt	NS	2.15		2.14		1.47		3.33	
Copper	50	4.52		6.73		6.4		13.1	
Iron	NS	7860		6270		4360		8960	
Lead	63	1.57		2.01		0.95		3.8	
Magnesium	NS	510	N	738	N	324	N	1180	N
Manganese	1,600	181		115		88.2		132	
Mercury	0.18	0.005	U	0.005	U	0.003	J	0.005	U
Nickel	30	5.46		9.34		4.8		9.25	
Potassium	NS	424		507		289		551	
Selenium	3.9	0.78	J	0.53	J	0.355	U	0.87	
Silver	2.0	0.195	U	0.19	U	0.175	U	0.19	U
Sodium	NS	71.6	J	67	J	32	J	96.7	
Thallium	NS	0.785	U	0.77	U	0.705	U	0.76	U
Vanadium	NS	5.06		5.59		2.64		10.5	
Zinc	109	12.4		12.6		8.75		19	

TABLE 3
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
METALS IN SOIL

Sample ID		**SB-14(20-25)**		**SB-15(20-25)**		**SB-16(3-4)**		**SB-15(20-25) DUPB**	
Lab Sample Number		**D4216-01**		**D4216-04**		**D4216-05**		**D4216-08**	
Sampling Date	**NYS Part 375**	**9/14/2012**		**9/14/2012**		**9/14/2012**		**9/14/2012**	
Matrix	**Unrestricted use**	**SOIL**		**SOIL**		**SOIL**		**SOIL**	
Dilution Factor	**SCO**	**1**		**1**		**1**		**1**	
Units		**mg/Kg**		**mg/Kg**		**mg/Kg**		**mg/Kg**	
COMPOUND									
Aluminum	NS	1780		2090		9010		2540	
Antimony	NS	0.915	U	0.88	U	1.02	U	0.93	U
Arsenic	13	0.365	U	1.09		6.06		2.12	
Barium	350	12.5		17.2		26.1		18.2	
Beryllium	7	0.09	J	0.08	J	0.33		0.1	J
Cadmium	2.5	0.11	U	0.105	U	0.125	U	0.11	U
Calcium	NS	755		361		1130		198	
Chromium, total	NS	13.3		13.2		14.7		10.8	
Trivalent Chromium	30	0.1	J	0.202	U	0.222	U	0.204	U
Hexavalent Chromium	1	**13.2**		**13.2**		**14.7**		**10.8**	
Cobalt	NS	2.74		3.57		6.22		3.4	
Copper	50	5.76		6.46		11.1		8.71	
Iron	NS	7840		7170		17000		21000	
Lead	63	2.12		1.86		15.4		1.77	
Magnesium	NS	862		872		1560		1040	
Manganese	1,600	121		132		188		207	
Mercury	0.18	0.0055	U	0.005	U	0.078		0.005	U
Nickel	30	7.01		8.49		13.6		8.7	
Potassium	NS	421		568		587		933	
Selenium	3.9	0.62	J	0.81		2.24		1.89	
Silver	2.0	0.185	U	0.15	J	0.51		0.56	
Sodium	NS	128		92.7		48.1	J	40.4	J
Thallium	NS	0.73	U	0.705	U	0.82	U	1.1	J
Vanadium	NS	5.07		5.77		15.7		8.14	
Zinc	109	16.9		15.2		34.8		23.4	

TABLE 4
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
PESTICIDES IN SOIL

Sample ID	NYS Part 375 Unrestricted use SCO	SB-10(15-20)	SB-11(20-25)	SB-12(15-20)	SB-11(20-25) DUPA	SB-14(20-25)	SB-15(20-25)	SB-16(3-4)	SB-15(20-25) DUPB
Lab Sample Number		**D4185-01**	**D4185-02**	**D4185-03**	**D4185-04**	**D4216-01**	**D4216-04**	**D4216-05**	**D4216-08**
Sampling Date		**9/13/2012**	**9/13/2012**	**9/13/2012**	**9/13/2012**	**9/14/2012**	**9/14/2012**	**9/14/2012**	**9/14/2012**
Matrix		**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor		**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND									
4,4-DDD	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
4,4-DDE	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
4,4-DDT	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
Aldrin	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
alpha-BHC	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
alpha-Chlordane	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
beta-BHC	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
delta-BHC	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
Dieldrin	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
Endosulfan I	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
Endosulfan II	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
Endosulfan Sulfate	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
Endrin	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
Endrin aldehyde	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
Endrin ketone	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
gamma-BHC	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
gamma-Chlordane	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
Heptachlor	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
Heptachlor epoxide	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
Methoxychlor	--	0.9 U	0.9 U	0.85 U	0.95 U	0.9 U	0.85 U	0.95 U	0.85 U
Toxaphene	--	9 U	9 U	8.5 U	9.5 U	9 U	8.5 U	9.5 U	8.5 U
Total Concentration.		0	0	0	0	0	0	0	0

TABLE 5
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
PCBs IN SOIL

Sample ID		SB-10(15-20)	SB-11(20-25)	SB-12(15-20)	SB-11(20-25) DUPA	SB-14(20-25)	SB-15(20-25)	SB-16(3-4)	SB-15(20-25) DUPB
Lab Sample Number		**D4185-01**	**D4185-02**	**D4185-03**	**D4185-04**	**D4216-01**	**D4216-04**	**D4216-05**	**D4216-08**
Sampling Date	**NYS Part 375**	**9/13/2012**	**9/13/2012**	**9/13/2012**	**9/13/2012**	**9/14/2012**	**9/14/2012**	**9/14/2012**	**9/14/2012**
Matrix	**Unrestricted**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Dilution Factor	**use SCO**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Units		**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
COMPOUND									
Aroclor-1016	--	9 U	9 U	8.5 U	9.5 U	9 U	8.5 U	9.5 U	8.5 U
Aroclor-1221	--	9 U	9 U	8.5 U	9.5 U	9 U	8.5 U	9.5 U	8.5 U
Aroclor-1232	--	9 U	9 U	8.5 U	9.5 U	9 U	8.5 U	9.5 U	8.5 U
Aroclor-1242	--	9 U	9 U	8.5 U	9.5 U	9 U	8.5 U	9.5 U	8.5 U
Aroclor-1248	--	9 U	9 U	8.5 U	9.5 U	9 U	8.5 U	9.5 U	8.5 U
Aroclor-1254	--	9 U	9 U	8.5 U	9.5 U	9 U	8.5 U	9.5 U	8.5 U
Aroclor-1260	100	9 U	9 U	8.5 U	11 J	9 U	8.5 U	9.5 U	8.5 U
Total Concentration.		0	0	0	11	0	0	0	0

TABLE 6
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Sample ID		**MW-1**		**MW-2**		**MW-3**		**MW-4**		**MW-3/DUP**	
Lab Sample Number	**NYS GW Stardards /guidance values**	**D4379-01**		**D4379-02**		**D4379-05**		**D4379-06**		**D4379-07**	
Sampling Date		**9/27/2012**		**9/27/2012**		**9/27/2012**		**9/27/2012**		**9/27/2012**	
Matrix		**WATER**		**WATER**		**WATER**		**WATER**		**WATER**	
Dilution Factor		**1**		**1**		**1**		**1**		**1**	
Units		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
COMPOUND											
1,1,1-Trichloroethane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichlorotrifluoroethane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethene	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dibromo-3-Chloropropane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dibromoethane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichlorobenzene	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,3-Dichlorobenzene	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,4-Dichlorobenzene	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,4-Dioxane	--	10	U	10	U	10	U	10	U	10	U
2-Butanone	--	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
2-Hexanone	--	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
4-Methyl-2-Pentanone	--	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Acetone	--	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Benzene	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromochloromethane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromodichloromethane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromoform	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromomethane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Carbon Disulfide	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U

TABLE 6
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Sample ID	NYS GW Stardards /guidance values	MW-1	MW-2	MW-3	MW-4	MW-3/DUP
Lab Sample Number		D4379-01	D4379-02	D4379-05	D4379-06	D4379-07
Sampling Date		9/27/2012	9/27/2012	9/27/2012	9/27/2012	9/27/2012
Matrix		WATER	WATER	WATER	WATER	WATER
Dilution Factor		1	1	1	1	1
Units		ug/L	ug/L	ug/L	ug/L	ug/L
Carbon Tetrachloride	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	7	0.5 U	0.5 U	1.3	0.5 U	1.3
Chloromethane	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethyl Benzene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m/p-Xylenes	--	1 U	1 U	1 U	1 U	1 U
Methyl Acetate	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl Ether	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Butylbenzene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-propylbenzene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
t-1,3-Dichloropropene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
tert-Butylbenzene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	2	1.4	1.1	2	0.91 J
Toluene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Total Xylenes	--	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
trans-1,2-Dichloroethene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 6
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Sample ID	**NYS GW Stardards /guidance values**	**MW-1**		**MW-2**		**MW-3**		**MW-4**		**MW-3/DUP**	
Lab Sample Number		**D4379-01**		**D4379-02**		**D4379-05**		**D4379-06**		**D4379-07**	
Sampling Date		**9/27/2012**		**9/27/2012**		**9/27/2012**		**9/27/2012**		**9/27/2012**	
Matrix		**WATER**		**WATER**		**WATER**		**WATER**		**WATER**	
Dilution Factor		**1**		**1**		**1**		**1**		**1**	
Units		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
Trichlorofluoromethane	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Vinyl Chloride	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Total Concentration.		2		1.4		2.4		2		2.21	

TABLE 7
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
SEMI-VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Sample ID		MW-1		MW-2		MW-3		MW-4		MW-3/DUP	
Lab Sample Number	NYS GW Stardards /guidance values	D4379-01		D4379-02		D4379-05		D4379-06		D4379-07	
Sampling Date		9/27/2012		9/27/2012		9/27/2012		9/27/2012		9/27/2012	
Matrix		WATER		WATER		WATER		WATER		WATER	
Dilution Factor		1		1		1		1		1	
Units		ug/L		ug/L		ug/L		ug/L		ug/L	
COMPOUND											
1,1-Biphenyl	--	5	U	5	U	5	U	5	U	5	U
1,2,4,5-Tetrachlorobenzene	--	5	U	5	U	5	U	5	U	5	U
1,4-Dioxane	--	5	U	5	U	5	U	5	U	5	U
2,2-oxybis(1-Chloropropane)	--	5	U	5	U	5	U	5	U	5	U
2,3,4,6-Tetrachlorophenol	--	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	--	5	U	5	U	5	U	5	U	5	U
2,4,6-Trichlorophenol	--	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	--	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	--	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrophenol	--	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrotoluene	--	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	--	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	--	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	--	5	U	5	U	5	U	5	U	5	U
2-Methylnaphthalene	--	5	U	5	U	5	U	5	U	5	U
2-Methylphenol (o-cresol)	--	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	--	5	U	5	U	5	U	5	U	5	U
2-Nitrophenol	--	5	U	5	U	5	U	5	U	5	U
3,3-Dichlorobenzidine	--	5	U	5	U	5	U	5	U	5	U
3+4-Methylphenols (m+p-cresol)	--	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	--	5	U	5	U	5	U	5	U	5	U
4,6-Dinitro-2-methylphenol	--	5	U	5	U	5	U	5	U	5	U
4-Bromophenyl-phenylether	--	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methylphenol	--	5	U	5	U	5	U	5	U	5	U
4-Chloroaniline	--	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl-phenylether	--	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	--	5	U	5	U	5	U	5	U	5	U
4-Nitrophenol	--	5	U	5	U	5	U	5	U	5	U

TABLE 7
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
SEMI-VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Sample ID		**MW-1**		**MW-2**		**MW-3**		**MW-4**		**MW-3/DUP**	
Lab Sample Number	**NYS GW Stardards /guidance values**	**D4379-01**		**D4379-02**		**D4379-05**		**D4379-06**		**D4379-07**	
Sampling Date		**9/27/2012**		**9/27/2012**		**9/27/2012**		**9/27/2012**		**9/27/2012**	
Matrix		**WATER**		**WATER**		**WATER**		**WATER**		**WATER**	
Dilution Factor		**1**		**1**		**1**		**1**		**1**	
Units		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
COMPOUND											
Acenaphthene	--	5	U	5	U	5	U	5	U	5	U
Acenaphthylene	--	5	U	5	U	5	U	5	U	5	U
Acetophenone	--	5	U	5	U	5	U	5	U	5	U
Anthracene	--	5	U	5	U	5	U	5	U	5	U
Atrazine	--	5	U	5	U	5	U	5	U	5	U
Benzaldehyde	--	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	--	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	--	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	--	5	U	5	U	5	U	5	U	5	U
Benzo(g,h,i)perylene	--	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	--	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	--	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl)ether	--	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	--	5	U	5	U	5	U	5	U	5	U
Butylbenzylphthalate	--	5	U	5	U	5	U	5	U	5	U
Caprolactam	--	5	U	5	U	5	U	5	U	5	U
Carbazole	--	5	U	5	U	5	U	5	U	5	U
Chrysene	--	5	U	5	U	5	U	5	U	5	U
Dibenz(a,h)anthracene	--	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	--	5	U	5	U	5	U	5	U	5	U
Diethylphthalate	--	5	U	5	U	5	U	5	U	5	U
Dimethylphthalate	--	5	U	5	U	5	U	5	U	5	U
Di-n-butylphthalate	--	5	U	5	U	5	U	5	U	5	U
Di-n-octyl phthalate	--	5	U	5	U	5	U	5	U	5	U
Fluoranthene	--	5	U	5	U	5	U	5	U	5	U
Fluorene	--	5	U	5	U	5	U	5	U	5	U
Hexachlorobenzene	--	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	--	5	U	5	U	5	U	5	U	5	U

TABLE 7
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
SEMI-VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Sample ID		**MW-1**		**MW-2**		**MW-3**		**MW-4**		**MW-3/DUP**	
Lab Sample Number	**NYS GW Stardards /guidance values**	**D4379-01**		**D4379-02**		**D4379-05**		**D4379-06**		**D4379-07**	
Sampling Date		**9/27/2012**		**9/27/2012**		**9/27/2012**		**9/27/2012**		**9/27/2012**	
Matrix		**WATER**		**WATER**		**WATER**		**WATER**		**WATER**	
Dilution Factor		**1**		**1**		**1**		**1**		**1**	
Units		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
COMPOUND											
Hexachlorocyclopentadiene	--	5	UQ	5	UQ	5	UQ	5	UQ	5	UQ
Hexachloroethane	--	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-cd)pyrene	--	5	U	5	U	5	U	5	U	5	U
Isophorone	--	5	U	5	U	5	U	5	U	5	U
Naphthalene	--	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	--	5	U	5	U	5	U	5	U	5	U
N-Nitroso-di-n-propylamine	--	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	--	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	--	5	U	5	U	5	U	5	U	5	U
Phenanthrene	--	5	U	5	U	5	U	5	U	5	U
Phenol	--	5	U	5	U	5	U	5	U	5	U
Pyrene	--	5	U	5	U	5	U	5	U	5	U
Total Concentration.		0		0		0		0		0	

TABLE 8
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
METALS IN GROUNDWATER

Sample ID	NYS GW Stardards /guidance values	MW-1		MW-2		MW-3		MW-4		MW-3/DUP	
Lab Sample Number		D4379-01		D4379-02		D4379-05		D4379-06		D4379-07	
Sampling Date		9/27/2012		9/27/2012		9/27/2012		9/27/2012		9/27/2012	
Matrix		WATER		WATER		WATER		WATER		WATER	
Dilution Factor		1		1		1		1		1	
Units		ug/L		ug/L		ug/L		ug/L		ug/L	
COMPOUND											
Aluminum	--	48.5	J	47.8	J	51.5		69.9		30.7	J
Antimony	--	12.5	U	12.5	U	12.5	U	12.5	U	12.5	U
Arsenic	25	5	U	5	U	5	U	5	U	5	U
Barium	1000	36.2	J	13.1	J	89.1		10.9	J	89.9	
Beryllium	--	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Cadmium	--	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Calcium	--	9,570		3,750		29,300		30,700		29,100	
Chromium, Total	NS	2.5	U	1.19	J	2.5	U	2.5	U	2.5	U
Hexavalent Chromium	50	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U
Trivalent Chromium	NS	0.01	U	1.19		0.01	U	0.01	U	0.01	U
Cobalt	--	7.5	U	7.5	U	7.5	U	7.5	U	7.5	U
Copper	200	5	U	5	U	3.52	J	5	U	2.94	J
Iron	--	43.6	J	287		83.6		813		68.9	
Lead	25	3	U	3	U	3	U	5.46	J	3	U
Magnesium	--	1,310		294	J	3,540		6,390		3,470	
Manganese	300	234		245		72.6		**1,030**		71.3	
Mercury	0.7	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	100	10	U	10	U	10	U	10	U	10	U
Potassium	--	3,450		1,170		3,660		3,020		3,550	
Selenium	10	5	U	5	U	5.46	J	5	U	5	U
Silver	50	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Sodium		4,870		20,800		42,100		16,300		42,300	
Thallium	--	10	U	10	U	10	U	10	U	10	U
Vanadium	--	10	U	10	U	10	U	10	U	10	U
Zinc	2000	10	U	6.7	J	10	U	15	J	14.9	J

TABLE 9
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
PESTICIDES IN GROUNDWATER

Sample ID	**NYS GW Stardards /guidance values**	**MW-1**	**MW-2**	**MW-3**	**MW-4**	**MW-3/DUP**
Lab Sample Number		**D4379-01**	**D4379-02**	**D4379-05**	**D4379-06**	**D4379-07**
Sampling Date		**9/27/2012**	**9/27/2012**	**9/27/2012**	**9/27/2012**	**9/27/2012**
Matrix		**WATER**	**WATER**	**WATER**	**WATER**	**WATER**
Dilution Factor		**1**	**1**	**1**	**1**	**1**
Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
COMPOUND						
4,4-DDD	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
4,4-DDE	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
4,4-DDT	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
Aldrin	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
alpha-BHC	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
alpha-Chlordane	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
beta-BHC	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
delta-BHC	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
Dieldrin	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
Endosulfan I	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
Endosulfan II	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
Endosulfan Sulfate	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
Endrin	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
Endrin aldehyde	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
Endrin ketone	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
gamma-BHC	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
gamma-Chlordane	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
Heptachlor	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
Heptachlor epoxide	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
Methoxychlor	--	0.0255 U	0.0255 U	0.026 U	0.0255 U	0.025 U
Toxaphene	--	0.255 U	0.255 U	0.26 U	0.255 U	0.25 U
Total Concentration.		0	0	0	0	0

TABLE 10
SITE CHARACTERIZATION
SITE: 115 OLD COUNTRY ROAD
PCBs IN GROUNDWATER

Sample ID	**NYS GW Stardards /guidance values**	**MW-1**		**MW-2**		**MW-3**		**MW-4**		**MW-3/DUP**	
Lab Sample Number		**D4379-13**		**D4379-14**		**D4379-15**		**D4379-16**		**D4379-17**	
Sampling Date		**10/1/2012**		**10/1/2012**		**10/1/2012**		**10/1/2012**		**10/1/2012**	
Matrix		**WATER**		**WATER**		**WATER**		**WATER**		**WATER**	
Dilution Factor		**1**		**1**		**1**		**1**		**1**	
Units		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
COMPOUND											
Aroclor-1016	--	0.255	U	0.25	U	0.255	U	0.26	U	0.255	U
Aroclor-1221	--	0.255	U	0.25	U	0.255	U	0.26	U	0.255	U
Aroclor-1232	--	0.255	U	0.25	U	0.255	U	0.26	U	0.255	U
Aroclor-1242	--	0.255	U	0.25	U	0.255	U	0.26	U	0.255	U
Aroclor-1248	--	0.255	U	0.25	U	0.255	U	0.26	U	0.255	U
Aroclor-1254	--	0.255	U	0.25	U	0.255	U	0.26	U	0.255	U
Aroclor-1260	--	0.255	U	0.25	U	0.255	U	0.26	U	0.255	U
Total Concentration.		0		0		0		0		0	

TABLE 11
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
March 8, 2012

	SPRINT STORE									
Sample ID	**SSV-1**		**SSV-1DL**		**FIELD DUPLICATE**		**FIELD DUPLICATE DL**		**IA-1**	
Lab Sample Number	**D1788-02**		**D1788-02DL**		**D1788-01**		**D1788-01DL**		**D1788-03**	
Sampling Date	**3/8/2012**		**3/8/2012**		**3/8/2012**		**3/8/2012**		**3/8/2012**	
Matrix	**AIR**		**AIR**		**AIR**		**AIR**		**AIR**	
Dilution Factor	**1**		**40**		**1**		**40**		**1**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND										
1,1,1-Trichloroethane	491	E	2782	D	523	E	2564	D	0.49	
1,1,2,2-Tetrachloroethane	0.69	U	27.5	U	0.69	U	27.5	U	0.69	U
1,1,2-Trichloroethane	4.53		17.5	U	5.46		17.5	U	0.44	U
1,1,2-Trichlorotrifluoroethane	2.15	J	12.3	U	2.53	J	12.3	U	0.31	U
1,1-Dichloroethane	315	E	607	D	339	E	566	D	0.16	U
1,1-Dichloroethene	118	E	95.2	D	146	E	87.2	D	0.2	U
1,2,4-Trichlorobenzene	0.3	U	11.9	U	0.3	U	11.9	U	0.3	U
1,2,4-Trimethylbenzene	0.49	U	19.7	U	0.49	U	19.7	U	0.49	U
1,2-Dibromoethane	0.54	U	21.5	U	0.54	U	21.5	U	0.54	U
1,2-Dichlorobenzene	0.42	U	16.8	U	0.42	U	16.8	U	0.42	U
1,2-Dichloroethane	0.28	U	11.3	U	0.28	U	11.3	U	0.28	U
1,2-Dichloropropane	0.28	U	11.1	U	0.28	U	11.1	U	0.28	U
1,3,5-Trimethylbenzene	0.44	U	17.7	U	0.44	U	17.7	U	0.44	U
1,3-Butadiene	0.2	U	7.96	U	0.2	U	7.96	U	0.2	U
1,3-Dichlorobenzene	0.48	U	19.2	U	0.48	U	19.2	U	0.48	U
1,4-Dichlorobenzene	0.36	U	14.4	U	0.36	U	14.4	U	0.36	U
1,4-Dioxane	0.32	U	13	U	0.32	U	13	U	0.32	U
2,2,4-Trimethylpentane	0.19	U	7.47	U	0.19	U	7.47	U	0.19	U
2-Butanone	9.73		11.8	U	10.6		11.8	U	1	J
2-Chlorotoluene	0.52	U	20.7	U	0.52	U	20.7	U	0.52	U
4-Ethyltoluene	0.39	U	15.7	U	0.39	U	15.7	U	0.39	U
4-Methyl-2-Pentanone	1.43	J	9.84	U	1.31	J	9.84	U	1.43	J
Acetone	38	E	61.8	D	45.1	E	47.5	D	14.2	
Allyl Chloride	0.16	U	6.26	U	0.16	U	6.26	U	0.16	U
Benzene	1.21	J	5.11	U	1.37	J	5.11	U	0.13	U

TABLE 11
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
March 8, 2012

	SPRINT STORE									
Sample ID	**SSV-1**		**SSV-1DL**		**FIELD DUPLICATE**		**FIELD DUPLICATE DL**		**IA-1**	
Lab Sample Number	**D1788-02**		**D1788-02DL**		**D1788-01**		**D1788-01DL**		**D1788-03**	
Sampling Date	**3/8/2012**		**3/8/2012**		**3/8/2012**		**3/8/2012**		**3/8/2012**	
Matrix	**AIR**		**AIR**		**AIR**		**AIR**		**AIR**	
Dilution Factor	**1**		**40**		**1**		**40**		**1**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND										
Bromodichloromethane	0.33	U	13.4	U	0.33	U	13.4	U	0.33	U
Bromoethene	0.13	U	5.25	U	0.13	U	5.25	U	0.13	U
Bromoform	0.52	U	20.7	U	0.52	U	20.7	U	0.52	U
Bromomethane	0.12	U	4.66	U	0.12	U	4.66	U	0.12	U
Carbon Disulfide	0.16	U	6.23	U	0.16	U	6.23	U	0.16	U
Carbon Tetrachloride	0.19	U	7.55	U	0.19	U	7.55	U	0.5	
Chlorobenzene	0.41	U	16.6	U	0.41	U	16.6	U	0.41	U
Chloroethane	0.18	U	7.39	U	0.18	U	7.39	U	0.18	U
Chloroform	19.5		3.91	U	24.4		3.91	U	0.1	U
Chloromethane	0.6	J	4.96	U	0.5	J	4.96	U	0.72	J
cis-1,2-Dichloroethene	0.24	U	9.52	U	0.24	U	9.52	U	0.24	U
cis-1,3-Dichloropropene	0.27	U	10.9	U	0.27	U	10.9	U	0.27	U
Cyclohexane	0.76	J	11	U	0.28	U	11	U	0.28	U
Dibromochloromethane	0.43	U	17	U	0.43	U	17	U	0.43	U
Dichlorodifluoromethane	1.29	J	7.91	U	1.19	J	7.91	U	1.48	J
Dichlorotetrafluoroethane	0.28	U	11.2	U	0.28	U	11.2	U	0.28	U
Ethyl Benzene	0.35	U	13.9	U	0.35	U	13.9	U	0.35	U
Heptane	0.25	U	9.84	U	0.25	U	9.84	U	0.25	U
Hexachloro-1,3-Butadiene	0.85	U	34.1	U	0.85	U	34.1	U	0.85	U
Hexane	4.93		5.64	U	5.64		5.64	U	4.58	
m/p-Xylene	1.78	J	19.1	U	2.43	J	19.1	U	1.04	J
Methyl Methacrylate	0.41	U	16.4	U	0.41	U	16.4	U	0.41	U
Methyl tert-Butyl Ether	0.18	U	7.21	U	0.18	U	7.21	U	0.18	U
Methylene Chloride	1.53	J	32	JD	6.6		6.95	U	1.77	
o-Xylene	0.3	U	12.2	U	0.3	U	12.2	U	0.3	U

TABLE 11
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
March 8, 2012

	SPRINT STORE									
Sample ID	**SSV-1**		**SSV-1DL**		**FIELD DUPLICATE**		**FIELD DUPLICATE DL**		**IA-1**	
Lab Sample Number	**D1788-02**		**D1788-02DL**		**D1788-01**		**D1788-01DL**		**D1788-03**	
Sampling Date	**3/8/2012**		**3/8/2012**		**3/8/2012**		**3/8/2012**		**3/8/2012**	
Matrix	**AIR**		**AIR**		**AIR**		**AIR**		**AIR**	
Dilution Factor	**1**		**40**		**1**		**40**		**1**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND										
Styrene	0.3	U	11.9	U	0.3	U	11.9	U	0.3	U
t-1,3-Dichloropropene	0.32	U	12.7	U	0.32	U	12.7	U	0.32	U
tert-Butyl alcohol	0.3	U	12.1	U	0.3	U	12.1	U	0.3	U
Tetrachloroethene	1084	E	2169	D	1152	E	1898	D	2.51	
Tetrahydrofuran	0.74	J	9.44	U	0.88	J	9.44	U	0.24	U
Toluene	6.03		7.54	U	5.65		7.54	U	4.15	
trans-1,2-Dichloroethene	2.85		9.52	U	3.57		9.52	U	0.24	U
Trichloroethene	26.9		15	D	32.2		12.9	JD	0.16	U
Trichlorofluoromethane	18.5		8.99	U	21.4		8.99	U	5.62	
Vinyl Chloride	0.18	U	7.16	U	0.18	U	7.16	U	0.18	U
Total Concentration.	2150.46		5762		2330.83		5175.6		39.49	

TABLE 11
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
March 8, 2012

	TIGER SCHULMANN				OUTDOOR
Sample ID	**SSV-2**	**SSV-2DL**	**SSV-2DL2**	**IA-2**	**AA-1**
Lab Sample Number	**D1788-06**	**D1788-06DL**	**D1788-06DL2**	**D1788-05**	**D1788-04**
Sampling Date	**3/8/2012**	**3/8/2012**	**3/8/2012**	**3/8/2012**	**3/8/2012**
Matrix	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**
Dilution Factor	**1**	**10**	**200**	**1**	**1**
Units	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**
COMPOUND					
1,1,1-Trichloroethane	709 E	3382 ED	7638 D	0.49	0.16 U
1,1,2,2-Tetrachloroethane	0.69 U	6.87 U	137 U	0.69 U	0.69 U
1,1,2-Trichloroethane	0.44 U	4.36 U	87.3 U	0.44 U	0.44 U
1,1,2-Trichlorotrifluoroethane	3.37 J	3.07 U	61.3 U	0.31 U	0.31 U
1,1-Dichloroethane	275 E	169 D	178 JD	0.16 U	0.16 U
1,1-Dichloroethene	269 E	210 D	206 JD	0.2 U	0.2 U
1,2,4-Trichlorobenzene	0.3 U	2.97 U	59.4 U	0.3 U	0.3 U
1,2,4-Trimethylbenzene	0.49 U	4.92 U	98.3 U	0.49 U	0.49 U
1,2-Dibromoethane	0.54 U	5.38 U	107 U	0.54 U	0.54 U
1,2-Dichlorobenzene	0.42 U	4.21 U	84.2 U	0.42 U	0.42 U
1,2-Dichloroethane	0.28 U	2.83 U	56.7 U	0.28 U	0.28 U
1,2-Dichloropropane	0.28 U	2.77 U	55.5 U	0.28 U	0.28 U
1,3,5-Trimethylbenzene	0.44 U	4.42 U	88.5 U	0.44 U	0.44 U
1,3-Butadiene	0.2 U	1.99 U	39.8 U	0.2 U	0.2 U
1,3-Dichlorobenzene	0.48 U	4.81 U	96.2 U	0.48 U	0.48 U
1,4-Dichlorobenzene	0.36 U	3.61 U	72.2 U	0.36 U	0.36 U
1,4-Dioxane	0.32 U	3.24 U	64.9 U	0.32 U	0.32 U
2,2,4-Trimethylpentane	0.19 U	1.87 U	37.4 U	0.19 U	0.19 U
2-Butanone	2.54	2.95 U	59 U	1.33 J	0.29 U
2-Chlorotoluene	0.52 U	5.18 U	103 U	0.52 U	0.52 U
4-Ethyltoluene	0.39 U	3.93 U	78.7 U	0.39 U	0.39 U
4-Methyl-2-Pentanone	0.25 U	2.46 U	49.2 U	0.25 U	0.25 U
Acetone	11.4	18.5 D	47.5 U	15.7	16.6
Allyl Chloride	0.16 U	1.57 U	31.3 U	0.16 U	0.16 U
Benzene	0.67 J	1.28 U	25.6 U	0.13 U	0.13 U

