

INTERIM REMEDIAL MEASURE DESIGN DOCUMENT

Bridge Cleaners Site, BCP Site No. C241127

Prepared for
Zhong Chuang Properties LLC
39-26 30th Street
Long Island City, NY 11101-2806

Prepared by
The logo for Integral Engineering P.C. features the word "integral" in a blue, lowercase, sans-serif font. A vertical line runs through the letter "i", extending from the top of the "i" down to the "e". Below the word "integral", the words "engineering p.c." are written in a smaller, blue, lowercase, sans-serif font.
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ACRONYMS AND ABBREVIATIONS

AS/SVE	air sparge / soil vapor extraction
atm	atmosphere (atmospheric pressure)
BCP	brownfield cleanup program
CFM	cubic feet per minute
CSM	conceptual site model
DAR	division of air resources
DER	division of environmental remediation
DGW	depth to groundwater
DO	dissolved oxygen
ft bgs	feet below ground surface
ft ³	cubic feet
GPD	gallons per day
Integral	Integral Engineering, P.C.
IRM	interim remedial measure
iwc	inches of water column
NAVFAC	Naval Facilities Engineering Command
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
PCE	tetrachloroethylene
PFD	process flow diagram
PID	photoionization detector
psig	pounds per square inch (gage)
PVC	polyvinyl chloride
RIR	remedial investigation report
Sch	schedule
SCO	soil cleanup objectives
SF	square foot or square feet
Site	39-26 30 th Street, Long Island City, New York

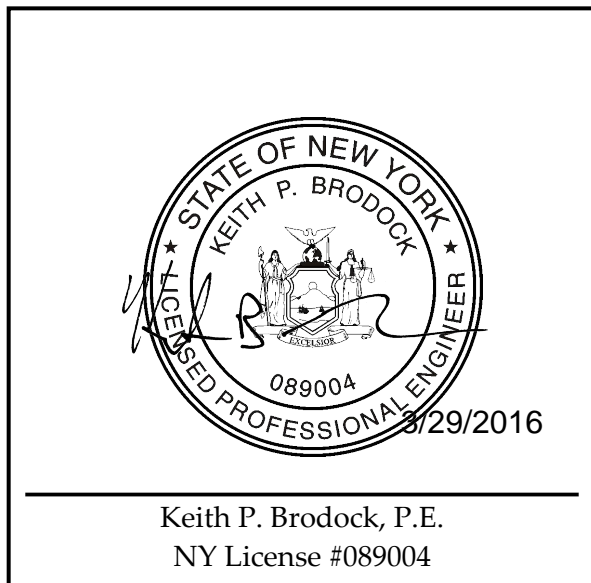
SSDS	sub-slab depressurization system
SVE	soil vapor extraction
TCE	trichloroethylene
TechSolutions	TechSolutions Engineering, P.C.
µg	microgram
USEPA	United States Environmental Protection Agency
USGS	U.S. Geological Survey
VMP	vacuum monitoring point
VOC	volatile organic compound
Volunteer	Zhong Chuang Properties LLC
Zhong Chuang	Zhong Chuang Properties LLC

CERTIFICATION

I, Keith P. Brodock, P.E., certify that I am currently a New York State registered professional engineer as defined in 6 NYCRR part 375 and that this Interim Remedial Measure (IRM) Design Document was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by a New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.

Date signed and sealed:



1 INTRODUCTION

Integral Engineering, P.C. (Integral) has prepared this Interim Remedial Measure (IRM) Design Document on behalf of Zhong Chuang Properties LLC (Zhong Chuang or Volunteer) for the property located at 39-26 30th Street, Long Island City, NY (Site). The Site is currently enrolled in the New York State Brownfield Cleanup Program (BCP) and listed as Site No. C241127.

Remediation pilot tests were performed at the Site to evaluate the efficacy of air sparge and soil vapor extraction (SVE); to identify the design parameters for the remediation system; and, to evaluate the appropriateness of SVE for mitigation of soil vapor intrusion. The subsurface pilot tests included installation of one SVE recovery well, application of negative pressure (vacuum) to the recovery well, and measurement of subsurface pressures at various distances from the recovery well. Two of the pilot tests included injection of air into the saturated subsurface to evaluate the utility and efficacy of air sparging as a component of the remediation.

The subsurface pilot test included the installation of an SVE recovery well (RW-01), air injection well (AI-01R)¹, and several vacuum monitoring points (VM-01 through VM-08) placed strategically throughout the site. Previously installed groundwater monitoring wells (GW-1 through GW-5), sub-slab soil probes (SP-2 through 8), and the newly installed wells were utilized for the measurement of subsurface pressures at various distances from the recovery well (RW-01) during the application of negative pressure (vacuum). Two additional air injection pilot tests included the application of pressurized air into AI-01R. The results of the air injection tests were used to evaluate the effectiveness of air sparging as a potential component of the remediation.

The pilot test evaluation and proposed remediation design is presented in this Design Document. In summary, based upon the pilot test data, we propose to install one blower to extract contaminated vapors from the subsurface at two locations within the building. In addition, we propose to install one air sparge well between the two SVE locations. The one system will act as both an air sparge / soil vapor extraction (AS/SVE) system and as a sub-slab depressurization system (SSDS) to mitigate soil vapor intrusion. The system installation would be performed as an interim remedial measure (IRM).

¹ The initial air injection well, AI-01, was compromised. A replacement well, AI-01R, with similar characteristics to AI-01 was installed nearby for the pilot test.

1.1 SITE DESCRIPTION

The approximately 7,500 square foot (SF) Site is known as the former Bridge Cleaners and is designated as Block 399, Lot 31. A Site location map is provided as Figure 1. A map showing the Site property boundaries is included as Figure 2.

The Site is currently improved with a one-story building (without a basement) that covers the entire lot. The building is currently used for the storage and cutting of fabrics. The Site is currently zoned as M1-3/R7X, which is a Special Long Island City Mixed Use District for mixed residential and commercial use.

1.2 SITE HISTORY

A number of investigations and assessments have been performed at the Site between 2011 and 2014. These investigations consisted of limited subsurface assessments conducted by various consultants on behalf of the Site owner or the New York State Department of Environmental Conservation (NYSDEC). Integral has been provided the following investigation reports:

- Limited Sub-Surface Site Investigation, Long Island Laboratories, Inc., dated September 2011
- Site Characterization Report, Ecology and Environmental Engineering, P.C., May 2012
- Remedial Investigation Report, TechSolutions Engineering, P.C., June 2014 (most recent version)

According to the June 2014 Remedial Investigation Report (RIR) prepared by TechSolutions Engineering, P.C. (TechSolutions) (Appendix A)², the Site was used as a dry cleaner from 1997 until about 2011. Other historical uses included warehousing and distribution. Figure 3 depicts the current Site layout.

The RIR summarized soil, groundwater, and soil vapor results from investigations performed at the Site between September 2011 and February 2014. Elevated tetrachloroethylene (PCE) and trichloroethylene (TCE) concentrations were found in groundwater and soil vapor samples collected within and nearby the Site. PCE and TCE were identified in soil samples at the Site, but did not exceed NYSDEC Unrestricted Soil Cleanup Objectives (SCOs).

A soil investigation conducted by Integral in December 2014, identified concentrations of PCE above the Unrestricted SCO, but below the Industrial SCO, in four soil samples collected from

² This RIR was rejected by the NYSDEC in a letter dated September 10, 2014, though it has been utilized in this Work Plan for reference.

beneath the northern corner of the building. Pursuant to an NYSDEC-approved Remedial Investigation Proposal dated November 11, 2014, a total of five soil samples, inclusive of one duplicate, were collected during the installation of two soil borings (SB-6 and SB-7). Samples collected from SB-06 were defined as SB-06(11.5'-12') and SB-06(17.5-18.5'); samples collected from SB-07 were defined as SB-07(0-4') and SB-07(15-17.5'); a duplicate collected from SB-07(0-4') designated DUPLICATE (12-30-14). In samples SB-06(11.5'-12'), SB-07(0-4'), DUPLICATE (12-30-14), and SB-07(15-17.5'), PCE was the only analyte detected, and was identified above the Unrestricted SCO and the Protection of Groundwater SCO (to the extent the Protection of Groundwater SCO is applicable to this Site), both 1.3 mg/kg, but below the Industrial SCO of 300 mg/kg. DUPLICATE (12-30-14) contained the maximum observed concentration of PCE at 9.6 mg/kg. Integral's Data Evaluation Report, dated July 1, 2015 (Appendix B) discusses the results from this investigation.

Figure 4, Figure 5, and Figure 6 depict the combined soil, groundwater, and soil vapor sampling results, respectively, for PCE and its degradation products.

1.3 PURPOSE

The purpose of this IRM Design Document is to accomplish the following:

- Provide an evaluation of the pilot test data and resulting conclusions; and,
- Present the remediation system design for the focused remediation of chlorinated volatile organic compounds (VOCs) and for mitigation of soil vapor intrusion.

2 BACKGROUND

2.1 PHYSICAL SETTING

The Site incorporates approximately 0.17 acres of fairly level land situated in Long Island City, Queens, New York. The Site is mapped on the Central Park, NY-NJ and Brooklyn Quadrant 7.5 Minute Topographic Map, published by the U.S. Geological Survey (USGS). Review of the topographic map indicates that the Site is located approximately 40 ft above sea level (National Geodetic Vertical Datum 1988).

2.1.1 Geologic Setting

Previous reports have characterized the soil beneath the Site as medium or fine sand with trace silt. Bedrock geology in the vicinity of the Site is characterized from the RIR as:

At the regional level, the subsurface geological units of Queens County consist of sequences of unconsolidated sediments of Late Cretaceous and Pleistocene pre-Sangamon and Sangamon ages. The unconsolidated sediments are underlain by crystalline bedrock of Precambrian age and overlain mostly by glacial upper Pleistocene deposits of Wisconsinian age but also to a lesser extent by Holocene deposits (Soren, USGS, 1978). From grade to bedrock, the primary geologic units in the region are artificial fill / surficial deposits, upper Pleistocene deposits, Gardiners Clay (where present), Jameco Gravel (not be present in the vicinity of the Site), Monmouth Group and Magothy Formation, and the Raritan Formation.

Natural surficial glacial deposits in Queens County consist mostly of ground moraine in the northern part of Queens County near the [Site] and outwash in the southern portions of the county. However, artificial fill has been used in many places to extend and reinforce shorelines and to fill swampy areas in preparation for development. The surficial deposits are underlain by the upper Pleistocene deposits which range in thickness from 0 to 300 feet and are primarily composed of glacial drift material such as till, lacustrine deposits and outwash sand and gravel (Soren, USGS, 1978). Regionally, the upper Pleistocene deposits are unconformably underlain by the Gardiners Clay which is located in primarily the central and southern parts of Queens County. The Gardiners Clay consists of mostly grayish green and less commonly dark gray clay intercalated with sand and gravelly beds. The thickness of the Gardiners Clay varies widely and is absent in some sections of Queens County (i.e., Glendale, Woodhaven, Ozone Park areas) but generally ranges to a maximum of 150 feet thick. Importantly, the Gardiners Clay serves to confine water in the underlying

Jameco Gravel regionally where present and Magothy-Matawan Formation (Soren, USGS, 1978) in much of the region.

The Jameco Gravel is believed to have been deposited by streams in Queens County and unconformable underlies the Gardiners Clay where present. The Jameco deposits are mostly coarse sand and granule to cobble gravel with boulders having been reported by some drillers. The thickness of the Jameco Gravel ranges from 0 to 250 feet regionally; however, it is generally absent in the vicinity of the [Site] which is located north of the most-widely accepted extent of the Jameco Gravel...

Underlying the Jameco Gravel (where present) is the Monmouth Group and the Magothy- Matawan Formation which ranges from 0 to 450 feet thick in Queens County. Magothy- Matawan strata may be missing in northern and northwestern Queens County and is typically present between 0 and 200 feet in thickness near the [Site]. The Raritan Formation underlies the Magothy-Matawan formation where present and consists of a clay and sand member. Bedrock is typically not encountered to a depth of between 100 and 200 feet in the vicinity of the [Site]. (TechSolutions 2014)

2.1.2 Hydrogeologic Setting

Groundwater has been measured at approximately twenty ft bgs at the Site. According to the RIR:

The regional aquifer system in the general vicinity of the Site includes the following system from shallow to deep: the upper glacial aquifer which is underlain by the Magothy Aquifer. The Raritan clay unit then separates the Magothy Aquifer from the underlying Lloyd Aquifer which overlies bedrock. (TechSolutions 2014)

3 CONCEPTUAL SITE MODEL

The conceptual site model (CSM) reflects that there are residual chlorinated hydrocarbons in the unsaturated subsurface near the northern corner of the building potentially causing secondary impacts to groundwater. This residual material may have discharged from a boiler drain in the northern corner of the building, and while there is a small concrete patch in this area, there is no evidence that a drain existed in the building. The CSM also must consider the possibility that a release occurred off-Site and is contributing to the observed conditions. The magnitude of the release, whether on-Site or off-Site (or both), is unknown, though the chlorinated hydrocarbon concentrations identified in the unsaturated on-Site soil lead to the conclusion that any on-Site release was minor.

Below is additional supporting information to the CSM:

- The groundwater at the Site, based on previous reports, generally flows from north to south. PCE concentrations in groundwater ranged from 176 to 340 µg/L, and were within the same order of magnitude across the Site, although slightly higher to the south.
- Soil vapor concentrations of PCE ranged from 21,400 to 668,000 µg/m³ across the Site. The larger concentrations were found in the northern portion of the building, indicating potential residual source material nearby (in unsaturated soil).
- A boiler room was historically present in the northern corner of the building. In the past, it was not uncommon for buildings to construct a drain (dry well) for boiler condensate blow-down. No evidence of a drain or dry well has been observed or provided, although there appears to be a small concrete patch in this area.
- PCE was identified in soil samples collected from the northern corner of the Site building with a maximum concentration of 9.6 mg/kg, which is below the Industrial SCO of 300 mg/kg, but above the Unrestricted Use and Protection of Groundwater SCOs of 1.3 mg/kg, to the extent the Protection of Groundwater SCO is applicable to this Site. (Integral, 2015)

4 PILOT TEST

This section presents the results of the pilot test that was performed to inform the design of an AS/SVE remediation system and vapor intrusion mitigation system at the Site.

4.1 TESTING OBJECTIVES

The overall objective of the testing program is to provide for the design of a remediation and protective system in light of the concentrations of PCE and other VOCs in the soil, groundwater, or soil vapors beneath the slab of the building.

Aquifer testing [slug and modified (between well) slug tests] were done to:

- Evaluate hydraulic conductivities for the purpose of controlling groundwater if necessary and/or evaluating intrinsic permeability which can be derived from hydraulic conductivities,
- Assess the ability of air sparging techniques to enhance the remediation and protective systems to be designed, and,
- Evaluate the effects of underground structures on the capture of contaminated soil vapors.

The steady-state SVE tests were done to provide necessary data for the design of soil vapor extraction from beneath the building slab. An AS/SVE system uses one or more blowers to induce airflow through the subsurface (unsaturated zones) to volatilize contaminants for exhaust to the atmosphere, in addition to the introduction of air into the saturated zone to allow for mass transfer of dissolved contaminants into the vapor phase (for collection by the SVE).

The air sparging tests were conducted to evaluate the efficacy of air sparging to enhance the remediation by removing contaminants from the groundwater so that they could be captured by the SVE system.

Lastly, laboratory analytical testing results of soil vapors from the recovery well (RW-01) and vacuum monitoring point (VMP) VM-02 were used to evaluate the need for air treatment on the discharge of the SVE system.

4.2 OVERVIEW OF TESTS AND EQUIPMENT

Groundwater pressure responses in the five monitoring wells (GW-1 through GW-5) and one air sparging well (AI-01R) were recorded throughout the tests using pressure transducers recording at one minute intervals (Figure 3 shows the site layout; Appendix C contains boring

logs for the wells and VMPs installed for the pilot test³; Appendix D contains cross-sections with the pilot test well and VMP installations). The pressure transducers were In-Situ data loggers (Aqua TROLL 200) and a barometric pressure logger (Schlumberger Baro-Diver) for a calibration to barometric pressure if necessary.

Transducer records were calibrated by depth to groundwater measurements made both before and after the recording periods. Depth to groundwater (DGW) measurements were obtained at the time of deployment of the pressure transducer or when the transducer was removed from the well. Survey and depth to groundwater data provided by Donald R. Stedje, P.L.S., were used to calculate groundwater elevations, and distances to wells containing transducers.

Dissolved oxygen levels, temperature, and other parameters were measured using meters (YSI Model 550) installed in the groundwater monitoring wells.

Differential pressures were periodically measured via digital manometers, and pressure gauges in the groundwater monitoring wells, VMPs, and select soil boring locations where tubes remain to allow access to the subsurface.

Slug tests and modified (between wells) slug tests were conducted using AI-01R as the pressurized well. Pressure changes (slugs) were created by pressurizing AI-01R then suddenly releasing the pressure to create the slug. Responses were measured using pressure transducers in the slug well and the four remaining monitoring wells within the building.

Steady state SVE tests were conducted using RW-01 as the extraction well. Extraction was done using three different negative pressures (vacuum) and volumetric flows at RW-01. Responses to these three extraction rates were measured in the groundwater monitoring wells, vacuum monitoring probes, and a select number of soil (vapor) probe locations where tubes to the subsurface remained.

Air sparging tests were conducted by pressurizing AI-01R sufficiently to create a flow of air into the well and out into the formation. Responses to the flow of air into the formation were measured in the groundwater monitoring wells; specifically, dissolved oxygen levels and changes to groundwater elevations were measured.

After an initial period of air sparging, SVE was added at RW-01 as before. This allowed for the field testing of vapors in the discharge from RW-01 using a photoionization detector (PID).

³ The boring log for AI-01 is included instead of the boring log for AI-01R as no subsurface soil descriptions were collected for AI-01R. AI-01R is similarly constructed to AI-01.

Contaminant concentrations in extracted and potentially extracted vapors were evaluated using PID measurements of the extracted air from RW-01, and via laboratory-analyzed air samples collected from RW-01 and VMP VM-02 (results discussed in Section 4.6).

Analysis methods for the pilot test data were based on theoretical equations developed initially by Theis and modified by others to accommodate a particular aquifer test.

4.3 SLUG TEST AND MODIFIED (BETWEEN WELL) SLUG TEST

Two slug tests were done in AI-01R, one following the other. AI-01R is a two inch well screened between 34 and 35 feet below ground. At the time of the test, groundwater was 20 feet below ground surface providing a water column in the well of approximately 14 feet.

The aquifer was stressed by pressurizing the slug test well to approximately 30 pounds per square inch (psig) until a stable condition had been reached. The pressure was rapidly released and the well's recovery tracked by pressure transducers recording on one minute intervals.

The modified slug tests were done at the same time as the slug tests. The water pressure differential created by the slug test was recorded in other nearby wells as a pressure wave propagated through the aquifer.

4.3.1 Slug Test

The slug tests in AI-01R were analyzed using the Bouwer and Rice method. The governing equation is

$$K = \frac{r_c^2 \cdot \ln(R_e/r_w)}{2L_e} \cdot \frac{1}{t} \quad \text{where}$$

K = Hydraulic conductivity

L_e = Length of screened portion of well

r_c = Radius of the casing

R_e = Effective radial distance over which y is dissipated

r_w = Radial distance to undisturbed portion of aquifer from center line

t = Time

y = Difference between water level in well and water level outside well

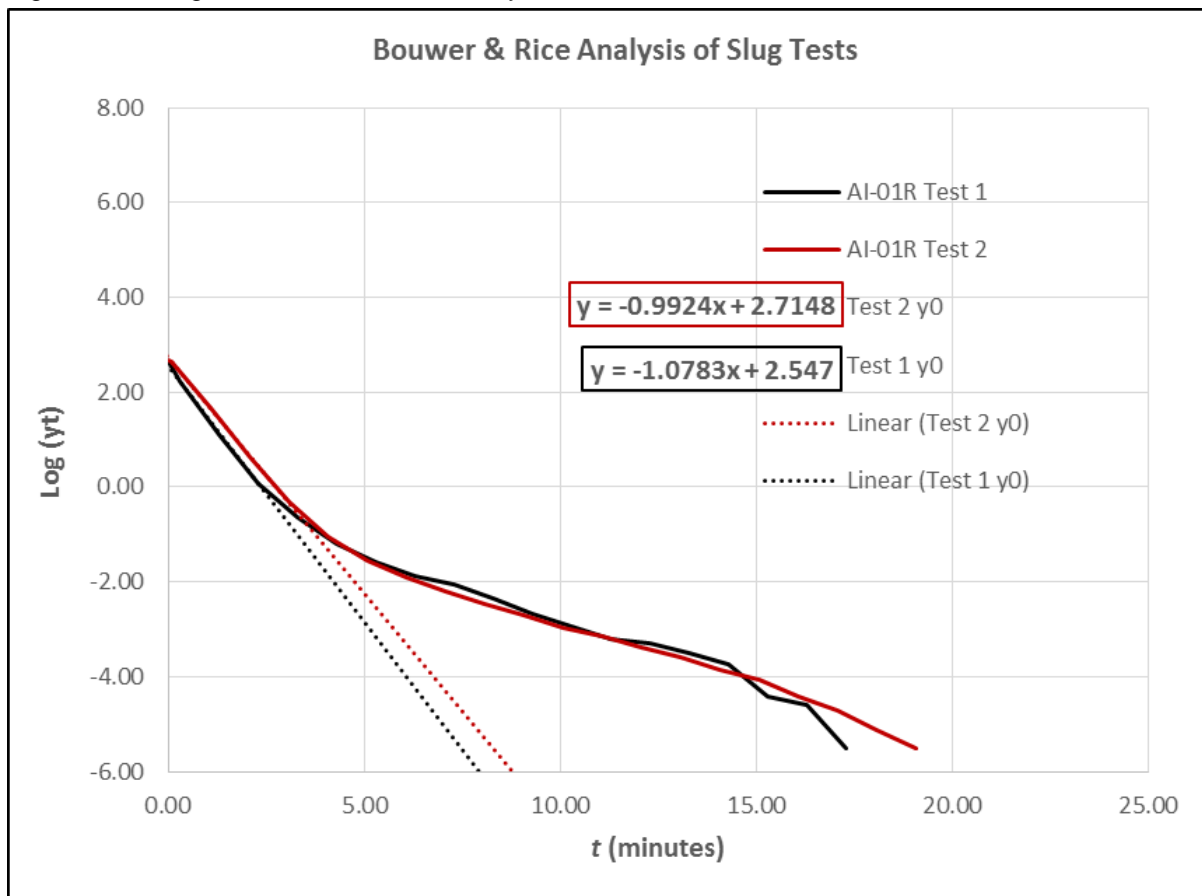
y₀ = y at time zero

y_t = y at time t.

The method involves calculating the most representative slopes of the water recovery curve in the plot of the slug recovery (feet) and time (minutes). Because of the shortness of the screen

(one foot) and the bentonite sealing of the annular space between the well casing and the outer portions of the disturbed area (the dimensions of the drill hole) for the entire length of the well above the screen, the most representative portion of the recovery curve occurred in the first five minutes. These slopes are shown in Figure 7 below.

Figure 7 Slug Test Bouwer & Rice Analysis



Detailed calculations are provided in Appendix E. Results are as follows:

Table 1 Hydraulic Conductivity

K	Test 1	Test 2
ft/min	0.0037	0.0034
GPD/ft ²	40.2	37.0

4.3.2 Modified Slug Tests

Modified slug tests involve the detection of pressure signals from the slug test well in other wells in the formation. The analysis is in accordance with basic propagation theory as

developed by Theis from heat transfer theory, using the one parameter solution for heat propagation:

$$s(x, t) = 1/\sqrt{4\pi Tt} \cdot e^{(-x^2/4KTt)} \quad \text{where}$$

$s(x, t)$ is the amplitude of the pressure signal,

T is transmissivity,

x is distance between the slug test well and the observation well, and,

t is time.

K can be estimated from T by

$$K = \frac{T}{b \cdot S_s} \text{ where}$$

b = Aquifer depth, and,

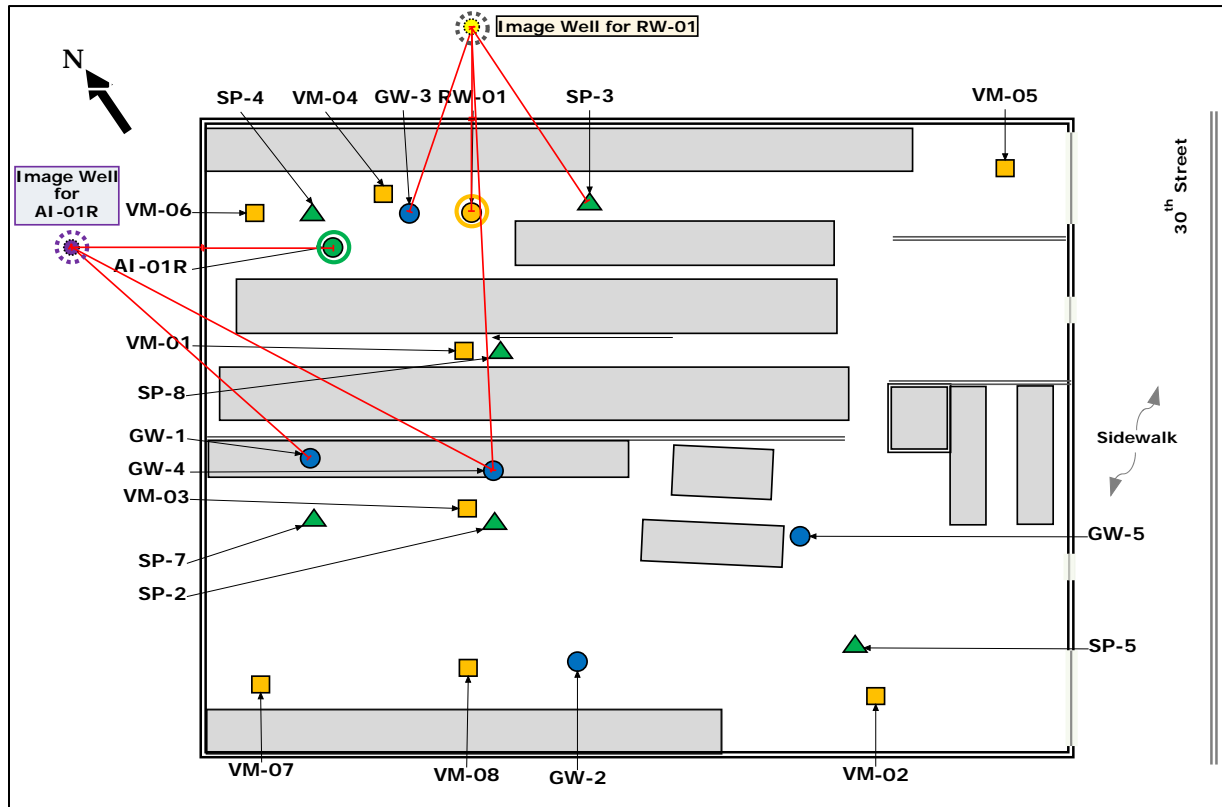
S_s = Specific Storage or Elastic Storage.

As the remote wells respond to a pressure wave from the slug well, and there is little actual movement of groundwater in the remote wells since the Specific Storage, S_s , is reflecting the elasticity component of Storativity, as opposed to the water drainage component. Therefore, the parameter is appropriate even for unconfined conditions. This assumption may not be true for the responses in GW-3, however, as some water movement is apparent.

For the modified slug test, the amplitude, period, and arrival times of the pressure waves at remote wells were identified. Hydraulic conductivities were determined by calculating the best fit K and S values across all tests using least squares regression techniques.

The above calculations are also used to look for inconsistencies in the data that indicate hydraulic barriers. The principle of superimposition is used to estimate the location of the boundaries indicated by the calculations. Further, K values are adjusted to account for the effects of these boundaries. An image well (shown on Figure 8 below) was used to take into account a partial boundary apparent at about the location of the building's northwestern foundation.

Figure 8 Slug Test Image Well Locations



The K values were calculated from the modified slug tests:

Table 2 Hydraulic Conductivity from Modified Slug Tests

Test Number	Well Designation	r ft	K ft/min	K GPD/ft ²
1	GW-3	9.7	0.0031	34
1	GW-1	24.4	0.0041	
1	GW-1 Image	40.0	0.0041	
1	GW-1 Combined	24.4	0.0041	44
1	GW-4	31.8	0.0036	39

Test Number	Well Designation	r ft	K ft/min	K GPD/ft ²
Test 1 Averages			0.0036	39
2	GW-3	9.7	0.0046	50
2	GW-1	24.4	0.0038	
2	GW-1 Image	40.0	0.0038	
2	GW-1 Combined	24.4	0.0038	41
2	GW-4	31.8	0.0021	
2	GW-4 Image	50.0	0.0021	
2	GW-4 Combined	31.8	0.0021	22
Test 2 Averages			0.0035	38

The slug and modified slug tests result in similar hydraulic conductivities ranging from 0.0034 to 0.0037 ft/min (37 to 40 GPD/ft²). The modified slug test also provides information on hydraulic barriers that can be used to evaluate the radius of influence of SVE capture and the negative pressures (suction/vacuum) required to be placed on recovery wells.

4.4 SVE STEADY STATE TESTS

4.4.1 Intrinsic Permeability

Intrinsic permeability was calculated using the Cooper-Jacob Approximation

$$k_i = \frac{Q_v \mu}{\pi b P_s \cdot [(1 - P_{atm}/P_s)^2]} \ln \left(\frac{r_s}{r_{ROI}} \right) \quad \text{where}$$

- b = Aquifer thickness
- P_{atm} = Atmospheric pressure
- P_s = Pressure at the screen
- Q_v = Volumetric Flow rate
- r_{ROI} = Radius of influence
- r_s = Radius of screen
- μ = Dynamic Viscosity

The radius of influence (ROI) is calculated as the distance from the well where the absolute pressure equals atmospheric pressure. Figure 9, below, shows graphically this calculation for

Tests 1 and 3 in the radial direction to the southeast toward the furthest, remote corner of the building (Table 3, below, provides the tabulated data)⁴. The resulting ROI values can be confirmed by comparing to the measured values in the well nearest the calculated ROI, GW-5. Net pressure increases due to the extraction is greater in GW-5 than 0.010 iwc⁵ defined to calculate the pilot test ROI, confirming the calculated extent of the pilot test ROI.

Figure 9 SVE Pilot Test Radius of Influence

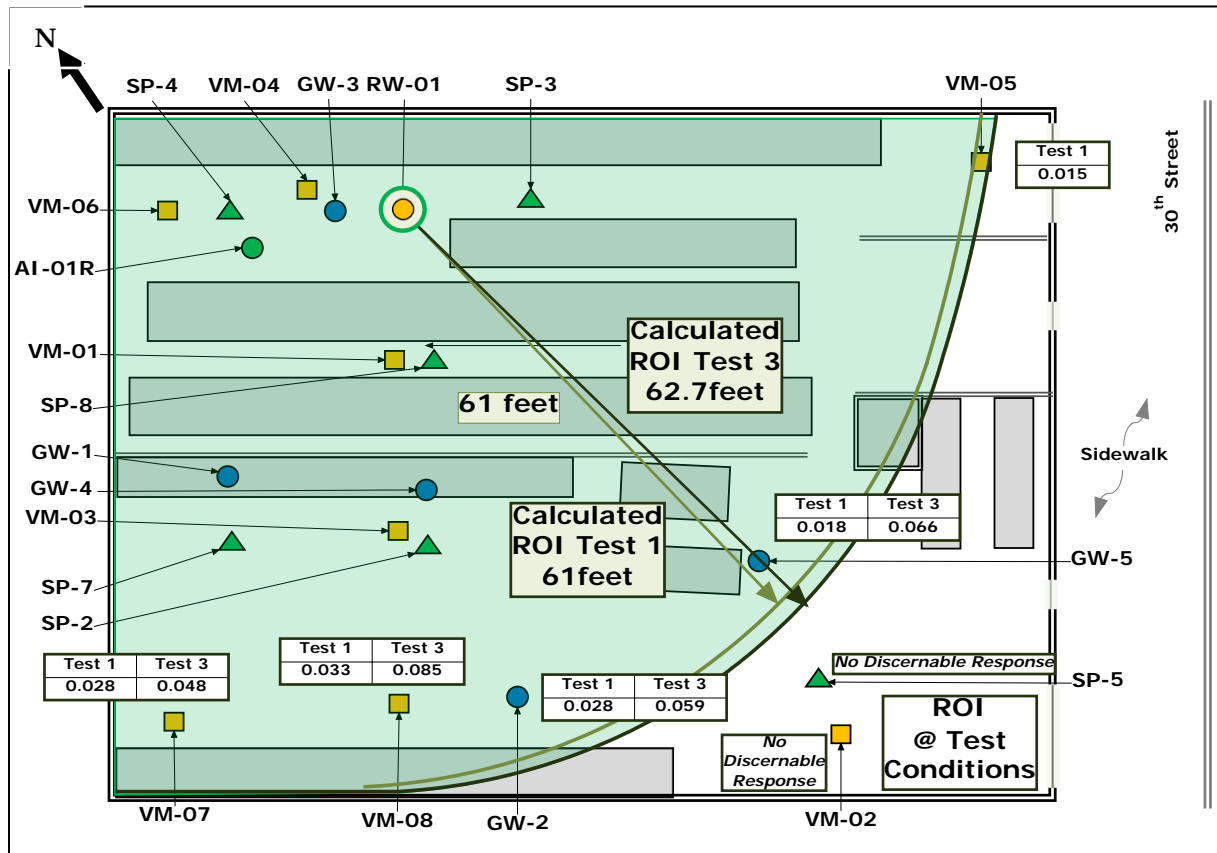


Table 3 SVE Pilot Test Radius of Influence

Test Number	Radial Direction	ROI ΔP iwc	ROI ft	k_i cm ²	K ft/min	ΔP in GW-2 53 ft South	ΔP in GW-5 52.8 ft Southeast
Test 1	Southeast	0.010	61.0	2.3E-06	0.436	0.028	0.018

⁴ Test 2 is not shown as the results would be between Test 1 and Test 3. Test 2 was conducted with similar negative pressure at the blower as Test 3. Test 2 was conducted with 30.0 iwc and Test 3 was conducted with 33.5 iwc. Comparing Test 1 (conducted with 20.0 iwc) with Test 3 provides a larger magnitude difference for evaluation.

⁵ The ROI for the SVE pilot test was based on 0.010 iwc; however, the SVE design presented in Section 5 is based on ROI at 0.10 iwc.

Test Number	Radial Direction	ROI ΔP iwc	ROI ft	k_i cm²	K ft/min	ΔP in GW-2 53 ft South	ΔP in GW-5 52.8 ft Southeast
Test 3	Southeast	0.010	62.7	2.1E-06	0.399	0.059	0.066

Also shown is Test 3 to the south toward GW-2. The boundary along the northwestern foundation affects the calculations to the south (and southwest). Radial directions affected by the foundation walls have relatively higher pressures due to the boundary effects, resulting in lower ROI values and higher k_i values than would be calculated in the absence of the boundary. However, in all three SVE tests, the measured pressure increase in GW-2 is above 0.010 iwc. This is true of all wells at the perimeter of the measurements, confirming that the system influenced all areas under the slab with the exception of the area to the southeast, as shown in Figure 9. Table 4, below, lists the pressure differentials for all measured wells.

Table 4 SVE Pilot Test Measured Pressure Differentials

		ΔP Test 1	ΔP Test 2	ΔP Test 3
Blower Pressure (iwc):		20.0	30.0	33.5
Well Head Pressure (iwc):		11.0	14.6	15.8
Flow (CFM)		82.1	101.6	107.8
Measured Location	Distance from RW-1 feet	ΔP Test 1 iwc	ΔP Test 2 iwc	ΔP Test 3 iwc
GW-1 ΔP	33.64	0.172	0.228	0.270
GW-2 ΔP	53.08	0.028	0.066	0.059
GW-3 ΔP	7.27	1.900	2.566	2.837
GW-4 ΔP	29.69	0.228	0.363	0.379
GW-5 ΔP	52.83	0.018	0.060	0.066
SP-2 ΔP	35.58	--	0.095	0.093
SP-3 ΔP	13.59	0.218	0.297	0.329
SP-4 ΔP	18.23	0.228	0.304	0.338
SP-5 ΔP	66.40	0.002	--	0.007
SP-7 ΔP	39.71	0.038	0.757	0.063
SP-8 ΔP	15.98	0.616	0.793	0.885
VM-1 ΔP	15.77	0.846	1.090	1.215
VM-3 ΔP	34.04	0.221	0.176	0.184
VM-4 ΔP	10.26	--	1.676	1.820
VM-5 ΔP	61.12	0.015	0.011	--
VM-6 ΔP	24.69	0.239	0.340	0.357
VM-7 ΔP	59.49	0.028	0.034	0.048

		ΔP Test 1	ΔP Test 2	ΔP Test 3
VM-8 ΔP	52.37	0.033	0.057	0.085

4.4.2 Modeled SVE Pressure Distribution from Recovery Well

Rearranging the Cooper-Jacob Approximation used above allows us to model directly the pressure gradients extending from the recovery well. The rearranged equation is

$$P_{r_x}^2 = P_{r_w}^2 - [Q_v \cdot P_s \cdot \mu / (\pi \cdot b \cdot k_i)] \cdot \ln(r_w / r_x) \quad \text{where}$$

k_i = Intrinsic permeability,

r_w = Effective radius of the screen,

r_x = Radius of differential pressure,

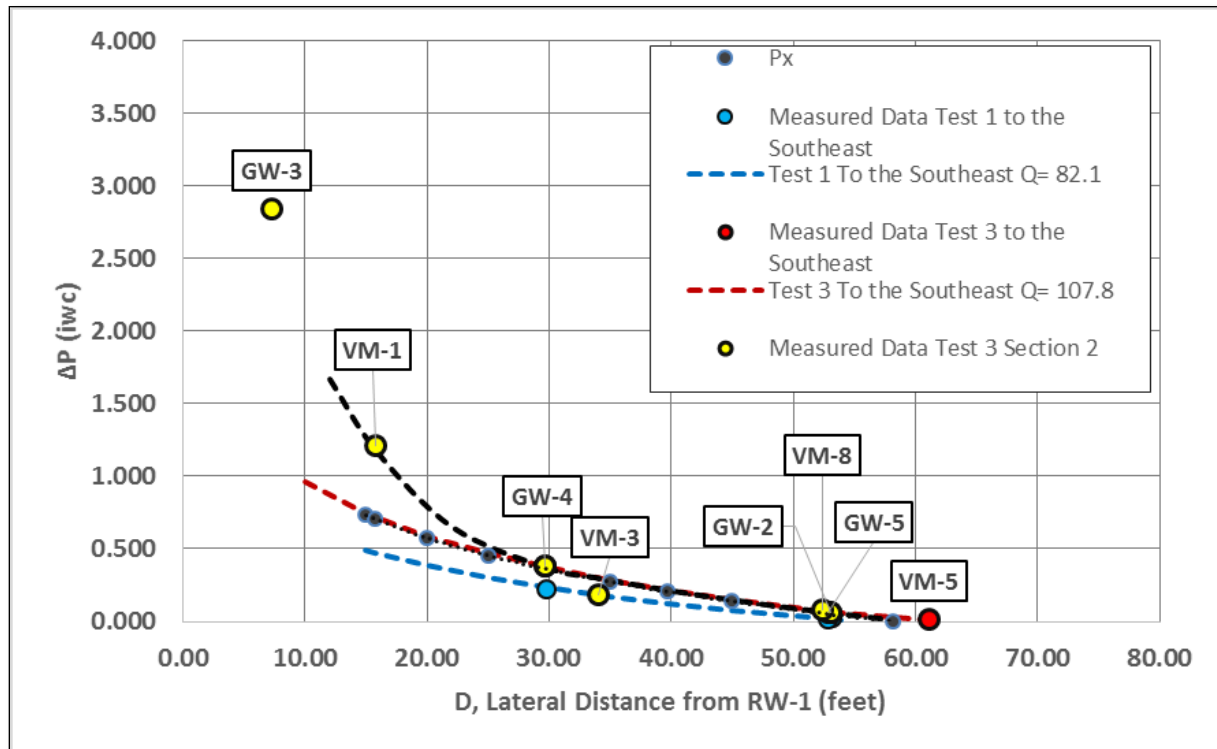
P_s, P_{rx} = differential pressures at screen and at r_x , respectively,

Q_v = Volumetric flow rate, and,

b = thickness of zone available for air flow.

Calculations using this form of the equation allows us to better fit the measured data, and thereby fine tune the influence extraction will have on the subsurface vapors. It also allows us to evaluate the directionality of the extraction influence (Figure 10, below).

Figure 10 SVE Pilot Test Differential Pressure vs. Distance



The calculations to the south and southwest include the same super-imposition principle applied to the modified slug tests, resulting in the distribution of suction pressure over a greater distance.

Evaluating the data in this fashion still allowed us to evaluate the effects of the air leakage identified in RW-01. The leakage caused a loss of suction between the wellhead and the screen. Based on these calculations, the suction pressure on the screen could have been as low as 20% of the suction pressure at the wellhead. We believe the leak is between the concrete plug and the PVC casing at the surface of the ground. This can be remedied with a polyurethane sealant or with bituthene liquid membrane during remedial construction. For design purposes, we will be looking at the lower screen suction pressures as well as the anticipated pressures that would be achieved with a repair of the leaking recovery well. Equipment will be specified to cover conditions in between.

4.5 AIR SPARGE AND AIR SPARGE WITH SVE TESTS

The aquifer was stressed by pressurizing the air sparging well (AI-01R) until the applied pressure is stabilized at approximately 30 psig. AI-01R is a two-inch well screened between 34 and 35 feet below ground. During the test, groundwater levels and dissolved oxygen concentrations were measured in the groundwater monitoring wells. After approximately 30 minutes, the SVE testing system was activated and PID readings in its discharge were added to the data collection.

Given the relatively low hydraulic conductivity values measured, the thinness of the groundwater zone to be treated, and the silty / fine sand nature of the soils, Site conditions are conducive to air sparging. Silty sand and fine sand with low hydraulic conductivities generally have relatively low porosity and, in turn, relatively high capillary pressures. As air sparging must displace water in the formation, it must overcome the groundwater's capillary pressures resisting the displacement. Once air is displaced in the immediate vicinity of the well from the well screen to the surface, the pressure applied to the screen is relieved by vertical flow of air, limiting the lateral spread of air.

Calculations (provided in Appendix F) quantify the above concepts. The screen is pressurized (P_s) and a flow out the screen is created (Q_{air}). Groundwater is displaced both laterally and vertically; however, as the head differential is much larger in the vertical direction, the displacement of water is greater vertically until the air reaches the unsaturated zone. The applied pressure, P_s , is dissipated immediately outside the screen as air flows vertically. Thereafter, of course, air will flow preferentially through the column of soil from which water has been displaced to the surface. It will not spread as the surrounding groundwater's hydraulic and capillary pressures will prevent the air from entering the water filled pores surrounding the column of air filled pores. This is the steady state condition that is set up almost immediately, after the air has displaced the water in the vertical direction.

At steady state, the screen pressure is relieved by the vertical flow of air. The resulting air pressure at any point in the air column next to the sparge well is equal to the groundwater's pressure preventing lateral flow. The size of the column of air filled pores can be estimated by calculating the area needed to pass the flow, Q_{air} . This is readily done using Darcy's Equation modified for air as the fluid

$$Q_{air} = A \cdot \frac{k_i \rho \cdot g}{\mu} \cdot \frac{\Delta h}{\Delta L} \quad \text{where}$$

A = Area at depth $\Delta L = \pi r^2$, $r =$ radius of air column, $r_w =$ radius of drill hole,

k_i = Intrinsic permeability (cm²),

ρ = Density of air (varies with pressure),

Δh = Head difference between depth of ΔL and the unsaturated zone,

μ = Dynamic viscosity, and,
 ΔL = Depth below unsaturated zone.

Assuming a flow of 40 cfm, applying the intrinsic permeability values from above, and using the lower values of capillary pressure, we calculate that air sparging would drive air approximately 0.5 ft around the screen, and up to a maximum of 2.0 feet once the unsaturated zone is reached:

Figure 11 Calculated Air Spread During Air Sparge

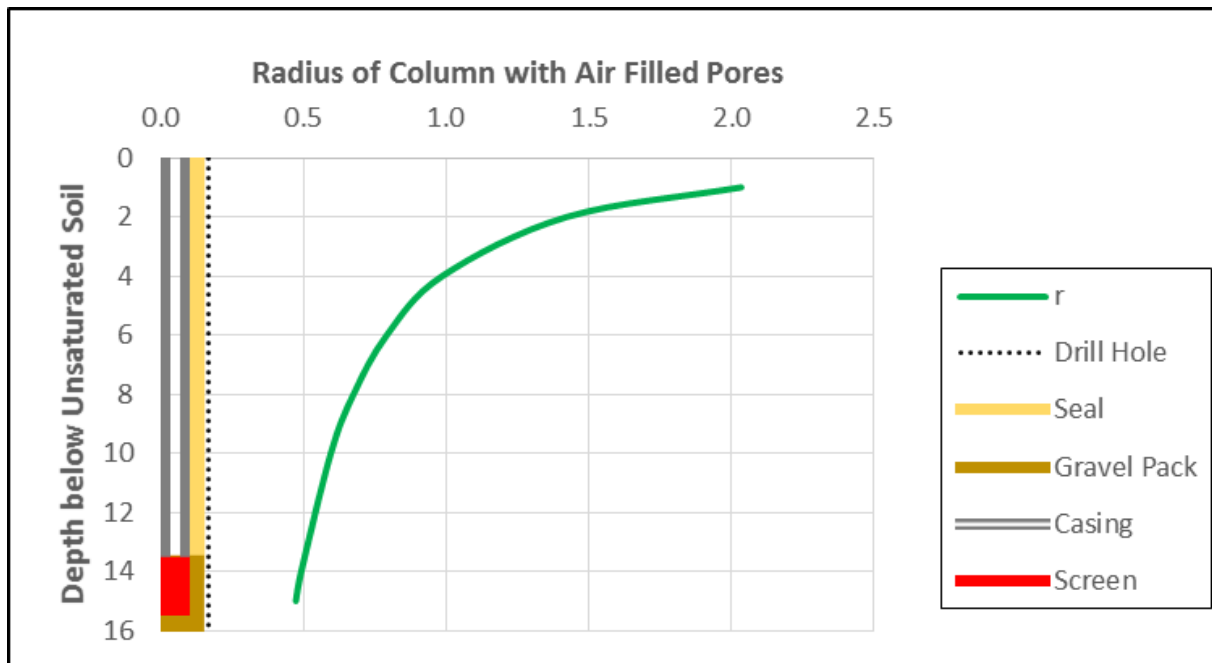
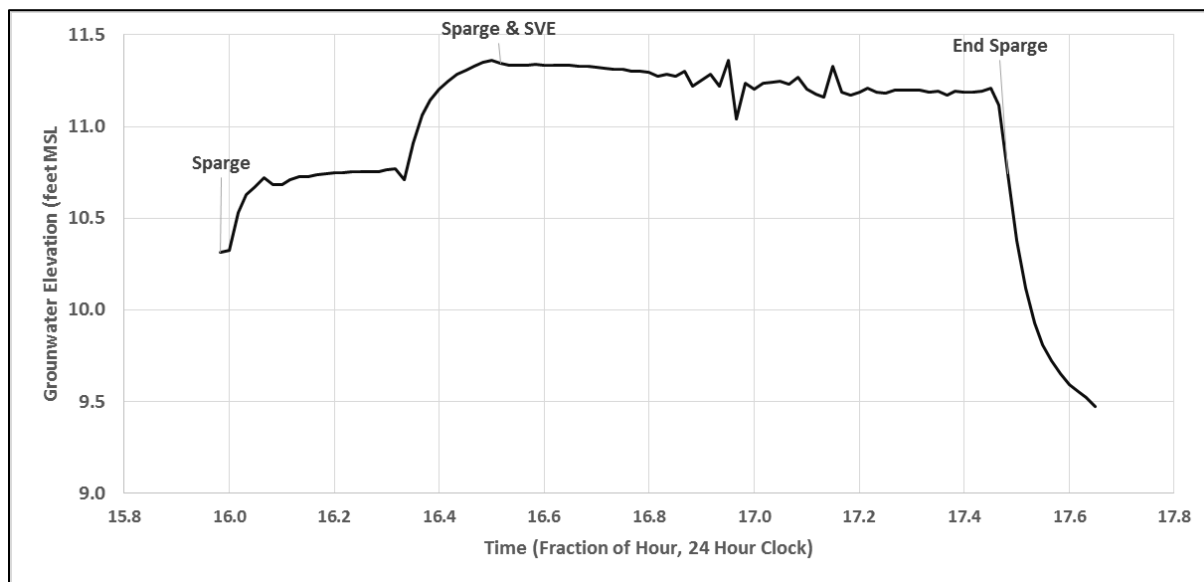


Figure 12, below, shows the pressure transducer response in monitoring well GW-3 during the course of the air sparging tests⁶. At the beginning of the test, as AI-01R is pressurized, the recorded groundwater level in GW-03 increases until an approximately steady level is reached at hour 16.5. Therefore, between its static level and the level reached during the air sparging, GW-03 was raised approximately 1.8 feet. (The jog in this rise at approximately 16.35 hours is due to an increase in the pressurization of AI-01R done to re-stabilize the pressure at 30 psig.) After this initial rise in groundwater elevation, the elevation in GW-03 slowly declined until the end of the sparging test when it rapidly returned back to its static level.

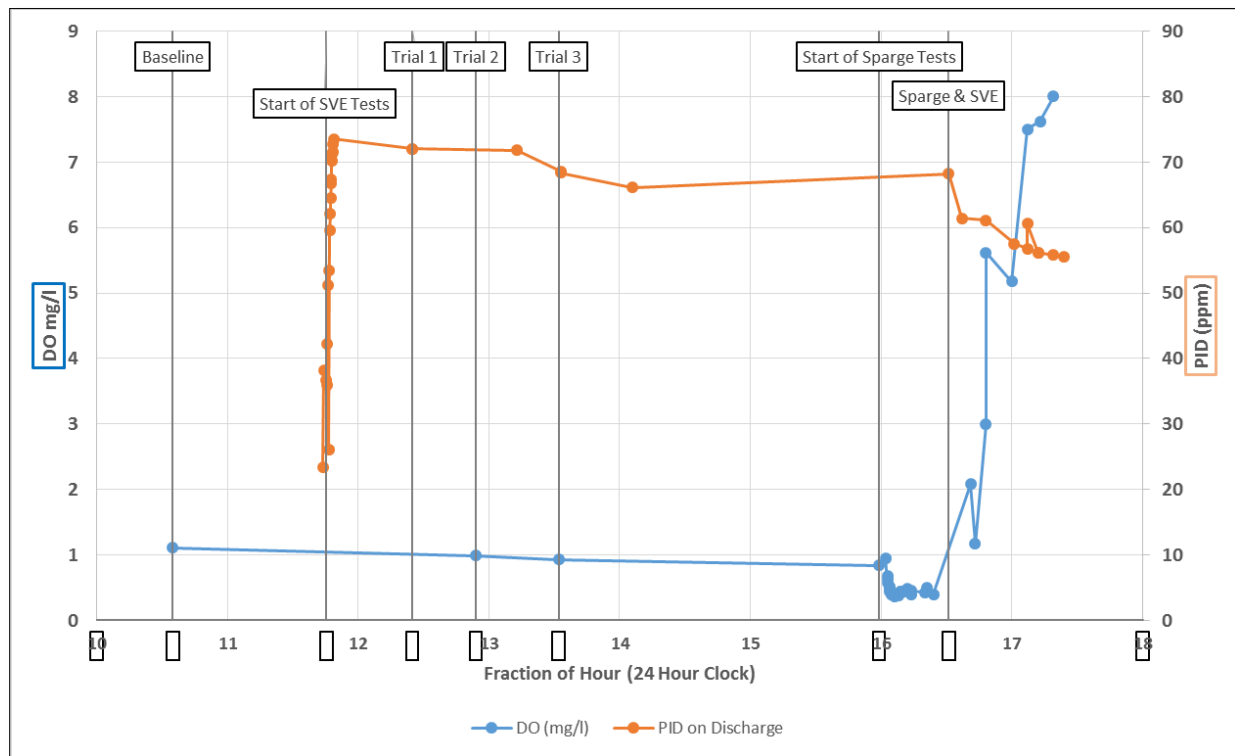
Figure 12 GW-3 Elevation During Air Sparge



⁶ GW-3 had a base elevation of 9.47ft to which it returned at the end of the air sparging tests. Figure 12 shows the well not quite recovered from prior testing.

Figure 13, below, shows the levels of dissolved oxygen (DO) in GW-3 and the PID readings in the discharge of the SVE system. The figure covers the entire period of testing. The PID readings are represented by the upper orange line. The dissolved oxygen readings are represented by the lower blue line.

Figure 13 Dissolved Oxygen in GW-3 During Air Sparge



A little before noon, the SVE test system was started. The PID level increases rapidly due to the SVE beginning to pull vapors from the undisturbed area around RW-01. Thereafter, the PID readings begin a slow decline, likely due to cleaner air being pulled in from farther away.

Turning on the air sparging system may have increased the vapor concentrations as the sample at about 4:30PM (16.50 hrs) is slightly increased. Thereafter, however, the PID returns to its decay pattern until the end of the test. This observation is consistent with the above calculations that tell us that only a small column of water was affected by the pilot test injection of the air, resulting in an equivalently-small release of contaminants picked up by the PID in the SVE discharge.

The DO in GW-3 initially drops when the air sparging test begins, probably due to the air sparging causing a small groundwater gradient and, in turn, an addition of groundwater from the undisturbed area around the well that has a lower DO concentration. After the initial drop, the DO dramatically increases in GW-3.

The substantial rise in groundwater elevation in GW-3 would only occur if, by the act of injecting air at the location of AI-01R, water was pushed to GW-3 at a rate faster than would occur with Darcian flow in the saturated zone. Rather, injecting air into AI-01R apparently pushed groundwater into the unsaturated zone, where it could travel to GW-3 much faster than in the saturated zone. This resulted in the rapid 1.83 foot increase in the groundwater level in GW-3. In turn, as this water was oxygenated by the air injection, it resulted in a rapid increase of the DO concentration in GW-3.

4.6 VAPOR LABORATORY ANALYTICAL TESTS

Two vapor samples were collected and analyzed, and, based on an analysis of the results and relevant regulations, Integral has concluded that no vapor treatment is necessary. Integral collected one vapor sample from RW-01 during the SVE pilot test and one vapor sample from VM-2, previously assuming that future vapor extraction may occur near VM-2. Below are the results (the laboratory report is included as Appendix G).

Table 5 SVE Pilot Test Soil Vapor Sample Results

Constituent	RW-1 µg/m ³	VM-2 µg/m ³	Maximum ^a µg/m ³	Maximum lb/ft ³
cis-1,2-Dichloroethylene	384	ND ^b (587)	587	3.66e-8
Isopropanol	ND (349)	398,000	398,000	2.48e-5
Tetrachloroethylene	226,000	55,400	220,000	1.37e-5
Trichloroethylene	1,100	ND (795)	1,100	6.87e-8
Vinyl Chloride	ND (147)	ND (378)	378	2.36e-8
<i>Total</i>			<i>620,065</i>	<i>3.87e-5</i>

^a Non-detect concentrations at the reporting limit shown where applicable

^b ND (349) – Not Detected (at the given reporting limit)

Conservatively using the maximum concentrations (including non-detect concentrations at the reporting limit) above and applying the entire estimated flow (with a clean filter) of 122.7 CFM, the discharge would be 0.28 lbs/hr.

Vapor emissions treatment is not necessary for this discharge. According to NYSDEC DAR-1 *Guidelines for the Control of Toxic Ambient Air Contaminants*, emissions treatment is necessary for sources emitting greater than 3.5 lbs/hr of VOCs (the design discharge for the proposed SVE is 0.28 lbs/hr, an order of magnitude lower). NYSDEC has also indicated that carbon treatment is required “if an emission point exceeds 0.5 lb/hr of VOCs”; however, the proposed SVE discharge is less than this threshold. Further, according to 6 NYCRR 201-3.3(c)(29), the proposed SVE system is defined as a “trivial activity” for which no treatment is necessary as the system is a soil vent operated under an agreement (the Brownfield Cleanup Agreement) with,

and under the supervision of, NYSDEC⁷. We, therefore, conclude that no emissions treatment is necessary for the proposed system.

The detection of isopropanol in the one soil vapor sample is anomalous as isopropanol is not known to be used in the Site operations. Isopropanol in soil vapor may originate off-Site.

⁷ The Administrative Code of the City of New York 24-153 refers to 6 NYCRR 212, which provides the exemption for a “trivial activity” under 6 NYCRR 201-3.3(c)(29).

5 REMEDIATION SYSTEM DESIGN

Based on the results of the pilot test, we have designed the AS/SVE remediation system with one blower that will extract soil vapor from two locations along the centerline of the building with an air sparge well in between. An AS/SVE system uses one or more blowers to induce airflow through the subsurface (unsaturated zones) to volatilize contaminants for exhaust to the atmosphere, in addition to the introduction of air into the saturated zone to allow for mass transfer of dissolved contaminants into the vapor phase (for collection by the SVE). Monitoring wells are well situated around this location to monitor the effects of air sparging. For this Site, the AS/SVE system will also serve to create negative differential pressure beneath the Site building's slab relative to the pressure above the building's slab, thereby mitigating the infiltration of sub-slab vapors into the building. The AS/SVE process flow diagram (PFD), layouts, elevations, and equipment schedule are provided in Appendix H.

5.1 SOIL VAPOR EXTRACTION

5.1.1 SVE Design Basis

A design criterion of 0.10 iwc was utilized for the SVE system design. The SVE system will provide a minimum of 0.10 iwc of negative pressure (suction) or greater at all locations in the vadose zone under the building.

5.1.2 SVE Layout

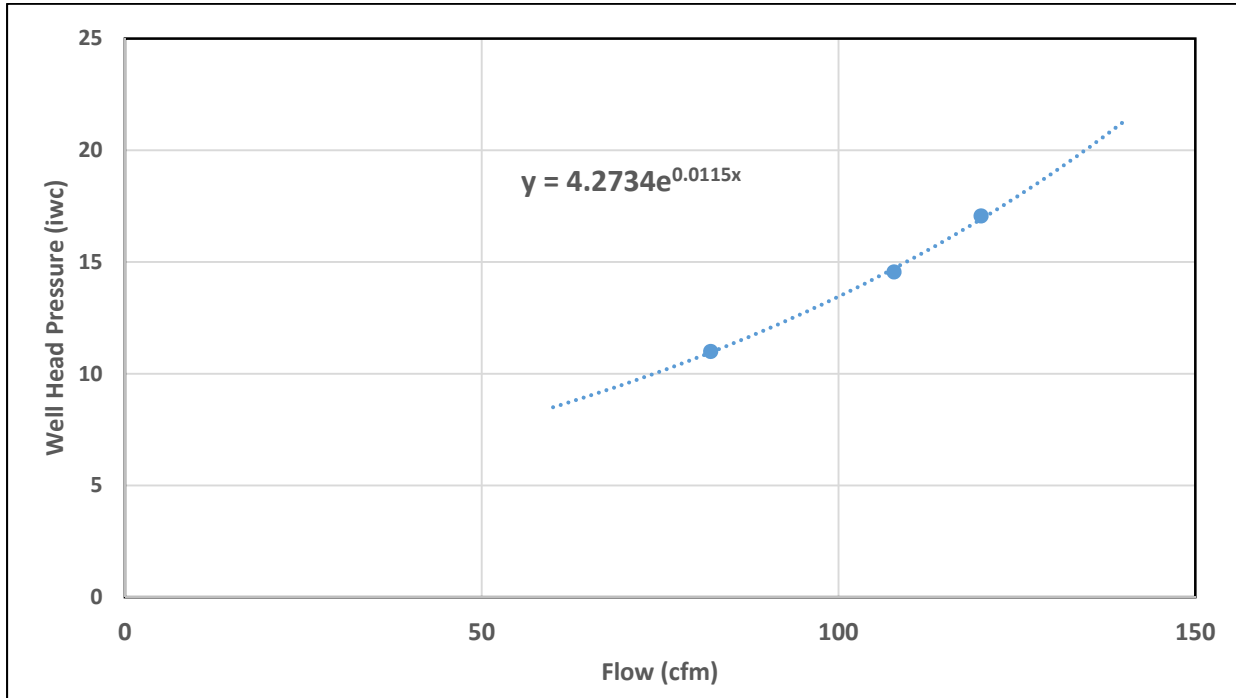
The SVE blower will extract vapors from two new wells, RW-2 and RW-3, to be located along the centerline of the building (the PFD is located in Appendix H). The building is rectangular, 100 ft long by 75 ft wide. Two extraction wells positioned along the centerline of the building are the most efficient means of reaching all areas in the vadose zone. Therefore, we selected this configuration then calculated the negative pressure and flow that would need to be applied to each well to create the 0.10 iwc criterion at all areas in the vadose zone. The two risers from the two SVE recovery wells will bend at the ceiling, connect, and run along the interior demising wall (the AS/SVE layout is provided in Appendix H). The combined risers will penetrate the roof and connect to the roof-mounted AS/SVE skid. The exhaust point of the stack will be three ft above the roof parapet wall, if any.

5.1.3 SVE System Curve

A differential pressure of 0.10 iwc at a specified distance from the recovery well can be created by different combinations of flow and wellhead pressure. The following figure shows the relationship between flow and applied (well head) differential pressure that would create 0.10

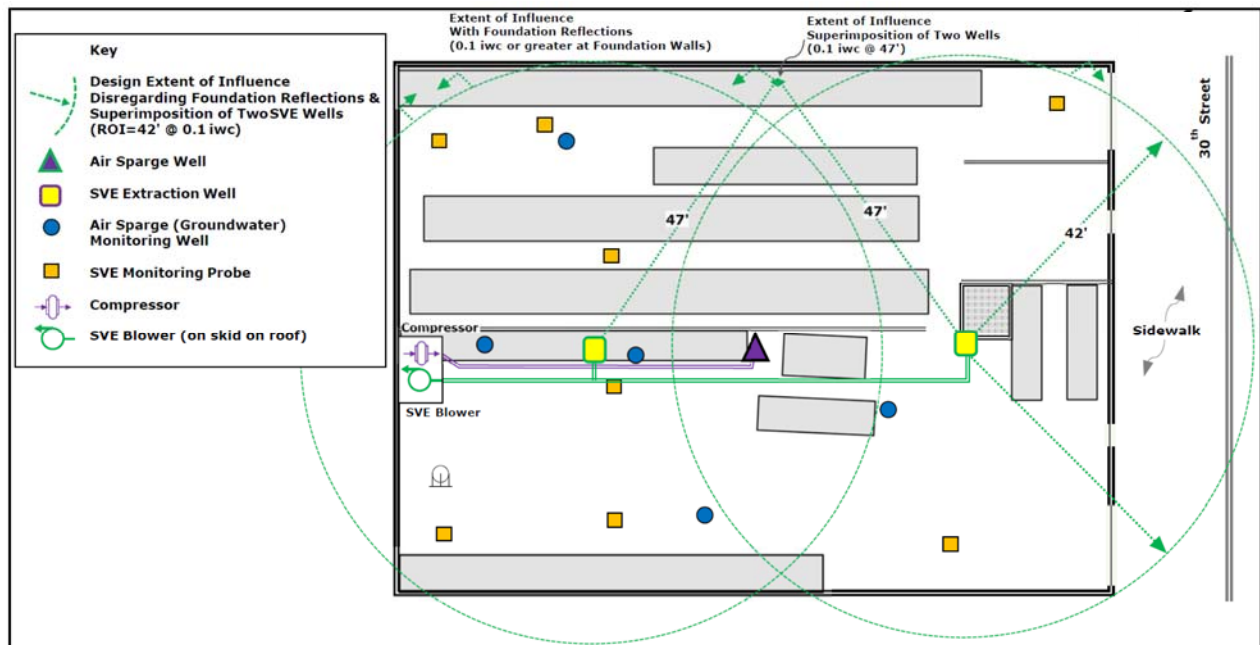
iwc at 42 feet from the recovery well, based on the pilot test. The 42-foot range is adequate to cover all areas in the vadose zone as is discussed below.

Figure 14 Differential Pressure of 0.10 iwc at 42 Ft



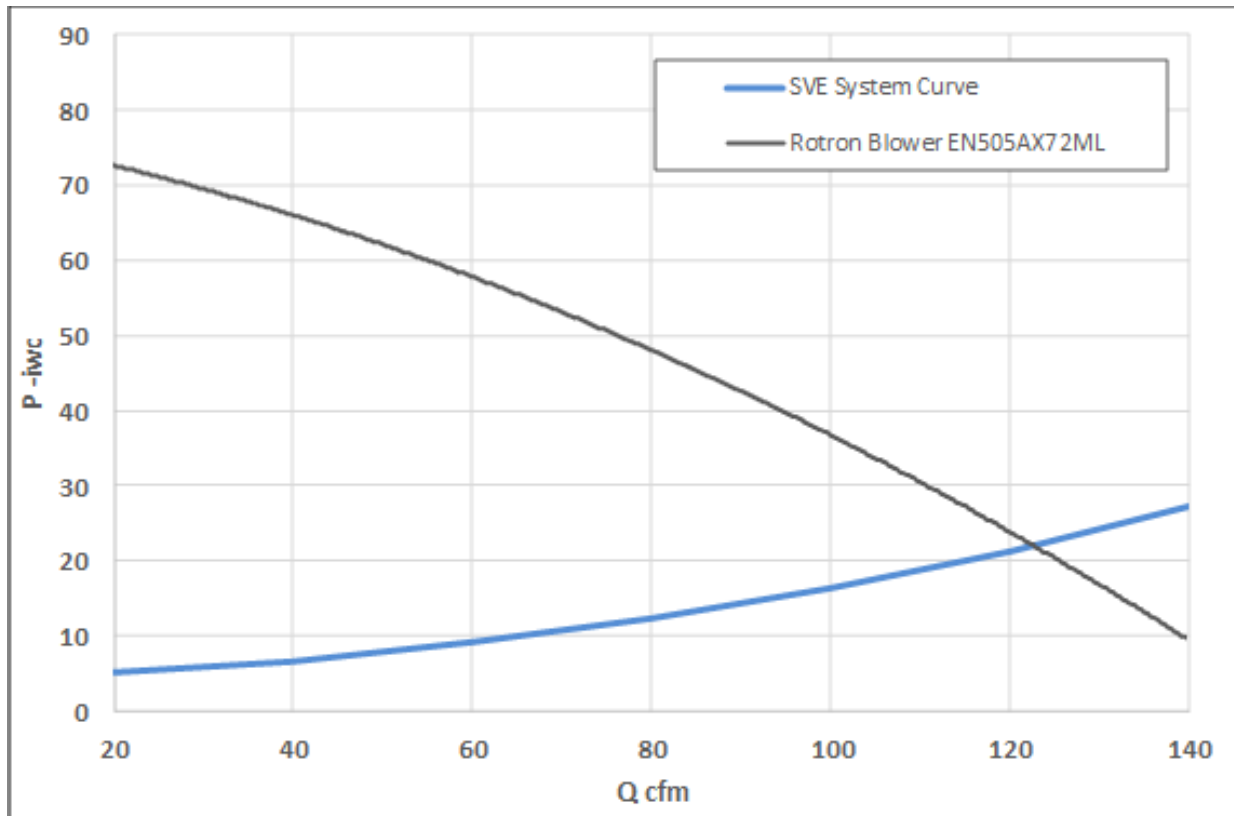
The two SVE recovery wells will work in tandem to create 0.10 iwc in all areas in the vadose zone. The principle of superimposition is used to calculate the influence of two wells working together. Briefly stated, where the areas of influence from each well overlap, both wells contribute to the differential pressure at the points of overlap. Additionally, the reflection effects of the foundation walls identified during the pilot test are considered. Again, this is done using the principle of superimposition. By applying these principles and laying out the influences from the recovery wells, 42 ft was selected as the necessary ROI from each recovery well to achieve 0.10 iwc at each point in the vadose zone.

Figure 15 SVE Radius of Influence



To select the correct blower that will apply adequate well head pressure to, and handle the resulting flow from, each recovery well, the distribution of flow between the wells and the pressure losses in the piping and skid need to be considered. The results of combining these pressure losses and flow divisions with the pressure/flow relationship at each well results in a curve expressing flow versus applied pressure at the blower. This is the system curve (shown below in blue).

Figure 16 System and Blower Curves



The blower curve for a Rotron EN505AX72ML, the selected blower, is also plotted on the above figure in dark gray. Where these two curves meet (22.0 iwc, 122.7 CFM) is the operating point at which the SVE system will operate, given the Site conditions. Based on the expected flow rate, we anticipate an air discharge temperature increase of 15°C or 27°F. Assuming a subsurface temperature of 50°F, the exhaust discharge temperature would be approximately 77°F.

5.1.4 SVE Air Exchanges

The SVE system operating at 122.7 CFM (flow at the blower with a clean filter) will provide an average turnover of the air in the vadose zone of approximately 7.0 hours. This is equivalent to

3.4 turnovers per 24 hour period. This calculation is based on a porosity of 0.3, average depth to groundwater of 20.7 ft and building dimensions of 100 ft by 75 ft.

5.1.5 SVE Recovery Well Design

RW-2 and RW-3 will be installed consistent with RW-1: four-inch PVC Sch 40, 0.020-inch slot from 1.5-18 ft bgs⁸. The annular space around the wells will be filled with sand from the end of the boring to six inches above the top of the screen. Above the sand, the annuli will be filled with concrete to grade. The seal between the risers and the concrete will be enhanced with the application of a chemically-resistant sealant such as bituthene liquid membrane. The boreholes will be completed with a well cover.

5.2 AIR SPARGE

5.2.1 Air Sparge Layout

The air sparge well will be located between the two SVE wells to maximize the capture of vapors generated by air sparging and to minimize the risk to building inhabitants of vapors crossing the floor slab (Appendix H). Additionally, several groundwater monitoring wells proximal to the proposed air sparging well can be used to evaluate the effectiveness of the air sparging. In particular, GW-5 is located within approximately 19.8 ft of the proposed air sparge well. As this well had the highest concentrations of groundwater contaminants in past testing, the changes in concentrations in the well will provide a good means of evaluating effectiveness.

5.2.2 Air Sparge Design

A single vertical air sparge well will be connected to the air compressor skid via a 2 inch PVC. The sparge well will have the following components:

- A ball valve for flow rate control, a differential pressure gauge, and a pitot tube-type flow sensor located in the immediate vicinity of the sparge well.
- 2-inch casing and screen (Schedule 40 PVC).
- 1-foot screen interval at the base of the well (34 – 35 ft bgs).
- 4-foot annular sand pack from the base of the well to 2 feet above the screen interval (32 ft bgs).
- A grout seal placed above the sand pack (to a depth of 32 ft bgs).

⁸ The extraction wells will be screened above and below the silty clay layer expected to be present 6.0-9.5 ft bgs to maintain functionality.

The design parameters for the air sparge well are listed Table 6, below.

Table 6 Design Parameters for Air Sparge Well

Design Parameter	Minimum	Maximum
Air Sparge Flow Rate (CFM)	0	40.0
Air Sparge Pressure (PSI)	6.5	30

The design parameters were based upon the following criteria:

- The minimum and maximum flow rates are based on guidance documents (NAVFAC 2001; USACE 2013).
- The minimum air pressure was calculated based on the minimum pressure required to overcome the hydrostatic head.
- The maximum pressure was determined from the pilot study and the pressure at which a secondary permeability in the aquifer may be created (a function of soil density and the depth of the well completion).

5.3 AS/SVE INSTRUMENTATION & CONTROLS

The AS/SVE system will contain various equipment to refine and direct the pressure/flow. Pressure indicators/transmitters and pitot tubes will be installed to assess the pressure and flow conditions within the system. (The previously-installed vacuum monitoring points will be used to monitor subsurface pressure field extension.) Butterfly valves and a variable frequency drive (VFD) will be installed to control the pressure/flow within the system (see Appendix H for the equipment schedule and proposed locations).

Some of the AS/SVE monitoring and control equipment will be located in an electrical panel located on the first floor. We intend to transmit the pressure/flow readings from the roof-mounted AS/SVE skid to the first floor control panel to limit the need for roof access (there is no access at the moment). The VFD will also be located in the control panel so the SVE system can be balanced using the VFD and butterfly valves, all located on the first floor.

5.4 SSDS DESIGN CRITERION

A design criterion of 0.010 iwc was utilized for the SSDS portion of the design (as opposed to the 0.10 iwc design criterion for the SVE portion of the design); meaning, the SSDS is designed to provide a minimum of 0.010 iwc of differential pressure across the slab (vacuum, defined as a lower pressure beneath the slab than above the slab). United States Environmental Protection Agency (USEPA) Radon Mitigation Standards recommend at least 0.004 iwc of pressure differential across the building slab. We have designed to a higher pressure differential to add a

factor of safety to the design and to take into account that a radon type fan operates at lower pressures; however, differential pressure of 0.004 iwc across the slab is acceptable, according to USEPA. Should the SVE system be no longer effective as an SVE, the pressures will be lowered and the SVE will operate as an SSDS only to achieve 0.010 iwc pressure differential across the slab in the VMPs.

6 PRE- AND POST-CONSTRUCTION ACTIVITIES

6.1 PRE-CONSTRUCTION SAMPLING

Prior to constructing the remediation system, groundwater and soil vapor samples will be collected. Groundwater samples will be collected from the on-Site wells and from three nearby wells [MW-1, MW-2, and MW-5 (Figure 17)]. Soil vapor samples will be collected (in Tedlar bags) from all sub-slab and vacuum monitoring points. Groundwater and soil vapor samples will be analyzed for PCE, TCE, 1,2-DCE, VC, and isopropanol.

6.2 MONITORING DURING SYSTEM STARTUP

A series of measurements will be collected at the startup of the remediation system. Immediately prior to starting the SVE system, groundwater levels and DO concentrations will be recorded. Pressure measurements will be collected from all sub-slab points and VMPs. Upon SVE system startup, flow rate and pressure at the SVE risers will be recorded, and pressure measurements from all sub-slab points and VMPs will be collected. After the air sparge is initiated, pressure measurements, groundwater levels, and DO concentrations will continue to be monitored on a recurring basis until two consistent sets of results are obtained.

A log sheet for the measurements collected during system startup is provided in Appendix I.

6.3 POST-CONSTRUCTION ACTIVITIES

6.3.1 Post-Construction Vacuum Monitoring

Pressure measurements will be collected from all sub-slab and vacuum monitoring points to evaluate the effectiveness of the AS/SVE system achieving the design pressure of 0.10 iwc.

6.3.2 Post-Construction Sampling

6.3.2.1 Groundwater & Soil Vapor

On a quarterly basis, groundwater and soil vapor samples will be collected following the same procedure as described above in the Pre-Construction Sampling section (Section 6.1). The data collected from these events will be used to quantify contaminant reductions and to evaluate overall system effectiveness.

Once the quarterly grab samples have indicated a sustained reduction in contaminant levels, sub-slab and indoor air samples will be collected and analyzed to evaluate treatment

effectiveness. Upon authorization by NYSDEC, the AS/SVE system will be temporarily shut down and air samples will then be collected. The air samples will be collected in stainless-steel canisters for an eight-hour duration and analyzed for PCE, TCE, 1,2-DCE, VC, and isopropanol.

6.3.2.2 Knockout Tank Water

Prior to disposal, the knockout tank water will be sampled and analyzed. The knockout tank water will be disposed of in accordance with applicable Federal, State, and Local laws and regulations.

7 SCHEDULE

Below is a schedule for the installation of the remediation system. We have included provisions for a Comfort Letter from NYSDEC in the schedule. The Comfort Letter is intended to provide the Volunteer with NYSDEC's agreement on the remediation approach and system design. Having NYSDEC's agreement in principle will allow the Volunteer to spend money on the remediation prior to the end of the public notice period with a reasonable assurance that its implementation as proposed will be approved by NYSDEC, thereby permitting a shortening of the schedule.