TABLE 11
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
March 8, 2012

	TIGER SCHULMANN								**OUTDOOR**	
Sample ID	**SSV-2**		**SSV-2DL**		**SSV-2DL2**		**IA-2**		**AA-1**	
Lab Sample Number	**D1788-06**		**D1788-06DL**		**D1788-06DL2**		**D1788-05**		**D1788-04**	
Sampling Date	**3/8/2012**		**3/8/2012**		**3/8/2012**		**3/8/2012**		**3/8/2012**	
Matrix	**AIR**		**AIR**		**AIR**		**AIR**		**AIR**	
Dilution Factor	**1**		**10**		**200**		**1**		**1**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND										
Bromodichloromethane	0.33	U	3.35	U	67	U	0.33	U	0.33	U
Bromoethene	0.13	U	1.31	U	26.2	U	0.13	U	0.13	U
Bromoform	0.52	U	5.17	U	103	U	0.52	U	0.52	U
Bromomethane	0.12	U	1.16	U	23.3	U	0.12	U	0.12	U
Carbon Disulfide	1.28	J	1.56	U	31.1	U	0.16	U	0.16	U
Carbon Tetrachloride	1.38		1.89	U	37.7	U	0.44		0.44	
Chlorobenzene	0.41	U	4.14	U	82.9	U	0.41	U	0.41	U
Chloroethane	0.18	U	1.85	U	36.9	U	0.18	U	0.18	U
Chloroform	33.7		25.9	D	19.5	U	0.1	U	0.1	U
Chloromethane	0.12	U	1.24	U	24.8	U	0.7	J	0.7	J
cis-1,2-Dichloroethene	0.24	U	2.38	U	47.6	U	0.24	U	0.24	U
cis-1,3-Dichloropropene	0.27	U	2.72	U	54.5	U	0.27	U	0.27	U
Cyclohexane	0.86	J	2.75	U	55.1	U	0.28	U	0.28	U
Dibromochloromethane	0.43	U	4.26	U	85.2	U	0.43	U	0.43	U
Dichlorodifluoromethane	1.34	J	1.98	U	39.6	U	1.63	J	1.43	J
Dichlorotetrafluoroethane	0.28	U	2.8	U	55.9	U	0.28	U	0.28	U
Ethyl Benzene	0.35	U	3.47	U	69.5	U	0.35	U	0.35	U
Heptane	0.25	U	2.46	U	49.2	U	0.25	U	0.98	J
Hexachloro-1,3-Butadiene	0.85	U	8.53	U	170	U	0.85	U	0.85	U
Hexane	7.75		1.41	U	28.2	U	8.46		3.38	
m/p-Xylene	2.35	J	4.78	U	95.6	U	1	J	0.48	U
Methyl Methacrylate	0.41	U	4.09	U	81.9	U	0.41	U	0.41	U
Methyl tert-Butyl Ether	0.18	U	1.8	U	36	U	0.18	U	0.18	U
Methylene Chloride	4.86		9.38	JD	34.7	U	2.01		2.01	
o-Xylene	0.3	U	3.04	U	60.8	U	0.3	U	0.3	U

TABLE 11
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
March 8, 2012

	TIGER SCHULMANN								OUTDOOR	
Sample ID	**SSV-2**		**SSV-2DL**		**SSV-2DL2**		**IA-2**		**AA-1**	
Lab Sample Number	**D1788-06**		**D1788-06DL**		**D1788-06DL2**		**D1788-05**		**D1788-04**	
Sampling Date	**3/8/2012**		**3/8/2012**		**3/8/2012**		**3/8/2012**		**3/8/2012**	
Matrix	**AIR**		**AIR**		**AIR**		**AIR**		**AIR**	
Dilution Factor	**1**		**10**		**200**		**1**		**1**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND										
Styrene	0.3	U	2.98	U	59.6	U	0.3	U	0.3	U
t-1,3-Dichloropropene	0.32	U	3.18	U	63.6	U	0.32	U	0.32	U
tert-Butyl alcohol	0.3	U	3.03	U	60.6	U	0.91	J	0.3	U
Tetrachloroethene	949	E	1763	ED	949	D	5.29		56.3	
Tetrahydrofuran	0.24	U	2.36	U	47.2	U	0.24	U	0.24	U
Toluene	3.39		1.88	U	37.7	U	10.6		10.9	
trans-1,2-Dichloroethene	5.15		2.38	U	47.6	U	0.24	U	0.24	U
Trichloroethene	29.6		14.5	D	32.2	U	0.16	J	0.16	J
Trichlorofluoromethane	67.4		61.8	D	45	U	21.4		1.46	J
Vinyl Chloride	0.18	U	1.79	U	35.8	U	0.18	U	0.18	U
Total Concentration.	2379.04		5654.08		8971		70.12		94.36	

TABLE 12
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
November 16, 2012

	CUPS FROZEN YOGURT													
Sample ID	**SSV-5**		**SSV-5DL**		**SSV-5DL2**		**DUP**		**DUPDL**		**DUPDL2**		**IA-1**	
Lab Sample Number	**D4896-03**		**D4896-03DL**		**D4896-03DL2**		**D4896-02**		**D4896-02DL**		**D4896-02DL2**		**D4896-01**	
Sampling Date	**11/16/2012**		**11/16/2012**		**11/16/2012**		**11/16/2012**		**11/16/2012**		**11/16/2012**		**11/16/2012**	
Matrix	**AIR**		**AIR**		**AIR**		**AIR**		**AIR**		**AIR**		**AIR**	
Dilution Factor	**1**		**40**		**400**		**1**		**40**		**100**		**1**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND														
1,1,1-Trichloroethane	155	E	128	D	65.5	U	56.2		48	D	54.6	D	0.16	U
1,1,2,2-Tetrachloroethane	0.69	U	27.5	U	274	U	0.69	U	27.5	U	68.7	U	0.69	U
1,1,2-Trichloroethane	0.44	U	17.5	U	174	U	0.44	U	17.5	U	43.6	U	0.44	U
1,1,2-Trichlorotrifluoroethane	0.31	U	12.3	U	122	U	0.31	U	12.3	U	30.7	U	0.46	J
1,1-Dichloroethane	0.16	U	6.48	U	64.8	U	0.65		6.48	U	16.2	U	0.16	U
1,1-Dichloroethene	0.2	U	7.93	U	79.3	U	0.2	U	7.93	U	19.8	U	0.2	U
1,2,4-Trichlorobenzene	0.3	U	11.9	U	118	U	0.3	U	11.9	U	29.7	U	0.3	U
1,2,4-Trimethylbenzene	0.93		19.7	U	196	U	0.49	U	19.7	U	49.2	U	0.93	
1,2-Dibromoethane	0.54	U	21.5	U	215	U	0.54	U	21.5	U	53.8	U	0.54	U
1,2-Dichlorobenzene	0.42	U	16.8	U	168	U	0.42	U	16.8	U	42.1	U	0.42	U
1,2-Dichloroethane	0.28	U	11.3	U	113	U	0.28	U	11.3	U	28.3	U	0.28	U
1,2-Dichloropropane	0.28	U	11.1	U	110	U	0.28	U	11.1	U	27.7	U	0.28	U
1,3,5-Trimethylbenzene	0.44	U	17.7	U	176	U	0.44	U	17.7	U	44.2	U	0.44	U
1,3-Butadiene	0.2	U	7.96	U	79.6	U	0.2	U	7.96	U	19.9	U	0.2	U
1,3-Dichlorobenzene	0.48	U	19.2	U	192	U	0.48	U	19.2	U	48.1	U	0.48	U
1,4-Dichlorobenzene	0.36	U	14.4	U	144	U	0.36	U	14.4	U	36.1	U	0.36	U
1,4-Dioxane	0.32	U	13	U	129	U	0.32	U	13	U	32.4	U	0.32	U
2,2,4-Trimethylpentane	0.19	U	7.47	U	74.7	U	0.19	U	7.47	U	18.7	U	0.19	U
2-Butanone	5.31		11.8	U	117	U	30.7		30.7	D	29.5	U	43.1	
2-Chlorotoluene	0.52	U	20.7	U	207	U	0.52	U	20.7	U	51.8	U	0.52	U
4-Ethyltoluene	0.39	U	15.7	U	157	U	0.39	U	15.7	U	39.3	U	0.39	U
4-Methyl-2-Pentanone	0.66		9.84	U	98.4	U	3.98		9.84	U	24.6	U	5.16	
Acetone	165	E	204	D	503	D	110	E	147	D	192	D	52.5	E
Allyl Chloride	0.16	U	6.26	U	62.6	U	0.16	U	6.26	U	15.6	U	0.16	U
Benzene	0.13	U	5.11	U	51.1	U	0.13	U	5.11	U	12.8	U	1.25	
Bromodichloromethane	0.33	U	13.4	U	133	U	0.33	U	13.4	U	33.5	U	0.33	U
Bromoethene	0.13	U	5.25	U	52.5	U	0.13	U	5.25	U	13.1	U	0.13	U

TABLE 12
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
November 16, 2012

	CUPS FROZEN YOGURT													
Sample ID	**SSV-5**		**SSV-5DL**		**SSV-5DL2**		**DUP**		**DUPDL**		**DUPDL2**		**IA-1**	
Lab Sample Number	**D4896-03**		**D4896-03DL**		**D4896-03DL2**		**D4896-02**		**D4896-02DL**		**D4896-02DL2**		**D4896-01**	
Sampling Date	**11/16/2012**		**11/16/2012**		**11/16/2012**		**11/16/2012**		**11/16/2012**		**11/16/2012**		**11/16/2012**	
Matrix	**AIR**		**AIR**		**AIR**		**AIR**		**AIR**		**AIR**		**AIR**	
Dilution Factor	**1**		**40**		**400**		**1**		**40**		**100**		**1**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND														
Bromoform	0.52	U	20.7	U	206	U	0.52	U	20.7	U	51.7	U	0.52	U
Bromomethane	0.12	U	4.66	U	46.6	U	0.12	U	4.66	U	11.6	U	0.12	U
Carbon Disulfide	0.16	U	6.23	U	62.3	U	0.16	U	6.23	U	15.6	U	0.16	U
Carbon Tetrachloride	0.82		7.55	U	75.5	U	0.19	U	7.55	U	18.9	U	0.44	
Chlorobenzene	0.41	U	16.6	U	165	U	0.41	U	16.6	U	41.4	U	0.41	U
Chloroethane	0.18	U	7.39	U	73.9	U	0.18	U	7.39	U	18.5	U	0.18	U
Chloroform	141	E	132	D	39.1	U	52.2		52.7	D	58.6	D	0.1	U
Chloromethane	0.12	U	4.96	U	49.6	U	0.64		4.96	U	12.4	U	1.2	
cis-1,2-Dichloroethene	12.8		9.52	U	95.2	U	4.28		9.52	U	23.8	U	0.24	U
cis-1,3-Dichloropropene	0.27	U	10.9	U	108	U	0.27	U	10.9	U	27.2	U	0.27	U
Cyclohexane	0.28	U	11	U	110	U	0.28	U	11	U	27.5	U	0.28	U
Dibromochloromethane	0.43	U	17	U	170	U	0.43	U	17	U	42.6	U	0.43	U
Dichlorodifluoromethane	1.34		7.91	U	79.1	U	1.38		7.91	U	19.8	U	1.24	
Dichlorotetrafluoroethane	0.28	U	11.2	U	111	U	0.28	U	11.2	U	28	U	0.28	U
Ethyl Benzene	0.48		13.9	U	138	U	3.52		13.9	U	34.8	U	6.25	
Heptane	0.25	U	9.84	U	98.4	U	1.6		9.84	U	24.6	U	2.38	
Hexachloro-1,3-Butadiene	0.85	U	34.1	U	341	U	0.85	U	34.1	U	85.3	U	0.85	U
Hexane	2.47		5.64	U	56.4	U	2.15		5.64	U	14.1	U	2.5	
m/p-Xylene	2.17		19.1	U	191	U	14.4		19.1	U	47.8	U	25.8	
Methyl Methacrylate	0.41	U	16.4	U	163	U	0.41	U	16.4	U	41	U	0.41	U
Methyl tert-Butyl Ether	0.18	U	7.21	U	72.1	U	0.18	U	7.21	U	18	U	0.18	U
Methylene Chloride	0.17	U	6.95	U	69.5	U	0.17	U	6.95	U	17.4	U	1.39	
o-Xylene	0.78		12.2	U	121	U	4.78		12.2	U	30.4	U	8.73	
Styrene	0.3	U	11.9	U	119	U	0.3	U	11.9	U	29.8	U	0.3	U
t-1,3-Dichloropropene	0.32	U	12.7	U	127	U	0.32	U	12.7	U	31.8	U	0.32	U
tert-Butyl alcohol	25.6		27.9	D	121	U	8.09		12.1	U	30.3	U	1.36	
Tetrachloroethene	4265	E	16478	ED	17970	D	2861	E	5221	ED	5350	D	14.8	

TABLE 12
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
November 16, 2012

	CUPS FROZEN YOGURT						
Sample ID	**SSV-5**	**SSV-5DL**	**SSV-5DL2**	**DUP**	**DUPDL**	**DUPDL2**	**IA-1**
Lab Sample Number	**D4896-03**	**D4896-03DL**	**D4896-03DL2**	**D4896-02**	**D4896-02DL**	**D4896-02DL2**	**D4896-01**
Sampling Date	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**
Matrix	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**
Dilution Factor	**1**	**40**	**400**	**1**	**40**	**100**	**1**
Units	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**
COMPOUND							
Tetrahydrofuran	0.24 U	9.44 U	94.4 U	12.8	9.44 U	23.6 U	20.8
Toluene	10.4	7.54 U	75.4 U	27.2	15.1 JD	18.8 U	41.8
trans-1,2-Dichloroethene	1.9	9.52 U	95.2 U	0.75	9.52 U	23.8 U	0.24 U
Trichloroethene	166 E	141 D	171 D	59.6	45.1 D	59.1 D	0.16 U
Trichlorofluoromethane	57.9	56.2 D	89.9 U	30.1	31.5 D	22.5 U	13.2
Vinyl Chloride	0.08 U	3.07 U	30.7 U	0.08 U	3.07 U	7.67 U	0.08 U
Total Concentration.	5015.56	17167.1	18644	3286.02	5591.1	5714.3	245.29

TABLE 12
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
November 16, 2012

		BAGEL BOSS					OUTDOOR
Sample ID	**IA-1DL**	**SSV-6**	**SSV-6DL**	**IA-2**	**IA-2DL**	**IA-2DL2**	**AA-1**
Lab Sample Number	**D4896-01DL**	**D4896-05**	**D4896-05DL**	**D4896-06**	**D4896-06DL**	**D4896-06DL2**	**D4896-04**
Sampling Date	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**
Matrix	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**
Dilution Factor	**10**	**1**	**100**	**1**	**10**	**100**	**1**
Units	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**
COMPOUND							
1,1,1-Trichloroethane	1.64 U	725 E	1707 D	0.93	1.64 U	16.4 U	0.16 U
1,1,2,2-Tetrachloroethane	6.87 U	0.69 U	68.7 U	0.69 U	6.87 U	68.7 U	0.69 U
1,1,2-Trichloroethane	4.36 U	17.6	43.6 U	0.44 U	4.36 U	43.6 U	0.44 U
1,1,2-Trichlorotrifluoroethane	3.07 U	0.31 U	30.7 U	0.31 U	3.07 U	30.7 U	0.54 J
1,1-Dichloroethane	1.62 U	13.7	16.2 U	0.16 U	1.62 U	16.2 U	0.16 U
1,1-Dichloroethene	1.98 U	39.2	43.6 D	0.2 U	1.98 U	19.8 U	0.2 U
1,2,4-Trichlorobenzene	2.97 U	0.3 U	29.7 JQ	0.3 U	2.97 U	29.7 U	0.3 U
1,2,4-Trimethylbenzene	4.92 U	0.49 U	49.2 U	1.13	4.92 U	49.2 U	0.49 J
1,2-Dibromoethane	5.38 U	0.54 U	53.8 U	0.54 U	5.38 U	53.8 U	0.54 U
1,2-Dichlorobenzene	4.21 U	0.42 U	42.1 JQ	0.42 U	4.21 U	42.1 U	0.42 U
1,2-Dichloroethane	2.83 U	0.28 U	28.3 U	0.28 U	2.83 U	28.3 U	0.28 U
1,2-Dichloropropane	2.77 U	0.28 U	27.7 U	0.28 U	2.77 U	27.7 U	0.28 U
1,3,5-Trimethylbenzene	4.42 U	0.44 U	44.2 JQ	0.44 U	4.42 U	44.2 U	0.44 U
1,3-Butadiene	1.99 U	0.2 U	19.9 U	0.2 U	1.99 U	19.9 U	0.2 U
1,3-Dichlorobenzene	4.81 U	0.48 U	48.1 JQ	0.48 U	4.81 U	48.1 U	0.48 U
1,4-Dichlorobenzene	3.61 U	0.36 U	36.1 JQ	0.36 U	3.61 U	36.1 U	0.36 U
1,4-Dioxane	3.24 U	0.32 U	32.4 U	0.32 U	3.24 U	32.4 U	0.32 U
2,2,4-Trimethylpentane	1.87 U	0.19 U	18.7 U	0.19 U	1.87 U	18.7 U	0.19 U
2-Butanone	39.8 D	5.25	29.5 U	5.37	5.6 D	29.5 U	0.53
2-Chlorotoluene	5.18 U	0.52 U	51.8 U	0.52 U	5.18 U	51.8 U	0.52 U
4-Ethyltoluene	3.93 U	0.39 U	39.3 JQ	0.39 U	3.93 U	39.3 U	0.39 U
4-Methyl-2-Pentanone	2.46 U	0.25 U	24.6 U	0.25 U	2.46 U	24.6 U	0.25 U
Acetone	57.7 D	38.2 E	23.8 U	224 E	532 ED	574 D	7.34
Allyl Chloride	1.57 U	0.16 U	15.6 U	0.16 U	1.57 U	15.6 U	0.16 U
Benzene	1.28 U	1.34	12.8 U	1.88	1.28 U	12.8 U	0.83
Bromodichloromethane	3.35 U	0.33 U	33.5 U	0.33 U	3.35 U	33.5 U	0.33 U
Bromoethene	1.31 U	0.13 U	13.1 U	0.13 U	1.31 U	13.1 U	0.13 U

TABLE 12
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
November 16, 2012

		BAGEL BOSS					OUTDOOR
Sample ID	**IA-1DL**	**SSV-6**	**SSV-6DL**	**IA-2**	**IA-2DL**	**IA-2DL2**	**AA-1**
Lab Sample Number	**D4896-01DL**	**D4896-05**	**D4896-05DL**	**D4896-06**	**D4896-06DL**	**D4896-06DL2**	**D4896-04**
Sampling Date	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**
Matrix	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**
Dilution Factor	**10**	**1**	**100**	**1**	**10**	**100**	**1**
Units	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**
COMPOUND							
Bromoform	5.17 U	0.52 U	51.7 U	0.52 U	5.17 U	51.7 U	0.52 U
Bromomethane	1.16 U	0.12 U	11.6 U	0.12 U	1.16 U	11.6 U	0.12 U
Carbon Disulfide	1.56 U	15	15.6 U	0.34	1.56 U	15.6 U	0.16 U
Carbon Tetrachloride	1.89 U	0.19 U	18.9 U	0.5	1.89 U	18.9 U	0.44
Chlorobenzene	4.14 U	0.41 U	41.4 U	0.41 U	4.14 U	41.4 U	0.41 U
Chloroethane	1.85 U	0.18 U	18.5 U	0.18 U	1.85 U	18.5 U	0.18 U
Chloroform	0.98 U	24	9.77 U	1.07	0.98 U	9.77 U	0.1 U
Chloromethane	1.24 U	0.12 U	12.4 U	0.97	1.24 U	12.4 U	0.6
cis-1,2-Dichloroethene	2.38 U	0.24 U	23.8 U	0.24 U	2.38 U	23.8 U	0.24 U
cis-1,3-Dichloropropene	2.72 U	0.27 U	27.2 U	0.27 U	2.72 U	27.2 U	0.27 U
Cyclohexane	2.75 U	0.28 U	27.5 U	0.28 U	2.75 U	27.5 U	0.28 U
Dibromochloromethane	4.26 U	0.43 U	42.6 U	0.43 U	4.26 U	42.6 U	0.43 U
Dichlorodifluoromethane	1.98 U	1.34	19.8 U	1.24	1.98 U	19.8 U	1.43
Dichlorotetrafluoroethane	2.8 U	0.28 U	28 U	0.28 U	2.8 U	28 U	0.28 U
Ethyl Benzene	3.47 JD	0.61	34.8 JQ	0.78	3.47 U	34.8 U	0.35 U
Heptane	2.46 U	0.66	24.6 U	0.25 U	2.46 U	24.6 U	0.41 J
Hexachloro-1,3-Butadiene	8.53 U	0.85 U	85.3 U	0.85 U	8.53 U	85.3 U	0.85 U
Hexane	1.41 U	3.35	14.1 U	0.14 U	1.41 U	14.1 U	3
m/p-Xylene	17.8 D	2.08	47.8 U	2.48	4.78 U	47.8 U	0.91
Methyl Methacrylate	4.09 U	0.41 U	41 U	0.41 U	4.09 U	41 U	0.41 U
Methyl tert-Butyl Ether	1.8 U	0.18 U	18 U	0.18 U	1.8 U	18 U	0.18 U
Methylene Chloride	1.74 U	0.17 U	17.4 U	11.7	17.4 D	17.4 U	1.35
o-Xylene	6.08 D	0.56	30.4 U	0.91	3.04 U	30.4 U	0.3 U
Styrene	2.98 U	0.47	29.8 JQ	0.77	2.98 U	29.8 U	0.3 U
t-1,3-Dichloropropene	3.18 U	0.32 U	31.8 JQ	0.32 U	3.18 U	31.8 U	0.32 U
tert-Butyl alcohol	3.03 U	0.3 U	30.3 U	0.3 U	3.03 U	30.3 U	0.3 U
Tetrachloroethene	12.2 D	2414 E	4204 D	2522 E	4509 ED	3485 D	0.41

TABLE 12
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
November 16, 2012

		BAGEL BOSS					OUTDOOR
Sample ID	**IA-1DL**	**SSV-6**	**SSV-6DL**	**IA-2**	**IA-2DL**	**IA-2DL2**	**AA-1**
Lab Sample Number	**D4896-01DL**	**D4896-05**	**D4896-05DL**	**D4896-06**	**D4896-06DL**	**D4896-06DL2**	**D4896-04**
Sampling Date	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**	**11/16/2012**
Matrix	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**	**AIR**
Dilution Factor	**10**	**1**	**100**	**1**	**10**	**100**	**1**
Units	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**
COMPOUND							
Tetrahydrofuran	14.8 D	0.24 U	23.6 U	0.24 U	2.36 U	23.6 U	0.24 U
Toluene	30.5 D	8.67	18.8 U	20	13.2 D	18.8 U	20.1
trans-1,2-Dichloroethene	2.38 U	4.96	23.8 U	0.24 U	2.38 U	23.8 U	0.24 U
Trichloroethene	1.61 U	44.6	43 D	1.29	1.61 U	16.1 U	0.16 U
Trichlorofluoromethane	12.4 D	321 E	483 D	14.7	14.6 D	22.5 U	1.24
Vinyl Chloride	0.77 U	0.08 U	7.67 U	0.08 U	0.77 U	7.67 U	0.08 U
Total Concentration.	194.75	3681.59	6480.6	2812.06	5091.8	4059	39.62

TABLE 13
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
December 21, 2012

	CUPS FROZEN YOGURT											
Sample ID	**SSV-5**		**SSV-5DL**		**DUP**		**DUPDL**		**IA-1**		**IA-1DL**	
Lab Sample Number	**D5316-07**		**D5316-07DL**		**D5316-08**		**D5316-08DL**		**D5316-06**		**D5316-06DL**	
Sampling Date	**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**	
Matrix	**Air**		**Air**		**Air**		**Air**		**Air**		**Air**	
Dilution Factor	**1**		**40**		**1**		**10**		**1**		**10**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND												
1,1,1-Trichloroethane	16.4		6.55	U	0.16	U	1.64	U	0.16	U	1.64	U
1,1,2,2-Tetrachloroethane	0.69	U	27.5	U	0.69	U	6.87	U	0.69	U	6.87	U
1,1,2-Trichloroethane	0.55	U	21.8	U	0.55	U	5.46	U	0.55	U	5.46	U
1,1,2-Trichlorotrifluoroethane	1		12.3	U	0.61	J	3.07	U	0.61	J	3.07	U
1,1-Dichloroethane	0.16	U	6.48	U	0.16	U	1.62	U	0.16	U	1.62	U
1,1-Dichloroethene	0.2	U	7.93	U	0.2	U	1.98	U	0.2	U	1.98	U
1,2,4-Trichlorobenzene	0.3	U	11.9	U	0.3	U	2.97	U	0.3	U	2.97	U
1,2,4-Trimethylbenzene	0.79		19.7	U	0.64		4.92	U	0.49	U	4.92	U
1,2-Dibromoethane	0.77	U	30.7	U	0.77	U	7.69	U	0.77	U	7.69	U
1,2-Dichlorobenzene	0.6	U	24	U	0.6	U	6.01	U	0.6	U	6.01	U
1,2-Dichloroethane	0.4	U	16.2	U	0.4	U	4.05	U	0.4	U	4.05	U
1,2-Dichloropropane	0.46	U	18.5	U	0.46	U	4.62	U	0.46	U	4.62	U
1,3,5-Trimethylbenzene	0.49	U	19.7	U	0.49	U	4.92	U	0.49	U	4.92	U
1,3-Butadiene	0.22	U	8.85	U	0.22	U	2.21	U	0.22	U	2.21	U
1,3-Dichlorobenzene	0.6	U	24	U	0.6	U	6.01	U	0.6	U	6.01	U
1,4-Dichlorobenzene	0.6	U	24	U	0.6	U	6.01	U	0.6	U	6.01	U
1,4-Dioxane	0.36	U	14.4	U	0.36	U	3.6	U	0.36	U	3.6	U
2,2,4-Trimethylpentane	0.19	U	7.47	U	0.47		1.87	U	0.19	U	1.87	U
2-Butanone	6.19		11.8	U	2.09		2.95	U	2.48		2.95	U
2-Chlorotoluene	0.52	U	20.7	U	0.52	U	5.18	U	0.52	U	5.18	U
4-Ethyltoluene	0.49	U	19.7	U	0.49	U	4.92	U	0.49	U	4.92	U
4-Methyl-2-Pentanone	0.53		8.2	U	0.2	U	2.05	U	0.2	U	2.05	U
Acetone	203	E	217	D	195	E	208	D	178	E	183	D
Allyl Chloride	0.16	U	6.26	U	0.16	U	1.57	U	0.16	U	1.57	U
Benzene	1.92		5.11	U	1.57		1.28	U	2.17		1.28	U
Bromodichloromethane	0.33	U	13.4	U	0.33	U	3.35	U	0.33	U	3.35	U
Bromoethene	0.13	U	5.25	U	0.13	U	1.31	U	0.13	U	1.31	U

TABLE 13
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
December 21, 2012

	CUPS FROZEN YOGURT											
Sample ID	**SSV-5**		**SSV-5DL**		**DUP**		**DUPDL**		**IA-1**		**IA-1DL**	
Lab Sample Number	**D5316-07**		**D5316-07DL**		**D5316-08**		**D5316-08DL**		**D5316-06**		**D5316-06DL**	
Sampling Date	**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**	
Matrix	**Air**		**Air**		**Air**		**Air**		**Air**		**Air**	
Dilution Factor	**1**		**40**		**1**		**10**		**1**		**10**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND												
Bromoform	0.52	U	20.7	U	0.52	U	5.17	U	0.52	U	5.17	U
Bromomethane	0.12	U	4.66	U	0.12	U	1.16	U	0.12	U	1.16	U
Carbon Disulfide	0.31		6.23	U	0.16	U	1.56	U	0.16	U	1.56	U
Carbon Tetrachloride	0.57		7.55	U	0.5		1.89	U	0.5		1.89	U
Chlorobenzene	0.46	U	18.4	U	0.46	U	4.61	U	0.46	U	4.61	U
Chloroethane	0.26	U	10.6	U	0.26	U	2.64	U	0.26	U	2.64	U
Chloroform	21.5		3.91	U	0.1	U	0.98	U	0.1	U	0.98	U
Chloromethane	0.21	U	8.26	U	0.76		2.07	U	0.72		2.07	U
cis-1,2-Dichloroethene	1.67		15.9	U	0.4	U	3.96	U	0.4	U	3.96	U
cis-1,3-Dichloropropene	0.45	U	18.2	U	0.45	U	4.54	U	0.45	U	4.54	U
Cyclohexane	0.34	U	13.8	U	0.79		3.44	U	0.79		3.44	U
Dibromochloromethane	0.43	U	17	U	0.43	U	4.26	U	0.43	U	4.26	U
Dichlorodifluoromethane	1.24		7.91	U	1.53		1.98	U	1.38		1.98	U
Dichlorotetrafluoroethane	0.28	U	11.2	U	0.28	U	2.8	U	0.28	U	2.8	U
Ethyl Benzene	0.87		17.4	U	0.43		4.34	U	0.56		4.34	U
Heptane	1.48		16.4	U	1.23		4.1	U	1.48		4.1	U
Hexachloro-1,3-Butadiene	1.07	U	42.7	U	1.07	U	10.7	U	1.07	U	10.7	U
Hexane	0.14	U	5.64	U	0.14	U	1.41	U	0.14	U	1.41	U
m/p-Xylene	4.13		34.8	U	1.65		8.69	U	1.82		8.69	U
Methyl Methacrylate	0.41	U	16.4	U	0.41	U	4.09	U	0.41	U	4.09	U
Methyl tert-Butyl Ether	0.18	U	7.21	U	0.18	U	1.8	U	0.18	U	1.8	U
Methylene Chloride	0.17	U	6.95	U	2.95		1.74	U	11.5		16.3	D
o-Xylene	1.26		17.4	U	0.65		4.34	U	0.69		4.34	U
Styrene	0.72		17	U	0.43		4.26	U	0.68		4.26	U
t-1,3-Dichloropropene	0.45	U	18.2	U	0.45	U	4.54	U	0.45	U	4.54	U
tert-Butyl alcohol	7.28		12.1	U	0.45		3.03	U	0.42		3.03	U
Tetrachloroethene	3526	E	1695	D	2.92		2.03	U	2.44		2.03	U

TABLE 13
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
December 21, 2012

	CUPS FROZEN YOGURT					
Sample ID	**SSV-5**	**SSV-5DL**	**DUP**	**DUPDL**	**IA-1**	**IA-1DL**
Lab Sample Number	**D5316-07**	**D5316-07DL**	**D5316-08**	**D5316-08DL**	**D5316-06**	**D5316-06DL**
Sampling Date	**12/21/2012**	**12/21/2012**	**12/21/2012**	**12/21/2012**	**12/21/2012**	**12/21/2012**
Matrix	**Air**	**Air**	**Air**	**Air**	**Air**	**Air**
Dilution Factor	**1**	**40**	**1**	**10**	**1**	**10**
Units	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**	**Ug/M3**
COMPOUND						
Tetrahydrofuran	1.62	11.8 U	0.41	2.95 U	0.41	2.95 U
Toluene	10.6	7.54 U	9.42	5.65 D	22.2	12.1 D
trans-1,2-Dichloroethene	0.4 U	15.9 U	0.4 U	3.96 U	0.4 U	3.96 U
Trichloroethene	26.9	6.45 U	0.16 U	1.61 U	0.16 U	1.61 U
Trichlorofluoromethane	9.55	8.99 U	2.42	2.25 U	2.36	2.25 U
Vinyl Chloride	0.08 U	3.07 U	0.08 U	0.77 U	0.08 U	0.77 U
Total Concentration.	3845.53	1912	226.92	213.65	231.21	211.4

TABLE 13
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
December 21, 2012

	BAGEL BOSS							
Sample ID	**SSV-6**		**SSV-6DL**		**IA-2**		**IA-2DL**	
Lab Sample Number	**D5316-05**		**D5316-05DL**		**D5316-04**		**D5316-04DL**	
Sampling Date	**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**	
Matrix	**Air**		**Air**		**Air**		**Air**	
Dilution Factor	**1**		**10**		**1**		**100**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND								
1,1,1-Trichloroethane	50.2		49.6	D	0.71		16.4	U
1,1,2,2-Tetrachloroethane	0.69	U	6.87	U	0.69	U	68.7	U
1,1,2-Trichloroethane	0.82		5.46	U	0.55	U	54.6	U
1,1,2-Trichlorotrifluoroethane	0.31	U	3.07	U	0.31	U	30.7	U
1,1-Dichloroethane	0.65		1.62	U	0.16	U	16.2	U
1,1-Dichloroethene	1.31		1.98	U	0.2	U	19.8	U
1,2,4-Trichlorobenzene	0.3	U	2.97	U	0.3	U	29.7	U
1,2,4-Trimethylbenzene	0.54		4.92	U	0.49	U	49.2	U
1,2-Dibromoethane	0.77	U	7.69	U	0.77	U	76.8	U
1,2-Dichlorobenzene	0.6	U	6.01	U	0.6	U	60.1	U
1,2-Dichloroethane	0.4	U	4.05	U	0.4	U	40.5	U
1,2-Dichloropropane	0.46	U	4.62	U	0.46	U	46.2	U
1,3,5-Trimethylbenzene	0.49	U	4.92	U	0.49	U	49.2	U
1,3-Butadiene	0.22	U	2.21	U	0.22	U	22.1	U
1,3-Dichlorobenzene	0.6	U	6.01	U	0.6	U	60.1	U
1,4-Dichlorobenzene	0.6	U	6.01	U	0.6	U	60.1	U
1,4-Dioxane	0.36	U	3.6	U	0.36	U	36	U
2,2,4-Trimethylpentane	0.65		1.87	U	0.61		18.7	U
2-Butanone	2.83		3.54	D	5.01		29.5	U
2-Chlorotoluene	0.52	U	5.18	U	0.52	U	51.8	U
4-Ethyltoluene	0.49	U	4.92	U	0.49	U	49.2	U
4-Methyl-2-Pentanone	0.2	U	2.05	U	1.15		20.5	U
Acetone	92.4	E	106	D	546	E	1496	D
Allyl Chloride	0.16	U	1.57	U	0.16	U	15.6	U
Benzene	1.28		1.28	U	2.04		12.8	U
Bromodichloromethane	0.33	U	3.35	U	0.33	U	33.5	U
Bromoethene	0.13	U	1.31	U	0.13	U	13.1	U

TABLE 13
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
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December 21, 2012

	BAGEL BOSS							
Sample ID	**SSV-6**		**SSV-6DL**		**IA-2**		**IA-2DL**	
Lab Sample Number	**D5316-05**		**D5316-05DL**		**D5316-04**		**D5316-04DL**	
Sampling Date	**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**	
Matrix	**Air**		**Air**		**Air**		**Air**	
Dilution Factor	**1**		**10**		**1**		**100**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND								
Bromoform	0.52	U	5.17	U	0.52	U	51.7	U
Bromomethane	0.12	U	1.16	U	0.12	U	11.6	U
Carbon Disulfide	0.44		1.56	U	0.16	U	15.6	U
Carbon Tetrachloride	0.5		1.89	U	0.5		18.9	U
Chlorobenzene	0.46	U	4.61	U	0.46	U	46	U
Chloroethane	0.26	U	2.64	U	0.26	U	26.4	U
Chloroform	1.76		0.98	U	2.73		9.77	U
Chloromethane	1.01		2.07	U	1.09		20.6	U
cis-1,2-Dichloroethene	0.4	U	3.96	U	0.4	U	39.6	U
cis-1,3-Dichloropropene	0.45	U	4.54	U	0.45	U	45.4	U
Cyclohexane	0.34	U	3.44	U	0.34	U	34.4	U
Dibromochloromethane	0.43	U	4.26	U	0.43	U	42.6	U
Dichlorodifluoromethane	1.68		1.98	U	1.43		19.8	U
Dichlorotetrafluoroethane	0.28	U	2.8	U	0.28	U	28	U
Ethyl Benzene	0.48		4.34	U	0.56		43.4	U
Heptane	0.86		4.1	U	0.41	U	41	U
Hexachloro-1,3-Butadiene	1.07	U	10.7	U	1.07	U	106	U
Hexane	0.14	U	1.41	U	0.14	U	14.1	U
m/p-Xylene	1		8.69	U	2.17		86.9	U
Methyl Methacrylate	0.41	U	4.09	U	0.41	U	41	U
Methyl tert-Butyl Ether	0.18	U	1.8	U	0.18	U	18	U
Methylene Chloride	1.56		1.74	U	1.7		17.4	U
o-Xylene	0.43	U	4.34	U	0.87		43.4	U
Styrene	0.55		4.26	U	0.43	U	42.6	U
t-1,3-Dichloropropene	0.45	U	4.54	U	0.45	U	45.4	U
tert-Butyl alcohol	0.3	U	3.03	U	0.3	U	30.3	U
Tetrachloroethene	246	E	198	D	22.4		20.3	U

TABLE 13
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
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	BAGEL BOSS							
Sample ID	**SSV-6**		**SSV-6DL**		**IA-2**		**IA-2DL**	
Lab Sample Number	**D5316-05**		**D5316-05DL**		**D5316-04**		**D5316-04DL**	
Sampling Date	**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**	
Matrix	**Air**		**Air**		**Air**		**Air**	
Dilution Factor	**1**		**10**		**1**		**100**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND								
Tetrahydrofuran	0.29	U	2.95	U	0.29	U	29.5	U
Toluene	6.41		4.15	D	13.9		18.8	U
trans-1,2-Dichloroethene	0.4	U	3.96	U	0.4	U	39.6	U
Trichloroethene	1.83		1.61	U	0.16	U	16.1	U
Trichlorofluoromethane	12.4		12.9	D	6.18		22.5	U
Vinyl Chloride	0.08	U	0.77	U	0.08	U	7.67	U
Total Concentration.	427.16		374.19		609.05		1496	

TABLE 13
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
December 21, 2012

	BABI NAILS										**OUTDOOR**	
Sample ID	**SSV-7**		**SSV-7DL**		**IA-3**		**IA-3DL**		**IA-3DL2**		**AA-1**	
Lab Sample Number	**D5316-02**		**D5316-02DL**		**D5316-01**		**D5316-01DL**		**D5316-01DL2**		**D5316-03**	
Sampling Date	**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**	
Matrix	**Air**		**Air**		**Air**		**Air**		**Air**		**Air**	
Dilution Factor	**1**		**200**		**1**		**10**		**800**		**1**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND												
1,1,1-Trichloroethane	3219	E	12003	D	1.25		1.64	U	130	U	0.16	U
1,1,2,2-Tetrachloroethane	0.69	U	137	U	0.69	U	6.87	U	549	U	0.69	U
1,1,2-Trichloroethane	0.55	U	109	U	0.55	U	5.46	U	436	U	0.55	U
1,1,2-Trichlorotrifluoroethane	18.4		61.3	U	0.31	U	3.07	U	245	U	0.46	J
1,1-Dichloroethane	647	E	566	D	0.16	U	1.62	U	129	U	0.16	U
1,1-Dichloroethene	9.52		39.6	U	0.2	U	1.98	U	158	U	0.2	U
1,2,4-Trichlorobenzene	0.3	U	59.4	U	0.3	U	2.97	U	237	U	0.3	U
1,2,4-Trimethylbenzene	0.69		98.3	U	0.79		4.92	U	393	U	0.49	U
1,2-Dibromoethane	0.77	U	153	U	0.77	U	7.69	U	614	U	0.77	U
1,2-Dichlorobenzene	0.6	U	120	U	0.6	U	6.01	U	480	U	0.6	U
1,2-Dichloroethane	0.4	U	81	U	0.4	U	4.05	U	323	U	0.4	U
1,2-Dichloropropane	0.46	U	92.4	U	0.46	U	4.62	U	369	U	0.46	U
1,3,5-Trimethylbenzene	0.49	U	98.3	U	0.49	U	4.92	U	393	U	0.49	U
1,3-Butadiene	0.22	U	44.2	U	0.22	U	2.21	U	176	U	0.22	U
1,3-Dichlorobenzene	0.6	U	120	U	0.6	U	6.01	U	480	U	0.6	U
1,4-Dichlorobenzene	0.6	U	120	U	0.6	U	6.01	U	480	U	0.6	U
1,4-Dioxane	0.36	U	72.1	U	0.36	U	3.6	U	288	U	0.36	U
2,2,4-Trimethylpentane	0.19	U	37.4	U	0.19	U	1.87	U	149	U	0.19	U
2-Butanone	23		59	U	19.2		17.7	D	235	U	0.68	
2-Chlorotoluene	0.52	U	103	U	0.52	U	5.18	U	414	U	0.52	U
4-Ethyltoluene	0.49	U	98.3	U	0.54		4.92	U	393	U	0.49	U
4-Methyl-2-Pentanone	1.68		41	U	0.2	U	2.05	U	163	U	0.2	U
Acetone	831	E	2613	D	1449	E	6413	ED	24704	D	8.08	
Allyl Chloride	0.16	U	31.3	U	0.16	U	1.57	U	125	U	0.16	U
Benzene	1.57		25.6	U	1.34		1.28	U	102	U	1.05	
Bromodichloromethane	0.33	U	67	U	0.33	U	3.35	U	267	U	0.33	U
Bromoethene	0.13	U	26.2	U	0.13	U	1.31	U	104	U	0.13	U

TABLE 13
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
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December 21, 2012

	BABI NAILS										OUTDOOR	
Sample ID	**SSV-7**		**SSV-7DL**		**IA-3**		**IA-3DL**		**IA-3DL2**		**AA-1**	
Lab Sample Number	**D5316-02**		**D5316-02DL**		**D5316-01**		**D5316-01DL**		**D5316-01DL2**		**D5316-03**	
Sampling Date	**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**	
Matrix	**Air**		**Air**		**Air**		**Air**		**Air**		**Air**	
Dilution Factor	**1**		**200**		**1**		**10**		**800**		**1**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND												
Bromoform	0.52	U	103	U	0.52	U	5.17	U	413	U	0.52	U
Bromomethane	0.12	U	23.3	U	0.12	U	1.16	U	93.2	U	0.12	U
Carbon Disulfide	2.46		31.1	U	0.16	U	1.56	U	124	U	0.16	U
Carbon Tetrachloride	0.19	U	37.7	U	0.57		1.89	U	150	U	0.5	
Chlorobenzene	0.46	U	92.1	U	0.46	U	4.61	U	368	U	0.46	U
Chloroethane	0.26	U	52.8	U	0.26	U	2.64	U	211	U	0.26	U
Chloroform	6.84		19.5	U	1.07		0.98	U	78.1	U	0.1	U
Chloromethane	0.47		41.3	U	0.89		2.07	U	165	U	0.68	
cis-1,2-Dichloroethene	0.4	U	79.3	U	0.4	U	3.96	U	317	U	0.4	U
cis-1,3-Dichloropropene	0.45	U	90.8	U	0.45	U	4.54	U	363	U	0.45	U
Cyclohexane	0.34	U	68.8	U	0.34	U	3.44	U	275	U	0.34	U
Dibromochloromethane	0.43	U	85.2	U	0.43	U	4.26	U	340	U	0.43	U
Dichlorodifluoromethane	1.53		39.6	U	1.34		1.98	U	158	U	1.34	
Dichlorotetrafluoroethane	0.28	U	55.9	U	0.28	U	2.8	U	223	U	0.28	U
Ethyl Benzene	0.65		86.9	U	0.48		4.34	U	347	U	0.43	U
Heptane	2.54		82	U	0.41	U	4.1	U	327	U	0.41	
Hexachloro-1,3-Butadiene	1.07	U	213	U	1.07	U	10.7	U	853	U	1.07	U
Hexane	0.14	U	28.2	U	0.14	U	1.41	U	112	U	0.14	U
m/p-Xylene	2.26		173	U	1.52		8.69	U	694	U	0.87	U
Methyl Methacrylate	0.41	U	81.9	U	0.41	U	4.09	U	327	U	0.41	U
Methyl tert-Butyl Ether	0.18	U	36	U	0.18	U	1.8	U	144	U	0.18	U
Methylene Chloride	6.25		34.7	U	8.69		1.74	U	138	U	5.91	
o-Xylene	0.78		86.9	U	0.56		4.34	U	347	U	0.43	U
Styrene	0.43	U	85.2	U	0.43	U	4.26	U	340	U	0.43	U
t-1,3-Dichloropropene	0.45	U	90.8	U	0.45	U	4.54	U	363	U	0.45	U
tert-Butyl alcohol	3.03		60.6	U	0.3	U	3.03	U	242	U	0.3	U
Tetrachloroethene	2.78		40.7	U	5.9		2.03	U	162	U	2.85	

TABLE 13
SITE CHARACTERIZATION
SITE : 115 OLD COUNTRY ROAD
TO-15
December 21, 2012

	BABI NAILS										OUTDOOR	
Sample ID	**SSV-7**		**SSV-7DL**		**IA-3**		**IA-3DL**		**IA-3DL2**		**AA-1**	
Lab Sample Number	**D5316-02**		**D5316-02DL**		**D5316-01**		**D5316-01DL**		**D5316-01DL2**		**D5316-03**	
Sampling Date	**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**		**12/21/2012**	
Matrix	**Air**		**Air**		**Air**		**Air**		**Air**		**Air**	
Dilution Factor	**1**		**200**		**1**		**10**		**800**		**1**	
Units	**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**		**Ug/M3**	
COMPOUND												
Tetrahydrofuran	0.29	U	59	U	0.29	U	2.95	U	235	U	0.29	U
Toluene	20.4		37.7	U	72.4	E	54.3	D	150	U	4.52	
trans-1,2-Dichloroethene	0.4	U	79.3	U	0.4	U	3.96	U	317	U	0.4	U
Trichloroethene	0.54		32.2	U	0.16	U	1.61	U	128	U	0.16	U
Trichlorofluoromethane	46.6		45	U	0.22	U	2.25	U	179	U	1.12	
Vinyl Chloride	0.08	U	15.3	U	0.08	U	0.77	U	61.4	U	0.08	U
Total Concentration.	4848.99		15182		1565.54		6485		24704		27.6	

APPENDIX A

FIGURE 1 : MONITORING WELL CONSTRUCTION LOG

Well Cap
Flushmount Curb Box
Land Surface
Clean Fill
1 Foot Below Grade
Inch Diameter Borehole
2 Inch Diameter Well Casing
Well Casing Material
Bentonite Cement
2 Feet Below Grade
45.22 Feet Below Grade
45.40 Approximate Depth to Water (ft.)
2 Inch Diameter Well Screen
pvc Well Screen Material
10 Slot Size
Filter Pack
Grain Size
55.22 Feet Below Grade

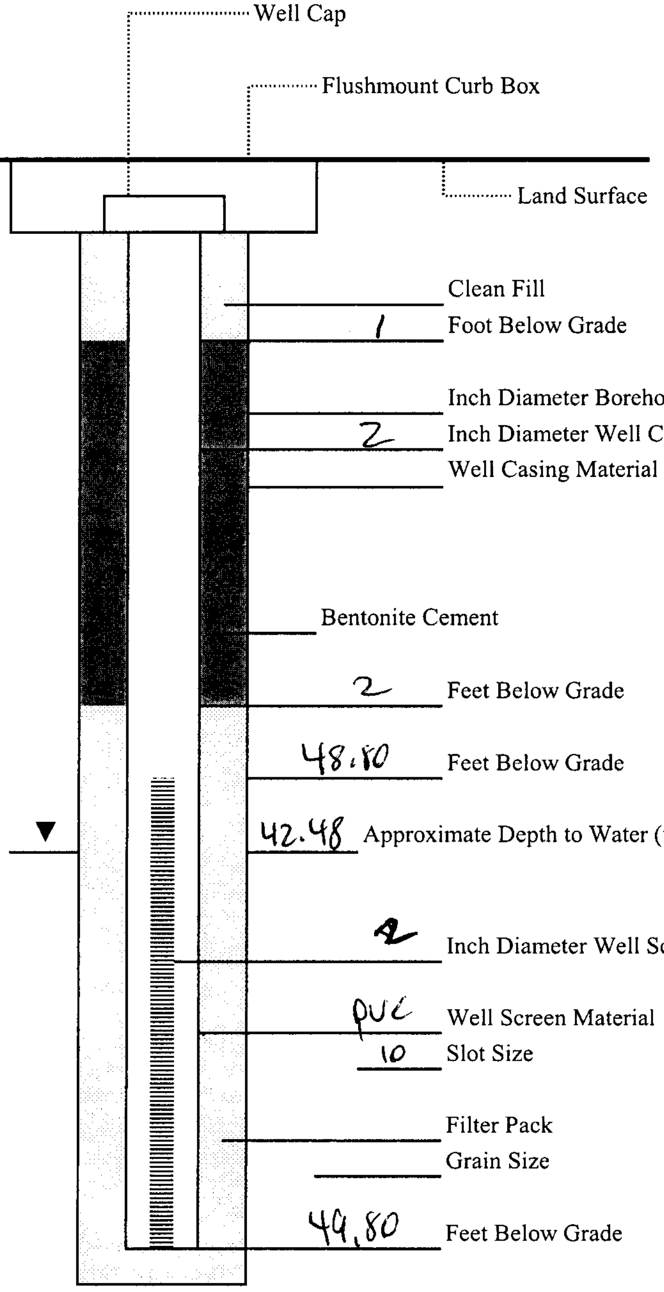
Notes:

Well Number mw-1 (Northwest rear)
NYSDEC Project
Project
Surveyor Survey Date
Land Surface Elevation
Measuring Point Elevation
Northing Easting

Installation Date 9/12/12
Drilling Contractor Tri-state Drilling
Drilling Method Direct Push
Drilling Fluid N/A
Fluid Loss During Drilling (Est) N/A

Development Techniques
Date(s) of Development
Water Removed During Development
Depth to Water (Ft. below M.P.)
Pumping Depth to Water (Ft. below M.P.)
Pumping Duration Yield gpm
Specific Capacity
Hydrogeologist
Company **NAC CONSULTANTS, INC.**

FIGURE 1 : MONITORING WELL CONSTRUCTION LOG



Clean Fill
1 Foot Below Grade
Inch Diameter Borehole
2 Inch Diameter Well Casing
Well Casing Material
Bentonite Cement
2 Feet Below Grade
48.80 Feet Below Grade
42.48 Approximate Depth to Water (ft.)
2 Inch Diameter Well Screen
PVC Well Screen Material
10 Slot Size
Filter Pack
Grain Size
49.80 Feet Below Grade

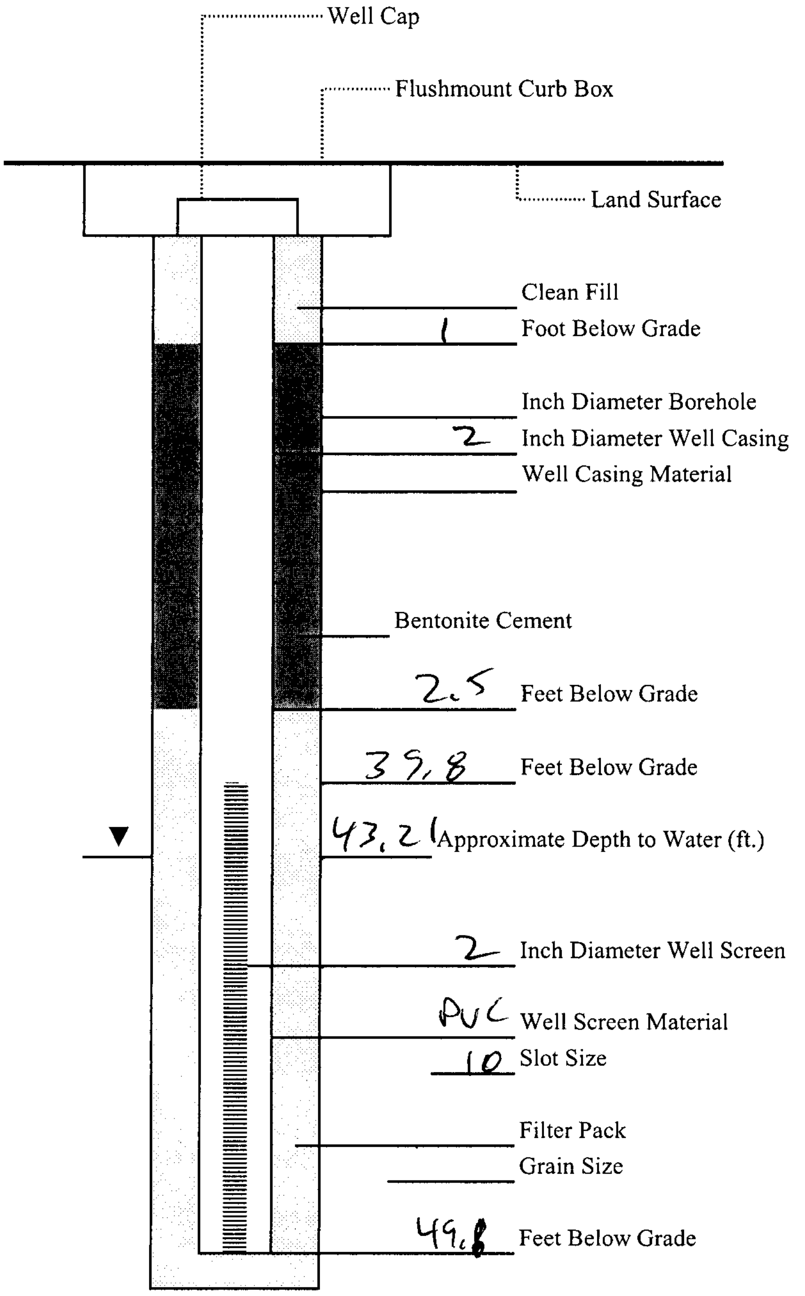
Notes:

Well Number MW-2 (Rear Northeast)
NYSDEC Project
Project
Surveyor Survey Date
Land Surface Elevation
Measuring Point Elevation
Northing Easting

Installation Date 9/12/12
Drilling Contractor Tri State Drilling
Drilling Method Direct Push
Drilling Fluid N/A
Fluid Loss During Drilling (Est) N/A

Development Techniques
Date(s) of Development
Water Removed During Development
Depth to Water (Ft. below M.P.)
Pumping Depth to Water (Ft. below M.P.)
Pumping Duration Yield gpm
Specific Capacity
Hydrogeologist
Company **NAC CONSULTANTS, INC.**

FIGURE 1 : MONITORING WELL CONSTRUCTION LOG



1 Foot Below Grade

Inch Diameter Borehole

2 Inch Diameter Well Casing

Well Casing Material

2.5 Feet Below Grade

39.8 Feet Below Grade

43.21 Approximate Depth to Water (ft.)

2 Inch Diameter Well Screen

PVC Well Screen Material

10 Slot Size

Grain Size

49.8 Feet Below Grade

Notes:

Well Number MW-3 (Front / South)

NYSDEC Project

Project

Surveyor Survey Date

Land Surface Elevation

Measuring Point Elevation

Northing Easting

Installation Date 9/12/12

Drilling Contractor TriState Drilling

Drilling Method Direct Push

Drilling Fluid N/A

Fluid Loss During Drilling (Est) N/A

Development Techniques

Date(s) of Development

Water Removed During Development

Depth to Water (Ft. below M.P.)

Pumping Depth to Water (Ft. below M.P.)

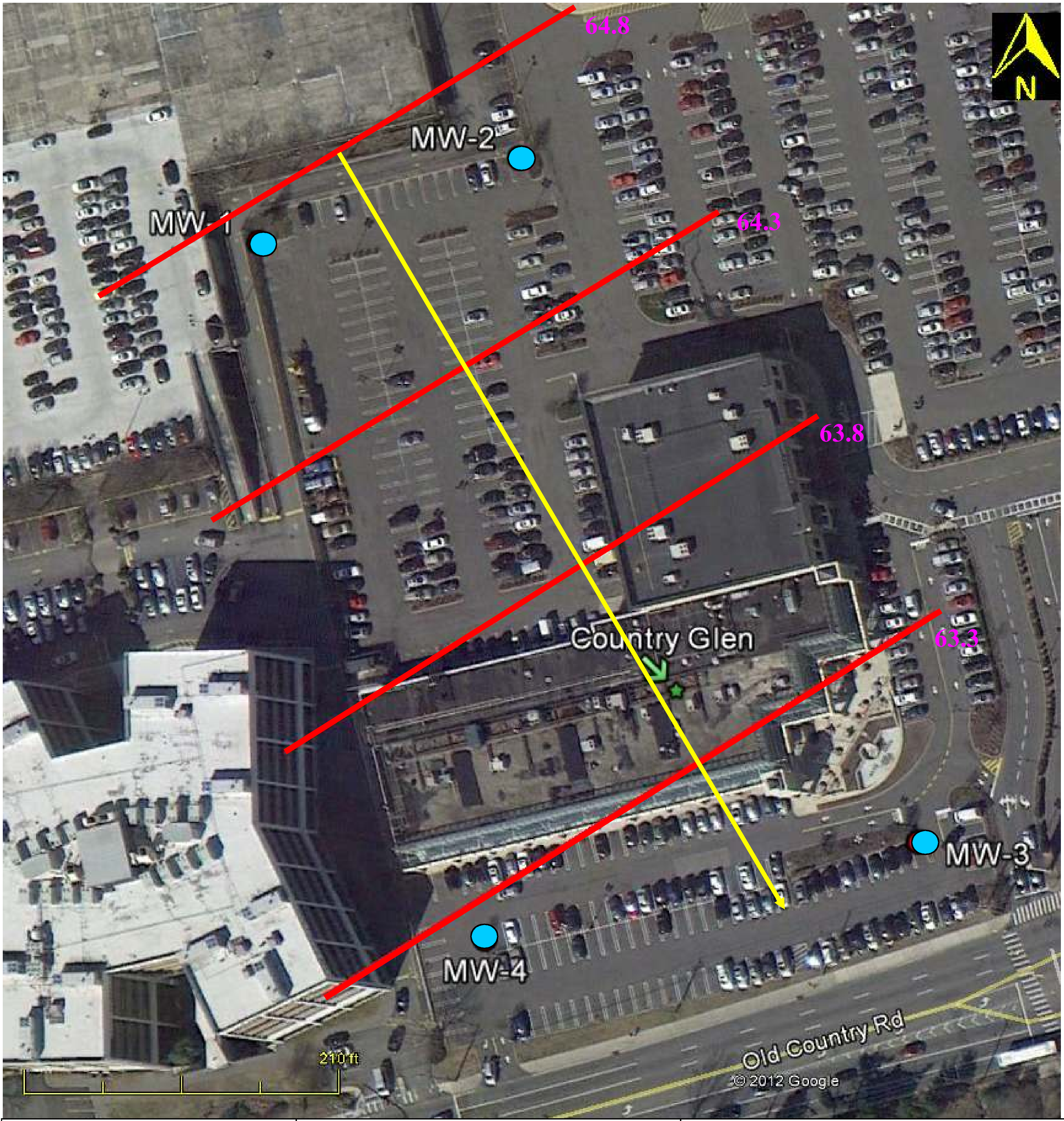
Pumping Duration Yield gpm

Specific Capacity

Hydrogeologist

Company **NAC CONSULTANTS, INC.**

APPENDIX B



LEGEND

▬ **Groundwater Elevation Contours**

→ **Groundwater Flow Direction**

● **Groundwater Monitoring Well Location**

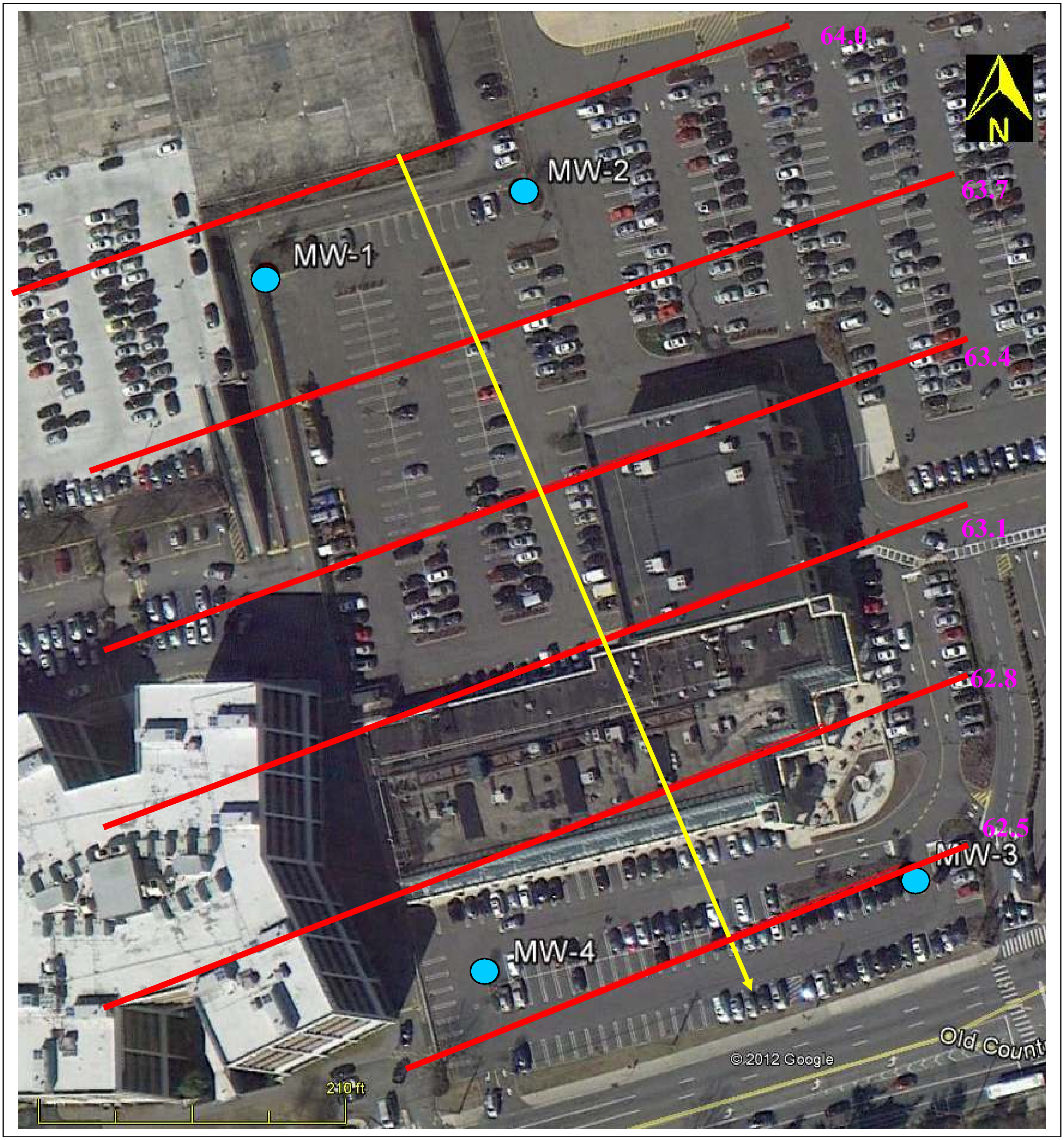
NAC CONSULTANTS, INC.
28 Henry Street
Kings Park, New York 11754
(631) 269-2680 FAX (631) 269-2685

November 2012

Groundwater elevations are based on J&H Well MW-4 casing elevation shown in construction log as benchmark (elevation above MSL)

GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION – 9/24/12

Country Glen
115 Old Country Road
Carle Place, New York



LEGEND

— **Groundwater Elevation Contours**

→ **Groundwater Flow Direction**

● **Groundwater Monitoring Well Location**

NAC CONSULTANTS, INC.
28 Henry Street
Kings Park, New York 11754
(631) 269-2680 FAX (631) 269-2685

December 2012

Groundwater elevations are based on J&H Well MW-4 casing elevation shown in construction log as benchmark (elevation above MSL)

GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION – 11/13/12

Country Glen
115 Old Country Road
Carle Place, New York

APPENDIX C

Data Usability Summary Report

115 Old Country Road Site
Carle Place, New York

Samples Collected
September – October 2012

December 2012

EnviroAnalytics
Data Management and Validation Service

2638 Sunset Avenue
Utica, New York 13502

Data Usability Summary Report

Samples Collected
September – October 2012

115 Old Country Road Site
Carle Place, New York

Prepared By:

EnviroAnalytics
Data Management and Validation Service
2638 Sunset Avenue
Utica, New York 13502

EXECUTIVE SUMMARY

This report addresses data quality for soil and water samples collected at the 115 Old Country Road Site located in Carle Place, New York. The samples were analyzed for volatile organics (VOCs), semivolatile organics (SVOCs), pesticides/polychlorinated biphenyls (pesticide/PCBs), and inorganics (Metals) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Edgewater Environmental, Inc. of Huntington Station, New York. Analytical services were provided by Chemtech located in Mountainside, New Jersey.