Table 7. Schedule

Task	Task Duration	Date Completed / Scheduled
NYSDEC/NYSDOH Approval of IRM WP	--	5/29/2015
Install SVE Recovery Well, Monitoring Points, and Air Injection Well	--	8/8/2015
Conduct SVE Pilot Test & Air Injection Pilot Test (Attempted)	--	10/3/2015
Reinstall Air Injection Well	--	10/16/2015
Conduct SVE Pilot Test & Air Injection Pilot Test	--	11/2/2015
Design SVE (with Air Injection) System	--	11/23/2015
Prepare Design Document	--	11/30/2015
Submit Draft Results of Pilot Test and Draft IRM Design	--	11/30/2015
Receive Comments from NYSDEC on Draft IRM Design	--	1/21/2016
Volunteer & NYSDEC Agree on Proposed Remedial Approach	--	2/10/2016
Submit Revised Draft IRM Design Document	--	3/4/2016
NYSDEC Review of Revised Draft IRM Design Document		3/22/2016
Finalize IRM Design Document		3/29/2016
Preparation of Fact Sheet (NYSDEC)	1 Week	4/5/2016
Translation of Fact Sheet to Spanish (Volunteer)	2 Weeks	4/15/2016
Public Notice of IRM Design (Start)	--	4/18/2016
Receive a Comfort Letter from NYSDEC re: Design Agreement	--	4/29/2016
Public Notice of IRM Design (End)	45 Days	6/2/2016
Compilation of Public Comments & NYSDEC Approval	1 Week	6/10/2016

Task	Task Duration	Date Completed / Scheduled
Contracting / Procurement	4 Weeks ⁹	7/8/2016
System Installation	2 Weeks ¹⁰	7/22/2016
System Start-up & Balancing	1 Week	7/29/2016
Prepare AS/SVE Operations & Maintenance Manual	4 Weeks	8/26/2016

We will notify NYSDEC at least one week prior to installing the system.

⁹ We may be able to reduce the contracting and procurement time, depending upon the availability of the contractor and of the system components, and upon the receipt of the Comfort Letter.

¹⁰ Weather and conditions permitting

8 KEY PROJECT CONTACT LIST

Table 8. Key Contact List

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Keith Brodock, P.E.	Integral Project Manager	(212) 440-6702	kbrodock@integral-corp.com
Zhong Chuang Properties LLC	Volunteer		
James J. Periconi, Esq.	Attorney for Volunteer	(212) 213-5500	jpericoni@periconi.com

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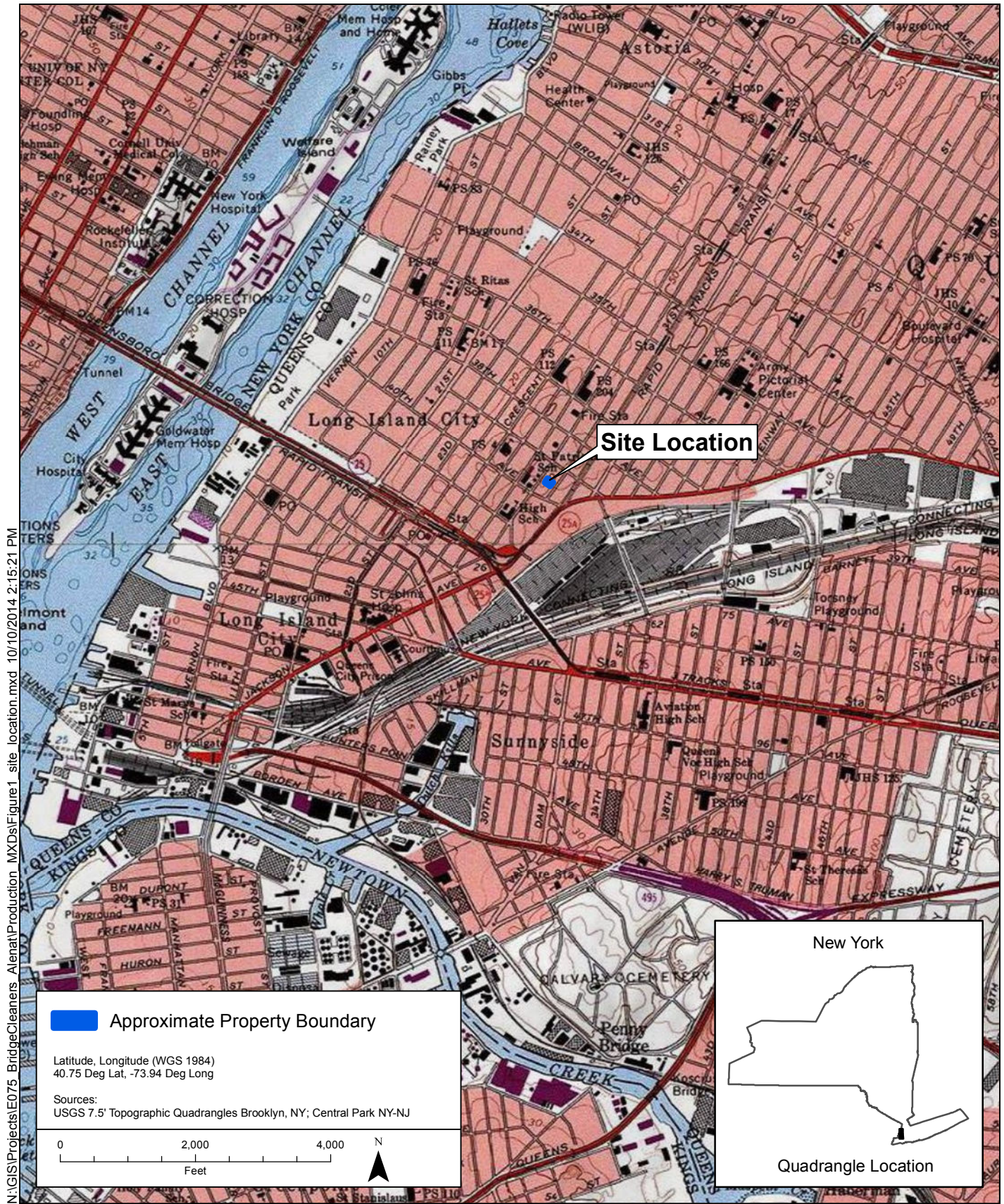
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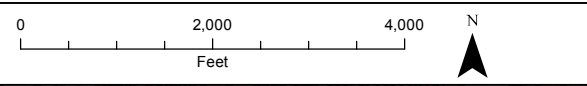
FIGURES



 Approximate Property Boundary

Latitude, Longitude (WGS 1984)
40.75 Deg Lat, -73.94 Deg Long

Sources:
USGS 7.5' Topographic Quadrangles Brooklyn, NY; Central Park NY-NJ



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Figure 1.
Site Location Map
39-26 30th St.
Long Island City, NY

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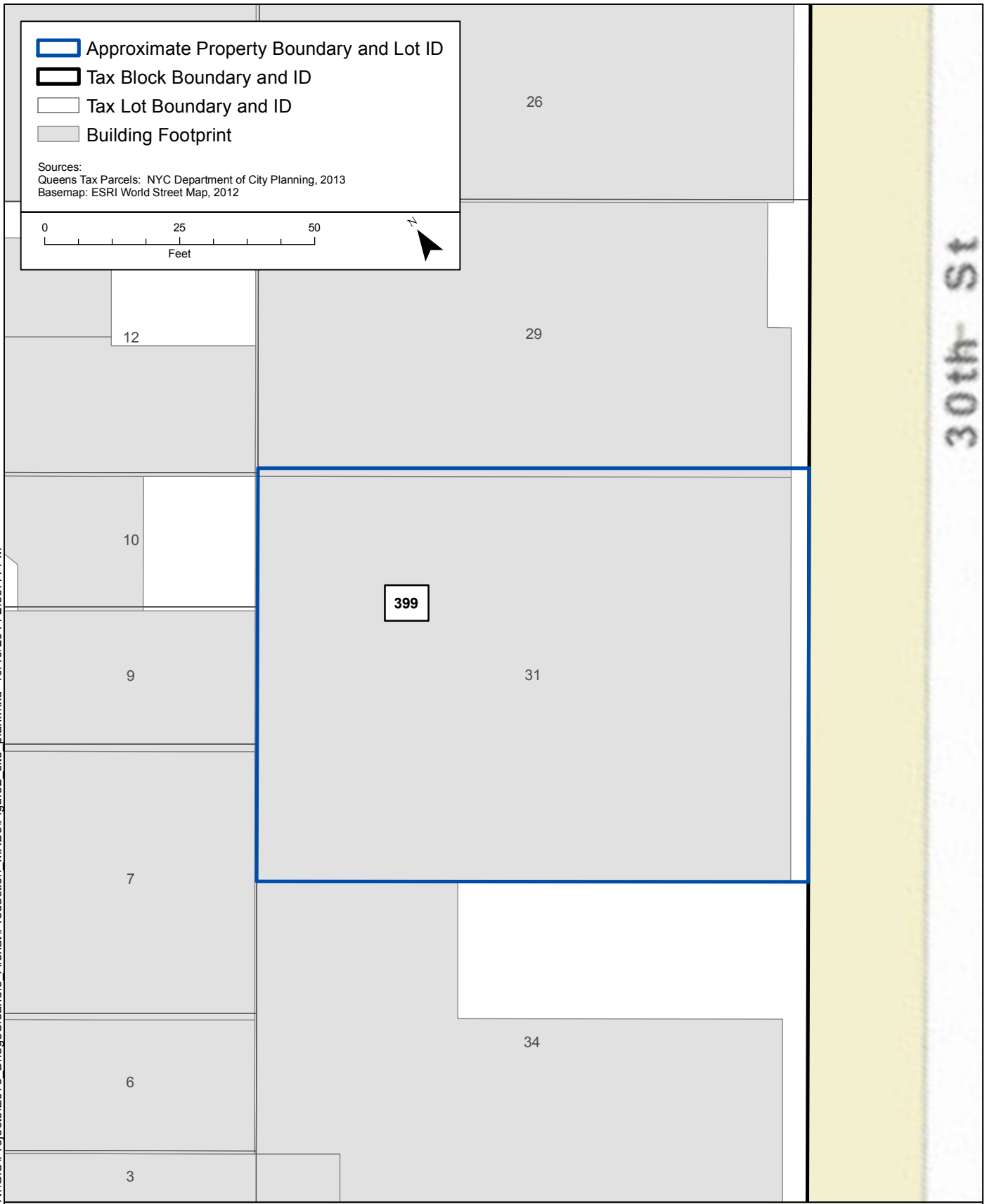
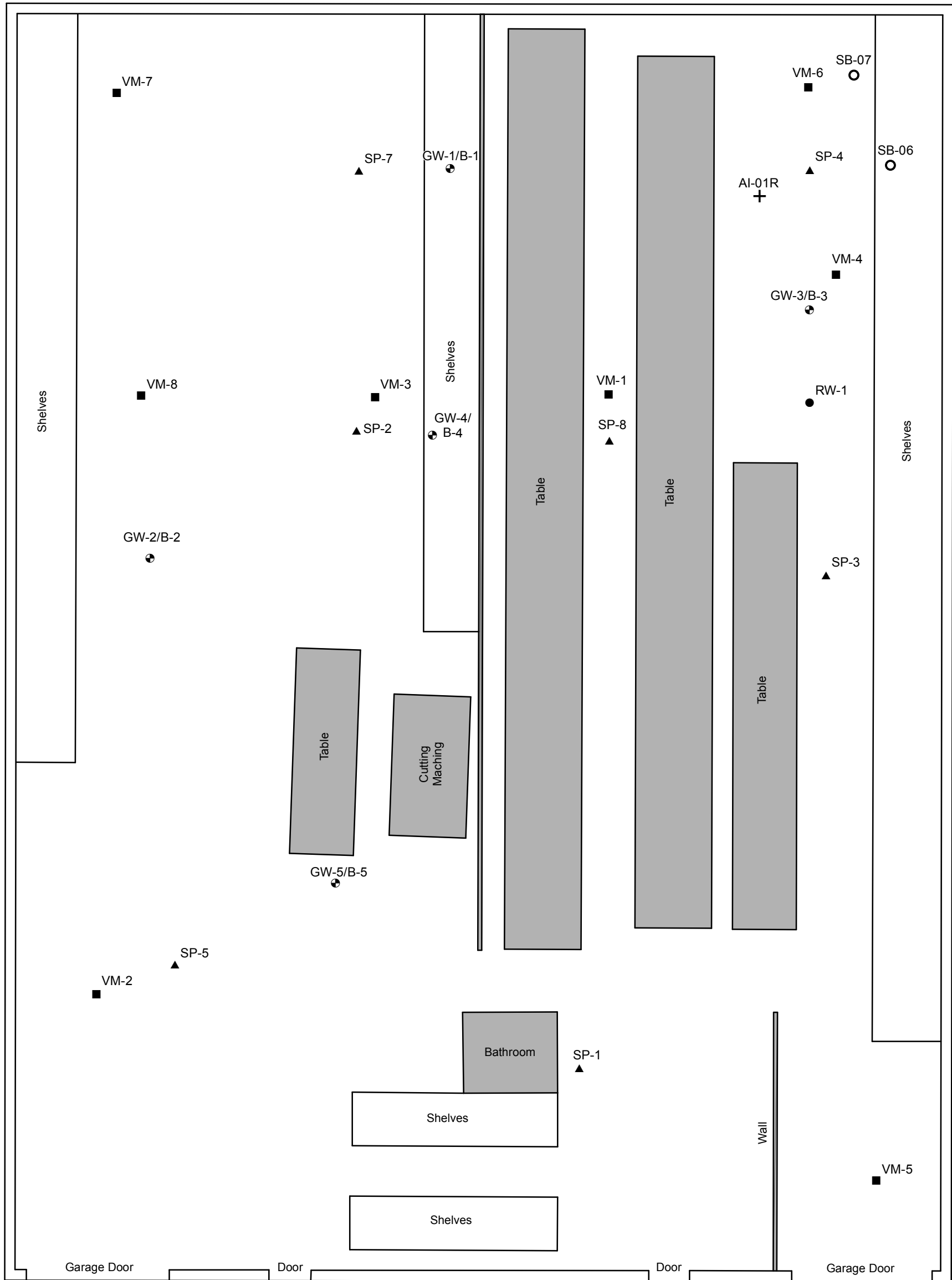


Figure 2.
Site Plan
39-26 30th St
Long Island City, NY



- Vapor Extraction Well
- ⊕ Groundwater Monitoring Well/Soil Boring
- Soil Boring
- + Air Injection Well
- Vacuum Monitoring Point
- ▲ Soil Vapor Point

Basemap Source: Well Elevation Survey, Bridge Cleaners, 39-26 30th Street, Long Island City, New York, Donald R. Stedje, P.L.S., October 30, 2015.

0 5 10
Feet

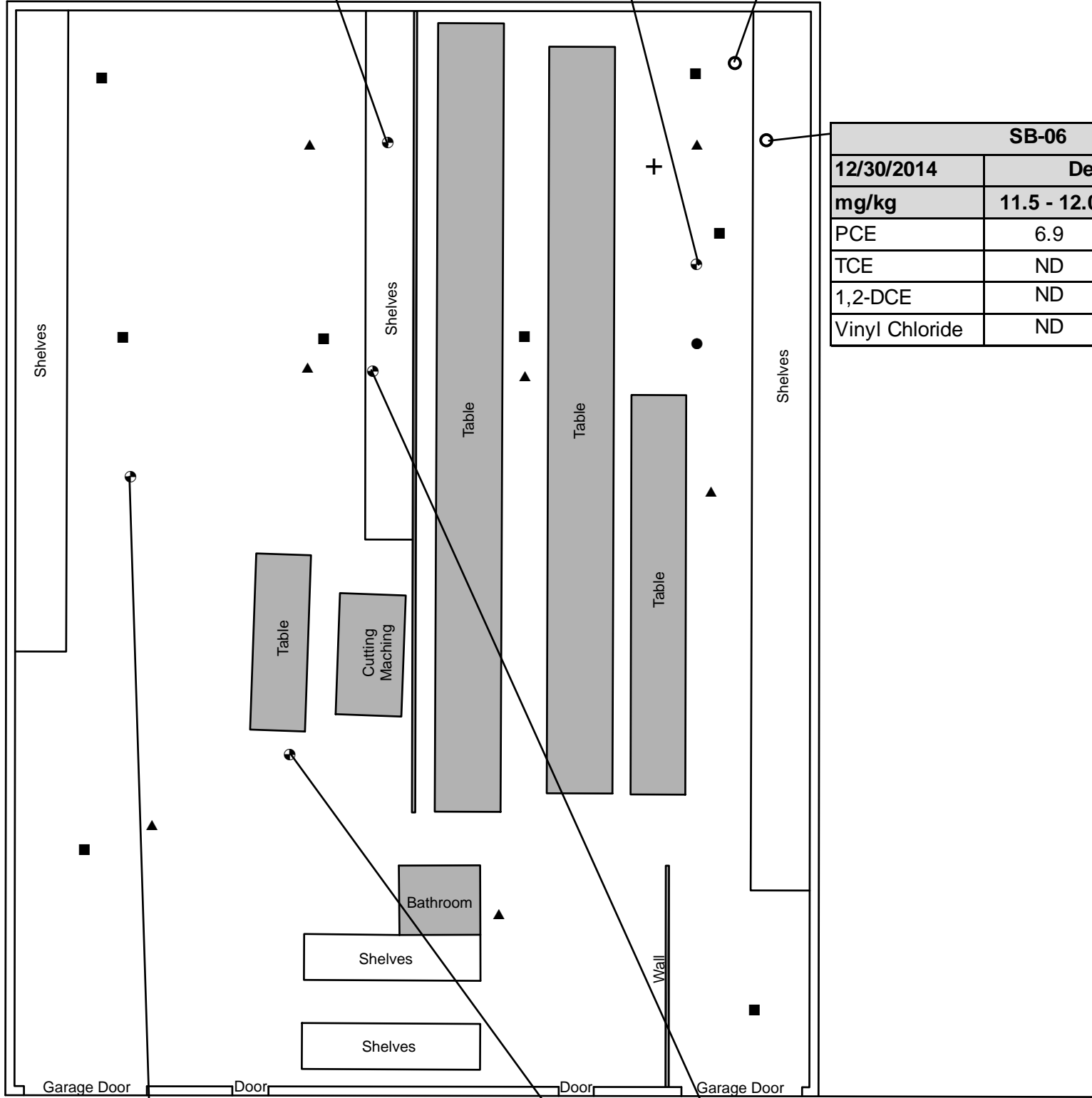
Figure 3.
Site Layout
39-26 30th St
Long Island City, NY

B-3				
1/13/2014	Depth (ft)			
mg/kg	2.5 - 3.0	8.0 - 8.5	13.0 - 13.5	17.5 - 18.0
PCE	0.0086	0.0069	0.0022J	0.0023J

B-1				
1/13/2014	Depth (ft)			
mg/kg	4.5 - 5.0	9.5 - 10.0	14.5 - 15.0	19.5 - 20.0
PCE	0.0033J	0.0037J	0.0039J	0.153
TCE	ND	ND	ND	0.0092J
1,2-DCE	ND	ND	ND	0.0011J

SB-07			
12/30/2014	Depth (ft)		
mg/kg	0 - 4	0-4 (dup)	15.0 - 17.5
PCE	4.8	9.6	1.8
TCE	ND	ND	ND
1,2-DCE	ND	ND	ND
Vinyl Chloride	ND	ND	ND

SB-06		
12/30/2014	Depth (ft)	
mg/kg	11.5 - 12.0	17.5 - 18.5
PCE	6.9	0.087
TCE	ND	ND
1,2-DCE	ND	ND
Vinyl Chloride	ND	ND



B-2				
1/13/2014	Depth (ft)			
mg/kg	3.0 - 3.5	8.0 - 8.5	13.0 - 13.5	19.5 - 20.0
PCE	0.208	0.0058J	0.0035J	0.0013J
TCE	0.0043J	ND	ND	ND

B-4				
1/13/2014	Depth (ft)			
mg/kg	3.0 - 3.5	8.0 - 8.5	13.5 - 14.0	19.5 - 20.0
PCE	0.0033J	0.0124	0.0071J	0.0077

B-5				
1/13/2014	Depth (ft)			
mg/kg	4.5 - 5.0	9.5 - 10.0	13.0 - 13.5	18.5 - 19.0
PCE	0.0085	0.00092J	0.0012J	0.00095J

- Vapor Extraction Well
- ⊕ Groundwater Monitoring Well/Soil Boring
- Soil Boring
- + Air Injection Well
- Vacuum Monitoring Point
- ▲ Soil Vapor Point

Basemap Source: Well Elevation Survey, Bridge Cleaners, 39-26 30th Street, Long Island City, New York, Donald R. Stedje, P.L.S., October 30, 2015.



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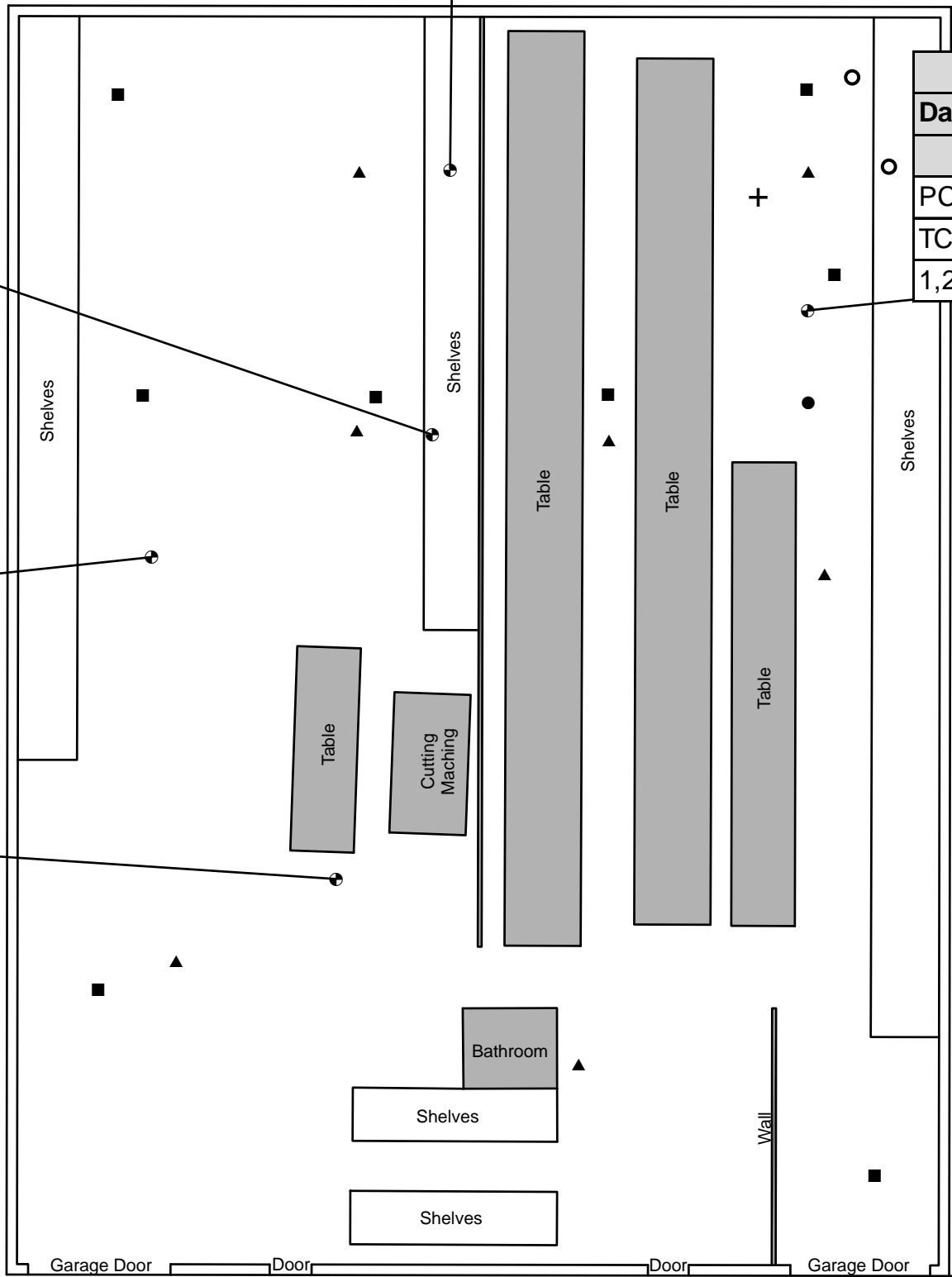
GW-1	
Date	2/8/2014
	µg/L
PCE	280
TCE	5.4
1,2-DCE	0.34J

GW-3	
Date	2/8/2014
	µg/L
PCE	175
TCE	2
1,2-DCE	0.39J

GW-4	
Date	2/8/2014
	µg/L
PCE	254
TCE	2.6
1,2-DCE	1.1

GW-2	
Date	2/8/2014
	µg/L
PCE	165
TCE	2.4
1,2-DCE	0.81J

GW-5	
Date	2/8/2014
	µg/L
PCE	340
TCE	6.9



Sidewalk

●	Vapor Extraction Well
⊙	Groundwater Monitoring Well/Soil Boring
○	Soil Boring
+	Air Injection Well
■	Vacuum Monitoring Point
▲	Soil Vapor Point

Basemap Source: Well Elevation Survey, Bridge Cleaners, 39-26 30th Street, Long Island City, New York, Donald R. Stedje, P.L.S., October 30, 2015.

0 10 20
Feet

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SP-7	
Date	2/8/2014
	µg/m ³
PCE	44000
TCE	575
1,2-DCE	251

SP-8	
Date	2/8/2014
	µg/m ³
PCE	246000
TCE	1930
1,2-DCE	1590

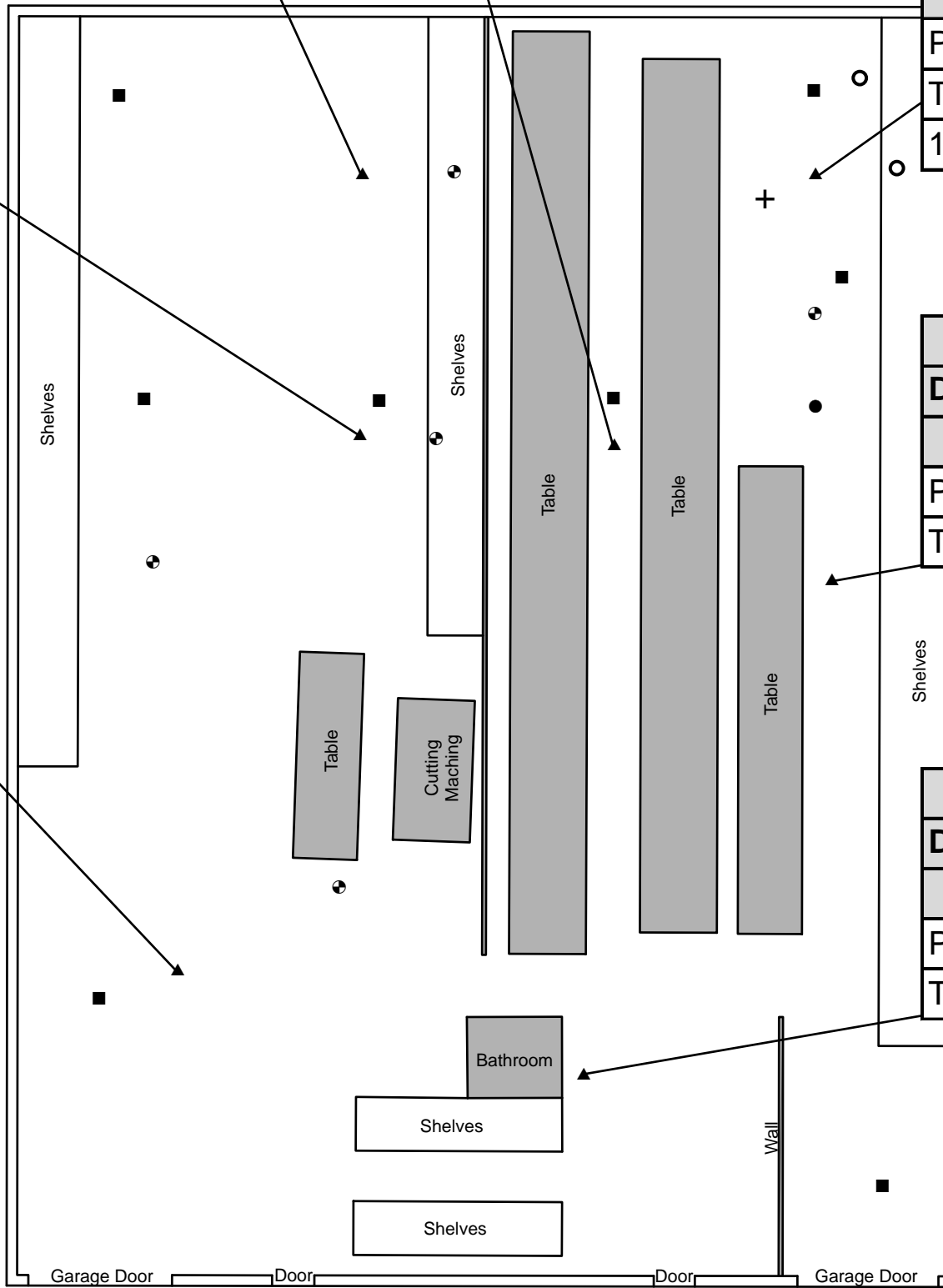
SP-4	
Date	2/8/2014
	µg/m ³
PCE	668000
TCE	2140
1,2-DCE	1330

SP-2	
Date	2/8/2014
	µg/m ³
PCE	30400
TCE	871
1,2-DCE	920

SP-3	
Date	2/8/2014
	µg/m ³
PCE	170000
TCE	554

SP-5	
Date	2/8/2014
	µg/m ³
PCE	21400
TCE	919

SP-1	
Date	2/8/2014
	µg/m ³
PCE	31700
TCE	623



●	Vapor Extraction Well
⊙	Groundwater Monitoring Well/Soil Boring
○	Soil Boring
+	Air Injection Well
■	Vacuum Monitoring Point
▲	Soil Vapor Point

Basemap Source: Well Elevation Survey, Bridge Cleaners, 39-26 30th Street, Long Island City, New York, Donald R. Stedje, P.L.S., October 30, 2015.

PCE = Tetrachloroethene
TCE = Trichloroethene
1,2-DCE = cis-1,2-Dichloroethene (Not detected results not shown)

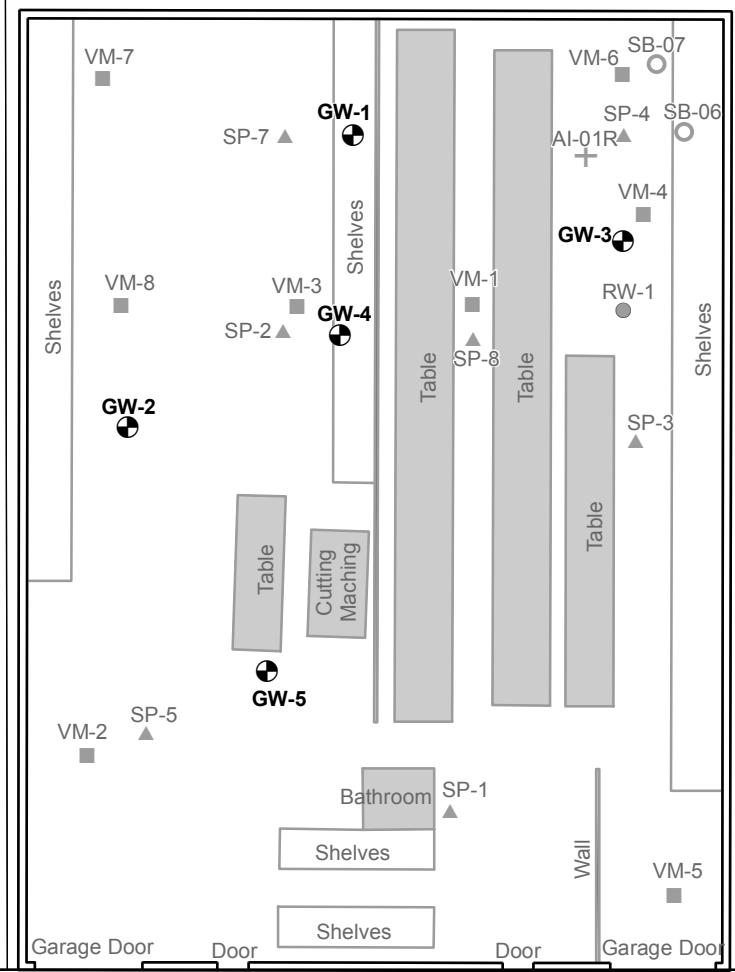
Figure 6.
Soil Vapor Sampling Results
39-26 30th St
Long Island City, NY

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- ⊕ Groundwater Monitoring Well
- Vapor Extraction Well
- Soil Boring
- ⊕ Air Injection Well
- Vacuum Monitoring Point
- ▲ Soil Vapor Point

Basemap Source: Well Elevation Survey, Bridge Cleaners, 39-26 30th Street, Long Island City, New York, Donald R. Stedje, P.L.S., October 30, 2015.

Sidewalk Groundwater Well Source: Site Characterization Report, Bridge Cleaners, 39-26 30th Street, Long Island City, New York, Ecology and Environment Engineering, May 9, 2012.



MW-2
⊕

MW-5
⊕

Sidewalk

MW-1
⊕

Figure 17.
Pre- and Post-Construction Groundwater Sampling Locations
39-26 30th St
Long Island City, NY

APPENDIX A

REMEDIAL INVESTIGATION REPORT

REMEDIAL INVESTIGATION REPORT

**Former Bridge Cleaners Site
NYSDEC Site No. C241127
39-26 30th Street
Long Island City, New York**



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June 2014



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- Appendix N: Groundwater Analytical Reports
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REMEDIAL INVESTIGATION REPORT

**Former Bridge Cleaners Site
NYSDEC Site No. C241127
39-26 30th Street
Long Island City, New York**

Engineering Certification:

I, Daniel J. Smith, P.E. certify that I am currently a New York State registered Professional Engineer and Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Remedial Investigation Report was prepared in general accordance with applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and agreements between NYSDEC and the Volunteer under the applicable Brownfield Cleanup Agreement.

Daniel J. Smith, P.E.
NYS PE License No. 073173



TechSolutions Engineering, P.C



REMEDIAL INVESTIGATION REPORT

Former Bridge Cleaners Site NYSDEC Site No. C241127 39-26 30th Street Long Island City, New York

EXECUTIVE SUMMARY

A Remedial Investigation (RI) was completed at the Former Bridge Cleaners Site located at 39-26 30th Street in Long Island City, Queens, New York (the "Subject Property" or "Site"). The Subject Property is in the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) and is identified as Site No. C241127.

The scope of work completed for the RI included the following:

- Installation of five (5) soil borings and collection of soil samples at depths from grade to the water table which was encountered at approximately 20 feet below grade surface (bgs). Twenty-three (23) soil samples were collected in total;
- The five (5) soil borings were converted to monitoring wells for collection of groundwater quality samples. After installation, the groundwater monitoring wells were surveyed by a New York State Licensed Surveyor and a round of water levels were collected to determine the site-specific potentiometric surface and inferred groundwater flow direction. It was determined that groundwater flows from north to south across the Subject property.
- Seven (7) sub-slab soil vapor probes were installed through the indoor floor slab and four (4) indoor air quality (IAQ) sample locations were also sampled. The four IAQ sample locations were collocated with four of the seven sub-slab vapor probes. Sub-slab soil vapor data and IAQ sample data were used to complete a Soil Vapor Intrusion (SVI) investigation consistent with New York State Department of Health (NYSDOH) guidance.
- In addition to the sampling of soil, groundwater and vapor media, a review of historical environmental studies on-Site and at adjacent properties in the area was also completed. The review of historical reports, as well as regional environmental quality data summarized by EDR, confirmed that there are regional, chlorinated volatile organic compound (VOCs) impacts to groundwater. A monitoring well installed directly adjacent and partially upgradient to the Subject Property (i.e., GW-1 installed by Preferred Environmental at 39-27 29th Street) historically contained 910 µg/l tetrachloroethene (PCE). PCE concentrations as high as 11,000 parts per billion (ppb) in groundwater were reported at upgradient sites less than ½ mile away by EDR.



The following results were obtained based upon the investigation completed:

- There are no significant impacts to on-Site soils for VOCs, SVOCs, metals, pesticides or PCBs based upon the 23 soil samples collected. The vast majority of parameters analyzed for were not detected in samples and for those parameters that were detected, all sample results indicated concentrations well below NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCOs). Based upon the soil data obtained, no further action for soil is recommended.
- Two contaminants were detected in on-Site groundwater at concentrations exceeding their respective Class GA Groundwater Quality Standard: PCE and TCE. The maximum concentration of PCE was detected in GW-5 (downgradient) at 340 µg/l. However, similar concentrations were also detected on-Site, upgradient at GW-1 and GW-3 (280 µg/l and 175 µg/l, respectively). Importantly, all concentrations of PCE detected on-Site were well below the reported concentration of 910 µg/l of PCE detected immediately upgradient/cross gradient on the adjacent 39-27 29th Street site. TCE was detected at a maximum concentration of 6.9 µg/l in GW-5 (downgradient) but also detected upgradient in GW-1 at 5.4 µg/l. Both detections are only slightly above the Class GA Groundwater Quality Standard of 5 µg/l for TCE.
- Based upon the confirmed presence of chlorinated VOC concentrations upgradient of the Subject property that are higher than any chlorinated VOC concentrations detected on-Site, and the fact that chlorinated VOCs were not detected in any of the 23 soil samples at concentrations exceeding NYSDEC UUSCOs, the Subject Property is not considered the source of PCE in the area.
- No SVOCs or PCBs were detected in groundwater at concentrations exceeding their respective Class GA Groundwater Quality Standards. Of the pesticides analyzed, only Dieldrin was detected above its Class GA Groundwater Quality Standard of 0.004 µg/l with a concentration of 0.018 µg/l in GW-5. Dieldrin was non-detectable in all other samples (both soil and groundwater) and was not known to be used on-Site. It was however, detected in soils at the upgradient 39-27 29th Street site making it likely that the source of Dieldrin is upgradient of the Subject Property.
- Several metals were detected in groundwater at concentrations exceeding their respective Class GA Groundwater Quality Standards. However, wells could not be developed to less than 50 NTU turbidity and all metal samples were unfiltered. Many of the metals detected on-Site in groundwater were also detected in upgradient, off-Site wells in studies by others and are not uncommon in highly urbanized areas.
- Elevated sub-slab vapor concentrations of PCE and TCE resulting in a NYSDOH guidance recommendation to “mitigate” were noted in all seven (7) sub-slab vapor probe locations. c12DCE sub-slab soil vapor concentrations were noted in two locations to the degree that NYSDOH matrix recommendations indicated a mitigation recommendation. The highest concentrations of PCE and TCE in sub-slab vapors were noted at SP-4 (near the northwest corner of the building) with 668,000 µg/m³ of PCE and 2,140 µg/m³ of TCE detected. The highest concentration of c12DCE was noted at SP-6 (1,590 µg/m³). PCE and TCE are both



considered to be present in groundwater regionally at concentrations higher than those detected anywhere on the Subject property and PCE and TCE were also both absent in all soil samples on-Site at concentrations above UUSCOs. Therefore, it is probable that the sub-slab vapor concentrations noted may be the result of contaminants which have migrated under the subject property from off-Site.

- Indoor air quality samples were collected from four locations that were collocated with SP-1 through SP-4. Elevated concentrations of PCE were noted in all four IAQ samples with the maximum concentration detected at SP-4/IAQ-4 (279 $\mu\text{g}/\text{m}^3$).



REMEDIAL INVESTIGATION REPORT

**Former Bridge Cleaners Site
NYSDEC Site No. C241127
39-26 30th Street
Long Island City, New York**

1.0 INTRODUCTION AND BACKGROUND INFORMATION

Due to a concern about potential tetrachloroethene (PCE) in all media at and under the property and raised concerns about possible impacts on those working there, the current owner of the industrial property located at 39-20 30th Street, Long Island City, Queens, New York made application to the New York State Department of Environmental Conservation (NYSDEC) to enter into the Brownfield Cleanup Program (“BCP” or “Program”). On or about May 17, 2013, the Site was accepted into the BCP as Site No. C241127. The applicant, Zhong Chuang Properties LLC, is participating in the BCP as a Volunteer as defined in New York Environmental Conservation Law (ECL) 27-1405(1)(b).

Under the BCP, the Volunteer has agreed to undertake certain environmental actions, including the development of this Remedial Investigation (RI) Report as outlined herein. Based upon discussions between the Volunteer and NYSDEC, the RI scope of work included on-Site soil and groundwater sampling and a Soil Vapor Intrusion (SVI) investigation. The scope of work summarized in this RI Report was completed in general conformance with the RI Work Plan approved by NYSDEC and dated October 2013.

1.1 Site Location and Description

The subject property is located between 39th Avenue and 40th Avenue, in Long Island City, New York (hereinafter the “Site,” the “Bridge Cleaners Site,” or “Subject Property”). The site is designated as Tax map ID No. 4-399-31 (see **Appendix A**) and is located in an urban area of Queens County consisting of a mix of industrial commercial and residential structures (see **Figure 1**). The site includes a 7,500 square foot one-story concrete building that occupies the entire lot. The back (north-northwest side) of the lot abuts adjacent buildings and a small driveway is located immediately to the west of the site building (see **Figure 2**). The building has no basement. The building is currently occupied by a wholesale fabric warehouse with operations limited to receipt and shipping of fabric rolls, fabric storage prior to distribution and customized fabric cutting and trimming to meet order requirements. As indicated in **Figure 2**, current operations areas limited access to some portions of the building interior.



The section of Long Island City containing the Site is zoned Special Purpose District which allows mixed residential and commercial use. The specific designation for the Site is M1-3/R7X. Buildings within the city block are primarily commercial. There are residential units including a three-story apartment building along 29th Street. The downgradient block also contains a limited number of residential buildings.

The Subject Property is a City of New York E designated site (E-218 Hazmat) and within a New York State Environmental Zone (EN Zone) due to the presence of hazardous materials regionally. **Appendix B** includes a summary of environmental sites of interest within the region surrounding the subject property. As noted in the appendix, there are numerous petroleum bulk storage sites and E-Designated sites in all directions surrounding the property confirming the presence of adverse, regional environmental concerns.

1.2 Site History and Ownership

Based upon review of the New York City (NYC) Department of Finance, Office of the City Register Database, the earliest document for the property on file is a mortgage dated April 19, 1967, between Alenat Corp. and North Side Savings Bank¹ (see Appendix A for the NYC Parcel identifier Deed summary report). Bridge Cleaners is first identified in the deed records in 2004 as Queens Bridge Cleaners, Inc. along with an entity named Jetomi Cleaners, Inc. (Jetomi). The Volunteer, Zhong Chaung Properties, LLC, is first identified in the deed recorded March 28, 2012.

Between 1967 and 2004 there are no named entities in the deed database that imply the types of operations ongoing at the property during that time period (i.e., just generic names and the lending institutions are identified). Based upon information provided by Sustainable Development, Inc. (SDI), it is believed that the property was constructed in the 1950s and the property was reportedly used for warehousing and distribution until 1988. From 1988 to 1994, the property was reportedly occupied by LSL Hydro and was used for water bottling and distribution. From 1994 to 1995, Main Trading Company occupied the site and used the property for fabric cutting and sewing. From 1995 to 1997, the site was occupied by Aersonic Company and was used as a courier service.

The site was occupied by a commercial laundry and dry cleaner starting in approximately 1997. The dry cleaning operations reportedly continued until May 2011. Historic dry cleaning operations were performed under the names of Bridge Cleaners, Jetomi Cleaners, Park Cleaners, Queens Bridge Cleaners and Queens Bridge Yang Cleaners.

¹ Note: This was incorrectly stated as 1992 in the RI Work Plan. The data herein supersede work plan information re: tax maps and deeds.



1.3 Regional Issues

The Site is a City of New York E-designated site (E-218 Hazmat) and within a New York State Environmental Zone (EN Zone) due to the presence of hazardous materials regionally. **Appendix B** includes a summary of environmental sites of interest within the region surrounding the subject property. As noted in the appendix, there are numerous petroleum bulk storage sites and E-Designated sites in all directions surrounding the property confirming the presence of adverse, regional environmental concerns.

Additional information provided to TechSolutions by SDI indicates that the neighboring property (39-27 29th Street) was at one time a greeting card manufacturer. Greeting card and similar printing operations often utilize various solvents (including chlorinated solvents) to degrease and clean the printing equipment and therefore it is possible that operations of adjacent properties have adversely impacted the subsurface of the subject property. Historic sampling at the 39-27 29th Street site which is located upgradient / cross gradient of the subject property has indicated tetrachloroethene (PCE) concentrations as high as 910 µg/l in 2009 which, as will be discussed later in the text, is higher than any PCE concentrations detected in groundwater samples from monitoring wells installed on the Subject Property during this RI. Further, there are a number of historical dry cleaning operations with confirmed groundwater quality concerns located in both upgradient and cross-gradient locations from the subject site. Additional information regarding regional areas of concern and the impacts upon the Subject Property are discussed in **Section 4.3.2** and **Section 5**.

1.4 Previous Investigations and Environmental Studies

There are reportedly three (3) historic environmental investigations / studies that were completed at or in the vicinity of the site prior to this RI:

- Soil and Groundwater Sampling Program, Long Island Analytical Laboratories (LIAL), September 2011;
- Groundwater Investigation Report, E&E Engineering (E&E), February 2012; and,
- Site Characterization Report, E&E Engineering, May 2012. Please note that this report was completed for the NYSDEC. A copy of the Site Characterization Report, including tables summarizing analytical data and figures showing historic sample locations, is provided in **Appendix A**

In addition, the following assessments were conducted for an adjacent property located at 39-27 29th Street:

- Phase I Environmental Site Assessment, E&E, 2007; and,



- Phase II Environmental Site Assessment, Preferred Environmental, Inc. (Preferred), 2010.

The results of the historic environmental investigations are provided in the following sections.

1.4.1 Long Island Analytical Investigation (September 2011)

A soil and groundwater sampling program was completed at the Subject Property by Long Island Analytical Laboratories (LIAL) in September 2011. Five soil borings were installed within the site building, with three of those borings completed as monitoring wells. The depth to groundwater at the Subject Property was observed to be approximately 22 feet below ground surface (bgs). Soil and groundwater samples were collected and analyzed for the presence of volatile organic hydrocarbons. The results of the soil sampling indicated minor detections of PCE at all five locations, though no results exceeded applicable regulatory criteria.

The results of the groundwater sampling indicated regulatory exceedances at all three locations:

Parameter	NYSDEC Class GA Groundwater Quality Standard (µg/l)	GW-1 (µg/l)	GW-2 (µg/l)	GW-3 (µg/l)
Tetrachloroethene	5	1,470	537	841
Trichloroethene	5	12.5	<5	11
sec/tert-butylbenzene	5	<5	<5	19.52
1,2,4-trimethylbenzene	5	<5	<5	13.9
4-isobutylbenzene	5	<5	<5	6.45
1,4 diethylbenzene	5	<5	<5	35.9
1,2,4,5-tetramethylbenzene	5	<5	<5	11.2

LIAL concluded that due to the fact that no significant levels of PCE were identified in site soils, it appeared that groundwater impacts at the site were attributable to an off-site/upgradient source.

A copy of the LIAL report is provided in **Appendix C**.

1.4.2 E&E Groundwater Investigation (February 2012)

In February 2012, E&E installed five (5) monitoring wells in the vicinity of the Site as part of a study of the block area surrounding the Bridge Cleaners site. Groundwater samples



were then collected from all five monitoring wells. However, none of the wells installed by E&E were installed directly upgradient of the Subject Property making interpretation of sample results difficult without an understanding of possible upgradient contamination which has been reported in the region (see **Section 4.3.2** discussion). See **Appendix D** for data summary tables and a figure showing historic sample locations in relation to the E&E investigation.

1.4.3 Adjacent Off-Site Investigations (Preferred Phase II)

The following information is provided based upon a summary of prior investigations that was included in the May 2012 Site Characterization Report completed by E&E. The E&E study included the area surrounding the Bridge Cleaners Site (i.e., including an off-site but adjacent property located at 39-27 29th Street). Although the studies discussed below were both conducted for the property at the rear of and adjacent to the Bridge Cleaners Site, the sites are in very close proximity to the subject property immediately along the property line, and therefore provide relevant information regarding the Site. A copy of the Site Characterization Report, including tables summarizing analytical data and figures showing historic sample locations, is provided in **Appendix D**. Note that full copies of all the reports referenced by E&E in that report have not been made available to TechSolutions for review, and therefore the information provided in this section is based solely upon the information available in the E&E Site Characterization Report.

The 2010 Phase II ESA completed by Preferred (Preferred Phase II) on the adjacent, 39-27 29th Street site reportedly included the following scope of work:

- Collection of six soil samples from four soil borings;
- Collection of two groundwater samples from temporary wells installed at two of the four soil borings; and,
- Collection of four soil vapor samples from below the basement and first floor of the adjacent building.

The soil and groundwater samples were submitted for volatile organic compound (VOC), semi-volatile organic compound (SVOC), pesticides, polychlorinated biphenyl compounds (PCBs), Target Analyte List (TAL) metals and mercury analysis. Soil vapor samples were only submitted for VOCs analysis.

Based upon the data summary of the Preferred Phase II included in the E&E Site Characterization Report, the following conclusions were noted:

Soil results at 39-27 29th Street (Preferred Phase II, 2010):

- No PCBs were detected in any of the soil samples;



- Only one soil sample, SB-4, collected from 0 to 2 feet below grade surface (bgs) on the west portion of the adjacent site, revealed VOCs and SVOCs above method detection limits. However, concentrations of these compounds were well below Unrestricted Use SCOs;
- Low levels of various TAL metals were detected in all six soil samples at the adjacent site. All results were well below Unrestricted Use SCOs;
- The pesticide Aldrin was reported in two soil samples, one of which slightly exceeded the Restricted-Residential SCO of 97 µg/kg. The pesticide Dieldrin was also reported in two soil samples, both exceeding the Residential SCO of 39 µg/kg but below the Restricted-Residential SCO of 200 µg/kg. It is important to note that Dieldrin was detected in groundwater underlying the Subject Property which is downgradient / cross gradient of the soil detections at the 39-27 29th Street site (see **Section 5.2.4**). No detections of Dieldrin were noted in soil at the Subject property making it very likely that the 39-27 29th Street site is the probably source of Dieldrin in groundwater;

Groundwater results at 39-27 29th Street (Preferred Phase II, 2010):

- No SVOCs or PCBs were reported in either of the two groundwater samples;
- Both groundwater samples collected at 39-27 29th Street exceeded the NYSDEC Class GA Ambient Water Quality Standard of 5 µg/L for PCE with 910 µg/L of PCE detected in sample GW-1 (the eastern portion of the property closest to the Bridge Cleaners Site) and 120 µg/L detected in sample GW-2 (the western portion of the property farther away from Bridge Cleaners). Importantly, the GW-1 sample with 910 µg/l of PCE detected is directly upgradient of the rear corner of the Subject Property and as will be discussed later in this report in **Section 5.2.1**, 910 µg/l is higher than any PCE detections on the Subject Property during this RI making it likely that an upgradient source of PCE exists in groundwater.
- Elevated iron, magnesium, manganese, and sodium were reported in total metals analysis; however, only sodium and magnesium were reported in the dissolved metals analysis.

Soil vapor results at adjacent property (Preferred Phase II, 2010):

- Both PCE and TCE were detected in all four soil vapor samples collected from 6 feet below grade in the cellar and first floor at the adjacent site.
- PCE was detected above the NYSDOH Air Guidance Value of 100 µg/m³, in two of the samples, at 400 µg/m³ in one sample and at 16,900 µg/m³ in another.

Given that the full report indicating the methods and results of the Preferred Phase II ESA are not available, the results summary indicated above should be considered cautiously. However, the data imply that a significant source of PCE in groundwater upgradient of the Subject Property exists.



2.0 PHYSICAL SITE SETTING

This section of the RI Report identifies the physical Site setting, including surface characteristics, geology, and hydrogeology and how the physical Site characteristics relate to the environmental sampling program results discussed later in this report.

2.1 Site Topography

A Site topography map is provided in **Figure 3** (Source: NYC ARCGIS Database, 2013 Central Park Quad). As indicated in the figure, the Site surface topography is essentially flat as the Site was graded for construction of a building that occupies the entire parcel. The surface elevation only varies slightly with a gentle slope from a high of approximately 39 feet above mean sea level (msl) at the northeast corner of the parcel to approximately 37 feet above msl further to the southwest along 30th Street. The Site coordinates (longitude / latitude) are approximately 40° 45' 09.0"N, 73° 56' 4.5"W (Source: Google Earth).

Since the building covers the entire Site, the grade surface consists entirely of the concrete finished floor of the structure which has been graded flat.

2.2 Surface Water Bodies

There are no surface water bodies on the Subject Property or the immediately adjacent properties. The nearest surface water body is the East River which is located approximately 0.85 miles northwest of the Site. There are no known floor drains or stormwater drains on the subject property and the building occupies the entire Site (i.e., the property is essentially fully walled on all sides) eliminating any plausible runoff scenario from the Site. Therefore, environmental conditions at the Site will not adversely impact any surface water bodies in the area.

2.3 Site Utilities and Water Supply

Water at the Site is supplied by NYCDEP. There are no private wells used for any purpose on the Subject Property. Electricity is provided by Consolidated Edison. The building is heated by natural gas supplied by National Grid. There are no known underground storage tanks (USTs) or above ground storage tanks (ASTs) at the Site.

2.4 Geology and Soil Conditions

The following sections describe the regional and local geologic conditions based upon review of publicly available information and Site specific soil borings.



2.4.1 Regional Geology

At the regional level, the subsurface geological units of Queens County consist of sequences of unconsolidated sediments of Late Cretaceous and Pleistocene pre-Sangamon and Sangamon ages. The unconsolidated sediments are underlain by crystalline bedrock of Precambrian age and overlain mostly by glacial upper Pleistocene deposits of Wisconsinian age but also to a lesser extent by Holocene deposits (Soren, USGS, 1978). From grade to bedrock, the primary geologic units in the region are artificial fill / surficial deposits, upper Pleistocene deposits, Gardiners Clay (where present), Jameco Gravel (not be present in the vicinity of the Site), Monmouth Group and Magothy Formation, and the Raritan Formation.

Natural surficial glacial deposits in Queens County consist mostly of ground moraine in the northern part of Queens County near the Subject Property and outwash in the southern portions of the county. However, artificial fill has been used in many places to extend and reinforce shorelines and to fill swampy areas in preparation for development. The surficial deposits are underlain by the upper Pleistocene deposits which range in thickness from 0 to 300 feet and are primarily composed of glacial drift material such as till, lacustrine deposits and outwash sand and gravel (Soren, USGS, 1978). Regionally, the upper Pleistocene deposits are unconformably underlain by the Gardiners Clay which is located in primarily the central and southern parts of Queens County. The Gardiners Clay consists of mostly grayish green and less commonly dark gray clay intercalated with sand and gravelly beds. The thickness of the Gardiners Clay varies widely and is absent in some sections of Queens County (i.e., Glendale, Woodhaven, Ozone Park areas) but generally ranges to a maximum of 150 feet thick. Importantly, the Gardiners Clay serves to confine water in the underlying Jameco Gravel regionally where present and Magothy-Matawan Formation (Soren, USGS, 1978) in much of the region.

The Jameco Gravel is believed to have been deposited by streams in Queens County and unconformably underlies the Gardiners Clay where present. The Jameco deposits are mostly coarse sand and granule to cobble gravel with boulders having been reported by some drillers. The thickness of the Jameco Gravel ranges from 0 to 250 feet regionally; however, it is generally absent in the vicinity of the Subject Property which is located north of the most-widely accepted extent of the Jameco Gravel (see **Appendix E** for additional regional geologic and hydrogeologic information).

Underlying the Jameco Gravel (where present) is the Monmouth Group and the Magothy-Matawan Formation which ranges from 0 to 450 feet thick in Queens County. Magothy-Matawan strata may be missing in northern and northwestern Queens County and is typically present between 0 and 200 feet in thickness near the Subject Property. The Raritan Formation underlies the Magothy-Matawan formation where present and consists



of a clay and sand member. Bedrock is typically not encountered to a depth of between 100 and 200 feet in the vicinity of the Subject property.

Additional regional geology and hydrogeology information, maps and cross-sections are provided in **Appendix E**.

2.4.2 Site Specific Geology and Soil Characteristics

Site-specific information regarding local geology and soil conditions was obtained as part of the soil boring program completed. A total of five (5) soil borings were completed to determine local soil conditions and to collect representative soil samples. Soil boring locations are indicated in **Figure 4**.

Soil Boring B-1 was drilled to a total depth of 30 feet below grade surface (bgs) for future well installation and is representative of soil conditions at the rear of the building near the northwest corner of the parcel. From grade to approximately 1.25 feet below grade, conditions consisted of cinders with some gravel. This is likely representative of the base course below the existing floor slab. From 1.25 to 7 feet bgs medium light brown sands were noted with finer light brown sands noted from 7 to 17 feet bgs and fine brown sands again noted from 17 to 20 feet bgs. Medium brown sands were noted from 20 to 25 feet bgs. Water / wet sands were encountered at approximately 20 feet bgs. No odors were noted during drilling of this boring. Elevated photoionization detector (PID) screening readings for volatile organic compounds (VOCs) were absent except at the water table where a maximum PID reading of 40 part per million equivalence units (in reference to the calibration gas) were noted. The absence of any odors in soils above the water table and no elevated PID readings until the water table was encountered is consistent with the absence of VOC impacts in soil and possible groundwater impacts from another location.

Boring B-2 was installed along the south-southwest wall to a total depth of 30 feet bgs (for future well installation), and is representative of soil conditions along the south-southwest portion of the parcel. Cinders and some gravel were noted from grade to 1.5 feet bgs underlain by dark brown silty loam with some gravel to 2 feet bgs. A reddish brown silty sand was evident from 3 to 4 feet bgs followed by a mix of light brown fine sand and brown medium sands from 4 to 20 feet bgs similar to conditions at B-1. Wet / moist soils were encountered at approximately 20 feet bgs and gray fine silty sand was noted at 20 to 25 feet bgs. No odors were present at any depth during drilling and sampling. PID readings slightly above background were noted starting at approximately 10 feet bgs and extending to the termination of the boring where the highest PID readings of 43 to 47 ppm equivalence units were noted in the saturated soils between 20 and 25 feet bgs. The trend of PID readings and the absence of any elevated PID



readings immediately below the slab are again indicative of a possible non-local groundwater impact.

Boring B-3 was located near the northeast corner of the parcel and is considered representative of soils in this portion of the Site. The boring was extended to a total depth of 30 feet in preparation for future monitoring well installation but logging was completed to 25 feet bgs. Silty sand and gravel were noted from 0.5 to 1 foot bgs below the concrete slab. The remainder of the boring from 0.5 to 25 feet bgs consisted of a mixture of brown and light brown fine sands with some medium sands noted between 1 and 5.5 feet bgs. Moist / wet soils were encountered at approximately 18 feet bgs. PID readings slightly above background (maximum of 25 ppm equivalence units at 13 feet bgs) were noted from grade to approximately the water table in this area. The highest PID screening readings were noted near the top of the water table at approximately 15 to 18 feet bgs (maximum PID reading of 53 ppm equivalence units noted at approximately 17 feet bgs). No odors were noted in any of the samples screened.

Boring B-4 was located near the center of the parcel and extended to 30 feet bgs in preparation for well installation. Logging was documented to 25 feet bgs. Cinders and some gravel were noted to 1.5 feet bgs followed by a mixture of fine and medium light brown and brown sands to 25 feet below grade similar to other borings at the Site. Moist / wet soils were encountered at approximately 20 feet bgs where the highest PID readings were also noted (53 ppm equivalence units at 20 feet bgs). Low PID readings (typically below 5 ppm equivalence units) were present in the shallow unsaturated zone soils with a generally increasing trend as the depth approached the water table consistent with a water source of possible VOCs rather than a soil source at this location.

Boring B-5 was located at the center / southeast portion of the property and was also completed to a depth of 30 feet bgs for future well installation. Unlike the other soil borings, the geology in this location was more varied with some clay being encountered between 6 and 9.5 feet bgs. Dark brown sand with gravel was noted from 1 to 1.5 feet bgs underlain by brown silty sands at 1.5 to 3.5 feet bgs. A light brown medium sand with some gravel was present from 3.5 to 6 feet bgs followed by the brown silty clay noted above. From 9.5 to termination of the boring, a light brown fine sand was noted consistent with other Site soil borings. As with all other borings, the highest PID screening results were noted at the water table (approximately 19 feet bgs at B-5), where a maximum reading of 24.9 ppm equivalence units was detected. Although not significantly elevated, PID readings above background were also noted from grade to the top of the water table in B-5.



2.5 Regional and Local Hydrogeology

The following is an overview of regional and local hydrogeologic conditions. Additional information is provided in **Appendix E** regarding regional hydrogeology. Groundwater characterization is discussed later in this report.

2.5.1 Regional Hydrogeology

A conceptualized cross-section of the Brooklyn and queens aquifer system is provided in **Figure 5**. As indicated in **Figure 5**, the regional aquifer system in the general vicinity of the Site includes the following system from shallow to deep: the upper glacial aquifer which is underlain by the Magothy Aquifer. The Raritan clay unit then separates the Magothy Aquifer from the underlying Lloyd Aquifer which overlies bedrock. A summary of the major geologic and corresponding hydrogeologic units for the region of is provided in **Table 1**.

The upper glacial aquifer is regionally present at approximately 10 to 20 feet above mean sea level in the region of the Subject Property with the depth to groundwater dependent upon local topography. The depth at which groundwater was encountered below grade at the Site (approximately 20 feet bgs) is typical of the area. Regionally, groundwater flow is toward the south-southwest in the vicinity of the Subject Property but may vary significantly locally.

2.5.2 Local Hydrogeology

Local groundwater elevation levels vary from 11.04 above mean sea level (msl) to 10.01 above msl in the vicinity of the Site based upon the NYSDEC site remediation database. Depth to groundwater at the Site ranges from approximately 16 to 28 feet bgs based upon data provided by others and was confirmed to be approximately 20 to 21 feet bgs based upon gauging completed as part of this RI (see **Table 2**).

Monitoring well locations and installation information are indicated in **Figure 6** and **Table 2**, respectively. A potentiometric surface map based upon well gauging completed on February 8, 2014, is presented in **Figure 7**. As indicated in Figure 6, the implied groundwater flow direction based upon the potentiometric surface map is toward the south.

2.6 Fish and Wildlife in Region

The Subject Property and the entire surrounding neighborhood is highly industrialized within an inner-city, urban setting. Fish and wildlife, other than urban animals (i.e., pigeons and possible stray domestic animals, etc.) are not considered sensitive receptors



or a significant concern with respect to adverse impacts from environmental conditions at the Subject Property.



3.0 REMEDIAL ACTION OBJECTIVES

This section of the RI Report summarizes the Remedial Action Objectives (RAOs) for the Site and provides a discussion of how the data collected during the RI are used in the development of a plan for Remedial Action going forward at the Site.

3.1 Remedial Investigation Objectives

Prior to discussing RAOs, it is important to re-state the RI objectives. As indicated in the RI Work Plan approved by NYSDEC, the following were the RI Objectives:

- Delineation of the areal and vertical extent of contaminants in all media at or emanating from the Site;
- Determination of the surface and subsurface characteristics of the Site, including topography, geology and hydrogeology, including depth to groundwater;
- Identification of the sources of contamination, migration pathways, and actual or potential receptors of contaminants on or through air, soil, groundwater, utilities, and structures at the Site, without regard to property boundaries;
- Collection and evaluation of data necessary to evaluate the actual and potential threats to public health and the environment; and,
- Collection of data necessary to evaluate any release to an environmental medium and develop remedial alternative(s) to address the release.

As will be discussed further in **Section 4** of this RI Report, the data collected were sufficient to meet these objectives.

3.2 RAOs

This section of the RI Report discusses the RAOs for the Site. As has been established in accordance with DER-10, RAOs developed consider the following:

- Applicable Standards, Criteria and Guidance (SCGs) considering the current, intended and reasonably anticipated future use of the Site and its surroundings;
- All contaminants exceeding applicable SCGs;
- Environmental media impacted by such contaminants;
- Extent of the impact to the environmental media;
- All actual or potential human exposures and / or environmental impacts resulting from the contaminants in environmental media identified above; and,
- Any Site specific cleanup levels developed.



Based upon the foregoing, the RAOs identified below in **Sections 3.2.1 through 3.2.3** have been established for the Site.

3.2.1 Groundwater RAOs

The following RAOs apply to groundwater:

- RAO for Public Health Protection: (1) Prevent contact with, or inhalation of, volatiles from contaminated groundwater; and,
- RAO for Environmental Protection: (1) Restore the groundwater aquifer to pre-disposal / pre-release conditions to the extent practicable, and (2) Remove the source of ground or surface water contamination (if an on-Site source) to the extent practicable.

3.2.2 Soil RAOs

The following RAOs apply to soil:

- RAO for Public Health Protection: (1) Prevent ingestion / direct contact with contaminated soil; and, (2) Prevent inhalation of, or exposure from, contaminants volatilizing from contaminants in soil.

3.2.3 Soil Vapor RAOs

The following RAOs apply to soil vapor:

- RAO for Public Health Protection: (1) Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into the building(s) at the Site.

3.3 Standards, Criteria and Guidelines

Standards, Criteria and Guidance (SCGs) are defined as “mean standards and criteria that are generally applicable, consistently applied, and officially promulgated, that are either directly applicable, or that are not directly applicable but are relevant and appropriate, unless good cause exists why conformity should be dispensed with, and with consideration being given to guidance determined, after the exercise of scientific and engineering judgment, to be applicable.” SCGs are essentially similar to the CERCLA concept of Applicable or Relevant and Appropriate Requirements (ARARs).

The most common SCGs applicable in New York State and at the former Bridge Cleaners Site are the following:



- Soil: SCOs and supplemental SCOs identified in 6 NYCRR 375-6.8 and the Commissioner's Policy on *Soil Cleanup Guidance* (CP-Soil), as amended, including but not limited to CP-51 - Soil Cleanup Guidance;
- Groundwater: Groundwater cleanup guidelines and standards identified in the form of Class GA Groundwater Quality Standards / Guidelines in TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998, as amended; and,
- Soil Vapor / Indoor Air Quality: NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006, as amended.

In addition to the regulatory SCGs identified above, the follow regulations *may* also apply to remedy selection and implementation:

- New York Codes, Rules and Regulations (NYCRR) Part 175 - Special Licenses and Permits--Definitions and Uniform Procedures;
- NYCRR Part 371 - Identification and Listing of Hazardous Wastes;
- NYCRR Part 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities (November 1998);
- NYCRR Subpart 374-1 - Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities;
- NYCRR Part 375 - Environmental Remediation Programs;
- NYCRR Part 376 - Land Disposal Restrictions;
- NYCRR Part 608 - Use and Protection of Waters;
- NYCRR Parts 700-706 - Water Quality Standards;
- NYCRR Part 750 through 758 - Implementation of NPDES Program in NYS (SPDES Regulations);
- Code of Federal Regulations (CFR) Part 1910.120 - Hazardous Waste Operations and Emergency Response; and,
- CFR Part 144 - Underground Injection Control Program

Formal regulations are not the only SCGs that may be applicable. The following regulatory guidance documents *may* be applicable and also will be considered in the final remedy design and implementation:

- United States Environmental Protection Agency (USEPA) Office of Solid Waste and Emergency Response (OSWER) Directive 9355.047FS Presumptive Remedies: Policy and Procedures;



- USEPA OSWER Directive 9355.048FS Presumptive Remedies: Site Characterization and Technology Selection for CERCLA sites with Volatile Organic Compounds in Soils;
- Department of Environmental Remediation (DER)-10 - Technical Guidance for Site Investigation and Remediation;
- DER-15 - Presumptive/Proven Remedial Technologies;
- Technical and Administrative Guidance Memorandum (TAGM) 4013 - Emergency Hazardous Waste Drum Removal/ Surficial Cleanup Procedures;
- TAGM 4059 - Making Changes To Selected Remedies;
- TAGM 3028 - "Contained In" Criteria for Environmental Media: Soil Action Levels;
- TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations;
- TOGS 1.3.8 - New Discharges to Publicly Owned Treatment Works;
- TOGS 2.1.2 - Underground Injection/Recirculation (UIR) at Groundwater Remediation Sites;
- Cleanup Program (CP) - 43 - Groundwater Monitoring Well Decommissioning Procedures;
- CP-51 - Soil Cleanup Guidance;
- Air Guide 1 - Guidelines for the Control of Toxic Ambient Air Contaminants;
- Citizen Participation in New York's Hazardous Waste Site Remediation Program: A Guidebook;
- OSWER Directive 9200.4-17 - Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites; and,
- NYSDOH Environmental Health Manual CSFP-530 - "Individual Water Supplies - Activated Carbon Treatment Systems".

It should be noted that these SCGs are only potentially applicable at this stage of the remedial investigation program and a more detailed applicability review will be completed as part of the future Remedial Design / Remedial Action (RD/RA) process.



4.0 REMEDIAL INVESTIGATION SCOPE OF WORK

This section of the RI Work Plan summarizes the specific investigative activities performed at the Site including sampling procedures and protocols.

4.1 Overview of Investigation Approach

Investigation of the Site included the following general scope of work:

- **Soil Sampling:** Historic investigations identified soil impacts at the subject property; however, there was little information available regarding Site-specific geology and impacts to soil as a function of depth. In addition, the parameters included in historic investigations were incomplete with respect to initial DER-10 investigation guidance. The work completed in this RI addressed those data gaps in the soil investigation work completed to date at the Site;
- **Groundwater Sampling:** Given the small size of the Subject Property, the historic groundwater sampling program was sufficient to provide a good overview of the areas of potential concern at the Site. However, the parameters analyzed were not wholly consistent with DER-10, and an update of historic data for confirmation purposes was completed as part of the RI.
- **Soil Vapor and Indoor Air Quality Sampling:** Although there was limited soil vapor sampling performed at the site in the past by others, a formal Soil Vapor Intrusion (SVI) investigation in conformance with NYSDOH guidance was not performed historically. The RI included a comprehensive SVI investigation that was sufficient to serve as the basis SVI mitigation measures, if determined to be applicable.

A more detailed description of each of these elements of the scope of work is outlined in the following sections.

4.2 Preliminary Activities / Non-Intrusive Investigation

Before starting intrusive drilling and investigation, several office-based and non-intrusive field activities were completed as outlined below.

4.2.1 Utility Clearance

Prior to the start of any field work, a public utility mark was performed by calling the ONE-CALL center. Markouts were used to adjust proposed sampling locations as necessary. Based upon the completion of utility markouts, no changes to the proposed sample locations was required. However, as is discussed in **Section 4.2.2**, the initial Site inspection identified several surface obstructions related to current operations within the building that required several sample locations to be moved slightly from the locations proposed in the RI Work Plan. The minor changes did not have any material



impact on the investigation performed, the interpretation of results, or the ability to meet the defined RAOs for the RI.

4.2.2 Initial Site Inspections

Prior to intrusive sampling, several Site walk-throughs were completed to verify access to proposed sample locations and to coordinate work with Site occupants and regulators as appropriate. This initial inspection was also utilized to complete the inventory documentation part of the proposed SVI investigation and to identify locations of historic operations or potential concern (if possible) to meet NYSDEC requests for additional research into historic Site operations.

As a minimum, the preliminary Site inspection assessed the following:

- Identification of current and former equipment locations (to the degree possible);
- Identification of any floor drains or other subsurface features that were evident from at-grade infrastructure and (e.g., vent pipes, access hatches, floor patches, utility chases, etc.);
- The location and condition of any pre-existing monitoring wells; and,
- Any storage or use of hazardous materials.

Based upon the initial inspections it was not possible to confirm the location of historic dry cleaning equipment in the facility; however, discussions with SDI have indicated that the former dry cleaning operations using hazardous materials were reportedly present at the northern corner of the facility in the general vicinity of borings B-3/GW-3 and B-1/GW-1 and vapor sample locations SP-4, SP-6 and SP-7. Currently, there were no operations using hazardous materials except for minor cleaners related to maintenance and janitorial type supplies, nor were any floor drains evident within the building. Operations are currently limited to dry cutting and rolling fabrics, storage of fabric rolls, and shipping and receiving fabrics. At the time of inspections in February and March 2014, a new office area was currently under construction along the portion of the building fronting 30th Street and new fabric shelving was being installed along the southwest wall of the facility. There were no existing monitoring wells apparent within the building structure although several monitoring wells were noted along 30th Street as well as in the general neighborhood of the Site. The wells along 30th Street are related to former investigation at the Subject Property as discussed previously in this RI Report. It should be noted that the building has been significantly renovated and visual inspection was of limited value to assess historic operations.



4.3 Historic Records Searches and Permits

An EDR Radius Report was obtained to evaluate historical Site information related to environmental permits, violations, spills or other areas of potential concern and also to evaluate surrounding properties for potential impacts to the Subject Property. The complete EDR Report is provided in **Appendix F** under separate cover. A summary of the EDR Report findings is presented below for both the subject and neighboring properties:

4.3.1 Subject Property EDR Summary

The following is a summary of the EDR Report findings for the Subject Property (39-26 30th Street, aka 39-28 30th Street):

- **NY E Designation Listing - Lot 31, Tax Block 399, 39-26 30th Street:** The Subject Property is an NYC E Designated Site. The (E) designations would require that the fee owner of the site conduct a testing and sampling protocol, and remediation where appropriate, to the satisfaction of the NYCDEP before the issuance of a building permit by the Department of Buildings pursuant to the provisions of Section 11-15 of the Zoning Resolution (Environmental Requirements). The (E) designations also include a mandatory construction-related health and safety plan which must be approved by NYCDEP.
- **Dry Cleaner Listings:**
 - City Wide Cleaners, 39-28 30th St: NY Drycleaners listing;
 - Queens Boro Cleaners, 39-28 (39-26) 30th Street: NY Drycleaners listing;
 - Fresh Cleaners & Laundry Inc., 39-26 30th Street: This facility was identified as a former Resource Conservation and recovery Act (RCRA) Small Quantity Generator (SQG). This facility listing included the following spent halogenated solvents tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane and 1,1,2-trichloroethane. A number of unspecified compliance violations were also listed in the EDR report.
- **NY Solid and Hazardous Waste Site (SHWS) Listing.** The Subject Property was shown to be in a Hazardous Waste program, and noted that the Site was occupied by a commercial laundry and dry cleaner up until 2011, when the DEC investigation of the property began. Records indicate at least 10 years of use as a dry cleaner consistent with the known Site history. A discussion of the 2009 – 2011 sampling programs completed at the Site (and discussed previously in detail in this RI Report) was also provided.
- **Manifest Site Listing.** The Subject Property was identified as having generated waste manifests pertaining to disposal of halogenated solvents (off-site) in 1999, 2001, 2005, 2008 and 2009. The listing also identified disposal in Pennsylvania



(PA) for a number of containers of materials at Cycle Chem Inc in Lewisberry, PA (February 2012).

- **NY Brownfields Site Listing:** (The EDR report identified the Site as participating in the Brownfields program under Site Code 480014.
- **NYS DEC- Fresh Cleaners Site, 39-26 30th Street: PA Manifest Listing** (wastes shipped to PA were identified).
- **Misc. Compliance Site Designations.** There were a number of compliance listings in 2007 pertaining to the "Jetomi Cleaners, Inc. D/B/A Queens Bridge Cleaners AKA Bridge Cleaners Queens Bridge Cleaners". The compliance listings were consistent with former dry cleaning operations as outlined above.

4.3.2 Neighboring Property EDR Summary

Numerous properties with confirmed environmental concerns were identified in the surrounding community including several sites *directly hydrogeologically upgradient* of the Subject Property with confirmed groundwater impacts for chemicals commonly used in dry cleaning operations. Based upon the EDR Report findings, the following upgradient property concerns were noted in the region:

- **Jung Sun Laundry Site, 37-10 24th St (0.335 miles N):** This site, which is located under ½ mile immediately upgradient of the Subject Property, is classified by NYSDEC as "Significant Threat to the Public Health or Environment – Action Required." The Jung Sun facility had been a commercial laundry/dry cleaner from the 1930 through the 1990s. Significant cVOC impacts to groundwater were noted during numerous investigations from 2003 through 2012. Specifically, Tetrachloroethene (PCE), Trichloroethene (TCE), cis-1,2-Dichloroethene (c12DCE), trans-1,2-Dichloroethene (t12DCE) and Vinyl Chloride (VC) have been detected on the Jung Sun site at concentrations of up to 11,000 ppb, 1,200 ppb, 21,000 ppb, 130 ppb and 390 ppb, respectively. Groundwater flow at the site has been identified as towards the southwest (i.e., toward the Subject Property). As will be discussed later in this report, the levels of contaminants confirmed in groundwater at the Jung Sun Laundry site are several orders of magnitude higher in concentration than any contaminants identified on the Subject Property.

There are at least 13 off-Site dry cleaning operations located hydrogeologically upgradient within 0.5 miles of the Subject Property. At least one of the sites (i.e., Jung Sun Laundry) has confirmed significant subsurface impacts and others have lesser confirmed groundwater impacts. Therefore, confirmed upgradient contamination in groundwater is present at levels higher than detected in any wells on the Subject Property.

4.4 Soil Investigation and Sampling

The following sections summarize the soil investigation program completed.



4.4.1 Soil Borings / Sample Locations

Soil sampling locations are identified in **Figure 4**. All soil borings were installed and associated soil samples were collected on January 13-14, 2014.

As indicated in **Figure 4**, five (5) soil borings were installed to obtain additional data and to identify the Site-specific geology. Soil borings were extended to the water and completed as monitoring wells (see **Section 4.5**). Soil samples were collected from each five-foot depth interval from grade to the termination of the boring at each sampling location with select samples submitted to a NYS ELAP Certified Analytical laboratory for analyses in general conformance with the NYSDEC approved RI Work Plan.² A summary of the soil borings installed, the depths of samples submitted for laboratory analyses, and the laboratory parameters is provided in **Table 3**.

4.4.2 Soil Sampling Procedures

The following procedures were utilized to collect soil samples at each location:

- An access hole was cut through the concrete slab utilizing a drive hammer or concrete corer at each location;
- Soil samples were collected on a nominal basis from the surface to the targeted termination depth (see **Table 3**) or until groundwater was encountered;
- Soil samples were inspected and classified in accordance with the Unified Soil Classification System. Soil samples were field screened utilizing a photo-ionization detector (PID) and by visual and olfactory inspection for the presence of impact. A graphic log of each soil boring was prepared with appropriate stratification lines, lithologic descriptions, sample identifications, PID readings, sample depth intervals and dates. Soil boring logs are provided in **Appendix G**.
- At each soil boring location, soil samples were collected on a nominal continuous basis by advancing a four-to-five-foot-long stainless steel macrocore sampler with a direct-push drill rig. Each macrocore sampler was equipped with factory-decontaminated, plastic acetate liners;
- Representative soil samples were placed into laboratory-supplied glassware and stored on ice pending the final selection of samples to be analyzed. At each sampling interval (i.e., every five feet vertically), the appropriate soil sample volume was transferred into laboratory-supplied glassware (the VOC aliquot was placed in En Core or Terra Core samplers per EPA Method 5035A), and immediately placed on ice; and,

² In some instances the sampling program may have been modified slightly to account for field conditions (i.e., the depth to water was shallow than anticipated and therefore some samples proposed at potential vadose zone samples were not collected, etc.)



- Upon termination of each boring, the boring was converted to a monitoring well (see **Section 4.5**).

4.4.3 Soil Analytical Parameters

The analytical parameters indicated in **Table 3** were included in the sampling program.

All analyses were performed by an Environmental Laboratory Approval program (ELAP) certified laboratory for the parameter being run with Analytical Services Protocol (ASP) Category B deliverables electronically. Quality control samples were collected and analyzed as outlined in the QAPP under separate cover. Data Usability Summary Reports (DUSRs) were completed by Vali-Data of WNY, LLC in accordance with DER-10 requirements and are provided in **Appendix H**.

4.5 Groundwater Investigation and Sampling

The following sections outline the groundwater investigation completed at the Site.

4.5.1 New Monitoring Well Installation

The locations of the five (5) wells installed on January 13-14, 2014, for groundwater elevation gauging and quality sampling are indicated in **Figure 6** (i.e., the soil borings B-1 through B-5 were completed as wells GW-1 through GW-5, respectively). New monitoring wells were completed as summarized in **Table 2**. A New York State-licensed survey was performed on all monitoring wells for both location (easting and northings) and elevation of top of casing.

4.5.2 Well Development Procedures

Monitoring wells were developed on January 15, 2014 with the pump and surge development method using a ½" diameter HDPE tubing with a surge block and pumping with a peristaltic pump.

During well development, water quality parameters (pH, specific conductivity, temperature and turbidity) were measured using a Horiba U-22 Multiparameter Meter and a Lamotte 2020 turbidimeter (or equivalent / similar equipment) and the data recorded on well development logs. Well development logs are provided in **Appendix I**. A monitoring well was considered developed when three consecutive water quality parameter readings stabilized. It should be noted that it was not possible to achieve turbidity readings below 50 NTU even after excessive pumping. Therefore, it is possible that the high turbidity could adversely analytical results.



4.5.3 Well Sampling Procedures

Sampling of groundwater from the newly installed wells was completed on February 8, 2014, at least seven (7) days after completion of well development in accordance with the approved RI Work Plan. Samples were collected utilizing the low-flow sampling technique in accordance with the following protocols (see QAPP for additional information):

- A decontaminated low-flow, electric submersible pump was lowered to the bottom of a well and then raised approximately one to two feet to ensure that the pump intake was within the well's screened interval;
- The pump was turned on with an initial high flow rate to initiate the pumping process;
- Once flow was established, the flow rate was lowered to less than or equal to 100 milliliters per minute (ml/m) and field parameters (i.e., pH, dissolved oxygen, conductivity, temperature, turbidity and oxidation reduction potential) were measured and recorded on a two-to-five minute interval; and,
- Once the field parameters stabilized³ (i.e., three readings within ten percent of one-another), laboratory-supplied glassware was filled directly from the pump discharge.

Well sampling logs are provided in **Appendix J**.

4.5.4 Groundwater Analytical Parameters

A summary of the parameters analyzed as part of the groundwater sampling program is provided in **Table 3**. All analyses were performed by an ELAP-certified laboratory for the parameter being run. Results were provided with ASP Category B deliverables electronically. Quality control samples were collected and analyzed as outlined in the QAPP. A DUSR was also completed by Vali-Data of WNY, LLC in accordance with DER-10 requirements (see **Appendix H**).

4.5.5 Well Surveying and Gauging

Following well installation, all newly installed wells were surveyed by a New York State licensed surveyor (NY Land Surveyor, P.C.) for location and north edge, top of casing elevation. One round of well gauging was performed following well development on January 15, 2014, and a second gauging event was completed immediately prior to well sampling on February 8, 2014. Elevation data were used in conjunction with depth to

³ As noted above, turbidity readings were not stable below 50 NTU.



water elevation measurements to determine the potentiometric surface of groundwater and inferred groundwater flow direction in **Figure 7**. The local groundwater flow direction at the Site is to the south based upon the well gauging completed. No separate phase hydrocarbons (SPH) were present in any of the wells on-Site.

4.6 Soil Vapor Intrusion Investigation

A SVI investigation in general conformance with NYSDOH guidance was completed. The following sections outline the scope of work performed.

4.6.1 Site Reconnaissance / Inventory

The initial task of the SVI investigation was completion of a Site reconnaissance to understand current Site operations and to document any activities or chemical usage that may bias the results of the soil vapor and indoor air quality sampling program. This work included:

- A Site inspection to determine the building layout and to optimize sampling locations;
- Review of Site operations and current hazardous materials usage. To the degree possible, historic chemical usage was also considered;
- Review of the heating ventilation and air conditioning system to determine air flow patterns, sources of makeup air, and possible preferential exposure pathways; and,
- Documentation of a facility chemical inventory.

The results of the SVI Investigation are provided in **Section 5.3**.

4.6.2 Proposed Soil Vapor and Indoor Air Quality Sample Locations

Seven “permanent” soil vapor implants were installed on January 13-14, 2014, to facilitate the collection of sub-slab vapor samples. Four indoor air quality sample locations were co-located with four of the seven sub-slab soil vapor sampling locations (in the former office, along the northeast and southwest sides of the building, and near the far end of the building) to allow direct use of the NYSDOH matrix for evaluation of SVI investigation data. The locations of the soil vapor implants included the former LIAL soil sampling locations, as well as additional locations to provide sufficient coverage to properly assess sub-slab vapor conditions at the Site. The locations of the sub-slab soil vapor implants and co-located indoor air quality samples are shown on **Figure 14**.

In addition to the locations indicated on **Figure 14**, a sample location at the exterior of the building (near the front building entrance on the day of sampling) was also sampled



to assist in documentation of background, ambient conditions. It should be noted that the ambient sample was located in a cross-gradient direction on the day of sampling for security purposes and because the wind location was highly variable on the day of sampling.

4.6.3 Installation of Soil Vapor Probes

Soil vapor probes were installed as follows:

- A drill bored through the concrete floor of the building and a six-inch double woven stainless steel vapor sampling implant (screen) was lowered into the boring to a depth of approximately four to eight inches (4" - 8") below the underside of the concrete slab;
- The vapor sampling implant was connected to a short length of Teflon-lined polyethylene tubing (length sufficient to extend to grade for subsequent sampling). Tubing was coiled in the well and temporarily sealed when not actively used for soil vapor sampling;
- The implant was positioned so that the lowest three inches of the screen was below the base of the concrete floor. The annular space around the implant was backfilled with #1 silica sand to two inches above the implant. A two-inch thick hydrated granular bentonite seal will be placed immediately above the sand;
- Each implant was completed with a flush-mount protective casing secured to the concrete with hydraulic cement.

Care was taken to ensure a good surface seal and that all fittings and seals were properly positioned and effective so as not to allow ambient air (i.e., non-subsurface vapor) into the implant screen and tubing assembly.

4.6.4 Sub-slab Vapor and IAQ Sampling Procedures and Analyses

Sample collection of sub-slab vapor samples and IAQ samples was completed on February 8, 2014, in according to the following procedures:

- Sub-slab soil vapor and IAQ samples were collected using laboratory-evacuated six-liter Summa[®] canisters with eight-hour flow regulators calibrated by the laboratory to ensure an 8-hour sampling duration. The flow rate was less than the maximum flow rate of 0.2 LPM as established in the NYSDOH Guidance Document) provided by a NYSDEC-certified analytical laboratory. Sub-Slab Vapor and IAQ sampling logs are provided in **Appendix K**.
- An approximate one-quart to two-quart aluminum enclosure was placed over the implant protective casing and the interface between the enclosure and the ground surface was sealed with natural bees wax to prevent intrusion of outside air into the sampling apparatus;



- Per New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006), a helium tracer gas was utilized during the sampling of each soil vapor implant. The tracer gas was used to verify that the infiltration of outdoor (ambient) air is not occurring during sample collection. A tank containing ultra-high purity UHP helium (99.999%) was connected to the side port of the enclosure and enough helium released to displace any ambient air within the enclosure and to maintain a positive pressure within the enclosure;
- Following the application of the tracer gas, one to three volumes of soil vapor / trapped air was purged from the soil vapor implant using a Gilian GilAir-3 air sample pump (or equivalent method). A Dielectric MGD-2002 helium detector (or equivalent) was used to check for the presence of the tracer gas in the purged soil vapor; if less than 10% of the tracer gas was detected, a soil vapor sample was then collected;
- At the four locations where co-located IAQ samples were also collected, sampling times were coordinated so that sub-slab vapor and IAQ samples at the same location were collected at the same time.⁴ IAQ samples shall were located in the breathing zone (3 to 5 feet above the finished floor) within 5 feet of the soil vapor probe locations;
- Summa canisters were completely evacuated to negative pressure (approximately 30" Hg vacuum) before use. To start sampling of both the sub-slab sample and the IAQ sample, the valve on the Summa canisters was opened and sample was drawn into the canister at the pre-defined rate in accordance with laboratory calibration of the Summa canisters and all data (times, pressures, vacuums, flow rates, etc. were recorded (see **Appendix K**).
- The sample containers and chain-of-custody form was placed in a secure container, taped shut, and secured with a chain of custody seal. The samples were submitted to an ELAP certified analytical laboratory for VOC analysis by US Environmental Protection Agency Method TO-15 (enhanced for low level detection less than NYSDOH matrix levels).

The HVAC system was in operation a minimum of 24 hours before the sample collection commenced and was be set for its normal heating season operation. All sample containers were certified clean by the laboratory.

4.7 Community Air Monitoring Plan (CAMP)

A Community Air Monitoring Plan (CAMP) was implemented as part of the RI. Data collected for community air monitoring is provided in **Appendix L**. All breathing zone PID readings were less than 0.7 ppm equivalence units.

⁴ It should be noted that the IAQ-2 sample regulator was not working during a mid-sampling inspection and therefore a new Summa canister was immediately set-up and started to replace the defective IAQ-2 sample. Therefore, there was not an exact time overlap for this sample location (designated IAQ-2B).



4.8 Health and Safety (H&S)

A Health and Safety Plan (HASP) was maintained on-Site at all times during field operations and tailgate safety meetings were held by Site workers. There were no safety concerns or incidents noted during the RI.



5.0 REMEDIAL INVESTIGATION SAMPLING PROGRAM RESULTS

The previous sections of this RI Report documented the work completed, including both “paper” research and field procedures followed. This section of the RI report discusses the data obtained in relation to applicable regulatory Standards, Criteria, and Guidelines (SCGs) and the Remedial Action Objectives (RAOs) discussed in **Sections 3.2 and 3.3** of this RI Report.

5.1 Soil Investigation Results

A total of twenty-three (23) soil samples at various depths from grade to the water table at approximately 20 feet below grade surface (bgs) were collected from five (5) locations (see **Figure 4**). The following sections discuss the findings and results of the soil investigation phase of the RI.

5.1.1 Volatile Organic Compounds (VOCs) in Soil

The primary contaminants of concern identified in prior investigations were VOCs with particular emphasis on the dry cleaning solvent PCE and related chlorinated VOCs (cVOCs) including TCE, c12DCE, and VC. VOCs were included for analysis (TCL VOCs) in twenty of the twenty-three soil samples collected. In addition, field screening for VOCs using a PID was completed on every sample interval during the soil boring program.

PID screening in the field during soil sampling generally did not indicate significantly elevated readings until the water table was approached except for B-5 where PID readings of between 14 and 24 ppm equivalence units (ppmeu) were noted in the shallow samples immediately underlying the concrete floor slab and at B-3 where PID readings between 10 and 15 ppmeu were noted throughout the soil column. At other locations, PID readings were generally low from grade to 13-15 feet bgs. However, as moist soils were starting to be encountered in borings below 15-18 feet, PID screening readings general increased to over 40 ppmeu. The relatively lower PID screening readings in shallow soils in comparison to higher readings in the saturated soils at all boring locations is consistent with a possible regional groundwater concern as has been referenced previously in this report. PID screening results are included in the soil boring logs in **Appendix G**.

Based upon PID screening results and visual observations, select soil samples were submitted for laboratory analyses for TCL VOCs (see **Table 3** for sample depths submitted for lab analyses for VOCs). Sample results for VOCs are summarized in **Table 4** and complete analytical reports are provided in **Appendix M**.

As indicated in **Table 4**, no VOCs were detected at concentrations in any samples at levels exceeding NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCOs). Several



VOCs were detected at very low concentrations only slightly above detection limits (but well below UUSCOs) including:

- Cis-1,2-Dichloroethene (c12DCE): maximum detection of 0.0011J mg/kg at B-1D, 19.5-20.0 ft. bgs which is at the groundwater interface)
- Methylene chloride: maximum detection of 0.0032J mg/kg at B-1A, 4.5-5.0' bgs)⁵;
- Tetrachloroethene (PCE): maximum detection of 0.208 mg/kg at B-2A, 3.0 – 3.5 ft. bgs; and,
- Trichloroethene (TCE): maximum detection of 0.0092J mg/kg at B-1D, 19.5 – 20.0 ft. bgs (at the groundwater table).

A summary of all detected VOCs in soils is presented in **Figure 8**.

Based upon the soil sample results at multiple locations and depths, including the reported location where former dry cleaning solvent operations were performed, no further action for soils due to the presence of VOCs is warranted.

5.1.2 Semi-Volatile Organic Compounds (SVOCs) in Soil

SVOCs were analyzed from one sample depth in each soil boring based upon visual observations and PID results. SVOC sample results are summarized in **Table 5** and **Figure 9**. Complete analytical reports are provided in **Appendix M**.

As indicated in **Table 5** and **Figure 9**, no SVOCs were detected in any samples at concentrations exceeding their respective UUSCOs. The only SVOCs detected (all at concentrations well below UUSCOs) were:

- Benz(a)anthracene [B(a)A]: maximum detection of 0.0232J mg/kg at B-5B, 5.8-6.3 ft. bgs;
- Benzo(a)pyrene [B(a)P]: maximum detection of 0.0225J mg/kg at B-5B, 5.8-6.3 ft. bgs;
- Benzo(b)fluoranthene [B(b)F]: maximum detection of 0.0291J mg/kg at B-5B, 5.8-6.3 ft. bgs;
- Benzo(g,h,i)perylene [B(ghi)P]: maximum detection of 0.0186J mg/kg at B-5B, 5.8-6.3 ft. bgs;
- Chrysene: maximum detection of 0.0285J mg/kg at B-5B, 5.8-6.3 ft. bgs;

⁵ J = estimated value below reporting limit



- Bis(2-ethylhexyl)phthalate [BEHP]: maximum detection of 0.0438J mg/kg at B-3D, 14.5-15.0 ft. bgs;
- Fluoranthene: maximum detection of 0.0545J mg/kg at B-5B, 5.8-6.3 ft. bgs;
- Indeno(1,2,3-cd)pyrene [I(123cd)P]: maximum detection of 0.0220J mg/kg at B-5B, 5.8-6.3 ft. bgs;
- Phenanthrene: maximum detection of 0.0254J mg/kg at B-5B, 5.8-6.3 ft. bgs; and,
- Pyrene: maximum detection of 0.0431J mg/kg at B-5B, 5.8-6.3 ft. bgs;

Based upon the soil sample results indicating only sporadic, very low detections of SVOCs at only slightly above the detection limit, no further action for soils due to the presence of SVOCs is warranted.

5.1.3 Metals in Soil

Metals were analyzed from one sample depth in each soil boring based upon visual observations and PID results. Metals sample results are summarized in **Table 6**. Complete analytical reports are provided in **Appendix M**. No metals were detected in any samples at concentrations exceeding their respective UUSCOs. No further action is recommended in soil due to the presence of metals.

5.1.4 Pesticides and PCBs in Soil

Pesticides and PCBs were analyzed from one sample depth in each soil boring based upon visual observations and PID results. Metals sample results are summarized in **Table 7**. Complete analytical reports are provided in **Appendix M**. No PCBs or pesticides were detected in any samples above method detection limits. No further action is recommended in soil due to pesticides and / or PCBs.

5.2 Groundwater Investigation Results

The groundwater investigation included installation and sampling of five (5) new monitoring wells as indicated in **Figure 6**. Well installation details and results of well gauging confirming that locally groundwater flows toward the south are provided in **Table 2** and **Figure 7**. The following sections discuss the results of groundwater analytical testing.

5.2.1 Volatile Organic Compounds (VOCs) in Groundwater

The primary contaminants of concern in groundwater were chlorinated solvents including the dry cleaning solvent PCE and the related degradation products TCE, c12DCE, and VC.



Therefore, VOCs analysis was performed for all groundwater samples collected and the results of analytical testing are summarized in **Table 8**. Complete analytical reports for groundwater samples are provided in **Appendix N**.

As indicated in **Table 8**, several VOCs were detected at concentrations exceeding their respective NYSDEC Class GA Groundwater Quality Standards (Class GA GWQSs), including:

- PCE was detected in all five monitoring wells with concentrations ranging from 165 µg/l at GW-2 to a maximum detection of 340 µg/l in GW-5 (an upgradient well that is also in the vicinity of the reported, former dry cleaning operation. The Class GA GWQS for PCE is 5 µg/l; and,
- TCE was detected slightly above its respective Class GA GWQS of 5 µg/l in two of the five monitoring wells (5.4 µg/l in GW-1 which is an upgradient well and 6.9 µg/l in GW-5).

In addition to PCE and TCE, several other VOCs were detected at concentrations below their respective Class GA GWQSs including chloroform (maximum concentration of 4.2J µg/l at GW-2), c12DCE (maximum concentration of 1.1 µg/l at GW-4), ethylbenzene (maximum concentration of 1.3 µg/l at GW-1), isopropylbenzene (maximum concentration of 1.6J at GW-1), and o-Xylene (maximum concentration of 3.2 µg/l at GW-1). All other VOCs were non-detectable in all groundwater samples collected.

A summary of all detected VOCs in groundwater overlaid on a plume map for PCE detections and the potentiometric surface map is presented in **Figure 10**. Groundwater data are difficult to interpret at the Site because the wells located in the general vicinity of the former dry cleaning operations (i.e., GW-1 and GW-3) are also the upgradient-most locations on the subject property in a region with confirmed, off-Site, upgradient groundwater impacts higher than the maximum levels of PCE and TCE found on the subject property during this RI. In fact, PCE concentrations detected at an upgradient / cross gradient portion of the adjacent facility at 39-27 29th Street were 910 µg/l (at GW-1 on the 39-17 29th Street site, Preferred Phase II Report) which is significantly higher than any PCE detections on the Subject Property.

Although PCE concentrations on-Site were slightly higher in downgradient well GW-5 (340 µg/l) compared to on-Site upgradient wells GW-1 and GW-3 (280 µg/l and 175 µg/l, respectively), all results were on the same order of magnitude on-Site and several orders of magnitude below the 11,000 ppb detections that have been reported in upgradient off-Site properties within ½ mile of the Subject Property (see **Section 4.3.2** discussion) and the 910 µg/l concentration at the adjacent, upgradient well GW-1 on the 39-17 29th Street site. When the groundwater data are considered in conjunction with the absence of *any* vadose soil impacts for PCE on-Site (including sampling directly overlying the well



screens), it is probable that the PCE impacts detected in groundwater are not associated with former on-Site operations but rather the wider, regional chlorinated VOC concerns.

5.2.2 Semi-Volatile Organic Compounds (SVOCs) in Groundwater

SVOCs analyses were completed for all groundwater samples and the results are summarized in **Table 9** and **Figure 11**. Complete analytical reports are provided in **Appendix N**.

As indicated in **Table 9** and **Figure 11**, no SVOCs were detected in any samples at concentrations exceeding their respective Class GA GWQs. The only SVOC detected at any level was BEHP, which is a common plasticizing agent often found at low levels in urban groundwater. There is no known source of BEHP on the Site based upon known current and historic operations. The maximum concentration of BEHP detected was only 1.1 µg/l which is below the Class GA GWQS for BEHP of 5 µg/l.

Based upon the absence of SVOC impacts of significance in soils and the fact that all groundwater monitoring wells confirmed the absence of any SVOCs above applicable standards, no further action for groundwater due to the presence of SVOCs is warranted.

5.2.3 Metals in Groundwater

Metals were analyzed in samples collected from all monitoring wells. As discussed previously in this report, it was not possible to obtain turbidity readings less than 50 NTU in any of the wells on-Site during development and pre-sample purging. Therefore, sample results for metals (unfiltered) may be biased high and must be interpreted cautiously.

As indicated in **Table 10** several metals were detected on-Site at concentrations exceeding their respective Class GA GWQs including total chromium (Cr), total iron (Fe), lead (Pb), magnesium (Mg), manganese (Mn), and sodium. It is not uncommon to see detections of these metals in urban groundwater samples with high turbidity. The distribution of metals detected above their respective Class GA GWQs are indicated in **Figure 12**. Complete analytical reports are provided in **Appendix N**.

- Chromium was detected in three of five wells at levels exceeding its Class GA GWQS of 50 µg/l. The highest concentration was detected in GW-4 located near the center of the Site (104 µg/l). However, similar concentrations were also detected in upgradient wells GW-1 and GW-3 (53.4 µg/l and 74.2 µg/l, respectively). The turbidity in each of these wells was in excess of 50 NTU after purging and before sampling, and it is likely that results were therefore biased high since samples were not filtered before analysis. The fact that the only well where less than 50 NTU was achievable was GW-5 and chromium was non-detectable in this well sample supports the possibility of high turbidity bias.



- Iron was detected at elevated levels in all wells except GW-5 (the one well where turbidity less than 50 NTU was attainable). The highest concentration of iron was detected in GW-3 (upgradient) at 39,600 µg/l. Elevated levels of iron in unfiltered samples in an urban environment are not atypical.
- Lead was detected at 35.7 µg/l in GW-3 (upgradient) and 70.5 µg/l in GW-4 (in the middle of the Site downgradient of GW-3). The Class GA GWQS for lead is 25 µg/l. As with the chromium and iron detections, significantly lower concentrations were detected at GW-5 downgradient, which was the one well that was able to be purged to less than 50 NTU prior to sampling. Lead is also often detected at slightly elevated levels in unfiltered metal samples in urban environments.
- Manganese was detected at elevated levels in four of the five wells with the highest concentration detected in GW-3 (upgradient) at 2,240 µg/l. Manganese, like iron, is commonly detected in unfiltered metal samples in urban environments.
- The remaining two metals detected at concentrations (Magnesium and Sodium) are nutrients that are not considered significant from a Site impact perspective.

Although elevated concentrations of metals were detected on-Site, the highest concentrations detected were generally present in upgradient well GW-3 or the well immediately downgradient of the upgradient well at GW-4. In addition, elevated turbidity readings in all wells (except GW-5) were noted prior to sampling which may have biased the results of the unfiltered metals samples high. In the one sample where turbidity levels below 50 NTU were obtainable, only magnesium, manganese, and sodium were detected above their respective class GQ GWQSs.

The former operations at the Site (i.e., dry cleaning) would typically not use chemicals containing the metals indicated in the groundwater sampling program. Importantly, none of the metals detected in groundwater above their respective Class GA GWQSs were detected in any soil samples at concentrations exceeding unrestricted use standards. Therefore, there does not appear to be any on-Site source of the metals detected in elevated concentrations in the unfiltered groundwater samples.

5.2.4 Pesticides and PCBs in Groundwater

Pesticides and PCBs were analyzed for all groundwater samples collected and are summarized in **Table 11** and **Figure 13**. Complete analytical reports are provided in **Appendix N**.

The only pesticide detected was Dieldrin which was detected in GW-5 at a concentration of 0.018 µg/l which exceeds the Class GA GWQS of 0.004 µg/l. Dieldrin was not detected in any soil samples on-Site. However, Dieldrin was detected in soils at the adjacent, upgradient property located at 39-27 29th Street. Therefore, it is highly probable that



source of Dieldrin is an off-Site, upgradient property. No PCBs were detected in any samples above method detection limits.

5.3 Soil Vapor and Indoor Air Quality Investigation Results

Both sub-slab soil vapor and indoor air quality (IAQ) sampling was performed in general conformance with NYSDOH guidance. Seven (7) sub-slab vapor probe locations were sampled and IAQ samples in breathing zones (3-5 feet above grade surface) were also collected at four of the sub-slab point locations concurrently. An exterior sample was collected to establish background ambient air conditions. Sub-Slab and IAQ sample locations and results are presented in **Figure 14**.

Actual sample collection parameters including vacuums, times of collection and flow rate information were discussed previously in **Section 4.6** (including sub-sections) and are summarized in **Table 12**. As indicated in **Table 12**, all canisters (both sub-slab and IAQ samples) were stopped before the full eight-hour period to ensure that there was residual vacuum remaining upon termination of testing. All samples were run for TO-15 VOCs with low detection limits. Sample results are summarized in **Table 13** and **Figure 14** (chlorinated VOCs only). Complete analytical reports are provided in **Appendix O**.

Seven chlorinated VOCs are specifically included in NYSDOH SVI evaluation guidance: carbon tetrachloride (CT), 1,1-Dichloroethene (11-DCE), cis-1,2-Dichloroethene (c12DCE), 1,1,1-Trichloroethane (111TCA), PCE, TCE and VC. These seven compounds were evaluated using the Matrix 1 and Matrix 2 criteria of the NYSDOH guidance to determine if the combination of sub-slab vapor concentrations and IAQ sample concentrations warranted no action, monitoring, or mitigation recommendations. As indicated in **Table 13**, no action was recommended with respect to CT, 11DCE, 111TCA and VC in any of the sample locations⁶. Monitoring or mitigation was recommended in at least one sample location for c12DCE, PCE and TCE:

- In evaluating c12DCE, no action was recommended by the NYSDOH matrix for sample locations SP-1 and SP-3. However, monitoring was recommended at the SP-2 location due to a sub-slab concentration of 920 $\mu\text{g}/\text{m}^3$ of c12DCE. Importantly, indoor air concentrations of c12DCE at this same location were non-detectable⁶. Mitigation was recommended by the NYSDOH matrix at SP-4 (due to 1,330 $\mu\text{g}/\text{m}^3$ in the sub-slab sample and 0.95 $\mu\text{g}/\text{m}^3$ in the corresponding IAQ sample). Although no corresponding IAQ sample was collected at the SP-6

⁶ It should be noted that some detection limits were above the matrix screening levels for some parameters. Non-detectable results, even if above the matrix values, were considered to be the absence of a certain parameter in the context of this discussion. Importantly, Since PCE and TCE have triggered mitigation and associated monitoring, even if other chlorinated parameters have not using the context above regarding detection limits, future mitigation and monitoring will also address compounds with the noted, elevated detection limits.



location, the sub-slab results for c12DCE were sufficiently elevated to also indicate mitigation based upon the NYSDOH matrix (1,590 $\mu\text{g}/\text{m}^3$ of c12DCE).

- Mitigation was recommended at all sample locations based upon PCE results for both sub-slab and IAQ samples. The highest sub-slab concentrations of PCE were detected at SP-4 where 668,000 $\mu\text{g}/\text{m}^3$ of PCE were detected). IAQ sample results for PCE were also elevated at all locations where concentrations of 152 $\mu\text{g}/\text{m}^3$, 236 $\mu\text{g}/\text{m}^3$, 158 $\mu\text{g}/\text{m}^3$, and 279 $\mu\text{g}/\text{m}^3$ were detected in samples IAQ-1, IAQ-2B, IAQ-3 and IAQ-4, respectively.
- Mitigation was recommended at all sample locations for TCE as well. However, the mitigation recommendation for TCE was driven by elevated sub-slab concentrations only (i.e., indoor air concentrations of TCE did not exceed levels in the NYSDOH Matrix indicating automatic mitigation recommendations). The highest sub-slab concentrations of TCE were detected at SP-4 where 2,140 $\mu\text{g}/\text{m}^3$ of TCE were detected). IAQ sample results for TCE were 1.2 $\mu\text{g}/\text{m}^3$, 2.2 $\mu\text{g}/\text{m}^3$, 1.1 $\mu\text{g}/\text{m}^3$, and 1.8 $\mu\text{g}/\text{m}^3$ in samples IAQ-1, IAQ-2B, IAQ-3 and IAQ-4, respectively.

As discussed previously in the groundwater data evaluation discussion, there is a confirmed regional groundwater plume upgradient of the subject property. It is likely that the elevated sub-slab vapor concentrations are the result of the regional, shallow groundwater impacts, because c12DCE, PCE, and TCE concentrations in the extensive on-Site soil sampling program did not indicate any samples exceeding their respective unrestricted use SCOs.



6.0 QUALITATIVE EXPOSURE ASSESSMENT

This section generally follows the guidelines presented in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC, May 2010) to conduct a qualitative human health exposure assessment (HHEA). This assessment is being conducted to consider potential exposure to Site-related constituents of potential concern (COPCs) by human receptors and is limited to the data presented in this report. It is very important to note that this assessment is qualitative in nature only and not intended to develop quantitative human health evaluation or "risk" estimates.

For the purposes of this assessment, constituents detected above UUSCOs in Site media are defined as COPCs. Investigations have identified COPCs in Site media at concentrations above UUSCOs (Figures 8, 10, and 11) the main COPCs identified at this Site are VOCs including:

- PCE;
- TCE;
- C12DCE; and,
- Vinyl chloride.

Human exposure to COPCs occurs via several possible routes, including ingestion, dermal contact, and inhalation. Exposure assessment is the process of describing, measuring, or estimating the intensity, frequency, and duration of potential human exposure to COPCs in environmental media (e.g., soil, air) at a site. This section discusses the mechanisms by which people (receptors) might come in contact with COPCs. The assessment includes the following:

- Description of the exposure setting;
- Identification of potential receptors;
- Identification of release mechanisms; and
- Identification of potential sources and exposure pathways.

A conceptual site model (CSM) was developed based on the history, conditions, analytical results, and the commercial use of the Site. The CSM identifies the relationship among sources, release mechanisms, exposure media, exposure routes, and potential receptors.



6.1 Exposure Setting

Potential exposure to COPCs at a site depends on a number of factors related to the physical characteristics of a site and its surroundings. These factors include location, surrounding land use, surface topography, hydrogeology, meteorology, and vegetation. They also include factors related to the current and anticipated future use(s) of the property. These factors determine the types of activities that might occur at the Site, the degree to which the Site is accessible to the general public, and the mechanisms that might result in migration of COPCs to on-Site and off-Site populations.

6.1.1 Physical Setting and Land Use

The Site is located in a multi-use area comprised of commercial, and residential properties. Properties immediately surrounding the Site include commercial buildings to the south (downgradient), commercial properties to the west (side gradient), large parking lot and train tracks to the east (down- and side-gradient), and commercial properties to the north (upgradient). There are residential buildings located north and upgradient of the Site and a hotel located south of the site beyond the commercial building and the street.

The Site consists of an approximately 7,500 square foot one-story concrete building that occupies the entire lot. The back (north-northwest side) of the lot abuts adjacent buildings and a small driveway is located immediately to the west of the site building (see **Figure 2**). The building has no basement.

In addition to land use, water use also contributes to the degree of potential exposure to COPCs at a site. Based on groundwater investigations which have been performed on the Site, and previous investigations conducted for the NYSDEC on the adjacent properties there is no significant groundwater aquifer within the overburden soils or fill materials. Groundwater flow appears to be generally toward the south, at a depth of between 22.5 and 25.5 ft.-bgs. The groundwater in the vicinity of the Site is not likely to be used as a drinking water source due to:

- The small amount of water available relative to water needs;
- A local ordinance prohibiting water supply wells in the City; and,
- The fact that public drinking water is available throughout the area.

Based upon this information and the assumed depth to groundwater at the Site, exposure pathways to potential COPCs in groundwater are currently not considered to be potentially complete based upon existing land use in the area. The groundwater exposure pathway would only be complete during future groundwater investigations or



under construction scenarios where dewatering to depths greater than 20 feet are required which are unlikely in the vicinity of the site.

6.2 Identification of Potential Receptors

Potential receptors for both on-Site and immediately off-Site were considered for existing site use as well as reasonable, potential future site use scenarios.

6.2.1 On-Site Receptors

The identification of potential human receptors is based on the characteristics of the Site, the surrounding land uses, and the anticipated future land use.

The Site is currently occupied by a wholesale fabric warehouse with operations limited to receipt and shipping of fabric rolls, fabric storage prior to distribution and customized fabric cutting and trimming to meet order requirements. The workers in the fabric warehouse are potential receptors. The human receptor populations for current on-Site conditions include workers and visitors. Workers would be limited to adults. With regard to possible future on-Site receptors, it is likely that it would be limited to adults as well under a future commercial operating scenario or a future construction scenario. On-Site residential receptors are not considered realistically plausible for the current or future use of the Site.

6.2.2 Off-Site Receptors

Off-site receptors could potentially include the following:

- Adult men and women working in the area in commercial establishments or performing construction in the vicinity of the Subject property;
- Men, women, and children local retail establishments. However, the extent of potential exposure, if any, for these receptors would be very limited; and,
- Potential residential (men, women, and / or children) occupants further downgradient from the Site (there are no known immediately adjacent residents downgradient of the Subject property).

As is discussed below, potential receptors may not ever become actual receptors depending upon the completed exposure pathways that may or may not be present.

6.3 Sources, Mechanisms of Releases, and Mechanisms of Transport

COPCs at the Site are likely derived from historical operations or off-site sources. COPCs could have been released to soil through spills or operational practices during these operations. Off-site groundwater impacts could have sources from up-gradient spills or



operational practices. The following is a discussion of possible release and transport mechanisms.

6.3.1 Fugitive Dust Generation

Volatile and non-volatile chemicals present in soil can be potentially released to ambient air as a result of fugitive dust generation. Based on the current commercial land use, the majority of the Site and surrounding area is covered by structures, concrete, and asphalt. The potential for soil particle transport with fugitive dust is not likely under current Site conditions.

Under a future construction scenario on- or off-Site, a Soil Management Plan (SMP) would typically be required and would address monitoring for dusts / particulates as well as dust control measures to minimize potential exposures.

6.3.2 Volatilization

Volatile chemicals present in soil/fill, groundwater, and soil vapor may be released to ambient or indoor air either from or through the soil/fill underlying current or future building structures. Volatile chemicals typically have a low organic-carbon partition coefficient (K_{oc}), low molecular weight, and a high Henry's Law constant.

No volatile organic compounds were detected in site soils above 6 NYCRR Part 375 unrestricted use SCOs. However, several VOCs were detected above the thresholds of the NYSDOH October 2006 SVI Guidance Document (as amended). Several VOCs were also detected in the Site groundwater at concentrations above their respective Class GA GWQS. As these exceedances are located within the footprint of the building, a sub-slab depressurization system is being proposed as an Interim Remedial Measure (IRM) for the entire building, to mitigate a realistic, potential exposure pathway for current and future site occupants. With regard to off-site transport, vapors may also be released as indicated above for on-Site if contamination in groundwater migrates off-site.

6.3.3 Surface Water Runoff

Erosion and transport of surface soils and associated sorbed chemicals in surface water runoff is a potential migration pathway; however, the potential for soil particle transport with surface water runoff is not likely under current Site conditions given that the entire building is paved and there are no floor drains within the building (i.e., there is no realistic mechanism for storm water to come into contact with soils underlying the building structure).



6.3.4 Leaching

Leaching refers to chemicals present in soil/fill migrating downward to groundwater as a result of infiltration of precipitation. Under the current commercial land use, the entire Site is covered by asphalt, buildings, and is serviced by the City of New York Sewer Authority's sanitary water collection system minimizing the infiltration of water through the fill material. As such, leaching is not considered a relevant migration pathway. In addition, the data generated during this RI have indicated that the COPC were not present in on-site soils at concentrations exceeding applicable regulatory standards.

6.3.5 Groundwater Transport

Chemicals present in groundwater may be transported horizontally and vertically through the Site via groundwater flow. Based on groundwater elevations measured as part of this RI, groundwater underlying the Site migrates horizontally to the south. As discussed previously in this RI Report, there are confirmed concentrations of upgradient COPCs as well as their presence on-Site confirming that groundwater transport is a realistic release and transport mechanism. As a result, actual on-Site groundwater impacts have been confirmed and downgradient, off-site impacts (as well as upgradient impacts) are likely and should be considered in off-site evaluations.

6.4 Identification of Potential Exposure Pathways

This section identifies the potential pathways by which the receptors described above could be exposed to COPCs at the Site. An exposure pathway is the mechanism by which an individual may come into contact with COPCs in the environment. An exposure pathway is defined by four elements:

1. A source and mechanism of COPC release to the environment;
2. An environmental receiving or transport medium (e.g., air, soil) for the released COPC;
3. A point of potential contact with the medium of concern; and
4. An exposure route (e.g., ingestion) at the contact point.

An exposure pathway is considered "complete" only if all four elements are present. A discussion of the potential exposure pathways is presented below. It should be noted that the Site and surrounding areas are serviced by municipal water and the use of municipal water is required by the City of New York. Use of ground water at the Site for drinking will be further prohibited through filing of an Environmental Easement.



Based upon consideration of sources, release mechanisms, and receptors, the following potential exposure pathways exist on-Site under current operating conditions:

- Inhalation of vapors impacted by the COPCs as a result of SVI;

It is important to note that the following exposure pathways are not considered complete under current operating conditions although they may be potentially applicable under future use or construction scenarios:

- Ingestion or dermal contact with impacted soil: Since the entire building is covered with concrete, there is no current exposure pathway to come into contact with COPCs in soil currently. In addition, future ingestion or dermal contact with COPCs in soils at levels warranting a concern appear unlikely given that all COPCs were within their respective standards for Unrestricted Use. Even under a future construction scenario where dermal contact or ingestion of soil could be possible, the fact that the data indicate soils meet the most stringent of soil standards (unrestricted use standards) for the COPCs makes it unlikely that a quantitative human health evaluation (beyond the scope of this RI) would identify concerns for a limited duration construction worker exposure scenario.
- Ingestion or dermal contact with groundwater: There is currently no potential point of contact with impacted groundwater under current Site use as groundwater is not used for potable water, there are no cooling water or industrial uses of the site groundwater, groundwater is present at approximately 20 feet below grade under a concrete slab covering the entire Site. Groundwater contact could be possible under a future construction scenario involving dewatering; however, construction requiring excavation and dewatering to depths greater than 20 feet, while possible, are uncommon.

6.5 Potential Ecological Risks (Qualitative Discussion)

The Site is a former urban fill site located within a highly developed, urban area in Long Island City. The Site use is commercial with the majority of the Site covered by buildings, concrete sidewalks and asphalt, providing little or no wildlife habitat or food value. As such, no unacceptable ecological risks are anticipated.

The NYSDEC's decision key contained in Appendix 3C of DER-10 (NYSDEC, 2010) was utilized to evaluate whether or not performance of a Fish and Wildlife Resources Impact Analysis was needed. The RI demonstrated that there is evidence that COPCs are present at the Site in the environment. Therefore, the Site can be considered to have been affected by one or more discharge or spill events. The Site currently contains little to no ecological resources, as the Site is covered by impervious surfaces site-wide. A review of the NYSDEC's internet-based Environmental Resources Management Resource Mapper suggests that the Site and adjacent properties do not contain state-regulated freshwater wetlands and/or rare plants and/or rare animals. Evidence of significant on-Site ecological resources was not observed during the RI. Additionally, there is no evidence



that contamination present at the Site has the potential to migrate to and impact potential off-Site ecological resources. Therefore, a Fish and Wildlife Resources Impact Analysis was not needed based on interpretation of NYSDEC guidance (DER-1 0 Appendix 3C).

6.6 Summary of Completed Exposure Pathways

Based on the qualitative analysis of chemical fate and transport provided above, the potentially complete exposure pathways through which Site COPCs could reach receptors are:

Current Operating Conditions and Future / Construction Worker Scenarios:

- Inhalation of soil vapors via volatilization of COPCs in soil and groundwater: This exposure pathway is considered complete for both current and future use scenarios;

Future / Construction Worker Scenarios Only

- Dermal contact or ingestion of soils in a future, construction worker scenario: Although possible from a qualitative perspective, it should be considered extremely unlikely if a quantitative assessment were to be performed because the COPCs were not present on-Site at concentrations exceeding Unrestricted Use Soil Cleanup Objectives which are designed to be protective of human health and the environment. This pathway is potentially complete only under a future construction worker scenario as the building slab currently covers the entire floor surface to prevent contact with any sub-surface soils. If future construction would involve removal of the floor slab, a soil management plan should be prepared to minimize potential exposure.
- Dermal contact or ingestion of groundwater in a future, construction worker scenario only: Currently there is no point of contact possible with groundwater underlying the site and the aquifer underlying the site is not used for potable water. The only qualitative exposure pathway that would be plausible would be a future construction scenario involving dewatering at depths greater than 20 feet below grade which is considered highly improbable.

It is important to note that the foregoing conclusions are based upon a qualitative assessment only. A quantitative exposure assessment and human health evaluation is beyond the scope of this RI. The determination of a potentially complete exposure pathway from a qualitative perspective is not a confirmation that an actual exposure pathway exists nor any confirmation that there is a numerical "risk" exceeding any potentially applicable regulatory criteria or guidelines.



7.0 FINDINGS AND CONCLUSIONS

Based upon the work completed in this RI, the following conclusions can be drawn.

- Soils underlying the Subject Property are primarily comprised of bedding material for the concrete floor slab to approximately 1 foot below grade surface (bgs). From 1 foot to the approximate top of the water table at 20 feet bgs, soils were generally a mixture of light to medium brown sands with some gravel and silty sands. Clays were only noted sporadically at B-5 in the boring closes to 30th Street.
- There are no significant impacts to on-Site soils for VOCs, SVOCs, metals, pesticides or PCBs based upon the 23 soil samples collected. The vast majority of parameters analyzed for were not detected in samples and for those parameters that were detected, all sample results indicated concentrations well below NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCOs). Sampling included locations which were immediately below former dry cleaning operational areas from grade to the water table. Based upon the soil data obtained, no further action for soil are recommended.
- Groundwater is encountered at the Site at approximately 20 feet bgs and the local groundwater flow direction is generally from the north toward the south. Review of EDR report findings have indicated the presence of multiple sites with documented groundwater impacts upgradient of the subject property and within ½ mile. Based upon EDR data reported, *the concentrations of chlorinated VOCs upgradient were several orders of magnitude higher in concentration than the levels of chlorinated VOCs detected anywhere on the subject property.*
- Two contaminants were detected in groundwater at concentrations exceeding their respective Class GA Groundwater Quality Standard: PCE and TCE. The maximum concentration of PCE was detected in GW-5 (downgradient) at 340 µg/l. However, similar concentrations were also detected on-Site upgradient at GW-1 and GW-3 (280 µg/l and 175 µg/l, respectively). Importantly, all concentrations of PCE detected on-Site were well below the reported concentration of 910 µg/l of PCE detected immediately upgradient on the adjacent 39-27 29th Street site (i.e., in Preferred Well GW-1 [a different well than GW-1 on the Subject property]).
- TCE was detected at a maximum concentration of 6.9 µg/l in GW-5 (downgradient) but also detected upgradient in GW-1 at 5.4 µg/l. Both detections are only slightly above the Class GA Groundwater Quality Standard of 5 µg/l for TCE. Based upon the fact that neither PCE nor TCE were detected in any Site soil samples above UUSCOs, including those samples collected immediately above the screened interval in the area of the Site that was reportedly the location of former dry cleaning operations, it appears as if the groundwater impacts noted for PCE and TCE may be the results of off-Site sources and not historical on-Site operations.
- Several metals were detected in groundwater samples at concentrations exceeding their respective Class GA Groundwater Quality Standards: Chromium, Iron, Lead, Magnesium, Manganese, and Sodium. Many of these wells were also detected at elevated levels upgradient during the Preferred Phase II at the



adjacent 39-27 29th Street site. During development of Site monitoring wells and subsequent purging before sample collection, only GW-5 was able to be developed and purged so that turbidity readings were less than 50 NTUs. Therefore all metals results (unfiltered) must be interpreted cautiously because reported results may be biased high.

- No SVOCs or PCBs were detected in groundwater at concentrations exceeding their respective Class GA Groundwater Quality Standards. Of the pesticides analyzed, only Dieldrin was detected above its Class GA Groundwater Quality Standard of 0.004 µg/l with a concentration of 0.018 µg/l in GW-5. Dieldrin was non-detectable in all other samples. Dieldrin was not known to be used on-Site and was not detected in any on-Site soil samples. It was however, detected in soils at the upgradient 39-27 29th Street site making it likely that the source of Dieldrin is upgradient of the Subject Property.
- Elevated sub-slab vapor concentrations of PCE and TCE resulting in a NYSDOH guidance recommendation to “mitigate” were noted in all seven (7) sub-slab vapor probe locations. c12DCE sub-slab soil vapor concentrations were noted in two locations to the degree that NYSDOH matrix recommendations indicated a mitigation recommendation. The highest concentrations of PCE and TCE in sub-slab vapors were noted at SP-4 (near the northwest corner of the building) with 668,000 µg/m³ of PCE and 2,140 µg/m³ of TCE detected. The highest concentration of c12DCE was noted at SP-6 (1,590 µg/m³). As discussed previously, PCE and TCE are both considered to be present in groundwater regionally at concentrations significantly higher than those detected anywhere on the Subject property and PCE and TCE were also both absent in all soil samples on-Site at concentrations above UUSCOs. Therefore, it is probable that the sub-slab vapor concentrations noted may be the result of contaminants which have migrated under the subject property from off-Site.

Indoor air quality samples were collected from four locations that were collocated with SP-1 through SP-4. Elevated concentrations of PCE were noted in all four IAQ samples with the maximum concentration detected at SP-4/IAQ-4 (279 µg/m³).



8.0 RECOMMENDATIONS

Based upon the findings stated in this report and discussions with representatives for the Volunteer, the following recommendations are made:

- In order to evaluate the potential source of the PCE and TCE in the groundwater under the Site, two (2) off-Site upgradient wells will be installed. These two wells will be sampled along with the existing wells of the Site. If possible, the two wells (if they still exist) installed on the 39-27 29th Street Site should be sampled concurrently. This will allow for a true assessment of the potential off-site upgradient sources of the contamination.
- As elevated sub-slab vapor concentrations of PCE and TCE resulting in a NYSDOH guidance recommendation to “mitigate” were noted in all seven (7) sub-slab vapor probe locations, a Vapor Intrusion Mitigation System (VIMS) will be designed and installed on the Site as an Interim Remediation Measure (IRM).
- If the additional information gathered during this stage of the investigation indicates that the Subject Site is a source of the groundwater contamination, a remedial measure such as *in-situ* chemical oxidation will be contemplated. The NYSDEC recommendation of an interim measure of air sparge/soil vapor extraction will not be feasible for the Subject Site for the following reason:
 - The magnitude and the logistics of the construction effort will prohibit the utilization of such a system. As NYSDEC has witnessed, Site operations utilize the *entire* foot print of the Site and there is no exterior space within the property. A space to house the system machinery is not available. In addition, the time required to install the system will unquestionably impose significant financial hardship on the current tenant and landlord.
 - The modest level of groundwater contamination at the Site does not warrant the need for an IRM to address groundwater contamination. The proposed monitoring wells along with sampling of a number of existing on-Site and off-Site wells will afford the opportunity to further refine the evaluation of local and surrounding groundwater impacts. Confirmation of an on-Site source will be essential in order to propose any effective groundwater and soil remedial system.
- The proposed vapor mitigation system will be designed to extract soil vapor from the soil matrix up to a minimum of 5 feet below the concrete floor



9.0 INTERIM REMEDIATION MEASURE (IRM)

As discussed between the NYSDEC and representatives for the Volunteer, a Vapor Intrusion Mitigation System (VIMS) will be installed on the Site to address soil vapors and protect site occupants. The proposed VIMS will be designed to create a negative pressure field (relative to typical building pressures at the time of diagnostic testing) under the slab of the building, so that sub slab vapors in these areas will be unlikely to migrate upward into the building. The active Sub-Slab Depressurization System (SSDS) will be able to maintain negative sub slab pressures under reasonably anticipated conditions and prevent soil borne vapors from entering into the building. The suction (extraction) points will be screened from just below the concrete floor to five (5) feet below the surface. The goal of the system is to create a sub slab negative pressure field with a minimum vacuum field of -0.004 inches of water column ("wc) and extract VOCs that may be present in the soil.

It is important to note that soil samples collected did not indicate the presence of any VOCs above their respective Unrestricted Use Soil Cleanup Objectives. Therefore, the SSDS proposed as an IRM is not designed to "remediate" soil since soil contamination warranting remediation is not present at the site based upon the RI results. However, it is the intent of the Volunteer to install a relatively robust SSDS that also address soil impacts, if any, that may be present.



TABLES



Table 1. Western Long Island stratigraphic column with geologic and hydrogeologic interpretation

System	Series	Geologic Unit		Hydrogeologic unit	Range of thickness, in feet	Range of altitude of upper surface, in feet above sea level
QUATERNARY	Holocene	Shore, beach salt-marsh deposits, and alluvium				
	Pleistocene	Wisconsin Glaciation (Harbor Hill, interstadial marine and Ronkonkoma? Drift	Till (ground and terminal moraine)	Upper Glacial aquifer	0 to 300	Land surface
			Outwash			
			"20-foot" clay (marine)			
		unconformity?				
		Sangamon Interglaciation	Gardiners Clay (marine)	Gardiners Clay	0 to 150	-40 to -200
unconformity?						
Pre-Wisconsin Glaciation (Illinoian?)	Jameco Gravel	Jameco aquifer ¹	0 to 200	-90 to -240		
unconformity?						
CRETACEOUS	Upper Cretaceous	Magothy Matawan Group undifferentiated		Magothy aquifer ¹	0 to 500	40 to -400
		RARITAN FORMATION	unconformity?			
			Clay member	Raritan confining unit	0 to 200	30 to -650
			Lloyd sand member	Lloyd aquifer	0 to 300	-90 to -825
unconformity?						
Precambrian		Crystalline bedrock		Bedrock	-	15 to -1100

¹ The Magothy and Jameco aquifers are often considered as one hydrologic unit with differing hydraulic properties. (See discussion in text.)

Table 2
Monitoring Well Installation and Gauging Summary
UIC Well Installation Details

Well ID	Diameter (inches)	Casing Material	Slot Size (inches)	Total Depth (ft bgs)	Screened Interval (feet bgs)	Initial Gauging Date	Elevation (ft) ³	Depth to Water (ft) ⁴	Water Table Elevation (2/8/14)
GW-1	2"	PVC (sch. 40)	0.020"	29.03	14.03 - 29.03	02/08/14	30.47	20.68	9.79
GW-2	2"	PVC (sch. 40)	0.020"	28.56	13.56 - 28.56	02/08/14	30.39	20.68	9.71
GW-3	2"	PVC (sch. 40)	0.020"	29.43	14.43 - 29.43	02/08/14	30.41	20.60	9.81
GW-4	2"	PVC (sch. 40)	0.020"	27.22	12.72 - 27.72	02/08/14	30.47	20.70	9.77
GW-5	2"	PVC (sch. 40)	0.020"	29.00	14.00 - 29.00	02/08/14	30.40	20.70	9.70

Notes:

1. bgs = below grade surface
2. TOC = top of casing (north edge reference)
3. TOC Elevation refers to NAVD 1088 Datum from NY Land Surveyor PC Survey dated 2/8/14.
4. Gauging and sampling data: B. Krafton sample logs.

Table 3
Remedial Investigation Summary

Soil Investigation:

Soil Boring ID	Total Depth (ft)*	Depth to Water (ft)	Depth of Samples Submitted for Lab Analyses*	Analytical Parameters**
B-1	29.03	20.68	(A) 4.5' – 5.0' (B) 9.5' – 10.0' (C) 14.5' – 15.0' (D) 19.5' – 20.0'	VOCs VOCs VOCs VOCs, SVOCs, PCBs, Pesticides, Metals
B-2	28.56	20.68	(A) 3.0' – 3.5' (B) 8.0' – 8.5' (C) 13.0' – 13.5' (D) 14.5' – 15.0' (E) 19.5' – 20.0'	VOCs VOCs VOCs SVOCs, PCBs, Pesticides, Metals VOCs
B-3	29.43	20.60	(A) 2.5' – 3.0' (B) 8.0' – 8.5' (C) 13.0' – 13.5' (D) 14.5' – 15.0' (E) 17.5' – 18.0'	VOCs VOCs VOCs SVOCs, PCBs, Pesticides, Metals VOCs
B-4	27.22	20.70	(A) 3.0' – 3.5' (B) 8.0' – 8.5' (C) 13.5' – 14.0' (D) 19.5' – 20.0'	VOCs VOCs VOCs, SVOCs, PCBs, Pesticides, Metals VOCs
B-5	29.00	20.70	(A) 4.5' – 5.0' (B) 5.8' – 6.3' (C) 9.5' – 10.0' (D) 13.0' – 13.5' (E) 18.5' – 19.0'	VOCs SVOCs, PCBs, Pesticides, Metals VOCs VOCs VOCs

*The borings were completed to the water table (depth varied at each location). Samples submitted for analyses were determined based upon field observations and depth to water at each location.

** In addition, QA/QC samples were collected per the QAPP.

Groundwater Investigation:

Well ID*	Screened Interval (ft bgs)	Total Depth (ft bgs)*	Depth to Water (ft)	Analytical Parameters*
GW-1	14.03 - 29.03	29.03	20.68	TCL VOCs, TCL SVOC and TAL Metals
GW-2	13.56 - 28.56	28.56	20.68	TCL VOCs, TCL SVOC, PCBs, Pesticides and TAL Metals
GW-3	14.43 - 29.43	29.43	20.60	TCL VOCs, TCL SVOC, PCBs, Pesticides and TAL Metals
GW-4	12.72 - 27.72	27.22	20.70	TCL VOCs, TCL SVOC and TAL Metals
GW-5	14.00 - 29.00	29.00	20.70	TCL VOCs, TCL SVOC, PCBs, Pesticides and TAL Metals

* In addition, QA/QC samples were collected per the QAPP.

Table 3
Remedial Investigation Summary (cont'd)

Soil Vapor Intrusion Investigation:

Soil Vapor Point ID	Sample Locations*	Type of Samples to Be Collected	Analytical Parameters**
SS-1 / IAQ-1	Sub-slab approx. 4" below slab; IAQ at 3'-5' above finished floor	Sub-slab vapor and co-located IAQ samples	All samples VOCs by TO-15 using Summa canisters. Low-detection limits
SS-2 / IAQ-2	Sub-slab approx. 4" below slab; IAQ at 3'-5' above finished floor	Sub-slab vapor and co-located IAQ samples	All samples VOCs by TO-15 using Summa canisters. Low-detection limits
SS-3 / IAQ-3	Sub-slab approx. 4" below slab; IAQ at 3'-5' above finished floor	Sub-slab vapor and co-located IAQ samples	All samples VOCs by TO-15 using Summa canisters. Low-detection limits
SS-4 / IAQ-4	Sub-slab approx. 4" below slab; IAQ at 3'-5' above finished floor	Sub-slab vapor and co-located IAQ samples	All samples VOCs by TO-15 using Summa canisters. Low-detection limits
SS-5	Sub-slab approx. 4" below slab only	Sub-slab vapor only	All samples VOCs by TO-15 using Summa canisters. Low-detection limits
SS-5	Sub-slab approx. 4" below slab only	Sub-slab vapor only	All samples VOCs by TO-15 using Summa canisters. Low-detection limits
SS-7	Sub-slab approx. 4" below slab only	Sub-slab vapor only	All samples VOCs by TO-15 using Summa canisters. Low-detection limits

**In addition to the samples indicated above, an additional upwind ambient air sample was also be included on the day of sampling.*

*** In addition, QA/QC samples were collected per the QAPP.*

Table 4

Soil Sampling Data Summary
Volatile Organic Compounds (VOCs)

Parameter	NYSDEC Unrestricted Use SCO	B-1A (4.5-5.0 ft)	B-1B (9.5-10.0 ft)	B-1C (14.5-15.0 ft)	B-1D (19.5-20.0 ft)
Acetone	0.05	<0.015 ND	<0.015 ND	<0.016 ND	<0.012 ND
Benzene	0.06	<0.0015 ND	<0.0015 ND	<0.0016 ND	<0.0012 ND
Bromochloromethane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Bromodichloromethane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Bromoform	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Bromomethane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
2-Butanone (MEK)	0.12	<0.015 ND	<0.015 ND	<0.016 ND	<0.012 ND
Carbon disulfide	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Carbon Tetrachloride	0.76	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Chlorobenzene	1.1	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Chloroethane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Chloroform	0.37	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Chloromethane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Cyclohexane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,2-Dibromo-3-chloropropane	NA	<0.015 ND	<0.015 ND	<0.016 ND	<0.012 ND
Dibromochloromethane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,2-Dibromoethane	NA	<0.0015 ND	<0.0015 ND	<0.0016 ND	<0.0012 ND
1,2-Dichlorobenzene	1.1	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,3-Dichlorobenzene	2.4	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,4-Dichlorobenzene	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,4-Dichlorobenzene	1.8	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Dichlorodifluoromethane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,1-Dichloroethane	0.27	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,2-Dichloroethane	0.02	<0.0015 ND	<0.0015 ND	<0.0016 ND	<0.0012 ND
1,1-Dichloroethene	0.33	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
cis-1,2-Dichloroethene	0.25	<0.0073 ND	<0.0073 ND	<0.008 ND	0.0011 J
trans-1,2-Dichloroethene	0.19	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,2-Dichloropropane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
cis-1,3-Dichloropropene	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
trans-1,3-Dichloropropene	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,4-Dioxane	NA	<0.180 ND	<0.180 ND	<0.200 ND	<0.150 ND
Ethylbenzene	1	<0.0015 ND	<0.0015 ND	<0.0016 ND	<0.0012 ND
Freon 113	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
2-Hexanone	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Isopropylbenzene	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Methyl Acetate	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Methylcyclohexane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Methyl Tert Butyl Ether	0.93	<0.0015 ND	<0.0015 ND	<0.0016 ND	<0.0012 ND
4-Methyl-2-pentanone(MIBK)	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Methylene chloride	0.05	0.0031 J	<0.0073 ND	<0.008 ND	<0.006 ND
Styrene	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,1,2,2-Tetrachloroethane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Tetrachloroethene	1.3	0.0033 J	0.0037 J	0.0039 J	0.153
Toluene	0.7	<0.0015 ND	<0.0015 ND	<0.0016 ND	<0.0012 ND
1,2,3-Trichlorobenzene	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,2,4-Trichlorobenzene	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,1,1-Trichloroethane	0.68	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
1,1,2-Trichloroethane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Trichloroethene	0.47	<0.0073 ND	<0.0073 ND	<0.008 ND	0.0092 J
Trichlorofluoromethane	NA	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
Vinyl chloride	0.02	<0.0073 ND	<0.0073 ND	<0.008 ND	<0.006 ND
m,p-Xylene	NA	<0.0015 ND	<0.0015 ND	<0.0016 ND	<0.0012 ND
o-Xylene	NA	<0.0015 ND	<0.0015 ND	<0.0016 ND	<0.0012 ND
Xylene (total)	0.26	<0.0015 ND	<0.0015 ND	<0.0016 ND	<0.0012 ND

Notes:

1. All results reported in mg/kg unless noted.
2. ND = Not Detected above the Reporting Limit (RL)
3. J = Estimated value below the Reporting Limit
4. Reference Soil Cleanup Objective is NYSDEC Unrestricted Use Standard.



Table 4

Soil Sampling Data Summary
Volatile Organic Compounds (VOCs)

Parameter	NYSDEC Unrestricted Use SCO	B-2A (3.0-3.5 ft)	B-2B (8.0-8.5 ft)	B-2C (13.0-13.5 ft)	B-2E (19.5-20.0 ft)
Acetone	0.05	<0.011 ND	<0.014 ND	<0.013 ND	<0.017 ND
Benzene	0.06	<0.0011 ND	<0.0014 ND	<0.0013 ND	<0.0017 ND
Bromochloromethane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Bromodichloromethane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Bromoform	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Bromomethane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
2-Butanone (MEK)	0.12	<0.011 ND	<0.014 ND	<0.013 ND	<0.017 ND
Carbon disulfide	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Carbon Tetrachloride	0.76	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Chlorobenzene	1.1	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Chloroethane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Chloroform	0.37	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Chloromethane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Cyclohexane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,2-Dibromo-3-chloropropane	NA	<0.011 ND	<0.014 ND	<0.013 ND	<0.017 ND
Dibromochloromethane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,2-Dibromoethane	NA	<0.0011 ND	<0.0014 ND	<0.0013 ND	<0.0017 ND
1,2-Dichlorobenzene	1.1	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,3-Dichlorobenzene	2.4	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,4-Dichlorobenzene	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,4-Dichlorobenzene	1.8	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Dichlorodifluoromethane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,1-Dichloroethane	0.27	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,2-Dichloroethane	0.02	<0.0011 ND	<0.0072 ND	<0.0013 ND	<0.0017 ND
1,1-Dichloroethene	0.33	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
cis-1,2-Dichloroethene	0.25	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
trans-1,2-Dichloroethene	0.19	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,2-Dichloropropane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
cis-1,3-Dichloropropene	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
trans-1,3-Dichloropropene	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,4-Dioxane	NA	<0.140 ND	<0.180 ND	<0.160 ND	<0.210 ND
Ethylbenzene	1	<0.0011 ND	<0.0014 ND	<0.0013 ND	<0.0017 ND
Freon 113	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
2-Hexanone	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Isopropylbenzene	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Methyl Acetate	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Methylcyclohexane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Methyl Tert Butyl Ether	0.93	<0.0011 ND	<0.0014 ND	<0.0013 ND	<0.0017 ND
4-Methyl-2-pentanone(MIBK)	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Methylene chloride	0.05	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Styrene	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,1,2,2-Tetrachloroethane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Tetrachloroethene	1.3	0.208	0.0058 J	0.0035 J	0.0013 J
Toluene	0.7	<0.0011 ND	<0.0014 ND	<0.0013 ND	<0.0017 ND
1,2,3-Trichlorobenzene	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,2,4-Trichlorobenzene	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,1,1-Trichloroethane	0.68	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
1,1,2-Trichloroethane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Trichloroethene	0.47	0.0043 J	<0.0072 ND	<0.0064 ND	<0.0085 ND
Trichlorofluoromethane	NA	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
Vinyl chloride	0.02	<0.0055 ND	<0.0072 ND	<0.0064 ND	<0.0085 ND
m,p-Xylene	NA	<0.0011 ND	<0.0014 ND	<0.0013 ND	<0.0017 ND
o-Xylene	NA	<0.0011 ND	<0.0014 ND	<0.0013 ND	<0.0017 ND
Xylene (total)	0.26	<0.0011 ND	<0.0014 ND	<0.0013 ND	<0.0017 ND

Notes:

1. All results reported in mg/kg unless noted.
2. ND = Not Detected above the Reporting Limit (RL)
3. J = Estimated value below the Reporting Limit
4. Reference Soil Cleanup Objective is NYSDEC Unrestricted Use Standard.



Table 4

Soil Sampling Data Summary
Volatile Organic Compounds (VOCs)

Parameter	NYSDEC Unrestricted Use SCO	B-3A (2.5-3.0 ft)	B-3B (8.0-8.5 ft)	B-3C (13.0-13.5 ft)	B-3E 17.5-18.0 ft)
Acetone	0.05	<0.012 ND	<0.013 ND	<0.012 ND	<0.012 ND
Benzene	0.06	<0.0012 ND	<0.0013 ND	<0.0012 ND	<0.0012 ND
Bromochloromethane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Bromodichloromethane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Bromoform	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Bromomethane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
2-Butanone (MEK)	0.12	<0.012 ND	<0.013 ND	<0.012 ND	<0.012 ND
Carbon disulfide	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Carbon Tetrachloride	0.76	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Chlorobenzene	1.1	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Chloroethane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Chloroform	0.37	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Chloromethane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Cyclohexane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,2-Dibromo-3-chloropropane	NA	<0.012 ND	<0.013 ND	<0.012 ND	<0.012 ND
Dibromochloromethane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,2-Dibromoethane	NA	<0.0012 ND	<0.0013 ND	<0.0012 ND	<0.006 ND
1,2-Dichlorobenzene	1.1	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,3-Dichlorobenzene	2.4	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,4-Dichlorobenzene	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,4-Dichlorobenzene	1.8	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Dichlorodifluoromethane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,1-Dichloroethane	0.27	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,2-Dichloroethane	0.02	<0.0012 ND	<0.0013 ND	<0.0012 ND	<0.0012 ND
1,1-Dichloroethene	0.33	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
cis-1,2-Dichloroethene	0.25	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
trans-1,2-Dichloroethene	0.19	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,2-Dichloropropane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
cis-1,3-Dichloropropene	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
trans-1,3-Dichloropropene	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,4-Dioxane	NA	<0.150 ND	<0.160 ND	<0.160 ND	<0.150 ND
Ethylbenzene	1	<0.0012 ND	<0.0013 ND	<0.0012 ND	<0.0012 ND
Freon 113	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
2-Hexanone	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Isopropylbenzene	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Methyl Acetate	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Methylcyclohexane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Methyl Tert Butyl Ether	0.93	<0.0012 ND	<0.0013 ND	<0.0012 ND	<0.0012 ND
4-Methyl-2-pentanone(MIBK)	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Methylene chloride	0.05	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Styrene	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,1,2,2-Tetrachloroethane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Tetrachloroethene	1.3	0.0086	0.0069	0.0022 J	0.0023 J
Toluene	0.7	<0.0012 ND	<0.0013 ND	<0.0012 ND	<0.0012 ND
1,2,3-Trichlorobenzene	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,2,4-Trichlorobenzene	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,1,1-Trichloroethane	0.68	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
1,1,2-Trichloroethane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Trichloroethene	0.47	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Trichlorofluoromethane	NA	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
Vinyl chloride	0.02	<0.0059 ND	<0.0064 ND	<0.0062 ND	<0.006 ND
m,p-Xylene	NA	<0.0012 ND	<0.0013 ND	<0.0012 ND	<0.0012 ND
o-Xylene	NA	<0.0012 ND	<0.0013 ND	<0.0012 ND	<0.0012 ND
Xylene (total)	0.26	<0.0012 ND	<0.0013 ND	<0.0012 ND	<0.0012 ND

Notes:

1. All results reported in mg/kg unless noted.
2. ND = Not Detected above the Reporting Limit (RL)
3. J = Estimated value below the Reporting Limit
4. Reference Soil Cleanup Objective is NYSDEC Unrestricted Use Standard.



Table 4

Soil Sampling Data Summary
Volatile Organic Compounds (VOCs)

Parameter	NYSDEC Unrestricted Use SCO	B-4A (3.0-3.5 ft)	B-4B (8.0-8.5 ft)	B-4C (13.5-14.0 ft)	B-4D (19.5-20.0 ft)
Acetone	0.05	<0.017 ND	<0.017 ND	<0.019 ND	<0.014 ND
Benzene	0.06	<0.0017 ND	<0.0017 ND	<0.0019 ND	<0.0014 ND
Bromochloromethane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Bromodichloromethane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Bromoform	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Bromomethane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
2-Butanone (MEK)	0.12	<0.017 ND	<0.017 ND	<0.019 ND	<0.014 ND
Carbon disulfide	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Carbon Tetrachloride	0.76	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Chlorobenzene	1.1	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Chloroethane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Chloroform	0.37	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Chloromethane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Cyclohexane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,2-Dibromo-3-chloropropane	NA	<0.017 ND	<0.017 ND	<0.019 ND	<0.014 ND
Dibromochloromethane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,2-Dibromoethane	NA	<0.0017 ND	<0.0017 ND	<0.0019 ND	<0.0014 ND
1,2-Dichlorobenzene	1.1	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,3-Dichlorobenzene	2.4	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,4-Dichlorobenzene	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,4-Dichlorobenzene	1.8	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Dichlorodifluoromethane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,1-Dichloroethane	0.27	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,2-Dichloroethane	0.02	<0.0017 ND	<0.0017 ND	<0.0019 ND	<0.0014 ND
1,1-Dichloroethene	0.33	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
cis-1,2-Dichloroethene	0.25	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
trans-1,2-Dichloroethene	0.19	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,2-Dichloropropane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
cis-1,3-Dichloropropene	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
trans-1,3-Dichloropropene	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,4-Dioxane	NA	<0.210 ND	<0.210 ND	<0.240 ND	<0.170 ND
Ethylbenzene	1	<0.0017 ND	<0.0017 ND	<0.0019 ND	<0.0014 ND
Freon 113	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
2-Hexanone	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Isopropylbenzene	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Methyl Acetate	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Methylcyclohexane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Methyl Tert Butyl Ether	0.93	<0.0017 ND	<0.0017 ND	<0.0019 ND	<0.0014 ND
4-Methyl-2-pentanone(MIBK)	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Methylene chloride	0.05	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Styrene	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,1,2,2-Tetrachloroethane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Tetrachloroethene	1.3	0.0033 J	0.0124	0.0071 J	0.0077
Toluene	0.7	<0.0017 ND	<0.0017 ND	<0.0019 ND	<0.0014 ND
1,2,3-Trichlorobenzene	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,2,4-Trichlorobenzene	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,1,1-Trichloroethane	0.68	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
1,1,2-Trichloroethane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Trichloroethene	0.47	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Trichlorofluoromethane	NA	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
Vinyl chloride	0.02	<0.0084 ND	<0.0083 ND	<0.0094 ND	<0.007 ND
m,p-Xylene	NA	<0.0017 ND	<0.0017 ND	<0.0019 ND	<0.0014 ND
o-Xylene	NA	<0.0017 ND	<0.0017 ND	<0.0019 ND	<0.0014 ND
Xylene (total)	0.26	<0.0017 ND	<0.0017 ND	<0.0019 ND	<0.0014 ND

Notes:

1. All results reported in mg/kg unless noted.
2. ND = Not Detected above the Reporting Limit (RL)
3. J = Estimated value below the Reporting Limit
4. Reference Soil Cleanup Objective is NYSDEC Unrestricted Use Standard.



Table 4

Soil Sampling Data Summary
Volatile Organic Compounds (VOCs)

Parameter	NYSDEC Unrestricted Use SCO	B-5A (4.5-5.0 ft)	B-5C (9.5-10.0 ft)	B-5D (13.0-13.5 ft)	B-5E (18.5-19.0 ft)
Acetone	0.05	<0.012 ND	<0.012 ND	<0.013 ND	<0.014 ND
Benzene	0.06	<0.0012 ND	<0.0012 ND	<0.0013 ND	<0.0014 ND
Bromochloromethane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Bromodichloromethane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Bromoform	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Bromomethane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
2-Butanone (MEK)	0.12	<0.012 ND	<0.012 ND	<0.013 ND	<0.014 ND
Carbon disulfide	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Carbon Tetrachloride	0.76	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Chlorobenzene	1.1	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Chloroethane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Chloroform	0.37	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Chloromethane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Cyclohexane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,2-Dibromo-3-chloropropane	NA	<0.012 ND	<0.012 ND	<0.013 ND	<0.014 ND
Dibromochloromethane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,2-Dibromoethane	NA	<0.0012 ND	<0.0012 ND	<0.0013 ND	<0.0014 ND
1,2-Dichlorobenzene	1.1	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,3-Dichlorobenzene	2.4	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,4-Dichlorobenzene	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,4-Dichlorobenzene	1.8	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Dichlorodifluoromethane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,1-Dichloroethane	0.27	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,2-Dichloroethane	0.02	<0.0012 ND	<0.0012 ND	<0.0013 ND	<0.0014 ND
1,1-Dichloroethene	0.33	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0072 ND
cis-1,2-Dichloroethene	0.25	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
trans-1,2-Dichloroethene	0.19	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,2-Dichloropropane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
cis-1,3-Dichloropropene	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
trans-1,3-Dichloropropene	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,4-Dioxane	NA	<0.140 ND	<0.150 ND	<0.170 ND	<0.170 ND
Ethylbenzene	1	<0.0012 ND	<0.0012 ND	<0.0013 ND	<0.0014 ND
Freon 113	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
2-Hexanone	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Isopropylbenzene	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Methyl Acetate	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Methylcyclohexane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Methyl Tert Butyl Ether	0.93	<0.0012 ND	<0.0012 ND	<0.0013 ND	<0.0014 ND
4-Methyl-2-pentanone(MIBK)	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Methylene chloride	0.05	<0.0058 ND	<0.0059 ND	0.003 J	<0.0068 ND
Styrene	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,1,2,2-Tetrachloroethane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Tetrachloroethene	1.3	0.0085	0.0092 J	0.0012 J	0.0095 J
Toluene	0.7	<0.0012 ND	<0.0012 ND	<0.0013 ND	<0.0014 ND
1,2,3-Trichlorobenzene	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,2,4-Trichlorobenzene	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,1,1-Trichloroethane	0.68	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
1,1,2-Trichloroethane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Trichloroethene	0.47	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Trichlorofluoromethane	NA	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
Vinyl chloride	0.02	<0.0058 ND	<0.0059 ND	<0.0066 ND	<0.0068 ND
m,p-Xylene	NA	<0.0012 ND	<0.0012 ND	<0.0013 ND	<0.0014 ND
o-Xylene	NA	<0.0012 ND	<0.0012 ND	<0.0013 ND	<0.0014 ND
Xylene (total)	0.26	<0.0012 ND	<0.0012 ND	<0.0013 ND	<0.0014 ND

Notes:

1. All results reported in mg/kg unless noted.
2. ND = Not Detected above the Reporting Limit (RL)
3. J = Estimated value below the Reporting Limit
4. Reference Soil Cleanup Objective is NYSDEC Unrestricted Use Standard.