The inorganics analyses data have been determined to be usable for qualitative and quantitative purposes with minor qualification. Sample results for Magnesium were qualified based on deviations from matrix spike analysis criteria. Results for several analytes were approximated based on deviations from field duplicate criteria.

The volatile organics analyses data were determined to be usable for qualitative and quantitative purposes with minor qualification. Sample results for several compounds were qualified based on deviations from initial calibration, continuing calibration, and laboratory control sample criteria.

The semivolatile organics analyses data were determined to be usable for qualitative and quantitative purposes with the exception of non-detected 4-Chloroaniline results for four samples that were rejected due to laboratory control sample deviations. Sample results for several compounds were qualified based on deviations from initial calibration, continuing calibration, laboratory control sample, matrix spike, and field duplicate criteria.

The PCBs analyses data were determined to be usable for qualitative and quantitative purposes with minor qualification. Sample results for Aroclor-1260 were qualified for several samples based on deviations from PCB identification and field duplicate criteria.

The pesticides analyses data were determined to be usable for qualitative and quantitative purposes as reported.

TABLE of CONTENTS

Appendices

SECTION 1 - INTRODUCTION

1.1 Introduction

This report addresses data quality for soil and water samples collected at the 115 Old Country Road Site located in Carle Place, New York. The samples were analyzed for volatile organics (VOCs), semivolatile organics (SVOCs), pesticides/polychlorinated biphenyls (pest/PCBs), herbicides, and inorganics (Metals) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Edgewater Environmental, Inc. of Huntington Station, New York. Analytical services were provided by Chemtech located in Mountainside, New Jersey. The quantity and types of samples submitted for data validation are tabulated below.

Table 1: Introduction - Sample Summary Table

SDG#	Date Collected	Matrix	Sample Identification	
			Client ID	Laboratory ID
D4185	9/13/2012	Soil/Water	SB-10(15-20)	D4185-01
			SB-11(20-25)	D4185-02
			SB-12(15-20)	D4185-03
			DUPA	D4185-04
			TRIPBLANK	D4185-05
			FIELDBLANK	D4185-06
			MCRINSEBLANK	D4185-07
			SSRINSEBLANK	D4185-08
			SB-13(0-5)	D4185-09
			SB-13(15-20)	D4185-10
D4216	9/14/2012	Soil/Water	SB-14(20-25)	D4216-01
			SB15(20-25)	D4216-04
			SB-16(3-4)	D4216-05
			SB-17(10-15)	D4216-06
			SB-18(15-20)	D4216-07
			DUPB	D4216-08
			TRIPBLANK	D4216-09
			FIELDBLANK	D4216-10
			MCRINSEBLANK	D4216-11
			SSRINSEBLANK	D4216-12
D4379	9/27/2012	Water	MW-1	D4379-01/13
	10/01/2012		MW-2	D4379-02/14
			MW-3	D4379-05/15
			MW-4	D4379-06/16
			DUP	D4379-07/17
			FILEDBLANK	D4379-08
			TRIPBLANK	D4379-09
			EQUIPMENTRINSEPUMP	D4379-10
			EQUIPMENTRINSETAPE	D4379-11

1.2 Analytical Methods

The samples were analyzed for volatile organics (VOCs), semivolatile organics (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and inorganics (Metals) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies (2005 update). Laboratory analyses were provided by Chemtech located in Mountainside, New Jersey.

1.3 Validation Protocols

Data validation is a process that involves the evaluation of analytical data against prescribed quality control criteria to determine the usefulness of the data. The analytical data addressed in this report were evaluated utilizing the quality control criteria presented in the following documents:

- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, USEPA-540-R-08-01, June 2008.
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review*, USEPA-540-R-10-011, January 2010.
- *CLP Organics Data Review and Preliminary Review*, SOP No. HW-6 Revision #14, USEPA Region II, September 2006.
- *Validation of Metals for the Contract Laboratory Program (CLP) based on SOW ILMO5.3*, SOP No. HW-2, Revision #13, USEPA Region II, September 2006.
- *Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-846 Method 8260B*, SOP No. HW-24 Revision #2, USEPA Hazardous Waste Support Branch, August 2008.
- *Validating Semivolatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-846 Method 8270D*, SOP No. HW-22 Revision #4, USEPA Hazardous Waste Support Branch, August 2008.
- *Validating PCB Compounds by Gas Chromatography SW-846 Method 8082A*, SOP No. HW-45 Revision #1, USEPA Hazardous Waste Support Branch, October 2006.
- *Validating Pesticide Compounds, Organochlorine Pesticides by Gas Chromatography SW-846 Method 8081B*, SOP No. HW-44 Revision #1, USEPA Hazardous Waste Support Branch, October 2006.
- *Exhibit E of New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP)*, NYSDEC June 2005.

1.3.1 Inorganic Parameters

The validation of inorganics for this project followed the requirements presented in the analytical methodology and the data validation guidelines presented above. The following QA/QC parameters were evaluated:

1. Holding Times
2. Calibration
    a. Initial Calibration Verification
    b. Continuing Calibration Verification
3. Blank Analysis

4. ICP Interference Check Sample Analysis (ICP only)
5. Matrix Spike Analysis
6. Laboratory Duplicate Analysis
7. Laboratory Control Sample Analysis
8. ICP Serial Dilution Analysis (ICP only)
9. Furnace Atomic Absorption Analysis
10. Method of Standard Addition Results
11. Field Blanks
12. Element Quantification and Reported Detection Limits
13. Document Completeness
14. Overall Data Assessment

1.3.2 Organic Parameters

The validation of organic parameters for this project followed the requirements presented in the analytical methodology and the data validation guidelines presented above. The following QA/QC parameters were evaluated:

Volatile and Semivolatile Organics Analyses

1. Holding Times
2. GC/MS Instrument Tuning Criteria
3. Calibration
    a. Initial Calibration
    b. Continuing Calibration
4. Blank Analysis
5. Surrogate Recovery
6. Matrix Spike / Matrix Spike Duplicate Analysis
7. Reference Standard Analysis
8. Internal Standards Recovery
9. Compound Identification and Quantification
10. Field Duplicate Analysis
11. System Performance
12. Documentation Completeness
13. Overall Data Assessment

Pesticides and PCBs Analyses

1. Holding Times
2. Instrument Performance
    a. Standards Retention Time Windows
    b. DCBP Retention Time Shift
    c. Baseline Stability
    d. Chromatographic Resolution
3. Calibration
    a. Initial Calibration
    b. Analytical Sequence Verification
    c. Continuing Calibration Verification
4. Blank Analysis
5. Surrogate Recovery

6. Matrix Spike/Matrix Spike Duplicate Analysis
7. Reference Standard Analysis
8. Compound Identification and Quantification
9. Documentation Completeness
10. Overall Data Assessment

1.4 Data Qualifiers

The following qualifiers as specified in the guidance documents presented in Section 1.3 of this report have been used for this data validation.

U	Indicates that the compound was analyzed for, but was not detected. The sample quantification limit is presented and adjusted for dilution. This qualifier is also used to signify that the detection limit of an analyte was raised due to blank contamination.
J	Indicates that the result should be considered approximate. This qualifier is used when the data validation procedure identifies a deficiency in the data generation process.
UJ	Indicates that the detection limit for the analyte in this sample should be considered approximate. This qualifier is used when the data validation process identifies a deficiency in the data generation process.
R	Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data are considered to be unusable for both qualitative and quantitative purposes.

The following sections of this document present a summary of the data validation process. Section 2 discusses data compliance with established QA/QC criteria and qualifications performed on the sample data. A discussion of the Precision, Accuracy, Representativeness, Comparability, and Completeness (PARCC) of the data and data usability are discussed in Section 3. The USEPA Region II Data Validation Checklists are presented in Appendix A.

SECTION 2 - DATA VALIDATION SUMMARY

This section presents a discussion of QA/QC parameter compliance with established criteria and the qualification of data performed when QA/QC parameter deviations were identified. When several deviations from established QA/QC criteria were observed, the final qualifier assigned to the data was based on the cumulative effect of the deviations.

2.1 Inorganics Analysis

Data validation was performed for eight soil samples, five water samples, and nine field blank samples for total inorganic parameters. The QA/QC parameters presented in Section 1.3.1 of this report were found to be within specified limits with the exception of the following:

Matrix Spike Analysis

Matrix spike (MS) recovery criteria requiring spike recoveries to be between 75 and 125 percent were exceeded for several analytes. Qualification of sample results included the approximation of results when spike recoveries were greater than the upper limit, but less than 200 percent or less than the lower limit, but greater than 10 percent. Detected results were rejected for analytes with spike recoveries greater than 200 percent. Qualification of sample data was not required when the non-spiked sample concentration was greater than four-times the spike solution concentration. Samples qualified due to MS recovery deviations are tabulated below.

Table 2: Inorganics Analyses - Matrix Spike Deviations

MS Sample ID	Inorganic	Percent Recovery	Qualifier	Affected Samples
SB-10(15-20)	Magnesium	520.2 %	J	SB-10(15-20) SB-11(20-25) SB-12(15-20) DUPA

Field Duplicate Analysis

Field duplicate criterion requires the relative percent difference (RPD) between duplicate analyses to be less than 35 percent (50 percent for soil samples). Qualification of sample results included the approximation of data for compounds with RPD values greater than 35 percent (50 percent for soil samples). Samples qualified due to laboratory duplicate analysis deviations are tabulated below.

Table 3: Inorganics Analyses -Field Duplicate Deviations

Duplicate Sample ID	Original Sample ID	Compound	RPD	Qualifier	Affected Samples
DUPA	SB-11(20-25)	Trivalent Chromium	113.3 %	J	SB-10(15-20)
		Calcium	103.4 %	J	SB-11(20-25)
		Copper	64.25 %	J	SB-12(15-20)
		Lead	61.62 %	J	DUPA
		Vanadium	61.03 %	J	

Duplicate Sample ID	Original Sample ID	Compound	RPD	Qualifier	Affected Samples
DUPB	SB-15(20-25)	Arsenic Calcium Iron Selenium Silver Sodium Thallium	64.17 % 58.32 % 98.19 % 80.0 % 115.5 % 78.59 % 200 %	J, UJ J J J J J J, UJ	SB-14(20-25) SB15(20-25) SB-16(3-4) DUPB
DUP	MW-3	Aluminum Selenium Zinc	50.61 % 200 % 200 %	J J, UJ J, UJ	MW-1 MW-2 MW-3 MW-4 DUP

Overall Data Assessment

Overall, the laboratory performed inorganics analyses in accordance with the requirements specified in the methods listed in Section 1.2 of this report. These data have been determined to be usable for qualitative and quantitative purposes with minor qualification. Sample results for Magnesium were qualified based on deviations from matrix spike analysis criteria. Results for several analytes were approximated based on deviations from field duplicate criteria.

2.2 Volatiles Analysis

Data validation was performed for twelve soil samples, five water samples, nine field blank samples, and three trip blank samples. The QA/QC parameters presented in Section 1.3.2 of this report were found to be within specified limits with the exception of the following:

Initial Calibration

The initial calibration relative standard deviation (%RSD) limit, which requires the %RSD to be less than 30 percent, was exceeded for several compounds. Sample qualification included the approximation (J, UJ) of results when %RSD criteria were exceeded. Samples requiring qualification due to these deviations are tabulated below.

Table 4: Volatile Organics Analyses – Initial Calibration Deviations

Date Analyzed	Compound	%RSD	Result Qualifier	Affected Samples
9/07/2012 MSVOAG	Acetone Methyl Acetate Methylene Chloride 2-Butanone	32.9 % 33.1 % 58.9 % 31.1 %	UJ UJ UJ UJ	TRIPBLANK FIELDBLANK MCRINSEBLANK SSRINSEBLANK
9/19/2012 MSVOA_N	Cyclohexane	35.1 %	UJ	TRIPBLANK FIELDBLANK MCRINSEBLANK SSRINSEBLANK
9/26/2012 MSVOA_N	Cyclohexane	33.2 %	UJ	MW-2 MW-1 MW-3 MW-4 DUP EQUIPMENTRINSEPUMP EQUIPMENTRINSETAPE

Date Analyzed	Compound	%RSD	Result Qualifier	Affected Samples
10/02/2012 MSVOA_N	Cyclohexane	45.6 %	UJ	FIELDBLANK TRIPBLANK

Continuing Calibration

The continuing calibration percent difference (%D) limit, which requires the %D to be less than 25 percent, was exceeded for several compounds. Sample qualification included the approximation (J, UJ) of results when %D criteria were exceeded, but were less than 90 percent. Samples requiring qualification due to these deviations are tabulated below.

Table 5: Volatile Organics Analyses - Continuing Calibration Deviations

Date Analyzed	Compound	%D	Result Qualifier	Affected Samples
9/14/2012 MSVOA_F (11:26)	2-Butanone	32.05 %	UJ	SB-13(0-5) SB-13(15-20) SB-10(15-20) SB-11(20-25) SB-12(15-20) DUPA
9/17/2012 MSVOA_F (12:36)	1,2-Dibromo-3-Chloropropane	39.29 %	UJ	SB-11(20-25)RE

Laboratory Control Sample Analysis

Laboratory control sample (LCS) recovery criteria requiring compound recoveries to be within laboratory generated control limits were exceeded for several compounds. Qualification of sample results included the approximation of results when spike recoveries were greater than the upper limit, but less than 200 percent or less than the lower limit, but greater than 10 percent. Non-detected sample results were rejected (R) for compounds with recoveries that were less than 10 percent. Samples qualified due to LCS recovery deviations are tabulated below.

Table 6: Volatile Organics Analyses – Laboratory Control Sample Deviations

Matrix	Compound	Percent Recovery	Control Limits	Qualifier	Affected Samples
Water	Carbon Disulfide	55 %	63 % to 138 %	UJ	TRIPBLANK
	Bromodichloromethane	75 %	78 % to 127 %	UJ	FIELDBLANK
	t-1,3-Dichloropropene	70 %	74 % to 131 %	UJ	MCRINSEBLANK
	cis-1,3-Dichloropropene	70 %	74 % to 128 %	UJ	SSRINSEBLANK

Internal Standards Recovery

The internal standard areas exceeded recovery limits for several samples. Qualification of sample results included the approximation of results when recoveries were greater than the upper limit, but less than 200 percent or less than the lower limit, but greater than 25 percent. Samples qualified due to internal standard recovery deviations are tabulated below.

Table 7: Volatile Organics Analyses -Internal Standard Deviations

Sample ID	Internal Standard	Percent Recovery	Affected Compounds	Qualifier
SB-11(20-25)	Pentafluorobenzene 1,4-Difluorobenzene Chlorobenzene-d5 1,4-Dichlorobenzene-d4	17.1 % 17.6 % 22.7 % 21.9 %	All Compounds	R[1]

1. Sample SB-11(20-25) was reanalyzed with acceptable internal standard recoveries. The results from the re-analysis [SB-11(20-25)RE] should be used for this sample.

Overall Data Assessment

Overall, the laboratory performed volatile organics analyses in accordance with the requirements specified in the method listed in Section 1.2. These data were determined to be usable for qualitative and quantitative purposes with minor qualification. Sample results for several compounds were qualified based on deviations from initial calibration, continuing calibration, and laboratory control sample criteria.

2.3 Semivolatiles Analysis

Data validation was performed for eight soil samples, five water samples, and six field blank samples. The QA/QC parameters presented in Section 1.3.2 of this report were found to be within specified limits with the exception of the following:

Initial Calibration

The initial calibration relative standard deviation (%RSD) limit, which requires the %RSD to be less than 30 percent, was exceeded for several compounds. Sample qualification included the approximation (J, UJ) of results when %RSD criteria were exceeded. Samples requiring qualification due to these deviations are tabulated below.

Table 8: Semivolatile Organics Analyses – Initial Calibration Deviations

Date Analyzed	Compound	%RSD	Result Qualifier	Affected Samples
9/17/2012 BNA_E	2,4-Dinitrophenol 4,6-Dinitro-2-methylphenol	45.7 % 31.7 %	UJ UJ	SB-11(20-25) SB-12(15-20) DUPA SB-10(15-20) SB-14(20-25) SB-15(20-25) SB-16(3-4) DUPB
9/14/2012 BNA_G	2,4-Dinitrophenol 4,6-Dinitro-2-methylphenol	45.9 % 30.6 %	UJ UJ	FIELDBLANK MCRINSEBLANK SSRINSEBLANK
9/13/2012 BNA_F	2,4-Dinitrophenol	31.8 %	UJ	FIELDBLANK MCRINSEBLANK SSRINSEBLANK

Continuing Calibration

The continuing calibration percent difference (%D) limit, which requires the %D to be less than 25 percent, was exceeded for several compounds. Sample qualification included the approximation (J, UJ) of results when %D criteria were exceeded, but were less than 90 percent. Samples requiring qualification due to these deviations are tabulated below.

Table 9: Semivolatile Organics Analyses - Continuing Calibration Deviations

Date Analyzed	Compound	%D	Result Qualifier	Affected Samples
9/19/2012 BNA_E (11:12)	2,4-Dinitrophenol	48.2 %	UJ	SB-14(20-25) SB-15(20-25) SB-16(3-4) DUPB

Laboratory Control Sample Analysis

Laboratory control sample (LCS) recovery criteria requiring compound recoveries to be within laboratory generated control limits were exceeded for several compounds. Qualification of sample results included the approximation of results when spike recoveries were greater than the upper limit, but less than 200 percent or less than the lower limit, but greater than 10 percent. Non-detected sample results were rejected (R) for compounds with recoveries that were less than 10 percent. Samples qualified due to LCS recovery deviations are tabulated below.

Table 10: Semivolatile Organics Analyses – Laboratory Control Sample Deviations

Matrix	Compound	Percent Recovery	Control Limits	Qualifier	Affected Samples
Soil	4-Chloroaniline	9 %	10 % to 130 %	R	SB-10(15-20) SB-11(20-25) SB-12(15-20) DUPA
Water	1,4-Dioxane	36 %	70 % to 130 %	UJ	FIELDBLANK MCRINSEBLANK SSRINSEBLANK

Matrix Spike Recovery

Matrix spike/matrix spike duplicate (MS/MSD) recovery criteria requiring compound recoveries to be within laboratory generated control limits were exceeded for several compounds. Qualification of sample results included the approximation of results when spike recoveries were greater than the upper limit, but less than 200 percent or less than the lower limit, but greater than 10 percent. Non-detected sample results were rejected (R) for compounds with recoveries less than 10 percent. Samples qualified due to MS/MSD recovery deviations are tabulated below.

Table 11: Semivolatile Organics Analyses – MS/MSD Analysis Deviations

MS/MSD Sample ID	Compound	Percent Recovery (MS/MSD)	Control Limits	Qualifier	Affected Samples
SB-11(20-25)	2,3,4,6-Tetrachlorophenol	65 %/49 %	52 % to 109 %	UJ	SB-10(15-20) SB-11(20-25) SB-12(15-20) DUPA
MW-2	2,3,4,6-Tetrachlorophenol	82 %/84 %	91 % to 111 %	UJ	MW-1 MW-2 MW-3 MW-4 DUP

Field Duplicate Analysis

Field duplicate criterion requires the relative percent difference (RPD) between duplicate analyses to be less than 35 percent (50 percent for soil samples). Qualification of sample results included the approximation of data for compounds with RPD values greater than 50 percent. Samples qualified due to laboratory duplicate analysis deviations are tabulated below.

Table 12: Semivolatile Organics Analyses – Field Duplicate Deviations

Duplicate Sample ID	Original Sample ID	Compound	RPD	Qualifier	Affected Samples
DUPA	SB-11(20-25)	Naphthalene	200 %	J, UJ	SB-10(15-20) SB-11(20-25) SB-12(15-20) DUPA
		Acenaphthene	200 %	J, UJ	
		Dibenzofuran	200 %	J, UJ	
		Fluorene	200 %	J, UJ	
		Phenanthrene	200 %	J, UJ	
		Anthracene	200 %	J, UJ	
		Carbazole	200 %	J, UJ	
		Fluoranthene	200 %	J, UJ	
		Pyrene	200 %	J, UJ	
		Benzo(a)anthracene	200 %	J, UJ	
		Chrysene	200 %	J, UJ	
		Benzo(b)fluoranthene	200 %	J, UJ	
		Benzo(k)fluoranthene	200 %	J, UJ	
		Benzo(a)pyrene	200 %	J, UJ	
		Indeno(1,2,3-cd)pyrene	200 %	J, UJ	
		Benzo(g,h,i)perylene	200 %	J, UJ	

Overall Data Assessment

Overall, the laboratory performed semivolatile organics analyses in accordance with the requirements specified in the method listed in Section 1.2. These data were determined to be usable for qualitative and quantitative purposes with the exception of non-detected 4-Chloroaniline results for four samples that were rejected due to laboratory control sample deviations. Sample results for several compounds were qualified based on deviations from initial calibration, continuing calibration, laboratory control sample, matrix spike, and field duplicate criteria.

2.4 PCBs Analyses

Data validation was performed for eight soil samples, five water samples, and six field blank samples. The QA/QC parameters presented in Section 1.3.2 of this report were found to be within specified limits with the exception of the following:

Field Duplicate Analysis

Field duplicate criterion requires the relative percent difference (RPD) between duplicate analyses to be less than 35 percent (50 percent for soil samples). Qualification of sample results included the approximation of data for compounds with RPD values greater than 50 percent. Samples qualified due to laboratory duplicate analysis deviations are tabulated below.

Table 13: PCBs Analyses - Field Duplicate Deviations

Duplicate Sample ID	Original Sample ID	Compound	RPD	Qualifier	Affected Samples
DUPA	SB-11(20-25)	Aroclor-1260	200 %	J, UJ	SB-10(15-20) SB-11(20-25) SB-12(15-20) DUPA

PCB Identification

Detected PCB results are required to have sample concentrations calculated from the primary and secondary (confirmation) chromatographic columns differ by less than 25 percent. Detected sample results that have a confirmation column percent difference (%D) greater than 25 percent require qualification. Qualification of sample data included the approximation of detected results for compounds with %D values greater than 25 percent, but less than 100 percent. Samples qualified due to confirmation column percent difference deviations are tabulated below.

Table 14: PCBS Analyses – PCB Identification Deviations

Sample ID	Compound	%D	Qualifier
DUPA	Aroclor-1260	46.7 %	J

Overall Data Assessment

Overall, the laboratory performed PCB analyses in accordance with the requirements specified in the method listed in Section 1.2. These data were determined to be usable for qualitative and quantitative purposes with minor qualification. Sample results for Aroclor-1260 were qualified for several samples based on deviations from PCB identification and field duplicate criteria.

2.5 Pesticides Analyses

Data validation was performed for eight soil samples, five water samples, and six field blank samples. The QA/QC parameters presented in Section 1.3.2 of this report were found to be within specified limits with the exception of the following:

Overall Data Assessment

Overall, the laboratory performed herbicide/pesticide analyses in accordance with the requirements specified in the method listed in Section 1.2. These data were determined to be usable for qualitative and quantitative purposes as reported.

SECTION 3 - DATA USABILITY and PARCC EVALUATION

3.1 Data Usability

This section presents a summary of the usability of the analytical data and an evaluation of the PARCC parameters. Data usability was calculated as the percentage of data that was not qualified as rejected based on a significant deviation from established QA/QC criteria. Data usability, which was calculated separately for each type of analysis, is tabulated below.

Table 15: Data Usability and PARCC Evaluation - Data Usability

Parameter	Usability	Deviations
Inorganic Parameters	100 %	None resulting in the rejection of data
Volatile Organics	100 %	None resulting in the rejection of data
Semivolatile Organics	99.69 %	Non-detected 4-Chloroaniline results were rejected for four samples due to laboratory control sample deviations
PCBs	100 %	None resulting in the rejection of data
Pesticides	100 %	None resulting in the rejection of data

3.2 PARCC Evaluation

The following sections provide an evaluation of the analytical data with respect to the precision, accuracy, representativeness, comparability, and completeness (PARCC) parameters.

3.2.1 Precision

Precision is measured through field duplicate samples, split samples, and laboratory duplicate samples. For this sampling program, 3.25 percent of the data were qualified for field duplicate criteria deviations and none of the data were qualified for laboratory duplicate criteria deviations.

3.2.2 Accuracy

Matrix spike sample, surrogate recovery, internal standard recovery, laboratory control samples, and calibration criteria indicate the accuracy of the data. For this sampling program, 0.32 percent of the analytical data were qualified for deviations from matrix spike recovery criteria; none of the data were qualified for surrogate recovery criteria deviations; none of the data were qualified for internal standard recovery criteria deviations; 0.57 percent of the data were qualified for laboratory control sample deviations; and 1.61 percent of the data were qualified for calibration criteria deviations.

3.2.3 Representativeness

Holding times, sample preservation, and blank analysis are indicators of the representativeness of the analytical data. For this investigation, none of the analytical data required qualification for holding time deviations and none of the analytical data required qualification for blank analysis deviations.

3.2.4 Comparability

Comparability is not compromised provided that the analytical methods did not change over time. A major component of comparability is the use of standard reference materials for calibration and QC. These standards are compared to other unknowns to verify their concentrations. Since standard analytical methods and reporting procedures were consistently used by the laboratory, the comparability criteria for the analytical data were met.

3.2.5 Completeness

The overall percent usability or completeness of the data was 99.9 percent.