Table 5

Soil Sampling Data Summary
Semi-Volatile Organic Compounds (VOCs)

Parameter	NYSDEC Unrestricted Use SCO	B-1D (19.5-20.0 ft)	B-2D (14.5-15.0 ft)	B-3D (14.5-15.0 ft)	B-4C (13.5-14.0 ft)	B-5B (5.8-6.3 ft)
2-Chlorophenol	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
4-Chloro-3-methylphenol	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
2,4-Dichlorophenol	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
2,4-Dimethylphenol	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
2,4-Dinitrophenol	NA	<0.720 ND	<0.590 ND	<0.660 ND	<0.840 ND	<0.670 ND
4,6-Dinitro-o-cresol	NA	<0.720 ND	<0.590 ND	<0.660 ND	<0.840 ND	<0.670 ND
2-Methylphenol	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
3&4-Methylphenol	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
2-Nitrophenol	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
4-Nitrophenol	NA	<0.360 ND	<0.300 ND	<0.330 ND	<0.420 ND	<0.340 ND
Pentachlorophenol	0.8	<0.360 ND	<0.300 ND	<0.360 ND	<0.420 ND	<0.340 ND
Phenol	0.33	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
2,3,4,6-Tetrachlorophenol	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
2,4,5-Trichlorophenol	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
2,4,6-Trichlorophenol	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
Acenaphthene	20	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	<0.034 ND
Acenaphthylene	100	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	<0.034 ND
Acetophenone	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
Anthracene	100	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	<0.034 ND
Atrazine	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
Benzo(a)anthracene	1	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	0.0232 J
Benzo(a)pyrene	1	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	0.0225 J
Benzo(b)fluoranthene	1	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	0.0291 J
Benzo(g,h,i)perylene	100	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	0.0186 J
Benzo(k)fluoranthene	0.8	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	<0.034 ND
4-Bromophenyl phenyl ether	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
Butyl benzyl phthalate	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
1,1'-Biphenyl	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
Benzaldehyde	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
2-Chloronaphthalene	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
4-Chloroaniline	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
Carbazole	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
Caprolactam	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
Chrysene	1	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	0.0285 J
bis(2-Chloroethoxy)methane	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
bis(2-Chloroethyl)ether	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
bis(2-Chloroisopropyl)ether	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
4-Chlorophenyl phenyl ether	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
2,4-Dinitrotoluene	NA	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	<0.034 ND
2,6-Dinitrotoluene	NA	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	<0.034 ND
3,3'-Dichlorobenzidine	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
Dibenzo(a,h)anthracene	0.33	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	<0.034 ND
Dibenzofuran	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
Di-n-butyl phthalate	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
Di-n-octyl phthalate	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
Diethyl phthalate	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
Dimethyl phthalate	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
bis(2-Ethylhexyl)phthalate	NA	<0.072 ND	<0.059 ND	0.0438 J	<0.084 ND	<0.067 ND
Fluoranthene	100	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	0.0545 J
Fluorene	30	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	<0.034 ND
Hexachlorobenzene	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
Hexachlorobutadiene	NA	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	<0.034 ND
Hexachlorocyclopentadiene	NA	<0.360 ND	<0.300 ND	<0.330 ND	<0.420 ND	<0.340 ND
Hexachloroethane	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
Indeno(1,2,3-cd)pyrene	0.5	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	0.022 J
Isophorone	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
2-Methylnaphthalene	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
2-Nitroaniline	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
3-Nitroaniline	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
4-Nitroaniline	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
Naphthalene	12	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	<0.034 ND
Nitrobenzene	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
N-Nitroso-di-n-propylamine	NA	<0.072 ND	<0.059 ND	<0.066 ND	<0.084 ND	<0.067 ND
N-Nitrosodiphenylamine	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND
Phenanthrene	100	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	0.0254 J
Pyrene	100	<0.036 ND	<0.030 ND	<0.033 ND	<0.042 ND	0.0431 J
1,2,4,5-Tetrachlorobenzene	NA	<0.180 ND	<0.150 ND	<0.160 ND	<0.210 ND	<0.170 ND

Notes:

1. All results reported in mg/kg unless noted.
2. ND = Not Detected above the Reporting Limit (RL)
3. J = Estimated value below the Reporting Limit
4. Reference Soil Cleanup Objective is NYSDEC Unrestricted Use Standard.



Table 6

Soil Sampling Data Summary
Metals

Parameter	NYSDEC Unrestricted Use SCO	B-1D (19.5-20.0 ft)	B-2D (14.5-15.0 ft)	B-3D (14.5-15.0 ft)	B-4C (13.5-14.0 ft)	B-5B (5.8-6.3 ft)
Aluminum	NA	7450	4560	7650	7060	12900
Antimony	NA	<2.5 ND	<2.1 ND	<2.1 ND	<2.6 ND	<2.1 ND
Arsenic	13	<2.5 ND	<2.1 ND	<2.1 ND	<2.6 ND	3.4
Barium	350	49.3	25.3	33.1	37.4	48.1
Beryllium	7.2	0.25	<0.21 ND	0.28	<0.26 ND	0.4
Cadmium	2.5	<0.62 ND	<0.52 ND	<0.52 ND	<0.65 ND	<0.53 ND
Calcium	NA	2910	2240	1290	2880	1690
Chromium	30	19.1	12.2	14.5	18.1	28.9
Cobalt	NA	6.9	<5.2 ND	5.8	<6.5	6.5
Copper	50	16	10.6	13.3	13.4	13
Iron	NA	15600	10100	12000	13200	17200
Lead	63	4.2	3	3.2	3.7	16.4
Magnesium	NA	5210	2940	5270	5040	3980
Manganese	1600	295	219	272	292	378
Mercury	0.18	<0.037 ND	<0.033 ND	<0.034 ND	<0.041 ND	0.091
Nickel	30	15.8	10.8	15	15.8	14.1
Potassium	NA	1910	<1000 ND	1190	<1300 ND	<1100 ND
Selenium	3.9	<2.5 ND	<2.1 ND	<2.1 ND	<2.6 ND	<2.1 ND
Silver	2	<0.62 ND	<0.52 ND	<0.52 ND	<0.65 ND	<0.53 ND
Sodium	NA	<1200 ND	<1000 ND	<1000 ND	<1300 ND	<1100 ND
Thalium	NA	<1.2 ND	<1.0 ND	<1.0 ND	<1.3 ND	<1.1 ND
Vanadium	NA	26.3	17.6	19.7	22.6	29.3
Zinc	109	45	25	42.3	38.9	50

Notes:

1. All results reported in mg/kg unless noted.
2. ND = Not Detected above the Reporting Limit (RL)
3. J = Estimated value below the Reporting Limit
4. Reference Soil Cleanup Objective is NYSDEC Unrestricted Use Standard.



Table 7

Soil Sampling Data Summary
Pesticides and PCBs

Parameter	NYSDEC Unrestricted Use SCO	B-1D (19.5-20.0 ft)	B-2D (14.5-15.0 ft)	B-3D (14.5-15.0 ft)	B-4C (13.5-14.0 ft)	B-5B (5.8-6.3 ft)
PESTICIDES						
Aldrin	0.005	0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
alpha-BHC	0.02	0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
beta-BHC	0.036	0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
delta-BHC	0.04	0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
gamma-BHC (Lindane)	0.1	0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
alpha-Chlordane	0.094	0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
gamma-Chlordane	NA	0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
Dieldrin	0.005	0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
4,4'-DDD	0.0033	0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
4,4'-DDE	0.0033	0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
4,4'-DDT	0.0033	0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
Endrin	0.014	0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
Endosulfan Sulfate	2.4	<0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
Endrin Aldehyde	NA	<0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
Endosulfan-I	2.4	<0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
Endosulfan-II	2.4	<0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
Heptachlor	0.042	<0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
Heptachlor epoxide	NA	<0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
Methoxychlor	NA	<0.0015 ND	<0.0013 ND	<0.0014 ND	<0.0018 ND	<0.0014 ND
Endrin Ketone	NA	<0.00077 ND	<0.00065 ND	<0.00071 ND	<0.00089 ND	<0.00069 ND
Toxaphene	NA	<0.019 ND	<0.016 ND	<0.018 ND	<0.022 ND	<0.017 ND
PCBs						
Aroclor 1016	0.1	<0.039 ND	<0.033 ND	<0.035 ND	<0.044 ND	<0.034 ND
Aroclor 1221	0.1	<0.039 ND	<0.033 ND	<0.035 ND	<0.044 ND	<0.034 ND
Aroclor 1232	0.1	<0.039 ND	<0.033 ND	<0.035 ND	<0.044 ND	<0.034 ND
Aroclor 1242	0.1	<0.039 ND	<0.033 ND	<0.035 ND	<0.044 ND	<0.034 ND
Aroclor 1248	0.1	<0.039 ND	<0.033 ND	<0.035 ND	<0.044 ND	<0.034 ND
Aroclor 1254	0.1	<0.039 ND	<0.033 ND	<0.035 ND	<0.044 ND	<0.034 ND
Aroclor 1260	0.1	<0.039 ND	<0.033 ND	<0.035 ND	<0.044 ND	<0.034 ND
Aroclor 1268	0.1	<0.039 ND	<0.033 ND	<0.035 ND	<0.044 ND	<0.034 ND
Aroclor 1262	0.1	<0.039 ND	<0.033 ND	<0.035 ND	<0.044 ND	<0.034 ND

Notes:

- All results reported in mg/kg unless noted.
- ND = Not Detected above the Reporting Limit (RL)
- J = Estimated value below the Reporting Limit
- Reference Soil Cleanup Objective is NYSDEC Unrestricted Use Standard.



Table 8

Groundwater Sampling Data Summary
Volatile Organic Compounds (VOCs)

Parameter	NYSDEC Class GA GW Quality Standard or Guidance Value	GW-1 (2/8/14)	GW-2 (2/8/14)	GW-3 (2/8/14)	GW-4 (2/8/14)	GW-5 / MW-5 (2/8/14)
Acetone	50	<10 ND	<10 ND	<10 ND	<10 ND	<10 ND
Benzene	1	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Bromochloromethane	5	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
Bromodichloromethane	50	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Bromoform	50	<4.0 ND	<4.0 ND	<4.0 ND	<4.0 ND	<4.0 ND
Bromomethane	5	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
2-Butanone (MEK)	50	<10 ND	<10 ND	<10 ND	<10 ND	<10 ND
Carbon disulfide		<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
Carbon Tetrachloride	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Chlorobenzene	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Chloroethane	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Chloroform	7	0.99 J	4.2	2.6	2.4	<1.0 ND
Chloromethane		<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Cyclohexane		<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
1,2-Dibromo-3-chloropropane	5	<10 ND	<10 ND	<10 ND	<10 ND	<10 ND
Dibromochloromethane	50	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
1,2-Dibromoethane	5	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
1,2-Dichlorobenzene	3	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
1,3-Dichlorobenzene	3	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
1,4-Dichlorobenzene	3	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Dichlorodifluoromethane	5	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
1,1-Dichloroethane	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
1,2-Dichloroethane	0.6	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
1,1-Dichloroethene	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
cis-1,2-Dichloroethene	5	0.34 J	0.81 J	0.39 J	1.1	<1.0 ND
trans-1,2-Dichloroethene	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
1,2-Dichloropropane	1	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
cis-1,3-Dichloropropene	0.4	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
trans-1,3-Dichloropropene	0.4	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
1,4-Dioxane		<130 ND	<130 ND	<130 ND	<130 ND	<130 ND
Ethylbenzene	5	1.2	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Freon 113	5	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
2-Hexanone	50	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
Isopropylbenzene	5	1.6 J	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
Methyl Acetate		<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
Methylcyclohexane		<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
Methyl Tert Butyl Ether		<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
4-Methyl-2-pentanone(MIBK)	5	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
Methylene chloride	5	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
Styrene	5	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
1,1,2,2-Tetrachloroethane	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Tetrachloroethene	5	280	165	175	254	340
Toluene	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
1,2,3-Trichlorobenzene	5	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
1,2,4-Trichlorobenzene	5	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
1,1,1-Trichloroethane	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
1,1,2-Trichloroethane	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Trichloroethene	5	5.4	2.4	2	2.6	6.9
Trichlorofluoromethane	5	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
Vinyl chloride	2	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
m,p-Xylene	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
o-Xylene	5	3.2	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Xylene (total)	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND

Notes:

1. All results reported in ug/l unless noted.
2. ND = Not Detected above the Reporting Limit (RL)
3. J = Estimated value below the Reporting Limit
4. Reference guideline is NYSDEC Class GA Groundwater Quality Standard / TOGs.



Table 9

Groundwater Sampling Data Summary
Semi-Volatile Organic Compounds (VOCs)

Parameter	GW Quality Standard or Guidance Value	GW-1 (2/8/14)	GW-2 (2/8/14)	GW-3 (2/8/14)	GW-4 (2/8/14)	GW-5 / MW-5 (2/8/14)
2-Chlorophenol	1	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
4-Chloro-3-methylphenol	1	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
2,4-Dichlorophenol	1	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
2,4-Dimethylphenol	1	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
2,4-Dinitrophenol	1	<20 ND	<20 ND	<20 ND	<20 ND	<20 ND
4,6-Dinitro-o-cresol	NA	<20 ND	<20 ND	<20 ND	<20 ND	<20 ND
2-Methylphenol	1	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
3&4-Methylphenol	1	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
2-Nitrophenol	1	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
4-Nitrophenol	1	<10 ND	<10 ND	<10 ND	<10 ND	<10 ND
Pentachlorophenol	1	<10 ND	<10 ND	<10 ND	<10 ND	<10 ND
Phenol	1	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
2,3,4,6-Tetrachlorophenol	1	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
2,4,5-Trichlorophenol	1	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
2,4,6-Trichlorophenol	1	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
Acenaphthene	20	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Acenaphthylene	NA	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Acetophenone	NA	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
Anthracene	50	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Atrazine	7.5	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
Benzaldehyde	NA	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
Benz(a)anthracene	0.002	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Benzo(a)pyrene	Non-Detect	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Benzo(b)fluoranthene	0.002	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Benzo(g,h,i)perylene	NA	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Benzo(k)fluoranthene	0.002	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
4-Bromophenyl phenyl ether	NA	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
Butyl benzyl phthalate	50	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
1,1'-Biphenyl	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
2-Chloronaphthalene	10	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
4-Chloroaniline	5	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
Carbazole	NA	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Caprolactam	NA	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
Chrysene	0.002	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
bis(2-Chloroethoxy)methane	5	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
bis(2-Chloroethyl)ether	1	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
bis(2-Chloroisopropyl)ether	NA	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
4-Chlorophenyl phenyl ether	NA	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
2,4-Dinitrotoluene	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
2,6-Dinitrotoluene	5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
3,3'-Dichlorobenzidine	NA	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
Dibenzo(a,h)anthracene	NA	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Dibenzofuran	NA	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
Di-n-butyl phthalate	50	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
Di-n-octyl phthalate	50	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
Diethyl phthalate	50	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
Dimethyl phthalate	50	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
bis(2-Ethylhexyl)phthalate	5	1.1 J	1.1 J	<2.0 ND	1.1 J	<2.0 ND
Fluoranthene	50	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Fluorene	50	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Hexachlorobenzene	0.04	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Hexachlorobutadiene	0.5	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Hexachlorocyclopentadiene	5	<10 ND	<10 ND	<10 ND	<10 ND	<10 ND
Hexachloroethane	5	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
Indeno(1,2,3-cd)pyrene	0.002	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Isophorone	50	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
2-Methylnaphthalene	NA	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
2-Nitroaniline	5	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
3-Nitroaniline	5	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
4-Nitroaniline	5	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
Naphthalene	10	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Nitrobenzene	0.4	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
N-Nitroso-di-n-propylamine	NA	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND
N-Nitrosodiphenylamine	50	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND	<5.0 ND
Phenanthrene	50	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Pyrene	50	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
1,2,4,5-Tetrachlorobenzene	5	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND	<2.0 ND

Notes:

1. All results reported in ug/l unless noted.
2. ND = Not Detected above the Reporting Limit (RL)
3. J = Estimated value below the Reporting Limit
4. Reference is NYSDEC Class GA Quality Standard or Guideline



Table 10

Groundwater Sampling Data Summary
Metals

Parameter	GW Quality Standard or Guidance Value	GW-1 (2/8/14)	GW-2 (2/8/14)	GW-3 (2/8/14)	GW-4 (2/8/14)	GW-5 / MW-5 (2/8/14)
Aluminum	NA	4610	6830	18500	16800	<200 ND
Antimony	3	<6.0 ND	<6.0 ND	<6.0 ND	<6.0 ND	<6.0 ND
Arsenic	25	<3.0 ND	4.9	5.7	9.8	<3.0 ND
Barium	1000	<200 ND	<200 ND	305	219	<200 ND
Beryllium	3	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND	<1.0 ND
Cadmium	5	<3.0 ND	<3.0 ND	<3.0 ND	<3.0 ND	<3.0 ND
Calcium	NA	101000	130000	172000	115000	120000
Chromium	50	53.4	34.4	74.2	104	<10 ND
Cobalt	NA	<50 ND	<50 ND	<50 ND	<50 ND	<50 ND
Copper	200	18.2	15.1	65.4	66.4	<10 ND
Iron	300	8540	13700	39600	35000	113
Lead	25	20.9	10.4	35.7	70.5	<3.0 ND
Magnesium	35000	28500	70100	74800	47900	47900
Manganese	300	277	427	2240	1620	485
Mercury	0.7	<0.20 ND	<0.20 ND	<0.20 ND	<0.20 ND	<0.20 ND
Nickel	100	30	24.6	65.7	69	<10 ND
Potassium	NA	<10000	<10000 ND	10200	<10000 ND	<10000 ND
Selenium	10	<10 ND	<10 ND	<10 ND	<10 ND	<10 ND
Silver	50	<10 ND	<10 ND	<10 ND	<10 ND	<10 ND
Sodium	20000	113000	142000	189000	142000	167000
Thalium	0.5	<10 ND	<10 ND	<10 ND	<10 ND	<10 ND
Vanadium	NA	<50 ND	<50 ND	<50 ND	<50 ND	<50 ND
Zinc	2000	33.8	39.6	101	132	<20 ND

Notes:

1. All results reported in ug/l unless noted.
2. ND = Not Detected above the Reporting Limit (RL)
3. J = Estimated value below the Reporting Limit
4. Reference is NYSDEC Class GA Groundwater Quality Standards / Guidelines.



Table 11

Groundwater Sampling Data Summary
Pesticides and PCBs

Parameter	GW Quality Standard or Guidance Value	GW-2 (2/8/14)	GW-3 (2/8/14)	GW-5 / MW-5 (2/8/14)
PESTICIDES				
Aldrin	Non-Detect	<0.010 ND	<0.010 ND	<0.010 ND
alpha-BHC	0.01	<0.010 ND	<0.010 ND	<0.010 ND
beta-BHC	0.04	<0.010 ND	<0.010 ND	<0.010 ND
delta-BHC	0.04	<0.010 ND	<0.010 ND	<0.010 ND
gamma-BHC (Lindane)	0.05	<0.010 ND	<0.010 ND	<0.010 ND
alpha-Chlordane	0.05	<0.010 ND	<0.010 ND	<0.010 ND
gamma-Chlordane	0.05	<0.010 ND	<0.010 ND	<0.010 ND
Dieldrin	0.004	<0.010 ND	<0.010 ND	0.018
4,4'-DDD	0.3	<0.010 ND	<0.010 ND	<0.010 ND
4,4'-DDE	0.2	<0.010 ND	<0.010 ND	<0.010 ND
4,4'-DDT	0.2	<0.010 ND	<0.010 ND	<0.010 ND
Endrin	Non-Detect	<0.010 ND	<0.010 ND	<0.010 ND
Endosulfan Sulfate	NA	<0.010 ND	<0.010 ND	<0.010 ND
Endrin Aldehyde	5	<0.010 ND	<0.010 ND	<0.010 ND
Endosulfan-I	NA	<0.010 ND	<0.010 ND	<0.010 ND
Endosulfan-II	NA	<0.010 ND	<0.010 ND	<0.010 ND
Heptachlor	0.04	<0.010 ND	<0.010 ND	<0.010 ND
Heptachlor epoxide	0.03	<0.010 ND	<0.010 ND	<0.010 ND
Methoxychlor	35	<0.020 ND	<0.020 ND	<0.020 ND
Endrin Ketone	5	<0.010 ND	<0.010 ND	<0.010 ND
Toxaphene	0.06	<0.25 ND	<0.26 ND	<0.25 ND
PCBs				
Aroclor 1016	0.09 total PCB	<0.50 ND	<0.51 ND	<0.50 ND
Aroclor 1221	0.09 total PCB	<0.50 ND	<0.51 ND	<0.50 ND
Aroclor 1232	0.09 total PCB	<0.50 ND	<0.51 ND	<0.50 ND
Aroclor 1242	0.09 total PCB	<0.50 ND	<0.51 ND	<0.50 ND
Aroclor 1248	0.09 total PCB	<0.50 ND	<0.51 ND	<0.50 ND
Aroclor 1254	0.09 total PCB	<0.50 ND	<0.51 ND	<0.50 ND
Aroclor 1260	0.09 total PCB	<0.50 ND	<0.51 ND	<0.50 ND
Aroclor 1268	0.09 total PCB	<0.50 ND	<0.51 ND	<0.50 ND
Aroclor 1262	0.09 total PCB	<0.50 ND	<0.51 ND	<0.50 ND

Notes:

1. All results reported in ug/l unless noted.
2. ND = Not Detected above the Reporting Limit (RL)
3. J = Estimated value below the Reporting Limit
4. Reference is NYSDEC Class GA Groundwater Quality Standard / Guideline.



Table 12
Sub-Slab and Indoor Air Quality Sample Collection Data

Sample ID	Type	Date	Sample Collection Info.			
			Start Time	Cannister Vacuum (mmHg)	End	Vacuum at Completion (mm Hg)
SP-1 (SS-1)	Sub-Slab, 6L Cannister	2/8/2014	12:12	30.0	17:40	12.0
SP-2 (SS-2)	Sub-Slab, 6L Cannister	2/8/2014	12:22	28.0	17:50	8.0
SP-3 (SS-3)	Sub-Slab, 6L Cannister	2/8/2014	12:14	30.0	17:42	14.0
SP-4 (SS-4)	Sub-Slab, 6L Cannister	2/8/2014	12:16	27.0	17:44	13.0
SP-5 (SS-5)	Sub-Slab, 6L Cannister	2/8/2014	12:24	33.0	17:52	18.0
SP-6 (SS-6)	Sub-Slab, 6L Cannister	2/8/2014	12:18	32.0	17:46	15.0
SP-7 (SS-7)	Sub-Slab, 6L Cannister	2/8/2014	12:20	32.0	17:48	13.0
IAQ-1	Indoor Air, 6L Cannister	2/8/2014	9:20	32.0	17:20	7.0
IAQ-2B	Indoor Air, 6L Cannister	2/8/2014	10:45	29.0	17:35	9.0
IAQ-3	Indoor Air, 6L Cannister	2/8/2014	9:23	32.0	17:23	6.0
IAQ-4	Indoor Air, 6L Cannister	2/8/2014	9:25	32.0	17:25	2.0
AMB-1	Ambient Air, 6L Cannister	2/8/2014	9:32	32.0	17:32	5.0

Note: Ambient air and all IAQ samples collected approximately 3 to 5' above finished floor in breathing zone.



FIGURES



Figure 1
Site Location Map
Bridge Cleaners Site
(Basemap: Google Earth Image)





Bridge Cleaners Site
Tax Map / Parcel ID Bo. 4-399-31
39-26 30th Street
Long Island City, NY 10101



Figure 2
Site Plan (with interior layout at time of RI)
Bridge Cleaners Site, 3926 30th Street, Long Island City, NY
(Basemap: Google Earth Image)



Figure 4
Soil Boring and Soil Sample Locations



Actual Cross-Section of Brooklyn and Queens

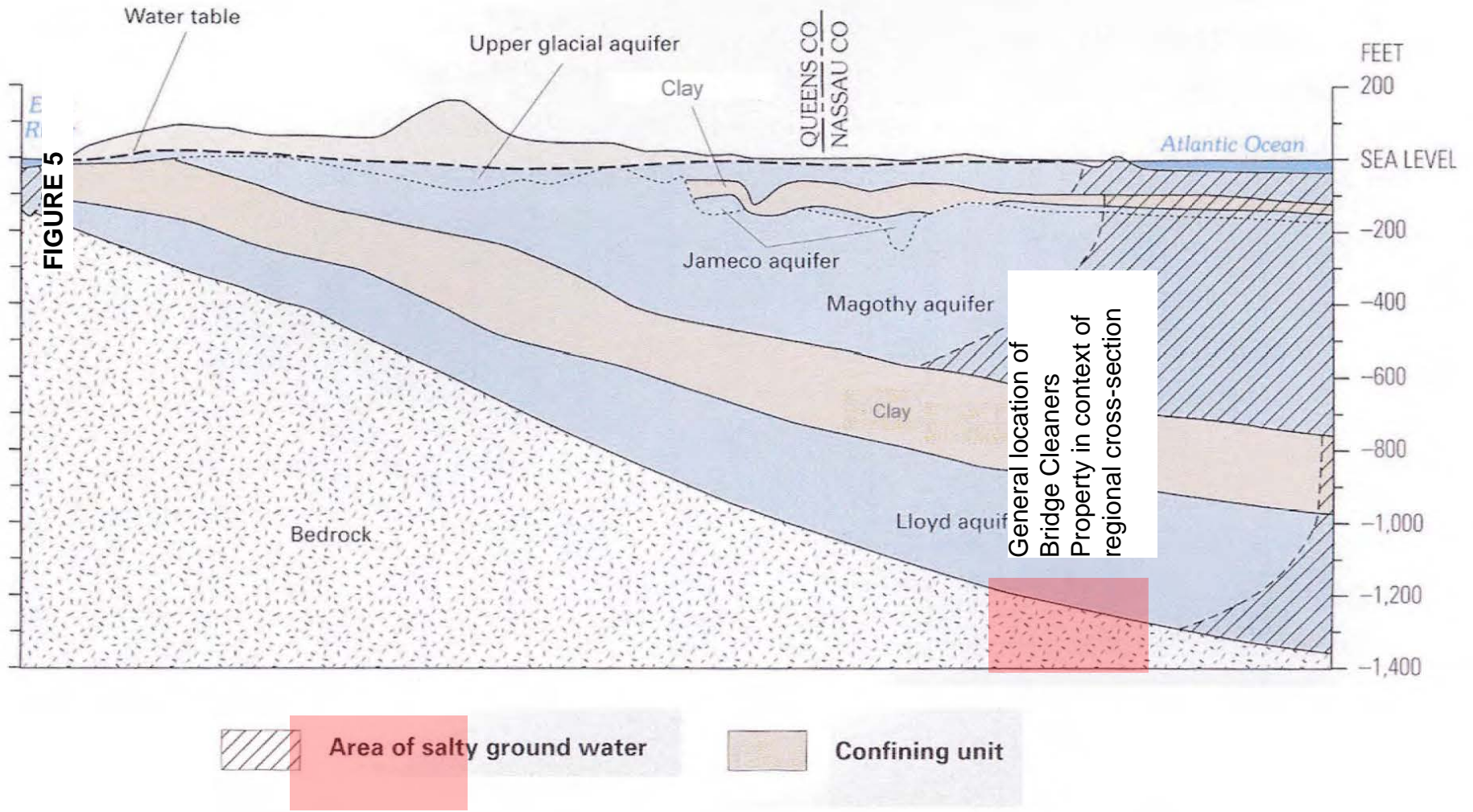




Figure 6
Groundwater Monitoring Well Locations
(Based on NY Land Surveyor PC 2/8/14)



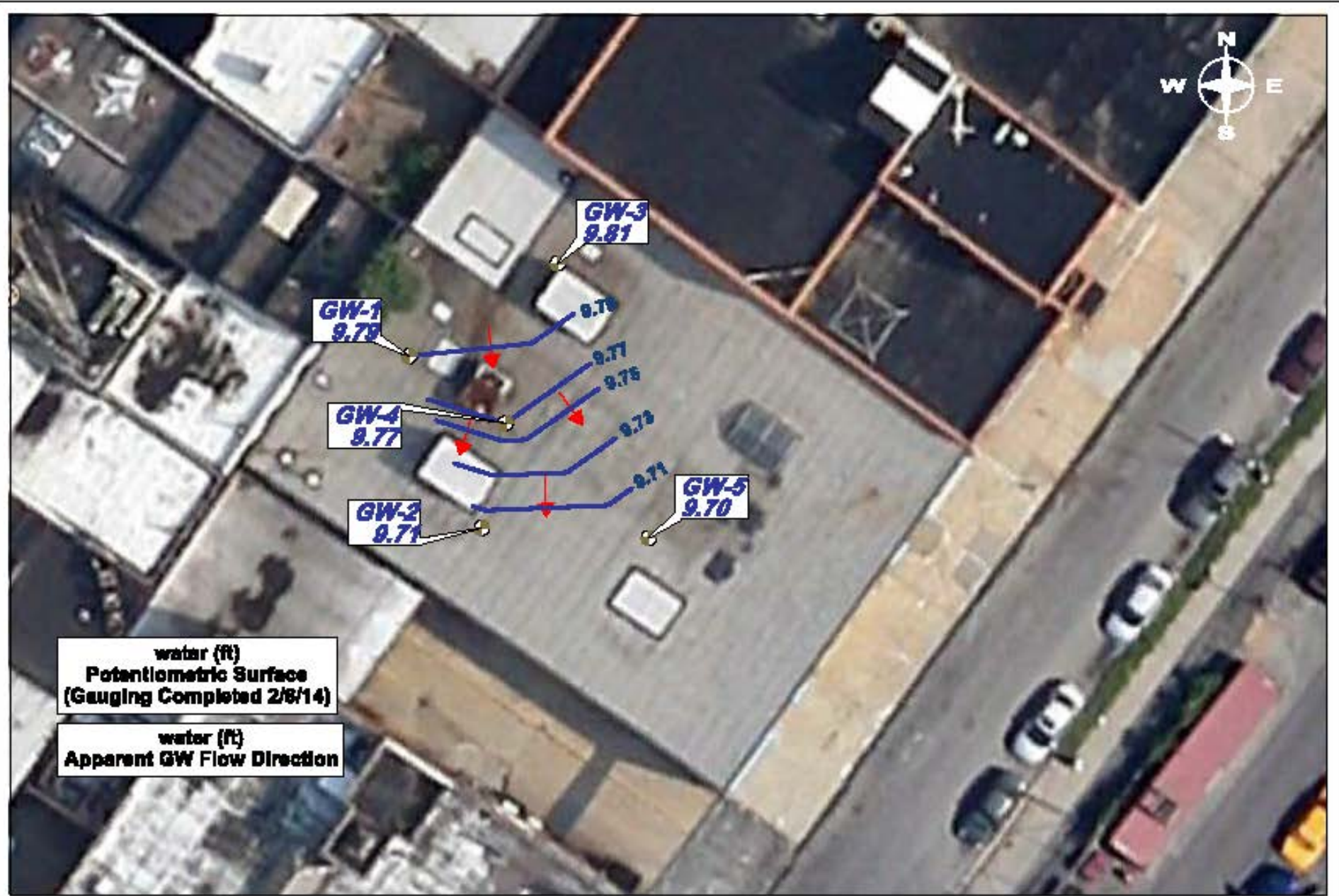


Figure 7
Potentiometric Surface Map and Inferred GW Flow Direction
(Gauging Performed 2/8/14)



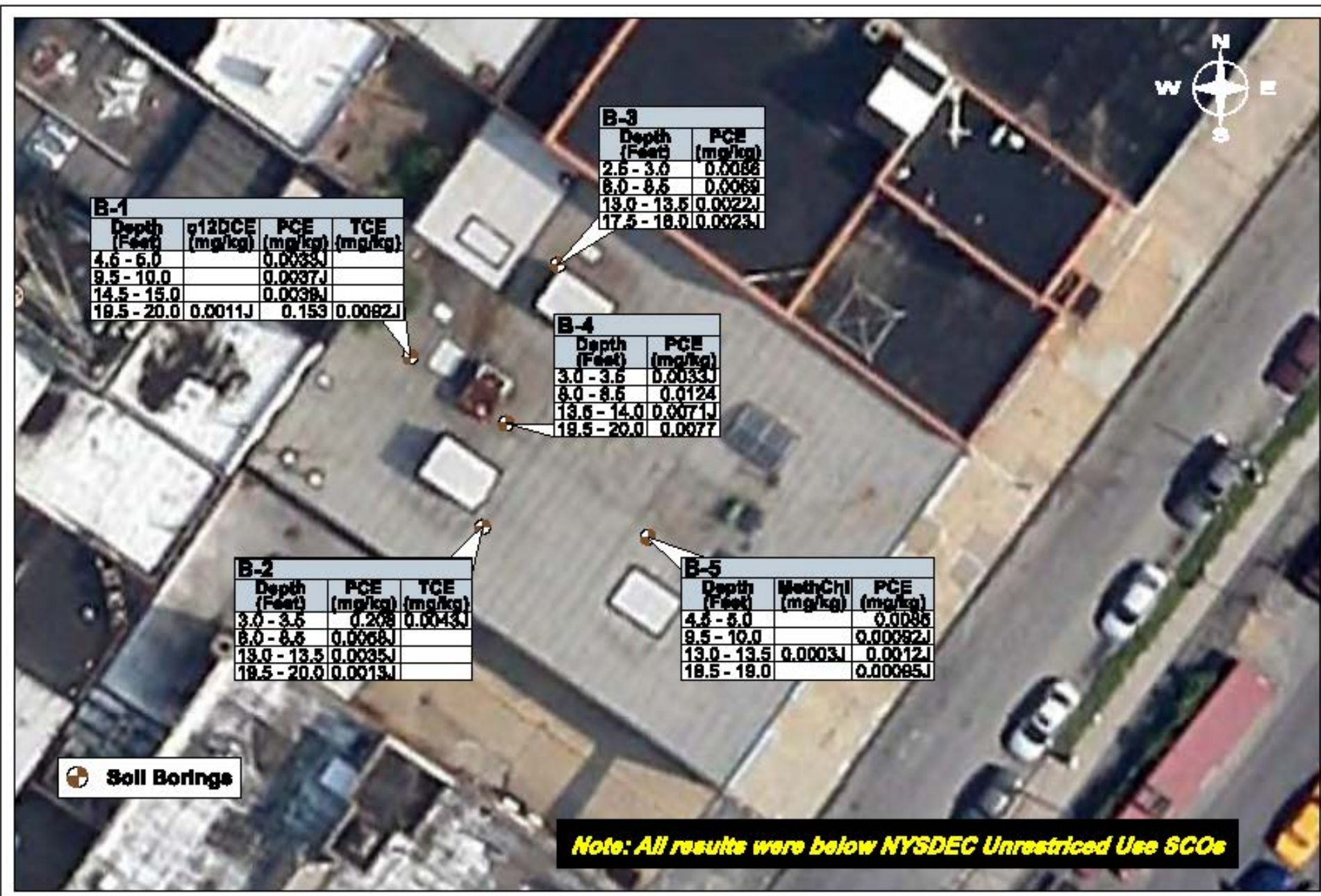


Figure 8
Summary of VOC Results in Soil
(Soil Sampling Performed 1/13/14)





Figure 9

**Summary of SVOC Results in Soil
(Soil Sampling Performed 1/13/14, Only detectable parameter indicated)**



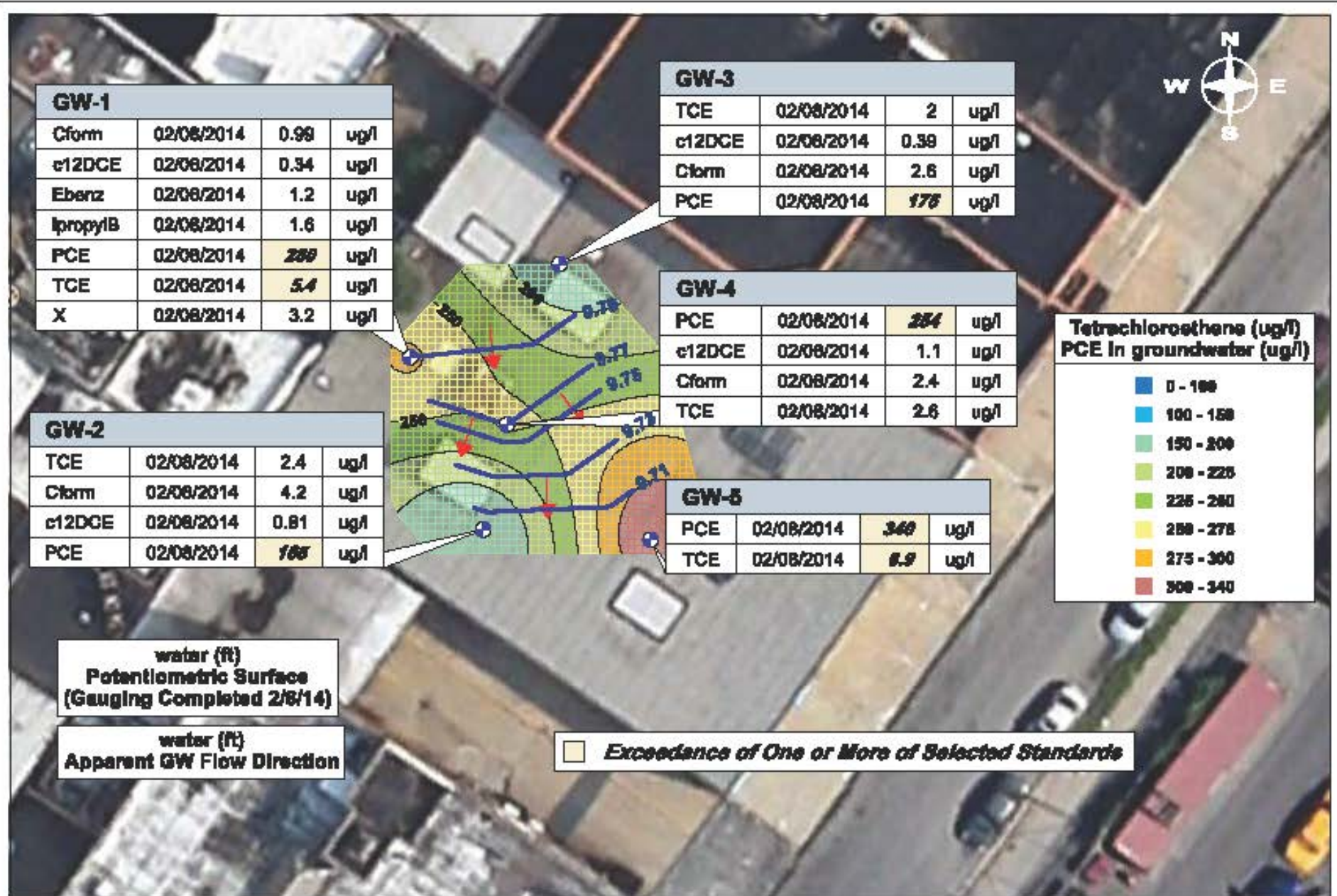


Figure 10
*Summary of VOCs in Groundwater
 (Sampling Performed 2/8/14, only detected VOCs shown)*



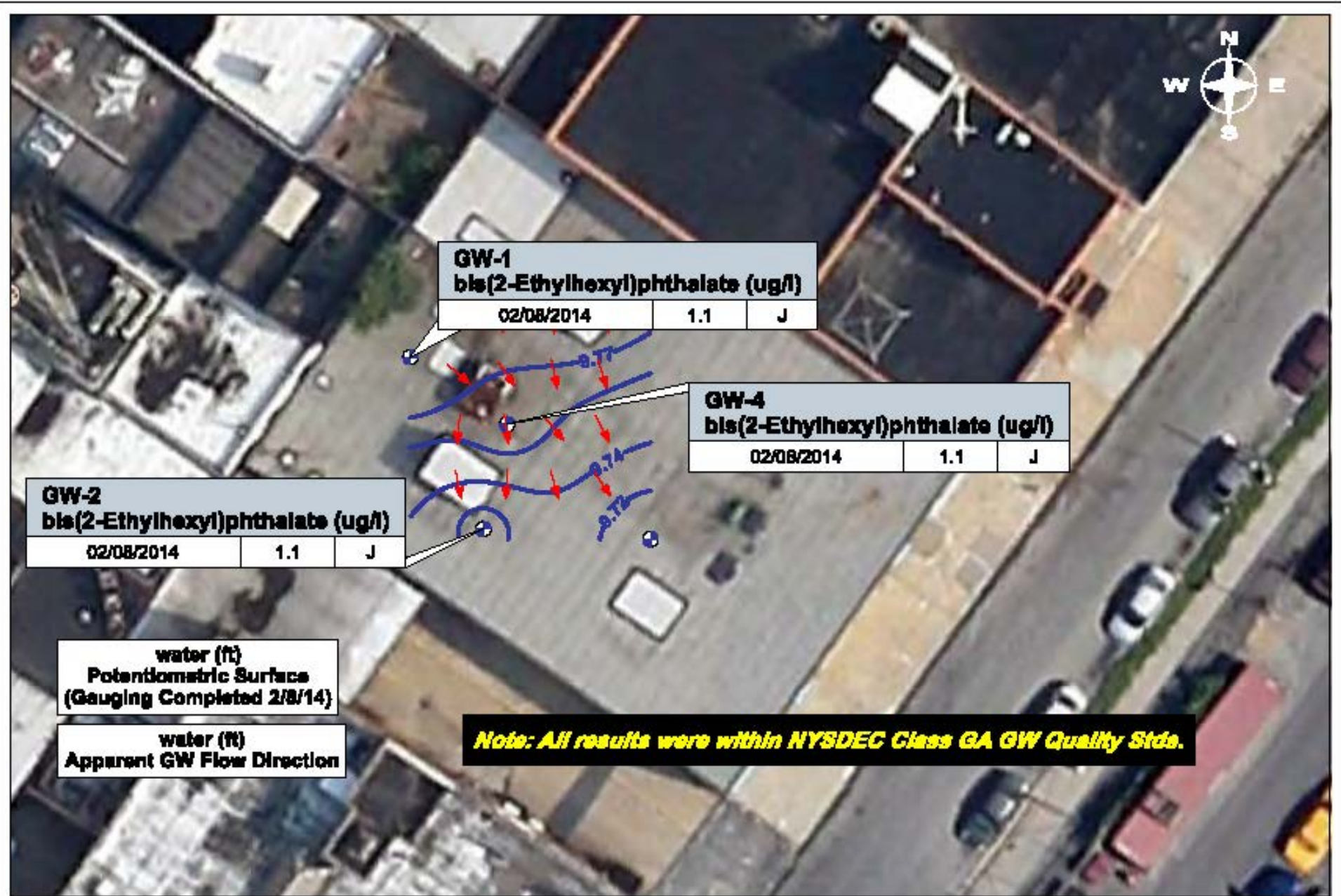


Figure 11

**Summary of SVOC Results in Groundwater
(Sampling Performed 2/8/14, Only Parameters Detected Are Indicated)**



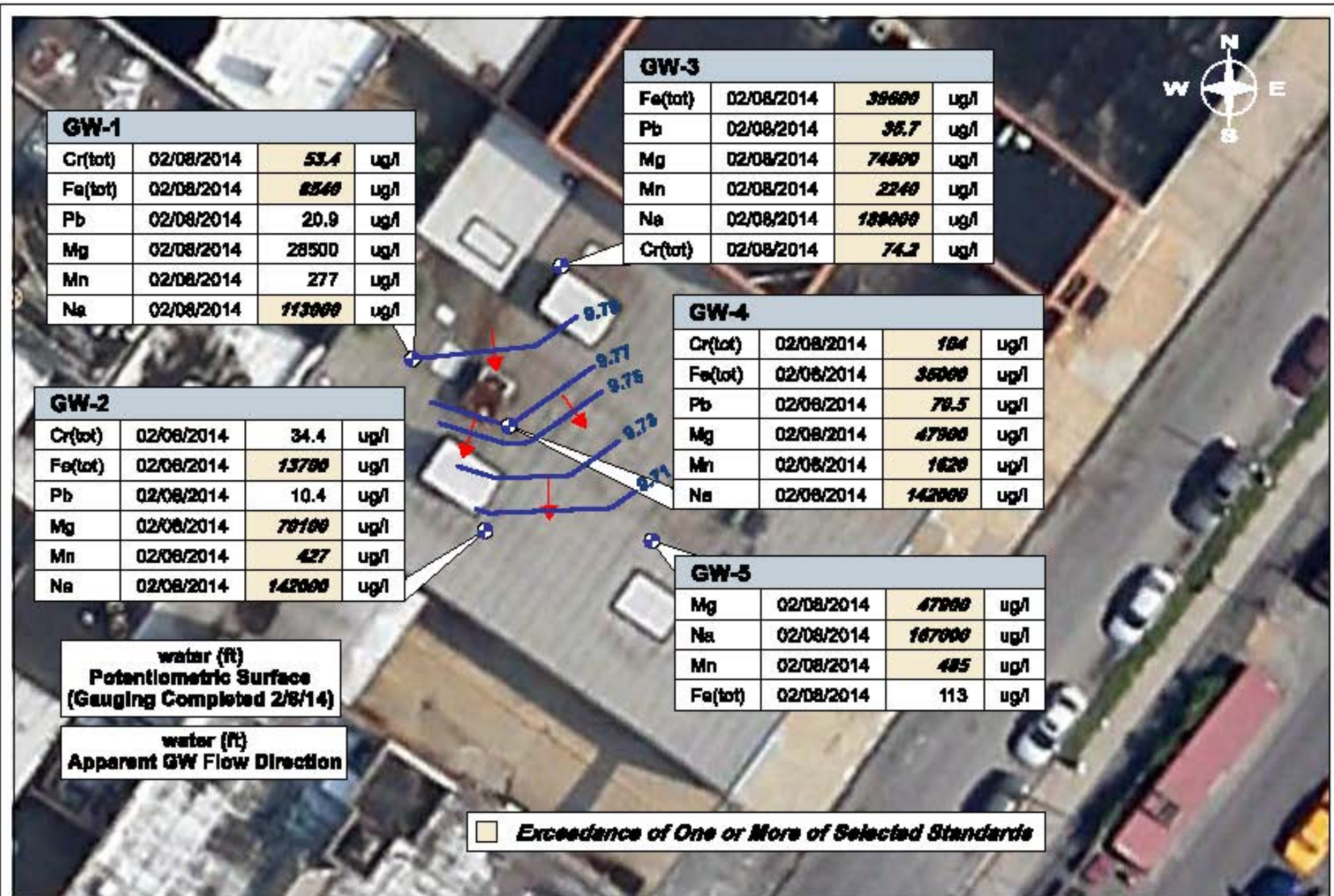


Figure 12

Summary of Metals Results in Groundwater
(Sampling Performed 2/8/14, only parameters exceeding standards indicated)



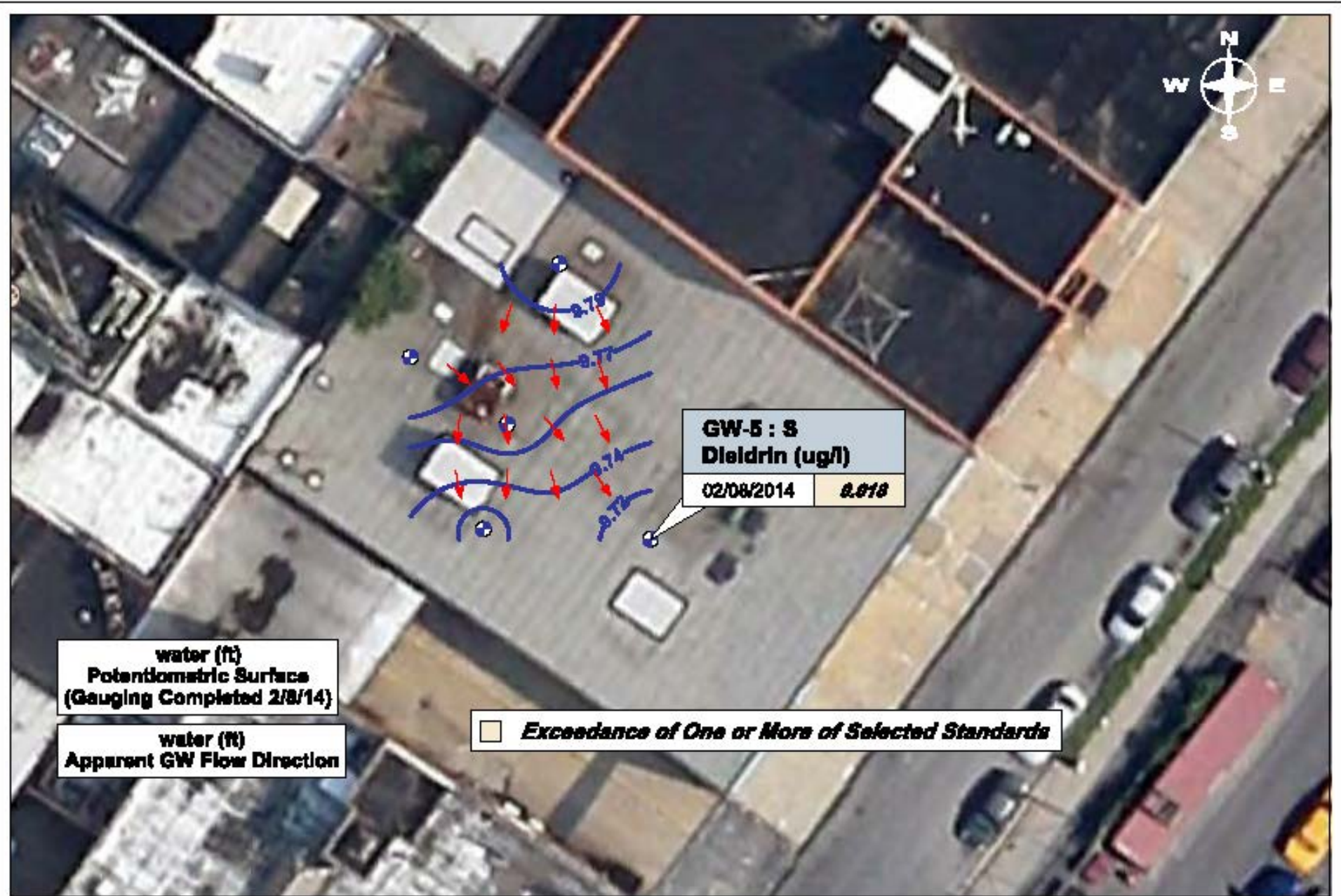


Figure 13

*Summary of Pesticide / PCB Results in Groundwater
(Sampling Performed 2/8/14, Only Parameters Detected Are Indicated)*



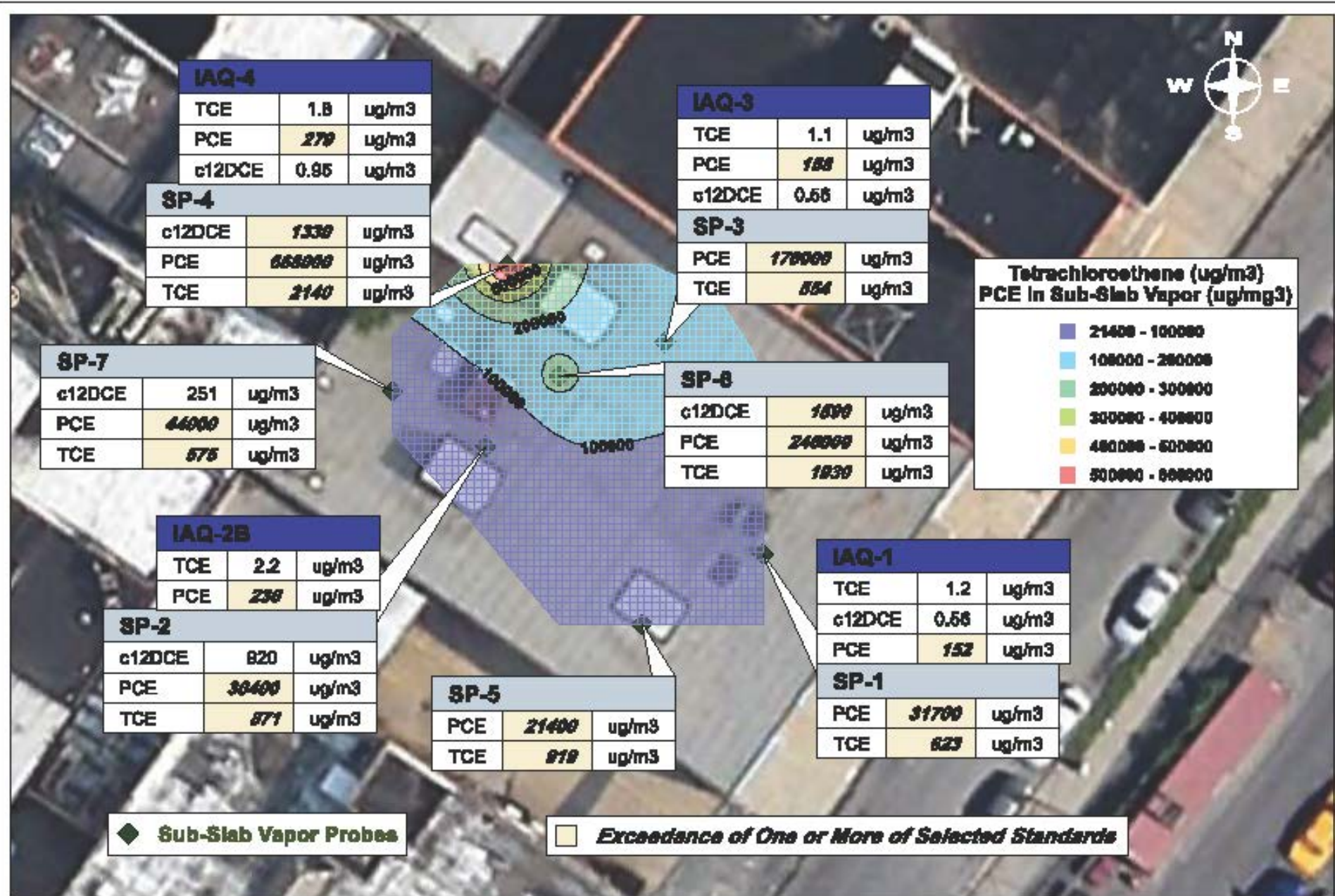


Figure 14

*Summary of IAQ and Sub-Slab Vapor Results
(Sampling Performed 2/8/14, Only detected NYSDOH Matrix parameters shown)*



Appendix A:
NYC Deed and Tax Map Database Summary for Subject Property

Search Results By Parcel Identifier

Current Search Criteria:

Borough: QUEENS
Block: 399
Lot: 31 **Unit:** N/A
Date Range:
Document Class: All Document Classes

Records 1 - 16 << previous next >> Max Rows <input type="text" value="99"/>														
[Search Options] [New BBL Search] [Edit Current Search] [View Tax Map] [Print Index]														
View	Reel/Pg/File	CRFN	Lot	Partial	Doc Date	Recorded / Filed	Document Type	Pages	Party1	Party2	Party 3/ Other	More Party 1/2 Names	Corrected/ Remarks	Doc Amount
		2012000122922	31	ENTIRE LOT	3/9/2012	3/28/2012 3:44:51 PM	ASSIGNMENT OF LEASES AND RENTS	17	ZHONG CHUANG PROPERTIES LLC	ALENAT PROPERTIES, LLC				200,000
		2012000122921	31	ENTIRE LOT	3/9/2012	3/28/2012 3:44:50 PM	MORTGAGE	41	ZHONG CHUANG PROPERTIES LLC	ALENAT PROPERTIES, LLC				200,000
		2012000122920	31	ENTIRE LOT	3/9/2012	3/28/2012 3:44:49 PM	DEED	4	ALENAT PROPERTIES, LLC	ZHONG CHAUNG PROPERTIES LLC				2,090,000
		2012000018008	31	ENTIRE LOT	12/16/2011	1/17/2012 10:52:28 AM	CORRECTION DEED	3	JARCO REALTY CO.	ALENAT PROPERTIES, LLC				0
		2011000224534	31	ENTIRE LOT	4/15/2011	6/23/2011 3:06:08 PM	DEED	3	JARCO REALTY CO.	ALENAT INC.				0
		2007000413244	31	ENTIRE LOT	7/23/2007	8/10/2007 9:49:53 AM	SATISFACTION OF MORTGAGE	3	JARCO REALTY CO.	MASPETH FEDERAL SAVINGS AND LOAN ASSOCIATION				0
		2004000790002	31		12/13/2004	12/28/2004 10:48:03 AM	INITIAL UCC1	4	JETOMI CLEANERS, INC.	QUEENS BRIDGE CLEANERS, INC.		✓		0
	3342/1608		31	ENTIRE LOT		6/23/1992	SATISFACTION OF MORTGAGE	2	ALENAT CORP	JAMAICA SVGS BK		✓		0
	3341/2384		31	ENTIRE LOT		6/23/1992	MORTGAGE	5	JARCO REALTY CO	MASPETH FED S&L ASN				210,000

3341/2382		31	ENTIRE LOT	6/5/1992	6/23/1992	DEED	2	ALENAT CORP	JARCO REALTY CO					0
1495/329		31	ENTIRE LOT	12/31/1982	1/18/1983	DEED	2	ALENAT CORP.	JARCO REALTY CO.					0
995/227		31	ENTIRE LOT	6/22/1977	6/22/1977	SUNDRY AGREEMENT	4	MASPETH FED S & L ASSN			✓			0
995/223		31	ENTIRE LOT	6/22/1977	6/22/1977	MORTGAGE	4	ALENAT CORP	MASPETH FEDERAL S & L ASSN					0
992/1522		31	ENTIRE LOT	6/10/1977	6/10/1977	ASSIGNMENT, MORTGAGE	2	NORTH SIDE SAVINGS BK	MASPETH FED SAVINGS & LOAN ASSOCIATION					0
393/227		31	ENTIRE LOT	4/19/1967	4/19/1967	ASSIGNMENT, MORTGAGE	2	JAMAICA SAVINGS BK	NORTH SIDE SAVS BK					0
393/192		31	ENTIRE LOT	4/19/1967	4/19/1967	MORTGAGE	4	ALENAT CORP	NORTH SIDE SAVS BK					0

New Parcel Identifier Search

Appendix B:
NYC Environmental Database Map Summary

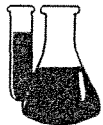


Contact Us

NYC Office of Environmental Remediation



Appendix C:
LIAL Investigation Letter Report



**LONG
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LABORATORIES INC.**

NYSDOH ELAP# 11693
USEPA# NY01273
CTDOH# PH-0284
NJDEP# NY012
PADEP# 68-2943

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Limited Sub-Surface Site Investigation
39-28 30th Street
Long Island City NY

September 2011

Prepared For: Larry Stopol
Levy, Stopol, & Camelo LLP
1425 RXR Plaza
Uniondale, NY 11556-1425

Prepared By: Long Island Analytical Laboratories, Inc. (LIAL)
110 Colin Drive
Holbrook, NY 11741



1 of 4 Pages

INTRODUCTION-

The subject site is a single story concrete building located at 39-28 30th Street Long Island City New York, although currently the subject property is vacant, the premise has been occupied by multiple dry cleaning operations for several years. Long Island Analytical Laboratories, Inc. (LIAL) has been retained to conduct a limited sub-surface investigation of the subject premise, the purpose of the investigation was two fold; first agenda was to determine if the past usage of the subject property as a dry cleaning operation has negatively affected the environmental condition of the subject property and/or the immediately surrounding area. The second agenda was to investigate the allegation that a know offsite spill of Tetrachloroethylene identified by the NYSDEC has migrated onto the subject site.

SCOPE OF WORK-

Long Island Analytical Laboratories, Inc. (LIAL) advanced a total of five (5) soil boring within the interior space of the subject dwelling using a stand Geoprobe device equipment with a five (5) foot macrocore sampling tip (see attached soil boring map). All soil borings were advanced on a continuous basis starting at grade level and continuing until refusal or the groundwater interface was encountered. All soil core samples were visually inspected for obvious signs of environmental impact, and any other visual or olfactory signs of contamination. All soil core samples were field screened for volatile organic vapors using a portable photoionization detector (see attached results).

A total of fifteen (15) discrete soil samples were collected from the five (5) soil borings, each of the three (3) discrete soil samples from each boring were secured from the (0-1) foot below grade interval, (9-10) feet below grade interval, and (19-20) feet below grade interval. The fifteen (15) discrete samples were collected, preserved, and shipped to the LIAL laboratory for analysis; all samples were collected and preserved in strict accordance with all local, state, and federal guidelines. All fifteen (15) soil samples were analyzed for volatile organic hydrocarbons via EPA method 8260B.

Groundwater samples were secured from three (3) of the five (5) soil boring locations advanced (see attached soil boring map). Three (3) groundwater samples were secured from B-1, B-2, and B-3 respectively this represent two (2) up-gradient and one (1) down gradient groundwater samples. All groundwater samples were secured from an approximate depth of twenty two (22) below grade level. All ground water samples were collected, preserved and shipped to the LIAL laboratory for analysis; all samples were collected and preserved in strict accordance with all local, state, and federal guidelines. All three (3) groundwater samples were analyzed for volatile organic hydrocarbons via EPA method 8260B.

FINDINGS & CONCLUSIONS-

The following is a tabular format of the soil and groundwater results obtained none of the target parameters were found not to exceed the minimum reportable limit (MRL) set by the laboratory with the exceptions (see attached analytical results):

Sample location	Depth in feet	Parameter	Results	PID Readings ppm
B-1 soil	0-1	Tetrachloroethylene	<5.05 ug/kg	0.00
B-1 soil	9-10	Tetrachloroethylene	<5.11 ug/kg	0.00
B-1 soil	19-20	Tetrachloroethylene	<6.11 ug/kg	0.00
B-1 groundwater	22	Trichloroethylene	12.5 ug/L	N/A
B-1 groundwater	22	Tetrachloroethylene	1,470 ug/L	21
B-2 soil	0-1	Tetrachloroethylene	<5.16 ug/kg	0.00
B-2 soil	9-10	Tetrachloroethylene	8.00 ug/kg	0.00
B-2 soil	19-20	Tetrachloroethylene	<5.55 ug/kg	0.00
B-2 groundwater	22	Tetrachloroethylene	537 ug/L	3.2
B-3 soil	0-1	Tetrachloroethylene	12.4 ug/kg	0.00
B-3 soil	9-10	Tetrachloroethylene	<5.94 ug/kg	0.00
B-3 soil	19-20	Tetrachloroethylene	5.70 ug/kg	0.00
B-3 groundwater	22	Trichloroethylene	11.0 ug/L	N/A
B-3 groundwater	22	Tetrachloroethylene	841 ug/L	N/A
B-3 groundwater	22	tert-Butylbenzene	6.32 ug/L	N/A
B-3 groundwater	22	1,2,4-Trimethylbenzene	13.9 ug/L	N/A
B-3 groundwater	22	sec-Butylbenzene	13.2 ug/L	N/A
B-3 groundwater	22	4-Isopropyltoluene	6.45 ug/L	N/A
B-3 groundwater	22	1,4 Diethylbenzene	35.9 ug/L	N/A
B-3 groundwater	22	1,2,4,5-Tetramethylbenzene	11.2 ug/L	N/A
B-4 soil	0-1	Tetrachloroethylene	7.69 ug/kg	0.00
B-4 soil	9-10	Tetrachloroethylene	<5.32 ug/kg	0.00
B-4 soil	19-20	Tetrachloroethylene	<5.17 ug/kg	0.00
B-5 soil	0-1	Tetrachloroethylene	143 ug/kg	0.00
B-5 soil	9-10	Tetrachloroethylene	<5.35 ug/kg	0.00
B-5 soil	19-20	Tetrachloroethylene	<5.98 ug/kg	0.00



SOIL & GROUND WATER RESULTS-

B-1 soil boring (B-1) failed to identify any detectable levels of Tetrachloroethylene in any of the three (3) discrete samples secured.

GW-1 groundwater sample (GW-1) did identify 12.5 ug/L and 1,470 ug/L of Trichloroethylene and Tetrachloroethylene respectively.

B-2 soil boring (B-2) two of the three depths 0-1 foot below grade and 19-20 below grade failed to identify any detectable levels of Tetrachloroethylene, the 0-9 foot below grade sample did identify 8.00 ug/kg of Tetrachloroethylene.

GW-2 groundwater sample (GW-2) did identify 537 ug/L of Tetrachloroethylene,.

B-3 soil boring (B-3) two of the three depths 0-1 foot below grade and the 19-20 foot below grade did identify Tetrachloroethylene at 12.4 ug/kg, and 5.70 ug/kg respectively. The third sample secured from 9-10 feet below grade failed to detect any detectable levels of Tetrachloroethylene.

GW-3 groundwater sample (GW-3) did identify Trichloroethylene at 11.0 ug/L and Tetrachloroethylene at 841 ug/L respectively as well as some other volatile organic hydrocarbons typically associated with petroleum fuel oil.

B-4 soil boring (B-4) only identified Tetrachloroethylene in the 0-1 foot interval at 7.69 ug/kg, the other two depths failed to identify any detectable levels of Tetrachloroethylene.

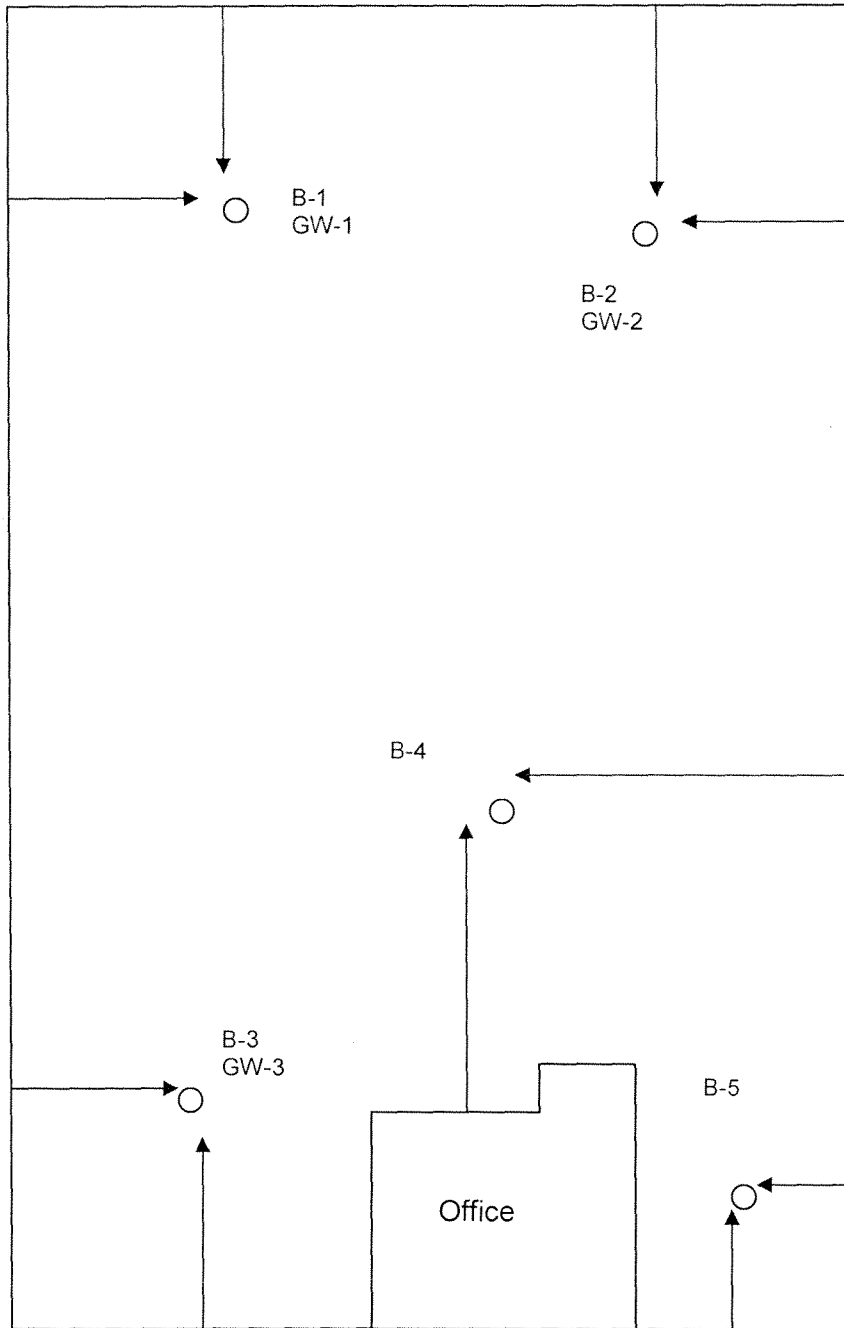
B-5 soil boring (B-5) only identified Tetrachloroethylene in the 0-1 foot interval at 143 ug/kg, the other two depths failed to identify any detectable levels of Tetrachloroethylene.



CONCLUSION-

The analytical data suggest on minor Tetrachloroethylene contamination in the soil column, the majority of the discrete soil samples were found to contain no detectable levels of Tetrachloroethylene. The discrete soil samples that did identify minor contamination that was limited to the surface for the most part this may be indicative of cross contamination during sample collection activities. The Groundwater results were found to identify elevated levels of Tetrachloroethylene both up-gradient and down-gradient of the subject parcel, this in conjunction with the fact that no significant levels of Tetrachloroethylene were identified in the soil would suggest that the source of the spill is located off-site and up-gradient of the subject parcel.





39-28th 30th Street LIC



**LONG
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LABORATORIES INC.**

110 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com



LIAL# 1092217

October 14, 2011

Page 1 of 56

Levy, Stopol, & Camelo LLP
Larry Stopol
1425 RXR Plaza
Uniondale NY, 11556

Re: 39-28 30th Street LIC, NY

Dear Larry Stopol,

Enclosed please find the Laboratory Analysis Report(s) for sample(s) received on September 22, 2011. Long Island Analytical Laboratories analyzed the samples on October 06, 2011 for the following:

CLIENT ID	ANALYSIS
B-1 0-1	EPA 8260B
B-1 9-10	EPA 8260B
B-1 19-20	EPA 8260B
GW-1 22'	EPA 8260B
B-2 0-1	EPA 8260B
B-2 9-10	EPA 8260B
B-2 19-20	EPA 8260B
GW-2 22'	EPA 8260B
B-3 0-1	EPA 8260B
B-3 9-10	EPA 8260B
B-3 19-20	EPA 8260B
GW-3 22'	EPA 8260B
B-4 0-1	EPA 8260B
B-4 9-10	EPA 8260B
B-4 19-20	EPA 8260B
B-5 0-1	EPA 8260B
B-5 9-10	EPA 8260B
B-5 19-20	EPA 8260B

Samples received at 1.7 °C

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories Inc. is a NELAP accredited laboratory. All reported results meet the requirements of the NELAP standards unless noted. Report shall not be reproduced except in full without the written approval of the laboratory. Results related only to items tested. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,



Long Island Analytical Laboratories, Inc.