APPENDIX A

DATA VALIDATION CHECKLISTS

Table of Contents

Data Validation Checklist - Part A: VOA Analyses

No:	Parameter	YES	NO	N/A
1.0	**Traffic Reports and Laboratory Narrative**			
1.1	Are the traffic Report Forms present for all samples?	X		
1.2	Do the Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		X	
2.0	**Holding Times**			
2.1	Have any VOA technical holding times, determined from date of collection to date of analysis, been exceeded?		X	
3.0	**System Monitoring Compound (SMC) Recovery (Form II)**			
3.1	Are the VOA SMC Recovery Summaries (FORM II) present for each of the following matrices:			
	a. Low Water	X		
	b. Low Soil	X		
	c. Air			X
3.2	Are all the VOA samples listed on the appropriate System Monitoring Compound Recovery Summary for each of the following matrices:			
	a. Low Water	X		
	b. Low Soil	X		
	c. Air			X
3.3	Were outliers marked correctly with an asterisk?			X
3.4	Was one or more VOA system monitoring compound recovery outside of contract specifications for any sample or method blank?		X	
	If yes, were samples re-analyzed?			X
	Were method blanks re-analyzed?			X
3.5	Are there any transcription/calculation errors between raw data and Form II?		X	
4.0	**Matrix Spikes (Form III)**			
4.1	Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present?		X	
4.2	Were matrix spikes analyzed at the required frequency for each of the following matrices?			
	a. Low Water	X		
	b. Low Soil	X		
	c. Air			X
4.3	How many VOA spike recoveries are outside QC limits?			
	Water ___0____ out of 58 Soils ____0___ out of 58			
4.4	How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?			
	Water ___0____ out of 58 Soils ____0____ out of 58			

Data Validation Checklist - Part A: VOA Analyses

No:	Parameter	YES	NO	N/A
5.0	**Blanks (Form IV)**			
5.1	Is the Method Blank Summary (Form IV) present?	X		
5.2	Frequency of Analysis: for the analysis of VOA TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix (low water, low soil, medium soil), whichever is more frequent?	X		
5.3	Has a VOA method/instrument blank been analyzed at least once every twelve hours for each concentration level and GC/MS system used?	X		
5.4	Is the chromatographic performance (baseline stability) for each instrument acceptable for VOAs?	X		
6.0	**Contamination**			
6.1	Do any method/instrument/reagent blanks have positive results (TCL and/or TIC) for VOAs?		X	
6.2	Do any field/trip/rinse blanks have positive VOA results (TCL and/or TIC)?		X	
6.3	Are there field/rinse/equipment blanks associated with every sample?	X		
7.0	**GC/MS Instrument Performance Check (Form V)**			
7.1	Are the GC/MS Instrument Performance Check Forms (Form V) present for Bromofluorobenzene (BFB)?	X		
7.2	Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the BFB provided for each twelve hour shift?	X		
7.3	Has an instrument performance compound been analyzed for every twelve hours of sample analysis per instrument?	X		
7.4	Have the ion abundances been normalized to m/z 95?	X		
7.5	Have the ion abundance criteria been met for each instrument used?	X		
7.6	Are there any transcription/calculation errors between mass lists and Form V's?		X	
7.7	Have the appropriate number of significant figures (two) been reported?	X		
7.8	Are the spectra of the mass calibration compound acceptable?	X		
8.0	**Target Compound List (TCL) Analytes**			
8.1	Are the Organic Analysis Data Sheets (Form I VOA) present with required header information on each page, for each of the following:			
	a. Sample and/or fractions as appropriate?	X		
	b. Matrix spikes and matrix spike duplicates?	X		
	c. Blanks?	X		
8.2	Are the VOA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (Quant Reports) included in the sample package for each of the following?			
	a. Samples and/or fractions as appropriate?	X		
	b. Matrix spikes and matrix spike duplicates (Mass spectra not required)?	X		
	c. Blanks?	X		
8.3	Are the response factors shown in the Quant Report?	X		

Data Validation Checklist - Part A: VOA Analyses

No:	Parameter	YES	NO	N/A
8.4	Is the chromatographic performance acceptable with respect to:			
	Baseline stability?	X		
	Resolution?	X		
	Peak shape?	X		
	Full-scale graph (attenuation)?	X		
	Other:			X
8.5	Are the lab-generated standard mass spectra of the identified VOA compounds present for each sample?	X		
8.6	Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	X		
8.7	Are all ions in the standard mass spectrum at a relative intensity greater than 10% also present in the sample mass spectrum?	X		
8.8	Do sample and standard relative ion intensities agree within 20%?	X		
9.0	**<u>Tentatively Identified Compounds (TIC)</u>**			
9.1	Are all Tentatively Identified Compound Forms (Form I Part B) present; and do listed TICs include scan number or retention time, estimated concentration and "JN" qualifier?	X		
9.2	Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following:			
	a. Samples and/or fractions as appropriate?	X		
	b. Blanks?	X		
9.3	Are any TCL compounds (from any fraction) listed as TIC compounds?		X	
9.4	Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
9.5	Do TIC and "best match" standard relative ion intensities agree within 20%?	X		
10.0	**<u>Compound Quantitation and Reported Detection Limits</u>**			
10.1	Are there any transcription/calculation errors in Form I results?		X	
10.2	Are the CRQLs adjusted to reflect sample dilutions and, for soils, sample moisture?	X		
11.0	**<u>Standards Data (GC/MS)</u>**			
11.1	Are the Reconstructed Ion Chromatograms, and data system printouts present for initial and continuing calibration?	X		
12.0	**<u>GC/MS Initial Calibration (Form VI)</u>**			
12.1	Are the Initial Calibration Forms (Form VI) present and complete for the volatile fraction at concentrations of 10, 20, 50, 100, 200 ug/L? Are there separate calibrations for low/med soils and low soil samples?	X		
12.2	Were all low level soil standards, blanks, and samples analyzed by heated purge?	X		
12.3	Are the response factors stable for VOA's over the concentration range of the calibration (%Relative Standard Deviation (%RSD) <30%)		X	
12.4	Are the RRFs above 0.01?	X		
12.5	Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %RSD?		X	

Data Validation Checklist - Part A: VOA Analyses

No:	Parameter	YES	NO	N/A
13.0	**GC/MS Continuing Calibration (Form VII)**			
13.1	Are the Continuing Calibration Forms (Form VII) present and complete for the volatile fraction?	X		
13.2	Has a continuing calibration standard been analyzed for every twelve hours of sample analysis per instrument?	X		
13.3	Do any volatile compounds have a %Difference (%D) between the initial and continuing RRF which exceeds the +/- 25% criteria?	X		
13.4	Do any volatile compounds have a RRF <0.01?		X	
13.5	Are there any transcription/calculation errors in the reporting of average response factor (RRF) or %difference (%D) between initial and continuing RRFs?		X	
14.0	**Internal Standard (Form VIII)**			
14.1	Are the internal standard areas (Form VIII) of every sample and blank within the upper and lower limits (-50% to +100%) for each continuing calibration?		X	
14.2	Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
15.0	**Field Duplicates**			
15.1	Were any field duplicates submitted for VOA analysis?	X		

Data Validation Checklist - Part B: BNA Analyses

No:	Parameter	YES	NO	N/A
1.0	**Traffic Reports and Laboratory Narrative**			
1.1	Are the traffic Report Forms present for all samples?	X		
1.2	Do the Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		X	
2.0	**Holding Times**			
2.1	Have any BNA technical holding times, determined from date of collection to date of extraction, been exceeded?		X	
3.0	**System Monitoring Compound (SMC) Recovery (Form II)**			
3.1	Are the BNA Surrogate Recovery Summaries (FORM II) present for each of the following matrices:			
	a. Low Water	X		
	b. Low Soil	X		
	c. Med Soil			X
3.2	Are all the BNA samples listed on the appropriate System Monitoring Compound Recovery Summary for each of the following matrices:			
	a. Low Water	X		
	b. Low Soil	X		
	c. Med Soil			X
3.3	Were outliers marked correctly with an asterisk?	X		
3.4	Were two or more base neutral or acid surrogate compound recoveries out of specification for any sample or method blank?		X	
	If yes, were samples re-analyzed?			X
	Were method blanks re-analyzed?			X
3.5	Are there any transcription/calculation errors between raw data and Form II?		X	
4.0	**Matrix Spikes (Form III)**			
4.1	Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present?	X		
4.2	Were matrix spikes analyzed at the required frequency for each of the following matrices?	X		
	a. Low Water	X		
	b. Low Soil	X		
	c. Med Soil			X
4.3	How many BNA spike recoveries are outside QC limits?			

Water ____0___ out of 68 Soils ___1____ out of 68

Data Validation Checklist - Part B: BNA Analyses

No:	Parameter	YES	NO	N/A
4.4	How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits? Water __0__ out of 68 Soils __0__ out of 68			
5.0	**Blanks (Form IV)**			
5.1	Is the Method Blank Summary (Form IV) present?	X		
5.2	Frequency of Analysis: Has a reagent/method blank analysis been reported per 20 samples of a similar matrix, or concentration level, for each extraction batch?	X		
5.3	Has a BNA method blank been analyzed for each GC/MS system used?	X		
5.4	Is the chromatographic performance (baseline stability) for each instrument acceptable for BNAs?	X		
6.0	**Contamination**			
6.1	Do any method/instrument/reagent blanks have positive results (TCL and/or TIC) for BNAs?		X	
6.2	Do any field/rinse blanks have positive BNA results (TCL and/or TIC)?		X	
6.3	Are there field/rinse/equipment blanks associated with every sample?	X		
7.0	**GC/MS Instrument Performance Check (Form V)**			
7.1	Are the GC/MS Instrument Performance Check Forms (Form V) present for Decafluorotriphenylphosphine (DFTPP)?	X		
7.2	Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the DFTPP provided for each twelve-hour shift?	X		
7.3	Has an instrument performance check solution been analyzed for every twelve hours of sample analysis per instrument?	X		
7.4	Have the ion abundances been normalized to m/z 198?	X		
7.5	Have the ion abundance criteria been met for each instrument used?	X		
7.6	Are there any transcription/calculation errors between mass lists and Form V's?		X	
7.7	Have the appropriate number of significant figures (two) been reported?	X		
7.8	Are the spectra of the mass calibration compound acceptable?	X		
8.0	**Target Compound List (TCL) Analytes**			
8.1	Are the Organic Analysis Data Sheets (Form I BNA) present with required header information on each page, for each of the following:			
	a. Sample and/or fractions as appropriate?	X		
	b. Matrix spikes and matrix spike duplicates?	X		
	c. Blanks?	X		
8.2	Has GPC cleanup been performed on all soil/sediment sample extracts?			X
8.3	Are the BNA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (Quant Reports) included in the sample package for each of the following?			

Data Validation Checklist - Part B: BNA Analyses

No:	Parameter	YES	NO	N/A
	a. Samples and/or fractions as appropriate?	X		
	b. Matrix spikes and matrix spike duplicates (Mass spectra not required)?	X		
	c. Blanks?	X		
8.4	Are the response factors shown in the Quant Report?	X		
8.5	Is the chromatographic performance acceptable with respect to:			
	Baseline stability?	X		
	Resolution	X		
	Peak shape?	X		
	Full-scale graph (attenuation)?	X		
	Other:			
8.6	Are the lab-generated standard mass spectra of identified BNA compounds present for each sample?	X		
8.7	Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	X		
8.8	Are all ions in the standard mass spectrum at a relative intensity greater than 10% also present in the sample mass spectrum?	X		
8.9	Do sample and standard relative ion intensities agree within 20%?	X		
9.0	**Tentatively Identified Compounds (TIC)**			
9.1	Are all Tentatively Identified Compound Forms (Form I, Part B) present; and do listed TICs include scan number or retention time, estimated concentration and "JN" qualifier?	X		
9.2	Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following:			
	a. Samples and/or fractions as appropriate?	X		
	b. Blanks?	X		
9.3	Are any TCL compounds (from any fraction) listed as TIC compounds?		X	
9.4	Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	X		
9.5	Do TIC and "best match" standard relative ion intensities agree within 20%?	X		
10.0	**Compound Quantitation and Reported Detection Limits**			
10.1	Are there any transcription/calculation errors in Form I results?		X	
10.2	Are the CRQLs adjusted to reflect sample dilutions and, for soils, sample moisture?	X		
11.0	**Standards Data (GC/MS)**			
11.1	Are the Reconstructed Ion Chromatograms, and data system printouts present for initial and continuing calibration?	X		
12.0	**GC/MS Initial Calibration (Form VI)**			

Data Validation Checklist - Part B: BNA Analyses

No:	Parameter	YES	NO	N/A
12.1	Are the Initial Calibration Forms (Form VI) present and complete for the BNA fraction ?	X		
12.2	Are response factors stable for BNA's over the concentration range of the calibration (%Relative Standard Deviation (%RSD) <30%)		X	
12.3	Are all BNA compound RRFs > 0.01?	X		
12.4	Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %RSD?		X	
13.0	**GC/MS Continuing Calibration (Form VII)**			
13.1	Are the Continuing Calibration Forms (Form VII) present and complete for the BNA fraction?	X		
13.2	Has a continuing calibration standard been analyzed for every twelve hours of sample analysis per instrument?	X		
13.3	Do any semivolatile compounds have a %Difference (%D) between the initial and continuing RRF which exceeds the +/- 25% criteria?	X		
13.4	Do any semivolatile compounds have a RRF <0.01?		X	
13.5	Are there any transcription/calculation errors in the reporting of average response factor (RRF) or %difference (%D) between initial and continuing RRFs?		X	
14.0	**Internal Standard (Form VIII)**			
14.1	Are the internal standard areas (Form VIII) of every sample and blank within the upper and lower limits (-50% to +100%) for each continuing calibration?	X		
14.2	Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
15.0	**Field Duplicates**			
15.1	Were any field duplicates submitted for BNA analysis?	X		

Data Validation Checklist - Part C: Pesticides/PCB Analysis

No:	Parameter	YES	NO	N/A
1.0	**Traffic Reports and Laboratory Narrative**			
1.1	Are the traffic Report Forms present for all samples?	X		
1.2	Do the Traffic Reports or SDG Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	X		
2.0	**Holding Times**			
2.1	Have any PEST/PCB technical holding times, determined from date of collection to date of extraction, been exceeded?		X	
3.0	**System Monitoring Compound (SMC) Recovery (Form II)**			
3.1	Are the PEST/PCB Surrogate Recovery Summaries (FORM II) present for each of the following matrices:			
	a. Low Water	X		
	b. Soil	X		
3.2	Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summary for each of the following matrices:			
	a. Low Water	X		
	b. Soil	X		
3.3	Were outliers marked correctly with an asterisk?	X		
3.4	Were surrogate recoveries of TCX or DCB outside of the contract specifications for any sample or method blank? (60-150%)	X		
3.5	Were surrogate retention times (RT) within the windows established during the initial 3-point analysis of Individual Standard Mixture A?	X		
3.6	Are there any transcription/calculation errors between raw data and Form II?		X	
4.0	**Matrix Spikes (Form III)**			
4.1	Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present?	X		
4.2	Were matrix spikes analyzed at the required frequency for each of the following matrices?	X		
	a. Low Water	X		
	b. Soil	X		
4.3	How many PEST/PCB spike recoveries are outside QC limits?			
	Water ___0___ out of 21 Soils ___0___ out of 21			
4.4	How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?			
	Water ___0___ out of 21 Soils ___0___ out of 21			
5.0	**Blanks (Form IV)**			
5.1	Is the Method Blank Summary (Form IV) present?	X		

Data Validation Checklist - Part C: Pesticides/PCB Analysis

No:	Parameter	YES	NO	N/A
5.2	Frequency of Analysis: For the analysis of Pesticide/PCB TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix or concentration or each extraction batch, whichever is more frequent?	X		
5.3	Has a PEST/PCB instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence?	X		
5.4	Is the chromatographic performance (baseline stability) for each instrument acceptable for PEST/PCBs?	X		
6.0	**Contamination**			
6.1	Do any method/instrument/reagent blanks have positive results PEST/PCBs?		X	
6.2	Do any field/rinse blanks have positive PEST/PCB results?		X	
6.3	Are there field/rinse/equipment blanks associated with every sample?		X	
7.0	**Calibration and GC Performance**			
7.1	Are the following Gas Chromatograms and Data Systems Printouts for both columns present for all samples, blanks, MS/MSD?			
	a. Peak resolution check	X		
	b. Performance evaluation mixtures	X		
	c. Aroclor 1016/1260	X		
	d. Aroclors 1221, 1232, 1242, 1248, 1254, 1262, 1268	X		
	e. Toxaphene	X		
	f. Low points individual mixtures A & B	X		
	g. Med points individual mixtures A & B	X		
	h. High points individual mixtures A & B	X		
	I. Instrument blanks	X		
7.2	Are Forms VI - PEST 1-4 present and complete for each column and each analytical sequence?	X		
7.3	Are there any transcription/calculation errors between raw data and Forms VI?		X	
7.4	Do all standard retention times, including each pesticide in each level of Individual Mixtures A & B, fall within the windows established during the initial calibration analytical sequence?	X		
7.5	Are the linearity criteria for the initial analyses of Individual Standards A & B within limits for both columns?	X		
7.6	Is the resolution between any two adjacent peaks in the Resolution Check Mixture > 60.0% for both columns?	X		
7.7	Is Form VII - Pest-1 present and complete for each Performance Evaluation Mixture analyzed during the analytical sequence for both columns?	X		
7.8	Has the individual %breakdown exceeded 20.0% on either column?		X	
	- for 4,4' - DDT?		X	
	- for endrin?		X	

Data Validation Checklist - Part C: Pesticides/PCB Analysis

No:	Parameter	YES	NO	N/A
	Has the combined %breakdown for 4,4' - DDT/Endrin exceeded 30.0% on either column?		X	
7.9	Are the relative percent difference (RPD) values for all PEM analytes <25.0%?	X		
7.10	Have all samples been injected within a 12 hr. Period beginning with the injection of an Instrument Blank?	X		
7.11	Is Form VII - Pest-2 present and complete for each INDA and INDB Verification Calibration analyzed?	X		
7.12	Are there any transcription/calculation errors between raw data and Form VII - Pest-2?		X	
7.13	Do all standard retention times for each INDA and INDB Verification Calibration fall within the windows established by the initial calibration sequence?	X		
7.14	Are the RPD values for all verification calibration standard compounds <25.0%?		X	
8.0	**<u>Analytical Sequence Check (Form VIII-PEST)</u>**			
8.1	Is Form VIII present and complete for each column and each period of analyses?	X		
8.2	Was the proper analytical sequence followed for each initial calibration and subsequent analyses?	X		
9.0	**<u>Cleanup Efficiency Verification (Form IX)</u>**			
9.1	Is Form IX - Pest-1 present and complete for each lot of Florisil Cartridges used?			X
9.2	Are all samples listed on the Pesticide Florisil Cartridge Check Form?			X
9.3	If GPC Cleanup was performed, is Form IX - Pest-2 present?		X	
9.4	Are percent recoveries (%R) of the pesticide and surrogate compounds used to check the efficiency of the cleanup procedures within QC limits:			
	80-120% for florisil cartridge check?			X
	80-110% for GPC calibration?			X
10.0	**<u>Pesticide/PCB Identification</u>**			
10.1	Is Form X complete for every sample in which a pesticide or PCB was detected?	X		
10.2	Are there any transcription/calculation errors between raw data and Forms 6E, 6G, 7E, 7D, 8D, 9A, 9B, 10A?		X	
10.3	Are retention times (RT) of the sample compounds within the established windows for both analyses?	X		
10.4	Is the percent difference (%D) calculated for the positive sample results on the two GC columns < 25.0%?		X	
10.5	Check chromatograms for false negatives, especially the multiple peak compounds toxaphene and PCBs. Were there any false negatives?		X	
11.0	**<u>Compound Quantitation and Reported Detection Limits</u>**			
11.1	Are there any transcription/calculation errors in Form I results?		X	
11.2	Are the CRQLs adjusted to reflect sample dilutions and, for soils, %moisture?	X		
12.0	**<u>Chromatogram Quality</u>**			
12.1	Were baselines stable?	X		

Data Validation Checklist - Part C: Pesticides/PCB Analysis

No:	Parameter	YES	NO	N/A
12.2	Were any electropositive displacement (negative peaks) or unusual peaks seen?		X	
13.0	**Field Duplicates**			
13.1	Were any field duplicates submitted for PEST/PCB analysis?	X		

Data Validation Checklist - Part D: Metals Analyses

No:	Parameter	YES	NO	N/A
1.0	**Form I to IX**			
1.1	Are all the Form I through Form IX labeled with:			
	Laboratory Name?	X		
	Case/SAS No.?		X	
	EPA sample No.?		X	
	SDG No.?	X		
	Contract No.?	X		
	Correct units?	X		
	Matrix?	X		
1.2	Do any computer/transcription errors exceed 10% of reported values on Forms I-IX for:			
	A. All analytes analyzed by ICP?		X	
	B. All analytes analyzed by GFAA?			X
	C. All analytes analyzed by AA Flame?			X
	D. Mercury?		X	
	E. Cyanide?			X
2.0	**Raw Data**			
2.1	Digestion Log for flame AA/ICP (Form XIII) present?	X		
2.2	Digestion Log for furnace AA (Form XIII) present?			X
2.3	Distillation Log for mercury (Form XIII) present?	X		
2.4	Distillation Log for cyanides (Form XIII) present?	X		
2.5	Are pH values (pH<2 for all metals, pH>12 for cyanide) present?	X		
2.6	Percent solids calculation dates present on sample preparation logs/bench sheets?	X		
2.7	Are preparation dates present on sample preparation logs/bench sheets?	X		
2.8	Measurement read out record present?			
	A. ICP	X		
	B. Flame AA			X
	C. Furnace AA			X
	D. Mercury	X		
	E. Cyanides			X
2.9	Are all raw data to support all sample analyses and QC operations present?			X
3.0	**Holding Times**			
3.1	A. Mercury analysis (28 days) ....exceeded?		X	
	B. Cyanide distillation (14 days) ....exceeded?			X
	C. Other Metals analysis (6 months) ....exceeded?		X	
3.2	Is pH of aqueous samples for:			
	A. Metals Analysis >2?		X	

Data Validation Checklist - Part D: Metals Analyses

No:	Parameter	YES	NO	N/A
	B. Cyanides Analysis <12?			X
4.0	**Form I (Final Data)**			
4.1	Are all Forms I's present and complete?	X		
4.2	Are correct units (ug/l for waters and mg/kg for soils) indicated on Form I's?	X		
4.3	Are soil sample results for each parameter corrected for percent solids?	X		
4.4	Are all "less than IDL" values properly coded with "U"?	X		
4.5	Are the correct concentration qualifiers used with final data?	X		
4.6	Are EPA sample #s and corresponding laboratory sample ID #s the same as on the Cover Page, Form I's and in the raw data?	X		
4.7	Was a brief physical description of samples given on Form I's?	X		
4.8	Was the dilution of any sample diluted beyond the requirements of the contract noted on Form I or Form XIV?		X	
5.0	**Calibration**			
5.1	Is record of at least 2 point calibration present for ICP analysis?	X		
5.2	Is record of 5 point calibration present for Hg analysis?	X		
5.3	Is record of 4 point calibration present for:			X
	Flame AA?			X
	Furnace AA?			X
	Cyanides?			X
5.4	Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses?	X		
5.5	Is correlation coefficient less than 0.995 for:			
	Mercury Analysis?	X		
	Cyanide Analysis?			X
	Atomic Absorption Analysis?			X
5.6	In the instance where less than 4 standards are measured in absorbance (or peak area, peak height, etc.) Mode, are remaining standards analyzed in concentration mode immediately after calibration within +/- 10% of the true values?			X
6.0	**Form II A (Initial and Continuing Calibration Verification)**			
6.1	Present and complete for every metal and cyanide?	X		
6.2	Present and complete for AA ICP when both are used for the same analyte?			X
6.3	Are all calibration standards (initial and continuing) within control limits:			
	Metals - 90 - 110 %R	X		
	Hg - 80 - 120 %R	X		
	Cyanides - 85 - 115 %R			X
6.4	Was continuing calibration performed every 10 samples or every 2 hours?	X		
6.5	Was ICV for cyanides distilled?			X

Data Validation Checklist - Part D: Metals Analyses

No:	Parameter	YES	NO	N/A
7.0	**Form II B (CRDL Standards for AA and ICP)**			
7.1	Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)?	X		
7.2	Was a mid range calibration verification standard distilled and analyzed for cyanide analysis?	X		
7.3	Was a 2xCRDL (or 2xIDL when IDL>CRDL) analyzed (CRI) for each ICP run?	X		
7.4	Was CRI analyzed after ICV/ICB and before the final CCV/CCB, and twice every eight hours of ICP run?	X		
7.5	Are CRA and CRI standards within control limits: Metals 70 – 130 %R?	X		
7.6	Is mid-range standard within control limits: Cyanide 70 - 130 %R?	X		
8.0	**Form III (Initial and Continuing Calibration Blanks)**			
8.1	Present and complete?	X		
8.2	For both AA and ICP when both are used for the same analyte?			X
8.3	Was an initial calibration blank analyzed?	X		
8.4	Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	X		
8.5	Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)?	X		
8.6	Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?			X
9.0	**Form III (Preparation Blank)**			
9.1	Was one preparation blank analyzed for:			
	each Sample Delivery Group?	X		
9.2	Is concentration of preparation blank value greater than the CRDL when IDL is less than or equal to CRDL?		X	
9.3	If yes, is the concentration of the sample with the least concentrated analyte less than 10 times the preparation blank?			X
9.4	Is concentration of preparation blank value (Form III) less than two times IDL, when IDL is greater than CRDL?			X
9.5	Is concentration of preparation blank below the negative CRDL?		X	
10.0	**Form IV (Interference Check Sample)**			
10.1	Present and Complete?	X		
10.2	Are all Interference Check Sample results inside the control limits (+/- 20%)?	X		
10.3	If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS?			X
11.0	**Form V A (Spiked Sample recovery - Pre-Digestion/Pre-Distillation**			
11.1	Present and complete for:			
	each SDG?	X		
	each matrix type?	X		
	each concentration range (i.e., low, medium, high)?	X		

Data Validation Checklist - Part D: Metals Analyses

No:	Parameter	YES	NO	N/A
	For both AA and ICP when both are used for the same analyte?			X
11.2	Was field blank used for spiked sample?		X	
11.3	Are all recoveries within control limits?		X	
11.4	If no, is sample concentration greater than or equal to four times spike concentration?		X	
12.0	**<u>Form VI (Lab Duplicates)</u>**			
12.1	Present and complete for :			
	each SDG?	X		
	each matrix type?	X		
	each concentration range (i.e., low, medium, high)?	X		
	both AA and ICP when both are used for the same analyte?			X
12.2	Was field blank used for duplicate analysis?		X	
12.3	Are all values within control limits (RPD 20% or difference </= +/-CRDL)?	X		
12.4	If no, are all results outside the control limits flagged with an * on Form I's and VI?			X
13.0	**<u>Field Duplicates</u>**			
13.1	Were field duplicates analyzed?	X		
13.2	**<u>Aqueous</u>**			
	Is any RPD greater than 35% where sample and duplicate are both greater than or equal to 5 times CRDL?	X		
	Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?		X	
13.3	**<u>Soil/Sediment</u>**			
	Is any RPD (where sample and duplicate are both greater than 5 times CRDL): >50%?	X		
	Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL): >2x CRDL?		X	
14.0	**<u>Form VII (Laboratory Control Sample)</u>**			
14.1	Was one LCS prepared and analyzed for:			
	each SDG?	X		
	each batch samples digested/distilled?	X		
	both AA and ICP when both are used for the same analyte?			X
14.2	**<u>Aqueous LCS</u>**			
	Is any LCS recovery:			
	less than 50%?		X	
	between 50% and 79%?		X	
	between 121% and 150%?		X	
	greater than 150%?		X	
14.3	**<u>Solid LCS</u>**			
	Is LCS "Found" value higher than the control limits on Form VII?		X	

Data Validation Checklist - Part D: Metals Analyses

No:	Parameter	YES	NO	N/A
	Is LCS "Found" value lower than the control limits on Form VII?	X		
15.0	**Form IX (ICP Serial Dilution)**			
15.1	Was serial dilution analysis performed for:			
	each SDG?	X		
	each matrix type?	X		
	each concentration range (i.e., low, medium, high)?	X		
15.2	Was field blank(s) used for Serial Dilution Analysis?		X	
15.3	Are results outside control limit flagged with an "E" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater?			X
15.4	Are any %difference values:			
	>10%		X	
	>/=100%		X	
16.0	**Furnace Atomic Absorption (AA) QC Analysis**			
16.1	Are duplicate injections present in furnace raw data for each sample analyzed by GFAA?			X
16.2	Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or Coefficient of Variation (CV) for concentration greater than CRDL?			X
16.3	Was a dilution analyzed for sample with analytical spike recovery less than 40%?			X
16.4	Is analytical spike recovery outside the control limits (85 - 115%) for any sample?			X
17.0	**Form VIII (Method of Standard Addition Results)**			
17.1	Present?			X
17.2	If no, is any Form I result coded with "S" or a "+"?			X
17.3	Is coefficient of correlation for MSA less than 0.990 for any sample?			X
17.4	Was MSA required for any sample but not performed?			X
17.5	Is coefficient of correlation for MSA less than 0.995?			X
17.6	Are MSA calculations outside the linear range of the calibration curve generated at the beginning of the analytical run?			X
17.7	Was proper Quantitation procedure followed correctly as outlined in the SOW on page E-23?			X
18.0	**Dissolved/Total or Inorganic/Total Analytes**			
18.1	Were any analyses performed for dissolved as well as total analytes on the same sample(s)?		X	
18.2	Were any analyses performed for inorganic as well as total (organic and inorganic) analytes on the same sample(s)?	X		
18.3	Is the concentration of any dissolved (or inorganic) analyte greater than its total concentration by more than 10%?		X	
18.4	Is the concentration of any dissolved (or inorganic) analyte greater than its total concentration by more than 50%?		X	

Data Validation Checklist - Part D: Metals Analyses

No:	Parameter	YES	NO	N/A
19.0	**Form I (Field Blank)**			
19.1	Is field blank concentration less than CRDL (or 2 x IDL when IDL>CRDL) for all parameters of associated aqueous and soil samples?			X
19.2	If no, was field blank value already rejected due to other QC criteria?			X
20.0	**Form X, XI, XII (Verification of Instrumental Parameters)**			
20.1	Is verification report present for:			
	Instrument Detection Limits (quarterly)?	X		
	ICP Interelement Correction Factors (annually)?	X		
	ICP Linear Ranges (quarterly)?	X		
21.0	**Form X (Instrument Detection Limits)**			
21.1	Are IDLs present for:			
	all the analytes?	X		
	all the instruments used?	X		
	For both AA and ICP when both are used for the same analyte?			X
21.2	Is IDL greater than CRDL for any analytes?		X	
21.3	If yes, is the concentration on Form I of the sample analyzed on the instrument whose IDL exceeds CRDL, greater than 5 x IDL?			X
22.0	**Form XI (Linear Ranges)**			
22.1	Was any sample result higher than the high linear range of ICP?		X	
22.2	Was any sample result higher than the highest calibration standard for non-ICP parameters?		X	
22.3	If yes for any of the above, was the sample diluted to obtain the result on Form I?			X
23.0	**Percent Solids of Sediments**			
23.1	Are percent solids in sediment(s):			
	<50%?		X	
	<10%?		X	

Data Usability Summary Report

115 Old Country Road Site
Carle Place, New York

Air/Soil Vapor Samples

December 2012

EnviroAnalytics
Data Management and Validation Service

2638 Sunset Avenue
Utica, New York 13502

Data Usability Summary Report

Air/Soil Vapor Samples

115 Old Country Road Site
Carle Place, New York

Prepared By:

EnviroAnalytics
Data Management and Validation Service
2638 Sunset Avenue
Utica, New York 13502

EXECUTIVE SUMMARY

This report addresses data quality for air/soil vapor samples collected at the 115 Old Country Road Site located in Carle Place, New York. The samples were analyzed for volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Edgewater Environmental. Inc. located in Huntington Station, New York. Analytical services were provided by Chemtech located in Mountainside, New Jersey.

The TO-15 volatile organic analyses data were determined to be usable for qualitative and quantitative purposes with additional qualification. Sample results for several compounds were qualified based on deviations from field duplicate criteria.

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Appendices

SECTION 1 - INTRODUCTION

1.1 Introduction

This report addresses data quality for air/soil vapor samples collected at the former 115 Old Country Road Site located in Carle Place, New York. The samples were analyzed for volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Edgewater Environmental, Inc. located in Huntington Station, New York. Analytical services were provided by Chemtech located in Mountainside, New Jersey. The quantity and type of samples submitted for data validation are tabulated below.

Table 1: Introduction - Sample Summary Table

SDG#	Date Collected	Sample Matrix	Sample Identification	
			Client ID	Laboratory ID
D1788	3/08/2012	Air/Soil Vapor	FIEDDUPLICATE SSV-1 IA-1 AA-1 IA-2 SSV-2	D1788-01 D1788-02 D1788-03 D1788-04 D1788-05 D1788-06
D4896	11/16/2012	Air/Soil Vapor	IA-1 DUP SSV-5 AA-1 SSV-6 IA-2	D4896-01 D4896-02 D4896-03 D4896-04 D4896-05 D4896-06

1.2 Analytical Methods

The samples were analyzed for volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies (2005 update). Laboratory analyses were provided by Chemtech located in Mountainside, New Jersey.

1.3 Validation Protocols

Data validation is a process that involves the evaluation of analytical data against prescribed quality control criteria to determine the usefulness of the data. The analytical data addressed in this report were evaluated utilizing the quality control criteria presented in the following documents:

- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, EPA-540-R-08-01, June 2008.

- *CLP Organics Data Review and Preliminary Review,* SOP No. HW-6 Revision #14, USEPA Region II, September 2006.

- *Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-846 Method 8260B*, SOP No. HW-24 Revision #2, USEPA Hazardous Waste Support Branch, October 2006.

- *Validating Air Samples Volatile Organic Analysis of Ambient Air in Canister by Method TO-15*, SOP No. HW-31 Revision #4, USEPA Hazardous Waste Support Branch, October 2006.

- *Exhibit E of New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP)*, NYSDEC June 2005.

1.3.1 Organic Parameters

The validation of organic parameters for this project followed the requirements presented in the analytical methodology and the data validation guidelines presented above. The following QA/QC parameters were evaluated:

Volatile Organics Analyses

1. Holding Times
2. GC/MS Instrument Tuning Criteria
3. Calibration
    a. Initial Calibration
    b. Continuing Calibration
4. Blank Analysis
5. Surrogate Recovery
6. Matrix Spike / Matrix Spike Duplicate Analysis
7. Reference Standard Analysis
8. Internal Standards Recovery
9. Compound Identification and Quantification
10. Field Duplicate Analysis
11. System Performance
12. Documentation Completeness
13. Overall Data Assessment

1.4 Data Qualifiers

The following qualifiers as specified in the guidance documents presented in Section 1.3 of this report have been used for this data validation.

U	Indicates that the compound was analyzed for, but was not detected. The sample quantification limit is presented and adjusted for dilution. This qualifier is also used to signify that the detection limit of an analyte was raised due to blank contamination.
J	Indicates that the result should be considered approximate. This qualifier is used when the data validation procedure identifies a deficiency in the data generation process.

UJ	Indicates that the detection limit for the analyte in this sample should be considered approximate. This qualifier is used when the data validation process identifies a deficiency in the data generation process.
R	Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data are considered to be unusable for both qualitative and quantitative purposes.

The following sections of this document present a summary of the data validation process. Section 2 discusses data compliance with established QA/QC criteria and qualifications performed on the sample data. A discussion of the Precision, Accuracy, Representativeness, Comparability, and Completeness (PARCC) of the data and data usability are discussed in Section 3. The USEPA Region II Data Validation Checklist is presented in Appendix A.

SECTION 2 - DATA VALIDATION SUMMARY

This section presents a discussion of QA/QC parameter compliance with established criteria and the qualification of data performed when QA/QC parameter deviations were identified. When several deviations from established QA/QC criteria were observed, the final qualifier assigned to the data was based on the cumulative effect of the deviations.

2.1 Volatile Organics Analysis

Data validation was performed for twelve air/soil vapor samples. The QA/QC parameters presented in Section 1.3.2 of this report were found to be within specified limits with the exception of the following:

Sample Dilution

Compound concentrations for several samples exceeded the linear calibration range of the analytical system when analyzed with an un-diluted sample aliquot. The laboratory re-analyzed these samples with a diluted sample aliquot to properly quantify the compound concentration within the range of the analytical system. The laboratory flagged compound concentrations that exceeded the analytical system's calibration range with an "E" qualifier in the un-diluted sample aliquots. The diluted sample results should be used in place of the "E" qualified sample results as shown in the following table.

Table 2: Volatile Organics Analysis - Sample Dilution Table

Sample ID	Compound	Sample Results (ppbv/µg/m^3)	
		Un-Diluted	Diluted
FIELDDUPLICATE	1,1-Dichloroethene	37 E/146 E	22/87.2
	Acetone	19 E/45.1 E	20/47.5
	1,1-Dichloroethane	84 E/339 E	140/566
	1,1,1-Trichloroethane	96 E/523 E	470/2564
	Tetrachloroethene	170 E/1152 E	280/1898
SSV-1	1,1-Dichloroethene	30 E/118 E	24/95.2
	Acetone	16 E/38.0 E	26/61.8
	1,1-Dichloroethane	78 E/315 E	150/607
	1,1,1-Trichloroethane	90 E/491 E	510/2782
	Tetrachloroethene	160 E/1084 E	320/2169
SSV-2	1,1-Dichloroethene	68 E/269 E	53/210
	1,1-Dichloroethane	68 E/275 E	42/169
	1,1,1-Trichloroethane	130 E/709 E	1400/7638
	Tetrachloroethene	140 E/949 E	140/949
IA-1	Acetone	22.1 E/52.5 E	24.3/57.7
DUP	Acetone	46.5 E/110 E	62/147
	Tetrachloroethene	422 E/2861 E	789/5350
SS-5	Acetone	69.5 E/165 E	86/204
	Chloroform	29 E/141 E	27.2/132
	1,1,1-Trichloroethane	28.5 E/155 E	23.6/128
	Trichloroethene	31 E/166 E	26.4/141
	Tetrachloroethene	629 E/4265 E	2650/17970
IA-2	Acetone	94.7 E/224 E	242/574
	Tetrachloroethene	372 E/2522 E	514/3485

Sample ID	Compound	Sample Results (ppbv/$\mu g/m^3$)	
		Un-Diluted	Diluted
SSV-6	Trichlorofluoromethane	57.2 E/321 E	86/483
	Acetone	16.1 E/38.2 E	16.1 J/38.2 J[1]
	1,1,1-Trichloroethane	133 E/725 E	313/1707
	Tetrachloroethene	356 E/2414 E	620/4204

1. Acetone was diluted below the level of quantification in the diluted re-analysis of sample SSV-6. Due to this deviation the detected Acetone result from the un-diluted analysis was qualified as approximated (J).

Field Duplicate Analysis

Field duplicate criterion requires the relative percent difference (RPD) between duplicate analyses to be less than 50 percent. Qualification of sample results included the approximation of data for compounds with RPD values greater than 50 percent. Samples qualified due to laboratory duplicate analysis deviations are tabulated below.

Table 3: Volatile Organics Analyses - Laboratory Duplicate Deviations

Duplicate Sample ID	Original Sample ID	Compound	RPD	Qualifier	Affected Samples
FIELDDUPLICATE	SSV-1	Methylene Chloride Cyclohexane Tetrahydrofuran Benzene	124.79 % 200 % 200 % 200 %	J J, UJ J, UJ J, UJ	FIEDDUPLICATE SSV-1 IA-1 AA-1 IA-2 SSV-2
DUP	SSV-5	tert-Butyl Alcohol Chloromethane Trichlorofluoromethane Heptane trans-1,2-Dichloroethene 1,1-Dichloroethane 2-Butanone Carbon Tetrachloride cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Tetrahydrofuran Trichloroethene 4-Methyl-2-pentanone Toluene Tetrachloroethene Ethylbenzene m,p-Xylene o-Xylene 1,2,4-Trimethylbenzene	103.87 % 200 % 63.26 % 200 % 86.57 % 200 % 140.98 % 200 % 99.77 % 87.07 % 78.47 % 200 % 81.60 % 143.36 % 89.78 % 108.23 % 151.17 % 147.64 % 143.75 % 200.00 %	J, UJ J, UJ J J, UJ J, UJ J, UJ J J, UJ J, UJ J, UJ J, UJ J, UJ J, UJ J, UJ J J J, UJ J J, UJ J, UJ	IA-1 DUP SSV-5 AA-1 SSV-6 IA-2

Overall Data Assessment

Overall, the laboratory performed volatile organic analyses in accordance with the requirements specified in the methods listed in Section 1.2. These data were determined to be usable for qualitative and quantitative purposes with additional qualification. Sample results for several compounds were qualified based on deviations from field duplicate criteria.

SECTION 3 - DATA USABILITY and PARCC EVALUATION

3.1 Data Usability

This section presents a summary of the usability of the analytical data and an evaluation of the PARCC parameters. Data usability was calculated as the percentage of data that was not qualified as rejected based on a significant deviation from established QA/QC criteria. Data usability which was calculated separately for each type of analysis is tabulated below.

Table 4: Data Usability and PARCC Evaluation - Data Usability

Parameter	Usability	Deviations
TO-15 Volatile organics	100 %	None resulting in the rejection of data.

3.2 PARCC Evaluation

The following sections provide an evaluation of the analytical data with respect to the precision, accuracy, representativeness, comparability, and completeness (PARCC) parameters.

3.2.1 Precision

Precision is measured through field duplicate samples, split samples, and laboratory duplicate samples. For this sampling program, none of the data were qualified for laboratory duplicate criteria deviations; and 11.43 percent of the data were qualified for field duplicate criteria deviations.

3.2.2 Accuracy

Matrix spike sample, surrogate recovery, internal standard recovery, laboratory control samples, and calibration criteria indicate the accuracy of the data. For this sampling program, none of the analytical data were qualified for deviations from matrix spike recovery criteria; none of the data were qualified for surrogate recovery criteria deviations; none of the data were qualified for internal standard recovery criteria deviations; none of the data were qualified for laboratory control sample deviations; and none of the data were qualified for calibration criteria deviations.

3.2.3 Representativeness

Holding times, sample preservation, and blank analysis are indicators of the representativeness of the analytical data. For this investigation, none of the analytical data required qualification for holding time deviations and none of the analytical data required qualification for blank analysis deviations.

3.2.4 Comparability

Comparability is not compromised provided that the analytical methods did not change over time. A major component of comparability is the use of standard reference materials for calibration and QC. These standards are compared to other unknowns to verify their concentrations. Since standard analytical methods and reporting procedures were consistently used by the laboratory, the comparability criteria for the analytical data were met.

3.2.5 Completeness

The percent usability or completeness of the data was determined to be 100 percent.

APPENDIX A

DATA VALIDATION CHECKLISTS

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Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
1.0	**Data Completeness and Deliverables**			
1.1	Have any missing deliverables been received and added to the data package?		X	
2.0	**Cover Letter, Narrative, and Data Reporting Forms**			
2.1	Is the Lab. Narrative and Cover Page Present?	X		
2.2	Is Case Number contained in the Narrative?	X		
2.3	Are the following Data Reporting Forms present?			
	Analysis Data Sheet [Form I/Equivalent]	X		
	Tentatively Identified Compounds [Form I-TIC]	X		
	Blank Summary [Form IV/Equivalent]	X		
	Laboratory Control Sample Data Sheet [Form III/Equivalent]	X		
	GC/MS Instrument Performance Check and Mass Calibration [Form V/Equivalent]	X		
	Initial Calibration [Form VI/Equivalent]	X		
	Continuing Calibration [Form VII/Equivalent]	X		
	Internal Standard Area and RT Summary [Form VIII/Equivalent]	X		
	Canister Certification [Form IX/Equivalent]	X		
3.0	**Canister Receipt/Log-in Sheet**			
3.1	Do all info items agree with each sample?	X		
4.0	**Traffic Reports and Laboratory Narrative**			
4.1	Are the Traffic Report Forms present for all samples?	X		
5.0	**Holding Times**			
5.1	Have any VOA technical holding times of 30 days, determined from the date of sample collection to the date of analysis, been exceeded?		X	
6.0	**Leak Test Evaluation**			
6.1	Did the pressure test not vary by more than ± 13.8 kPa (± 2 psi) over the 24 hours period?	X		
7.0	**Canister Certification Form IX/Equivalent**			
7.1	Blank Analysis			
	Were the target analytes < the required detection limits specified in the task order?		X	
7.2	Is the canister certification form provided, and the associated canister sample identification included? When contamination, included contamination detected (all raw data), analyte and reference mass spectra.	X		

Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
8.0	**<u>Laboratory Control Samples</u>**			
8.1	Is an LCS Data Sheet [Form III/Equivalent] present and complete for each LCS?	X		
8.2	Was an LCS prepared (10 ppbv total scan, 0.1 ppbv SIM) and analyzed at the required frequency (once per 24 hour analytical sequence, and concurrently with the samples in the SDG)?	X		
8.3	Are there any transcription/calculation errors between the raw data and Form III/Equivalent?	X		
8.4	Is the % recovery within 70 – 130 % for each LCS <u>target compound</u> reported on Form III/Equivalent?	X		
8.5	Is the RT of <u>each reported LCS compound</u> within the windows established during the most recent valid calibration?	X		
8.6	Do the Internal Standards meet the requirements specified in Sections 18.1 and 18.2?	X		
9.0	**<u>GC/MS Instrument Performance Check</u>**			
9.1	Are the GC/MS Instrument Performance Check Forms [Form V/Equivalent] present for Bromofluorobenzene (BFB)?	X		
9.2	Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the 50 ng BFB provided for each twenty-four hour shift?	X		
9.3	Has the instrument performance compound been analyzed for every twenty-four hours of sample analysis per instrument?	X		
9.4	Have the ion abundances been normalized to m/z 95?	X		
9.5	Have the ion abundance criteria been met for each instrument used?	X		
9.6	Are there any transcription/calculation errors between mass lists and Form Vs?		X	
9.7	Have the appropriate number of significant figures (two) been reported?	X		
9.8	Are the spectra of the mass calibration compound acceptable?	X		
10.0	**<u>Performance Evaluation Sample (Optional)</u>**			
10.1	Was a PE sample submitted from the Agency with each SDG?			X
10.2	Do the Internal Standards meet the requirements specified in Section 18.1 and 18.2?			X
11.0	**<u>Laboratory Method Blanks</u>**			
11.1	Is an Analysis Data Sheet [Form IV/Equivalent] present and complete for each method blank?	X		
11.2	Frequency of Analysis:			
	Has a method blank analysis been reported per instrument for each 24-hour analytical sequence?	X		
	Has a method blank been analyzed after the initial calibration or a valid calibration check standard, and before the LCS, prior to sample analysis?	X		
11.3	Is the chromatographic performance (baseline stability) for each instrument acceptable?	X		
11.4	Was the area response of each Internal Standard (IS) in the blank within ± 40 % of the mean area response of the IS of the most recent valid calibration?	X		

Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	**Parameter**	**YES**	**NO**	**N/A**
11.5	Were the RTs of each IS within ± 0.33 min (20 sec.) between blanks and most recent valid calibration?	X		
12.0	**Blank Contamination**			
12.1	Do any method blanks have positive target and non-target VOA results?		X	
13.0	**Target Compound Analytes**			
13.1	Are the Organic Analysis Data Sheets [Form I/Equivalent], VOA chromatograms, and data system printouts present and complete with required header information for each of the following:			
	a. Samples?	X		
	b. Method blanks?	X		
	c. Laboratory Control Sample (LCS)?	X		
	d. Performance Evaluation Sample (PES)?	X		
13.2	Is the chromatographic performance acceptable with respect to:			
	a. Baseline stability?	X		
	b. Resolution?	X		
	c. Peak shape?	X		
	d. Full-scale graph (attenuation)?	X		
	e. Other?			X
13.3	Were any electropositive displacement (negative peaks) or unusual peaks seen?		X	
13.4	Is the sample component relative retention time (RRT) within ± 0.06 RRT units of the RRT of the standard component from the most recent continuing calibration?	X		
13.5	Was Nafion dryer used?		X	
14.0	**Tentatively Identified Compounds (TIC)**			
14.1	Are all Tentatively Identified Compound Forms [Form I-TIC] present and are retention time, estimated concentration and "JN" qualifier listed corresponding to each TIC?		X	
14.2	Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following?			
	a. Samples			X
	b. Blanks			X
14.3	Are all ions present in the reference mass spectrum with a relative intensity greater than 10 % also present in the sample mass spectrum?			X
14.4	Do TIC and "best match" standard relative ion intensities agree within 20 %?			X
15.0	**Initial Calibration and System Performance [Form VI/Equivalent]**			
15.1	Were each GC/MS system calibrated at 5 concentrations that span the monitoring range of the interest in an initial calibration sequence to determine the sensitivity and the linearity of the GC/MS response for the target compounds?	X		
15.2	Was the same volume introduced into the trap consistently for all field and QC-sample analyses?	X		

Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
15.3	Was the area response (Y) at each calibration level within ± 40 % of the mean area response (mean Y) over the initial calibration range for each Internal Standard?	X		
	Did the laboratory tabulate the area response (Y) of the primary ions and the corresponding concentration for each compound and Internal Standard?	X		
15.4	Are the relative retention times (RRTs) for each of the target compounds at each calibration level within ± 0.06 RRT units of the mean relative retention time for the compound?	X		
15.5	Are all individual RRF and average RRFs ≥ 0.050?	X		
15.6	Are the response factors (RF) stable i.e., % Relative Standard Deviation (%RSD) ≤ 40.0 %?	X		
15.7	Are there any transcription/calculation errors in the reporting of average response factors (RRFs) or %RSDs?		X	
15.8	Are the RT shift for each Internal Standard (IS) at each calibration level within 20 seconds of the mean RT over the initial calibration range of each IS?	X		
16.0	**<u>Daily Calibration (Form VII/Equivalent)</u>**			
16.1	Are the daily Calibration Forms [Form VII/Equivalent] present and complete for the volatile fraction?	X		
16.2	Has the daily calibration standard (20 ppbv total scan, 0.1 ppbv SIM) been analyzed for every twenty-four hours of sample analysis per instrument after the BFB tuning analysis?	X		
16.3	Do any volatile compounds have a % Difference (%D) between the initial and daily RRFs which exceed the ± 30 % criteria?		X	
16.4	Are there any transcription/calculation errors in the reporting of the average response factors (RRF) or % difference (%D) between initial and daily RRFs?		X	
17.0	**<u>Compound Quantitation and Reported Detection Limits</u>**			
17.1	Are there any transcription/calculations errors in Form I results?		X	
17.2	Are the reported detection limits adjusted to reflect sample dilutions?	X		
17.3	Have any target compound concentrations exceeded the calibration range of the GC?		X	
17.4	Was more than one method of quantitation used to calculate sample results within a batch or 24-hour analytical sequence?		X	
17.5	Did the lab report the target compounds below CRQLs with the suffix "J"?		X	
18.0	**<u>Internal Standards (Form VIII/Equivalent)</u>**			
18.1	Are the 3 internal standard areas [Form VIII] of every sample, LCS, PE, and blank within the upper and lower limits (+ 40 % to – 40 %) for each continuing calibration or 10 ppbv level of initial calibration?	X		
18.2	Are the internal standard retention times in each sample, LCS, PE, and blank within 20 seconds of the corresponding retention times in the associated calibration standard?	X		
19.0	**<u>Mass Spectral Interpretation/Identification</u>**			
19.1	Are the Organic Analysis Data Sheets present with required header information on each page, for each of the following:			
	a. Samples and/or fractions as appropriate?	X		

Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
	b. Laboratory Control Samples?	X		
	c. Blanks?	X		
19.2	Are the VOA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (quant reports) included in the sample package for each of the following:			
	a. Samples and/or fractions as appropriate?	X		
	b. Laboratory Control Samples?	X		
	c. Blanks?	X		
19.3	Is chromatographic performance acceptable with respect to:			
	a. Baseline stability?	X		
	b. Resolution?	X		
	c. Peak shape?	X		
	d. Full-scale graph (attenuation)?	X		
	e. Other:			X
19.4	Are the lab-generated standard mass spectra of the identified compounds present for each sample?	X		
19.5	Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	X		
19.6	Are all ions present in the reference standard mass spectrum at a relative intensity greater than 10 % also present in the sample mass spectrum?	X		
19.7	Do sample and reference standard relative ion intensities agree within ± 20 %?	X		
20.0	**<u>Field Duplicates</u>**			
15.1	Were any field duplicates submitted for VOA analysis?	X		

Data Usability Summary Report

115 Old Country Road Site
Carle Place, New York

Air/Soil Vapor Samples

January 2013

EnviroAnalytics
Data Management and Validation Service

2638 Sunset Avenue
Utica, New York 13502

Data Usability Summary Report

Air/Soil Vapor Samples

115 Old Country Road Site
Carle Place, New York

Prepared By:

EnviroAnalytics
Data Management and Validation Service
2638 Sunset Avenue
Utica, New York 13502

EXECUTIVE SUMMARY

This report addresses data quality for air/soil vapor samples collected at the 115 Old Country Road Site located in Carle Place, New York. The samples were analyzed for volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Edgewater Environmental. Inc. located in Huntington Station, New York. Analytical services were provided by Chemtech located in Mountainside, New Jersey.

The TO-15 volatile organic analyses data were determined to be usable for qualitative and quantitative purposes with additional qualification. Sample results for several compounds were qualified based on deviations from field duplicate criteria.

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Appendices

Appendix A - Data Validation Checklists

SECTION 1 - INTRODUCTION

1.1 Introduction

This report addresses data quality for air/soil vapor samples collected at the former 115 Old Country Road Site located in Carle Place, New York. The samples were analyzed for volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Edgewater Environmental, Inc. located in Huntington Station, New York. Analytical services were provided by Chemtech located in Mountainside, New Jersey. The quantity and type of samples submitted for data validation are tabulated below.

Table 1: Introduction - Sample Summary Table

SDG#	**Date Collected**	**Sample Matrix**	**Sample Identification**	
			Client ID	**Laboratory ID**
D5316	12/21/2012	Air/Soil Vapor	IA-3	D5316-01
			SSV-7	D5316-02
			AA-1	D5316-03
			IA-2	D5316-04
			SSV-6	D5316-05
			IA-1	D5316-06
			SSV-5	D5316-07
			DUP	D5316-08

1.2 Analytical Methods

The samples were analyzed for volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies (2005 update). Laboratory analyses were provided by Chemtech located in Mountainside, New Jersey.

1.3 Validation Protocols

Data validation is a process that involves the evaluation of analytical data against prescribed quality control criteria to determine the usefulness of the data. The analytical data addressed in this report were evaluated utilizing the quality control criteria presented in the following documents:

- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, EPA-540-R-08-01, June 2008.

- *CLP Organics Data Review and Preliminary Review*, SOP No. HW-6 Revision #14, USEPA Region II, September 2006.

- *Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-846 Method 8260B*, SOP No. HW-24 Revision #2, USEPA Hazardous Waste Support Branch, October 2006.

- *Validating Air Samples Volatile Organic Analysis of Ambient Air in Canister by Method TO-15*, SOP No. HW-31 Revision #4, USEPA Hazardous Waste Support Branch, October 2006.

- *Exhibit E of New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP)*, NYSDEC June 2005.

1.3.1 Organic Parameters

The validation of organic parameters for this project followed the requirements presented in the analytical methodology and the data validation guidelines presented above. The following QA/QC parameters were evaluated:

Volatile Organics Analyses

1. Holding Times
2. GC/MS Instrument Tuning Criteria
3. Calibration
    a. Initial Calibration
    b. Continuing Calibration
4. Blank Analysis
5. Surrogate Recovery
6. Matrix Spike / Matrix Spike Duplicate Analysis
7. Reference Standard Analysis
8. Internal Standards Recovery
9. Compound Identification and Quantification
10. Field Duplicate Analysis
11. System Performance
12. Documentation Completeness
13. Overall Data Assessment

1.4 Data Qualifiers

The following qualifiers as specified in the guidance documents presented in Section 1.3 of this report have been used for this data validation.

U	Indicates that the compound was analyzed for, but was not detected. The sample quantification limit is presented and adjusted for dilution. This qualifier is also used to signify that the detection limit of an analyte was raised due to blank contamination.
J	Indicates that the result should be considered approximate. This qualifier is used when the data validation procedure identifies a deficiency in the data generation process.
UJ	Indicates that the detection limit for the analyte in this sample should be considered approximate. This qualifier is used when the data validation process identifies a deficiency in the data generation process.

R	Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data are considered to be unusable for both qualitative and quantitative purposes.

The following sections of this document present a summary of the data validation process. Section 2 discusses data compliance with established QA/QC criteria and qualifications performed on the sample data. A discussion of the Precision, Accuracy, Representativeness, Comparability, and Completeness (PARCC) of the data and data usability are discussed in Section 3. The USEPA Region II Data Validation Checklist is presented in Appendix A.

SECTION 2 - DATA VALIDATION SUMMARY

This section presents a discussion of QA/QC parameter compliance with established criteria and the qualification of data performed when QA/QC parameter deviations were identified. When several deviations from established QA/QC criteria were observed, the final qualifier assigned to the data was based on the cumulative effect of the deviations.

2.1 Volatile Organics Analysis

Data validation was performed for eight air/soil vapor samples. The QA/QC parameters presented in Section 1.3.2 of this report were found to be within specified limits with the exception of the following:

Sample Dilution

Compound concentrations for several samples exceeded the linear calibration range of the analytical system when analyzed with an un-diluted sample aliquot. The laboratory re-analyzed these samples with a diluted sample aliquot to properly quantify the compound concentration within the range of the analytical system. The laboratory flagged compound concentrations that exceeded the analytical system's calibration range with an "E" qualifier in the un-diluted sample aliquots. The diluted sample results should be used in place of the "E" qualified sample results as shown in the following table.

Table 2: Volatile Organics Analysis - Sample Dilution Table

Sample ID	Compound	Sample Results (ppbv/μg/m^3)	
		Un-Diluted	Diluted
IA-3	Acetone	610 E/1449 E	10400/24704
	Toluene	19.2 E/72.4 E	14.4/54.3
SSV-7	Acetone	350 E/831 E	1100/2613
	1,1-Dichloroethane	160 E/647 E	140/566
	1,1,1-Trichloroethane	590 E/3219 E	2200/12003
IA-2	Acetone	230 E/546 E	630/1496
SSV-6	Acetone	38.9 E/92.4 E	2.3/12.9
	Tetrachloroethene	36.4 E/246 E	29.3/198
IA-1	Acetone	75 E/178 E	77.2/183
SSV-5	Acetone	85.5 E/203 E	91.6/217
	Tetrachloroethene	520 E/3526 E	250/1695
DUP	Acetone	82.2 E/195 E	87.9/208

Field Duplicate Analysis

Field duplicate criterion requires the relative percent difference (RPD) between duplicate analyses to be less than 50 percent. Qualification of sample results included the approximation of data for compounds with RPD values greater than 50 percent. Samples qualified due to laboratory duplicate analysis deviations are tabulated below.

Table 3: Volatile Organics Analyses - Field Duplicate Deviations

Duplicate Sample ID	Original Sample ID	Compound	RPD	Qualifier	Affected Samples
DUP	SSV-5	tert-Butyl Alcohol	176.7 %	J, UJ	IA-3 SSV-7 AA-1 IA-2 SSV-6 IA-1 SSV-5 DUP
		Chloromethane	200 %	J, UJ	
		Trichlorofluoromethane	119.1 %	J, UJ	
		Methylene Chloride	200 %	J, UJ	
		Cyclohexane	200 %	J, UJ	
		2-Butanone	99.0 %	J	
		cis-1,2-Dichloroethene	200 %	J, UJ	
		Chloroform	200 %	J, UJ	
		1,1,1-Trichloroethane	200 %	J, UJ	
		Tetrahydrofuran	119.2 %	J, UJ	
		2,2,4-Trimethylpentane	200 %	J, UJ	
		Trichloroethene	200 %	J, UJ	
		4-Methyl-2-pentanone	200 %	J, UJ	
		Tetrachloroethene	199.3 %	J	
		Ethylbenzene	67.7 %	J, UJ	
		m,p-Xylene	85.8 %	J, UJ	
		o-Xylene	63.9 %	J, UJ	
		Styrene	50.4 %	J, UJ	

Overall Data Assessment

Overall, the laboratory performed volatile organic analyses in accordance with the requirements specified in the methods listed in Section 1.2. These data were determined to be usable for qualitative and quantitative purposes with additional qualification. Sample results for several compounds were qualified based on deviations from field duplicate criteria.

SECTION 3 - DATA USABILITY and PARCC EVALUATION

3.1 Data Usability

This section presents a summary of the usability of the analytical data and an evaluation of the PARCC parameters. Data usability was calculated as the percentage of data that was not qualified as rejected based on a significant deviation from established QA/QC criteria. Data usability which was calculated separately for each type of analysis is tabulated below.

Table 4: Data Usability and PARCC Evaluation - Data Usability

Parameter	Usability	Deviations
TO-15 Volatile organics	100 %	None resulting in the rejection of data

3.2 PARCC Evaluation

The following sections provide an evaluation of the analytical data with respect to the precision, accuracy, representativeness, comparability, and completeness (PARCC) parameters.

3.2.1 Precision

Precision is measured through field duplicate samples, split samples, and laboratory duplicate samples. For this sampling program, none of the data were qualified for laboratory duplicate criteria deviations; and 30.0 percent of the data were qualified for field duplicate criteria deviations.

3.2.2 Accuracy

Matrix spike sample, surrogate recovery, internal standard recovery, laboratory control samples, and calibration criteria indicate the accuracy of the data. For this sampling program, none of the analytical data were qualified for deviations from matrix spike recovery criteria; none of the data were qualified for surrogate recovery criteria deviations; none of the data were qualified for internal standard recovery criteria deviations; none of the data were qualified for laboratory control sample deviations; and none of the data were qualified for calibration criteria deviations.

3.2.3 Representativeness

Holding times, sample preservation, and blank analysis are indicators of the representativeness of the analytical data. For this investigation, none of the analytical data required qualification for holding time deviations and none of the analytical data required qualification for blank analysis deviations.

3.2.4 Comparability

Comparability is not compromised provided that the analytical methods did not change over time. A major component of comparability is the use of standard reference materials for calibration and QC. These standards are compared to other unknowns to verify their concentrations. Since standard analytical methods and reporting procedures were consistently used by the laboratory, the comparability criteria for the analytical data were met.

3.2.5 Completeness

The percent usability or completeness of the data was determined to be 100 percent.