Michael Veraldi - Laboratory Director



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Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 08:00	Sample ID: B-1 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-01
Matrix: Soil	ELAP: #11693

Volatile Analysis

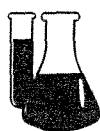
Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.05	<5.05	ug/kg dry	4.H
Chloroethane	75-00-3	5.05	<5.05	ug/kg dry	4.H
Chloromethane	74-87-3	5.05	<5.05	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.05	<5.05	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.05	<5.05	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.05	<5.05	ug/kg dry	
Acetone	67-64-1	50.5	<50.5	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.05	<5.05	ug/kg dry	
Methylene Chloride	75-09-2	5.05	<5.05	ug/kg dry	
Carbon disulfide	75-15-0	5.05	<5.05	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.05	<5.05	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.05	<5.05	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.05	<5.05	ug/kg dry	
Vinyl acetate	108-05-4	5.05	<5.05	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.1	<10.1	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.05	<5.05	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.05	<5.05	ug/kg dry	
Bromochloromethane	74-97-5	5.05	<5.05	ug/kg dry	
Chloroform	67-66-3	5.05	<5.05	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.05	<5.05	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.05	<5.05	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.05	<5.05	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.05	<5.05	ug/kg dry	
Benzene	71-43-2	5.05	<5.05	ug/kg dry	
Trichloroethylene	79-01-6	5.05	<5.05	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.05	<5.05	ug/kg dry	
Dibromomethane	74-95-3	5.05	<5.05	ug/kg dry	
Bromodichloromethane	75-27-4	5.05	<5.05	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.05	<5.05	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	10.1	<10.1	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.05	<5.05	ug/kg dry	
Toluene	108-88-3	5.05	<5.05	ug/kg dry	



Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 08:00	Sample ID: B-1 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-01
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.05	<5.05	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.05	<5.05	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.05	<5.05	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.05	<5.05	ug/kg dry	
Dibromochloromethane	124-48-1	5.05	<5.05	ug/kg dry	
Tetrachloroethylene	127-18-4	5.05	<5.05	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.05	<5.05	ug/kg dry	
Chlorobenzene	108-90-7	5.05	<5.05	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.05	<5.05	ug/kg dry	
Ethylbenzene	100-41-4	5.05	<5.05	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	10.1	<10.1	ug/kg dry	
Styrene	100-42-5	5.05	<5.05	ug/kg dry	
o-Xylene	95-47-6	5.05	<5.05	ug/kg dry	
Bromoform	75-25-2	5.05	<5.05	ug/kg dry	
1,1,1,2-Tetrachloroethane	79-34-5	5.05	<5.05	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.05	<5.05	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.05	<5.05	ug/kg dry	
Bromobenzene	108-86-1	5.05	<5.05	ug/kg dry	
n-Propylbenzene	103-65-1	5.05	<5.05	ug/kg dry	
2-Chlorotoluene	95-49-8	5.05	<5.05	ug/kg dry	
4-Chlorotoluene	106-43-4	5.05	<5.05	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.05	<5.05	ug/kg dry	
tert-Butylbenzene	98-06-6	5.05	<5.05	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.05	<5.05	ug/kg dry	
sec-Butylbenzene	135-98-8	5.05	<5.05	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.05	<5.05	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.05	<5.05	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.05	<5.05	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.05	<5.05	ug/kg dry	
n-Butylbenzene	104-51-8	5.05	<5.05	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.05	<5.05	ug/kg dry	



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 08:00	Sample ID: B-1 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-01
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.05	<5.05	ug/kg dry	
Naphthalene	91-20-3	5.05	<5.05	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.05	<5.05	ug/kg dry	
1,4-Dioxane	123-91-1	5.05	<5.05	ug/kg dry	4.H
Acrolein	107-02-8	5.05	<5.05	ug/kg dry	

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 09/30/2011

Analytical Method: EPA 8260B



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"TOMORROW'S ANALYTICAL SOLUTIONS TODAY"

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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 08:15	Sample ID: B-1 9-10
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-02
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.11	<5.11	ug/kg dry	4.H
Chloroethane	75-00-3	5.11	<5.11	ug/kg dry	4.H
Chloromethane	74-87-3	5.11	<5.11	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.11	<5.11	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.11	<5.11	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.11	<5.11	ug/kg dry	
Acetone	67-64-1	51.1	<51.1	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.11	<5.11	ug/kg dry	
Methylene Chloride	75-09-2	5.11	<5.11	ug/kg dry	
Carbon disulfide	75-15-0	5.11	<5.11	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.11	<5.11	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.11	<5.11	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.11	<5.11	ug/kg dry	
Vinyl acetate	108-05-4	5.11	<5.11	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.2	<10.2	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.11	<5.11	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.11	<5.11	ug/kg dry	
Bromochloromethane	74-97-5	5.11	<5.11	ug/kg dry	
Chloroform	67-66-3	5.11	<5.11	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.11	<5.11	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.11	<5.11	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.11	<5.11	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.11	<5.11	ug/kg dry	
Benzene	71-43-2	5.11	<5.11	ug/kg dry	
Trichloroethylene	79-01-6	5.11	<5.11	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.11	<5.11	ug/kg dry	
Dibromomethane	74-95-3	5.11	<5.11	ug/kg dry	
Bromodichloromethane	75-27-4	5.11	<5.11	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.11	<5.11	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	10.2	<10.2	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.11	<5.11	ug/kg dry	
Toluene	108-88-3	5.11	<5.11	ug/kg dry	



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Date (Time) Collected: 09/21/2011 08:15	Sample ID: B-1 9-10
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-02
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.11	<5.11	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.11	<5.11	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.11	<5.11	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.11	<5.11	ug/kg dry	
Dibromochloromethane	124-48-1	5.11	<5.11	ug/kg dry	
Tetrachloroethylene	127-18-4	5.11	<5.11	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.11	<5.11	ug/kg dry	
Chlorobenzene	108-90-7	5.11	<5.11	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.11	<5.11	ug/kg dry	
Ethylbenzene	100-41-4	5.11	<5.11	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	10.2	<10.2	ug/kg dry	
Styrene	100-42-5	5.11	<5.11	ug/kg dry	
o-Xylene	95-47-6	5.11	<5.11	ug/kg dry	
Bromoform	75-25-2	5.11	<5.11	ug/kg dry	
1,1,1,2-Tetrachloroethane	79-34-5	5.11	<5.11	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.11	<5.11	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.11	<5.11	ug/kg dry	
Bromobenzene	108-86-1	5.11	<5.11	ug/kg dry	
n-Propylbenzene	103-65-1	5.11	<5.11	ug/kg dry	
2-Chlorotoluene	95-49-8	5.11	<5.11	ug/kg dry	
4-Chlorotoluene	106-43-4	5.11	<5.11	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.11	<5.11	ug/kg dry	
tert-Butylbenzene	98-06-6	5.11	<5.11	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.11	<5.11	ug/kg dry	
sec-Butylbenzene	135-98-8	5.11	<5.11	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.11	<5.11	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.11	<5.11	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.11	<5.11	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.11	<5.11	ug/kg dry	
n-Butylbenzene	104-51-8	5.11	<5.11	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.11	<5.11	ug/kg dry	



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Matrix: Soil	ELAP: #11693

Volatile Analysis

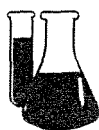
Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.11	<5.11	ug/kg dry	
Naphthalene	91-20-3	5.11	<5.11	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.11	<5.11	ug/kg dry	
1,4-Dioxane	123-91-1	5.11	<5.11	ug/kg dry	4.H
Acrolein	107-02-8	5.11	<5.11	ug/kg dry	

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 09/30/2011

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 08:30	Sample ID: B-1 19-20
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-03
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	6.11	<6.11	ug/kg dry	4.H
Chloroethane	75-00-3	6.11	<6.11	ug/kg dry	4.H
Chloromethane	74-87-3	6.11	<6.11	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	6.11	<6.11	ug/kg dry	4.H
Vinyl chloride	75-01-4	6.11	<6.11	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	6.11	<6.11	ug/kg dry	
Acetone	67-64-1	61.1	<61.1	ug/kg dry	
1,1-Dichloroethylene	75-35-4	6.11	<6.11	ug/kg dry	
Methylene Chloride	75-09-2	6.11	<6.11	ug/kg dry	
Carbon disulfide	75-15-0	6.11	<6.11	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	6.11	<6.11	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	6.11	<6.11	ug/kg dry	
1,1-Dichloroethane	75-34-3	6.11	<6.11	ug/kg dry	
Vinyl acetate	108-05-4	6.11	<6.11	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	12.2	<12.2	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	6.11	<6.11	ug/kg dry	
2,2-Dichloropropane	590-20-7	6.11	<6.11	ug/kg dry	
Bromochloromethane	74-97-5	6.11	<6.11	ug/kg dry	
Chloroform	67-66-3	6.11	<6.11	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	6.11	<6.11	ug/kg dry	
1,2-Dichloroethane	107-06-2	6.11	<6.11	ug/kg dry	
1,1-Dichloropropylene	563-58-6	6.11	<6.11	ug/kg dry	
Carbon Tetrachloride	56-23-5	6.11	<6.11	ug/kg dry	
Benzene	71-43-2	6.11	<6.11	ug/kg dry	
Trichloroethylene	79-01-6	6.11	<6.11	ug/kg dry	
1,2-Dichloropropane	78-87-5	6.11	<6.11	ug/kg dry	
Dibromomethane	74-95-3	6.11	<6.11	ug/kg dry	
Bromodichloromethane	75-27-4	6.11	<6.11	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	6.11	<6.11	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	12.2	<12.2	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	6.11	<6.11	ug/kg dry	
Toluene	108-88-3	6.11	<6.11	ug/kg dry	



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Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-03
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	6.11	<6.11	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	6.11	<6.11	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	6.11	<6.11	ug/kg dry	
1,3-Dichloropropane	142-28-9	6.11	<6.11	ug/kg dry	
Dibromochloromethane	124-48-1	6.11	<6.11	ug/kg dry	
Tetrachloroethylene	127-18-4	6.11	<6.11	ug/kg dry	
1,2-Dibromoethane	106-93-4	6.11	<6.11	ug/kg dry	
Chlorobenzene	108-90-7	6.11	<6.11	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	6.11	<6.11	ug/kg dry	
Ethylbenzene	100-41-4	6.11	<6.11	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	12.2	<12.2	ug/kg dry	
Styrene	100-42-5	6.11	<6.11	ug/kg dry	
o-Xylene	95-47-6	6.11	<6.11	ug/kg dry	
Bromoform	75-25-2	6.11	<6.11	ug/kg dry	
1,1,2,2-Tetrachloroethane	79-34-5	6.11	<6.11	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	6.11	<6.11	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	6.11	<6.11	ug/kg dry	
Bromobenzene	108-86-1	6.11	<6.11	ug/kg dry	
n-Propylbenzene	103-65-1	6.11	<6.11	ug/kg dry	
2-Chlorotoluene	95-49-8	6.11	<6.11	ug/kg dry	
4-Chlorotoluene	106-43-4	6.11	<6.11	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	6.11	<6.11	ug/kg dry	
tert-Butylbenzene	98-06-6	6.11	<6.11	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	6.11	<6.11	ug/kg dry	
sec-Butylbenzene	135-98-8	6.11	<6.11	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	6.11	<6.11	ug/kg dry	
4-Isopropyltoluene	99-87-6	6.11	<6.11	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	6.11	<6.11	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	6.11	<6.11	ug/kg dry	
n-Butylbenzene	104-51-8	6.11	<6.11	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	6.11	<6.11	ug/kg dry	



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Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-03
Matrix: Soil	ELAP: #11693

Volatile Analysis

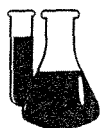
Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	6.11	<6.11	ug/kg dry	
Naphthalene	91-20-3	6.11	<6.11	ug/kg dry	
Hexachlorobutadiene	87-68-3	6.11	<6.11	ug/kg dry	
1,4-Dioxane	123-91-1	6.11	<6.11	ug/kg dry	4,H
Acrolein	107-02-8	6.11	<6.11	ug/kg dry	

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 09/30/2011

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 08:45	Sample ID: GW-1 22'
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-04
Matrix: Non-Potable Water	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.00	<5.00	ug/L	1.B, 4.G
Chloroethane	75-00-3	5.00	<5.00	ug/L	1.B
Chloromethane	74-87-3	5.00	<5.00	ug/L	1.B
Dichlorodifluoromethane	75-71-8	5.00	<5.00	ug/L	1.B, 4.G
Vinyl chloride	75-01-4	5.00	<5.00	ug/L	1.B
Trichlorofluoromethane	75-69-4	5.00	<5.00	ug/L	1.B
Acetone	67-64-1	20.0	<20.0	ug/L	1.B, 4.G
1,1-Dichloroethylene	75-35-4	5.00	<5.00	ug/L	1.B
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5.00	<5.00	ug/L	1.B
Methylene Chloride	75-09-2	5.00	<5.00	ug/L	1.B
Carbon disulfide	75-15-0	5.00	<5.00	ug/L	1.B, 4.G
Methyl-tert-Butyl Ether	1634-04-4	5.00	<5.00	ug/L	1.B
trans-1,2-Dichloroethylene	156-60-5	5.00	<5.00	ug/L	1.B
1,1-Dichloroethane	75-34-3	5.00	<5.00	ug/L	1.B
Vinyl acetate	108-05-4	5.00	<5.00	ug/L	1.B, 4.G
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.0	<10.0	ug/L	1.B
cis-1,2-Dichloroethylene	156-59-2	5.00	<5.00	ug/L	1.B
2,2-Dichloropropane	590-20-7	5.00	<5.00	ug/L	1.B, 4.J
Bromochloromethane	74-97-5	5.00	<5.00	ug/L	1.B
Chloroform	67-66-3	5.00	<5.00	ug/L	1.B
1,1,1-Trichloroethane	71-55-6	5.00	<5.00	ug/L	1.B
1,2-Dichloroethane	107-06-2	5.00	<5.00	ug/L	1.B
1,1-Dichloropropylene	563-58-6	5.00	<5.00	ug/L	1.B
Carbon Tetrachloride	56-23-5	5.00	<5.00	ug/L	1.B
Benzene	71-43-2	0.700	<0.700	ug/L	1.B
Trichloroethylene	79-01-6	5.00	12.5	ug/L	1.B
1,2-Dichloropropane	78-87-5	5.00	<5.00	ug/L	1.B
Dibromomethane	74-95-3	5.00	<5.00	ug/L	1.B
Bromodichloromethane	75-27-4	5.00	<5.00	ug/L	1.B, 4.G, 4.K
2-Chloroethyl Vinyl Ether	110-75-8	5.00	<5.00	ug/L	1.B
Methyl Isobutyl Ketone	108-10-1	10.0	<10.0	ug/L	1.B, 4.G
cis-1,3-Dichloropropylene	10061-01-5	5.00	<5.00	ug/L	1.B



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Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-04
Matrix: Non-Potable Water	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Toluene	108-88-3	5.00	<5.00	ug/L	1.B, 4.G
trans-1,3-Dichloropropylene	10061-02-6	5.00	<5.00	ug/L	1.B, 4.G
1,1,2-Trichloroethane	79-00-5	5.00	<5.00	ug/L	1.B
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.00	<5.00	ug/L	1.B
1,3-Dichloropropane	142-28-9	5.00	<5.00	ug/L	1.B, 4.G
Dibromochloromethane	124-48-1	5.00	<5.00	ug/L	1.B, 4.G, 4.K
Tetrachloroethylene	127-18-4	5.00	1470	ug/L	1.B, 4.A
1,2-Dibromoethane	106-93-4	5.00	<5.00	ug/L	1.B, 4.G
Chlorobenzene	108-90-7	5.00	<5.00	ug/L	1.B
1,1,1,2-Tetrachloroethane	630-20-6	5.00	<5.00	ug/L	1.B
Ethylbenzene	100-41-4	5.00	<5.00	ug/L	1.B
m,p-Xylenes	108-38-3/106-42-3	10.0	<10.0	ug/L	1.B, 4.G
Styrene	100-42-5	5.00	<5.00	ug/L	1.B, 4.G
o-Xylene	95-47-6	5.00	<5.00	ug/L	1.B, 4.G
Bromoform	75-25-2	5.00	<5.00	ug/L	1.B
1,1,2,2-Tetrachloroethane	79-34-5	5.00	<5.00	ug/L	1.B
Isopropylbenzene (Cumene)	98-82-8	5.00	<5.00	ug/L	1.B, 4.G
1,2,3-Trichloropropane	96-18-4	5.00	<5.00	ug/L	1.B, 4.G
Bromobenzene	108-86-1	5.00	<5.00	ug/L	1.B
n-Propylbenzene	103-65-1	5.00	<5.00	ug/L	1.B, 4.G
2-Chlorotoluene	95-49-8	5.00	<5.00	ug/L	1.B, 4.G
4-Ethyltoluene	622-96-8	5.00	<5.00	ug/L	1.B, 4.G
4-Chlorotoluene	106-43-4	5.00	<5.00	ug/L	1.B, 4.G
1,3,5-Trimethylbenzene	108-67-8	5.00	<5.00	ug/L	1.B, 4.G
tert-Butylbenzene	98-06-6	5.00	<5.00	ug/L	1.B
1,2,4-Trimethylbenzene	95-63-6	5.00	<5.00	ug/L	1.B, 4.G
sec-Butylbenzene	135-98-8	5.00	<5.00	ug/L	1.B, 4.G
1,3-Dichlorobenzene	541-73-1	5.00	<5.00	ug/L	1.B
4-Isopropyltoluene	99-87-6	5.00	<5.00	ug/L	1.B, 4.G
1,4-Dichlorobenzene	106-46-7	5.00	<5.00	ug/L	1.B
1,2-Dichlorobenzene	95-50-1	5.00	<5.00	ug/L	1.B



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110 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 08:45	Sample ID: GW-1 22'
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-04
Matrix: Non-Potable Water	ELAP: #11693

Volatile Analysis

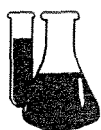
Parameter	CAS No.	MRL	Result	Units	Flag
1,4-Diethylbenzene	105-05-5	5.00	<5.00	ug/L	1.B, 4.G
n-Butylbenzene	104-51-8	5.00	<5.00	ug/L	4.G, 1.B
1,2-Dibromo-3-chloropropane	96-12-8	5.00	<5.00	ug/L	1.B
1,2,4,5-Tetramethylbenzene	95-93-2	5.00	<5.00	ug/L	1.B
1,2,4-Trichlorobenzene	120-82-1	5.00	<5.00	ug/L	1.B
Naphthalene	91-20-3	5.00	<5.00	ug/L	1.B
Hexachlorobutadiene	87-68-3	5.00	<5.00	ug/L	1.B
1,2,3-Trichlorobenzene	87-61-6	5.00	<5.00	ug/L	1.B
Acrylonitrile	107-13-1	5.00	<5.00	ug/L	1.B, 4.G

Date Prepared: 10/06/2011

Preparation Method: EPA 5030B

Date Analyzed: 10/06/2011

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 09:00	Sample ID: B-2 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-05
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.16	<5.16	ug/kg dry	4.H
Chloroethane	75-00-3	5.16	<5.16	ug/kg dry	4.H
Chloromethane	74-87-3	5.16	<5.16	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.16	<5.16	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.16	<5.16	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.16	<5.16	ug/kg dry	
Acetone	67-64-1	51.6	<51.6	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.16	<5.16	ug/kg dry	
Methylene Chloride	75-09-2	5.16	<5.16	ug/kg dry	
Carbon disulfide	75-15-0	5.16	<5.16	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.16	<5.16	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.16	<5.16	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.16	<5.16	ug/kg dry	
Vinyl acetate	108-05-4	5.16	<5.16	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.3	<10.3	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.16	<5.16	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.16	<5.16	ug/kg dry	
Bromochloromethane	74-97-5	5.16	<5.16	ug/kg dry	
Chloroform	67-66-3	5.16	<5.16	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.16	<5.16	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.16	<5.16	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.16	<5.16	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.16	<5.16	ug/kg dry	
Benzene	71-43-2	5.16	<5.16	ug/kg dry	
Trichloroethylene	79-01-6	5.16	<5.16	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.16	<5.16	ug/kg dry	
Dibromomethane	74-95-3	5.16	<5.16	ug/kg dry	
Bromodichloromethane	75-27-4	5.16	<5.16	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.16	<5.16	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	10.3	<10.3	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.16	<5.16	ug/kg dry	
Toluene	108-88-3	5.16	<5.16	ug/kg dry	



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 09:00	Sample ID: B-2 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-05
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.16	<5.16	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.16	<5.16	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.16	<5.16	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.16	<5.16	ug/kg dry	
Dibromochloromethane	124-48-1	5.16	<5.16	ug/kg dry	
Tetrachloroethylene	127-18-4	5.16	<5.16	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.16	<5.16	ug/kg dry	
Chlorobenzene	108-90-7	5.16	<5.16	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.16	<5.16	ug/kg dry	
Ethylbenzene	100-41-4	5.16	<5.16	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	10.3	<10.3	ug/kg dry	
Styrene	100-42-5	5.16	<5.16	ug/kg dry	
o-Xylene	95-47-6	5.16	<5.16	ug/kg dry	
Bromoform	75-25-2	5.16	<5.16	ug/kg dry	
1,1,1,2-Tetrachloroethane	79-34-5	5.16	<5.16	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.16	<5.16	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.16	<5.16	ug/kg dry	
Bromobenzene	108-86-1	5.16	<5.16	ug/kg dry	
n-Propylbenzene	103-65-1	5.16	<5.16	ug/kg dry	
2-Chlorotoluene	95-49-8	5.16	<5.16	ug/kg dry	
4-Chlorotoluene	106-43-4	5.16	<5.16	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.16	<5.16	ug/kg dry	
tert-Butylbenzene	98-06-6	5.16	<5.16	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.16	<5.16	ug/kg dry	
sec-Butylbenzene	135-98-8	5.16	<5.16	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.16	<5.16	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.16	<5.16	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.16	<5.16	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.16	<5.16	ug/kg dry	
n-Butylbenzene	104-51-8	5.16	<5.16	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.16	<5.16	ug/kg dry	



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 09:00	Sample ID: B-2 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-05
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.16	<5.16	ug/kg dry	
Naphthalene	91-20-3	5.16	<5.16	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.16	<5.16	ug/kg dry	
1,4-Dioxane	123-91-1	5.16	<5.16	ug/kg dry	4.H
Acrolein	107-02-8	5.16	<5.16	ug/kg dry	

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 10/01/2011

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 09:15	Sample ID: B-2 9-10
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-06
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.17	<5.17	ug/kg dry	4.H
Chloroethane	75-00-3	5.17	<5.17	ug/kg dry	4.H
Chloromethane	74-87-3	5.17	<5.17	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.17	<5.17	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.17	<5.17	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.17	<5.17	ug/kg dry	
Acetone	67-64-1	51.7	<51.7	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.17	<5.17	ug/kg dry	
Methylene Chloride	75-09-2	5.17	<5.17	ug/kg dry	
Carbon disulfide	75-15-0	5.17	<5.17	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.17	<5.17	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.17	<5.17	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.17	<5.17	ug/kg dry	
Vinyl acetate	108-05-4	5.17	<5.17	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.3	<10.3	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.17	<5.17	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.17	<5.17	ug/kg dry	
Bromochloromethane	74-97-5	5.17	<5.17	ug/kg dry	
Chloroform	67-66-3	5.17	<5.17	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.17	<5.17	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.17	<5.17	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.17	<5.17	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.17	<5.17	ug/kg dry	
Benzene	71-43-2	5.17	<5.17	ug/kg dry	
Trichloroethylene	79-01-6	5.17	<5.17	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.17	<5.17	ug/kg dry	
Dibromomethane	74-95-3	5.17	<5.17	ug/kg dry	
Bromodichloromethane	75-27-4	5.17	<5.17	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.17	<5.17	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	10.3	<10.3	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.17	<5.17	ug/kg dry	
Toluene	108-88-3	5.17	<5.17	ug/kg dry	



Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 09:15	Sample ID: B-2 9-10
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-06
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.17	<5.17	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.17	<5.17	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.17	<5.17	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.17	<5.17	ug/kg dry	
Dibromochloromethane	124-48-1	5.17	<5.17	ug/kg dry	
Tetrachloroethylene	127-18-4	5.17	8.00	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.17	<5.17	ug/kg dry	
Chlorobenzene	108-90-7	5.17	<5.17	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.17	<5.17	ug/kg dry	
Ethylbenzene	100-41-4	5.17	<5.17	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	10.3	<10.3	ug/kg dry	
Styrene	100-42-5	5.17	<5.17	ug/kg dry	
o-Xylene	95-47-6	5.17	<5.17	ug/kg dry	
Bromoform	75-25-2	5.17	<5.17	ug/kg dry	
1,1,1,2-Tetrachloroethane	79-34-5	5.17	<5.17	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.17	<5.17	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.17	<5.17	ug/kg dry	
Bromobenzene	108-86-1	5.17	<5.17	ug/kg dry	
n-Propylbenzene	103-65-1	5.17	<5.17	ug/kg dry	
2-Chlorotoluene	95-49-8	5.17	<5.17	ug/kg dry	
4-Chlorotoluene	106-43-4	5.17	<5.17	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.17	<5.17	ug/kg dry	
tert-Butylbenzene	98-06-6	5.17	<5.17	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.17	<5.17	ug/kg dry	
sec-Butylbenzene	135-98-8	5.17	<5.17	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.17	<5.17	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.17	<5.17	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.17	<5.17	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.17	<5.17	ug/kg dry	
n-Butylbenzene	104-51-8	5.17	<5.17	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.17	<5.17	ug/kg dry	



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 09:15	Sample ID: B-2 9-10
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-06
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.17	<5.17	ug/kg dry	
Naphthalene	91-20-3	5.17	<5.17	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.17	<5.17	ug/kg dry	
1,4-Dioxane	123-91-1	5.17	<5.17	ug/kg dry	4.H

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 10/01/2011

Analytical Method: EPA 8260B



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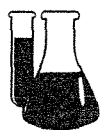
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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 09:30	Sample ID: B-2 19-20
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-07
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.55	<5.55	ug/kg dry	4.H
Chloroethane	75-00-3	5.55	<5.55	ug/kg dry	4.H
Chloromethane	74-87-3	5.55	<5.55	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.55	<5.55	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.55	<5.55	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.55	<5.55	ug/kg dry	
Acetone	67-64-1	55.5	<55.5	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.55	<5.55	ug/kg dry	
Methylene Chloride	75-09-2	5.55	<5.55	ug/kg dry	
Carbon disulfide	75-15-0	5.55	<5.55	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.55	<5.55	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.55	<5.55	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.55	<5.55	ug/kg dry	
Vinyl acetate	108-05-4	5.55	<5.55	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	11.1	<11.1	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.55	<5.55	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.55	<5.55	ug/kg dry	
Bromochloromethane	74-97-5	5.55	<5.55	ug/kg dry	
Chloroform	67-66-3	5.55	<5.55	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.55	<5.55	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.55	<5.55	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.55	<5.55	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.55	<5.55	ug/kg dry	
Benzene	71-43-2	5.55	<5.55	ug/kg dry	
Trichloroethylene	79-01-6	5.55	<5.55	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.55	<5.55	ug/kg dry	
Dibromomethane	74-95-3	5.55	<5.55	ug/kg dry	
Bromodichloromethane	75-27-4	5.55	<5.55	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.55	<5.55	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	11.1	<11.1	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.55	<5.55	ug/kg dry	
Toluene	108-88-3	5.55	<5.55	ug/kg dry	



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 09:30	Sample ID: B-2 19-20
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-07
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.55	<5.55	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.55	<5.55	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.55	<5.55	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.55	<5.55	ug/kg dry	
Dibromochloromethane	124-48-1	5.55	<5.55	ug/kg dry	
Tetrachloroethylene	127-18-4	5.55	<5.55	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.55	<5.55	ug/kg dry	
Chlorobenzene	108-90-7	5.55	<5.55	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.55	<5.55	ug/kg dry	
Ethylbenzene	100-41-4	5.55	<5.55	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	11.1	<11.1	ug/kg dry	
Styrene	100-42-5	5.55	<5.55	ug/kg dry	
o-Xylene	95-47-6	5.55	<5.55	ug/kg dry	
Bromoform	75-25-2	5.55	<5.55	ug/kg dry	
1,1,2,2-Tetrachloroethane	79-34-5	5.55	<5.55	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.55	<5.55	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.55	<5.55	ug/kg dry	
Bromobenzene	108-86-1	5.55	<5.55	ug/kg dry	
n-Propylbenzene	103-65-1	5.55	<5.55	ug/kg dry	
2-Chlorotoluene	95-49-8	5.55	<5.55	ug/kg dry	
4-Chlorotoluene	106-43-4	5.55	<5.55	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.55	<5.55	ug/kg dry	
tert-Butylbenzene	98-06-6	5.55	<5.55	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.55	<5.55	ug/kg dry	
sec-Butylbenzene	135-98-8	5.55	<5.55	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.55	<5.55	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.55	<5.55	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.55	<5.55	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.55	<5.55	ug/kg dry	
n-Butylbenzene	104-51-8	5.55	<5.55	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.55	<5.55	ug/kg dry	



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 09:30	Sample ID: B-2 19-20
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-07
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.55	<5.55	ug/kg dry	
Naphthalene	91-20-3	5.55	<5.55	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.55	<5.55	ug/kg dry	
1,4-Dioxane	123-91-1	5.55	<5.55	ug/kg dry	4.H

Date Prepared: 09/30/2011
 Date Analyzed: 10/01/2011

Preparation Method: EPA 5035
 Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 10:00	Sample ID: GW-2 22'
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-08
Matrix: Non-Potable Water	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.00	<5.00	ug/L	4.G, 1.B
Chloroethane	75-00-3	5.00	<5.00	ug/L	1.B
Chloromethane	74-87-3	5.00	<5.00	ug/L	1.B
Dichlorodifluoromethane	75-71-8	5.00	<5.00	ug/L	1.B, 4.G
Vinyl chloride	75-01-4	5.00	<5.00	ug/L	1.B
Trichlorofluoromethane	75-69-4	5.00	<5.00	ug/L	1.B
Acetone	67-64-1	20.0	<20.0	ug/L	1.B, 4.G
1,1-Dichloroethylene	75-35-4	5.00	<5.00	ug/L	1.B
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5.00	<5.00	ug/L	1.B
Methylene Chloride	75-09-2	5.00	<5.00	ug/L	1.B
Carbon disulfide	75-15-0	5.00	<5.00	ug/L	1.B, 4.G
Methyl-tert-Butyl Ether	1634-04-4	5.00	<5.00	ug/L	1.B
trans-1,2-Dichloroethylene	156-60-5	5.00	<5.00	ug/L	1.B
1,1-Dichloroethane	75-34-3	5.00	<5.00	ug/L	1.B
Vinyl acetate	108-05-4	5.00	<5.00	ug/L	1.B, 4.G
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.0	<10.0	ug/L	1.B
cis-1,2-Dichloroethylene	156-59-2	5.00	<5.00	ug/L	1.B
2,2-Dichloropropane	590-20-7	5.00	<5.00	ug/L	1.B, 4.J
Bromochloromethane	74-97-5	5.00	<5.00	ug/L	1.B
Chloroform	67-66-3	5.00	<5.00	ug/L	1.B
1,1,1-Trichloroethane	71-55-6	5.00	<5.00	ug/L	1.B
1,2-Dichloroethane	107-06-2	5.00	<5.00	ug/L	1.B
1,1-Dichloropropylene	563-58-6	5.00	<5.00	ug/L	1.B
Carbon Tetrachloride	56-23-5	5.00	<5.00	ug/L	1.B
Benzene	71-43-2	0.700	<0.700	ug/L	1.B
Trichloroethylene	79-01-6	5.00	<5.00	ug/L	1.B
1,2-Dichloropropane	78-87-5	5.00	<5.00	ug/L	1.B
Dibromomethane	74-95-3	5.00	<5.00	ug/L	1.B
Bromodichloromethane	75-27-4	5.00	<5.00	ug/L	1.B, 4.G, 4.K
2-Chloroethyl Vinyl Ether	110-75-8	5.00	<5.00	ug/L	1.B
Methyl Isobutyl Ketone	108-10-1	10.0	<10.0	ug/L	1.B, 4.G
cis-1,3-Dichloropropylene	10061-01-5	5.00	<5.00	ug/L	1.B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 10:00	Sample ID: GW-2 22'
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-08
Matrix: Non-Potable Water	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Toluene	108-88-3	5.00	<5.00	ug/L	1.B, 4.G
trans-1,3-Dichloropropylene	10061-02-6	5.00	<5.00	ug/L	1.B, 4.G
1,1,2-Trichloroethane	79-00-5	5.00	<5.00	ug/L	1.B
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.00	<5.00	ug/L	1.B
1,3-Dichloropropane	142-28-9	5.00	<5.00	ug/L	1.B, 4.G
Dibromochloromethane	124-48-1	5.00	<5.00	ug/L	1.B, 4.G, 4.K
Tetrachloroethylene	127-18-4	5.00	537	ug/L	1.B, 4.A
1,2-Dibromoethane	106-93-4	5.00	<5.00	ug/L	1.B, 4.G
Chlorobenzene	108-90-7	5.00	<5.00	ug/L	1.B
1,1,1,2-Tetrachloroethane	630-20-6	5.00	<5.00	ug/L	1.B
Ethylbenzene	100-41-4	5.00	<5.00	ug/L	1.B
m,p-Xylenes	108-38-3/106-42-3	10.0	<10.0	ug/L	1.B, 4.G
Styrene	100-42-5	5.00	<5.00	ug/L	1.B, 4.G
o-Xylene	95-47-6	5.00	<5.00	ug/L	1.B, 4.G
Bromoform	75-25-2	5.00	<5.00	ug/L	1.B
1,1,2,2-Tetrachloroethane	79-34-5	5.00	<5.00	ug/L	1.B
Isopropylbenzene (Cumene)	98-82-8	5.00	<5.00	ug/L	1.B, 4.G
1,2,3-Trichloropropane	96-18-4	5.00	<5.00	ug/L	1.B, 4.G
Bromobenzene	108-86-1	5.00	<5.00	ug/L	1.B
n-Propylbenzene	103-65-1	5.00	<5.00	ug/L	1.B, 4.G
2-Chlorotoluene	95-49-8	5.00	<5.00	ug/L	1.B, 4.G
4-Ethyltoluene	622-96-8	5.00	<5.00	ug/L	1.B, 4.G
4-Chlorotoluene	106-43-4	5.00	<5.00	ug/L	1.B, 4.G
1,3,5-Trimethylbenzene	108-67-8	5.00	<5.00	ug/L	1.B, 4.G
tert-Butylbenzene	98-06-6	5.00	<5.00	ug/L	1.B
1,2,4-Trimethylbenzene	95-63-6	5.00	<5.00	ug/L	1.B, 4.G
sec-Butylbenzene	135-98-8	5.00	<5.00	ug/L	1.B, 4.G
1,3-Dichlorobenzene	541-73-1	5.00	<5.00	ug/L	1.B
4-Isopropyltoluene	99-87-6	5.00	<5.00	ug/L	1.B, 4.G
1,4-Dichlorobenzene	106-46-7	5.00	<5.00	ug/L	1.B
1,2-Dichlorobenzene	95-50-1	5.00	<5.00	ug/L	1.B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 10:00	Sample ID: GW-2 22'
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-08
Matrix: Non-Potable Water	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,4-Diethylbenzene	105-05-5	5.00	<5.00	ug/L	1.B, 4.G
n-Butylbenzene	104-51-8	5.00	<5.00	ug/L	1.B, 4.G
1,2-Dibromo-3-chloropropane	96-12-8	5.00	<5.00	ug/L	1.B
1,2,4,5-Tetramethylbenzene	95-93-2	5.00	<5.00	ug/L	1.B
1,2,4-Trichlorobenzene	120-82-1	5.00	<5.00	ug/L	1.B
Naphthalene	91-20-3	5.00	<5.00	ug/L	1.B
Hexachlorobutadiene	87-68-3	5.00	<5.00	ug/L	1.B
1,2,3-Trichlorobenzene	87-61-6	5.00	<5.00	ug/L	1.B
Acrylonitrile	107-13-1	5.00	<5.00	ug/L	1.B, 4.G

Date Prepared: 10/06/2011

Preparation Method: EPA 5030B

Date Analyzed: 10/06/2011

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 10:15	Sample ID: B-3 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-09
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.54	<5.54	ug/kg dry	4.H
Chloroethane	75-00-3	5.54	<5.54	ug/kg dry	4.H
Chloromethane	74-87-3	5.54	<5.54	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.54	<5.54	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.54	<5.54	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.54	<5.54	ug/kg dry	
Acetone	67-64-1	55.4	<55.4	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.54	<5.54	ug/kg dry	
Methylene Chloride	75-09-2	5.54	<5.54	ug/kg dry	
Carbon disulfide	75-15-0	5.54	<5.54	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.54	<5.54	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.54	<5.54	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.54	<5.54	ug/kg dry	
Vinyl acetate	108-05-4	5.54	<5.54	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	11.1	<11.1	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.54	<5.54	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.54	<5.54	ug/kg dry	
Bromochloromethane	74-97-5	5.54	<5.54	ug/kg dry	
Chloroform	67-66-3	5.54	<5.54	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.54	<5.54	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.54	<5.54	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.54	<5.54	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.54	<5.54	ug/kg dry	
Benzene	71-43-2	5.54	<5.54	ug/kg dry	
Trichloroethylene	79-01-6	5.54	<5.54	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.54	<5.54	ug/kg dry	
Dibromomethane	74-95-3	5.54	<5.54	ug/kg dry	
Bromodichloromethane	75-27-4	5.54	<5.54	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.54	<5.54	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	11.1	<11.1	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.54	<5.54	ug/kg dry	
Toluene	108-88-3	5.54	<5.54	ug/kg dry	



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 10:15	Sample ID: B-3 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-09
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.54	<5.54	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.54	<5.54	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.54	<5.54	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.54	<5.54	ug/kg dry	
Dibromochloromethane	124-48-1	5.54	<5.54	ug/kg dry	
Tetrachloroethylene	127-18-4	5.54	12.4	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.54	<5.54	ug/kg dry	
Chlorobenzene	108-90-7	5.54	<5.54	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.54	<5.54	ug/kg dry	
Ethylbenzene	100-41-4	5.54	<5.54	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	11.1	<11.1	ug/kg dry	
Styrene	100-42-5	5.54	<5.54	ug/kg dry	
o-Xylene	95-47-6	5.54	<5.54	ug/kg dry	
Bromoform	75-25-2	5.54	<5.54	ug/kg dry	
1,1,1,2-Tetrachloroethane	79-34-5	5.54	<5.54	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.54	<5.54	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.54	<5.54	ug/kg dry	
Bromobenzene	108-86-1	5.54	<5.54	ug/kg dry	
n-Propylbenzene	103-65-1	5.54	<5.54	ug/kg dry	
2-Chlorotoluene	95-49-8	5.54	<5.54	ug/kg dry	
4-Chlorotoluene	106-43-4	5.54	<5.54	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.54	<5.54	ug/kg dry	
tert-Butylbenzene	98-06-6	5.54	<5.54	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.54	<5.54	ug/kg dry	
sec-Butylbenzene	135-98-8	5.54	<5.54	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.54	<5.54	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.54	<5.54	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.54	<5.54	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.54	<5.54	ug/kg dry	
n-Butylbenzene	104-51-8	5.54	<5.54	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.54	<5.54	ug/kg dry	



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Date (Time) Collected: 09/21/2011 10:15	Sample ID: B-3 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-09
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.54	<5.54	ug/kg dry	
Naphthalene	91-20-3	5.54	<5.54	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.54	<5.54	ug/kg dry	
1,4-Dioxane	123-91-1	5.54	<5.54	ug/kg dry	4.H

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 10/01/2011

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 10:30	Sample ID: B-3 9-10
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-10
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.94	<5.94	ug/kg dry	4.H
Chloroethane	75-00-3	5.94	<5.94	ug/kg dry	4.H
Chloromethane	74-87-3	5.94	<5.94	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.94	<5.94	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.94	<5.94	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.94	<5.94	ug/kg dry	
Acetone	67-64-1	59.4	<59.4	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.94	<5.94	ug/kg dry	
Methylene Chloride	75-09-2	5.94	<5.94	ug/kg dry	
Carbon disulfide	75-15-0	5.94	<5.94	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.94	<5.94	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.94	<5.94	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.94	<5.94	ug/kg dry	
Vinyl acetate	108-05-4	5.94	<5.94	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	11.9	<11.9	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.94	<5.94	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.94	<5.94	ug/kg dry	
Bromochloromethane	74-97-5	5.94	<5.94	ug/kg dry	
Chloroform	67-66-3	5.94	<5.94	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.94	<5.94	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.94	<5.94	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.94	<5.94	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.94	<5.94	ug/kg dry	
Benzene	71-43-2	5.94	<5.94	ug/kg dry	
Trichloroethylene	79-01-6	5.94	<5.94	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.94	<5.94	ug/kg dry	
Dibromomethane	74-95-3	5.94	<5.94	ug/kg dry	
Bromodichloromethane	75-27-4	5.94	<5.94	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.94	<5.94	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	11.9	<11.9	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.94	<5.94	ug/kg dry	
Toluene	108-88-3	5.94	<5.94	ug/kg dry	



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 10:30	Sample ID: B-3 9-10
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-10
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.94	<5.94	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.94	<5.94	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.94	<5.94	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.94	<5.94	ug/kg dry	
Dibromochloromethane	124-48-1	5.94	<5.94	ug/kg dry	
Tetrachloroethylene	127-18-4	5.94	<5.94	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.94	<5.94	ug/kg dry	
Chlorobenzene	108-90-7	5.94	<5.94	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.94	<5.94	ug/kg dry	
Ethylbenzene	100-41-4	5.94	<5.94	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	11.9	<11.9	ug/kg dry	
Styrene	100-42-5	5.94	<5.94	ug/kg dry	
o-Xylene	95-47-6	5.94	<5.94	ug/kg dry	
Bromoform	75-25-2	5.94	<5.94	ug/kg dry	
1,1,2,2-Tetrachloroethane	79-34-5	5.94	<5.94	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.94	<5.94	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.94	<5.94	ug/kg dry	
Bromobenzene	108-86-1	5.94	<5.94	ug/kg dry	
n-Propylbenzene	103-65-1	5.94	<5.94	ug/kg dry	
2-Chlorotoluene	95-49-8	5.94	<5.94	ug/kg dry	
4-Chlorotoluene	106-43-4	5.94	<5.94	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.94	<5.94	ug/kg dry	
tert-Butylbenzene	98-06-6	5.94	<5.94	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.94	<5.94	ug/kg dry	
sec-Butylbenzene	135-98-8	5.94	<5.94	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.94	<5.94	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.94	<5.94	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.94	<5.94	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.94	<5.94	ug/kg dry	
n-Butylbenzene	104-51-8	5.94	<5.94	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.94	<5.94	ug/kg dry	



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 10:30	Sample ID: B-3 9-10
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-10
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.94	<5.94	ug/kg dry	
Naphthalene	91-20-3	5.94	<5.94	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.94	<5.94	ug/kg dry	
1,4-Dioxane	123-91-1	5.94	<5.94	ug/kg dry	4.H

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 10/01/2011

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 10:45	Sample ID: B-3 19-20
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-11
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.70	<5.70	ug/kg dry	4.H
Chloroethane	75-00-3	5.70	<5.70	ug/kg dry	4.H
Chloromethane	74-87-3	5.70	<5.70	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.70	<5.70	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.70	<5.70	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.70	<5.70	ug/kg dry	
Acetone	67-64-1	57.0	<57.0	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.70	<5.70	ug/kg dry	
Methylene Chloride	75-09-2	5.70	<5.70	ug/kg dry	
Carbon disulfide	75-15-0	5.70	<5.70	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.70	<5.70	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.70	<5.70	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.70	<5.70	ug/kg dry	
Vinyl acetate	108-05-4	5.70	<5.70	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	11.4	<11.4	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.70	<5.70	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.70	<5.70	ug/kg dry	
Bromochloromethane	74-97-5	5.70	<5.70	ug/kg dry	
Chloroform	67-66-3	5.70	<5.70	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.70	<5.70	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.70	<5.70	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.70	<5.70	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.70	<5.70	ug/kg dry	
Benzene	71-43-2	5.70	<5.70	ug/kg dry	
Trichloroethylene	79-01-6	5.70	<5.70	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.70	<5.70	ug/kg dry	
Dibromomethane	74-95-3	5.70	<5.70	ug/kg dry	
Bromodichloromethane	75-27-4	5.70	<5.70	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.70	<5.70	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	11.4	<11.4	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.70	<5.70	ug/kg dry	
Toluene	108-88-3	5.70	<5.70	ug/kg dry	



Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 10:45	Sample ID: B-3 19-20
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-11
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.70	<5.70	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.70	<5.70	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.70	<5.70	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.70	<5.70	ug/kg dry	
Dibromochloromethane	124-48-1	5.70	<5.70	ug/kg dry	
Tetrachloroethylene	127-18-4	5.70	<5.70	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.70	<5.70	ug/kg dry	
Chlorobenzene	108-90-7	5.70	<5.70	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.70	<5.70	ug/kg dry	
Ethylbenzene	100-41-4	5.70	<5.70	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	11.4	<11.4	ug/kg dry	
Styrene	100-42-5	5.70	<5.70	ug/kg dry	
o-Xylene	95-47-6	5.70	<5.70	ug/kg dry	
Bromoform	75-25-2	5.70	<5.70	ug/kg dry	
1,1,2,2-Tetrachloroethane	79-34-5	5.70	<5.70	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.70	<5.70	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.70	<5.70	ug/kg dry	
Bromobenzene	108-86-1	5.70	<5.70	ug/kg dry	
n-Propylbenzene	103-65-1	5.70	<5.70	ug/kg dry	
2-Chlorotoluene	95-49-8	5.70	<5.70	ug/kg dry	
4-Chlorotoluene	106-43-4	5.70	<5.70	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.70	<5.70	ug/kg dry	
tert-Butylbenzene	98-06-6	5.70	<5.70	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.70	<5.70	ug/kg dry	
sec-Butylbenzene	135-98-8	5.70	<5.70	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.70	<5.70	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.70	<5.70	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.70	<5.70	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.70	<5.70	ug/kg dry	
n-Butylbenzene	104-51-8	5.70	<5.70	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.70	<5.70	ug/kg dry	



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 10:45	Sample ID: B-3 19-20
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-11
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.70	<5.70	ug/kg dry	
Naphthalene	91-20-3	5.70	<5.70	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.70	<5.70	ug/kg dry	
1,4-Dioxane	123-91-1	5.70	<5.70	ug/kg dry	4.H

Date Prepared: 09/30/2011

Date Analyzed: 10/01/2011

Preparation Method: EPA 5035

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 11:00	Sample ID: GW-3 22'
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-12
Matrix: Non-Potable Water	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.00	<5.00	ug/L	4.G, 1.B
Chloroethane	75-00-3	5.00	<5.00	ug/L	1.B
Chloromethane	74-87-3	5.00	<5.00	ug/L	1.B
Dichlorodifluoromethane	75-71-8	5.00	<5.00	ug/L	1.B, 4.G
Vinyl chloride	75-01-4	5.00	<5.00	ug/L	1.B
Trichlorofluoromethane	75-69-4	5.00	<5.00	ug/L	1.B
Acetone	67-64-1	20.0	<20.0	ug/L	1.B, 4.G
1,1-Dichloroethylene	75-35-4	5.00	<5.00	ug/L	1.B
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5.00	<5.00	ug/L	1.B
Methylene Chloride	75-09-2	5.00	<5.00	ug/L	1.B
Carbon disulfide	75-15-0	5.00	<5.00	ug/L	1.B, 4.G
Methyl-tert-Butyl Ether	1634-04-4	5.00	<5.00	ug/L	1.B
trans-1,2-Dichloroethylene	156-60-5	5.00	<5.00	ug/L	1.B
1,1-Dichloroethane	75-34-3	5.00	<5.00	ug/L	1.B
Vinyl acetate	108-05-4	5.00	<5.00	ug/L	1.B, 4.G
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.0	<10.0	ug/L	1.B
cis-1,2-Dichloroethylene	156-59-2	5.00	<5.00	ug/L	1.B
2,2-Dichloropropane	590-20-7	5.00	<5.00	ug/L	1.B, 4.J
Bromochloromethane	74-97-5	5.00	<5.00	ug/L	1.B
Chloroform	67-66-3	5.00	<5.00	ug/L	1.B
1,1,1-Trichloroethane	71-55-6	5.00	<5.00	ug/L	1.B
1,2-Dichloroethane	107-06-2	5.00	<5.00	ug/L	1.B
1,1-Dichloropropylene	563-58-6	5.00	<5.00	ug/L	1.B
Carbon Tetrachloride	56-23-5	5.00	<5.00	ug/L	1.B
Benzene	71-43-2	0.700	<0.700	ug/L	1.B
Trichloroethylene	79-01-6	5.00	11.0	ug/L	1.B
1,2-Dichloropropane	78-87-5	5.00	<5.00	ug/L	1.B
Dibromomethane	74-95-3	5.00	<5.00	ug/L	1.B
Bromodichloromethane	75-27-4	5.00	<5.00	ug/L	1.B, 4.G, 4.K
2-Chloroethyl Vinyl Ether	110-75-8	5.00	<5.00	ug/L	1.B
Methyl Isobutyl Ketone	108-10-1	10.0	<10.0	ug/L	1.B, 4.G
cis-1,3-Dichloropropylene	10061-01-5	5.00	<5.00	ug/L	1.B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 11:00	Sample ID: GW-3 22'
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-12
Matrix: Non-Potable Water	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Toluene	108-88-3	5.00	<5.00	ug/L	1.B, 4.G
trans-1,3-Dichloropropylene	10061-02-6	5.00	<5.00	ug/L	1.B, 4.G
1,1,2-Trichloroethane	79-00-5	5.00	<5.00	ug/L	1.B
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.00	<5.00	ug/L	1.B
1,3-Dichloropropane	142-28-9	5.00	<5.00	ug/L	1.B, 4.G
Dibromochloromethane	124-48-1	5.00	<5.00	ug/L	1.B, 4.G, 4.K
Tetrachloroethylene	127-18-4	5.00	841	ug/L	1.B, 4.A
1,2-Dibromoethane	106-93-4	5.00	<5.00	ug/L	1.B, 4.G
Chlorobenzene	108-90-7	5.00	<5.00	ug/L	1.B
1,1,1,2-Tetrachloroethane	630-20-6	5.00	<5.00	ug/L	1.B
Ethylbenzene	100-41-4	5.00	<5.00	ug/L	1.B
m,p-Xylenes	108-38-3/106-42-3	10.0	<10.0	ug/L	1.B, 4.G
Styrene	100-42-5	5.00	<5.00	ug/L	1.B, 4.G
o-Xylene	95-47-6	5.00	<5.00	ug/L	1.B, 4.G
Bromoform	75-25-2	5.00	<5.00	ug/L	1.B
1,1,2,2-Tetrachloroethane	79-34-5	5.00	<5.00	ug/L	1.B
Isopropylbenzene (Cumene)	98-82-8	5.00	<5.00	ug/L	1.B, 4.G
1,2,3-Trichloropropane	96-18-4	5.00	<5.00	ug/L	1.B, 4.G
Bromobenzene	108-86-1	5.00	<5.00	ug/L	1.B
n-Propylbenzene	103-65-1	5.00	<5.00	ug/L	1.B, 4.G
2-Chlorotoluene	95-49-8	5.00	<5.00	ug/L	1.B, 4.G
4-Ethyltoluene	622-96-8	5.00	<5.00	ug/L	1.B, 4.G
4-Chlorotoluene	106-43-4	5.00	<5.00	ug/L	1.B, 4.G
1,3,5-Trimethylbenzene	108-67-8	5.00	<5.00	ug/L	1.B, 4.G
tert-Butylbenzene	98-06-6	5.00	6.32	ug/L	1.B
1,2,4-Trimethylbenzene	95-63-6	5.00	13.9	ug/L	1.B, 4.G
sec-Butylbenzene	135-98-8	5.00	13.2	ug/L	1.B, 4.G
1,3-Dichlorobenzene	541-73-1	5.00	<5.00	ug/L	1.B
4-Isopropyltoluene	99-87-6	5.00	6.45	ug/L	1.B, 4.G
1,4-Dichlorobenzene	106-46-7	5.00	<5.00	ug/L	1.B
1,2-Dichlorobenzene	95-50-1	5.00	<5.00	ug/L	1.B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 11:00	Sample ID: GW-3 22'
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-12
Matrix: Non-Potable Water	ELAP: #11693

Volatile Analysis

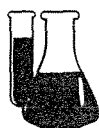
Parameter	CAS No.	MRL	Result	Units	Flag
1,4-Diethylbenzene	105-05-5	5.00	35.9	ug/L	1.B, 4.G
n-Butylbenzene	104-51-8	5.00	<5.00	ug/L	4.G, 1.B
1,2-Dibromo-3-chloropropane	96-12-8	5.00	<5.00	ug/L	1.B
1,2,4,5-Tetramethylbenzene	95-93-2	5.00	11.2	ug/L	1.B
1,2,4-Trichlorobenzene	120-82-1	5.00	<5.00	ug/L	1.B
Naphthalene	91-20-3	5.00	<5.00	ug/L	1.B
Hexachlorobutadiene	87-68-3	5.00	<5.00	ug/L	1.B
1,2,3-Trichlorobenzene	87-61-6	5.00	<5.00	ug/L	1.B
Acrylonitrile	107-13-1	5.00	<5.00	ug/L	1.B, 4.G

Date Prepared: 10/06/2011

Preparation Method: EPA 5030B

Date Analyzed: 10/06/2011

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 11:15	Sample ID: B-4 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-13
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.44	<5.44	ug/kg dry	4.H
Chloroethane	75-00-3	5.44	<5.44	ug/kg dry	4.H
Chloromethane	74-87-3	5.44	<5.44	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.44	<5.44	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.44	<5.44	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.44	<5.44	ug/kg dry	
Acetone	67-64-1	54.4	<54.4	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.44	<5.44	ug/kg dry	
Methylene Chloride	75-09-2	5.44	<5.44	ug/kg dry	
Carbon disulfide	75-15-0	5.44	<5.44	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.44	<5.44	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.44	<5.44	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.44	<5.44	ug/kg dry	
Vinyl acetate	108-05-4	5.44	<5.44	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.9	<10.9	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.44	<5.44	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.44	<5.44	ug/kg dry	
Bromochloromethane	74-97-5	5.44	<5.44	ug/kg dry	
Chloroform	67-66-3	5.44	<5.44	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.44	<5.44	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.44	<5.44	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.44	<5.44	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.44	<5.44	ug/kg dry	
Benzene	71-43-2	5.44	<5.44	ug/kg dry	
Trichloroethylene	79-01-6	5.44	<5.44	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.44	<5.44	ug/kg dry	
Dibromomethane	74-95-3	5.44	<5.44	ug/kg dry	
Bromodichloromethane	75-27-4	5.44	<5.44	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.44	<5.44	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	10.9	<10.9	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.44	<5.44	ug/kg dry	
Toluene	108-88-3	5.44	<5.44	ug/kg dry	



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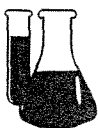
"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 11:15	Sample ID: B-4 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-13
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.44	<5.44	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.44	<5.44	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.44	<5.44	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.44	<5.44	ug/kg dry	
Dibromochloromethane	124-48-1	5.44	<5.44	ug/kg dry	
Tetrachloroethylene	127-18-4	5.44	7.69	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.44	<5.44	ug/kg dry	
Chlorobenzene	108-90-7	5.44	<5.44	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.44	<5.44	ug/kg dry	
Ethylbenzene	100-41-4	5.44	<5.44	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	10.9	<10.9	ug/kg dry	
Styrene	100-42-5	5.44	<5.44	ug/kg dry	
o-Xylene	95-47-6	5.44	<5.44	ug/kg dry	
Bromoform	75-25-2	5.44	<5.44	ug/kg dry	
1,1,2,2-Tetrachloroethane	79-34-5	5.44	<5.44	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.44	<5.44	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.44	<5.44	ug/kg dry	
Bromobenzene	108-86-1	5.44	<5.44	ug/kg dry	
n-Propylbenzene	103-65-1	5.44	<5.44	ug/kg dry	
2-Chlorotoluene	95-49-8	5.44	<5.44	ug/kg dry	
4-Chlorotoluene	106-43-4	5.44	<5.44	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.44	<5.44	ug/kg dry	
tert-Butylbenzene	98-06-6	5.44	<5.44	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.44	<5.44	ug/kg dry	
sec-Butylbenzene	135-98-8	5.44	<5.44	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.44	<5.44	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.44	<5.44	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.44	<5.44	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.44	<5.44	ug/kg dry	
n-Butylbenzene	104-51-8	5.44	<5.44	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.44	<5.44	ug/kg dry	



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Date (Time) Collected: 09/21/2011 11:15	Sample ID: B-4 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-13
Matrix: Soil	ELAP: #11693

Volatile Analysis

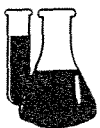
Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.44	<5.44	ug/kg dry	
Naphthalene	91-20-3	5.44	<5.44	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.44	<5.44	ug/kg dry	
1,4-Dioxane	123-91-1	5.44	<5.44	ug/kg dry	4.H

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 10/01/2011

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 11:30	Sample ID: B-4 9-10
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-14
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.32	<5.32	ug/kg dry	4.H
Chloroethane	75-00-3	5.32	<5.32	ug/kg dry	4.H
Chloromethane	74-87-3	5.32	<5.32	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.32	<5.32	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.32	<5.32	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.32	<5.32	ug/kg dry	
Acetone	67-64-1	53.2	<53.2	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.32	<5.32	ug/kg dry	
Methylene Chloride	75-09-2	5.32	<5.32	ug/kg dry	
Carbon disulfide	75-15-0	5.32	<5.32	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.32	<5.32	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.32	<5.32	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.32	<5.32	ug/kg dry	
Vinyl acetate	108-05-4	5.32	<5.32	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.6	<10.6	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.32	<5.32	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.32	<5.32	ug/kg dry	
Bromochloromethane	74-97-5	5.32	<5.32	ug/kg dry	
Chloroform	67-66-3	5.32	<5.32	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.32	<5.32	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.32	<5.32	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.32	<5.32	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.32	<5.32	ug/kg dry	
Benzene	71-43-2	5.32	<5.32	ug/kg dry	
Trichloroethylene	79-01-6	5.32	<5.32	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.32	<5.32	ug/kg dry	
Dibromomethane	74-95-3	5.32	<5.32	ug/kg dry	
Bromodichloromethane	75-27-4	5.32	<5.32	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.32	<5.32	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	10.6	<10.6	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.32	<5.32	ug/kg dry	
Toluene	108-88-3	5.32	<5.32	ug/kg dry	



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Date (Time) Collected: 09/21/2011 11:30	Sample ID: B-4 9-10
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-14
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.32	<5.32	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.32	<5.32	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.32	<5.32	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.32	<5.32	ug/kg dry	
Dibromochloromethane	124-48-1	5.32	<5.32	ug/kg dry	
Tetrachloroethylene	127-18-4	5.32	<5.32	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.32	<5.32	ug/kg dry	
Chlorobenzene	108-90-7	5.32	<5.32	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.32	<5.32	ug/kg dry	
Ethylbenzene	100-41-4	5.32	<5.32	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	10.6	<10.6	ug/kg dry	
Styrene	100-42-5	5.32	<5.32	ug/kg dry	
o-Xylene	95-47-6	5.32	<5.32	ug/kg dry	
Bromoform	75-25-2	5.32	<5.32	ug/kg dry	
1,1,2,2-Tetrachloroethane	79-34-5	5.32	<5.32	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.32	<5.32	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.32	<5.32	ug/kg dry	
Bromobenzene	108-86-1	5.32	<5.32	ug/kg dry	
n-Propylbenzene	103-65-1	5.32	<5.32	ug/kg dry	
2-Chlorotoluene	95-49-8	5.32	<5.32	ug/kg dry	
4-Chlorotoluene	106-43-4	5.32	<5.32	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.32	<5.32	ug/kg dry	
tert-Butylbenzene	98-06-6	5.32	<5.32	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.32	<5.32	ug/kg dry	
sec-Butylbenzene	135-98-8	5.32	<5.32	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.32	<5.32	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.32	<5.32	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.32	<5.32	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.32	<5.32	ug/kg dry	
n-Butylbenzene	104-51-8	5.32	<5.32	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.32	<5.32	ug/kg dry	



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Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.32	<5.32	ug/kg dry	
Naphthalene	91-20-3	5.32	<5.32	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.32	<5.32	ug/kg dry	
1,4-Dioxane	123-91-1	5.32	<5.32	ug/kg dry	4.H

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 10/01/2011

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 11:45	Sample ID: B-4 19-20
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-15
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.17	<5.17	ug/kg dry	4.H
Chloroethane	75-00-3	5.17	<5.17	ug/kg dry	4.H
Chloromethane	74-87-3	5.17	<5.17	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.17	<5.17	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.17	<5.17	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.17	<5.17	ug/kg dry	
Acetone	67-64-1	51.7	<51.7	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.17	<5.17	ug/kg dry	
Methylene Chloride	75-09-2	5.17	<5.17	ug/kg dry	
Carbon disulfide	75-15-0	5.17	<5.17	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.17	<5.17	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.17	<5.17	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.17	<5.17	ug/kg dry	
Vinyl acetate	108-05-4	5.17	<5.17	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.3	<10.3	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.17	<5.17	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.17	<5.17	ug/kg dry	
Bromochloromethane	74-97-5	5.17	<5.17	ug/kg dry	
Chloroform	67-66-3	5.17	<5.17	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.17	<5.17	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.17	<5.17	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.17	<5.17	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.17	<5.17	ug/kg dry	
Benzene	71-43-2	5.17	<5.17	ug/kg dry	
Trichloroethylene	79-01-6	5.17	<5.17	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.17	<5.17	ug/kg dry	
Dibromomethane	74-95-3	5.17	<5.17	ug/kg dry	
Bromodichloromethane	75-27-4	5.17	<5.17	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.17	<5.17	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	10.3	<10.3	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.17	<5.17	ug/kg dry	
Toluene	108-88-3	5.17	<5.17	ug/kg dry	



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Date (Time) Collected: 09/21/2011 11:45	Sample ID: B-4 19-20
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-15
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.17	<5.17	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.17	<5.17	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.17	<5.17	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.17	<5.17	ug/kg dry	
Dibromochloromethane	124-48-1	5.17	<5.17	ug/kg dry	
Tetrachloroethylene	127-18-4	5.17	<5.17	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.17	<5.17	ug/kg dry	
Chlorobenzene	108-90-7	5.17	<5.17	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.17	<5.17	ug/kg dry	
Ethylbenzene	100-41-4	5.17	<5.17	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	10.3	<10.3	ug/kg dry	
Styrene	100-42-5	5.17	<5.17	ug/kg dry	
o-Xylene	95-47-6	5.17	<5.17	ug/kg dry	
Bromoform	75-25-2	5.17	<5.17	ug/kg dry	
1,1,1,2-Tetrachloroethane	79-34-5	5.17	<5.17	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.17	<5.17	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.17	<5.17	ug/kg dry	
Bromobenzene	108-86-1	5.17	<5.17	ug/kg dry	
n-Propylbenzene	103-65-1	5.17	<5.17	ug/kg dry	
2-Chlorotoluene	95-49-8	5.17	<5.17	ug/kg dry	
4-Chlorotoluene	106-43-4	5.17	<5.17	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.17	<5.17	ug/kg dry	
tert-Butylbenzene	98-06-6	5.17	<5.17	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.17	<5.17	ug/kg dry	
sec-Butylbenzene	135-98-8	5.17	<5.17	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.17	<5.17	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.17	<5.17	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.17	<5.17	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.17	<5.17	ug/kg dry	
n-Butylbenzene	104-51-8	5.17	<5.17	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.17	<5.17	ug/kg dry	



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Date (Time) Collected: 09/21/2011 11:45	Sample ID: B-4 19-20
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-15
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.17	<5.17	ug/kg dry	
Naphthalene	91-20-3	5.17	<5.17	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.17	<5.17	ug/kg dry	
1,4-Dioxane	123-91-1	5.17	<5.17	ug/kg dry	4.H

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 10/01/2011

Analytical Method: EPA 8260B



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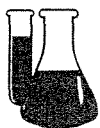
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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 14:00	Sample ID: B-5 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-16
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.56	<5.56	ug/kg dry	4.H
Chloroethane	75-00-3	5.56	<5.56	ug/kg dry	4.H
Chloromethane	74-87-3	5.56	<5.56	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.56	<5.56	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.56	<5.56	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.56	<5.56	ug/kg dry	
Acetone	67-64-1	55.6	<55.6	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.56	<5.56	ug/kg dry	
Methylene Chloride	75-09-2	5.56	<5.56	ug/kg dry	
Carbon disulfide	75-15-0	5.56	<5.56	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.56	<5.56	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.56	<5.56	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.56	<5.56	ug/kg dry	
Vinyl acetate	108-05-4	5.56	<5.56	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	11.1	<11.1	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.56	<5.56	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.56	<5.56	ug/kg dry	
Bromochloromethane	74-97-5	5.56	<5.56	ug/kg dry	
Chloroform	67-66-3	5.56	<5.56	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.56	<5.56	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.56	<5.56	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.56	<5.56	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.56	<5.56	ug/kg dry	
Benzene	71-43-2	5.56	<5.56	ug/kg dry	
Trichloroethylene	79-01-6	5.56	<5.56	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.56	<5.56	ug/kg dry	
Dibromomethane	74-95-3	5.56	<5.56	ug/kg dry	
Bromodichloromethane	75-27-4	5.56	<5.56	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.56	<5.56	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	11.1	<11.1	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.56	<5.56	ug/kg dry	
Toluene	108-88-3	5.56	<5.56	ug/kg dry	



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 14:00	Sample ID: B-5 0-1
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-16
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.56	<5.56	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.56	<5.56	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.56	<5.56	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.56	<5.56	ug/kg dry	
Dibromochloromethane	124-48-1	5.56	<5.56	ug/kg dry	
Tetrachloroethylene	127-18-4	5.56	143	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.56	<5.56	ug/kg dry	
Chlorobenzene	108-90-7	5.56	<5.56	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.56	<5.56	ug/kg dry	
Ethylbenzene	100-41-4	5.56	<5.56	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	11.1	<11.1	ug/kg dry	
Styrene	100-42-5	5.56	<5.56	ug/kg dry	
o-Xylene	95-47-6	5.56	<5.56	ug/kg dry	
Bromoform	75-25-2	5.56	<5.56	ug/kg dry	
1,1,2,2-Tetrachloroethane	79-34-5	5.56	<5.56	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.56	<5.56	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.56	<5.56	ug/kg dry	
Bromobenzene	108-86-1	5.56	<5.56	ug/kg dry	
n-Propylbenzene	103-65-1	5.56	<5.56	ug/kg dry	
2-Chlorotoluene	95-49-8	5.56	<5.56	ug/kg dry	
4-Chlorotoluene	106-43-4	5.56	<5.56	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.56	<5.56	ug/kg dry	
tert-Butylbenzene	98-06-6	5.56	<5.56	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.56	<5.56	ug/kg dry	
sec-Butylbenzene	135-98-8	5.56	<5.56	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.56	<5.56	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.56	<5.56	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.56	<5.56	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.56	<5.56	ug/kg dry	
n-Butylbenzene	104-51-8	5.56	<5.56	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.56	<5.56	ug/kg dry	



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Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-16
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.56	<5.56	ug/kg dry	
Naphthalene	91-20-3	5.56	<5.56	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.56	<5.56	ug/kg dry	
1,4-Dioxane	123-91-1	5.56	<5.56	ug/kg dry	4.H

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 10/01/2011

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 14:15	Sample ID: B-5 9-10
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-17
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.35	<5.35	ug/kg dry	4.H
Chloroethane	75-00-3	5.35	<5.35	ug/kg dry	4.H
Chloromethane	74-87-3	5.35	<5.35	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.35	<5.35	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.35	<5.35	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.35	<5.35	ug/kg dry	
Acetone	67-64-1	53.5	<53.5	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.35	<5.35	ug/kg dry	
Methylene Chloride	75-09-2	5.35	<5.35	ug/kg dry	
Carbon disulfide	75-15-0	5.35	<5.35	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.35	<5.35	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.35	<5.35	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.35	<5.35	ug/kg dry	
Vinyl acetate	108-05-4	5.35	<5.35	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.7	<10.7	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.35	<5.35	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.35	<5.35	ug/kg dry	
Bromochloromethane	74-97-5	5.35	<5.35	ug/kg dry	
Chloroform	67-66-3	5.35	<5.35	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.35	<5.35	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.35	<5.35	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.35	<5.35	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.35	<5.35	ug/kg dry	
Benzene	71-43-2	5.35	<5.35	ug/kg dry	
Trichloroethylene	79-01-6	5.35	<5.35	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.35	<5.35	ug/kg dry	
Dibromomethane	74-95-3	5.35	<5.35	ug/kg dry	
Bromodichloromethane	75-27-4	5.35	<5.35	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.35	<5.35	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	10.7	<10.7	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.35	<5.35	ug/kg dry	
Toluene	108-88-3	5.35	<5.35	ug/kg dry	



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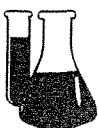
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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 14:15	Sample ID: B-5 9-10
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-17
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.35	<5.35	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.35	<5.35	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.35	<5.35	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.35	<5.35	ug/kg dry	
Dibromochloromethane	124-48-1	5.35	<5.35	ug/kg dry	
Tetrachloroethylene	127-18-4	5.35	<5.35	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.35	<5.35	ug/kg dry	
Chlorobenzene	108-90-7	5.35	<5.35	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.35	<5.35	ug/kg dry	
Ethylbenzene	100-41-4	5.35	<5.35	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	10.7	<10.7	ug/kg dry	
Styrene	100-42-5	5.35	<5.35	ug/kg dry	
o-Xylene	95-47-6	5.35	<5.35	ug/kg dry	
Bromoform	75-25-2	5.35	<5.35	ug/kg dry	
1,1,1,2-Tetrachloroethane	79-34-5	5.35	<5.35	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.35	<5.35	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.35	<5.35	ug/kg dry	
Bromobenzene	108-86-1	5.35	<5.35	ug/kg dry	
n-Propylbenzene	103-65-1	5.35	<5.35	ug/kg dry	
2-Chlorotoluene	95-49-8	5.35	<5.35	ug/kg dry	
4-Chlorotoluene	106-43-4	5.35	<5.35	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.35	<5.35	ug/kg dry	
tert-Butylbenzene	98-06-6	5.35	<5.35	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.35	<5.35	ug/kg dry	
sec-Butylbenzene	135-98-8	5.35	<5.35	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.35	<5.35	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.35	<5.35	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.35	<5.35	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.35	<5.35	ug/kg dry	
n-Butylbenzene	104-51-8	5.35	<5.35	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.35	<5.35	ug/kg dry	



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
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Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-17
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.35	<5.35	ug/kg dry	
Naphthalene	91-20-3	5.35	<5.35	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.35	<5.35	ug/kg dry	
1,4-Dioxane	123-91-1	5.35	<5.35	ug/kg dry	4.H

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 10/01/2011

Analytical Method: EPA 8260B



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Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 14:45	Sample ID: B-5 19-20
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-18
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
Bromomethane	74-83-9	5.98	<5.98	ug/kg dry	4.H
Chloroethane	75-00-3	5.98	<5.98	ug/kg dry	4.H
Chloromethane	74-87-3	5.98	<5.98	ug/kg dry	4.J
Dichlorodifluoromethane	75-71-8	5.98	<5.98	ug/kg dry	4.H
Vinyl chloride	75-01-4	5.98	<5.98	ug/kg dry	4.H
Trichlorofluoromethane	75-69-4	5.98	<5.98	ug/kg dry	
Acetone	67-64-1	59.8	<59.8	ug/kg dry	
1,1-Dichloroethylene	75-35-4	5.98	<5.98	ug/kg dry	
Methylene Chloride	75-09-2	5.98	<5.98	ug/kg dry	
Carbon disulfide	75-15-0	5.98	<5.98	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.98	<5.98	ug/kg dry	
trans-1,2-Dichloroethylene	156-60-5	5.98	<5.98	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.98	<5.98	ug/kg dry	
Vinyl acetate	108-05-4	5.98	<5.98	ug/kg dry	4.H
Methyl Ethyl Ketone (2-Butanone)	78-93-3	12.0	<12.0	ug/kg dry	
cis-1,2-Dichloroethylene	156-59-2	5.98	<5.98	ug/kg dry	
2,2-Dichloropropane	590-20-7	5.98	<5.98	ug/kg dry	
Bromochloromethane	74-97-5	5.98	<5.98	ug/kg dry	
Chloroform	67-66-3	5.98	<5.98	ug/kg dry	
1,1,1-Trichloroethane	71-55-6	5.98	<5.98	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.98	<5.98	ug/kg dry	
1,1-Dichloropropylene	563-58-6	5.98	<5.98	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.98	<5.98	ug/kg dry	
Benzene	71-43-2	5.98	<5.98	ug/kg dry	
Trichloroethylene	79-01-6	5.98	<5.98	ug/kg dry	
1,2-Dichloropropane	78-87-5	5.98	<5.98	ug/kg dry	
Dibromomethane	74-95-3	5.98	<5.98	ug/kg dry	
Bromodichloromethane	75-27-4	5.98	<5.98	ug/kg dry	
2-Chloroethyl Vinyl Ether	110-75-8	5.98	<5.98	ug/kg dry	
Methyl Isobutyl Ketone	108-10-1	12.0	<12.0	ug/kg dry	
cis-1,3-Dichloropropylene	10061-01-5	5.98	<5.98	ug/kg dry	
Toluene	108-88-3	5.98	<5.98	ug/kg dry	



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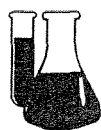
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Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-18
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
trans-1,3-Dichloropropylene	10061-02-6	5.98	<5.98	ug/kg dry	
1,1,2-Trichloroethane	79-00-5	5.98	<5.98	ug/kg dry	
Methyl Butyl Ketone (2-Hexanone)	591-78-6	5.98	<5.98	ug/kg dry	
1,3-Dichloropropane	142-28-9	5.98	<5.98	ug/kg dry	
Dibromochloromethane	124-48-1	5.98	<5.98	ug/kg dry	
Tetrachloroethylene	127-18-4	5.98	<5.98	ug/kg dry	
1,2-Dibromoethane	106-93-4	5.98	<5.98	ug/kg dry	
Chlorobenzene	108-90-7	5.98	<5.98	ug/kg dry	
1,1,1,2-Tetrachloroethane	630-20-6	5.98	<5.98	ug/kg dry	
Ethylbenzene	100-41-4	5.98	<5.98	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	12.0	<12.0	ug/kg dry	
Styrene	100-42-5	5.98	<5.98	ug/kg dry	
o-Xylene	95-47-6	5.98	<5.98	ug/kg dry	
Bromoform	75-25-2	5.98	<5.98	ug/kg dry	
1,1,2,2-Tetrachloroethane	79-34-5	5.98	<5.98	ug/kg dry	
Isopropylbenzene (Cumene)	98-82-8	5.98	<5.98	ug/kg dry	
1,2,3-Trichloropropane	96-18-4	5.98	<5.98	ug/kg dry	
Bromobenzene	108-86-1	5.98	<5.98	ug/kg dry	
n-Propylbenzene	103-65-1	5.98	<5.98	ug/kg dry	
2-Chlorotoluene	95-49-8	5.98	<5.98	ug/kg dry	
4-Chlorotoluene	106-43-4	5.98	<5.98	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.98	<5.98	ug/kg dry	
tert-Butylbenzene	98-06-6	5.98	<5.98	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.98	<5.98	ug/kg dry	
sec-Butylbenzene	135-98-8	5.98	<5.98	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.98	<5.98	ug/kg dry	
4-Isopropyltoluene	99-87-6	5.98	<5.98	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.98	<5.98	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.98	<5.98	ug/kg dry	
n-Butylbenzene	104-51-8	5.98	<5.98	ug/kg dry	
1,2-Dibromo-3-chloropropane	96-12-8	5.98	<5.98	ug/kg dry	



Client: Levy, Stopol, & Camelo LLP	Client ID: 39-28 30th Street LIC, NY
Date (Time) Collected: 09/21/2011 14:45	Sample ID: B-5 19-20
Date (Time) Received: 09/22/2011 17:07	Laboratory ID: 1092217-18
Matrix: Soil	ELAP: #11693

Volatile Analysis

Parameter	CAS No.	MRL	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	5.98	<5.98	ug/kg dry	
Naphthalene	91-20-3	5.98	<5.98	ug/kg dry	
Hexachlorobutadiene	87-68-3	5.98	<5.98	ug/kg dry	
1,4-Dioxane	123-91-1	5.98	<5.98	ug/kg dry	4.H

Date Prepared: 09/30/2011

Preparation Method: EPA 5035

Date Analyzed: 10/01/2011

Analytical Method: EPA 8260B

Data Qualifiers Key Reference:

- 1.B Holding time exceeded, results cannot be used for regulatory purposes.
- 4.A Estimated concentration, exceeds calibration range
- 4.G Spike recovery out of range due to matrix interference
- 4.H Spike recovery out of range due to matrix inconsistency
- 4.J Continuing Calibration Verification (CCV) quality control levels low
- 4.K Continuing Calibration Verification (CCV) quality control levels high
- MRL Minimum Reporting Limit



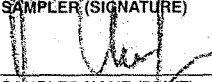
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CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT (2)

CLIENT NAME/ADDRESS Levy Stopoi + Camelo LLP 1425 RXR PLAZA UNIONDALE, NY 11556	CONTACT: <u>Larry Stopoi</u>	SAMPLER (SIGNATURE) 	DATE <u>9-21-11</u>	TIME <u>2:45</u>	SAMPLE(S) SEALED <input checked="" type="checkbox"/> YES / <input type="checkbox"/> NO	LABORATORY CHAIN ID # (FOR LAB USE ONLY)
	PHONE: <u>516-802-7007</u>	SAMPLER NAME (PRINT) <u>Jim Auberio</u>	DATE <u>9-21-11</u>	TIME <u>2:45</u>	CORRECT CONTAINER(S) <input checked="" type="checkbox"/> YES / <input type="checkbox"/> NO	
	FAX: <u>516-802-7008</u>					

PROJECT LOCATION: 39-28 30th Street Long Island City

TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tending of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms

SAMPLES RECEIVED AT: 1.7 °C

ANALYSIS REQUIRED: Toxicology/Heavy Metals
UOC 5260

LABORATORY ID # <small>For Laboratory Use Only</small>	MATRIX	TYPE	PH	PRES.	DATE	TIME	SAMPLE # LOCATION	ANALYSIS REQUIRED		# OF CONTAINERS
1. <u>01</u>	<u>S</u>	<u>C</u>		<u>1</u>	<u>9-21-11</u>	<u>8:00</u>	<u>B-1 (0'-1')</u>	<u>X</u>	<u>X</u>	<u>2</u>
2. <u>02</u>	<u>S</u>	<u>C</u>		<u>1</u>			<u>B-1 (9'-10')</u>	<u>X</u>	<u>X</u>	<u>2</u>
3. <u>03</u>	<u>S</u>	<u>C</u>		<u>1</u>			<u>B-1 (19'-20')</u>	<u>X</u>	<u>X</u>	<u>2</u>
4. <u>04</u>	<u>W</u>	<u>G</u>	<u>7</u>	<u>Loop</u>	<u>2</u>		<u>GW-1 (22')</u>	<u>X</u>	<u>X</u>	<u>3</u>
5. <u>05</u>	<u>S</u>	<u>C</u>		<u>1</u>			<u>B-2 (0'-1')</u>	<u>X</u>	<u>X</u>	<u>2</u>
6. <u>06</u>	<u>S</u>	<u>C</u>		<u>1</u>			<u>B-2 (9'-10')</u>	<u>X</u>	<u>X</u>	<u>2</u>
7. <u>07</u>	<u>S</u>	<u>C</u>		<u>1</u>			<u>B-2 (19'-20')</u>	<u>X</u>	<u>X</u>	<u>2</u>
8. <u>08</u>	<u>W</u>	<u>G</u>	<u>7</u>	<u>Loop</u>	<u>2</u>		<u>GW-2 (22')</u>	<u>X</u>	<u>X</u>	<u>3</u>
9. <u>09</u>	<u>S</u>	<u>C</u>		<u>1</u>			<u>B-3 (0'-1')</u>	<u>X</u>	<u>X</u>	<u>2</u>
10. <u>10</u>	<u>S</u>	<u>C</u>		<u>1</u>			<u>B-3 (9'-10')</u>	<u>X</u>	<u>X</u>	<u>2</u>
11. <u>11</u>	<u>S</u>	<u>C</u>		<u>1</u>			<u>B-3 (19'-20')</u>	<u>X</u>	<u>X</u>	<u>2</u>
12. <u>12</u>	<u>W</u>	<u>G</u>	<u>7</u>	<u>Loop</u>	<u>2</u>		<u>GW-3 (22')</u>	<u>X</u>	<u>X</u>	<u>3</u>
13. <u>13</u>	<u>S</u>	<u>C</u>		<u>1</u>			<u>B-4 (0'-1')</u>	<u>X</u>	<u>X</u>	<u>2</u>
14. <u>14</u>	<u>S</u>	<u>C</u>		<u>1</u>			<u>B-4 (9'-10')</u>	<u>X</u>	<u>X</u>	<u>2</u>

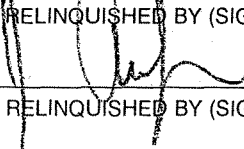
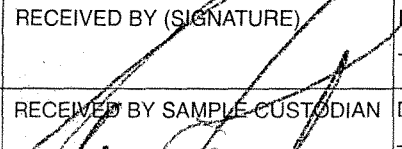

MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIPE; PC=PAINT CHIPS; BM= BULK MATERIAL; O=OIL; WW=WASTE WATER

TURNAROUND REQUIRED: NORMAL STAT

TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON

PRES: (1) ICE; (2) HCL; (3) H₂SO₄; (4) NAOH; (5) NA₂S₂O₃; (6) HNO₃; (7) OTHER

COMMENTS / INSTRUCTIONS: BY 1 1

RELINQUISHED BY (SIGNATURE) 	DATE <u>9-22-11</u>	PRINTED NAME <u>Jim Auberio</u>	RECEIVED BY (SIGNATURE) 	DATE	PRINTED NAME
	TIME <u>3:00</u>			TIME	
RELINQUISHED BY (SIGNATURE)	DATE <u>9-22-11</u>	PRINTED NAME	RECEIVED BY SAMPLE CUSTODIAN 	DATE <u>9-22-11</u>	PRINTED NAME <u>Kevin L...</u>
	TIME			TIME <u>4:45 PM</u>	



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CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT 27

CLIENT NAME/ADDRESS Levy, Stopol, Camelo LLP 1425 RRR Plaza Uniondale, N.Y. 11556	CONTACT: <i>Larry Stopol</i> PHONE: <i>516.802.7007</i> FAX: <i>516.802.7008</i>	SAMPLER (SIGNATURE) DATE: <i>9.21.11</i> TIME: <i>2:45</i>	SAMPLE(S) SEALED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	1092217 N)
		SAMPLER NAME (PRINT) <i>Jim Aufiero</i> DATE: <i>9.21.11</i> TIME: <i>2:45</i>	CORRECT CONTAINER(S) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

PROJECT LOCATION:
39-28 30th Street Long Island City

TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms

SAMPLES RECEIVED AT
1.7 °C

ANALYSIS REQUIRED
~~Extractable PCBs~~
UOC

LABORATORY ID # <small>For Laboratory Use Only</small>	MATRIX	TYPE	PH	RES. CHLORINE	PRES.	DATE	TIME	SAMPLE # LOCATION						# OF CONTAINERS	
<i>109220-15</i>	<i>S</i>	<i>C</i>		<i>1</i>		<i>9.21.11</i>		<i>B-4 (19'-20')</i>	<i>X</i>	<i>X</i>					<i>2</i>
<i>2. 16</i>	<i>S</i>	<i>C</i>		<i>1</i>				<i>B-5 (0-1')</i>	<i>X</i>	<i>X</i>					<i>2</i>
<i>3. 17</i>	<i>S</i>	<i>C</i>		<i>1</i>				<i>B-5 (9'-10')</i>	<i>X</i>	<i>X</i>					<i>2</i>
<i>4. 18</i>	<i>S</i>	<i>C</i>		<i>1</i>			<i>2:45</i>	<i>B-5 (19'-20')</i>	<i>X</i>	<i>X</i>					<i>2</i>
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14.															

MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIPE;
 PC=PAINT CHIPS; BM= BULK MATERIAL, O=OIL, WW=WASTE WATER
 TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON
 PRES: (1) ICE; (2) HCL; (3) H₂SO₄; (4) NAOH; (5) NA₂S₃O₃; (6) HNO₃; (7) OTHER

TURNAROUND REQUIRED: NORMAL STAT
 BY *1 1*

COMMENTS / INSTRUCTIONS

RELINQUISHED BY (SIGNATURE) 	DATE <i>9.22.11</i> TIME <i>3:00</i>	PRINTED NAME <i>Jim Aufiero</i>	RECEIVED BY (SIGNATURE) 	DATE TIME	PRINTED NAME
RELINQUISHED BY (SIGNATURE)	DATE TIME	PRINTED NAME	RECEIVED BY SAMPLE CUSTODIAN 	DATE <i>9.22.11</i> TIME <i>4:45 PM</i>	PRINTED NAME <i>Ron Lambertson</i>

Appendix D:
E&E Engineering Site Characterization Report (partial)

**Site Characterization Report
Bridge Cleaners
39-26 30th Street
Long Island City, Queens County,
New York**

Site Number: 2-41-127

May 2012

Prepared for:

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 Broadway
Albany, New York 12233**

Prepared by:


**ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
368 Pleasant View Drive
Lancaster, New York 14086**

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List of Abbreviations and Acronyms

ASP	Analytical Services Protocol
BGS	below ground surface
Con-Test	Con-Test Analytical Laboratory
°C	degrees Celsius
DER	Division of Environmental Remediation
DOT	(United States) Department of Transportation
DUSR	Data Usability Summary Report
EDR	Environmental Data Resources Inc.
EEEPCC	Ecology and Environment Engineering, P.C.
EPA	(United States) Environmental Protection Agency
EPS	Environmental Products and Service of Vermont, Inc.
GC/MS	gas chromatography/mass spectroscopy
HASP	health and safety plan
HVAC	heating, ventilating, and air conditioning
ID	inner diameter
IDW	investigation-derived waste
LAWES	Land, Air, and Water Environmental Services, Inc.
MD	matrix duplicate
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
MS/MSD	matrix spike/matrix spike duplicate
NAD	North American Datum
NAVD 88	North American Vertical Datum of 1988
NTU	nephelometric turbidity units
NYCRR	New York Codes Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health

List of Abbreviations and Acronyms (cont.)

PCE	perchloroethylene
PID	photoionization detector
PPE	personal protective equipment
PVC	polyvinyl chloride
QA/QC	quality assurance/quality control
QAPP	Quality Assurance Project Plan
SC	site characterization
SCO	Soil Cleanup Objective
SOW	scope of work
SVOC	semivolatile organic compound
TCE	trichloroethylene
USCS	Unified Soil Classification System
VOC	volatile organic compound

1

Site Assessment Summary

1.1 Introduction

Pursuant to Work Assignment Number D007617-1, Ecology and Environment Engineering, P.C. (EEEEPC) performed a site characterization (SC) at the Bridge Cleaners site (Site No. 2-41-127).

1.2 Purpose

The primary objective of this SC is assessment of subsurface soil and groundwater conditions to identify the possible source area of chlorinated volatile organic compounds (VOCs) in the area around the Bridge Cleaners site.

1.3 Site Description

The Bridge Cleaners site is a 0.1700-acre parcel located at 39-26 30th Street (Block 00399, Lot 0031), Long Island City, borough of Queens, Queens County, New York (see Figure 1-1). The Bridge Cleaners property consists of a single-story, 7,500-square-foot concrete building that occupies the entire lot (see Figure 1-2). The building was vacant at the time of this investigation; however, records indicate the building was occupied by a commercial laundry and dry cleaner since 1997. A list of former tenants is presented in Appendix A.

The study area consists of the city block surrounding the Bridge Cleaners site and is zoned in an area of mixed residential and manufacturing. The study area is bounded by 39th Avenue to the north, 30th Street to the east, 40th Avenue to the south, and 29th Street to the west. Other properties located on this block include: a faith-based organization, a parking garage, a vacant lot, and a telecommunications wholesaling business along 30th Street (east side of site). Occupants along 29th Street (west side of site) include another faith-based organization, a plumbing and heating, ventilating, and air conditioning (HVAC) business, the same parking garage also found on 30th Street, a greeting card publishing company, a multi-story concrete building under renovation, and a hotel.

The study area is approximately 30 feet above mean sea level and the topography is relatively flat with a gentle slope to the south and southeast. The nearest water bodies are Dutch Kills, approximately 3,500 feet to the south of Bridge Cleaners site, and the East River, located approximately 4,500 feet to the northwest.

1.4 Previous Investigations

Previous investigations conducted in the area include Phase I and Phase II environmental assessments performed on the adjoining property at 39-27 29th Street (the multi-story concrete building under renovation). The Phase I assessment conducted in 2007 stated that Bridge Cleaners was in operation as a commercial dry cleaner at that time (AVT Enterprises 2007). The Phase II assessment conducted in 2010 included installation of soil borings and collection of soil, groundwater, and soil vapor samples (Preferred Environmental Solutions 2010). Results of the assessment supported the conclusion that groundwater contamination may come from the Bridge Cleaners property. Additional information from the Phase II assessment is presented in Section 3.3.

A limited sub-surface investigation was conducted on the Bridge Cleaners property in 2011 by Long Island Analytical Laboratories Inc. This investigation was performed on behalf of the property owner and included installation of five soil borings and collection of soil and groundwater samples. Sample results indicated the presence of trichloroethylene (TCE), PCE, and petroleum hydrocarbons in groundwater samples; perchloroethylene (PCE) was present in soil samples (Long Island Analytical Laboratories Inc. 2011). Additional information from the limited subsurface investigation conducted on the Bridge Cleaners property is presented in Section 3.3. *

2

Site Characterization

The SC for the Bridge Cleaners site was designed to identify the source of the area of contamination by investigating the magnitude and extent of chlorinated VOC contamination in soils and groundwater in the study area. These activities included a review of previous site investigations; development of a work plan; installation of five soil borings; collection of subsurface soil samples from the borings; installation of five groundwater monitoring wells in the borings; well development and groundwater sample collection; laboratory analysis of soil and groundwater samples; a site survey; and preparation of a summary report.

The study area consists of the city block surrounding the Bridge Cleaners site. Specific areas where intrusive work was conducted during this investigation include the east sidewalk along 29th Street between 39th and 40th Avenue; the west sidewalk along 30th Street between 39th and 40th Avenue; and the north sidewalk along 40th Avenue between 29th and 30th streets.

The SC field work was conducted between February 13 and 23, 2012. Photos from the field work are presented in Appendix B. Figure 2-1 depicts locations of the wells installed as part of this investigation. SC activities were performed in accordance with the scope of work described in the Work Assignment cost estimate submitted on January 11, 2012. A summary of the field procedures and modifications to the planned field investigation is provided below.

2.1 Preliminary Activities

Prior to beginning field activities, the EEEPC team reviewed the initial scope of work (SOW) and discussed the purpose of the investigation with the NYSDEC project manager. The original SOW included the collection of indoor air and soil vapor samples from inside the building, as well as the installation and sampling of monitoring wells both inside and outside of the building. Drilling subcontractors were initially consulted to discuss equipment options and identify specific methodologies to conduct the indoor work. All indoor work was subsequently cancelled due to site access challenges and limitations imposed by the property owner.

Following additional discussions with the NYSDEC project manager, a modified SOW was agreed upon as described in the January 11, 2012, Work Authorization cost estimate letter. The letter described the proposed investigation activities, methodologies, and schedule. It also identified the number and locations of monitoring wells. Detailed sampling methodologies and standard operating procedures were completed in accordance with applicable NYSDEC protocols, including DER-10 (NYSDEC 2010a).

After NYSDEC's approval of the final budget estimate, subcontracts were completed for drilling, analytical, survey, and waste disposal services; and a site-specific health and safety plan (HASP) was prepared.

2.2 Health and Safety Monitoring

During the intrusive site activities, EEEPC performed air monitoring to characterize airborne contaminant concentrations, including those of volatile organic vapors and explosive gases. A photoionization detector (PID) was used to monitor the concentration of organic vapors in the workers' breathing zone and adjacent to the boreholes during intrusive sampling. An oxygen/explosive gas meter was also used during intrusive activities to monitor for potentially explosive conditions. The monitoring indicated that there were no chemical impacts on worker or nearby resident health and safety and all work was performed in "Level D" personal protective equipment (PPE; i.e., no respiratory protection was required).

2.3 Direct-Push Activities

Monitoring well installation activities were conducted at the site between February 13 and 16, 2012. EEEPC subcontracted Land, Air, and Water Environmental Services, Inc. (LAWES), of Center Moriches, New York, to drill and install five monitoring wells in the sidewalks of three streets (29th Street, 30th Street, and 40th Avenue) around the Bridge Cleaners property (see Figure 2-1). LAWES used a Geoprobe Model 6610DT to conduct soil core collection and install the wells.

2.3.1 Subsurface Soil Sampling

Prior to initiating intrusive subsurface activities, LAWES obtained the proper drilling permits from New York City and coordinated with the Underground Facilities Protection Organization to identify and locate underground utilities in the vicinity of the soil borings. After the proposed drilling locations were cleared of utilities, a diamond hole saw was used to core through surface concrete at each well location. In accordance with New York City requirements, the top 5 feet of soil was then hand-dug at each location to verify buried utilities were not present. No utilities or other buried hazards were observed at any of the locations, so drilling activities at each location commenced when hand-clearing was complete.

The purpose of the subsurface soil investigation was to assess the extent of VOC contamination present in subsurface soil, as well as provide lithologic information and estimate the depth of groundwater. At each borehole, the Macro-Core system

was used to collect continuous soil cores in discrete, 5-foot-long dedicated acetate liners from 5 feet below grade to approximately 8 feet below the estimated depth of groundwater. Upon retrieval, each acetate liner was cut longitudinally and the EEEPC field geologist screened the soil for organic vapors using a PID and logged soil characteristics in accordance with the Unified Soil Classification System (USCS). Soil boring logs completed at each monitoring well location are provided in Appendix C.

A minimum of two subsurface soil samples were collected for laboratory analysis from each soil boring, one from soil believed to be contaminated (based on PID response, odor, or visual indicators) and the other collected from the estimated top of the water table. All 13 soil samples (plus one duplicate sample) were submitted for both VOC (United States Environmental Protection Agency [EPA] Method SW8260B) and percent solids analyses (EPA Method SM 2540G). A hydrocarbon-like odor similar to gasoline was detected in MW-4 starting at 29.5 feet below ground surface (BGS). Based on discussions with the NYSDEC Project Manager, the four samples from MW-4 were also analyzed for semivolatile organic compounds (SVOCs) (EPA Method 8270D). Table 2-1 presents depths that soil samples were collected as well as laboratory analytical data.

Soil samples were submitted to Con-Test Analytical Laboratory (Con-Test), of East Longmeadow, Massachusetts, under subcontract with EEEPC. All subsurface soil samples collected for VOC analysis were collected using the procedures described in EPA Method 5035: an approximately 5-gram subsample was collected with a dedicated polyethylene syringe and placed into pre-weighed vials containing methanol and deionized water. An additional aliquot was placed in a glass jar for percent solids determination. Upon collection, the sample containers were labeled and immediately placed in a cooler maintained with ice at 4°Celsius (C). Samples packaging and transportation were performed in accordance with the procedures outlined in the Master Quality Assurance Project Plan (QAPP) (EEEPC 2011).

2.3.2 Monitoring Well Installation

Upon completion of soil core collection, all boreholes were constructed as flush-mount monitoring wells (MW-1 through MW-5). Each monitoring well was constructed using 10 feet of 1.5-inch inner diameter (ID) polyvinyl chloride (PVC) well screen with a 0.010-inch slot size pre-packed inside a 40-mesh size sand filter surrounded by stainless-steel mesh followed by 1.5-inch ID Schedule 40 PVC riser to approximately 6 inches below grade. All PVC connections were flush-threaded, with a PVC cap placed on the bottom of the screen. The pre-packed well assembly and riser were installed through 3-inch ID coring rods advanced to the target well depth. After the well screen reached the desired depth, the 3-inch probe rids were retracted to near the top of the screen and 2 feet of U.S. Silica #0 sand was installed through the rod annulus, followed by a 2-foot-thick pelletized bentonite seal. Following a minimum 30-minute respite that allowed the bentonite to hydrate, a 5% bentonite/cement grout was installed from the top of the seal

to 1 foot BGS. The monitoring wells were constructed with flush-mount protective casings and fitted with a locked water tight cap (J-plug). Well construction details are summarized in Table 2-2 and well construction logs are provided in Appendix C.

2.4 Monitoring Well Development

Following a minimum of 24 hours after well installation activities were complete, the EEEPC field team developed the five monitoring wells on February 20 and 21, 2012. Development was performed by bailing the wells using dedicated 0.75-inch ID by 3-foot-long weighted polyethylene bailers. Development was performed to remove fine sediments from the sand pack and maximize hydraulic communication with the surrounding formation. Temperature, pH, conductivity, and turbidity measurements were recorded to monitor the progress of the development process. Water level in the wells remained relatively unchanged during well development. Due to the fine sandy and silty nature of the overburden aquifer, turbidity remained high in all wells except MW-3, in which turbidity was estimated to have reduced below 50 NTU. In the remaining wells, development was considered complete after at least five well volumes were removed. Development water was containerized and managed as IDW as discussed in Section 2.6. Well development records are included in Appendix C.

2.5 Monitoring Well Sampling

All monitoring wells were sampled at least 24 hours following well development using dedicated polyethylene bailers. Prior to purging and sampling the monitoring wells, static water levels were measured and used to determine the volume of standing water in each well. Temperature, pH, conductivity, and turbidity measurements were recorded throughout the well purging process and immediately prior to sampling. Due to the fine sand and silty nature of the overburden aquifer, groundwater turbidity was never below 50 nephelometric turbidity units (NTUs) in any of the wells. As such, purging continued until a minimum of five well volumes of water were removed from the wells (as per NYSDEC requirements), at which point all the groundwater quality parameters besides turbidity were stable (varying less than 10%) for three consecutive readings. Final groundwater quality parameters measured at the time of sampling are provided in Table 2-3. Monitoring well purge and sample records are included in Appendix C.

Upon collection, the sample containers were labeled and immediately placed in a cooler maintained with ice at 4°C. Samples were packaged and submitted to Con-Test for VOC analysis (EPA Method 8260B). A trip blank accompanied each shipment of water samples.

2.6 Investigation-Derived Waste (IDW) Management

The SC field effort generated investigation-derived waste (IDW) that included soil cuttings from monitoring well installation; groundwater from monitoring well development; purging and sampling; and spent PPE.

Due to site access limitation requirements by the site owner, IDW was not allowed to be stored on the Bridge Cleaners site overnight. As such, EEEPC subcontracted Environmental Products and Service of Vermont, Inc. (EPS) to pick-up and dispose of soil and water IDW on a daily basis. The soil cuttings and groundwater IDW were placed in U.S. Department of Transportation (DOT)-approved steel 55-gallon drums and transported to Cycle Chem, Inc., of Lewisberry, Pennsylvania, for disposal. Based on the expected contamination levels in the soil and water, no waste disposal analytical samples were collected as the IDW was classified as F-Listed waste by EPS for disposal purposes.

Spent macrocore liners were wiped clean and properly disposed of off-site as non-regulated solid waste with the PPE by LAWES.

2.7 Site Survey

YEC, Inc., of Valley Cottage, New York, was subcontracted to perform the site survey at the end of the well sampling phase on February 23, 2012. Surveying included setting a benchmark at the site, as well as measuring the horizontal locations and vertical elevations of pertinent features in the site area (e.g., monitoring well locations, building corners, and conventional and overhead doors). Horizontal control for the site benchmark was established in the New York State Plane East Zone (feet), North American Datum (NAD) 1983 to an accuracy of ± 0.1 foot. The vertical control for the site benchmark was established to the nearest ± 0.05 foot relative to the North American Vertical Datum of 1988 (NAVD 88). All ground level readings and monitoring well inner casing elevations were surveyed using a site level and rod measured to the nearest 0.01 foot relative to the NAVD 88, with an estimated accuracy of ± 0.05 feet.

2.8 Static Groundwater Elevation Measurement

Depth-to-water measurements were collected from all monitoring wells on February 23, 2012. Measurements were made using an electronic water level indicator capable of measuring depth to water to within 0.01 feet and were taken from a surveyed point at the top of each inside well casing at least 24 hours after well development. Depth-to-water measurements were used in conjunction with surveyed top of casing elevations to establish static groundwater level elevations for each measured location (see Table 2-2). Static water level elevations were used to plot interpreted groundwater isopleths presented on Figure 2-1 and indicate groundwater flow to the south-southwest. Estimated horizontal groundwater gradient ranges from 0.002 to 0.005 foot per foot across the site.

2.9 Sample Analysis

Soil and groundwater sample analyses were performed by Con-Test using EPA SW-846 Methods as noted above (EPA 1996). These analytical protocols are incorporated by reference into the NYSDEC Analytical Services Protocol (ASP) (NYSDEC 2005). Laboratory reports were consistent with NYSDEC ASP Cate-

gory B deliverable requirements and were provided in a format consistent with the NYSDEC Environmental Information Management System.

2.10 Work Plan Deviations

The initial intent of the SC was to install two wells each on the sidewalks of 29th and 30th Streets and one well on the sidewalk of 40th Avenue. As a result of the use of an outdated site plan figure to establish well locations, well MW-2 was installed an estimated 75 feet south-southwest of the correct location. To remedy the situation, two options were considered. One was to install all five wells as planned and to install a sixth well, at the location at which well MW-2 was intended. This option was considered feasible due to drilling and well installation proceeding ahead of schedule. Another option was to install one well on 29th Street instead of two, and install a third well on 30th Street, at the location at which well MW-2 was intended. The NYSDEC project manager selected the latter option, so a total of five wells were installed, including one on the sidewalk of 29th Street, three on the sidewalks of 30th Street, and one on the sidewalk of 40th Avenue.

During soil coring at MW-04, a gray-stained sandy soil with a strong gasoline-type odor and substantially elevated PID readings was observed beginning at a depth of approximately 29.5 feet BGS and below. At the request of the NYSDEC project manager, a fourth soil sample was collected from the soil cores and all soil samples were analyzed for VOCs by EPA SW-846 Method 8260B and SVOCs by EPA SW-846 Method 8270D.

During well development the turbidity meter malfunctioned. After numerous attempts to recalibrate the instrument and after consultation with the instrument vendor the only option identified to remedy the situation was to have a replacement unit shipped to the site. This was not feasible, however, because sampling would have been completed before the replacement instrument could arrive. Well development and sampling proceeded using visual estimation and photo documentation to show groundwater turbidity.

2.11 Quality Assurance/Quality Control

Quality assurance/quality control (QA/QC) samples, including field duplicates, trip blanks, and additional volume for matrix spike/matrix spike duplicate (MS/MSD) analysis were collected for groundwater and soil samples in accordance with the specifications of EEEPC's *Master Quality Assurance Project Plan (QAPP) for NYSDEC Projects* (2011). For groundwater and soil samples, field duplicates and MS/MSD samples were collected at the rate of one per 20 field samples. Trip blanks were included with each laboratory shipment of groundwater samples. Samples were collected using dedicated sampling equipment for each individual location.

Duplicate samples provide insight into the homogeneity of the sample matrix and establish a degree of confidence that the sample represents site conditions.

Groundwater duplicates were collected by filling additional laboratory vials. Soil duplicates consisted of additional volume and were collected directly into a separate VOC sample collection syringe immediately adjacent to the original sample. A review of the duplicate sample results is provided in the Data Usability Summary Reports (DUSRs) provided in Appendix D. Where the relative percent difference between the original and duplicate sample results exceeded data review guidelines, “J” flags were added to indicate that the results are estimated; however, there were no significant impacts on data usability associated with the field duplicate sample results.

In addition to analytical error introduced by machinery and sample handling, error can also occasionally result from analytical process interference by a sample matrix. This can result in the reporting of analytes at concentrations higher or lower than the true concentrations. Laboratory or matrix spike duplicates are aliquots of the same sample that are split prior to analysis and are treated exactly the same throughout the analytical method. The relative percent difference (RPD) between the values of the MS and MSD or between the original and the matrix duplicate (MD) was taken as a measure of the precision of the analytical method.

Trip blanks were collected to establish that the transport of sample vials to and from the field did not result in the contamination of the samples from external sources. Trip blanks consisted of laboratory vials containing deionized water. One trip blank was shipped to and from the field with each sample shipment of groundwater samples. Trip blank results are discussed in the DUSRs (see Appendix D). For the groundwater samples, no compounds were detected in the trip blanks; therefore, there were no impacts on data usability associated with the trip blank sample results.

2.12 Data Validation Review

All laboratory deliverables were reviewed in accordance with the QAPP (EEEPC 2011). The data were qualified following general guidelines in the *EPA CLP National Functional Guidelines for Organic Data Review, EPA 540/R-99-008* (October 1999). DUSRs were prepared for each laboratory report (based on sample delivery group) as specified in NYSDEC’s *Guidance for the Development of Quality Assurance Plans and Data Usability Summary Reports* (2010b). The data review included an evaluation of the following:

- Holding times;
- Initial and continuing calibration;
- Reporting limits;

- Laboratory blanks;
- MS/MSD samples;
- Laboratory control samples;
- Field duplicates;
- Sample result verification; and
- Method-specific QC samples (e.g., gas chromatography/mass spectroscopy [GC/MS]).

DUSRs were prepared by EEEPC's data validation chemist (see Appendix D). Any deviations from acceptable QC specifications are discussed in the DUSRs. Qualifiers were added to the data, if appropriate, to indicate potential concerns with data usability and these qualifiers were transferred to the data summary tables discussed in Section 3. In general, there were no significant impacts on data usability.

3

Analytical Results

This section presents the analytical results of field sampling activities in order to develop an understanding of the nature and extent of soil and groundwater contamination at the Bridge Cleaners site. Tables 3-1 and 3-2 summarize current analytical results by presenting the analytes that were present in at least one sample at a concentration exceeding the analyte-specific detection limit. Complete laboratory analytical results are presented in Appendix E. Data in Tables 3-1 and 3-2 were screened against New York State Standards, Criteria, and Guidelines to identify the samples containing analytes that may represent a possible threat to human health and the environment. This screening process involved comparison of current soil analytical results in Table 3-1 to the NYSDEC 6 New York Codes Rules and Regulations (NYCRR) Subpart 375-6 Remedial Program Soil Cleanup Objectives (SCOs) for both Unrestricted Use and Restricted-Residential Use (NYSDEC 2006). The Unrestricted Use SCO is defined as a use without imposed restrictions, such as environmental easements or other land use controls. The Restricted-Residential Use SCO is a land use category that is considered when there is common ownership or a single owner/managing entity of the site, which at a minimum prohibits any vegetable gardens on a site (although community vegetable gardens may be considered with NYSDEC's approval) and single-family housing. Active recreational uses, which are public uses with a reasonable potential for soil contact, such as parks, are also included under this category.

Groundwater standards are promulgated standards with which all ambient waters of the state of New York must comply. The groundwater analytical results summarized in Table 3-2 were compared to Class GA Groundwater Standards and Guidance Values where applicable (NYSDEC 1999).

3.1 Subsurface Soil Sampling Results

A total of 13 soil samples (and one duplicate sample) were collected from the five monitoring well locations (MW-1 through MW-05) to characterize the horizontal and vertical extent of soil contamination at the site. All soil samples were submitted to the laboratory for VOC (EPA Method 8260B) and percent solids analysis. In addition, based on the hydrocarbon-like odor similar to gasoline that was detected in MW-4, these four samples were also analyzed for SVOCs (EPA Method 8270D). The percent solids ranged from 80% to 99%, with an average percent

solid value of 86.6%. A summary of the analytical results is provided below, as well as in Table 3-1.

VOCs

Fourteen VOCs (PCE, TCE, and 12 petroleum hydrocarbons) were detected in the 13 soil samples submitted to the laboratory for analysis. PCE was detected in nine of 13 soil samples, with only one sample (MW4-02) exceeding the Unrestricted Use SCO of 1.3 milligrams per kilogram (mg/kg) and no samples exceeding the Restricted-Residential use SCO of 19 mg/kg. TCE was reported in two of 13 soil samples, with no samples exceeding the Unrestricted Use SCO of 0.47 mg/kg or the Restricted-Residential Use SCO of 21 mg/kg. Soil sample MW4-02 was collected below the water table, which likely explains the detection of PCE and other compounds.

A total of 12 non-chlorinated petroleum hydrocarbon VOCs (m- and p-xylenes were reported as a sum) were detected between two soil samples collected from monitoring well MW-04 (MW4-02 from 29.8 feet BGS and MW4-04 from 31.8 feet BGS). Seven non-chlorinated contaminants from the MW4-02 sample exceeded Unrestricted SCOs (m- and p-xylenes were reported as a sum), with five of the compounds (1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene m- and p-xylenes and o-xylene) also exceeding Restricted-Residential SCOs.

SVOCs

SVOCs were not detected in any of the four samples from MW-4 submitted for analysis.

3.2 Monitoring Well Sampling Results

A total of 12 VOCs (PCE, TCE, chloroform, and eight petroleum hydrocarbons) were detected in the five groundwater samples submitted for VOC (Method 8260B) analysis to characterize the horizontal extent of groundwater contamination at the site. A summary of groundwater data from the current and previous investigations is presented in Figure 2-1.

PCE was detected above the Class GA Groundwater Standard of 5 micrograms per liter ($\mu\text{g/L}$) in all five groundwater samples, with the highest concentration of PCE (440 $\mu\text{g/L}$) reported in sample MW3-01W. PCE concentrations in the remaining four samples ranged from 18 $\mu\text{g/L}$ in sample MW1-01W to 31 $\mu\text{g/L}$ in samples MW4-01W and MW5-01W.

TCE was detected in four of the five groundwater samples, with the highest concentration of TCE (31 $\mu\text{g/L}$) reported in sample MW3-01W, exceeding the Class GA Groundwater Standard of 5 $\mu\text{g/L}$. TCE concentrations in the remaining samples ranged from 1 $\mu\text{g/L}$ in sample MW1-01W to 5 $\mu\text{g/L}$ in sample MW4-01W.

Chloroform was detected in monitoring well MW1-01 at 9.9 $\mu\text{g/L}$, which exceeds the Class GA Groundwater Standard of 7 $\mu\text{g/L}$.

Nine petroleum hydrocarbons were detected in sample MW4-01 W, all of which exceed their Class GA Groundwater Standards. M- and p-xylenes were reported as a sum, at 1,300 µg/L, while the groundwater standard is 5 µg/L for each isomer. The total concentration of non-chlorinated VOCs detected in sample MW4-01 W was approximately 2,437 µg/L.

One petroleum hydrocarbon (naphthalene) was also detected in the MW5-01 W sample, but it was below the 10 µg/L Class GA Groundwater Standard.

3.3 Previous Investigation Sampling Results

Two previous investigations were conducted at the adjacent property 39-27 29th Street, and a limited subsurface investigation was performed on the Bridge Cleaners site in 2010. The 2007 Phase I ESA completed at 39-27 29th Street was completed as a precursor to a possible real estate transaction and did not include collection of samples for laboratory analysis. However, the 2010 Phase II ESA included the collection of six soil samples from four soil borings; two groundwater samples collected from temporary wells installed at two of the four soil borings; and four soil vapor samples from below the basement and first floor of the building. The soil and groundwater samples were submitted for VOC, SVOC, pesticides, PCBs, TAL metals and mercury analysis, while the soil vapor samples were only submitted for VOCs analysis.

No PCBs were detected in any of the soil samples. Only one soil sample, SB-4, collected from 0 to 2 feet BGS on the west portion of the site, revealed VOCs and SVOCs above method detection limits. However, concentrations of these compounds were well below Unrestricted Use SCOs. Low levels of various TAL metals were detected in all six soil samples; also well below Unrestricted Use SCOs. The pesticide Aldrin was reported in two soil samples, one of which slightly exceeded the Restricted-Residential SCO of 97 µg/kg. The pesticide Dieldrin was also reported in two soil samples, both exceeding the Residential SCO of 39 µg/kg but below the Restricted-Residential SCO of 200 µg/kg.

No SVOCs or PCBs were reported in either of the two groundwater samples. However, both groundwater samples exceeded the NYSDEC Class GA Ambient Water Quality Standard of 5 µg/L, with 910 µg/L of PCE detected in sample GW-1 (the eastern portion of the property closest to the Bridge Cleaners site), while 120 µg/L of PCE was detected in sample GW-2 (the western portion of the property farther away from Bridge Cleaners). Elevated iron, magnesium, manganese, and sodium were reported in total metals analysis; however, only sodium and magnesium were reported in the dissolved metals analysis.

Both PCE and TCE were detected in all four soil vapor samples collected from 6 feet below grade in the cellar and first floors at the site. PCE was detected above the NYSDOH Air Guidance Value of 100 µg/m³ in two of the samples, at

400 $\mu\text{g}/\text{m}^3$ in one sample and at 16,900 $\mu\text{g}/\text{m}^3$ in another, indicating that mitigation is necessary.

The limited subsurface investigation completed on the Bridge Cleaners property in 2010 by the property owner included installation of five soil borings throughout the Bridge Cleaners building and collection of three soil samples for VOC analysis from each soil boring. Groundwater samples were collected from three of the five soil borings and submitted for analysis of VOCs. PCE was detected in five of 15 soil samples (up to 143 $\mu\text{g}/\text{kg}$) and all five samples exceeded the Unrestricted use SCO of 1.3 mg/kg . One sample exceeded the Restricted-Residential Use SCO of 19 mg/kg . PCE was detected in all three groundwater samples, up to 1,470 mg/L with all three samples exceeding the NYSDEC Class GA Ambient Water Quality Standard of 5 $\mu\text{g}/\text{L}$. TCE was detected in two of the five groundwater samples (up to 12.5 $\mu\text{g}/\text{L}$) and both samples exceeded the NYSDEC Class GA Ambient Water Quality Standard of 5 $\mu\text{g}/\text{L}$. Six non-chlorinated petroleum hydrocarbons were detected in groundwater sample BCGW-3 totaling 86.97 total non-chlorinated VOC, with each compound exceeding applicable NYSDEC Class GA Ambient Water Quality Standards of 5 $\mu\text{g}/\text{L}$.

4

Summary and Conclusions

4.1 Summary

The primary objective of this investigation is to assess subsurface soil and groundwater conditions to identify the possible source area of chlorinated VOCs identified in the area around the Bridge Cleaners site.

Five monitoring wells were drilled and installed in the sidewalks of three streets surrounding the Bridge Cleaners site. During drilling activities, 13 soil samples (plus one duplicate sample) were submitted for both VOC (EPA Method SW8260B) and percent solids analyses (EPA Method SM 2540G). While drilling at location MW-4, a hydrocarbon-like odor similar to gasoline was detected starting at 29.5 feet BGS, so these four samples were also analyzed for SVOC (EPA Method 8270D). After monitoring well construction and well development activities were complete, water level measurements were made and all five monitoring wells were sampled for VOCs (EPA Method 8260B).

Fourteen VOCs were detected in the 13 soil samples submitted to the laboratory for analysis. Samples were screened against the NYSDEC 6 NYCRR Subpart 375-6 Remedial Program SCOs for both Unrestricted use and Restricted-Residential use. PCE was detected in nine of 13 soil samples, with one sample exceeding the unrestricted use SCO and no samples exceeding the restricted-residential use SCO. TCE was reported in two of 13 soil samples. No samples exceeded the unrestricted use or the restricted-residential use SCOs. Twelve non-chlorinated VOCs were detected in two soil samples collected from monitoring well MW-04, however these soil samples were collected below the water table. The majority of the contamination was found in the MW4-02 sample from 29.8 feet BGS. While seven compounds exceed the unrestricted SCOs, four compounds (1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene and total xylenes) also exceed restricted-residential SCOs. No SVOCs were detected in any of the samples from MW-4. The percent solids ranged from 80% to 99%, with an average percent solid value of 86.6%.

Twelve VOCs were detected in the five groundwater samples submitted for VOC (EPA Method 8260B) analysis and screened against New York State Class GA Groundwater Standards and Guidance Values. M-and p-xylenes were reported as

a sum. PCE was detected and exceeded the Class GA Groundwater Standard of 5 µg/L in all five samples. TCE was detected in four of the five groundwater samples, with one sample (MW3-01W) exceeding the Class GA Groundwater Standard of 5 µg/L. Chloroform was detected in the groundwater sample from MW1-01 exceeding the Class GA Groundwater Standard. Ten petroleum hydrocarbons were detected in the MW4-01W sample (m-and p-xylenes were reported as a sum), all of which exceed their Class GA Groundwater Standards. A total of approximately 2,437 µg/L of non-chlorinated VOCs were detected at MW-4.

Six soil samples from four soil borings, two groundwater samples, and four soil vapor samples were collected from an adjacent property (39-27 29th Street) during the 2010 Phase II ESA. No SVOCs or PCBs were detected in any of the soil and groundwater samples collected at the site. However, low levels of VOCs were reported in one soil sample, two pesticides (Aldrin and Dieldrin) were detected in two soil samples. PCE was detected in both groundwater samples at levels exceeding the NYSDEC Class GA Ambient Water Quality and elevated levels of iron, magnesium, manganese and sodium were also detected. Both PCE and TCE were detected in all four soil vapor samples collected at the site, with the sub-slab PCE results exceeding the New York State Department of Health (NYSDOH) Air Guidance Value of 100 µg/m³, suggesting that mitigation is necessary.

The Bridge Cleaners property owner completed a limited subsurface investigation at the Bridge Cleaners property in 2010, collecting 15 soil and five groundwater samples for VOC analysis from five soil borings. While PCE was detected in five of 15 soil samples, it was detected in all five groundwater samples. TCE was detected in two of the five groundwater samples, while various low-level petroleum hydrocarbons were detected in one groundwater sample.

4.2 Conclusions

Chlorinated Plume

PCE and, to a lesser extent, TCE appear to be a significant concern in the Bridge Cleaners area. Chlorinated contamination was detected in all groundwater samples.

The soil and groundwater samples collected from inside the Bridge Cleaners building by the site owner and the Phase II conducted at 39-27 29th Street revealed chlorinated contamination generally one to two orders of magnitude higher than the samples collected during this SC near the edges of the city block. This information indicates the source of the chlorinated contamination is from this city block, most likely the southwest corner of the Bridge Cleaners property.

Groundwater elevations indicate that groundwater flow is to the south-southwest, with the highest chlorinated groundwater contamination found along the southern portion of the investigation area (MW3-01W). This matches the conclusion that

the chlorinated contamination likely originates from the southwest corner of the Bridge Cleaners building as this monitoring well is directly downgradient of that area.

At one location, MW-04, on the western portion of the site, a second plume comprised of petroleum hydrocarbons appears to be a concern (see discussion below).

Secondary Plume

Although the focus of this SC was to track down the source of PCE and TCE contamination in the area, during the investigation a second contamination plume was identified at monitoring well location MW-4. Although PCE was detected in the soil and groundwater samples, a variety of “other” VOC contaminants were identified at this location. Approximately 589 mg/kg of total VOCs were detected in a soil sample from MW-4 and approximately 2,437 µg/L of total VOCs were detected in the groundwater sample. In general, the five main contaminants found at this location were 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene, N-propylbenzene, and xylenes.

Based on the common uses of these compounds, the source of this second contamination plume is likely an aged gasoline spill (based on the lack of lighter benzene and toluene compounds). Based on the observed groundwater flow direction, the source of this second contamination plume is likely located on the city block northwest of the project area (between 28th and 29th Street).

4.3 Recommendations

EEEEPC recommends that NYSDEC consider the following:

- Performing an additional investigation at the Bridge Cleaners site as well as in the vicinity of the 39-27 29th Street property to determine whether vapor mitigation is necessary.
- Performing further investigations around the inferred Bridge Cleaners source area in the southwest portion of the building to determine the extent of contamination and to assess feasible in situ remediation options.
- Performing additional investigation along and to the north and west of 29th Street to determine the source of a second non-chlorinated hydrocarbon contamination plume.
- Performing further studies in each of these areas, which include installation and sampling of additional monitoring wells; collection of additional soils data vertical profiling; or vapor intrusion studies.

5

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Tables

Table 2-1 Soil Sampling Depths, Bridge Cleaners, Long Island City, New York

Sample ID	Depth (ft BGS)	Sample ID	Depth (ft BGS)
MW1-01	14.5	MW4-01	7.8
MW1-02	23.0	MW4-02	29.8
MW2-01	18.8	MW4-03	27.3
MW2-02	23.8	MW4-04	31.8
MW3-01	19.9	MW5-01	10.5
MW3-02	23.8	MW5-02	17.8
		MW5-03	23.5

Key:

BGS = Below Ground Surface

ft = feet

**Table 2-2 Summary of Field Water Quality Data
Bridge Cleaners Site Characterization**

Well ID	Sample Date	pH	Temperature (° Celcius)	Specific Conductance (mS/cm)	Turbidity* (NTU)
MW-01	22-Feb-2012	7.37	12.10	113.7	250
MW-02	21-Feb-2012	6.78	15.40	194.5	500
MW-03	22-Feb-2012	7.47	16.90	104.7	500
MW-04	22-Feb-2012	7.62	16.20	120.8	250
MW-05	21-Feb-2012	6.82	16.20	199.1	250

Key:

* = Visual estimate due to turbidity meter malfunction

(mS/cm) = milliSiemens per centimeter

mg/L = milligrams per liter

NTU = nephelometric turbidity unit

Table 2-3 Well Construction and Groundwater Elevation Summary, Bridge Cleaners, Long Island City, New York

Well ID	Latitude	Longitude	TOIC Elevation (ft AMSL) ¹	Ground Surface Elevation (ft AMSL) ¹	Depth to Water (ft TOIC) ²	Groundwater Elevation (ft AMSL) ¹	Total Well Depth (ft BGS) ³	Screen Interval (ft BGS)	Sand Pack Interval (ft BGS)	Seal Interval (ft BGS)
MW-01	40.752735	-73.934135	34.74	35.05	23.70	11.04	30.30	20.30 - 30.30	18.8 - 31.0	16.8 - 18.8
MW-02	40.752206	-73.934619	26.15	26.55	16.00	10.15	26.64	16.64 - 26.64	15.0 - 27.0	13.0 - 15.0
MW-03	40.752173	-73.935161	29.70	30.15	19.69	10.01	27.29	17.29 - 27.29	15.8 - 27.8	13.8 - 15.8
MW-04	40.752670	-73.935170	38.36	38.72	27.85	10.51	34.10	24.10 - 34.10	22.0 - 34.1	20.0 - 22.0
MW-05	40.752345	-73.934491	28.49	28.78	18.01	10.48	25.89	15.89 - 25.89	14.0 - 26.5	12.0 - 14.0

Notes:

1 North American Vertical Datum 1988.

2 Measured on February 23, 2012.

3 Measured after well development on February 20 or 21, 2012.

Key:

AMSL = Above Mean Sea Level

BGS = Below Ground Surface

ft = feet

TOIC = Top of Inside Casing

T-5

Table 3-1 Bridge Cleaners Soil Analytical Results, February 2012

Analyte ⁽¹⁾	Sample ID:		MW1-01	MW1-02	MW2-01	MW2-02	MW2-02/D	MW3-01	MW3-02	MW4-01	MW4-03	MW4-02	MW4-04	MW5-01	MW5-02	MW5-03
	Date:	Depth (feet bgs):	02/13/12	02/13/12	02/14/12	02/14/12	02/14/12	02/14/12	02/14/12	02/15/12	02/15/12	02/15/12	02/15/12	02/16/12	02/16/12	02/16/12
	Unrestricted SCO ⁽²⁾	Restricted-Residential SCO ⁽³⁾	14.6	23.0	18.8	23.8	23.8	19.9	23.8	7.8	27.3	29.8	31.8	10.8	17.8	23.8
Percent Solids by Method SM 2540G (%)																
SOLIDS, PERCENT	NA	NA	99	92	82	85	83	89	88	97	81	80	81	94	82	80
VOCs by Method SW8260B (mg/kg)																
1,2,4-TRIMETHYLBENZENE	3.6	52	0.00043 U	0.00058 U	0.00052 U	0.00065 U	0.00048 U	0.00049 U	0.00044 U	0.00051 U	0.0005 U	720	0.071	0.00059 U	0.00058 U	0.00057 U
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	8.4	52	0.00032 U	0.00043 U	0.00039 U	0.00048 U	0.00036 U	0.00037 U	0.00033 U	0.00039 U	0.00037 U	60	0.028	0.00044 U	0.00043 U	0.00043 U
CYMENE	NA	NA	0.00043 U	0.00058 U	0.00052 U	0.00065 U	0.00048 U	0.00049 U	0.00044 U	0.00051 U	0.0005 U	10	0.023 J	0.00059 U	0.00058 U	0.00057 U
ETHYLBENZENE	1	41	0.00043 U	0.00058 U	0.00052 U	0.00065 U	0.00048 U	0.00049 U	0.00044 U	0.00051 U	0.0005 U	23	0.067	0.00059 U	0.00058 U	0.00057 U
ISOPROPYLBENZENE (CUMENE)	NA	NA	0.00038 U	0.00051 U	0.00045 U	0.00056 U	0.00042 U	0.00043 U	0.00039 U	0.00045 U	0.00044 U	50	0.023 J	0.00052 U	0.00051 U	0.0005 U
M AND P XYLENES ⁽⁴⁾	0.26	100	0.00091 U	0.0012 U	0.0011 U	0.0014 U	0.001 U	0.001 U	0.00094 U	0.0011 U	0.0011 U	730	3.1	0.0013 U	0.0012 U	0.0012 U
NAPHTHALENE	NA	100	0.00038 U	0.00051 U	0.00045 U	0.00056 U	0.00042 U	0.00043 U	0.00039 U	0.00045 U	0.00044 U	0.32 U	0.0031	0.00052 U	0.00051 U	0.0005 U
N-BUTYLBENZENE	12	100	0.00038 U	0.00051 U	0.00045 U	0.00056 U	0.00042 U	0.00043 U	0.00039 U	0.00045 U	0.00044 U	6.3	0.0017	0.00052 U	0.00051 U	0.0005 U
N-PROPYLBENZENE	3.9	100	0.00038 U	0.00051 U	0.00045 U	0.00056 U	0.00042 U	0.00043 U	0.00039 U	0.00045 U	0.00044 U	55	0.02	0.00052 U	0.00051 U	0.0005 U
O-XYLENE (1,2-DIMETHYLBENZENE) ⁽⁴⁾	0.26	100	0.00038 U	0.00051 U	0.00045 U	0.00056 U	0.00042 U	0.00043 U	0.00039 U	0.00045 U	0.00044 U	41	0.07	0.00052 U	0.00051 U	0.0005 U
SEC-BUTYLBENZENE	11	100	0.00054 U	0.00072 U	0.00065 U	0.00081 U	0.00061 U	0.00061 U	0.00055 U	0.00064 U	0.00062 U	11	0.0021	0.00074 U	0.00072 U	0.00072 U
T-BUTYLBENZENE	5.9	100	0.00048 U	0.00065 U	0.00058 U	0.00073 U	0.00054 U	0.00055 U	0.00058 U	0.00058 U	0.00056 U	2.5	0.00055 U	0.00067 U	0.00065 U	0.00064 U
TETRACHLOROETHYLENE (PCE)	1.3	19	0.0018	0.00094 U	0.0018	0.0024	0.002	0.014	0.076	0.00084 U	0.0061	3.3	0.00079 U	0.00096 U	0.0044	0.0048
TRICHLOROETHYLENE (TCE)	0.47	21	0.00048 U	0.00065 U	0.00058 U	0.00073 U	0.00054 U	0.0028	0.005	0.00058 U	0.00056 U	0.18 U	0.00055 U	0.00067 U	0.00065 U	0.00064 U

Key:

- = Analyte not analyzed for.
- bgs = below ground surface
- D Designates field duplicate sample.
- (g) = Guidance value (no applicable standard).
- J = Estimated value
- mg/kg = Milligrams per kilogram.
- SCO = Soil Clean-up Objectives (6 NYCRR Part 375-6)
- SVOCs = Semi-Volatile organic compounds.
- U = Not detected (lab reporting limit shown).
- UJ = Not detected/Estimated Value.
- VOCs = Volatile organic compounds.

Notes:

- 1) Bold values in unshaded cell denotes analytes reported above method detection limits.
- 2) Bold values in shaded cell denotes analytes reported to exceed Part 375 Unrestricted SCO
- 3) Bold, italicized values in shaded cell denotes analytes reported to exceed Part 375 Unrestricted and Restricted-Residential
- 4) The Part 375 SCO for xylene (mixed), and the sum of the xylene detections was used for comparison.

Table 3-2 Bridge Cleaners Groundwater Analytical Results, February 2012

Analyte ⁽¹⁾	Screening Criteria ^(2,3)	Sample ID:	MW1-01W	MW1-01W/D	MW2-01W	MW3-01W	MW4-01W	MW5-01W	TB022112	TB022212
		Date:	02/22/12	02/22/12	02/21/12	02/22/12	02/22/12	02/21/12	02/21/12	02/22/12
VOCs by Method SW8260B (µg/L)										
1,2,4-TRIMETHYLBENZENE	5		0.06 U	0.06 U	0.06 U	0.6 U	220	0.06 U	0.06 U	0.06 U
1,3,5-TRIMETHYLBENZENE	5		0.06 U	0.06 U	0.06 U	0.6 U	83	0.06 U	0.06 U	0.06 U
CHLOROFORM	7		9.9	9.7	0.04 U	0.4 U	0.2 U	0.04 U	0.04 U	0.04 U
ETHYLBENZENE	5		0.05 U	0.05 U	0.05 U	0.5 U	290	0.05 U	0.05 U	0.05 U
ISOPROPYLBENZENE	5		0.06 U	0.06 U	0.06 U	0.6 U	80	0.06 U	0.06 U	0.06 U
M AND P XYLENES ⁽⁴⁾	5		0.07 U	0.07 U	0.07 U	0.7 U	1300	0.07 U	0.07 U	0.07 U
NAPHTHALENE	10		0.21 UJ	0.21 UJ	0.21 UJ	2.1 UJ	18 J	3.2 J	0.21 UJ	0.21 UJ
N-PROPYLBENZENE	5		0.04 U	0.04 U	0.04 U	0.4 U	60	0.04 U	0.04 U	0.04 U
O-XYLENE	5		0.05 U	0.05 U	0.05 U	0.5 U	380	0.05 U	0.05 U	0.05 U
SEC-BUTYLBENZENE	5		0.05 U	0.05 U	0.05 U	0.5 U	5.6	0.05 U	0.05 U	0.05 U
TETRACHLOROETHYLENE (PCE)	5		18	21	25	440	31	31	0.14 U	0.14 U
TRICHLOROETHYLENE (TCE)	5		1	1.1	0.12 U	32	5	2.1	0.12 U	0.12 U

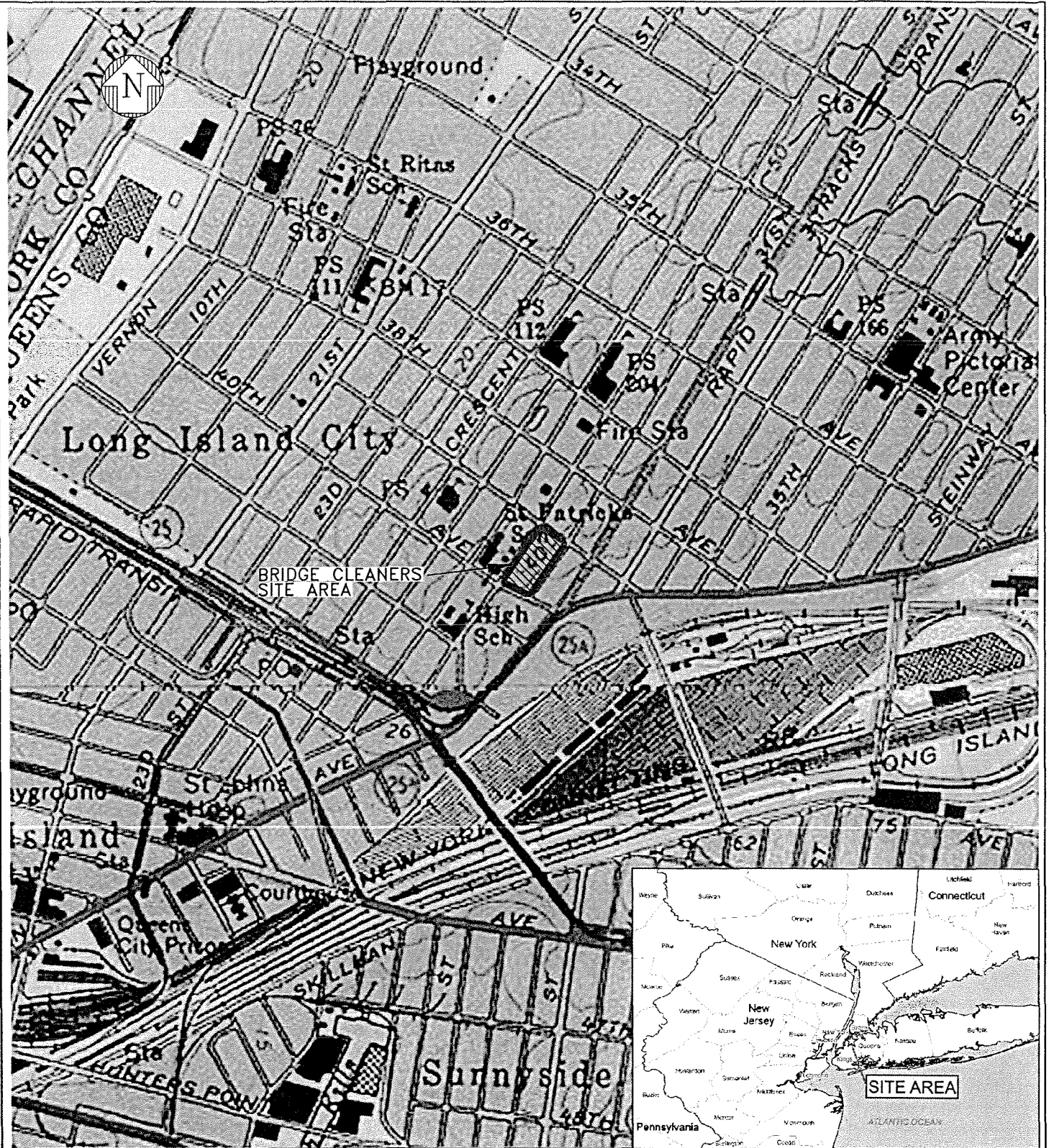
Key:

- = Analyte not analyzed for.
- /D Designates field duplicate sample.
- (g) = Guidance value (no applicable standard).
- J = Estimated value.
- mg/L = Milligrams per liter.
- U = Not detected (lab reporting limit shown).
- UJ = Not detected/Estimated Value.
- µg/L = Micrograms per liter.
- VOCs = Volatile organic compounds.

Notes:

- 1) Bold values in unshaded cell denotes analyte reported above method detection limits.
- 2) Bold values in shaded cell denotes analyte reported above the screening criteria.
- 3) New York State Department of Environmental Conservation, Technical and Operational Guidance Series Memorandum #1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, 1998 (with updates), Class GA Groundwater Standards and Guidance Values.
- 4) The groundwater standard is 5 ug/L for each isomer.

Figures



SOURCE: USGS 7.5-Minute Topographic Quadrangles:
 Central Park, NY-NJ 1979; Brooklyn, NY 1980

SCALE IN FEET

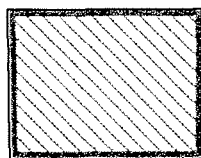




SCALE IN FEET



LEGEND



39-26 30TH STREET (BRIDGE CLEANERS)

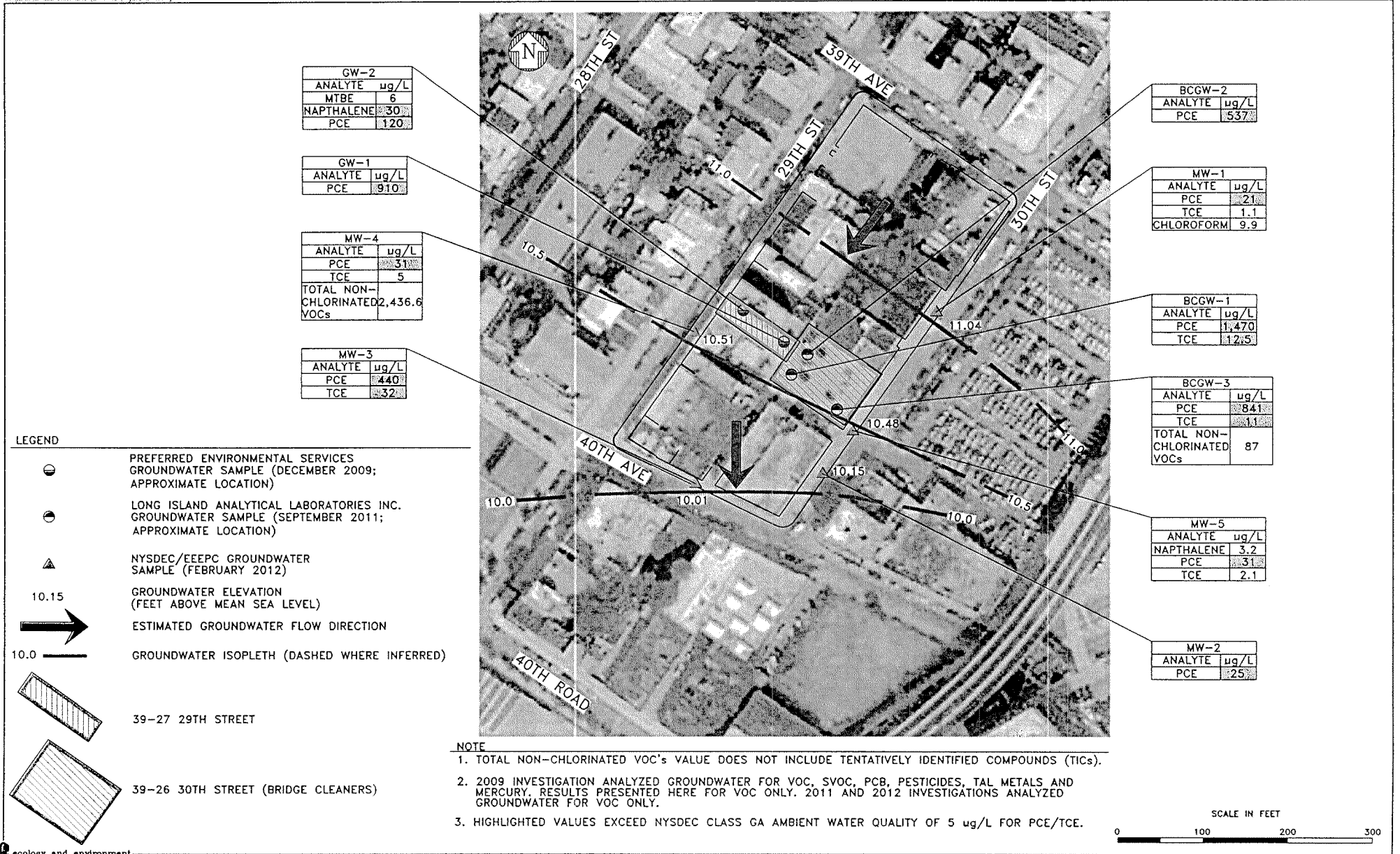


FIGURE 2-1 GROUNDWATER DATA SUMMARY AND ISOPLETHS BRIDGE CLEANERS SITE CHARACTERIZATION LONG ISLAND CITY, NEW YORK

Appendix E:
Regional Geology and Hydrogeology Information and Maps

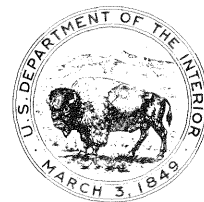
SUBSURFACE GEOLOGY AND PALEOGEOGRAPHY OF
QUEENS COUNTY, LONG ISLAND, NEW YORK

by Julian Soren

U.S. GEOLOGICAL SURVEY

Water-Resources Investigations 77-34
Open-File Report

Prepared in cooperation with the
New York State Department of Environmental Conservation



February 1978

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

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- A. Bedrock surface
 - B. Lloyd Sand Member surface
 - C. Clay member surface
 - D. Magothy-Matawan surface
 - E. Jameco Gravel surface
 - F. Gardiners Clay surface
- G. Paleographic map showing geology and approximate surface of Queens County before deposition of Jameco Gravel

FACTORS FOR CONVERTING ENGLISH UNITS TO
INTERNATIONAL SYSTEM (SI) UNITS

<u>Multiply English Units</u>	<u>By</u>	<u>To obtain SI units</u>
	<u>Length</u>	
feet (ft)	0.3048	meters (m)
miles (mi)	1.609	kilometers (km)
	<u>Flow</u>	
gallons per minute (gal/min)	.06309	liters per second (L/s)
million gallons per day (Mgal/d)		cubic meters per second (m ³ /s)
	<u>Slope</u>	
feet per mile (ft/mi)	.1894	meters per kilometer (m/km)

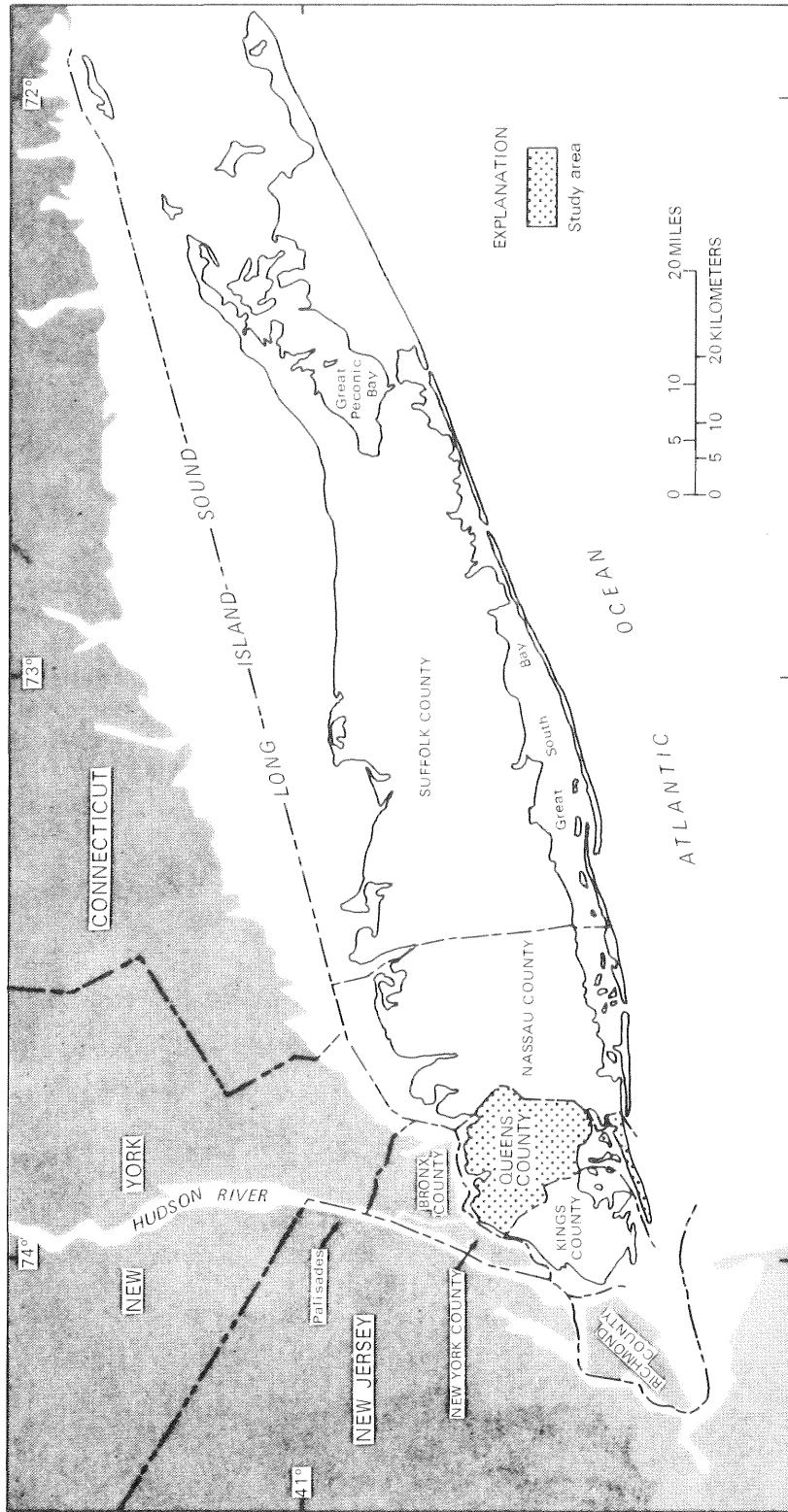
SUBSURFACE GEOLOGY AND PALEOGEOGRAPHY OF
QUEENS COUNTY, LONG ISLAND, NEW YORK

By

Julian Soren

ABSTRACT

Unconsolidated strata of clay, silt, sand, and gravel of Late Cretaceous and pre-Wisconsin Pleistocene ages lie between crystalline basement rocks (bedrock) of Precambrian(?) age and unconsolidated deposits of late Pleistocene (Wisconsin) and Holocene ages in Queens County, Long Island, N.Y., a borough of New York City. Data collected during a recent study of the hydrogeology of the county and updated records of earlier studies have been used to prepare contour maps that delineate the surfaces of the bedrock and the Upper Cretaceous and pre-Wisconsin Pleistocene deposits. The presence of diabase fragments, apparently from the Hudson Palisades, in a buried valley through the county suggests that the ancestral Hudson River was diverted into Queens County in Pleistocene time.



Base from U.S. Geological Survey
State base map, 1:500,000, 1974

Figure 1.--Location of Queens County, N.Y. and general regional geography.

INTRODUCTION

Queens County, one of the five boroughs of the City of New York, is situated at the west end of Long Island (fig. 1). The County had a population of 1,962,900 in 1974 (I. L. Kundzins, Librarian, U.S. Department of Commerce, oral commun., Dec. 16, 1975) in a land area of 113 mi². Communities in the county are a mixture of urban and suburban developments; the west half of the county is mostly urban. The principal geographic and cultural features are described in Soren (1971, p. 3-6). Plate 1A shows the locations of communities and other geographic features.

Mapping of subsurface geologic units is important to ground-water-supply managers, well drillers, geologists, hydrologists, engineers, and others concerned with subsurface work and studies. Subsurface mapping is especially important in Queens County because ground water supplies the needs of about 3/4 million people there. This report provides maps showing contours on the surfaces of geologic units underlying Pleistocene deposits of Wisconsin age (pl. 2A-F) and shows stratigraphic relationships of the units in geologic sections (pl. 1B). Before this report, the only available subsurface geologic mapping of the County was given in Suter, deLaguna, and Perlmutter (1949), which provided formation-surface contour maps, geologic sections, geologic history, and lithologic descriptions. However, the maps in Suter and others (1949), at approximately 1:185,000, are at a smaller scale than those in this report, the formation-surface contours are not easily referenced to surficial geography, and the maps contain many inaccuracies owing to the quality of reported subsurface data available at that time. The remapping of the geologic units also indicates that the Hudson River was diverted into Queens County in the Pleistocene Epoch--an addition to the knowledge of the regional geomorphology.

The maps and geologic sections in this report supersede those in Suter and others (1949). Much of the well data used therein have been reinterpreted, and additional well and core data were collected and examined as part of a general investigation of geology and ground water in the county between 1958 and 1975. The location of wells and test borings used to prepare this report are shown in plate 1A. A report on ground water and geohydrologic conditions in the county is given in Soren (1971). The work in the County was done by the U.S. Geological Survey under a cooperative agreement with the New York State Department of Environmental Conservation.

Acknowledgments

Drill cuttings, core samples, and well logs were made unreservedly available to the author by Abe Kreitman of The Lauman Co., Inc., Bethpage, N.Y.; and by George Tibbe of the Layne-New York Co., Inc., Hauppauge, N.Y., during the course of the investigation. Robert N. Oldale and Francis A. Kohout, U.S. Geological Survey, provided valuable assistance in the preparation of the report manuscript.

GEOLOGY

The subsurface geologic units in Queens County described in this report consist of sequences of unconsolidated sediments of Late Cretaceous and Pleistocene pre-Sangamon and Sangamon ages that are underlain by crystalline bedrock of Precambrian(?) age and overlain mostly by glacial upper Pleistocene deposits of Wisconsin age but also, to a lesser extent, by Holocene deposits. These units, from bedrock upward, are the Raritan Formation, of Late Cretaceous age, consisting of the Lloyd Sand Member and an overlying clay member (unnamed); the Magothy Formation-Matawan Group undifferentiated, of Late Cretaceous age; the Jameco Gravel, of pre-Sangamon age; and the Gardiners Clay, of Sangamon age. The Cretaceous formations are part of the Atlantic Coastal Plain. The overlying upper Pleistocene deposits extend to the land surface in more than three-fourths of the County; Holocene deposits mantle the remainder.

Erosion of the subsurface units developed a valley system, now buried, which traverses Queens County from north to south. The valleys are filled with Pleistocene deposits.

The unconsolidated deposits have been intensively developed, mostly for public-water supply, since before 1900; recorded pumpage from 1904 through the 1960's averaged 60 Mgal/d (Soren, 1971, p. 23). In the mid-1970's, pumpage increased to an average of 70 Mgal/d (New York State Department of Environmental Conservation, Stony Brook, N.Y. office, written commun., May 1, 1973, and R. J. O'Reilly, oral commun., Aug. 5, 1974).

Subsurface Geology

Precambrian(?) Rocks

Bedrock

The Precambrian(?) bedrock consists chiefly of complexly folded and faulted gneisses and schists that were eroded to a peneplain before deposition of the overlying Upper Cretaceous units.

The position of the bedrock surface is shown by contours in plate 2A. The strike of the bedrock surface in Queens County is about N 50° E, and the surface dips to the southeast at approximately 80 ft/mi, an angle of about 52 minutes. Small bedrock outcrops occur in the northwestern part of the County near the East River (Soren, 1971, pl. 1), and bedrock lies 1,100 ft below sea level at Far Rockaway, in the southeastern part of the County.

In most of Queens County, the bedrock surface was weathered to clay prior to deposition of the Upper Cretaceous strata. Perlmutter (in Suter and others, 1949, p. 13) states that the weathered bedrock-surface

clay is 5 to 100 ft thick and can be identified and differentiated from younger clay units by examination of samples for indications of original bedrock minerals, such as ragged quartz grains, garnet fragments, biotite, amphibole, pyroxene, feldspar, or altered products of these minerals.

Information about the position of bedrock in Queens County is of interest to designers of subsurface structures, excavators, and water-well drillers, especially where bedrock is near the land surface in northwestern and northern Queens, because the bedrock surface is, for practical definition, the bottom of the ground-water reservoir on Long Island. Bedrock does not usually yield more than a few gallons per minute to wells and, except at a few wells in the extreme western part of the county, bedrock is not used for water supply because larger yields are usually available at shallower depths.

Upper Cretaceous Deposits

Raritan Formation

Lloyd Sand Member.--This unit is of continental origin and overlies the bedrock surface with angular unconformity. The Lloyd consists of very fine to very coarse quartzose sand, granule to medium-pebble gravel, and interbedded clay and clayey and silty sand; sand and gravel beds commonly contain much interstitial clay and silt. The sand and gravel are generally grayish white and light yellow; clays are grayish white, light to dark gray, pink, and reddish. Disseminated lignite and pyrite are common in Lloyd beds, and laminae and thin beds of these substances occur within the clayey beds. Other minerals are stable types such as muscovite, rutile, and garnet.

Thickness of the Lloyd Sand Member in Queens County increases southeastward and ranges from 0 to 300 ft. Strike and dip of the member are approximately the same as those of the bedrock surface.

The position of the Lloyd surface is shown by contours in plate 2B. The unit was not deposited in western and northwestern Queens County but tapers out along a line from the Ridgewood vicinity of the County to Jackson Heights. The Lloyd is missing in buried valleys between the New York Municipal airport and College Point, between College Point and Whitestone, and in the Flushing Meadows Park area (pl. 1B, section C-C') as a result of erosion mainly in post-Cretaceous time. The valleys were probably cut by the ancestral Hudson River and associated tributary and distributary streams. The valley system is discussed in the section "The Buried Valley of the Ancestral Hudson River(?) in Queens County."

Lloyd beds do not crop out in Queens County; the surface of the member lies 100 ft below mean sea level in the northern part of the county and descends to 800 ft below sea level at Far Rockaway.

The importance of the Lloyd Sand Member in Queens County is that it is a moderately developed aquifer (Lloyd aquifer). As much as 10 Mgal/d of freshwater was pumped from the Lloyd in the 1930's and 1940's, and an average of 5 Mgal/d was pumped from the unit in the 1960's (Soren, 1971, p. 26). Lloyd pumpage in the mid-1970's averaged 6 Mgal/d (New York State Department of Environmental Conservation, written commun., May 1, 1973 and R. J. O'Reilly, oral commun., Aug. 5, 1974). Individual wells screened in Lloyd strata have been pumped at sustained rates of more than 1,000 gal/min during their developmental stages.

Water in the Lloyd is under artesian conditions; it is confined by the overlying clay member of the Raritan Formation and the underlying bedrock. The Lloyd is the only large supply of fresh ground water on the Rockaway Peninsula, and since it lies below sea level everywhere on Long Island, its freshwater recharge can only be from above. Recharge is mostly at very slow rates through the clay member over large areas, but locally, in the buried valleys, the aquifer can be more easily recharged through adjacent Pleistocene deposits that extend from bedrock to land surface (pl. 1B, section C-C').

Clay member.--This unit, of continental origin, has not been formally named as a stratigraphic unit but is commonly referred to on Long Island as the Raritan clay; it has also been named "Raritan clay" as a hydrogeologic unit (Cohen and others, 1968, p. 18). The clay member overlies the Lloyd Sand Member with apparent conformity. In western Queens County, the clay member overlaps the Lloyd and lies on bedrock with angular unconformity (pl. 1B, sections A-A' and C-C').

Deposits of the clay member include clay, silty clay, and clayey and silty fine sand. Lignite and pyrite occur in the clay member as in the Lloyd Sand Member. Sandy beds are commonly found in the clay member, and thin gravelly beds have been found locally in the unit. The clays are mostly light to dark gray; others are brownish red, pink, red, and grayish white. The reddish hues are attributed to oxidation of iron minerals in the sediments where they crop out (or cropped out prior to burial), or where they are (or were) near enough to land surface for oxidation to occur.

The author observed one outcrop of the clay member in Queens County in a small bluff near the shore of the East River in Whitestone (Soren, 1971, pl. 1) and penetrated the unit with a hand auger 4 ft below beach deposits just north of the outcrop (the outcrop was covered by a few feet of earth at some time in the late 1960's). Elsewhere in the County, the clay member lies below land surface and almost entirely below sea level. The unit dips southeastward and is about 600 ft below sea level at Far Rockaway; strike and dip of the clay member's surface are approximately the same as the Lloyd's. Thickness of the clay member increases southward and ranges from 0 to 200 ft. However, where the unit is less than 100 ft thick, the thinning is generally a result of erosion.

The position of the surface of the clay member is shown by contours in plate 2C. The map of the unit's surface indicates that the clay member overlaps the Lloyd in western and northwestern Queens County. The unit is missing in the westernmost part of Queens and in the buried valleys, where the Lloyd is also missing. The clay member terminates generally as a low escarpment, probably because it is more resistant to erosion than the Lloyd Sand Member or overlying beds.

On Long Island, the major significance of the clay member is that it confines water in the Lloyd Sand Member (Lloyd aquifer).

Magothy Formation-Matawan Group Undifferentiated

This unit includes the remainder of the Upper Cretaceous strata above the Raritan Formation in Queens County. It apparently is of continental origin and disconformably overlies the clay member of the Raritan Formation. The Magothy-Matawan unit is unconformably overlain by formations of Pleistocene age, which are described in the following paragraphs. In older reports, such as Suter and others (1949), the unit was called the "Magothy(?) Formation"; the name change to Magothy Formation-Matawan Group undifferentiated was made by Perlmutter and Todd (1965, p. 9).

The Magothy-Matawan deposits consist of strata similar to those in the Lloyd Sand Member of the Raritan Formation; however, sand and gravel (up to large pebbles) generally occur only in the basal 50 to 100 ft of the Magothy-Matawan deposits. This basal sand and gravel bed indicates probable disconformity between the unit and the underlying clay member of the Raritan Formation. Thickness of Magothy-Matawan strata in Queens County ranges from 0 to 450 ft; the thickest section is in the Far Rockaway area. Thickness of the deposits varies greatly because of erosion near the end of and after Late Cretaceous time. Magothy-Matawan strata are missing in northern and northwestern Queens County and also in the buried valley trending southward from the Flushing Meadow Park area.

The position of the surface of the Magothy-Matawan unit is shown by contours in plate 2D. The intensity of erosion of the unit can be seen from the contour pattern, which shows a well-developed, ancient topographic relief. Magothy-Matawan beds do not crop out in Queens County. The surface of the unit is above sea level only in an area of approximately 4 mi² in the northeastern part of the county, in the vicinities of Bellerose, Floral Park, and Douglaston. The highest part of the Magothy-Matawan surface is approximately 50 ft above sea level in Douglaston. Its surface is deepest in the buried valley, from John F. Kennedy International Airport to Belle Harbor, where it is more than 400 ft below sea level. Only the basal Magothy-Matawan beds occur in the unit's northernmost extent in the county, and the thickest section of the unit, at Far Rockaway, is probably only one-third to one-half its original thickness. The greatest known thickness of Magothy-Matawan

strata on Long Island, 1,059 ft, was determined by the author in 1975 at a deep observation-well installation at Smith Point, Fire Island, in Suffolk County, 47 mi east of Far Rockaway (well S52162, not shown in this report). In the Fire Island vicinity, the Magothy-Matawan unit is inferred to be unconformably overlain by the Upper Cretaceous Monmouth Group of marine origin (Jensen and Soren, 1974, sheet 1) because some erosion of uppermost Magothy-Matawan beds prior to deposition of the Monmouth seems to have occurred there.

The Magothy-Matawan unit is an important aquifer (Magothy aquifer) in Queens County. Intensive development of the aquifer started in the 1950's. About one-third of the 60 Mgal/d of water that was pumped mostly for public supply in the County in the 1960's came from this unit (Soren, 1971, p. 26). In the mid-1970's, pumpage from all the County's aquifers had risen to 70 Mgal/d (New York State Department of Environmental Conservation, written commun., May 1, 1973, and R. J. O'Reilly, oral commun., Aug. 5, 1975). Although a breakdown of pumpage by aquifer is not available for the years 1972 to 1975, pumpage from the Magothy-Matawan unit is estimated to have increased to more than half of the ground-water pumpage in the County during this period. Individual wells screened in the Magothy-Matawan strata have commonly been pumped at sustained rates of 1,500 gal/min during their developmental stages.

The Magothy-Matawan unit is poorly confined in the northern part of Queens County; in the southern part, where it is overlain by the Gardiners Clay, it is well confined (Soren, 1971, p. 10). In the extreme southern part, at and near The Rockaway Peninsula, water in the unit is salty (Soren, 1971, pl. 1).

Pleistocene Deposits

Pre-Sangamon deposits

Jameco Gravel.--The Jameco Gravel seems to have been deposited by streams in Queens County. The unit is found only in buried valleys, where it unconformably overlies older formations. It is unconformably overlain by the Gardiners Clay, of Sangamon age, except in the Glendale-Woodhaven-Ozone Park areas, where the Gardiners is missing. Here the Jameco is unconformably overlain by upper Pleistocene deposits (pl. 1B, section D-D').

Jameco deposits are the oldest Pleistocene sediments on Long Island. The Jameco is pre-Sangamon; otherwise its age is uncertain. The unit has been believed to be of Kansan or Illinoian ages; however, the most recent estimate of the formation's age is that it is Illinoian (Williams, 1976, p. 22).