APPENDIX A

DATA VALIDATION CHECKLISTS

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Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
1.0	**Data Completeness and Deliverables**			
1.1	Have any missing deliverables been received and added to the data package?		X	
2.0	**Cover Letter, Narrative, and Data Reporting Forms**			
2.1	Is the Lab. Narrative and Cover Page Present?	X		
2.2	Is Case Number contained in the Narrative?	X		
2.3	Are the following Data Reporting Forms present?			
	Analysis Data Sheet [Form I/Equivalent]	X		
	Tentatively Identified Compounds [Form I-TIC]	X		
	Blank Summary [Form IV/Equivalent]	X		
	Laboratory Control Sample Data Sheet [Form III/Equivalent]	X		
	GC/MS Instrument Performance Check and Mass Calibration [Form V/Equivalent]	X		
	Initial Calibration [Form VI/Equivalent]	X		
	Continuing Calibration [Form VII/Equivalent]	X		
	Internal Standard Area and RT Summary [Form VIII/Equivalent]	X		
	Canister Certification [Form IX/Equivalent]	X		
3.0	**Canister Receipt/Log-in Sheet**			
3.1	Do all info items agree with each sample?	X		
4.0	**Traffic Reports and Laboratory Narrative**			
4.1	Are the Traffic Report Forms present for all samples?	X		
5.0	**Holding Times**			
5.1	Have any VOA technical holding times of 30 days, determined from the date of sample collection to the date of analysis, been exceeded?		X	
6.0	**Leak Test Evaluation**			
6.1	Did the pressure test not vary by more than ± 13.8 kPa (± 2 psi) over the 24 hours period?	X		
7.0	**Canister Certification Form IX/Equivalent**			
7.1	Blank Analysis			
	Were the target analytes < the required detection limits specified in the task order?		X	
7.2	Is the canister certification form provided, and the associated canister sample identification included? When contamination, included contamination detected (all raw data), analyte and reference mass spectra.	X		

Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
8.0	**Laboratory Control Samples**			
8.1	Is an LCS Data Sheet [Form III/Equivalent] present and complete for each LCS?	X		
8.2	Was an LCS prepared (10 ppbv total scan, 0.1 ppbv SIM) and analyzed at the required frequency (once per 24 hour analytical sequence, and concurrently with the samples in the SDG)?	X		
8.3	Are there any transcription/calculation errors between the raw data and Form III/Equivalent?		X	
8.4	Is the % recovery within 70 – 130 % for each LCS target compound reported on Form III/Equivalent?	X		
8.5	Is the RT of each reported LCS compound within the windows established during the most recent valid calibration?	X		
8.6	Do the Internal Standards meet the requirements specified in Sections 18.1 and 18.2?	X		
9.0	**GC/MS Instrument Performance Check**			
9.1	Are the GC/MS Instrument Performance Check Forms [Form V/Equivalent] present for Bromofluorobenzene (BFB)?	X		
9.2	Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the 50 ng BFB provided for each twenty-four hour shift?	X		
9.3	Has the instrument performance compound been analyzed for every twenty-four hours of sample analysis per instrument?	X		
9.4	Have the ion abundances been normalized to m/z 95?	X		
9.5	Have the ion abundance criteria been met for each instrument used?	X		
9.6	Are there any transcription/calculation errors between mass lists and Form Vs?		X	
9.7	Have the appropriate number of significant figures (two) been reported?	X		
9.8	Are the spectra of the mass calibration compound acceptable?	X		
10.0	**Performance Evaluation Sample (Optional)**			
10.1	Was a PE sample submitted from the Agency with each SDG?			X
10.2	Do the Internal Standards meet the requirements specified in Section 18.1 and 18.2?			X
11.0	**Laboratory Method Blanks**			
11.1	Is an Analysis Data Sheet [Form IV/Equivalent] present and complete for each method blank?	X		
11.2	Frequency of Analysis:			
	Has a method blank analysis been reported per instrument for each 24-hour analytical sequence?	X		
	Has a method blank been analyzed after the initial calibration or a valid calibration check standard, and before the LCS, prior to sample analysis?	X		
11.3	Is the chromatographic performance (baseline stability) for each instrument acceptable?	X		
11.4	Was the area response of each Internal Standard (IS) in the blank within ± 40 % of the mean area response of the IS of the most recent valid calibration?	X		

Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
11.5	Were the RTs of each IS within ± 0.33 min (20 sec.) between blanks and most recent valid calibration?	X		
12.0	**Blank Contamination**			
12.1	Do any method blanks have positive target and non-target VOA results?		X	
13.0	**Target Compound Analytes**			
13.1	Are the Organic Analysis Data Sheets [Form I/Equivalent], VOA chromatograms, and data system printouts present and complete with required header information for each of the following:			
	a. Samples?	X		
	b. Method blanks?	X		
	c. Laboratory Control Sample (LCS)?	X		
	d. Performance Evaluation Sample (PES)?	X		
13.2	Is the chromatographic performance acceptable with respect to:			
	a. Baseline stability?	X		
	b. Resolution?	X		
	c. Peak shape?	X		
	d. Full-scale graph (attenuation)?	X		
	e. Other?			X
13.3	Were any electropositive displacement (negative peaks) or unusual peaks seen?		X	
13.4	Is the sample component relative retention time (RRT) within ± 0.06 RRT units of the RRT of the standard component from the most recent continuing calibration?	X		
13.5	Was Nafion dryer used?		X	
14.0	**Tentatively Identified Compounds (TIC)**			
14.1	Are all Tentatively Identified Compound Forms [Form I-TIC] present and are retention time, estimated concentration and "JN" qualifier listed corresponding to each TIC?		X	
14.2	Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following?			
	a. Samples			X
	b. Blanks			X
14.3	Are all ions present in the reference mass spectrum with a relative intensity greater than 10 % also present in the sample mass spectrum?			X
14.4	Do TIC and "best match" standard relative ion intensities agree within 20 %?			X
15.0	**Initial Calibration and System Performance [Form VI/Equivalent]**			
15.1	Were each GC/MS system calibrated at 5 concentrations that span the monitoring range of the interest in an initial calibration sequence to determine the sensitivity and the linearity of the GC/MS response for the target compounds?	X		
15.2	Was the same volume introduced into the trap consistently for all field and QC-sample analyses?	X		

No:	Parameter	YES	NO	N/A
15.3	Was the area response (Y) at each calibration level within ± 40 % of the mean area response (mean Y) over the initial calibration range for each Internal Standard?	X		
	Did the laboratory tabulate the area response (Y) of the primary ions and the corresponding concentration for each compound and Internal Standard?	X		
15.4	Are the relative retention times (RRTs) for each of the target compounds at each calibration level within ± 0.06 RRT units of the mean relative retention time for the compound?	X		
15.5	Are all individual RRF and average RRFs ≥ 0.050?	X		
15.6	Are the response factors (RF) stable i.e., % Relative Standard Deviation (%RSD) ≤ 40.0 %?	X		
15.7	Are there any transcription/calculation errors in the reporting of average response factors (RRFs) or %RSDs?		X	
15.8	Are the RT shift for each Internal Standard (IS) at each calibration level within 20 seconds of the mean RT over the initial calibration range of each IS?	X		
16.0	**<u>Daily Calibration (Form VII/Equivalent)</u>**			
16.1	Are the daily Calibration Forms [Form VII/Equivalent] present and complete for the volatile fraction?	X		
16.2	Has the daily calibration standard (20 ppbv total scan, 0.1 ppbv SIM) been analyzed for every twenty-four hours of sample analysis per instrument after the BFB tuning analysis?	X		
16.3	Do any volatile compounds have a % Difference (%D) between the initial and daily RRFs which exceed the ± 30 % criteria?		X	
16.4	Are there any transcription/calculation errors in the reporting of the average response factors (RRF) or % difference (%D) between initial and daily RRFs?		X	
17.0	**<u>Compound Quantitation and Reported Detection Limits</u>**			
17.1	Are there any transcription/calculations errors in Form I results?		X	
17.2	Are the reported detection limits adjusted to reflect sample dilutions?	X		
17.3	Have any target compound concentrations exceeded the calibration range of the GC?		X	
17.4	Was more than one method of quantitation used to calculate sample results within a batch or 24-hour analytical sequence?		X	
17.5	Did the lab report the target compounds below CRQLs with the suffix “J”?		X	
18.0	**<u>Internal Standards (Form VIII/Equivalent)</u>**			
18.1	Are the 3 internal standard areas [Form VIII] of every sample, LCS, PE, and blank within the upper and lower limits (+ 40 % to – 40 %) for each continuing calibration or 10 ppbv level of initial calibration?	X		
18.2	Are the internal standard retention times in each sample, LCS, PE, and blank within 20 seconds of the corresponding retention times in the associated calibration standard?	X		
19.0	**<u>Mass Spectral Interpretation/Identification</u>**			
19.1	Are the Organic Analysis Data Sheets present with required header information on each page, for each of the following:			
	a. Samples and/or fractions as appropriate?	X		

Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
	b. Laboratory Control Samples?	X		
	c. Blanks?	X		
19.2	Are the VOA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (quant reports) included in the sample package for each of the following:			
	a. Samples and/or fractions as appropriate?	X		
	b. Laboratory Control Samples?	X		
	c. Blanks?	X		
19.3	Is chromatographic performance acceptable with respect to:			
	a. Baseline stability?	X		
	b. Resolution?	X		
	c. Peak shape?	X		
	d. Full-scale graph (attenuation)?	X		
	e. Other:			X
19.4	Are the lab-generated standard mass spectra of the identified compounds present for each sample?	X		
19.5	Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	X		
19.6	Are all ions present in the reference standard mass spectrum at a relative intensity greater than 10 % also present in the sample mass spectrum?	X		
19.7	Do sample and reference standard relative ion intensities agree within ± 20 %?	X		
20.0	**<u>Field Duplicates</u>**			
15.1	Were any field duplicates submitted for VOA analysis?	X		

APPENDIX D

DRAFT
SUB-SLAB DEPRESSURIZATION SYSTEM REMEDIAL DESIGN WORK PLAN

115 Old Country Road Site

Carle Place, New York

Order on Consent: A1-0625-08-09
Site: 1-30-199

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DRAWING

FIGURES

APPENDICES

1.0 INTRODUCTION

The *115 Old Country Road site (115 OCR Site)* is located at 115 Old Country Road, Carle Place, NY, on the north side of Old County Road and west of Glen Cove Road. The *115 OCR Site* is located in Nassau County in the Town of North Hempstead, and is identified as Section 9, Block 670, Lot 55. The property is 4.65 acres and is currently a commercial shopping center.

A Record Search Report (October 28, 2010) and its addendum (December 20, 2010) were prepared by Edgewater Environmental, Inc. (Edgewater) for the Site and was previously submitted to and approved by the New York State Department of Environmental Conservation (NYSDEC). The Record Search Report and its addendum noted the following:

- Beginning in 1962 and continuing for several decades, Johnson & Hoffman Manufacturing (J&H), manufactured metal specialty products at its facility located at 40 Voice Road in Carle Place, which included the use of several chlorinated solvents. The J&H Site is located north of the *115 OCR Site*, and north of the Long Island Rail Road tracks. J&H's activities contaminated soil and groundwater at its Voice Road facility and this contamination migrated off-site. J&H entered into an agreement with the NYSDEC to investigate and remediate its on-site and off-site contamination. As part of J&H's required off-site investigation, in March and April 2008, ERM, J&H's consultant, conducted testing at the 115 OCR Site, consisting of groundwater samples and a soil vapor intrusion (SVI) study. ERM collected sub-slab soil gas, indoor air and outdoor air samples as part of this SVI study. The sub-slab and indoor air samples taken by ERM at the *115 OCR Site* were collected from a then vacant unit. ERM reported that the sub-slab and indoor samples from the vacant space contained 1,1,1-trichloroethane (TCA) and tetrachloroethene (PCE). Both PCE and TCE were used at the J&H site. Although J&H's consultant, ERM, suggested that the dry cleaner located at the *115 OCR Site* may be a source of the detected PCE, there was no documented release of PCE by the dry cleaner. In addition, there was no documented current or past use of TCA at the 115 OCR Site. The groundwater samples taken by ERM did not detect any elevated levels of chemicals.

- In March 2009, Impact Environmental (Impact) conducted sub-slab soil vapor and indoor air sampling at the 115 OCR Site. Impact reported finding levels of TCA, PCE, and trichloroethene (TCE) in the sub-slab sample, and levels of PCE and TCE in the indoor air sample. There was no documented current or past use of TCE at the 115 OCR Site, although there was documented use of TCE at J&H.

- In December 2009, Edgewater, on behalf of the Respondent, collected a sub-slab soil vapor sample from the existing probe installed by ERM in the vacant tenant space. The sub-slab TCE and PCE concentrations found by Edgewater were about half the concentrations previously reported by ERM. Relatively low concentrations of gasoline components and trichlorofluoromethane (Freon) were also found in the December 2009 sampling.

- In February 2010, Edgewater installed a sub-slab depressurization system (SSDS) under the vacant space consisting of two independent suction wells and blowers. This system was installed and began operating before occupancy by the new tenant. A standard in-line blower system was installed. A pilot test documented sufficient vacuum beneath the slab with the blowers operating in tandem or independently.

- In June 2010, Edgewater collected sub-slab vapor samples from the two probes located in the vacant tenant space, after the blowers had been operating for several months. The results of this sampling revealed that the TCA concentrations in both samples were significantly lower than the samples collected in March 2008 and December 2009.

- Three additional SVI sampling events were conducted at several locations at the 115 OCR Site. (1) February 24, 2012: testing was done in and below the Tiger Schulman's and the Sprint Store spaces; (2) November 16, 2012: testing was done in and below the Cups and Bagel Boss spaces; and (3) December 21, 2012: testing was done in and below the Bagel Boss, Cups, and Babi Nails spaces.

The results of these studies demonstrate that soil vapor intrusion mitigation is needed for a portion of the 115 OCR Site.[1] Respondent proposes the following as that mitigative measure. Respondent will conduct a pilot test of the sub-surface, the results of which will be used to design and install an SSD system. Respondent will also seal parts of the building slab to help prevent the migration of sub-slab vapors into the indoor spaces.

2.0 REMEDIAL OBJECTIVES

The remedial objective of installing the SSD system is to control and prevent the migration of VOCs in the shallow unsaturated zone soil below the building slab into indoor air. As a secondary measure, portions of the building slab will be sealed to help achieve the remedial objective.

3.0 SUB-SLAB DEPRESSURIZATION SYSTEM

The proposed sub-slab depressurization system will depressurize areas under the building slab to control VOC migration into the interior air of the building. A pilot test will be performed at the 115 OCR Site before the full scale SSD system is designed and installed.

---

[1] For additional information regarding the soil vapor sampling work, please see the Site Characterization Report.

3.1 Pilot Test

A pilot test will be conducted to confirm the effectiveness of a full-scale system to depressurize the sub-slab areas, to prevent VOCs, in particular, the chlorinated VOCs mentioned above, from migrating from under the slab into the interior of the tenant spaces. The pilot test will include the use of the two existing vent wells in the Day Spa, installation and testing of one permanent SSD vent well, temporary piping, and connection to a skid mounted 5 HP regenerative vacuum blower with a moisture knockout vessel, vacuum gauges, and an air flow meter. The pilot test will be performed to obtain information on the estimated capture radius of the SSD points and the estimated design air flow rates and applied vacuum needed for full scale SSD system operation.

One 4-inch diameter, schedule 40 PVC shallow Vertical Sub-Slab Vent Well Screens (SSDVW) will be installed near the northern wall of the Bagel Boss tenant space. The approximate locations of the existing and proposed sub-slab vapor vent wells are shown on Drawing 1.

The pilot test will be performed after the concrete around the vent well has cured and prior to the design of the full scale system. During each run of the pilot test, the blower air flow rate, vacuum at the blower, vacuum at the sub-slab implants and soil gas monitoring points, and exhaust VOC concentrations will be measured. The approximate location of the sub-slab implant and soil gas monitoring points are shown on Drawing 1. VOC concentrations will be field measured at the exhaust of the SSD blower and at the vent wells. Measurements will be obtained using a parts per billion (ppb) photo-ionization detector (PID) equipped with a 10.6 eV ultraviolet lamp. The pressure will also be measured during each run at the vent wells that are not used to extract vapors. For example, when the vacuum is applied at Vent Well-1, the measurements will be collected at Vent Well-2, and Vent Well-3. A vacuum response of greater than -0.005 inches of water column (wc) at a given monitoring point will be used as the benchmark for sub-slab vacuum.

3.2 Sub-Slab Depressurization System Components

The data from the pilot test will be used to design the SSD system, which will be designed to operate continuously. The SSDVWs, the SSD Horizontal Vent Wells (SSDHWs), and blower are the key components of the SSD system. The proposed locations of SSDVWs and SSDHWs are shown on Drawing 1.

3.2.1 Sub-Slab Depressurization System Well Construction

3.2.1.1 Vertical Wells (SSDVWs)

The typical vertical vent well will be set to approximately four feet below the floor slab and will be 4-inch diameter, schedule 40 PVC. Each well will have a four foot long screen and will be set flush with the concrete floor in cast iron curb box. A typical SSDVW is shown in Figure 1.

3.2.1.2 Horizontal Wells (SSDHWs)

The typical horizontal vent well will be set to approximately four feet below the floor slab and will be 4-inch diameter, schedule 40 PVC. Each well will have a four foot long screen and will be set approximately two feet below grade. A typical SSDHW is shown in Figure 2

3.3 Additional SSDHWs and SSDVWs

Based on the results of the pilot test, additional SSDVWs and/or SSDHWs may need to be installed inside the building. The design and configuration will be in the same manner as shown in Figure 1 and Figure 2, respectively.

3.4 Sub-Slab Depressurization System Blower

During the pilot test, the SSDVWs and SSDHWs will be connected to a skid mounted vacuum blower. The connections will be made with temporary vacuum hose. The skid mounted vacuum blower is a 5.0 HP, centrifugal, explosion proof, vacuum blower rated at 210 cfm @ 40 inches wc. Additional tests may be run using a Fantech HP 220 mitigation blower. The specifications of the blowers that will be used in the pilot test are provided in Appendix.

The Blower selected for the permanent SSD system will be based upon the results of the pilot test.

3.5 Building Specifications

Construction details of the building will be reviewed from available drawings, proposed building renovations, and visual observations to determine the location of building footings, presence of floor to wall joints, expansion joints, structural supports, and foundations for columns, loading docks, machinery foundations/supports, utility trenches, underground utilities, trenches, and sumps to determine what, if any influence, these may have on the SSD system. The existing HVAC system and building ventilation system air intakes and exhausts will also be reviewed to determine the possible effects the HVAC system may have on the SSD system.

3.6 SSD System Design

The data from the pilot test will be used to design a full scale SSD system for the site. Vacuum measurements of at least -0.005 inches of water will be considered the minimum required to depressurize the slab. The pilot test data will be tabulated and presented in a pilot test report with the conceptual design of the full scale system for NYSDEC approval. The full scale system will include the major equipment listed above, piping, additional SSDVWSs, SSDHWs, and electrical controls with low vacuum and low air flow alarm systems.

4.0 SCHEDULE AND REPORTING

Country Glen, LLC is prepared to begin the pilot test installation immediately upon NYSDEC approval of this plan. The full scale system will be designed based on the pilot test data and will be presented to the NYSDEC as part of the pilot test report.

Monitoring of the depressurization system will be completed within 30 days after the construction and start-up of the full scale system to confirm that the SSD system produces negative sub-slab vacuum and that indoor air concentrations meet the criteria set forth in NYSDOH guidelines. NYSDEC will be provided with a report of the results of the monitoring to document the completion of system installation.

5.0 ANNUAL CERTIFICATION AND NOTIFICATION

An annual certification will be submitted to the NYSDEC by a professional engineer to document that the SSD system engineering controls are in place and are performing as designed. The certification requirement will remain in effect until NYSDEC notifies Country Glen, LLC that the certification is no longer required.

DRAWING

SUB SLAB DEPRESURIZATION
SYSTEM PILOT TEST

DRAWING 1

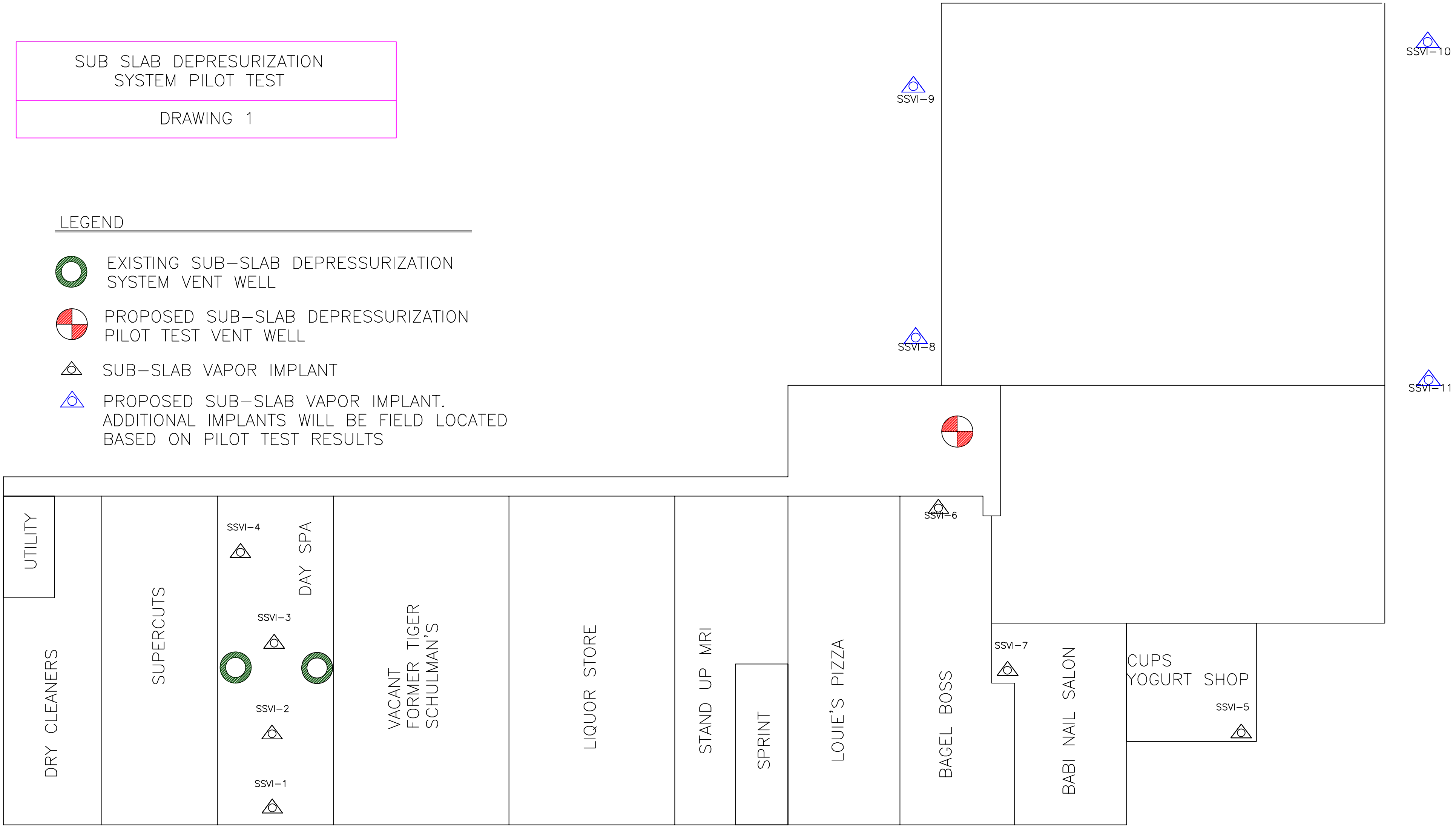
LEGEND

◎ EXISTING SUB–SLAB DEPRESSURIZATION
SYSTEM VENT WELL

⊕ PROPOSED SUB–SLAB DEPRESSURIZATION
PILOT TEST VENT WELL

△ SUB–SLAB VAPOR IMPLANT

△ PROPOSED SUB–SLAB VAPOR IMPLANT.
ADDITIONAL IMPLANTS WILL BE FIELD LOCATED
BASED ON PILOT TEST RESULTS



FIGURES

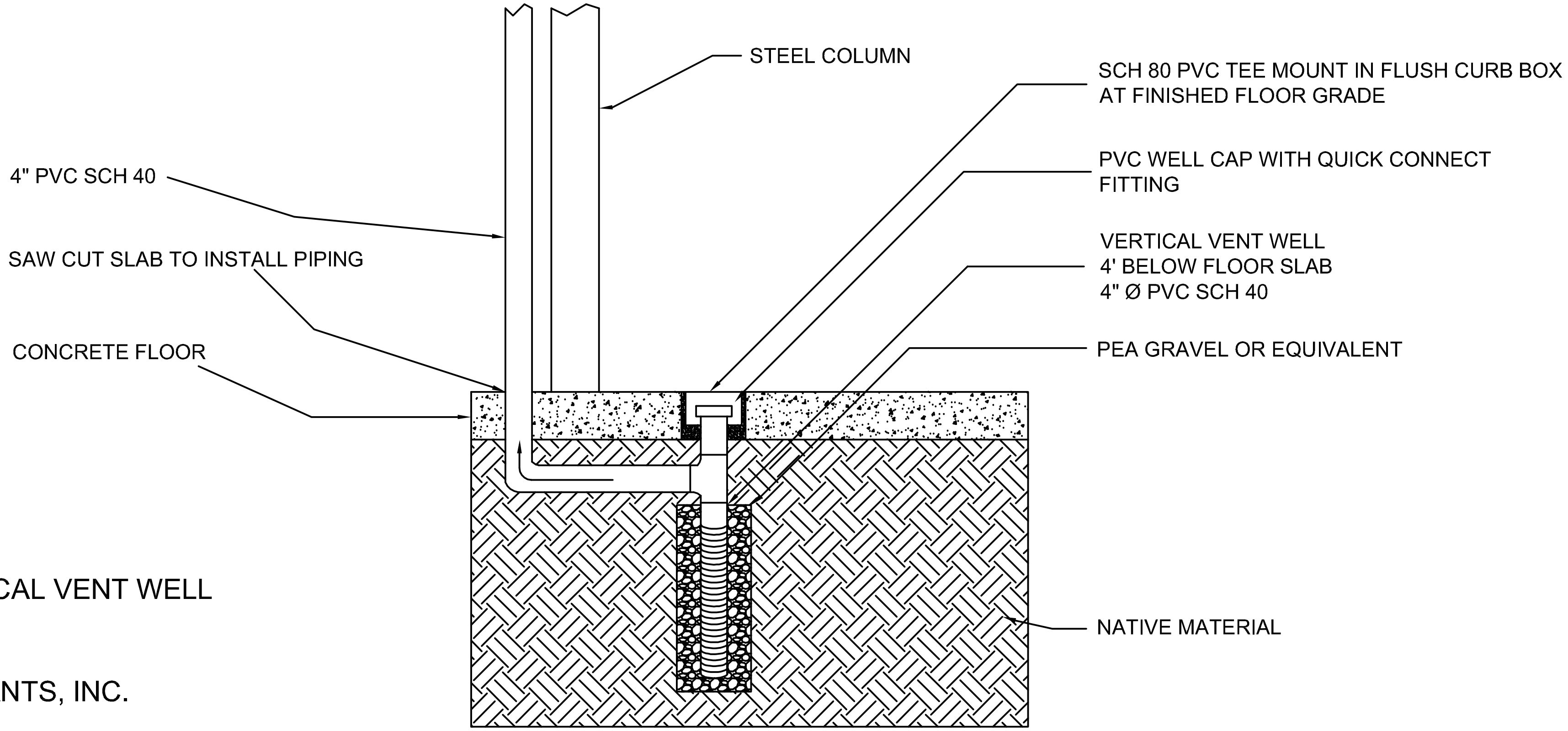


FIGURE 1
TYPICAL VERTICAL VENT WELL
NOT TO SCALE

NAC CONSULTANTS, INC.

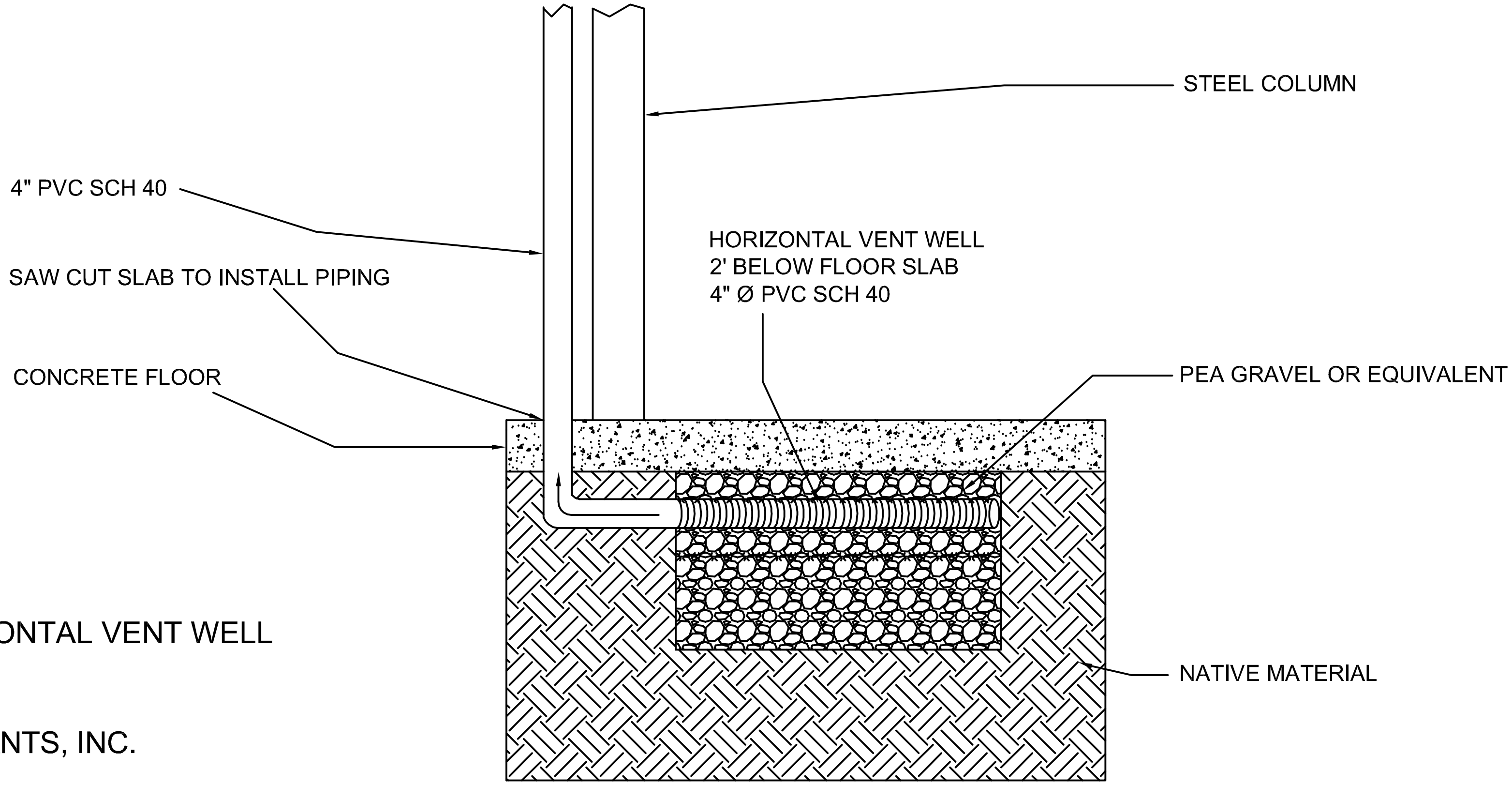


FIGURE 2
TYPICAL HORIZONTAL VENT WELL
NOT TO SCALE

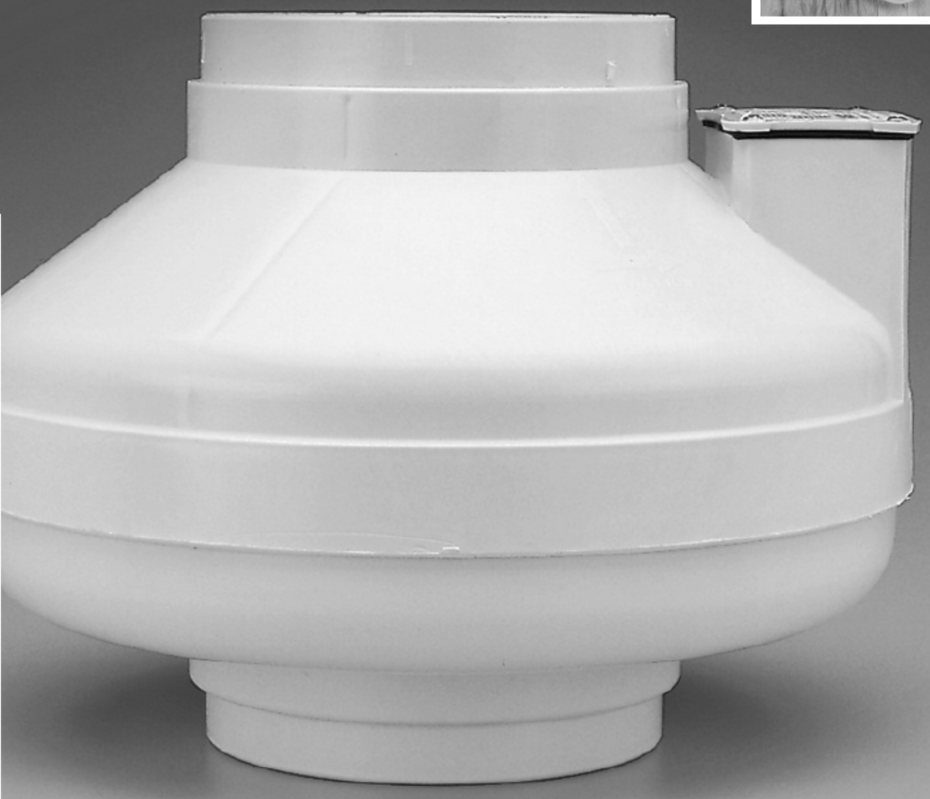
NAC CONSULTANTS, INC.