Jameco deposits are mostly of coarse sand and granule to cobble gravel; boulders are commonly reported by well drillers. Larger rock

fragments are composed mainly of granite, diabase, gneiss, schist, sandstone, and shale; smaller particles contain much of the same rock types and small to significant amounts of quartzose sand. The deposits become finer grained southward; the coarsest materials are in and near the thalweg of the buried valley from the Flushing Meadow Park area southward. Jameco deposits are generally dark brown and dark gray. Thickness of the Jameco ranges from 0 to 250 ft.

The stream that carried the Jameco materials into the County probably originated as melting glacial ice north of the County (deLaguna, in Suter and others, 1949, p. 41). Numerous diabase fragments in the Jameco indicate that the transporting stream had contact with the Palisades, a sill composed predominantly of diabase, at the west side of the Hudson River in New Jersey (fig. 1).

The position of the surface of the Jameco Gravel is shown in plate 2E. The unit occurs only in the central and southern parts of Queens County and in a small area of about 0.25 mi² near Maspeth, in western Queens. The formation is not believed by the author to be present in the buried valley from Flushing Meadow Park northward; the northernmost limit of the unit seems to be where the Harbor Hill moraine crosses the valley. Well logs do not show clearly definable Jameco deposits in the northern part of the buried valley, and it is probable that any Jameco deposits there were excavated and redeposited during Wisconsin glaciation. The Harbor Hill glacial advance terminated between sections C-C' and D-D' (pl. 1B), about 1.5 mi north of D-D'. Erosion of Jameco deposits does not seem to be significant in other parts of the county.

Jameco beds do not crop out in Queens County. Altitude of the Jameco surface ranges from approximately 80 ft below sea level in the Glendale and Laurelton areas to more than 200 feet below sea level in the Belle Harbor area of the Rockaway Peninsula.

The Jameco Gravel is a source of water in Queens County (Jameco aquifer). Individual wells screened in the Jameco strata have commonly been pumped at sustained rates of 1,500 gal/min during their developmental stages. In the 1960's, the Jameco was moderately developed for water supply at about 4.5 Mgal/d and about 2.5 Mgal/d in the mid-1970's (New York State Department of Environmental Conservation, written commun., May 1, 1973, and R. J. O'Reilly, oral commun., Aug. 5, 1974).

Water in the Jameco is well confined by the overlying Gardiners Clay, except where the Gardiners is missing in the Glendale-Woodhave-Ozone Park areas of the County (pl. 1B, section D-D'); in these areas water can readily move vertically between the Jameco and overlying glacial sand and gravel of Wisconsin age. Because the Jameco lies in a valley cut into the Magothy Formation-Matawan Group undifferentiated, ground water can readily move laterally between these units. At and near the Rockaway Peninsula, water in the Jameco is salty (Soren, 1971, pl. 1).

Sangamon deposits

Gardiners Clay.--The Gardiners Clay is an interglacial deposit of marine origin and contains fossil foraminifers, pelecypods, and gastropods. The formation unconformably overlies the Jameco Gravel and older formations in different parts of Queens County and is unconformably overlain by upper Pleistocene deposits.

Gardiners strata are mostly clay with some intercalated thin sandy and gravelly beds. The clays in the unit are mostly grayish green and, less commonly, dark gray. (The unit is generally described as "blue clay" by well drillers.) Minerals commonly found in the clays are muscovite, biotite, chlorite, quartz, pyroxene, glauconite, and amphibole; disseminated lignite is common in the unit.

Gardiners Clay beds do not crop out anywhere in the County. The formation is found only in the central and southern parts of Queens, and its surface lies mostly from 50 ft to 200 ft below sea level, descending southward. The position of the Gardiners surface is shown in plate 2F. Thickness of the Gardiners ranges from 0 to 150 ft; thickest deposits are where the unit overlies the Jameco Gravel in the buried valley. The Gardiners is missing in the Glendale-Woodhaven-Ozone Park area. It is not certain whether the formation was not deposited there or was eroded.

The surface of undisturbed Gardiners Clay has not been found higher than 40 ft below sea level anywhere on Long Island, and this altitude is probably at or near the maximum sea level in Sangamon time.

Gardiners Clay deposits have not been positively identified in northern Queens County. It is probable that during Wisconsin glaciation the unit was excavated and redeposited, as seems to have been the case with the underlying Jameco Gravel in the area.

The importance of the Gardiners Clay in Queens County is that it confines water in the underlying Jameco Gravel and Magothy Formation-Matawan Group undifferentiated.

Upper Pleistocene deposits

The name "upper Pleistocene deposits" was used by deLaguna (1948, p. 8 and 16) to include strata of Wisconsin age between the Gardiners Clay and Holocene deposits. Upper Pleistocene deposits range in thickness from 0 to 300 ft and are chiefly composed of glacial-drift material such as till, lacustrine deposits, and outwash sand and gravel. The upper Pleistocene deposits usually contain many unstable individual-mineral grains such as biotite, chlorite, feldspar, and hornblende as well as many compound-mineral grains containing these minerals; coarse-grained deposits and till often contain easily recognizable fragments of igneous, metamorphic, and

sedimentary rocks. The deposits also contain fossil plant material, disseminated in coarse-grained deposits and both disseminated and bedded in fine-grained deposits, in stages from fairly fresh in appearance to peat. Upper Pleistocene deposits unconformably overlies the older formations in Queens County. Areal distribution of glacial drift in the county is shown in Fuller (1914, pl. 1) and, in modified form, in Soren (1971, pl. 1).

In the Far Rockaway area, a clay unit of marine origin known as the "20-foot clay" occurs within upper Pleistocene deposits of outwash (Perlmutter and Geraghty, 1963, p. 36-37, and pl. 7, section X-X', also shown in this report in pl. 1B, section B-B'). The 20-foot clay was first described by Perlmutter and others (1959, p. 422) in the southwestern part of Nassau County, adjacent to Queens County, and was named for the fact that it was discovered 20 ft below sea level. The lithology and fauna of the 20-foot clay are similar to those of the Gardiners Clay (Perlmutter and Geraghty, 1963, p. 37); Weiss (1954, p. 143) states that the most abundant species of Foraminifera found in the Gardiners are still living locally and therefore are not restricted to the Pleistocene. Thickness of the 20-foot clay ranges from 0 to 40 ft.

The 20-foot clay is probably an interstadial deposit. Two ice-sheet advances seem to have occurred in late Wisconsin time; their terminal positions on Long Island are marked in Nassau and Suffolk Counties east of Queens County by the Ronkonkoma Terminal Moraine and the younger Harbor Hill Terminal Moraine. Only the Harbor Hill is visible in Queens County. The 20-foot clay probably was deposited during a period of rising sea level between the glacial advances. Glacial deposits below the 20-foot clay were probably deposited by the Ronkonkoma ice-sheet advance and retreat.

From earliest times of development through the 1950's, most pumping in Queens County was from outwash in upper Pleistocene deposits (upper glacial aquifer). By the 1960's, pumpage from this aquifer in Queens County constituted approximately one-half the total and, by the mid-1970's, only about one-third of the total (New York State Department of Environmental Conservation, written commun., May 1, 1973, and R. J. O'Reilly, oral commun., Aug. 5, 1974). Individual wells screened in outwash have commonly been pumped at sustained rates of 1,500 gal/min during their developmental stages.

Water in the upper Pleistocene deposits is mostly unconfined (under water-table conditions); in the northern part of Queens County, however, local confining conditions are created by complex interbedding of layers of sand and gravel and clayey and silty ground moraine (Soren, 1971, p. 8).

Upper Pleistocene deposits are shown but not differentiated in geologic sections A-A' through D-D', except for the 20-foot clay shown in section B-B' (pl. 1B).

Surficial Geology

The surficial glacial deposits in Queens County consist mainly of ground moraine in the northern part and outwash in the southern part. The areas are separated by the Harbor Hill moraine, which traverses the County from Glendale to Floral Park. Holocene surficial deposits consist of shore and salt-marsh deposits in the southern part of the County; artificial fill has been used in many places to extend and reinforce shorelines and to eliminate swampy areas. Surficial geology is described and illustrated in Soren (1971, p. 6-7 and pl. 1). A few small outcrops of preglacial formations occur in the western and north-central parts of the County.

PALEOGEOGRAPHY

Buried Valley of Ancestral Hudson River(?) in Queens County

A major buried valley stream traverses all of Queens County from north to south. The valley was cut through the Cretaceous formations into bedrock as far as the southern end of the Flushing Meadow Park area (pl. 2A-2D). From the park area southward, the valley was cut deeply into the Magothy Formation-Matawan Group undifferentiated to more than 400 ft below sea level (pl. 2D). The valley cutting was done by a stream system that apparently started late in the Late Cretaceous Epoch and probably continued into the Pleistocene Epoch to Jameco time. From Jameco time through the end of Pleistocene time, the valley system was buried by the Jameco Gravel, Gardiners Clay, and upper Pleistocene deposits. Evidence given in the following paragraphs indicates that the ancestral Hudson River(?) flowed through the main channel of this valley system.

Two tributary streams are indicated to have entered the ancestral Hudson course in the College Point vicinity (pl. 2A). One of these streams, probably an ancestral Bronx River, entered between the New York Municipal Airport and College Point; the second stream entered from between College Point and Whitestone. The second stream, which was in alignment with today's Westchester Creek in Bronx County, was probably associated with an ancestral Hutchinson River, also in Bronx County. These tributaries eroded to bedrock (pl. 2A) and left an isolated body of the Raritan Formation between them in the College Point area (pl. 2B, 2C).

The buried valley in Queens County was depicted by Veatch (1906, pl. 6) as having been cut in Tertiary time by a stream named the Sound River, which he showed to flow into Queens from Connecticut. Veatch also indicated that the main feeders into the Sound River were the ancestral Housatonic and Connecticut Rivers, 40 mi and 80 mi east of Queens, respectively. Veatch (1906, pl. 6) depicts the ancestral Hudson River as having flowed across the west end of Kings County, where it joined the Sound River south of Queens County. DeLaguna (1948, p. 14) gives evidence that precludes the

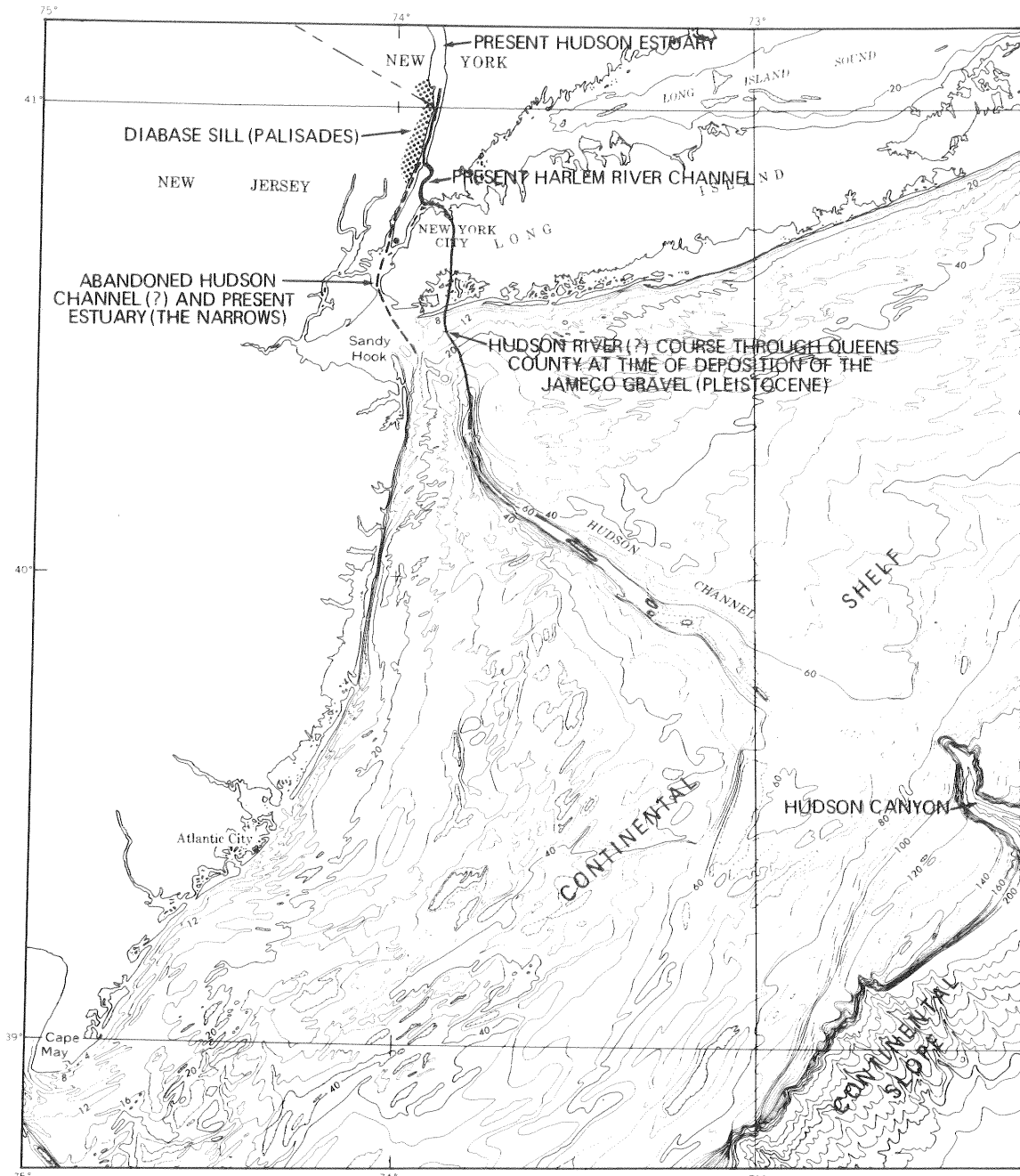
Sound River's having flowed into Queens County; furthermore, no indications of a major eastward drainage in the Long Island Sound area are known. Recent geophysical surveying of the Long Island Sound area (Grim and others, 1970, p. 661) does not indicate a buried channel of the Connecticut streams leading into Queens County, and McMaster and Ashraf (1973a, p. 374) show that ancient, prominent streamflow in the Connecticut River area developed a south, rather than east-trending, pattern and found thalwegs of these valleys cut into coastal-plain deposits to depths between 256 ft and 938 ft below sea level (1973b, p. 374). Major buried south-trending paleodrainage channels in the vicinity of Queens County and in Nassau and Suffolk Counties, east of Queens, are discussed and shown by Williams (1976, p. 39-50). Jensen and Soren (1974, pl. 1) show contours of the buried channels in Suffolk County.

DeLaguna (1948, p. 15) suggests that the diabase fragments in the Jameco deposits in the buried valleys of Queens and Kings Counties came from the nearby Palisades (fig. 1) and (in Suter and others, 1949, p. 42) states the possibility of the Hudson River's deflection across Kings and Queens Counties.

The thalweg of the buried valley in Queens County is as deep or deeper than the known bedrock surface in the Hudson River estuary between New York and New Jersey and between Kings and Richmond Counties, New York (fig. 1); therefore, the most likely explanation for the diabase in the buried valley in Queens is that the ancestral Hudson River(?) flowed through the buried valley. A capture of the Hudson could have been effected through the channel of the Harlem River between New York and Bronx Counties, or the river may have been diverted through the Harlem River's channel by an ice or moraine blockage. The change in course occurred prior to the deposition of the Jameco Gravel and probably during an interval that could range in age from Kansan to Illinoian. Dating of events in the Pleistocene Epoch earlier than the beginning of the Sangamon Interglaciation, about 125,000 years ago, is uncertain (Meyer Rubin, oral commun., July 21, 1976); the only certainty is that the course change occurred more than about 125,000 years ago. Braiding of the river was probably effected by distributaries branching through channels of the East River into Queens and Kings Counties; such a drainage pattern also accounts for the Jameco deposits in buried valleys in Kings County.

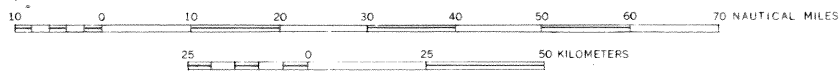
Mapping of the Hudson Channel in the continental shelf seaward from New York to the Hudson Canyon in the continental slope by Uchupi (in Schlee, 1973, p. 3-4) shows the north end of the channel curving into alignment with the buried valley in Queens County rather than with the present Hudson estuary (The Narrows) between Kings and Richmond Counties (figs. 1 and 2).

A paleotopographic map of the approximate pre-Jameco surface of Queens County is shown in plate 2G; the map is a composite of plates 2A-2D,



Base prepared by E. Uchupi, 1973

Paleohydrology by Julian Soren, 1977



CONTOUR INTERVALS 4, 20, AND 200 METERS
 BASED ON SOUNDINGS FROM U.S. COAST AND GEODETIC SURVEY SMOOTH SHEETS

Figure 2.--Hudson River(?) diversion through Queens County and course alignment with Hudson Channel and Canyon in the continental shelf.

inclusive. The pre-Jameco surface in the northern part of the County was altered by erosion during late Wisconsin glaciation. This eroded surface seems to be particularly evident in the Little Neck Bay area, as depicted by the broad valley cut into the Cretaceous deposits (pl. 2G), and in the Flushing Creek area where the Jameco Gravel and Gardiners Clay are absent in the valley cut through the Cretaceous deposits into bedrock (pls. 2E, 2F).

CONTOUR MAPS OF FORMATION SURFACES

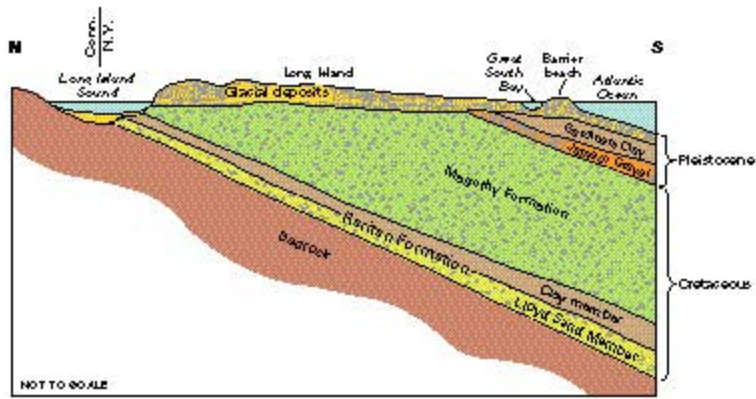
Contour lines are drawn on formation surfaces in plate 2A-2G to show the surface positions and configurations. On uneroded formation tops, the lines show structure contours; on eroded former land surfaces, they are paleotopographic contours. For example, a contour line on the clay member of the Raritan Formation where it is covered by the Magothy Formation-Matawan Group undifferentiated is a structure contour. Where such a contour runs into a buried valley, it ceases to be structure contour; it makes a sharp, angular bend "upstream" and becomes a topographic contour traversing the valley wall to reach the bottom of the unit and continues onto the eroded surface of the underlying unit.

Contour lines on the bedrock and Magothy-Matawan surfaces (pl. 2A and 2D) depict former topography. Contours on the surfaces of the Lloyd and clay members (pl. 2B, 2C) are structure contours where the units are uneroded, but show former topographic contours where the units were eroded in a buried valley. The contours on the Jameco and Gardiners surfaces (pl. 2E, 2F) are most likely structural and topographic, but data on the histories of these units are insufficient to permit precise distinctions. However, where the units' surfaces are fairly even, the contours are probably structural. All the contours shown in plate 2G are paleotopographic contours.

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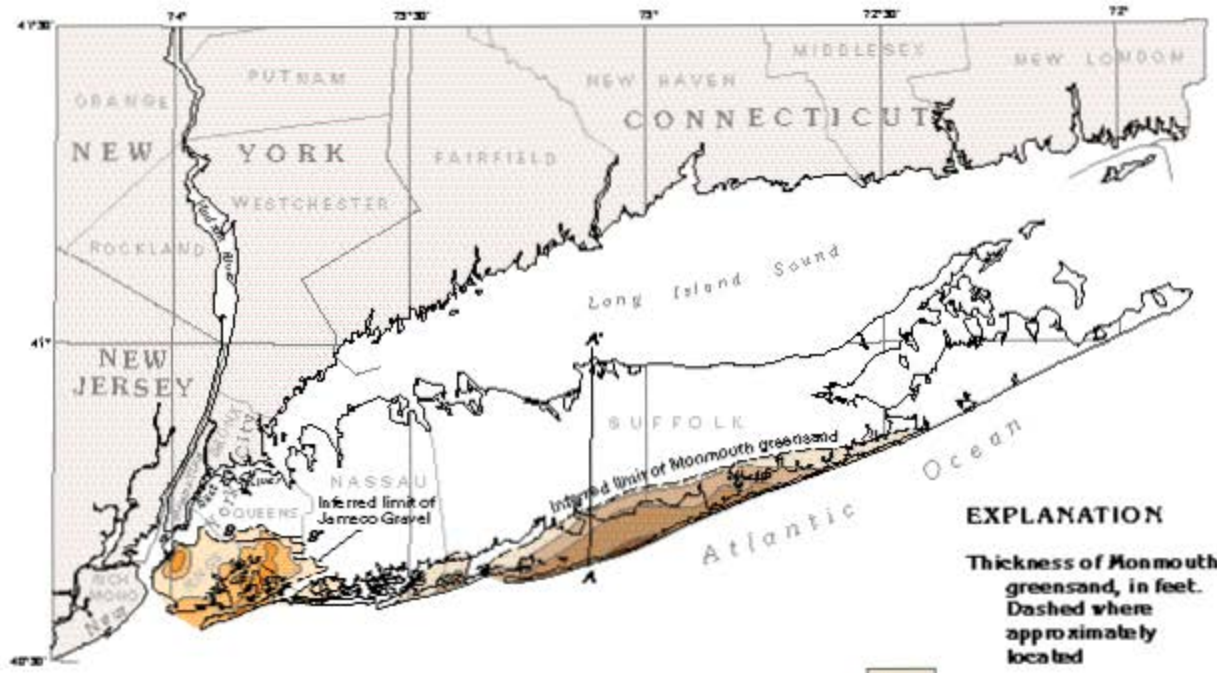
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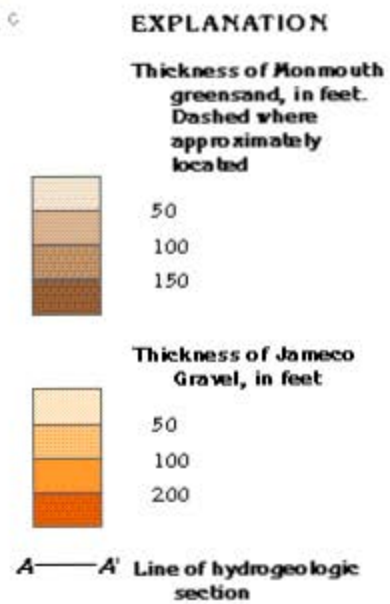
Modified from Franke, O.L., and McClymonds, N.E., 1972, Summary of the hydrologic situation on Long Island, New York, as a guide to water-management alternatives: U.S. Geological Survey Professional Paper 627-F, 59 p.

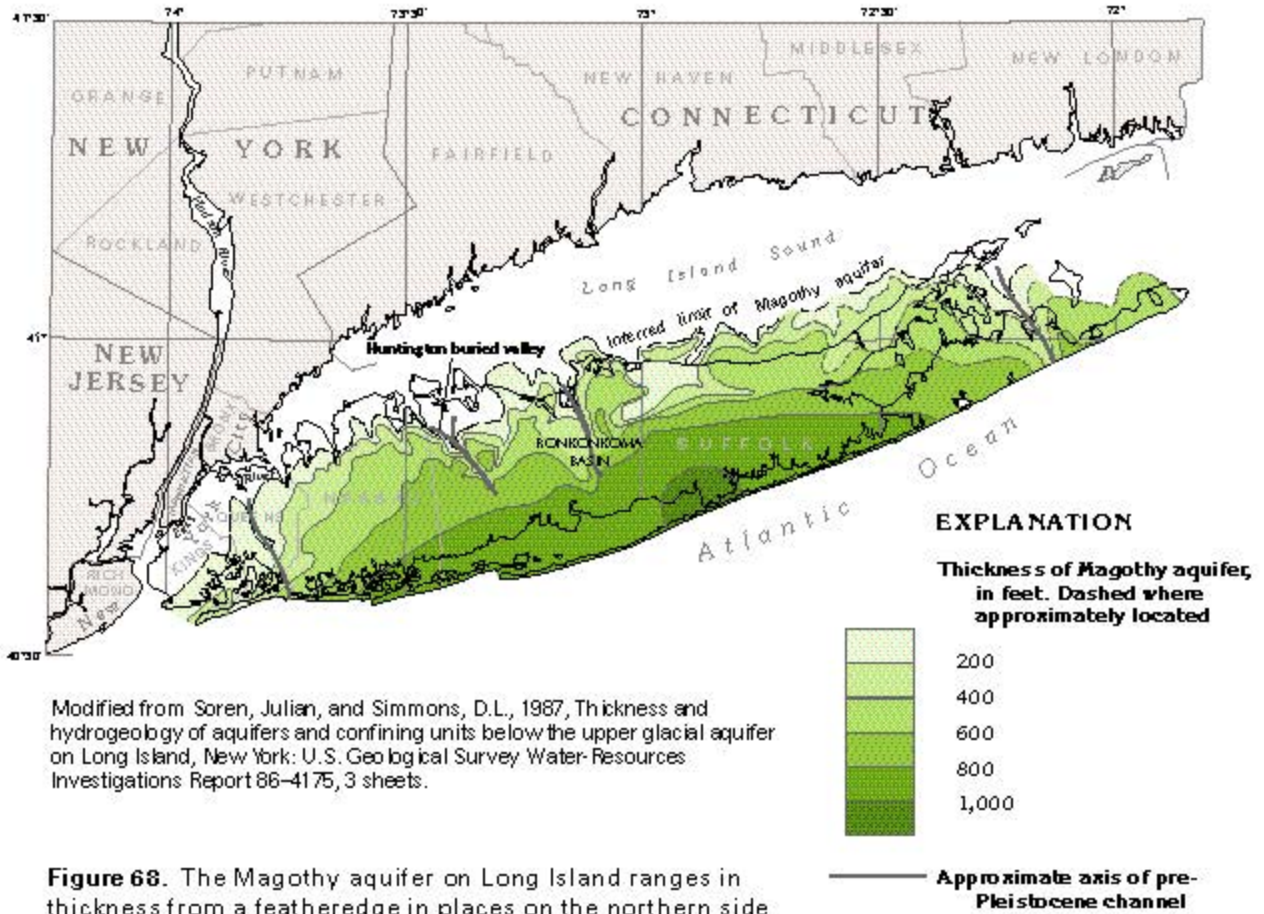
Figure 63. Coastal Plain sediments, which are of Cretaceous and Pleistocene ages, underlie glacial deposits on Long Island as shown by this idealized section of eastern Queens County. The Magothy Formation and the Lloyd Sand Member of the Raritan Formation form productive aquifers.



Modified from Soren, Julian, and Simmons, D.L., 1987, Thickness and hydrogeology of aquifers and confining units below the upper glacial aquifer on Long Island, New York: U.S. Geological Survey Water Resources Investigations Report 86-4175, 3 sheets.

Figure 69. The Monmouth greensand is a confining unit that ranges in thickness from a featheredge on its northern edge to about 150 feet on the south shore of Long Island. The Jameco Gravel forms a minor aquifer that ranges in thickness from 0 to about 200 feet in the southwestern part of Long Island.





Modified from Soren, Julian, and Simmons, D.L., 1987, Thickness and hydrogeology of aquifers and confining units below the upper glacial aquifer on Long Island, New York: U.S. Geological Survey Water-Resources Investigations Report 86-4175, 3 sheets.

Figure 68. The Magothy aquifer on Long Island ranges in thickness from a featheredge in places on the northern side of Long Island to about 1,000 feet in an area of southwestern Suffolk County on the south shore.

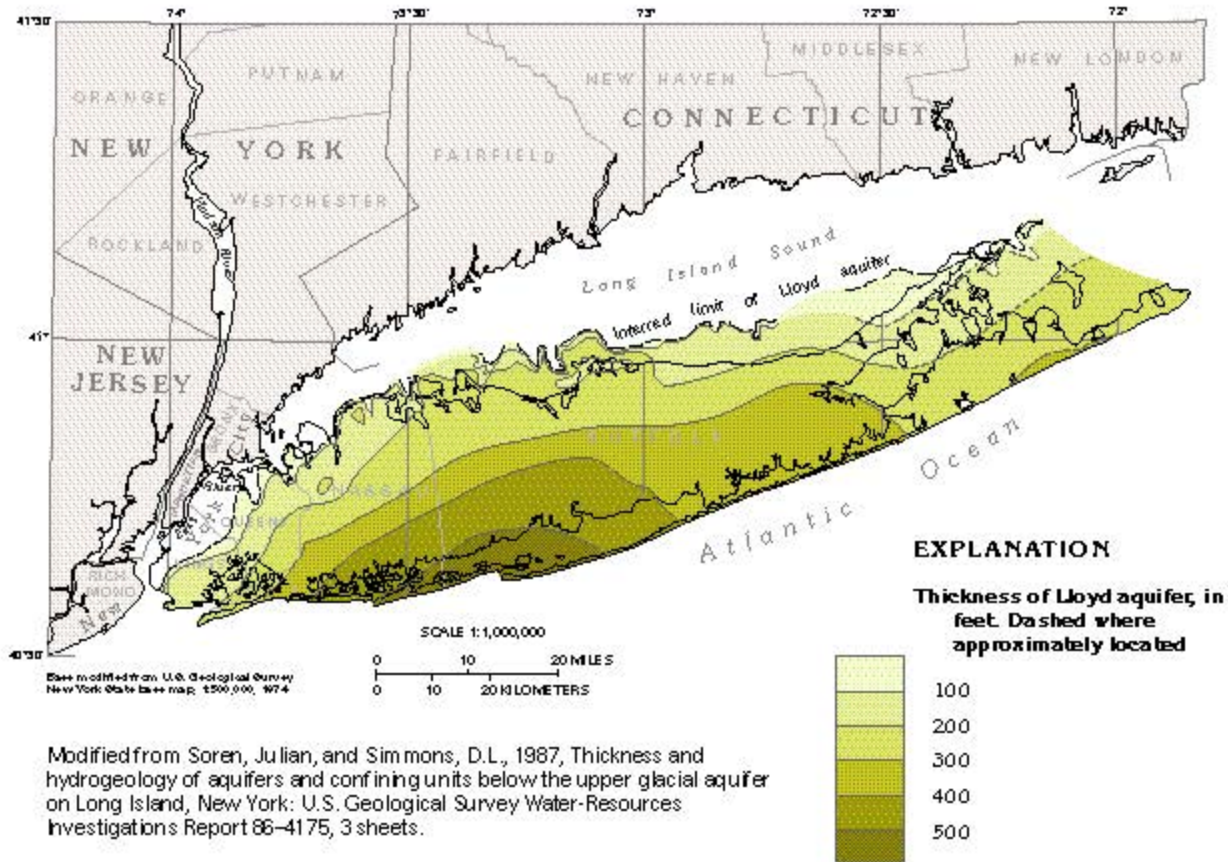
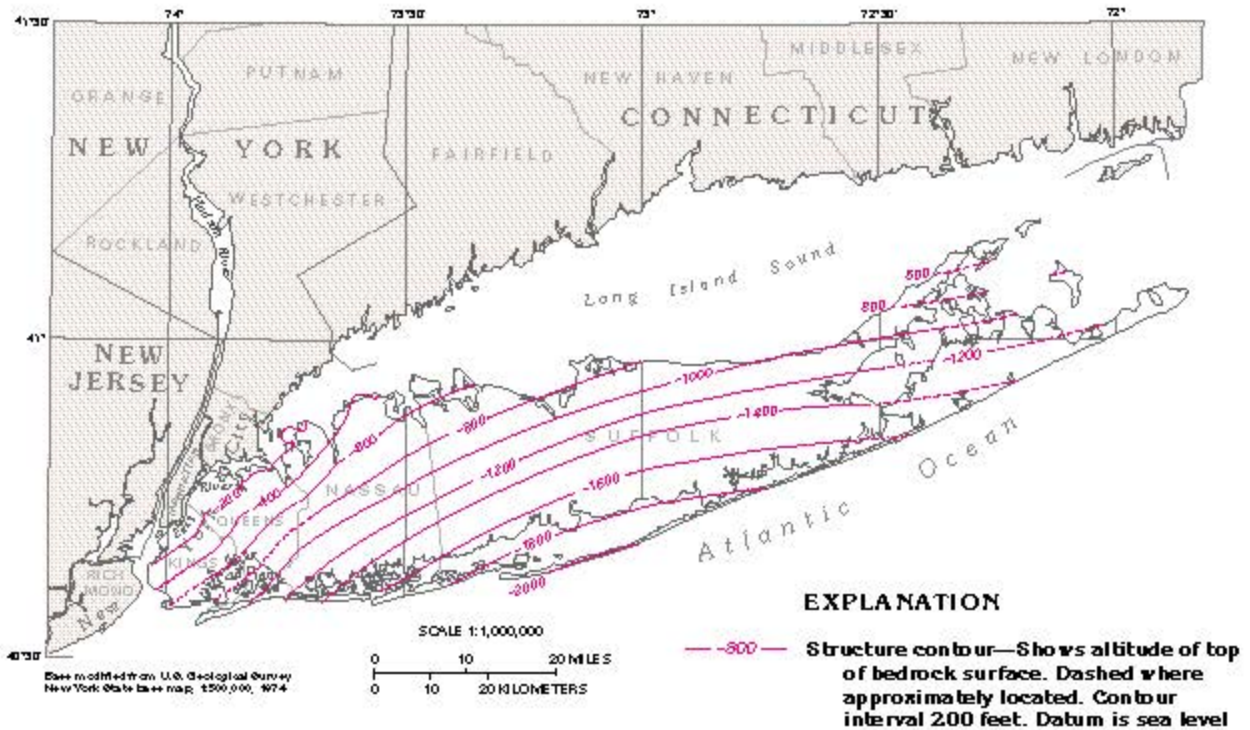


Figure 67. The thickness of the Lloyd aquifer ranges from a featheredge in places on the northern side of Long Island to about 500 feet in southeastern Nassau County and south-western Suffolk County on the southern side.



Modified from Soren, Julian, and Simmons, D.L., 1987, Thickness and hydrogeology of aquifers and confining units below the upper glacial aquifer on Long Island, New York: U.S. Geological Survey Water-Resources Investigations Report 86-4175, 3 sheets.

Figure 65. The crystalline-bedrock surface that underlies Long Island is at land surface in Connecticut but is about 2,000 feet below sea level along the central part of the southern coast of the island.

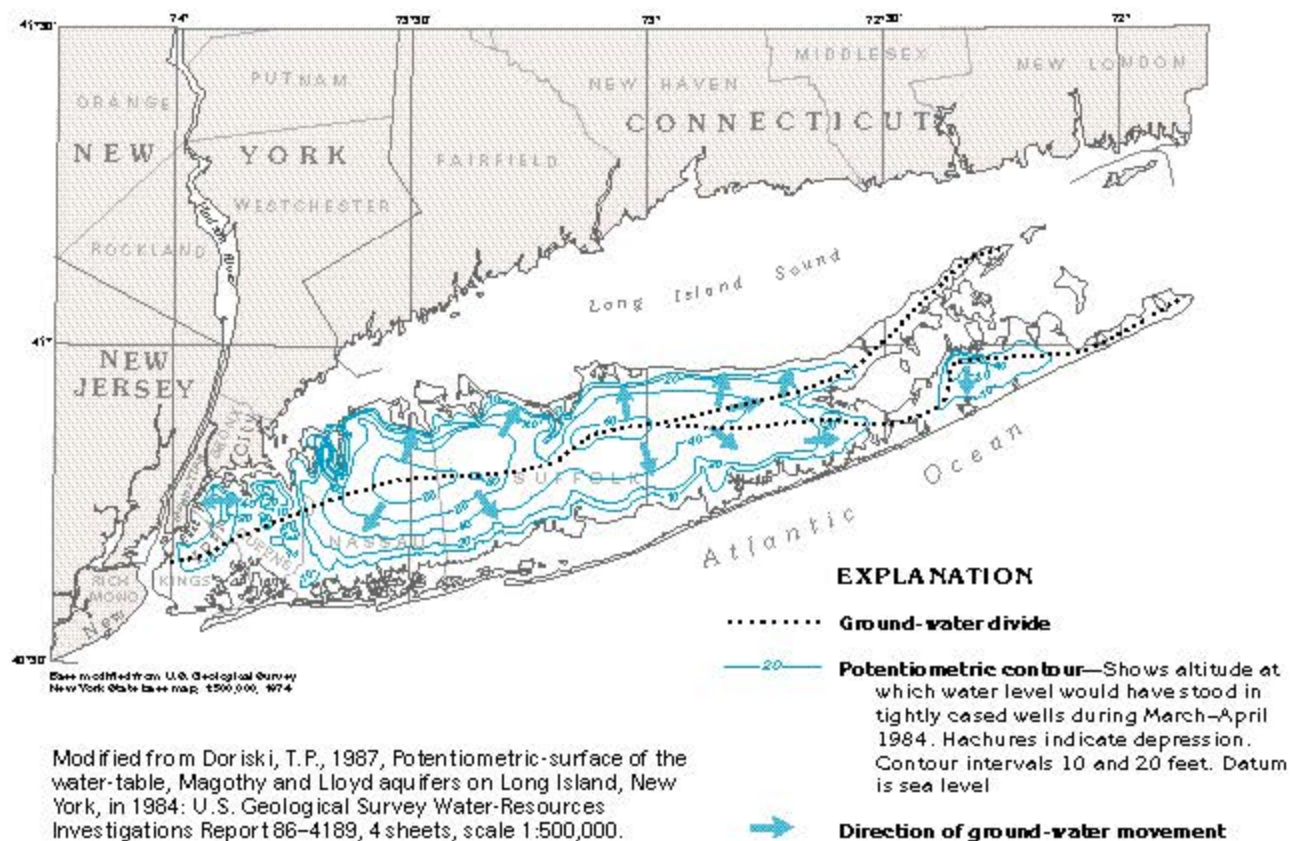
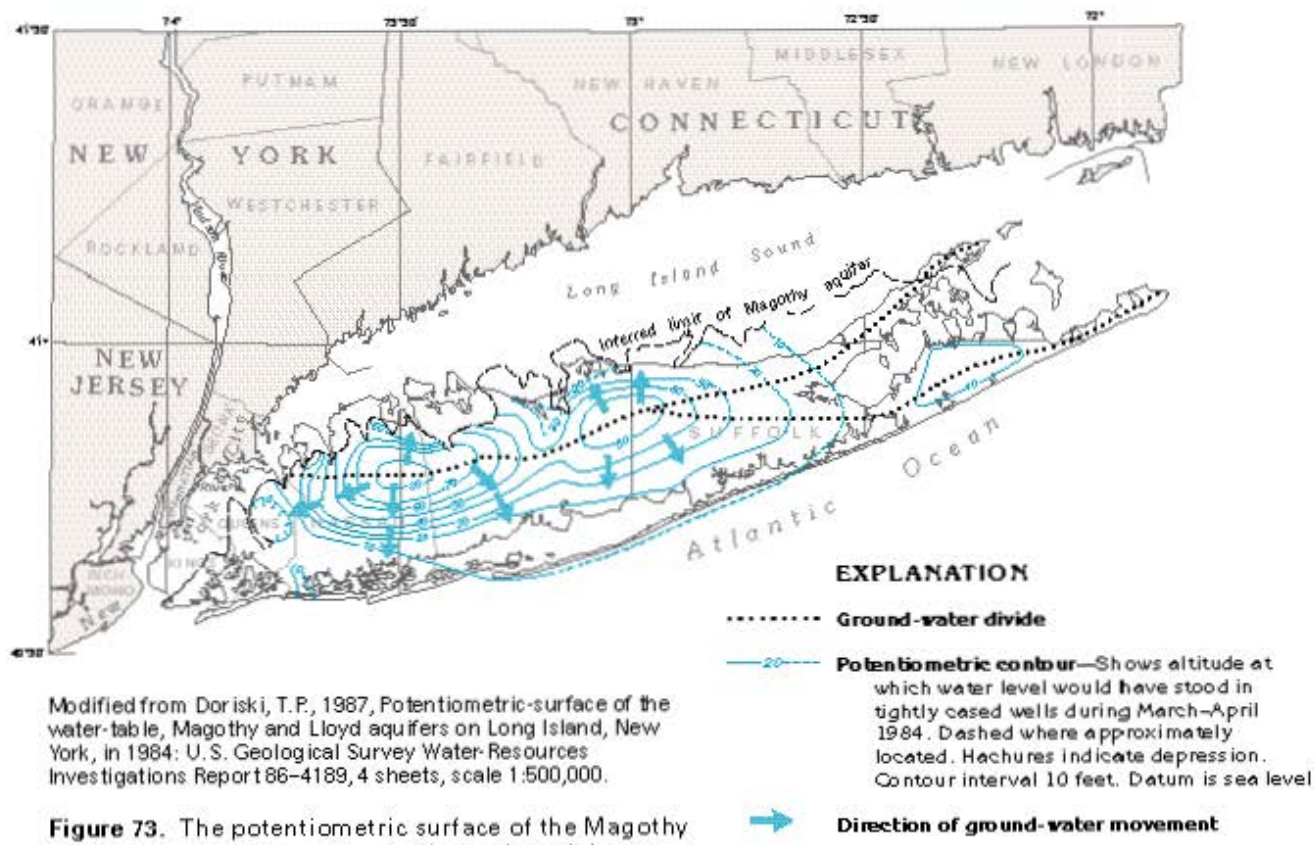
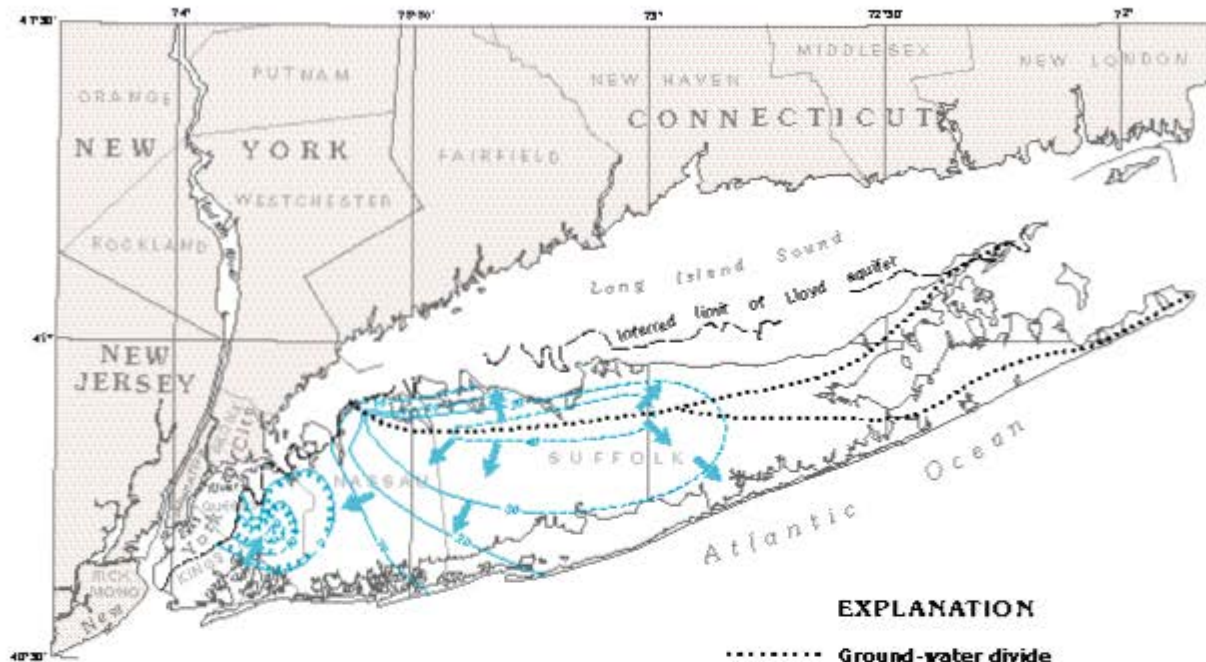


Figure 72. The potentiometric surface of the upper glacial aquifer slopes gently to the north and south from a central high, except in the western part of the island where ground-water withdrawals have lowered the water table and created cones of depression.



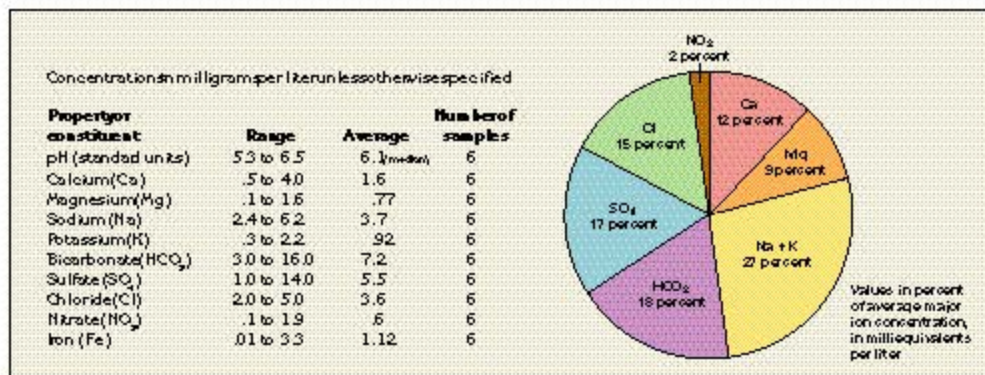
Modified from Doriski, T.P., 1987, Potentiometric-surface of the water-table, Magothy and Lloyd aquifers on Long Island, New York, in 1984: U.S. Geological Survey Water-Resources Investigations Report 86-4189, 4 sheets, scale 1:500,000.

Figure 73. The potentiometric surface of the Magothy aquifer has a configuration similar to that of the upper glacial aquifer, but the surface in the Magothy is more subdued and slightly lower in altitude.



Modified from Doriski, T.P., 1987, Potentiometric surface of the water-table, Magothy and Lloyd aquifers on Long Island, New York, in 1984; U.S. Geological Survey Water-Resources Investigations Report 86-4189, 4 sheets, scale 1:500,000.

Figure 74. The potentiometric surface of the Lloyd aquifer represents the pressure surface of a confined aquifer and generally is 20 to 50 feet lower than the potentiometric surfaces of the upper glacial and Magothy aquifers. Withdrawals from the Lloyd aquifer in Kings and Queens Counties have extensively lowered the potentiometric surface of the aquifer in the western part of the island.



Modified from Franke, O.L., and McClymonds, N.E., 1972, Summary of the hydrologic situation on Long Island, New York, as a guide to water-management alternatives: U.S. Geological Survey Professional Paper 627-F, 59 p.

Figure 82. Concentrations of all constituents in each of the aquifers on Long Island are minimal. Calcium, bicarbonate, chloride, and sulfate make up similar percentages of dissolved constituents, and sodium makes up a slightly higher percentage.

Table 10. The horizontal hydraulic conductivity of the Magothy and Lloyd aquifers is of similar magnitude, but that of the upper glacial aquifer is about six times greater. The hydraulic conductivity of the Gardiners and Raritan confining units is several orders of magnitude less than that of the aquifers

[Modified from Frank and Cohen, 1972; —, no data available]

Hydrogeologic unit	Approximate maximum thickness (feet)	Estimated average hydraulic conductivity (feet per day)	
		Horizontal	Vertical
Upper glacial aquifer	600	270	27
Gardiners confining unit	100	.01	.001
Magothy aquifer	1,000	50	1.4
Raritan confining unit	300	.01	.001
Lloyd aquifer	500	40	—

Appendix F:
EDR Report / Neighboring Property Summary (Separate Cover)

**Appendix G:
Soil Boring Logs**



Boring Log No.

B-1/GW-1

Location: Former bridge cleaners
39-26 30th Street, Long Island City, NY
 Contractor: ETB
 Licensed Driller:

Project No: 09514
 Date Started: 1/13/13
 Date Completed: 1/14/13
 Inspector: OK

Method: GP Spoon Size: 2 Inch

Depth to Water: 20' Boring Depth: 25'

Sample Number	Sample Depth (feet)	Blows	Sample Description	OVM Result (PPM)	Depth (feet)
			0-0.5 concrete		
			0.5-1.25 cinders w/ some gravel		
9:10	B-1A 4.5-5.0			0	5
			1.25-7.0 medium light brown sand		
9:18	B-1B 9.5-10.0			0	10
			7.0-17.0' Fine light brown sand		
9:25	B-1C 14.5-15.0			0	15
			17.0-20.0' Fine brown sand	1	17
				18	18
				28	19
9:34	B-1D 19.5-20.0			40	20
			20.0-25.0 medium brown sand	28	
				29	
					20
				2	25
			No odors		
					30
			GW @ 20.0'		
			well installed to depth of 30' BGS		
			15' screen on 1/4" / 1/4"		
			15' casing		
					20

well was installed as described in Section 3.5.2 of the RIWP dated September 2013 for the subject site.



Boring Log No.
B-2/GW-2

Location: **Former Bridge Cleaners**
39-26 30th Street, Long Island City, NY
Project No: **0951H**
Data Started: **1/13/14**
Contractor: **ETB**
Data Completed: **1/14/14**
Licensed Driller:
Inspector: **BH**

Method: **GP** Spoon Size: 2 Inch
Depth to Water: **20** Boring Depth: **25**

Sample Number	Sample Depth (feet)	Blows	Sample Description	DVM Result (PPM)	Depth (feet)
			0-0.5 Concrete	1	
				3.2	
12:33	B-2A 3.0-3.5		0.5-1.0 Gravel	4.0	
			1.0-1.5 Cinder + some gravel	1.8	2
				1.9	5
				0	
				0	
12:41	B-2B 8.0-8.5		1.5-2.0 Dark brown silty loam w/ some gravel	0	8
				0	10
				6.0	
				10	8
12:50	B-2C 13.0-13.5		2.0-4.0 Reddish brown silty sand	12.0	
13:04	B-2D 14.5-15.0		4.0-4.5 light brown fine sand	6.8	
				20.2	15
				14.0	8
				16	
				17	
				18	
13:01	B-2E 19.5-20.0		4.5-8.0' Brown Medium sand	22	20
				43	
				44	
				44	
			8.0-20.0' Light Brown Fine sand	47	
				31	25
			20.0-25.0 Gray fine silty sand		8
					30
					18
					12
					20'

GW @ 20
NO ODORS
Well installed to a depth of 30' on 1/14/14
15' screen
15' casing.

Well was installed as described in section 3.5.2 of the RIWP dated September 2013 for the subject site.

Soil Sampling

Date: 1/13/14

Job # 0951H

Client: Sustainable Development, Inc

Location: Former Bridge Cleaners
39-26 30th Street Long Island City, NY

Sample ID	Date	Time	PID	Sample Depth	Analyses
4 B-1A	1/13/14	9:10	0	4.5-5.0	TCL VOC
4 B-1B		9:18	0	9.5-10.0	TCL VOC
4 B-1C		9:25	0	14.5-15.0	TCL VOC
5 B-1d		9:34	40	19.5-20.0	TCL VOC PCBs TAL Metals TCL SVOC Pesticides
4 B-4A		11:32	5.1	3.0-3.5	TCL VOC
4 B-4B		11:37	1.0	8.0-8.5	TCL VOC
5 B-4C		11:44	24.0	13.5-14.0	TCL VOC PCB TAL Metals TCL SVOC Pesticides
4 B-4d		11:52	53	19.5-20.0	TCL VOC
4 B-2A		12:33	4	3.0-3.5	TCL VOC
4 B-2B		12:41	0	8.0-8.5	TCL VOC
4 B-2C		12:50	12	13.0-13.5	TCL VOC
1 B-2d		13:04	2.2	14.5-15.0	TCL SVOC Pesticides PCBs TAL Metals
4 B-2E		13:01	22.0	19.5-20.0	TCL VOC
4 B-5A		13:50	15	4.5-5.0	TCL VOC
1 B-5B		13:52	6.2	5.75-6.25	TCL SVOC Pesticides PCBs TAL Metals
4 B-5C		13:56	4.4	9.5-10.0	TCL VOC
4 B-5d		14:04	10	13.0-13.5	TCL VOC

Appendix H:
DUSR for Analytical Data

Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

SDI-Bridge, 39-26 30th Street, Long Island City, NY
Accutest Laboratories #JB57687
March 21, 2014
Sampling date: 1/13/14

Prepared by

Jodi Zimmerman, B.S.
Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

SDI-Bridge, 39-26 30th Street, Long Island City, NY
#JB57687

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for Sustainable Development, Inc. (SES), SDI-Bridge project in Long Island City, NY, Accutest Laboratories (Accutest), Project SDG ID#JB57687, reissue #2, submitted to Vali-Data of WNY, LLC on March 20, 2014. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocol and USEPA National Functional Guidelines. The laboratory performed the analyses using USEPA methods, 8260 (Volatile Organics), 8270 (Semi-Volatile Organics), 8081/8082 (Pesticides/Aroclors), 6010 (Inorganics) and 7471 (Mercury).

The original report was submitted on February 18, 2014.

The samples were received outside QC limits, low, at 0.0°C. No further action is required.

VOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Internal Standards.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met except data was not reported to 3 significant figures. This does not affect the usability of the data.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS did meet criteria except the area of Tert Butyl Alcohol-d₉ was outside QC limits, low in B-2E. Detected target analytes associated with Tert Butyl Alcohol-d₉ should be qualified as estimated, non-detects should be qualified as unusable.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

No field duplicate was acquired.

LABORATORY CONTROL SAMPLES

All criteria were met except the %Rec of Dichlorodifluoromethane was outside QC limits, high in VI7747-BS and VI7749-BS. Dichlorodifluoromethane was not detected in the samples, so no further action is required.

MS/MSD

No MS/MSD were performed on the samples in this sample delivery group.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met.

CONTINUING CALIBRATION

All criteria were met except the %D of 1,2-Dichloroethane was outside QC limits in continuing calibrations; I191763 and I191741. ASP allows for up to two target analytes to be outside QC limits without further action

GC/MS PERFORMANCE CHECK

All criteria were met.

SEMIVOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports

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#JB57687

- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

All criteria were met.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met except one TIC was detected in OP72071-MB1 and four TIC's were detected in OP72045-MB1.

FIELD DUPLICATE SAMPLE PRECISION

No field duplicate was acquired.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

No MS/MSD were performed on these samples.

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COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except quadratic regression was used for 2,4-Dinitrophenol in the initial calibration performed on instrument MP3 on 1/7/14, with acceptable results.

CONTINUING CALIBRATION

All criteria were met except the %D for d 2-Methylphenol in CC3465-50 was outside ASP QC limits. ASP allows for up to four target analytes to be outside QC limits without further action.

GC/MS PERFORMANCE CHECK

All criteria were met.

PESTICIDES/PCB

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Surrogate Spike Recoveries, Laboratory Control Samples and MS/MSD.

The results from the column with the lowest concentration were recorded.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec of all surrogates was outside ASP QC limits, low, in samples B-2D and B-3D off both columns in the pesticide and PCB analyses. Target analytes in these samples and analyses should be qualified as estimated.

The %Rec of DCBP off the first column was outside QC limits in sample B-5B in the pesticide analysis. Results from the conforming column should be used.

The %Rec of all surrogates was outside ASP QC limits, low, in B-1DMS and B-5BMDS off both columns in the PCB analysis. Target analytes in B-1DMS and B-5BMDS should be qualified as estimated.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

No field duplicate was acquired.

LABORATORY CONTROL SAMPLES

All criteria were met except the %Rec of Endrin Ketone in OP72052-BS1 was outside QC limits high. The %Rec of Endosulfan sulfate was outside ASP QC limits, high in OP72052-BS1. The %Rec of Aroclor 1016 was outside ASP QC limits, high, in OP72036-BS1. These target analytes should be qualified as estimated if they were detected in the associated samples.

The RPD between the first and second columns was outside QC limits for Aldrin in OP72052-BS1. If detected, this target analyte should be qualified as estimated in the associated samples.

MS/MSD

All criteria were met except the RPD of Aroclor 1016 and Aroclor 1260 was outside the QC limits between B-1DMS and B-1DMDS. The RPD of Aroclor 1016 and Aroclor 1260 was outside ASP QC limits between B-5BMS and B-5BMDS. If detected, Aroclor 1016 and Aroclor 1260 should be qualified as estimated in samples B-1D and B-5B.

The %Rec of Aroclor 1016 and Aroclor 1260 was outside QC limits, low, in B-1DMS and B-5BMDS. Since B-1DMDS and B-5BMS were compliant, no further action is required.

No MS/MSD was analyzed for Pesticides on samples in this sample delivery group.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except linear regression was used for 4,4'-DDT in the initial calibration performed on instrument GC4G on 12/27/13, with acceptable results.

CONTINUING CALIBRATION

All criteria were met except the %D of alpha-BHC and Heptachlor Epoxide off the second column in CC985-50 on 1/16/14 was outside QC limits. The %D of Heptachlor Epoxide, Dieldrin and 4,4'-DDD off

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#JB57687

the second column in CC985-25 on 1/17/14 was outside QC limits. The %D of alpha-BHC off the second column in CC985-50 on 1/17/14 was outside QC limits. The %D of Endosulfan sulfate off the first column in CC985-50 on 1/17/14 was outside QC limits. The %D of alpha-BHC off the second column in CC985-25 on 1/17/14 was outside QC limits. The %D of alpha-BHC, gamma-BHC and Endrin Ketone off the second column in CC985-50 on 1/20/14 was outside QC limits. The %D of TCMX off the first column in CC568-500 on 1/17/14 was outside QC limits. Results from the conforming column should be used. The %D of Aroclor 1016A and 1016B off the first column and DCBP and Aroclor 1260 off the second column were outside QC limits in cc4844-500 on 1/17/14. The %D of Aroclor 1260 and DCBP off the second column in cc4844-1000 on 1/17/14 and cc4844-500 on 1/18/14 was outside QC limits. Results from the conforming column should be used.

METALS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Blanks
- Laboratory Control Sample
- MS/MSD
- Duplicate
- Field Duplicate
- Serial Dilution
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Blanks.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met except data was not reported to 3 significant figures. This does not affect the usability of the data.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times were met.

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BLANKS

All criteria were met except TI was detected above the MDL, below the reporting limit in CCB7 run #MA33099. Associated samples in which this target analyte was detected above the MDL and below the reporting limit should be reported with the reporting limit and 'undetected'. Associated samples in which this target analyte was detected above the reporting limit should be qualified as estimated high.

LABORATORY CONTROL SAMPLE

All criteria were met.

MS/MSD

All criteria were met for the Hg analysis. No MS was performed on these samples for the 6010 analysis.

DUPLICATE

No duplicate was performed on these samples.

FIELD DUPLICATE

No field duplicate was acquired.

SERIAL DILUTION

No serial dilution was performed.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met.

GENERAL CHEMISTRY

The following items/criteria were reviewed for this analytical suite:

- Percent Solids

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

PERCENT SOLIDS

All criteria were met.

Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

SDI-Bridge, 39-26 30th Street, Long Island City, NY
Accutest Laboratories #JB59477
March 11, 2014
Sampling date: 2/8/14

Prepared by

Jodi Zimmerman, B.S.
Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

SDI-Bridge, 39-26 30th Street, Long Island City, NY
#JB59477

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for Sustainable Development, Inc. (SES), SDI-Bridge project in Long Island City, NY, Accutest Laboratories (Accutest), Project SDG ID#JB59477, submitted to Vali-Data of WNY, LLC on March 1, 2014. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocol and USEPA National Functional Guidelines. The laboratory performed the analyses using USEPA methods, 8260 (Volatile Organics), 8270 (Semi-Volatile Organics), 8081/8082 (Pesticides/Aroclors), 6010 (Inorganics) and 7470 (Mercury).

VOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Surrogate Spike Recoveries, MS/MSD and Continuing Calibration.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met except data was not reported to 3 significant figures. This does not affect the usability of the data.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS did meet criteria.

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec of Toluene-d₈ was outside ASP QC limits, low, in all samples, blanks and spikes. Associated target analytes should be qualified as estimated.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

No field duplicate was acquired.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met except the %Rec of Tetrachloroethene was outside QC limits, low, in MW-5MS/MSD. A rerun of MW-5MS/MSD resulted in acceptable results, so no further action is required. The RPD between MW-5MS and MW-5MSD of Chloromethane was outside QC limits. Chloromethane should be qualified as estimated in MW-5.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met.

CONTINUING CALIBRATION

All criteria were met except the %D of Cyclohexane was outside ASP outer QC limits in continuing calibrations; cc6839-20 and cc6839-50 run on 2/12/14. Cyclohexane should be qualified as estimated in associate samples, blanks and spikes.

GC/MS PERFORMANCE CHECK

All criteria were met.

SEMIVOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports

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#JB59477

- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in MS/MSD.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met except data was not reported to 3 significant figures. This does not affect the usability of the data.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

All criteria were met.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met except two TIC's were detected in OP72594-MB1.

FIELD DUPLICATE SAMPLE PRECISION

No field duplicate was acquired.

LABORATORY CONTROL SAMPLES

All criteria were met except the %Rec of 3-Chloroaniline was outside QC limits, low, in OP72594-BS1.

MS/MSD

All criteria were met except the % Rec of 3-Nitroaniline and 4-Chloroaniline was outside QC limits, low, in MW-5MS/MSD and should be qualified as estimated in MW-5.

The %Rec of 2,4-Dinitrotoluene was outside ASP QC limits, high, in MW-5MSD. No further action is needed due to compliance in MW-5MS.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except alternate forms of regression were used for target analytes in which the %RSD was >20%.

CONTINUING CALIBRATION

All criteria were met.

GC/MS PERFORMANCE CHECK

All criteria were met.

PESTICIDES/PCB

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Laboratory Control Samples. The results from the column with the lowest concentration were recorded.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met except data was not reported to 3 significant figures. This does not affect the usability of the data.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

No field duplicate was acquired.

LABORATORY CONTROL SAMPLES

All criteria were met except the %Rec of Endosulfan Sulfate in OP72600-BS1 was outside QC limits high. This target analyte should be qualified as estimated if detected in the associated samples. The RPD of Aldrin between the two columns in OP72600-BS1 was outside QC limits. There was no coelution of peaks, so the higher concentration should be recorded.

MS/MSD

All criteria were met except the %Rec of Aldrin and Endrin in MW-5MS was outside ASP QC limits, high. The %Rec of these target analytes was within limits in MW-5MSD, so no further action is required.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met.

CONTINUING CALIBRATION

All criteria were met.

METALS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Blanks
- Laboratory Control Sample
- MS/MSD
- Duplicate
- Field Duplicate
- Serial Dilution
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Blanks, Serial Dilution and Calibration.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met except data was not reported to 3 significant figures. This does not affect the usability of the data.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times were met.

BLANKS

All criteria were met except Co was detected above the MDL, below the reporting limit in CCB6 in run #MA33266.

Sb was detected above the MDL, below the reporting limits in CCB4 in run #MA33266.

Mn was detected above the MDL, below the reporting limits in CCB6 in run #MA33266.

Pb was detected above the MDL, below the reporting limits in CCB4 and CCB5 in run #MA33272.

Associated samples in which these target analytes were detected above the MDL and below the reporting limit should be reported with the reporting limit and 'undetected'. Associated samples in which these target analytes were detected above the reporting limit should be qualified as estimated high.

LABORATORY CONTROL SAMPLE

All criteria were met.

MS/MSD

All criteria were met.

DUPLICATE

No duplicate was performed on these samples.

FIELD DUPLICATE

No field duplicate was acquired.

SERIAL DILUTION

All criteria were met except the %D of Al and Fe were outside QC limits. These target analytes should be qualified as estimated in MW-5.

COMPOUND QUANTITATION

All criteria were met except the data was not reported down to the MDL. Updated pages are attached.

CALIBRATION

All criteria were met except the %Rec of Ca was outside QC limits, low in CCV2 in run #MA33272. The %Rec of Mg was outside QC limits, low in CCV2 in run #MA33272. The %Rec of K, Al and Na was outside QC limits, low in CCV3-5 in run #MA33272. These target analytes should be qualified as estimated in associated blanks, spikes and samples.

The %Rec of Ca was outside QC limits, high in CCV3-5 in run #MA33272. If Ca is detected above the MDL in the associated blanks, spikes and samples, it should be qualified as estimated high.

Appendix I:
Well Development Logs

Well Development Purge Data

Date: 1/15/14 Project #: 0951H
 Site: SOI - Bridge
 Address: Long Island City
 Monitoring Well ID: GW-1 Well Depth: 29.60
 Initial DTW: 20.77 Initial DTP: ND
 Start: 8:37 End: 9:25

TIME	Temperature °C	pH	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
8:40	15.57	8.94	0.709	0.0	
8:50	16.35	8.63	1.00	0.4	
9:00	16.47	8.31	1.12	612	
9:05	16.83	8.16	1.24	570	
9:10	17.03	7.99	1.28	609	
9:15	17.11	7.71	1.36	356	
9:20	17.10	7.74	1.37	370	
9:25	17.12	7.70	1.34	446	

NOTES:

Well Development Purge Data

Date: 1/15/14 PSE Project #: 09514
 Site: SOI-Bridge
 Address: Long Island City
 Monitoring Well ID: GW-2 Well Depth: 29.45
 Initial DTW: 20.67 Initial DTP: ND
 Start: 10:35 End: 11:05

TIME	Temperature °C	pH	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
10:40	17.64	7.22	1.60	0.0	
10:48	17.98	7.07	1.75	0.0	
10:55	17.83	7.01	1.82	719	
11:00	17.79	6.96	1.86	353	
11:05	17.80	6.97	1.87	414	

NOTES:

Well Development Purge Data

Date: 1/15/14 Project #: 09514
 Site: SDI - Bridge
 Address: Long Island City
 Monitoring Well ID: GW-3 Well Depth: 29.44
 Initial DTW: 20.65 Initial DTP: ND
 Start: 9:00 End: 9:50

TIME	Temperature °C	pH	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
9:05	17.18	7.72	1.95	0.0	
9:15	17.31	7.32	2.19	0.0	
9:25	17.32	7.28	2.30	502	
9:30	17.31	7.31	2.31	492	
9:35	17.30	7.35	2.33	480	
9:40	17.32	7.37	2.33	358	
9:45	17.28	7.34	2.30	437	

NOTES:

Well Development Purge Data

Date: 1/15/14 Project #: 0951H
 Site: SDI - Bridge
 Address: Long Island City
 Monitoring Well ID: GW-4 Well Depth: 29.28'
 Initial DTW: 20.71 Initial DTP: ND
 Start: 9:30 End: 10:30

TIME	Temperature °C	pH	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
9:35	17.27	8.34	1.30	0.0	
9:45	17.30	7.39	1.70	0.0	
9:55	17.40	7.30	1.69	674	
10:05	17.41	7.29	1.73	716	
10:15	17.43	7.26	1.78	792	
10:20	17.51	7.13	1.70	802	
10:25	17.62	7.13	1.67	870	
10:30	17.64	7.14	1.65	845	

NOTES:

Well Development Purge Data

Date: 1/15/14 Project #: 095114
 Site: SOI - Bridge
 Address: Long Island City
 Monitoring Well ID: GW-5 Well Depth: 29.42
 Initial DTW: 20.68 Initial DTP: ND
 Start: 10:00 End: 10:50

TIME	Temperature °C	pH	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
10:05	17.40	7.32	1.70	0.0	
10:15	17.46	7.19	1.77	0.0	
10:25	17.53	7.06	1.85	252	
10:35	17.77	7.08	1.90	156	
10:45	17.82	7.12	1.88	403	
10:50	17.80	7.11	1.90	322	

NOTES:

Appendix J:
Groundwater Sampling Logs

2235 Route 130, Dayton, NJ 08810
 TEL. 732-329-0200 FAX: 732-329-3499/3480
 www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job #

Client / Reporting Information	Project Information	Requested Analysis (see TEST CODE sheet)	Matrix Codes
--------------------------------	---------------------	---	--------------

Company Name Sustainable Development, Inc.		Project Name: SDI - Bridge	
Street Address 166 Woodside Avenue		Street 39-26 30th Street	
City State Zip West Harrison, NY 10604	City State Long Island City, NY	Billing Information (if different from Report to) Company Name Same	
Project Contact Al Nesheiwat	E-mail	Street Address	
Phone # 914-220-2404	Fax # 671-4004	Client Purchase Order # BC-001	City State Zip
Sampler(s) Name(s) Bill Keaton	Phone # 862-260-5110	Project Manager Al Nesheiwat	Attention:

<i>Pesticides + PCBs</i>	<i>THAL metals</i>	<i>TCL SVOC</i>	<i>TCL VOC</i>	<i>MS/MSD on MW-5</i>
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- Matrix Codes**
- DW - Drinking Water
 - GW - Ground Water
 - WW - Water
 - SW - Surface Water
 - SO - Soil
 - SL - Sludge
 - SED - Sediment
 - OI - Oil
 - LIQ - Other Liquid
 - AIR - Air
 - SOL - Other Solid
 - WP - Wipe
 - FB - Field Blank
 - EB - Equipment Blank
 - RB - Rinse Blank
 - TB - Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection				Number of preserved Bottles																	
			Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE									
	MW-5		2/8/14	10:25	BA	GW	16	3	2	8														
	MW-50			10:30			8	3	1	4														
	GW-3			12:15			8	3	1	4														
	GW-4			13:45			6	3	1	2														
	GW-1			15:05			6	3	1	2														
	GW-2			16:15			8	3	1	4														
	Trip			16:15			2	2																

LAB USE ONLY

Turnaround Time (Business days)	Data Deliverable Information	Comments / Special Instructions
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<input checked="checked" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY <input type="checkbox"/> other	Approved By (Accutest PM): / Date: _____ _____ _____ _____	<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> NYASP Category A <input type="checkbox"/> Commercial "B" (Level 2) <input checked="checked" type="checkbox"/> NYASP Category B <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> State Forms <input type="checkbox"/> NJ Reduced <input type="checkbox"/> EDD Format <input type="checkbox"/> Commercial "C" <input type="checkbox"/> Other _____ Commercial "A" = Results Only Commercial "B" = Results + QC Summary NJ Reduced = Results + QC Summary + Partial Raw data
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Sample Custody must be documented below each time samples change possession, including courier delivery.

1 Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
<i>Bill Keaton</i>	2/10/14 17:05	<i>[Signature]</i>	2		2
3 Relinquished by Sampler:	Date Time:	Received By:	4 Relinquished By:	Date Time:	Received By:
3		3	4		4
5 Relinquished by:	Date Time:	Received By:	Custody Seal #		
5		5	490,488,486		

<input type="checkbox"/> Intact	<input type="checkbox"/> Preserved where applicable	<input type="checkbox"/> On Ice	<input type="checkbox"/> Cooler Temp.
<input type="checkbox"/> Not intact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

LOW FLOW SAMPLING SHEET

Site: SDI - Bridge	
Location: Long Island City	Meter Type : Horiba U52
Project # : BC - 001	Serial #:
Monitoring Well ID: GW-1	Sampling Date and Time: 2/8/14 15:05
Depth TO Water Pre-Purge: 20.68	Sampler: Bill Krafton
Start Time: 14:05	Sampling Devices: SS Proactive Pump, Tubing
Purge Device: SS Proactive Typhoon Pump, Tubing	Sample Characteristics: clear
Pump Intake (FT B TOC): 25.0	Analytical Parameters: TAL Metals, TCL SVOCs, TCL VOCs
Well Depth: 29.03 Well Diameter: 2"	

Weather Conditions: Sunny, 30's

Time	Temp ©	pH	Specific Conductance [S/cm]	Turbidity	Dissolved Oxygen	Redox	DTW	Volume Purged (Gallon)	Purge Rate (ml/min)	Notes
8:52							20.68			
14:05										Start Purge
14:15	17.4	7.64	1.18	882	1.61	144	20.92		500	
14:25	17.9	7.78	1.22	652	0.93	136	20.92		500	
14:35	17.9	7.88	1.26	278	0.97	132	20.92		500	
14:40	17.9	7.86	1.26	169	0.99	126	20.92		500	
14:45	17.8	7.88	1.26	103	1.03	131	20.92		500	
14:50	17.8	7.89	1.27	98	1.3	132	20.92		500	
14:55	17.8	7.89	1.27	94	1.19	133	20.92		500	
15:00	17.8	7.88	1.28	83	1.14	134	20.92		500	
15:05	17.8	7.87	1.28	76	1.14	135	20.92	8.0	500	
										No Odors
										No Sheen

LOW FLOW SAMPLING SHEET

Site: SDI - Bridge										
Location: Long Island City						Meter Type : Horiba U52				
Project # : BC - 001						Serial #:				
Monitoring Well ID: GW-2						Sampling Date and Time: 2/8/14 16:15				
Depth TO Water Pre-Purge: 20.66						Sampler: Bill Krafton				
Start Time: 15:25						Sampling Devices: SS Proactive Pump, Tubing				
Purge Device: SS Proactive Typhoon Pump, Tubing						Sample Characteristics: clear				
Pump Intake (FT B TOC): 24.5						Analytical Parameters: Pesticides, PCBs, TAL Metals, TCL SVOCs TCL VOCs				
Well Depth: 28.56			Well Diameter: 2"							
Weather Conditions: Sunny, 30's										
Time	Temp ©	pH	Specific Conductance [S/cm]	Turbidity	Dissolved Oxygen	Redox	DTW	Volume Purged (Gallon)	Purge Rate (ml/min)	Notes
8:48							20.68			
15:25										Start Purge
15:35	17.7	6.86	1.77	>500	2.94	104	20.93		500	
15:45	17.8	6.81	1.76	291	1.53	54	20.94		500	
15:55	17.8	6.82	1.76	178	1.44	47	20.94		500	
16:00	17.8	6.82	1.76	73	1.46	46	20.94		500	
16:05	17.8	6.82	1.75	48	1.45	46	20.94		500	
16:10	17.7	6.82	1.75	68	1.47	47	20.94		500	
16:15	17.7	6.82	1.75	92	1.49	47	20.94	6.6	500	
										No odors
										No sheen

LOW FLOW SAMPLING SHEET

Site: SDI - Bridge		Meter Type : Horiba U52	
Location: Long Island City		Serial #:	
Project # : BC - 001		Sampling Date and Time: 2/8/14 12:15	
Monitoring Well ID: GW-3		Sampler: Bill Krafton	
Depth TO Water Pre-Purge: 20.60		Sampling Devices: SS Proactive Pump, Tubing	
Start Time: 11:20		Sample Characteristics: clear	
Purge Device: SS Proactive Typhoon Pump, Tubing		Analytical Parameters: Pesticides, PCBs, TAL Metals, TCL SVOCs TCL VOCs	
Pump Intake (FT B TOC): 25.0			
Well Depth: 29.43	Well Diameter: 2"		

Weather Conditions: Sunny, 30's

Time	Temp ©	pH	Specific Conductance [S/cm]	Turbidity	Dissolved Oxygen	Redox	DTW	Volume Purged (Gallon)	Purge Rate (ml/min)	Notes
8:56							20.6			
11:20										Start Purge
11:30	17.6	6.89	2.22	>500	1.8	168	20.64		500	
11:40	17.7	6.87	2.21	>500	2.06	161	20.64		500	
11:50	17.6	6.84	2.24	>500	9.52	161	20.64		500	
11:55	17.8	6.83	2.22	910	7.99	162	20.64		500	
12:00	17.8	6.83	2.23	680	4.84	161	20.63		500	
12:05	17.8	6.83	2.24	430	2.77	160	20.63		500	
12:10	17.8	6.82	2.22	494	2.86	162	20.63		500	
12:15	17.8	6.82	2.23	470	2.82	161	20.63	7.3	500	
										No odors
										No sheen

LOW FLOW SAMPLING SHEET

Site: SDI - Bridge		Meter Type : Horiba U52								
Location: Long Island City		Serial #:								
Project # : BC - 001		Sampling Date and Time: 2/8/14 13:45								
Monitoring Well ID: GW-4		Sampler: Bill Krafton								
Depth TO Water Pre-Purge: 20.70		Sampling Devices: SS Proactive Pump, Tubing								
Start Time: 13:00		Sample Characteristics: clear								
Purge Device: SS Proactive Typhoon Pump, Tubing		Analytical Parameters: TAL Metals, TCL SVOCs, TCL VOCs								
Pump Intake (FT B TOC): 24.0										
Well Depth: 27.22	Well Diameter: 2"									
Weather Conditions: Sunny, 30's										
Time	Temp ©	pH	Specific Conductance [S/cm]	Turbidity	Dissolved Oxygen	Redox	DTW	Volume Purged (Gallon)	Purge Rate (ml/min)	Notes
8:45							20.70			
13:00										Start Purge
13:05	17.5	7.16	1.52	>500	1.00	159	20.80		500	
13:15	17.8	7.28	1.51	>500	0.95	150	20.80		500	
13:25	17.9	7.29	1.51	782	1.24	149	20.80		500	
13:30	18.0	7.28	1.51	549	0.95	148	20.80		500	
3:35	18.0	7.26	1.51	402	0.94	147	20.80		500	
13:40	18.1	7.24	1.51	321	0.92	146	20.80		500	
13:45	18.1	7.25	1.51	302	0.91	145	20.80	5.9	500	
										No odors
										No sheen

LOW FLOW SAMPLING SHEET

Site: SDI - Bridge		Meter Type : Horiba U52								
Location: Long Island City		Serial #:								
Project # : BC - 001		Sampling Date and Time: 2/8/14 10:25								
Monitoring Well ID: GW-5		Sampler: Bill Krafton								
Depth TO Water Pre-Purge: 20.65		Sampling Devices: SS Proactive Pump, Tubing								
Start Time: 9:15		Sample Characteristics: clear								
Purge Device: SS Proactive Typhoon Pump, Tubing		Analytical Parameters: Pesticides, PCBS, TAL Metals, TCL SVOCs TCL VOCs								
Pump Intake (FT B TOC): 25.0										
Well Depth: 29.00	Well Diameter: 2"									
Weather Conditions: Sunny, 30's										
Time	Temp @	pH	Specific Conductance [S/cm]	Turbidity	Dissolved Oxygen	Redox	DTW	Volume Purged (Gallon)	Purge Rate (ml/min)	Notes
8:42							20.70			
9:15										Start Purge
9:25	17.5	6.92	1.61	149	1.72	145	20.90		500	
9:35	17.0	6.95	1.60	42	1.21	134	20.96		500	
9:45	16.8	6.98	1.62	16	0.95	125	20.97		500	
9:55	17.2	6.97	1.62	12	0.85	125	20.97		500	
10:00	17.3	6.97	1.63	13	0.84	125	20.97		500	
10:05	17.3	6.98	1.64	15	0.86	125	20.97		500	
10:10	17.4	6.97	1.64	8	0.87	122	20.97		500	
10:15	17.4	6.97	1.64	3	0.87	121	20.97		500	
10:20	17.4	6.97	1.64	5	0.88	120	20.97		500	
10:25	17.4	6.96	1.64	7	0.88	120	20.97	9.2	500	
										No odors
										No sheen
										*GW-50 is duplicate for GW-5.