VACUUM BLOWER SPECIFICATIONS

Fantech

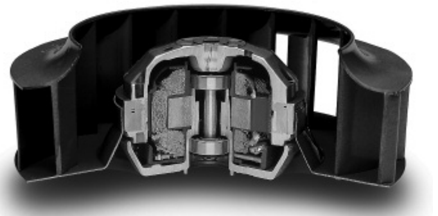
HP SERIES

FANS FOR RADON APPLICATIONS
WITH IMPROVED UV RESISTANCE!



TRUST THE INDUSTRY STANDARD.
HERE'S WHY:

Don't put your reputation at stake by installing a fan you know won't perform like a Fantech! For nearly twenty years, Fantech has manufactured quality ventilation equipment for Radon applications. Fantech is the fan Radon contractors have turned to in over 1,000,000 successful Radon installations worldwide.



Fantech external rotor motor

FANTECH HP SERIES FANS MEET THE CHALLENGES OF RADON APPLICATIONS:

HOUSING
- UV resistant, UL Listed durable plastic
- UL Listed for use in commercial applications
- Factory sealed to prevent leakage
- Watertight electrical terminal box
- Approved for mounting in wet locations - i.e. Outdoors

MOTOR
- Totally enclosed for protection
- High efficiency EBM motorized impeller
- Automatic reset thermal overload protection
- Average life expectancy of 7-10 years under continuous load conditions

RELIABILITY
- Five Year Full Factory Warranty
- Over 1,000,000 successful radon installations worldwide

IMPROVING INDOOR AIR QUALITY THROUGH BETTER VENTILATION

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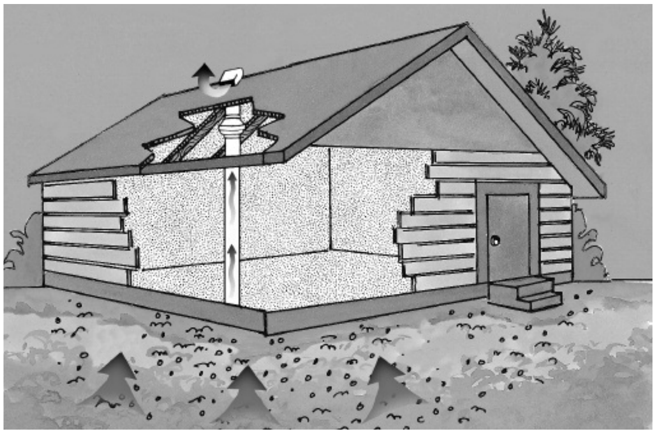


HP Series Fans are Specially Designed with Higher Pressure Capabilities for Radon Mitigation Applications

MOST RADON MITIGATORS WHO PREVIOUSLY USED THE FANTECH FR SERIES FANS HAVE SWITCHED TO THE NEW HP SERIES.

PERFORMANCE DATA

Fan Model	Volts	Wattage Range	Max. Amps	CFM vs. Static Pressure in Inches W.G.								Max. Ps
				0"	0.5"	0.75"	1.0"	1.25"	1.5"	1.75"	2.0"	
HP2133	115	14 - 20	0.17	134	68	19	-	-	-	-	-	0.84
HP2190	115	60 - 85	0.78	163	126	104	81	58	35	15	-	1.93
HP175	115	44 - 65	0.57	151	112	91	70	40	12	-	-	1.66
HP190	115	60 - 85	0.78	157	123	106	89	67	45	18	1	2.01
HP220	115	85 - 152	1.30	344	260	226	193	166	137	102	58	2.46

HVI MEMBER™

PERFORMANCE CURVES

Fantech provides you with independently tested performance specifications.

The performance curves shown in this brochure are representative of the actual test results recorded at Texas Engineering Experiment Station/Energy Systems Lab, a recognized testing authority for HVI. Testing was done in accordance with AMCA Standard 210-85 and HVI 916 Test Procedures. Performance graphs show air flow vs. static pressure.

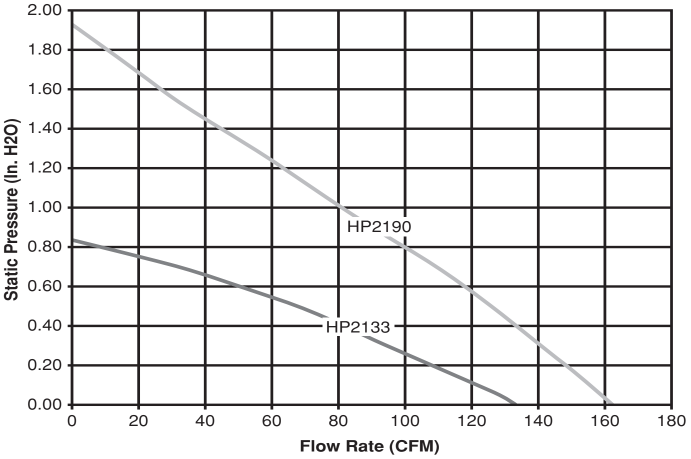
Use of HP Series fans in low resistance applications such as bathroom venting will result in elevated sound levels. We suggest FR Series or other Fantech fans for such applications.

HP FEATURES INCLUDE

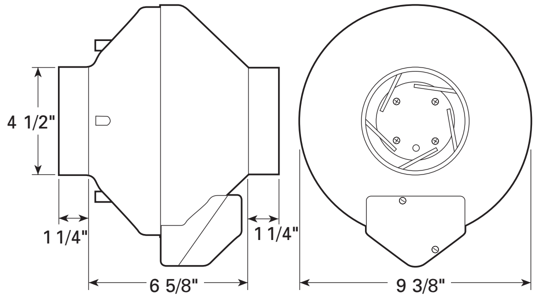
- Improved UV resistant housings approved for commercial applications.
- UL Approved for Wet Locations (Outdoors)
- Sealed housings and wiring boxes to prevent Radon leakage or water penetration
- Energy efficient permanent split capacitor motors
- External wiring box
- Full Five Year Factory Warranty

NOTE:
Installations that will result in condensate forming in the outlet ducting should have a condensate bypass installed to route the condensate outside of the fan housing. Conditions that are likely to produce condensate include but are not limited to: outdoor installations in cold climates, long lengths of outlet ducting, high moisture content in soil and thin wall or aluminum outlet ducting. Failure to install a proper condensate bypass may void any warranty claims.

HP2133 & HP2190 RADON MITIGATION FANS



Tested with 4" ID duct and standard couplings.

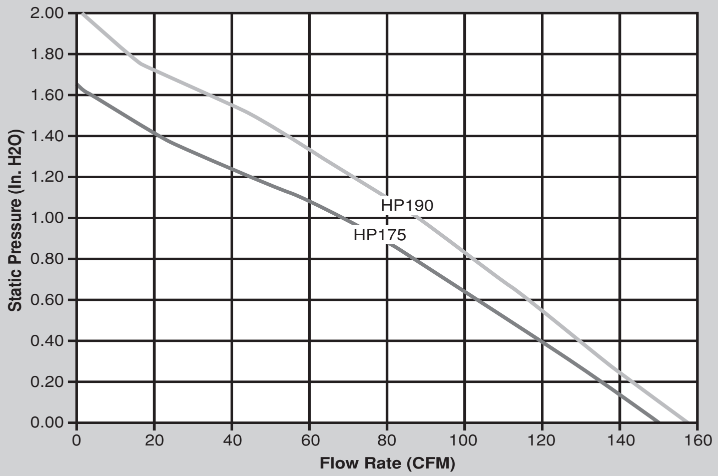


HP2133 – For applications where lower pressure and flow are needed. Record low power consumption of 14-20 watts! Often used where there is good sub slab communication and lower Radon levels.

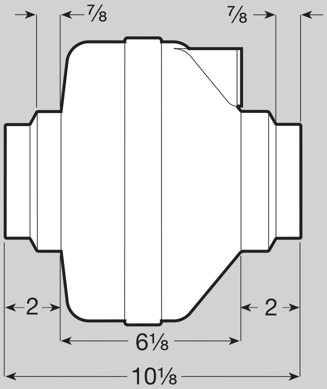
HP2190 – Performance like the HP190 but in a smaller housing. Performance suitable for the majority of installations.

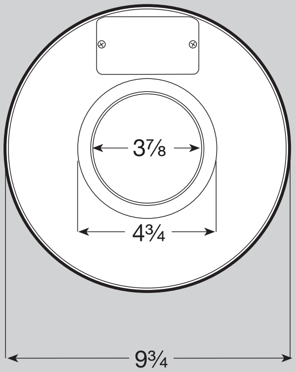
Fans are attached to PVC pipe using flexible couplings.
For 4" PVC pipe use Indiana Seals #156-44, Pipeconx PCX 56-44 or equivalent.
For 3" PVC pipe use Indiana Seals #156-43, Pipeconx PCX 56-43 or equivalent.

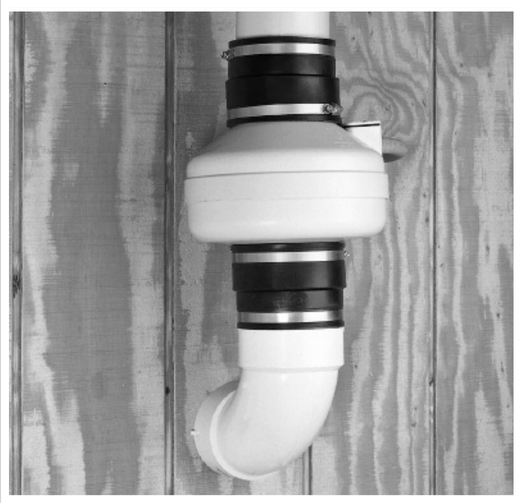
HP175 & HP190 RADON MITIGATION FANS



Tested with 4" ID duct and standard couplings.





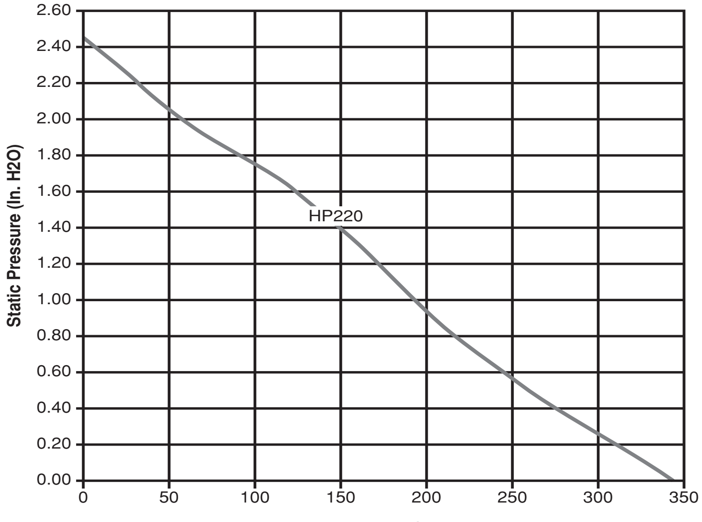


HP175 – The economical choice where slightly less air flow is needed. Often used where there is good sub slab communication and lower Radon levels.

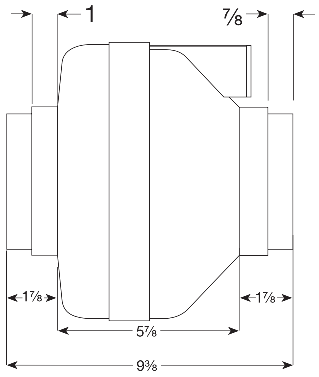
HP190 – The standard for Radon Mitigation. Ideally tailored performance curve for a vast majority of your mitigations.

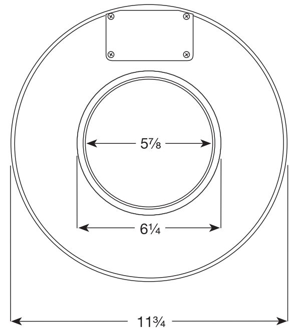
Fans are attached to PVC pipe using flexible couplings.
For 4" PVC pipe use Indiana Seals #151-44, Pipeconx PCX 51-44 or equivalent.
For 3" PVC pipe use Indiana Seals #156-43, Pipeconx PCX 56-43 or equivalent.

HP220 RADON MITIGATION FAN



Tested with 6" ID duct and standard couplings.





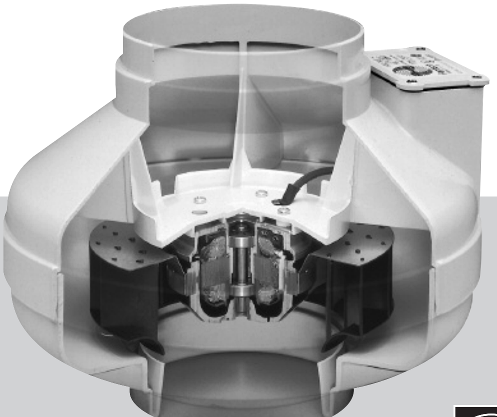
HP 220 – Excellent choice for systems with elevated radon levels, poor communication, multiple suction points and large subslab footprint. Replaces FR 175.

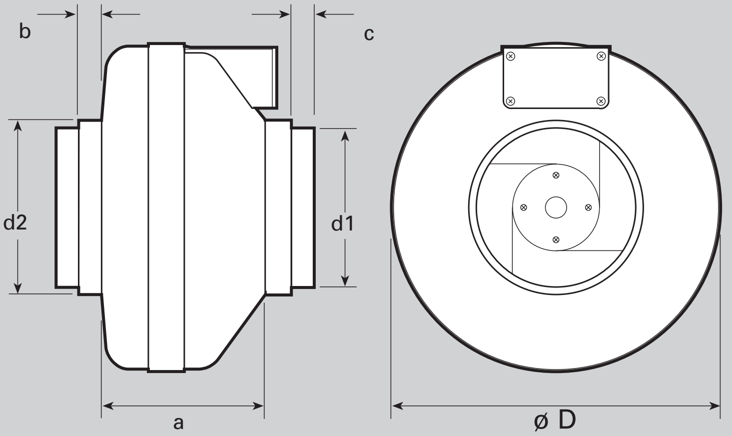
Fans are attached to PVC pipe using flexible couplings.
For 4" PVC pipe use Indiana Seals #156-64, Pipeconx PCX 56-64 or equivalent.
For 3" PVC pipe use Indiana Seals #156-63, Pipeconx PCX 56-63 or equivalent.

Fantech

FR SERIES

THE ORIGINAL MITIGATOR





DIMENSIONAL DATA

model	øD	d1	d2	a	b	c
FR100	9 1/2	3 7/8	4 7/8	6 1/8	7/8	7/8
FR110	9 1/2	3 7/8	4 7/8	6 1/8	7/8	7/8
FR125	9 1/2	–	4 7/8	6 1/8	7/8	–
FR140	11 3/4	5 7/8	6 1/4	5 7/8	1	7/8
FR150	11 3/4	5 7/8	6 1/4	5 7/8	1	7/8
FR160	11 3/4	5 7/8	6 1/4	6 3/8	1	7/8
FR200	13 1/4	7 7/8	9 7/8	6 1/4	1 1/2	1 1/2
FR225	13 1/4	7 7/8	9 7/8	6 1/4	1 1/2	1 1/2
FR250	13 1/4	–	9 7/8	6 1/4	–	1 1/2

All dimensions in inches

ENERGY STAR

2100 HVI CERTIFIED

PERFORMANCE DATA

Fan Model	Energy Star	RPM	Volts	Rated Watts	Wattage Range	Max. Amps	CFM vs. Static Pressure in Inches W.G.							Max. Ps	Duct Dia.
							0"	.2"	.4"	.6"	.8"	1.0"	1.5"		
FR100	✓	2950	120	21.2	13 - 22	0.18	137	110	83	60	21	-	-	0.90"	4"
FR125	✓	2950	115	18	15 - 18	0.18	148	120	88	47	-	-	-	0.79"	5"
FR150	✓	2750	120	71	54 - 72	0.67	263	230	198	167	136	106	17	1.58"	6"
FR160	-	2750	115	129	103 - 130	1.14	289	260	233	206	179	154	89	2.32"	6"
FR200	✓	2750	115	122	106 - 128	1.11	408	360	308	259	213	173	72	2.14"	8"
FR225	✓	3100	115	137	111 - 152	1.35	429	400	366	332	297	260	168	2.48"	8"
FR250*	-	2850	115	241	146 - 248	2.40	649	600	553	506	454	403	294	2.58"	10"

FR Series performance is shown with ducted outlet. Per HVI's Certified Ratings Program, charted air flow performance has been derated by a factor based on actual test results and the certified rate at .2 inches WG.
** Also available with 8" duct connection. Model FR 250-8. Special Order.*

NOTE:

Installations that will result in condensate forming in the outlet ducting should have a condensate bypass installed to route the condensate outside of the fan housing. Conditions that are likely to produce condensate include but are not limited to: outdoor installations in cold climates, long lengths of outlet ducting, high moisture content in soil and thin wall or aluminum outlet ducting. Failure to install a proper condensate bypass may void any warranty claims.

FIVE YEAR WARRANTY

DURING ENTIRE WARRANTY PERIOD:

FANTECH will replace any fan which has a factory defect in workmanship or material. Product may need to be returned to the Fantech factory, together with a copy of the bill of sale and identified with RMA number.

FOR FACTORY RETURN YOU MUST:

- Have a Return Materials Authorization (RMA) number. This may be obtained by calling FANTECH either in the USA at 1.800.747.1762 or in CANADA at 1.800.565.3548. Please have bill of sale available.
- The RMA number must be clearly written on the outside of the carton, or the carton will be refused.
- All parts and/or product will be repaired/replaced and shipped back to buyer; no credit will be issued.

OR

The Distributor may place an order for the warranty fan and is invoiced.
The Distributor will receive a credit equal to the invoice only after product is returned prepaid and verified to be defective.

FANTECH WARRANTY TERMS DO NOT PROVIDE FOR REPLACEMENT WITHOUT CHARGE PRIOR TO INSPECTION FOR A DEFECT. REPLACEMENTS ISSUED IN ADVANCE OF DEFECT INSPECTION ARE INVOICED, AND CREDIT IS PENDING INSPECTION OF RETURNED MATERIAL. DEFECTIVE MATERIAL RETURNED BY END USERS SHOULD NOT BE REPLACED BY THE DISTRIBUTOR WITHOUT CHARGE TO THE END USER, AS CREDIT TO DISTRIBUTOR'S ACCOUNT WILL BE PENDING INSPECTION AND VERIFICATION OF ACTUAL DEFECT BY FANTECH.

THE FOLLOWING WARRANTIES DO NOT APPLY:

- Damages from shipping, either concealed or visible. Claim must be filed with freight company.
- Damages resulting from improper wiring or installation.
- Damages or failure caused by acts of God, or resulting from improper consumer procedures, such as:

1. Improper maintenance
2. Misuse, abuse, abnormal use, or accident, and
3. Incorrect electrical voltage or current.

- Removal or any alteration made on the FANTECH label control number or date of manufacture.
- Any other warranty, expressed, implied or written, and to any consequential or incidental damages, loss or property, revenues, or profit, or costs of removal, installation or reinstallation, for any breach of warranty.

WARRANTY VALIDATION

- The user must keep a copy of the bill of sale to verify purchase date.
- These warranties give you specific legal rights, and are subject to an applicable consumer protection legislation. You may have additional rights which vary from state to state.

DISTRIBUTED BY:

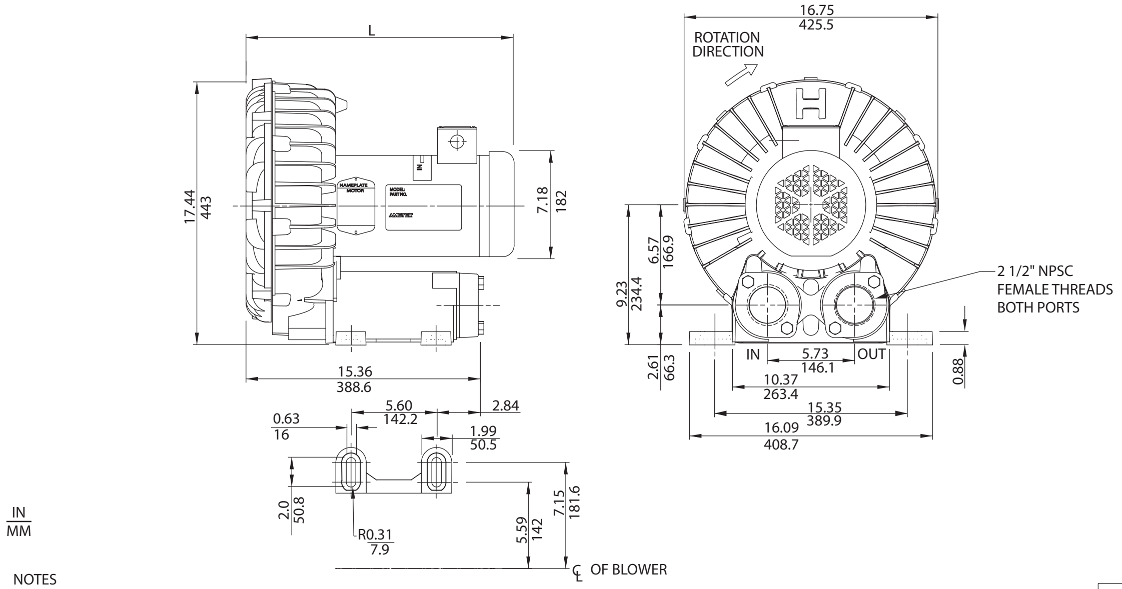
Fantech
United States 10048 Industrial Blvd. • Lenexa, KS 66215 • 1.800.747.1762 • www.fantech.net
Canada 50 Kanalflakt Way • Bouctouche, NB E4S 3M5 • 1.800.565.3548 • www.fantech.net

Item #: 411741
Rev Date: 021010

ROTRON®

EN 757 & CP 757

3.0 / 5.0 HP Sealed Regenerative w/Explosion-Proof Motor



NOTES
1 TERMINAL BOX CONNECTOR HOLE .75 NPT.
2 DRAWING NOT TO SCALE, CONTACT FACTORY FOR SCALE CAD DRAWING.
3 CONTACT FACTORY FOR BLOWER MODEL LENGTHS NOT SHOWN.

MODEL	L (IN/MM)
EN757M72XL	19.72/500.9
EN757F72XL	21.00/533.4

		Part/ Model Number				
		EN757M72XL	EN757M86XL	EN757F72XL	CP757FW72XLR	CP757FU72XLR
Specification	**Units**	081176	081177	081174	081180	081181
Motor Enclosure - Shaft Mtl.	-	XP-CS	XP-CS	XP-CS	Chem XP-SS	Chem XP-SS
Horsepower	-	3.0	3.0	5.0	XP-CS	3
Voltage	AC	208-230/460	575	208-230/460	208-230/460	208-230/460
Phase - Frequency	-	Three-60 Hz	Three-60 Hz	Three - 60 Hz	Three-60 Hz	Three - 60 Hz
Insulation Class	-	B	B	B	B	B
NEMA Rated Motor Amps	Amps (A)	7.2/3.6	3.0	14/7	14/7	7.2/3.6
Service Factor	-	1.0	1.0	1.0	1.0	1.0
Maximum Blower Amps	Amps (A)	10/5	4.0	15/7.5	15/7.5	10/5
Locked Rotor Amps	Amps (A)	54/47	22	152/76	152/76	54/27
NEMA Starter Size	-	0/0	0	1/1	1/1	0/0
Shipping Weight	Lbs	158	158	158	158	158
	Kg	71.7	71.7	71.7	71.7	71.7

Voltage - ROTRON motors are designed to handle a broad range of world voltages and power supply variations. Our dual voltage 3 phase motors are factory tested and certified to operate on both: **208-230/415-460 VAC-3 ph-60 Hz** and **190-208/380-415 VAC-3 ph-50 Hz**. Our dual voltage 1 phase motors are factory tested and certified to operate on both: **104-115/208-230 VAC-1 ph-60 Hz** and **100-110/200-220 VAC-1 ph-50 Hz**. All voltages above can handle a ±10% voltage fluctuation. Special wound motors can be ordered for voltages outside our certified range.

Operating Temperatures - Maximum operating temperature: Motor winding temperature (winding rise plus ambient) should not exceed 140°C for Class F rated motors or 120°C for Class B rated motors. Blower outlet air temperature should not exceed 140°C (air temperature rise plus inlet temperature). Performance curve maximum pressure and suction points are based on a 40°C inlet and ambient temperature. Consult factory for inlet or ambient temperatures above 40°C.

Maximum Blower Amps - Corresponds to the performance point at which the motor or blower temperature rise with a 40°C inlet and/or ambient temperature reaches the maximum operating temperature.

XP Motor Class - Group - See Explosive Atmosphere Classification Chart in Section I

Environmental / Chemical Processing Blowers

EN 757 & CP 757

ROTRON®

3.0 / 5.0 HP Sealed Regenerative w/Explosion-Proof Motor

FEATURES

- Manufactured in the USA - ISO 9001 and NAFTA compliant
- Maximum flow: 310 SCFM
- Maximum pressure: 80 IWG
- Maximum vacuum: 75 IWG
- Standard motor: 5.0 HP, explosion-proof
- Cast aluminum blower housing, impeller , cover & manifold; cast iron flanges (threaded); teflon® lip seal
- UL & CSA approved motor with permanently sealed ball bearings for explosive gas atmospheres Class I Group D minimum
- Sealed blower assembly
- Quiet operation within OSHA standards

MOTOR OPTIONS

- International voltage & frequency (Hz)
- Chemical duty, high efficiency, inverter duty or industry-specific designs
- Various horsepowers for application-specific needs

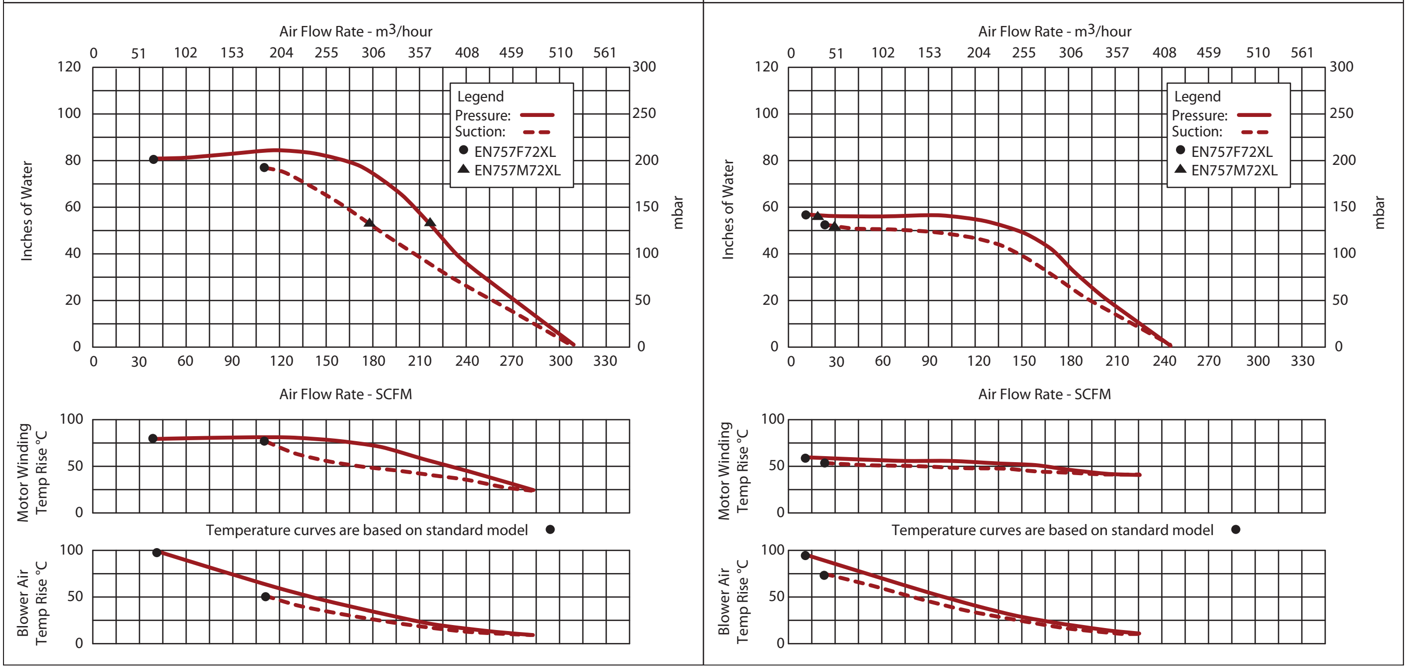
BLOWER OPTIONS

- Corrosion resistant surface treatments & sealing options
- Remote drive (motorless) models
- Slip-on or face flanges for application-specific needs

ACCESSORIES

- Flowmeters reading in SCFM
- Filters & moisture separators
- Pressure gauges, vacuum gauges, & relief valves
- Switches - air flow, pressure, vacuum, or temperature
- External mufflers for additional silencing
- Air knives (used on blow-off applications)
- Variable frequency drive package

Blower Performance at Standard Conditions


60 Hz
50 Hz

This document is for informational purposes only and should not be considered as a binding description of the products or their performance in all applications. The performance data on this page depicts typical performance under controlled laboratory conditions. AMETEK is not responsible for blowers driven beyond factory specified speed, temperature, pressure, flow or without proper alignment. Actual performance will vary depending on the operating environment and application. AMETEK products are not designed for and should not be used in medical life support applications. AMETEK reserves the right to revise its products without notification. The above characteristics represent standard products. For product designed to meet specific applications, contact AMETEK Technical & Industrial Products Sales department.