Appendix K:
IAQ and Sub-Slab Vapor Sampling Logs



CHAIN OF CUSTODY

Air Sampling Field Data Sheet

FED-EX Tracking #	Bottle Order Control # HM-01/29/2014-03
Lab Quote #	Lab Job #

Client / Reporting Information				Weather Parameters				Requested Analysis	
Company Name Sustainable Development Inc.				Project Name: Former Bridge Cleaners Indoor Air				Temperature (Fahrenheit)	
Address Suite 2A 166 Woodside Ave				Street 39-26 30th Street				Start: 21.0 degree f Maximum: 28.9 degree f	
City West Harrison,		State Zip N.Y. 10604		City Long Island City,		State N.Y.		Stop: 28.0 degree f Minimum: 21.0 degree f	
Project Contact Mr. Al M. Nesheiwat				Project #				Atmospheric Pressure (Inches of Hg)	
E-mail alnesheiwat@aol.com		Client Purchase Order #		Start: 30.34 in Maximum: 30.34 in				Stop: 30.19 in Minimum: 30.19 in	
Phone # (914) 220-2404		Fax # (914) 671-4004		Other weather comment:					

Lab Sample #	Field ID / Point of Collection	Air Type				Sampling Equipment Info					Start Sampling Information					Stop Sampling Information				
		Indoor(I) Soil Vap(SV) Ambient(A)	Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.					
	IAQ- 1	I.	A208	6l	FC-230	2/8/14	9:20	32.0	50.5	HM	2/8/2014	17:20	7.0	58.0	HM	X				
	IAQ- 2	I.	A668	6l	FC-462	2/8/14	9:28	32.0	49.5	HM	2/8/2014	10:50	2.0	54.5	HM	X				
	IAQ- 2B	I.	A1160	6l	FC-626	2/8/14	10:45	29.0	55.0	HM	2/8/2014	17:35	9.0	59.0	HM	X				
	IAQ- 3	I.	A280	6l	FC-347	2/8/14	9:23	32.0	54.0	HM	2/8/2014	17:23	6.0	61.5	HM	X				
	IAQ- 4	I.	A203	6l	FC-280	2/8/14	9:25	32.0	49.5	HM	2/8/2014	17:25	2.0	57.0	HM	X				
	Ambient Air	A	A1071	6l	FC-605	2/8/14	9:32	32.0	15.0	HM	2/8/2014	17:32	5.0	21.5	HM	X				

Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks			
Standard - 15 Days		Approved By: _____		All NJDEP TO-15 is mandatory Full T1							
10 Day	X	Date: _____		Comm A		ASP Cat 'B'					
5 Day				Comm B							
3 Day				Reduced T2							
2 Day				Full T1							
1 Day				Other:	X						
Other		24 hrs									

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Laboratory: 1 Ray Maronians	Date Time: 2/6/2014 11:30	Received By: [Signature]	Relinquished By: [Signature]	Date Time: 02/08/14 20:00	Received By: [Signature]
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #		

VTO15STD SIM



CHAIN OF CUSTODY

Air Sampling Field Data Sheet

FED-EX Tracking #	Bottle Order Control # HM-01/29/2014-03
Lab Quote #	Lab Job #

Client / Reporting Information						Weather Parameters					Requested Analysis														
Company Name Sustainable Development Inc.			Project Name: Former Bridge Cleaners Sub Slab Air			Temperature (Fahrenheit)					VTO15STD SIM														
Address Suite 2A 166 Woodside Ave			Street 39-26 30th Street			Start: 21.0 degree f Maximum: 28.9 degree f																			
City West Harrison, N.Y. 10604			City Long Island City, N.Y.			Stop: 28.0 degree f Minimum: 21.0 degree f																			
Project Contact Mr. Al M. Nesheiwat			Project #			Atmospheric Pressure (Inches of Hg)																			
Phone # (914) 220-2404			Client Purchase Order #			Start: 30.34 in Maximum: 30.34 in																			
Fax # (914) 671-4004						Stop: 30.19 in Minimum: 30.19 in																			
Sampler(s) Name(s)						Other weather comment:																			
Lab Sample #	Field ID / Point of Collection	Air Type	Sampling Equipment Info			Start Sampling Information					Stop Sampling Information														
		Indoor(I) Soil Vap(SV) Ambient(A)	Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.										
	SS- 1	SV	A223	6l	FC-231	2/8/14	12:12	30.0	52.2	HM	2/8/2014	17:40	52.0	12.0	HM	X									
	SS- 2	SV	A-668	6l	FC-462	2/8/14	12:22	28.0	47.5	HM	2/8/2014	17:50	52.5	8.0	HM	X									
	SS- 3	SV	A308	6l	FC-396	2/8/14	12:14	30.0	54.7	HM	2/8/2014	17:42	24.5	14.0	HM	X									
	SS- 4	SV	A278	6l	FC-289	2/8/14	12:16	27.0	54.3	HM	2/8/2014	17:44	55.0	13.0	HM	X									
	SS- 5	SV	A-773	6l	FC-513	2/8/14	12:24	33.0	45.3	HM	2/8/2014	17:52	50.5	18.0	HM	X									
	SS- 6	SV	A756	6l	FC-478	2/8/14	12:18	32.0	50.7	HM	2/8/2014	17:46	15.0	54.5	HM	X									
	SS- 7	SV	A-998	6l	FC-586	2/8/14	12:20	32.0	47.8	HM	2/8/2014	17:48	13.0	51.5	HM	X									
Turnaround Time (Business days)						Data Deliverable Information					Comments / Remarks														
Standard - 15 Days				Approved By: _____		All NJDEP TO-15 is mandatory Full T1																			
10 Day		X		Date: _____																					
5 Day																									
3 Day																									
2 Day																									
1 Day						Comm A				Comm B				Reduced T2				Full T1				Other: X		ASP Cat 'B'	
Other		24 hrs																							
Sample Custody must be documented below each time samples change possession, including courier delivery.																									
Relinquished by Laboratory: 1 <i>Ray Maroniano</i>		Date Time: 2/6/2014 11:30		Received By: 1 <i>[Signature]</i>		Relinquished By: 2 <i>[Signature]</i>		Date Time: 02/08/14 10:00		Received By: 2															
Relinquished by: 3		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:															
Relinquished by: 5		Date Time:		Received By:		Custody Seal #																			

Weather History for Central Park, NY

Saturday, February 8, 2014

Saturday, February 8, 2014

« Previous Day

February 8 2014 View

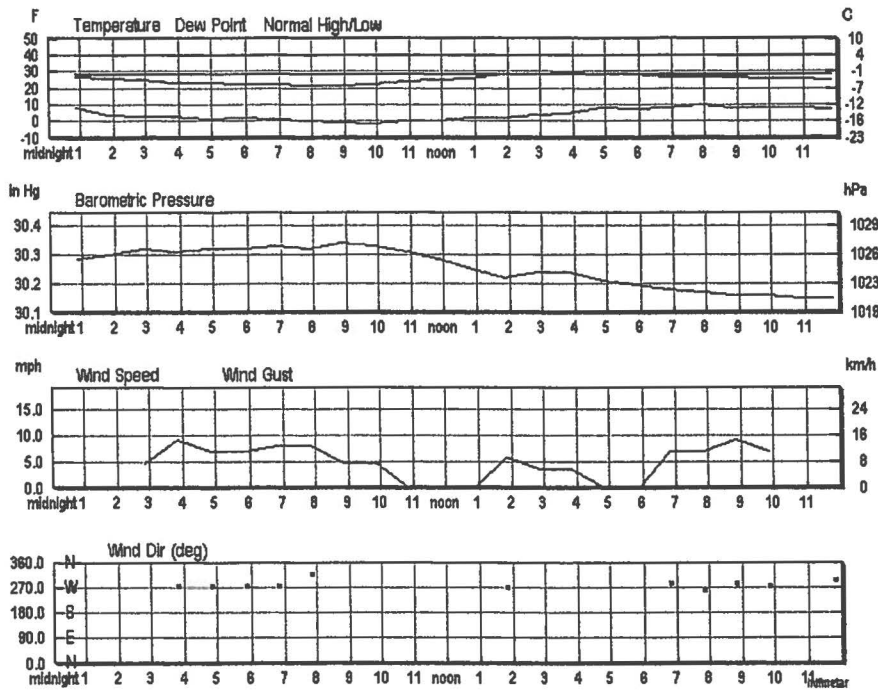
Next Day »

Daily Weekly Monthly Custom

	Actual	Average	Record
Temperature			
Mean Temperature	25 °F	34 °F	
Max Temperature	29 °F	40 °F	61 °F (1965)
Min Temperature	21 °F	28 °F	-7 °F (1934)
Degree Days			
Heating Degree Days	40	31	
Month to date heating degree days	255	251	
Since 1 July heating degree days	2998	2940	
Cooling Degree Days	0	0	
Month to date cooling degree days	0	0	
Year to date cooling degree days	0	0	
Moisture			
Dew Point	4 °F		
Average Humidity	41		
Maximum Humidity	50		
Minimum Humidity	31		
Precipitation			
Precipitation	0.00 in	0.11 in	1.15 in(2013)
Month to date precipitation	2.60	0.87	
Year to date precipitation	5.39	4.52	
Snow			
Snow	0.00 in	0.30 in	8.00 in (1870)
Month to date snowfall	12.0	2.6	
Since 1 July snowfall	40.3	14.7	
Snow Depth	9.00 in		
Sea Level Pressure			
Sea Level Pressure	30.26 in		
Wind			
Wind Speed	6 mph (WNW)		
Max Wind Speed	12 mph		
Max Gust Speed	17 mph		
Visibility	10 miles		
Events			

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary



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Hourly Weather History & Observations

Time (EST)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:51 AM	27.0 °F	19.5 °F	8.1 °F	45%	30.28 in	10.0 mi	West	6.9 mph	-	N/A		Clear
1:51 AM	26.1 °F	-	3.9 °F	39%	30.30 in	10.0 mi	North	-	-	N/A		Clear
2:51 AM	25.0 °F	19.3 °F	3.0 °F	39%	30.32 in	10.0 mi	Variable	4.6 mph	-	N/A		Clear
3:51 AM	23.0 °F	13.1 °F	3.0 °F	42%	30.31 in	10.0 mi	West	9.2 mph	-	N/A		Clear
4:51 AM	23.0 °F	14.7 °F	1.0 °F	39%	30.32 in	10.0 mi	West	8.9 mph	-	N/A		Clear
5:51 AM	21.9 °F	13.4 °F	1.9 °F	42%	30.32 in	10.0 mi	West	6.9 mph	-	N/A		Clear
6:51 AM	21.9 °F	12.5 °F	1.0 °F	40%	30.33 in	10.0 mi	West	8.1 mph	-	N/A		Clear
7:51 AM	21.0 °F	11.4 °F	-0.0 °F	40%	30.32 in	10.0 mi	NW	8.1 mph	-	N/A		Clear
8:51 AM	21.0 °F	14.6 °F	-0.9 °F	38%	30.34 in	10.0 mi	Variable	4.8 mph	-	N/A		Clear
9:51 AM	21.9 °F	16.7 °F	-2.0 °F	35%	30.33 in	10.0 mi	Variable	4.6 mph	-	N/A		Clear
10:51 AM	24.1 °F	-	-0.0 °F	35%	30.31 in	10.0 mi	Calm	Calm	-	N/A		Clear
11:51 AM	25.0 °F	-	-0.0 °F	34%	30.28 in	10.0 mi	Calm	Calm	-	N/A		Clear
12:51 PM	28.1 °F	-	1.9 °F	35%	30.25 in	10.0 mi	Calm	Calm	-	N/A		Overcast
1:51 PM	28.0 °F	21.7 °F	1.9 °F	33%	30.22 in	10.0 mi	West	5.8 mph	-	N/A		Partly Cloudy
2:51 PM	28.0 °F	24.2 °F	3.9 °F	36%	30.24 in	10.0 mi	Variable	3.5 mph	-	N/A		Overcast
3:51 PM	28.9 °F	26.2 °F	5.0 °F	36%	30.24 in	10.0 mi	Variable	3.5 mph	-	N/A		Overcast

Show full METARS | METAR FAQ | Comma Delimited File

Time (EST)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
4:51 PM	28.0 °F	-	8.1 °F	43%	30.21 in	10.0 mi	Calm	Calm	-	N/A		Mostly Cloudy
5:51 PM	28.0 °F	-	7.0 °F	41%	30.19 in	10.0 mi	Calm	Calm	-	N/A		Overcast
8:51 PM	27.0 °F	19.5 °F	8.1 °F	45%	30.18 in	10.0 mi	WNW	8.9 mph	-	N/A		Clear
7:51 PM	27.0 °F	19.5 °F	10.0 °F	49%	30.17 in	10.0 mi	West	8.9 mph	-	N/A		Overcast
8:51 PM	27.0 °F	18.0 °F	8.1 °F	45%	30.18 in	10.0 mi	WNW	9.2 mph	-	N/A		Partly Cloudy
9:51 PM	26.1 °F	18.4 °F	8.1 °F	47%	30.16 in	10.0 mi	West	8.9 mph	-	N/A		Partly Cloudy
10:51 PM	26.1 °F	-	8.1 °F	47%	30.16 in	10.0 mi	North	-	-	N/A		Clear
11:51 PM	25.0 °F	17.1 °F	7.0 °F	46%	30.15 in	10.0 mi	WNW	6.9 mph	-	N/A		Partly Cloudy

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INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, Inc.

92 North Main St, Building 20
Windsor, NJ 08561
Toll-free: (800) 301-9663

Pine Environmental Services, Inc.

Instrument ID 11814
Description Dielectric MGD-2002
Calibrated 2/7/2014 12:15:01PM

Manufacturer Dielectric	State Certified
Model Number MGD-2002	Status Pass
Serial Number/ Lot Number 41110	Temp °C 22.2
Location New Jersey	Humidity % 21
Department	

Calibration Specifications

Group # 1
Group Name Helium Test
Test Performed: Yes **As Found Result: Pass** **As Left Result: Pass**

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

<u>Test Standard ID</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Model Number</u>	<u>Serial Number / Lot Number</u>	<u>Last Cal Date / Opened Date</u>	<u>Next Cal Date / Expiration Date</u>
NJ HELIUM - 0605FD13	UHP Helium	Spec Air	Helium	0605FD13		7/1/2017

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Daniel Teller

All instruments are calibrated by Pine Environmental Services, Inc. according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services, Inc. of any defect within 24 hours of receipt of equipment
Please call 866-960-7463 for Technical Assistance



ACCUTEST

- FIELD OPERATIONS TIME SHEET -

CLIENT: Sustainable Environmental

JOB: Former Bridge Cleaners

JOB #: _____ **DEPT #:** _____ **H:** 02-04

JOB LOCATION: Long Island City, N.Y.

PURPOSE OF JOB: Indoor, Air, Subslab Air, and Groundwater Sampling

DATE: 2/8/2014

TIME TO JOB: 75 min _____ min _____

TIME FROM JOB: 100 min _____ min _____

TIME ON LOCATION: 615 min _____ min _____

TIME IN OFFICE: 40 min _____ min _____

SUBTOTAL: 830 min _____ min 0 min

MEN ON SITE (X) 1 (X) (X)

SUBTOTAL: 830 min _____ min 0 min

TOTAL: 830 min = 13.8333 hrs

1) TIME BILLED: 12.5 man hrs @ \$70 per hr \$ 875.00

2) MATERIALS USED:

1) Vehicle Mileage	[53]	<u>106</u>	@ 0.60/mi	=	<u>63.60</u>
2) Helium Detector		<u>1</u>	@ 105/ea		<u>105.00</u>
3) Helium Gas		<u>3</u>	@ 78/ea		<u>234.00</u>
4) Bees Wax		<u>3</u>	@ 22/ea		<u>66.00</u>
d) Teflon tubing		<u>150</u>	@ 2.40/ft	=	<u>360.00</u>
Total Materials				=	\$ <u>828.60</u>

3) ADDITIONAL CHARGES:

4) TOTAL FIELD CHARGES: = \$ 1703.60

TECHNICIANS: H.M.

COMS: MEN *Original Quote was for \$1306.10. Scope of work changed requiring Additional Materials, and sampling points.*

Field Notes

Sustainable Environmental

Former Bridge Cleaners

2/8/2014

- Arrive on site at 06:34 app 1 hr early
- Building Not accessible at 08:10 Building was a large warehouse type area presently being used as a textile (cloth material) cutting business. While sampling some carpentry work (installing large shelving units) was being done on the north wall of the building
- After bringing all equipment and supplies into the building I assist in setting up ground water sampling equipment.
- All Summa canisters and Flow controllers were removed from boxes and prepped for deployment.
- Install and imitate indoor air units between 09:20 and 09:30
Ambient air sample set up at 09:32 between the sidewalk and curb. Snow piles covering area.
- Prepare sub slab sampling points for Tracer Gas monitoring
Installed 14"x20" containment bonnets centered over SS sampling points. Sealed bonnets to the floor using molten Bees Was. Helium was used as tracer gas. Both the atmosphere inside the bonnet, and in the sampling line were measured for Helium concentrations using a Dielectric Model MGD-2002 Helium detector (rented, and calibrated by Pine Environmental).
- Concentrations of Helium were checked on all sampling points prior to installing Summa Canisters inline, and starting sampling.
- Sub Slab Samplers were imitated between 12:10 and 12:30

Problems

- It was observed that the Summa set up on Indoor Air **IAQ-2** was running low on pressure. In only 70 minutes of run time. Fearing that it was actually low on pressure (not just a pressure gauge malfunction) a extra sampling set up was installed and started at 10:45. This second sample is referred to as **IAQ-2B**. The original sample IAQ-2 was ended at

10:50

The sample order had delivered three extra suma units. One was used on IAQ-2B. The other units two were not used.

- After cleaning up and loading truck left site at 18:15.

Sub Slab Tracer Gas Sheet

Sustainable Enviromental
Former Bridge Cleaners
2/8/2014

Sample ID	He in Containment %	He in Sample Line PPM
SS-1	97	0.0
SS-2	96	0.0
SS-3	96	0.0
SS-4	93	0.0
SS-5	95	0.0
SS-6	97	0.0
SS-7	96	0.0

Appendix L:
Community Air Monitoring Data



66 Glen Avenue
Glen Rock, NJ 07452
Telephone: 201-444-9784
Fax: 201-670-9788
Email: psi@petroscience.com
www.petroscience.com

JOB Former Bridge Cleaners
SHEET NO. 39-26 30th St. Long Island City, NY OF 1
CALCULATED BY _____ DATE 1/13/14
CHECKED BY _____ DATE _____
SCALE Air Monitoring - CAMP

Time	PID	mg/m ³ Particulates
9:00	0.0	0.099
9:15	0.0	0.160
9:30	0.0	0.130
9:45	0.0	0.180
10:00	0.0	0.162
10:15	0.0	0.175
10:30	0.0	0.152
10:45	0.0	0.198
11:00	0.0	0.177
11:15	0.0	0.186
11:30	0.0	0.191
11:45	0.0	0.205
12:00	0.0	0.187
12:15	0.0	0.160
12:30	0.0	0.184
12:45	0.0	0.194
13:00	0.0	0.177
13:15	0.0	0.114
13:30	0.0	0.260
13:45	0.0	0.318
14:00	0.0	0.424
14:15	0.0	0.316
14:30	0.0	0.252
14:45	0.0	0.248
15:00	0.0	0.190
15:15	0.0	0.230
15:30	0.0	0.246
15:45	0.0	0.208
16:00	0.0	0.183



66 Glen Avenue
Glen Rock, NJ 07452
Telephone: 201-444-9784
Fax: 201-670-9788
Email: psi@petroscience.com
www.petroscience.com

FORMER N.Y. STATE, Long Island City, NY
39-26 30th St.
JOB _____
SHEET NO. _____ OF _____
CALCULATED BY _____ DATE 1/14/12
CHECKED BY _____ DATE _____
SCALE Air Monitoring - CAMP

Time	P10	mg/m ³ Particulates
8:30	0.0	0.242
8:45	0.0	0.288
9:00	0.0	0.347
9:15	0.0	0.432
9:30	0.0	0.656
9:45	0.0	0.564
10:00	0.0	0.592
10:15	0.0	0.587
10:30	0.0	0.376
10:45	0.0	0.283
11:00	0.0	0.319
11:15	0.0	0.305
11:30	0.0	0.282
11:45	0.0	0.276
12:00	0.0	0.268
12:15	0.0	0.301
12:30	0.0	0.344
12:45	0.0	0.410
13:00	0.0	0.396
13:15	0.0	0.344
13:30	0.0	0.352
13:45	0.0	0.290
14:00	0.0	0.371
14:15	0.0	0.460
14:30	0.0	0.543
14:45	0.0	0.560
15:00	0.0	0.469
15:15	0.0	0.454
15:30		
15:45		
16:00		

Appendix M:
Soil Analytical Reports

Sample Summary

SES (Sustainable Environmental)

Job No: JB57687

SDI-Bridge, 39-26 30th Street, Long Island City, NY
Project No: BC-001

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JB57687-1	01/13/14	09:10 BK	01/14/14	SO	Soil	B-1A
JB57687-2	01/13/14	09:18 BK	01/14/14	SO	Soil	B-1B
JB57687-3	01/13/14	09:25 BK	01/14/14	SO	Soil	B-1C
JB57687-4	01/13/14	09:34 BK	01/14/14	SO	Soil	B-1D
JB57687-5	01/13/14	11:32 BK	01/14/14	SO	Soil	B-4A
JB57687-6	01/13/14	11:37 BK	01/14/14	SO	Soil	B-4B
JB57687-7	01/13/14	11:44 BK	01/14/14	SO	Soil	B-4C
JB57687-8	01/13/14	11:52 BK	01/14/14	SO	Soil	B-4D
JB57687-9	01/13/14	12:33 BK	01/14/14	SO	Soil	B-2A
JB57687-10	01/13/14	12:41 BK	01/14/14	SO	Soil	B-2B
JB57687-11	01/13/14	12:50 BK	01/14/14	SO	Soil	B-2C
JB57687-12	01/13/14	13:04 BK	01/14/14	SO	Soil	B-2D
JB57687-13	01/13/14	13:01 BK	01/14/14	SO	Soil	B-2E

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary (continued)

SES (Sustainable Environmental)

Job No: JB57687

**SDI-Bridge, 39-26 30th Street, Long Island City, NY
Project No: BC-001**

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JB57687-14	01/13/14	13:50 BK	01/14/14	SO	Soil	B-5A
JB57687-15	01/13/14	13:52 BK	01/14/14	SO	Soil	B-5B
JB57687-16	01/13/14	13:56 BK	01/14/14	SO	Soil	B-5C
JB57687-17	01/13/14	14:04 BK	01/14/14	SO	Soil	B-5D
JB57687-18	01/13/14	14:10 BK	01/14/14	SO	Soil	B-5E
JB57687-19	01/13/14	15:05 BK	01/14/14	SO	Soil	B-3A
JB57687-20	01/13/14	15:14 BK	01/14/14	SO	Soil	B-3B
JB57687-21	01/13/14	15:22 BK	01/14/14	SO	Soil	B-3C
JB57687-22	01/13/14	15:30 BK	01/14/14	SO	Soil	B-3D
JB57687-23	01/13/14	15:33 BK	01/14/14	SO	Soil	B-3E

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Report of Analysis

Client Sample ID:	B-1A	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-1	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	81.7
Method:	SW846 8260C SW846 5035		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191754.D	1	01/16/14	SJM	01/15/14 08:00	n/a	VI7747
Run #2							

Run #1	Initial Weight
Run #1	4.2 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	15	6.6	ug/kg	
71-43-2	Benzene	ND	1.5	0.18	ug/kg	
74-97-5	Bromochloromethane	ND	7.3	0.76	ug/kg	
75-27-4	Bromodichloromethane	ND	7.3	0.41	ug/kg	
75-25-2	Bromoform	ND	7.3	0.38	ug/kg	
74-83-9	Bromomethane	ND	7.3	0.70	ug/kg	
78-93-3	2-Butanone (MEK)	ND	15	6.4	ug/kg	
75-15-0	Carbon disulfide	ND	7.3	0.21	ug/kg	
56-23-5	Carbon tetrachloride	ND	7.3	0.37	ug/kg	
108-90-7	Chlorobenzene	ND	7.3	0.29	ug/kg	
75-00-3	Chloroethane	ND	7.3	1.4	ug/kg	
67-66-3	Chloroform	ND	7.3	0.37	ug/kg	
74-87-3	Chloromethane	ND	7.3	0.50	ug/kg	
110-82-7	Cyclohexane	ND	7.3	0.37	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	15	1.9	ug/kg	
124-48-1	Dibromochloromethane	ND	7.3	0.35	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.5	0.80	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	7.3	0.49	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	7.3	0.32	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	7.3	0.37	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	7.3	0.51	ug/kg	
75-34-3	1,1-Dichloroethane	ND	7.3	0.46	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.5	0.47	ug/kg	
75-35-4	1,1-Dichloroethene	ND	7.3	0.42	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	7.3	0.30	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	7.3	0.62	ug/kg	
78-87-5	1,2-Dichloropropane	ND	7.3	0.64	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	7.3	0.33	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	7.3	0.39	ug/kg	
123-91-1	1,4-Dioxane	ND	180	110	ug/kg	
100-41-4	Ethylbenzene	ND	1.5	0.25	ug/kg	
76-13-1	Freon 113	ND	7.3	0.63	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-1A	
Lab Sample ID: JB57687-1	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 81.7
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	7.3	2.6	ug/kg	
98-82-8	Isopropylbenzene	ND	7.3	0.21	ug/kg	
79-20-9	Methyl Acetate	ND	7.3	2.4	ug/kg	
108-87-2	Methylcyclohexane	ND	7.3	0.24	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.5	0.50	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	7.3	1.9	ug/kg	
75-09-2	Methylene chloride	3.1	7.3	2.5	ug/kg	J
100-42-5	Styrene	ND	7.3	0.34	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.3	0.50	ug/kg	
127-18-4	Tetrachloroethene	3.3	7.3	0.60	ug/kg	J
108-88-3	Toluene	ND	1.5	0.21	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	7.3	0.30	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	7.3	0.26	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	7.3	0.42	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	7.3	1.2	ug/kg	
79-01-6	Trichloroethene	ND	7.3	0.51	ug/kg	
75-69-4	Trichlorofluoromethane	ND	7.3	0.33	ug/kg	
75-01-4	Vinyl chloride	ND	7.3	0.50	ug/kg	
	m,p-Xylene	ND	1.5	0.71	ug/kg	
95-47-6	o-Xylene	ND	1.5	0.26	ug/kg	
1330-20-7	Xylene (total)	ND	1.5	0.26	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		59-130%
17060-07-0	1,2-Dichloroethane-D4	101%		65-123%
2037-26-5	Toluene-D8	92%		80-124%
460-00-4	4-Bromofluorobenzene	102%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-1B		
Lab Sample ID: JB57687-2		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 81.1
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191755.D	1	01/16/14	SJM	01/15/14 08:00	n/a	VI7747
Run #2							

Run #1	Initial Weight
Run #1	4.2 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	15	6.7	ug/kg	
71-43-2	Benzene	ND	1.5	0.18	ug/kg	
74-97-5	Bromochloromethane	ND	7.3	0.76	ug/kg	
75-27-4	Bromodichloromethane	ND	7.3	0.41	ug/kg	
75-25-2	Bromoform	ND	7.3	0.38	ug/kg	
74-83-9	Bromomethane	ND	7.3	0.71	ug/kg	
78-93-3	2-Butanone (MEK)	ND	15	6.5	ug/kg	
75-15-0	Carbon disulfide	ND	7.3	0.21	ug/kg	
56-23-5	Carbon tetrachloride	ND	7.3	0.37	ug/kg	
108-90-7	Chlorobenzene	ND	7.3	0.29	ug/kg	
75-00-3	Chloroethane	ND	7.3	1.5	ug/kg	
67-66-3	Chloroform	ND	7.3	0.37	ug/kg	
74-87-3	Chloromethane	ND	7.3	0.50	ug/kg	
110-82-7	Cyclohexane	ND	7.3	0.38	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	15	2.0	ug/kg	
124-48-1	Dibromochloromethane	ND	7.3	0.36	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.5	0.80	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	7.3	0.50	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	7.3	0.32	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	7.3	0.37	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	7.3	0.52	ug/kg	
75-34-3	1,1-Dichloroethane	ND	7.3	0.46	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.5	0.47	ug/kg	
75-35-4	1,1-Dichloroethene	ND	7.3	0.42	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	7.3	0.30	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	7.3	0.62	ug/kg	
78-87-5	1,2-Dichloropropane	ND	7.3	0.64	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	7.3	0.33	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	7.3	0.40	ug/kg	
123-91-1	1,4-Dioxane	ND	180	110	ug/kg	
100-41-4	Ethylbenzene	ND	1.5	0.26	ug/kg	
76-13-1	Freon 113	ND	7.3	0.64	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-1B	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-2	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	81.1
Method:	SW846 8260C SW846 5035		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	7.3	2.6	ug/kg	
98-82-8	Isopropylbenzene	ND	7.3	0.22	ug/kg	
79-20-9	Methyl Acetate	ND	7.3	2.5	ug/kg	
108-87-2	Methylcyclohexane	ND	7.3	0.24	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.5	0.50	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	7.3	1.9	ug/kg	
75-09-2	Methylene chloride	ND	7.3	2.5	ug/kg	
100-42-5	Styrene	ND	7.3	0.34	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.3	0.50	ug/kg	
127-18-4	Tetrachloroethene	3.7	7.3	0.60	ug/kg	J
108-88-3	Toluene	ND	1.5	0.21	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	7.3	0.30	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	7.3	0.27	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	7.3	0.42	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	7.3	1.2	ug/kg	
79-01-6	Trichloroethene	ND	7.3	0.51	ug/kg	
75-69-4	Trichlorofluoromethane	ND	7.3	0.33	ug/kg	
75-01-4	Vinyl chloride	ND	7.3	0.50	ug/kg	
	m,p-Xylene	ND	1.5	0.71	ug/kg	
95-47-6	o-Xylene	ND	1.5	0.26	ug/kg	
1330-20-7	Xylene (total)	ND	1.5	0.26	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		59-130%
17060-07-0	1,2-Dichloroethane-D4	102%		65-123%
2037-26-5	Toluene-D8	92%		80-124%
460-00-4	4-Bromofluorobenzene	103%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-1C		
Lab Sample ID: JB57687-3		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 74.1
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191768.D	1	01/16/14	SJM	01/15/14 08:00	n/a	VI7747
Run #2							

Run #	Initial Weight
Run #1	4.2 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	16	7.3	ug/kg	
71-43-2	Benzene	ND	1.6	0.20	ug/kg	
74-97-5	Bromochloromethane	ND	8.0	0.83	ug/kg	
75-27-4	Bromodichloromethane	ND	8.0	0.45	ug/kg	
75-25-2	Bromoform	ND	8.0	0.42	ug/kg	
74-83-9	Bromomethane	ND	8.0	0.77	ug/kg	
78-93-3	2-Butanone (MEK)	ND	16	7.1	ug/kg	
75-15-0	Carbon disulfide	ND	8.0	0.23	ug/kg	
56-23-5	Carbon tetrachloride	ND	8.0	0.40	ug/kg	
108-90-7	Chlorobenzene	ND	8.0	0.32	ug/kg	
75-00-3	Chloroethane	ND	8.0	1.6	ug/kg	
67-66-3	Chloroform	ND	8.0	0.41	ug/kg	
74-87-3	Chloromethane	ND	8.0	0.55	ug/kg	
110-82-7	Cyclohexane	ND	8.0	0.41	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	16	2.1	ug/kg	
124-48-1	Dibromochloromethane	ND	8.0	0.39	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.6	0.88	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	8.0	0.54	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	8.0	0.35	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	8.0	0.40	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	8.0	0.57	ug/kg	
75-34-3	1,1-Dichloroethane	ND	8.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.6	0.52	ug/kg	
75-35-4	1,1-Dichloroethene	ND	8.0	0.46	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	8.0	0.33	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	8.0	0.68	ug/kg	
78-87-5	1,2-Dichloropropane	ND	8.0	0.70	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	8.0	0.36	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	8.0	0.43	ug/kg	
123-91-1	1,4-Dioxane	ND	200	120	ug/kg	
100-41-4	Ethylbenzene	ND	1.6	0.28	ug/kg	
76-13-1	Freon 113	ND	8.0	0.70	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-1C	
Lab Sample ID: JB57687-3	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 74.1
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	8.0	2.9	ug/kg	
98-82-8	Isopropylbenzene	ND	8.0	0.24	ug/kg	
79-20-9	Methyl Acetate	ND	8.0	2.7	ug/kg	
108-87-2	Methylcyclohexane	ND	8.0	0.26	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.6	0.55	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	8.0	2.1	ug/kg	
75-09-2	Methylene chloride	ND	8.0	2.7	ug/kg	
100-42-5	Styrene	ND	8.0	0.37	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.0	0.55	ug/kg	
127-18-4	Tetrachloroethene	3.9	8.0	0.66	ug/kg	J
108-88-3	Toluene	ND	1.6	0.23	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	8.0	0.33	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	8.0	0.29	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	8.0	0.46	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	8.0	1.3	ug/kg	
79-01-6	Trichloroethene	ND	8.0	0.56	ug/kg	
75-69-4	Trichlorofluoromethane	ND	8.0	0.36	ug/kg	
75-01-4	Vinyl chloride	ND	8.0	0.55	ug/kg	
	m,p-Xylene	ND	1.6	0.78	ug/kg	
95-47-6	o-Xylene	ND	1.6	0.29	ug/kg	
1330-20-7	Xylene (total)	ND	1.6	0.29	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		59-130%
17060-07-0	1,2-Dichloroethane-D4	106%		65-123%
2037-26-5	Toluene-D8	91%		80-124%
460-00-4	4-Bromofluorobenzene	104%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-1D		
Lab Sample ID: JB57687-4		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 81.2
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191757.D	1	01/16/14	SJM	01/15/14 08:00	n/a	VI7747
Run #2							

Run #1	Initial Weight
Run #1	5.1 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	12	5.5	ug/kg	
71-43-2	Benzene	ND	1.2	0.15	ug/kg	
74-97-5	Bromochloromethane	ND	6.0	0.63	ug/kg	
75-27-4	Bromodichloromethane	ND	6.0	0.34	ug/kg	
75-25-2	Bromoform	ND	6.0	0.32	ug/kg	
74-83-9	Bromomethane	ND	6.0	0.58	ug/kg	
78-93-3	2-Butanone (MEK)	ND	12	5.3	ug/kg	
75-15-0	Carbon disulfide	ND	6.0	0.17	ug/kg	
56-23-5	Carbon tetrachloride	ND	6.0	0.30	ug/kg	
108-90-7	Chlorobenzene	ND	6.0	0.24	ug/kg	
75-00-3	Chloroethane	ND	6.0	1.2	ug/kg	
67-66-3	Chloroform	ND	6.0	0.31	ug/kg	
74-87-3	Chloromethane	ND	6.0	0.41	ug/kg	
110-82-7	Cyclohexane	ND	6.0	0.31	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	12	1.6	ug/kg	
124-48-1	Dibromochloromethane	ND	6.0	0.29	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.2	0.66	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	6.0	0.41	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	6.0	0.26	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	6.0	0.30	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.0	0.43	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6.0	0.38	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.39	ug/kg	
75-35-4	1,1-Dichloroethene	ND	6.0	0.35	ug/kg	
156-59-2	cis-1,2-Dichloroethene	1.1	6.0	0.25	ug/kg	J
156-60-5	trans-1,2-Dichloroethene	ND	6.0	0.51	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.0	0.53	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.0	0.27	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.0	0.33	ug/kg	
123-91-1	1,4-Dioxane	ND	150	92	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.21	ug/kg	
76-13-1	Freon 113	ND	6.0	0.53	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-1D		Date Sampled: 01/13/14
Lab Sample ID: JB57687-4		Date Received: 01/14/14
Matrix: SO - Soil		Percent Solids: 81.2
Method: SW846 8260C SW846 5035		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	6.0	2.1	ug/kg	
98-82-8	Isopropylbenzene	ND	6.0	0.18	ug/kg	
79-20-9	Methyl Acetate	ND	6.0	2.0	ug/kg	
108-87-2	Methylcyclohexane	ND	6.0	0.20	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.2	0.41	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.0	1.6	ug/kg	
75-09-2	Methylene chloride	ND	6.0	2.1	ug/kg	
100-42-5	Styrene	ND	6.0	0.28	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.0	0.41	ug/kg	
127-18-4	Tetrachloroethene	153	6.0	0.50	ug/kg	
108-88-3	Toluene	ND	1.2	0.17	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.0	0.25	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.0	0.22	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.0	0.35	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	6.0	0.99	ug/kg	
79-01-6	Trichloroethene	0.92	6.0	0.42	ug/kg	J
75-69-4	Trichlorofluoromethane	ND	6.0	0.27	ug/kg	
75-01-4	Vinyl chloride	ND	6.0	0.41	ug/kg	
	m,p-Xylene	ND	1.2	0.58	ug/kg	
95-47-6	o-Xylene	ND	1.2	0.21	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.21	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		59-130%
17060-07-0	1,2-Dichloroethane-D4	103%		65-123%
2037-26-5	Toluene-D8	92%		80-124%
460-00-4	4-Bromofluorobenzene	104%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-1D	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-4	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	81.2
Method:	SW846 8270D SW846 3550C		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P5948.D	1	01/17/14	ALS	01/16/14	OP72045	E5P283
Run #2							

Run #	Initial Weight	Final Volume
Run #1	34.0 g	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	72	36	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	36	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	58	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	61	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	720	44	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	720	44	ug/kg	
95-48-7	2-Methylphenol	ND	72	41	ug/kg	
	3&4-Methylphenol	ND	72	46	ug/kg	
88-75-5	2-Nitrophenol	ND	180	38	ug/kg	
100-02-7	4-Nitrophenol	ND	360	61	ug/kg	
87-86-5	Pentachlorophenol	ND	360	62	ug/kg	
108-95-2	Phenol	ND	72	38	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	180	37	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	42	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	34	ug/kg	
83-32-9	Acenaphthene	ND	36	11	ug/kg	
208-96-8	Acenaphthylene	ND	36	12	ug/kg	
98-86-2	Acetophenone	ND	180	6.4	ug/kg	
120-12-7	Anthracene	ND	36	13	ug/kg	
1912-24-9	Atrazine	ND	72	7.1	ug/kg	
56-55-3	Benzo(a)anthracene	ND	36	12	ug/kg	
50-32-8	Benzo(a)pyrene	ND	36	11	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	36	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	36	13	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	36	14	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	72	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	72	21	ug/kg	
92-52-4	1,1'-Biphenyl	ND	72	4.2	ug/kg	
100-52-7	Benzaldehyde	ND	180	8.3	ug/kg	
91-58-7	2-Chloronaphthalene	ND	72	11	ug/kg	
106-47-8	4-Chloroaniline	ND	180	12	ug/kg	
86-74-8	Carbazole	ND	72	17	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-1D	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-4	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	81.2
Method:	SW846 8270D SW846 3550C		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	72	11	ug/kg	
218-01-9	Chrysene	ND	36	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	72	15	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	72	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	72	11	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	72	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	36	16	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	36	14	ug/kg	
91-94-1	3,3' -Dichlorobenzidine	ND	72	9.2	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	36	12	ug/kg	
132-64-9	Dibenzofuran	ND	72	11	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	72	8.0	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	72	18	ug/kg	
84-66-2	Diethyl phthalate	ND	72	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	72	13	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	72	32	ug/kg	
206-44-0	Fluoranthene	ND	36	16	ug/kg	
86-73-7	Fluorene	ND	36	12	ug/kg	
118-74-1	Hexachlorobenzene	ND	72	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	36	10	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	360	37	ug/kg	
67-72-1	Hexachloroethane	ND	180	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	36	13	ug/kg	
78-59-1	Isophorone	ND	72	9.7	ug/kg	
91-57-6	2-Methylnaphthalene	ND	72	20	ug/kg	
88-74-4	2-Nitroaniline	ND	180	16	ug/kg	
99-09-2	3-Nitroaniline	ND	180	14	ug/kg	
100-01-6	4-Nitroaniline	ND	180	14	ug/kg	
91-20-3	Naphthalene	ND	36	9.9	ug/kg	
98-95-3	Nitrobenzene	ND	72	10	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	72	8.8	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	22	ug/kg	
85-01-8	Phenanthrene	ND	36	16	ug/kg	
129-00-0	Pyrene	ND	36	14	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	180	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	74%		13-110%
4165-62-2	Phenol-d5	77%		15-110%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-1D	
Lab Sample ID: JB57687-4	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8270D SW846 3550C	Percent Solids: 81.2
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	69%		20-123%
4165-60-0	Nitrobenzene-d5	69%		10-110%
321-60-8	2-Fluorobiphenyl	70%		17-110%
3386-33-2	1-Chlorooctadecane	0%		-%
1718-51-0	Terphenyl-d14	77%		30-124%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-1D		
Lab Sample ID: JB57687-4		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8081B SW846 3546		Percent Solids: 81.2
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G40182.D	1	01/16/14	DG	01/15/14	OP72037	G4G1003
Run #2							

	Initial Weight	Final Volume
Run #1	15.9 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.77	0.36	ug/kg	
319-84-6	alpha-BHC	ND	0.77	0.23	ug/kg	
319-85-7	beta-BHC	ND	0.77	0.48	ug/kg	
319-86-8	delta-BHC	ND	0.77	0.38	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.77	0.38	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.77	0.29	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.77	0.53	ug/kg	
60-57-1	Dieldrin	ND	0.77	0.30	ug/kg	
72-54-8	4,4'-DDD	ND	0.77	0.42	ug/kg	
72-55-9	4,4'-DDE	ND	0.77	0.31	ug/kg	
50-29-3	4,4'-DDT	ND	0.77	0.38	ug/kg	
72-20-8	Endrin	ND	0.77	0.25	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.77	0.33	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.77	0.41	ug/kg	
959-98-8	Endosulfan-I	ND	0.77	0.29	ug/kg	
33213-65-9	Endosulfan-II	ND	0.77	0.46	ug/kg	
76-44-8	Heptachlor	ND	0.77	0.38	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.77	0.29	ug/kg	
72-43-5	Methoxychlor	ND	1.5	0.76	ug/kg	
53494-70-5	Endrin ketone	ND	0.77	0.32	ug/kg	
8001-35-2	Toxaphene	ND	19	9.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	41%		10-147%
877-09-8	Tetrachloro-m-xylene	40%		10-147%
2051-24-3	Decachlorobiphenyl	53%		10-154%
2051-24-3	Decachlorobiphenyl	33%		10-154%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-1D	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-4	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	81.2
Method:	SW846 8082A SW846 3546		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G22143.D	1	01/16/14	JR	01/15/14	OP72036	G5G571
Run #2							

	Initial Weight	Final Volume
Run #1	15.9 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	39	10	ug/kg	
11104-28-2	Aroclor 1221	ND	39	23	ug/kg	
11141-16-5	Aroclor 1232	ND	39	20	ug/kg	
53469-21-9	Aroclor 1242	ND	39	12	ug/kg	
12672-29-6	Aroclor 1248	ND	39	12	ug/kg	
11097-69-1	Aroclor 1254	ND	39	18	ug/kg	
11096-82-5	Aroclor 1260	ND	39	13	ug/kg	
11100-14-4	Aroclor 1268	ND	39	11	ug/kg	
37324-23-5	Aroclor 1262	ND	39	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	46%		14-139%
877-09-8	Tetrachloro-m-xylene	46%		14-139%
2051-24-3	Decachlorobiphenyl	41%		10-155%
2051-24-3	Decachlorobiphenyl	40%		10-155%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-1D	Date Sampled: 01/13/14
Lab Sample ID: JB57687-4	Date Received: 01/14/14
Matrix: SO - Soil	Percent Solids: 81.2
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	7450	62	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Antimony	< 2.5	2.5	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Arsenic	< 2.5	2.5	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Barium	49.3	25	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Beryllium	0.25	0.25	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Cadmium	< 0.62	0.62	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Calcium	2910	620	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Chromium	19.1	1.2	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Cobalt	6.9	6.2	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Copper	16.0	3.1	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Iron	15600	62	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Lead	4.2	2.5	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Magnesium	5210	620	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Manganese	295	1.8	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Mercury	< 0.037	0.037	mg/kg	1	01/17/14	01/17/14	DP SW846 7471B ¹	SW846 7471B ⁴
Nickel	15.8	4.9	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Potassium	1910	1200	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Selenium	< 2.5	2.5	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Silver	< 0.62	0.62	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Sodium	< 1200	1200	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Thallium	< 1.2	1.2	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Vanadium	26.3	6.2	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Zinc	45.0	2.5	mg/kg	1	01/16/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³

(1) Instrument QC Batch: MA33090

(2) Instrument QC Batch: MA33099

(3) Prep QC Batch: MP77247

(4) Prep QC Batch: MP77272

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-4A		
Lab Sample ID: JB57687-5		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 74.1
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191758.D	1	01/16/14	SJM	01/15/14 08:00	n/a	VI7747
Run #2							

Run #1	Initial Weight
Run #1	4.0 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	17	7.7	ug/kg	
71-43-2	Benzene	ND	1.7	0.21	ug/kg	
74-97-5	Bromochloromethane	ND	8.4	0.88	ug/kg	
75-27-4	Bromodichloromethane	ND	8.4	0.47	ug/kg	
75-25-2	Bromoform	ND	8.4	0.44	ug/kg	
74-83-9	Bromomethane	ND	8.4	0.81	ug/kg	
78-93-3	2-Butanone (MEK)	ND	17	7.4	ug/kg	
75-15-0	Carbon disulfide	ND	8.4	0.24	ug/kg	
56-23-5	Carbon tetrachloride	ND	8.4	0.42	ug/kg	
108-90-7	Chlorobenzene	ND	8.4	0.33	ug/kg	
75-00-3	Chloroethane	ND	8.4	1.7	ug/kg	
67-66-3	Chloroform	ND	8.4	0.43	ug/kg	
74-87-3	Chloromethane	ND	8.4	0.58	ug/kg	
110-82-7	Cyclohexane	ND	8.4	0.43	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	17	2.2	ug/kg	
124-48-1	Dibromochloromethane	ND	8.4	0.41	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.7	0.92	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	8.4	0.57	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	8.4	0.37	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	8.4	0.42	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	8.4	0.60	ug/kg	
75-34-3	1,1-Dichloroethane	ND	8.4	0.53	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.7	0.54	ug/kg	
75-35-4	1,1-Dichloroethene	ND	8.4	0.48	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	8.4	0.35	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	8.4	0.71	ug/kg	
78-87-5	1,2-Dichloropropane	ND	8.4	0.74	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	8.4	0.38	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	8.4	0.46	ug/kg	
123-91-1	1,4-Dioxane	ND	210	130	ug/kg	
100-41-4	Ethylbenzene	ND	1.7	0.30	ug/kg	
76-13-1	Freon 113	ND	8.4	0.73	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-4A	
Lab Sample ID: JB57687-5	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 74.1
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	8.4	3.0	ug/kg	
98-82-8	Isopropylbenzene	ND	8.4	0.25	ug/kg	
79-20-9	Methyl Acetate	ND	8.4	2.8	ug/kg	
108-87-2	Methylcyclohexane	ND	8.4	0.28	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.7	0.58	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	8.4	2.2	ug/kg	
75-09-2	Methylene chloride	ND	8.4	2.9	ug/kg	
100-42-5	Styrene	ND	8.4	0.39	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.4	0.58	ug/kg	
127-18-4	Tetrachloroethene	3.3	8.4	0.69	ug/kg	J
108-88-3	Toluene	ND	1.7	0.24	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	8.4	0.35	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	8.4	0.31	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	8.4	0.48	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	8.4	1.4	ug/kg	
79-01-6	Trichloroethene	ND	8.4	0.59	ug/kg	
75-69-4	Trichlorofluoromethane	ND	8.4	0.38	ug/kg	
75-01-4	Vinyl chloride	ND	8.4	0.58	ug/kg	
	m,p-Xylene	ND	1.7	0.82	ug/kg	
95-47-6	o-Xylene	ND	1.7	0.30	ug/kg	
1330-20-7	Xylene (total)	ND	1.7	0.30	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		59-130%
17060-07-0	1,2-Dichloroethane-D4	102%		65-123%
2037-26-5	Toluene-D8	93%		80-124%
460-00-4	4-Bromofluorobenzene	105%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-4B		
Lab Sample ID: JB57687-6		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 73.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191760.D	1	01/16/14	SJM	01/15/14 08:00	n/a	VI7747
Run #2							

Run #1	Initial Weight
Run #1	4.1 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	17	7.6	ug/kg	
71-43-2	Benzene	ND	1.7	0.21	ug/kg	
74-97-5	Bromochloromethane	ND	8.3	0.86	ug/kg	
75-27-4	Bromodichloromethane	ND	8.3	0.47	ug/kg	
75-25-2	Bromoform	ND	8.3	0.43	ug/kg	
74-83-9	Bromomethane	ND	8.3	0.80	ug/kg	
78-93-3	2-Butanone (MEK)	ND	17	7.3	ug/kg	
75-15-0	Carbon disulfide	ND	8.3	0.23	ug/kg	
56-23-5	Carbon tetrachloride	ND	8.3	0.42	ug/kg	
108-90-7	Chlorobenzene	ND	8.3	0.33	ug/kg	
75-00-3	Chloroethane	ND	8.3	1.7	ug/kg	
67-66-3	Chloroform	ND	8.3	0.42	ug/kg	
74-87-3	Chloromethane	ND	8.3	0.57	ug/kg	
110-82-7	Cyclohexane	ND	8.3	0.43	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	17	2.2	ug/kg	
124-48-1	Dibromochloromethane	ND	8.3	0.40	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.7	0.91	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	8.3	0.56	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	8.3	0.36	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	8.3	0.42	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	8.3	0.59	ug/kg	
75-34-3	1,1-Dichloroethane	ND	8.3	0.52	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.7	0.53	ug/kg	
75-35-4	1,1-Dichloroethene	ND	8.3	0.48	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	8.3	0.34	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	8.3	0.70	ug/kg	
78-87-5	1,2-Dichloropropane	ND	8.3	0.72	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	8.3	0.38	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	8.3	0.45	ug/kg	
123-91-1	1,4-Dioxane	ND	210	130	ug/kg	
100-41-4	Ethylbenzene	ND	1.7	0.29	ug/kg	
76-13-1	Freon 113	ND	8.3	0.72	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-4B	
Lab Sample ID: JB57687-6	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 73.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	8.3	3.0	ug/kg	
98-82-8	Isopropylbenzene	ND	8.3	0.24	ug/kg	
79-20-9	Methyl Acetate	ND	8.3	2.8	ug/kg	
108-87-2	Methylcyclohexane	ND	8.3	0.27	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.7	0.57	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	8.3	2.2	ug/kg	
75-09-2	Methylene chloride	ND	8.3	2.8	ug/kg	
100-42-5	Styrene	ND	8.3	0.38	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.3	0.57	ug/kg	
127-18-4	Tetrachloroethene	12.4	8.3	0.68	ug/kg	
108-88-3	Toluene	ND	1.7	0.24	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	8.3	0.34	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	8.3	0.30	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	8.3	0.48	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	8.3	1.4	ug/kg	
79-01-6	Trichloroethene	ND	8.3	0.58	ug/kg	
75-69-4	Trichlorofluoromethane	ND	8.3	0.37	ug/kg	
75-01-4	Vinyl chloride	ND	8.3	0.57	ug/kg	
	m,p-Xylene	ND	1.7	0.80	ug/kg	
95-47-6	o-Xylene	ND	1.7	0.30	ug/kg	
1330-20-7	Xylene (total)	ND	1.7	0.30	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		59-130%
17060-07-0	1,2-Dichloroethane-D4	105%		65-123%
2037-26-5	Toluene-D8	91%		80-124%
460-00-4	4-Bromofluorobenzene	98%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-4C		
Lab Sample ID: JB57687-7		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 73.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191769.D	1	01/16/14	SJM	01/15/14 08:00	n/a	VI7747
Run #2							

Run #	Initial Weight
Run #1	3.6 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	19	8.6	ug/kg	
71-43-2	Benzene	ND	1.9	0.24	ug/kg	
74-97-5	Bromochloromethane	ND	9.4	0.98	ug/kg	
75-27-4	Bromodichloromethane	ND	9.4	0.53	ug/kg	
75-25-2	Bromoform	ND	9.4	0.50	ug/kg	
74-83-9	Bromomethane	ND	9.4	0.91	ug/kg	
78-93-3	2-Butanone (MEK)	ND	19	8.3	ug/kg	
75-15-0	Carbon disulfide	ND	9.4	0.27	ug/kg	
56-23-5	Carbon tetrachloride	ND	9.4	0.47	ug/kg	
108-90-7	Chlorobenzene	ND	9.4	0.37	ug/kg	
75-00-3	Chloroethane	ND	9.4	1.9	ug/kg	
67-66-3	Chloroform	ND	9.4	0.48	ug/kg	
74-87-3	Chloromethane	ND	9.4	0.65	ug/kg	
110-82-7	Cyclohexane	ND	9.4	0.49	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	19	2.5	ug/kg	
124-48-1	Dibromochloromethane	ND	9.4	0.46	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.9	1.0	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	9.4	0.64	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	9.4	0.41	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	9.4	0.47	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	9.4	0.67	ug/kg	
75-34-3	1,1-Dichloroethane	ND	9.4	0.59	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.9	0.61	ug/kg	
75-35-4	1,1-Dichloroethene	ND	9.4	0.54	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	9.4	0.39	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	9.4	0.80	ug/kg	
78-87-5	1,2-Dichloropropane	ND	9.4	0.82	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	9.4	0.43	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	9.4	0.51	ug/kg	
123-91-1	1,4-Dioxane	ND	240	140	ug/kg	
100-41-4	Ethylbenzene	ND	1.9	0.33	ug/kg	
76-13-1	Freon 113	ND	9.4	0.82	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-4C	
Lab Sample ID: JB57687-7	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 73.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	9.4	3.4	ug/kg	
98-82-8	Isopropylbenzene	ND	9.4	0.28	ug/kg	
79-20-9	Methyl Acetate	ND	9.4	3.2	ug/kg	
108-87-2	Methylcyclohexane	ND	9.4	0.31	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.9	0.65	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	9.4	2.5	ug/kg	
75-09-2	Methylene chloride	ND	9.4	3.2	ug/kg	
100-42-5	Styrene	ND	9.4	0.44	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	9.4	0.65	ug/kg	
127-18-4	Tetrachloroethene	7.1	9.4	0.77	ug/kg	J
108-88-3	Toluene	ND	1.9	0.27	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	9.4	0.39	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	9.4	0.34	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	9.4	0.54	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	9.4	1.6	ug/kg	
79-01-6	Trichloroethene	ND	9.4	0.66	ug/kg	
75-69-4	Trichlorofluoromethane	ND	9.4	0.43	ug/kg	
75-01-4	Vinyl chloride	ND	9.4	0.65	ug/kg	
	m,p-Xylene	ND	1.9	0.91	ug/kg	
95-47-6	o-Xylene	ND	1.9	0.34	ug/kg	
1330-20-7	Xylene (total)	ND	1.9	0.34	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		59-130%
17060-07-0	1,2-Dichloroethane-D4	107%		65-123%
2037-26-5	Toluene-D8	92%		80-124%
460-00-4	4-Bromofluorobenzene	104%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-4C	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-7	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	73.5
Method:	SW846 8270D SW846 3550C		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P5949.D	1	01/17/14	ALS	01/16/14	OP72045	E5P283
Run #2							

Run #	Initial Weight	Final Volume
Run #1	32.4 g	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	84	42	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	210	42	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	210	68	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	210	71	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	840	51	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	840	51	ug/kg	
95-48-7	2-Methylphenol	ND	84	48	ug/kg	
	3&4-Methylphenol	ND	84	53	ug/kg	
88-75-5	2-Nitrophenol	ND	210	45	ug/kg	
100-02-7	4-Nitrophenol	ND	420	71	ug/kg	
87-86-5	Pentachlorophenol	ND	420	72	ug/kg	
108-95-2	Phenol	ND	84	44	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	210	43	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	210	49	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	210	39	ug/kg	
83-32-9	Acenaphthene	ND	42	12	ug/kg	
208-96-8	Acenaphthylene	ND	42	13	ug/kg	
98-86-2	Acetophenone	ND	210	7.4	ug/kg	
120-12-7	Anthracene	ND	42	15	ug/kg	
1912-24-9	Atrazine	ND	84	8.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	42	14	ug/kg	
50-32-8	Benzo(a)pyrene	ND	42	13	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	42	14	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	42	16	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	42	16	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	84	15	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	84	24	ug/kg	
92-52-4	1,1'-Biphenyl	ND	84	4.9	ug/kg	
100-52-7	Benzaldehyde	ND	210	9.7	ug/kg	
91-58-7	2-Chloronaphthalene	ND	84	13	ug/kg	
106-47-8	4-Chloroaniline	ND	210	13	ug/kg	
86-74-8	Carbazole	ND	84	19	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-4C		
Lab Sample ID: JB57687-7		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8270D SW846 3550C		Percent Solids: 73.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	84	13	ug/kg	
218-01-9	Chrysene	ND	42	14	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	84	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	84	13	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	84	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	84	13	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	42	18	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	42	16	ug/kg	
91-94-1	3,3' -Dichlorobenzidine	ND	84	11	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	42	14	ug/kg	
132-64-9	Dibenzofuran	ND	84	12	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	84	9.3	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	84	20	ug/kg	
84-66-2	Diethyl phthalate	ND	84	14	ug/kg	
131-11-3	Dimethyl phthalate	ND	84	15	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	84	37	ug/kg	
206-44-0	Fluoranthene	ND	42	19	ug/kg	
86-73-7	Fluorene	ND	42	14	ug/kg	
118-74-1	Hexachlorobenzene	ND	84	14	ug/kg	
87-68-3	Hexachlorobutadiene	ND	42	12	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	420	43	ug/kg	
67-72-1	Hexachloroethane	ND	210	12	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	42	15	ug/kg	
78-59-1	Isophorone	ND	84	11	ug/kg	
91-57-6	2-Methylnaphthalene	ND	84	23	ug/kg	
88-74-4	2-Nitroaniline	ND	210	18	ug/kg	
99-09-2	3-Nitroaniline	ND	210	17	ug/kg	
100-01-6	4-Nitroaniline	ND	210	16	ug/kg	
91-20-3	Naphthalene	ND	42	11	ug/kg	
98-95-3	Nitrobenzene	ND	84	12	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	84	10	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	210	25	ug/kg	
85-01-8	Phenanthrene	ND	42	19	ug/kg	
129-00-0	Pyrene	ND	42	16	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	210	13	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		13-110%
4165-62-2	Phenol-d5	79%		15-110%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-4C	
Lab Sample ID: JB57687-7	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8270D SW846 3550C	Percent Solids: 73.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	74%		20-123%
4165-60-0	Nitrobenzene-d5	74%		10-110%
321-60-8	2-Fluorobiphenyl	74%		17-110%
3386-33-2	1-Chlorooctadecane	0%		-%
1718-51-0	Terphenyl-d14	79%		30-124%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-4C		
Lab Sample ID: JB57687-7		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8081B SW846 3546		Percent Solids: 73.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G40183.D	1	01/16/14	DG	01/15/14	OP72037	G4G1003
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.89	0.41	ug/kg	
319-84-6	alpha-BHC	ND	0.89	0.27	ug/kg	
319-85-7	beta-BHC	ND	0.89	0.55	ug/kg	
319-86-8	delta-BHC	ND	0.89	0.44	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.89	0.44	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.89	0.33	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.89	0.61	ug/kg	
60-57-1	Dieldrin	ND	0.89	0.35	ug/kg	
72-54-8	4,4'-DDD	ND	0.89	0.49	ug/kg	
72-55-9	4,4'-DDE	ND	0.89	0.36	ug/kg	
50-29-3	4,4'-DDT	ND	0.89	0.44	ug/kg	
72-20-8	Endrin	ND	0.89	0.29	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.89	0.38	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.89	0.47	ug/kg	
959-98-8	Endosulfan-I	ND	0.89	0.34	ug/kg	
33213-65-9	Endosulfan-II	ND	0.89	0.53	ug/kg	
76-44-8	Heptachlor	ND	0.89	0.43	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.89	0.33	ug/kg	
72-43-5	Methoxychlor	ND	1.8	0.87	ug/kg	
53494-70-5	Endrin ketone	ND	0.89	0.36	ug/kg	
8001-35-2	Toxaphene	ND	22	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	33%		10-147%
877-09-8	Tetrachloro-m-xylene	33%		10-147%
2051-24-3	Decachlorobiphenyl	34%		10-154%
2051-24-3	Decachlorobiphenyl	30%		10-154%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-4C	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-7	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	73.5
Method:	SW846 8082A SW846 3546		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G22219.D	1	01/17/14	JR	01/15/14	OP72036	G5G572
Run #2							

Run #	Initial Weight	Final Volume
Run #1	15.3 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	44	12	ug/kg	
11104-28-2	Aroclor 1221	ND	44	27	ug/kg	
11141-16-5	Aroclor 1232	ND	44	22	ug/kg	
53469-21-9	Aroclor 1242	ND	44	14	ug/kg	
12672-29-6	Aroclor 1248	ND	44	14	ug/kg	
11097-69-1	Aroclor 1254	ND	44	21	ug/kg	
11096-82-5	Aroclor 1260	ND	44	15	ug/kg	
11100-14-4	Aroclor 1268	ND	44	13	ug/kg	
37324-23-5	Aroclor 1262	ND	44	14	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	35%		14-139%
877-09-8	Tetrachloro-m-xylene	37%		14-139%
2051-24-3	Decachlorobiphenyl	36%		10-155%
2051-24-3	Decachlorobiphenyl	37%		10-155%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-4C	Date Sampled: 01/13/14
Lab Sample ID: JB57687-7	Date Received: 01/14/14
Matrix: SO - Soil	Percent Solids: 73.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	7060	65	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Antimony	< 2.6	2.6	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Arsenic	< 2.6	2.6	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Barium	37.4	26	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Beryllium	< 0.26	0.26	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Cadmium	< 0.65	0.65	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Calcium	2880	650	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Chromium	18.1	1.3	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Cobalt	< 6.5	6.5	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Copper	13.4	3.3	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Iron	13200	65	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Lead	3.7	2.6	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Magnesium	5040	650	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Manganese	292	2.0	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Mercury	< 0.041	0.041	mg/kg	1	01/17/14	01/17/14	DP	SW846 7471B ¹ SW846 7471B ⁴
Nickel	15.8	5.2	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Potassium	< 1300	1300	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Selenium	< 2.6	2.6	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Silver	< 0.65	0.65	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Sodium	< 1300	1300	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Thallium	< 1.3	1.3	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Vanadium	22.6	6.5	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Zinc	38.9	2.6	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³

(1) Instrument QC Batch: MA33090

(2) Instrument QC Batch: MA33099

(3) Prep QC Batch: MP77247

(4) Prep QC Batch: MP77272

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-4D		
Lab Sample ID: JB57687-8		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 74.7
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191770.D	1	01/16/14	SJM	01/15/14 08:00	n/a	VI7747
Run #2							

Run #1	Initial Weight
Run #1	4.8 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	14	6.4	ug/kg	
71-43-2	Benzene	ND	1.4	0.18	ug/kg	
74-97-5	Bromochloromethane	ND	7.0	0.72	ug/kg	
75-27-4	Bromodichloromethane	ND	7.0	0.39	ug/kg	
75-25-2	Bromoform	ND	7.0	0.37	ug/kg	
74-83-9	Bromomethane	ND	7.0	0.67	ug/kg	
78-93-3	2-Butanone (MEK)	ND	14	6.1	ug/kg	
75-15-0	Carbon disulfide	ND	7.0	0.20	ug/kg	
56-23-5	Carbon tetrachloride	ND	7.0	0.35	ug/kg	
108-90-7	Chlorobenzene	ND	7.0	0.27	ug/kg	
75-00-3	Chloroethane	ND	7.0	1.4	ug/kg	
67-66-3	Chloroform	ND	7.0	0.35	ug/kg	
74-87-3	Chloromethane	ND	7.0	0.48	ug/kg	
110-82-7	Cyclohexane	ND	7.0	0.36	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	14	1.9	ug/kg	
124-48-1	Dibromochloromethane	ND	7.0	0.34	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.4	0.76	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	7.0	0.47	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	7.0	0.30	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	7.0	0.35	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	7.0	0.49	ug/kg	
75-34-3	1,1-Dichloroethane	ND	7.0	0.44	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.4	0.45	ug/kg	
75-35-4	1,1-Dichloroethene	ND	7.0	0.40	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	7.0	0.29	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	7.0	0.59	ug/kg	
78-87-5	1,2-Dichloropropane	ND	7.0	0.61	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	7.0	0.32	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	7.0	0.38	ug/kg	
123-91-1	1,4-Dioxane	ND	170	110	ug/kg	
100-41-4	Ethylbenzene	ND	1.4	0.24	ug/kg	
76-13-1	Freon 113	ND	7.0	0.61	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-4D	
Lab Sample ID: JB57687-8	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 74.7
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	7.0	2.5	ug/kg	
98-82-8	Isopropylbenzene	ND	7.0	0.20	ug/kg	
79-20-9	Methyl Acetate	ND	7.0	2.3	ug/kg	
108-87-2	Methylcyclohexane	ND	7.0	0.23	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.4	0.48	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	7.0	1.8	ug/kg	
75-09-2	Methylene chloride	ND	7.0	2.4	ug/kg	
100-42-5	Styrene	ND	7.0	0.32	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.0	0.48	ug/kg	
127-18-4	Tetrachloroethene	7.7	7.0	0.57	ug/kg	
108-88-3	Toluene	ND	1.4	0.20	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	7.0	0.29	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	7.0	0.25	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	7.0	0.40	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	7.0	1.1	ug/kg	
79-01-6	Trichloroethene	ND	7.0	0.49	ug/kg	
75-69-4	Trichlorofluoromethane	ND	7.0	0.31	ug/kg	
75-01-4	Vinyl chloride	ND	7.0	0.48	ug/kg	
	m,p-Xylene	ND	1.4	0.67	ug/kg	
95-47-6	o-Xylene	ND	1.4	0.25	ug/kg	
1330-20-7	Xylene (total)	ND	1.4	0.25	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		59-130%
17060-07-0	1,2-Dichloroethane-D4	101%		65-123%
2037-26-5	Toluene-D8	94%		80-124%
460-00-4	4-Bromofluorobenzene	104%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-2A	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-9	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	90.7
Method:	SW846 8260C SW846 5035		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191771.D	1	01/16/14	SJM	01/15/14 08:00	n/a	VI7747
Run #2							

Run #	Initial Weight
Run #1	5.0 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	11	5.0	ug/kg	
71-43-2	Benzene	ND	1.1	0.14	ug/kg	
74-97-5	Bromochloromethane	ND	5.5	0.57	ug/kg	
75-27-4	Bromodichloromethane	ND	5.5	0.31	ug/kg	
75-25-2	Bromoform	ND	5.5	0.29	ug/kg	
74-83-9	Bromomethane	ND	5.5	0.53	ug/kg	
78-93-3	2-Butanone (MEK)	ND	11	4.9	ug/kg	
75-15-0	Carbon disulfide	ND	5.5	0.16	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.5	0.28	ug/kg	
108-90-7	Chlorobenzene	ND	5.5	0.22	ug/kg	
75-00-3	Chloroethane	ND	5.5	1.1	ug/kg	
67-66-3	Chloroform	ND	5.5	0.28	ug/kg	
74-87-3	Chloromethane	ND	5.5	0.38	ug/kg	
110-82-7	Cyclohexane	ND	5.5	0.28	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	11	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.5	0.27	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.1	0.60	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.5	0.37	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.5	0.24	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.5	0.28	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.5	0.39	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.5	0.35	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.1	0.35	ug/kg	
75-35-4	1,1-Dichloroethene	ND	5.5	0.32	ug/kg	
156-59-2	cis-1,2-Dichloroethene	0.51	5.5	0.23	ug/kg	J
156-60-5	trans-1,2-Dichloroethene	ND	5.5	0.47	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.5	0.48	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.5	0.25	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.5	0.30	ug/kg	
123-91-1	1,4-Dioxane	ND	140	84	ug/kg	
100-41-4	Ethylbenzene	ND	1.1	0.19	ug/kg	
76-13-1	Freon 113	ND	5.5	0.48	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-2A	
Lab Sample ID: JB57687-9	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 90.7
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.5	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.5	0.16	ug/kg	
79-20-9	Methyl Acetate	ND	5.5	1.8	ug/kg	
108-87-2	Methylcyclohexane	ND	5.5	0.18	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.1	0.38	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.5	1.5	ug/kg	
75-09-2	Methylene chloride	ND	5.5	1.9	ug/kg	
100-42-5	Styrene	ND	5.5	0.26	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.5	0.38	ug/kg	
127-18-4	Tetrachloroethene	208	5.5	0.45	ug/kg	
108-88-3	Toluene	ND	1.1	0.16	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.5	0.23	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.5	0.20	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.5	0.32	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.5	0.91	ug/kg	
79-01-6	Trichloroethene	4.3	5.5	0.39	ug/kg	J
75-69-4	Trichlorofluoromethane	ND	5.5	0.25	ug/kg	
75-01-4	Vinyl chloride	ND	5.5	0.38	ug/kg	
	m,p-Xylene	ND	1.1	0.53	ug/kg	
95-47-6	o-Xylene	ND	1.1	0.20	ug/kg	
1330-20-7	Xylene (total)	ND	1.1	0.20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		59-130%
17060-07-0	1,2-Dichloroethane-D4	96%		65-123%
2037-26-5	Toluene-D8	95%		80-124%
460-00-4	4-Bromofluorobenzene	108%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-2B	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-10	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	99.3
Method:	SW846 8260C SW846 5035		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191804.D	1	01/17/14	SJM	01/15/14 09:00	n/a	VI7749
Run #2							

Run #1	Initial Weight
Run #1	3.5 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	14	6.6	ug/kg	
71-43-2	Benzene	ND	1.4	0.18	ug/kg	
74-97-5	Bromochloromethane	ND	7.2	0.75	ug/kg	
75-27-4	Bromodichloromethane	ND	7.2	0.40	ug/kg	
75-25-2	Bromoform	ND	7.2	0.38	ug/kg	
74-83-9	Bromomethane	ND	7.2	0.69	ug/kg	
78-93-3	2-Butanone (MEK)	ND	14	6.3	ug/kg	
75-15-0	Carbon disulfide	ND	7.2	0.20	ug/kg	
56-23-5	Carbon tetrachloride	ND	7.2	0.36	ug/kg	
108-90-7	Chlorobenzene	ND	7.2	0.28	ug/kg	
75-00-3	Chloroethane	ND	7.2	1.4	ug/kg	
67-66-3	Chloroform	ND	7.2	0.37	ug/kg	
74-87-3	Chloromethane	ND	7.2	0.49	ug/kg	
110-82-7	Cyclohexane	ND	7.2	0.37	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	14	1.9	ug/kg	
124-48-1	Dibromochloromethane	ND	7.2	0.35	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.4	0.79	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	7.2	0.49	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	7.2	0.31	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	7.2	0.36	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	7.2	0.51	ug/kg	
75-34-3	1,1-Dichloroethane	ND	7.2	0.45	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.4	0.46	ug/kg	
75-35-4	1,1-Dichloroethene	ND	7.2	0.41	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	7.2	0.30	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	7.2	0.61	ug/kg	
78-87-5	1,2-Dichloropropane	ND	7.2	0.63	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	7.2	0.33	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	7.2	0.39	ug/kg	
123-91-1	1,4-Dioxane	ND	180	110	ug/kg	
100-41-4	Ethylbenzene	ND	1.4	0.25	ug/kg	
76-13-1	Freon 113	ND	7.2	0.63	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-2B	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-10	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	99.3
Method:	SW846 8260C SW846 5035		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	7.2	2.6	ug/kg	
98-82-8	Isopropylbenzene	ND	7.2	0.21	ug/kg	
79-20-9	Methyl Acetate	ND	7.2	2.4	ug/kg	
108-87-2	Methylcyclohexane	ND	7.2	0.24	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.4	0.49	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	7.2	1.9	ug/kg	
75-09-2	Methylene chloride	ND	7.2	2.4	ug/kg	
100-42-5	Styrene	ND	7.2	0.33	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.2	0.49	ug/kg	
127-18-4	Tetrachloroethene	5.8	7.2	0.59	ug/kg	J
108-88-3	Toluene	ND	1.4	0.20	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	7.2	0.30	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	7.2	0.26	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	7.2	0.41	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	7.2	1.2	ug/kg	
79-01-6	Trichloroethene	ND	7.2	0.50	ug/kg	
75-69-4	Trichlorofluoromethane	ND	7.2	0.32	ug/kg	
75-01-4	Vinyl chloride	ND	7.2	0.49	ug/kg	
	m,p-Xylene	ND	1.4	0.70	ug/kg	
95-47-6	o-Xylene	ND	1.4	0.26	ug/kg	
1330-20-7	Xylene (total)	ND	1.4	0.26	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		59-130%
17060-07-0	1,2-Dichloroethane-D4	107%		65-123%
2037-26-5	Toluene-D8	92%		80-124%
460-00-4	4-Bromofluorobenzene	102%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-2C		
Lab Sample ID: JB57687-11		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 97.9
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191807.D	1	01/17/14	SJM	01/15/14 09:00	n/a	VI7749
Run #2							

Run #1	Initial Weight
Run #1	4.0 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	13	5.8	ug/kg	
71-43-2	Benzene	ND	1.3	0.16	ug/kg	
74-97-5	Bromochloromethane	ND	6.4	0.66	ug/kg	
75-27-4	Bromodichloromethane	ND	6.4	0.36	ug/kg	
75-25-2	Bromoform	ND	6.4	0.33	ug/kg	
74-83-9	Bromomethane	ND	6.4	0.61	ug/kg	
78-93-3	2-Butanone (MEK)	ND	13	5.6	ug/kg	
75-15-0	Carbon disulfide	ND	6.4	0.18	ug/kg	
56-23-5	Carbon tetrachloride	ND	6.4	0.32	ug/kg	
108-90-7	Chlorobenzene	ND	6.4	0.25	ug/kg	
75-00-3	Chloroethane	ND	6.4	1.3	ug/kg	
67-66-3	Chloroform	ND	6.4	0.32	ug/kg	
74-87-3	Chloromethane	ND	6.4	0.44	ug/kg	
110-82-7	Cyclohexane	ND	6.4	0.33	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	13	1.7	ug/kg	
124-48-1	Dibromochloromethane	ND	6.4	0.31	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.3	0.70	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	6.4	0.43	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	6.4	0.28	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	6.4	0.32	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.4	0.45	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6.4	0.40	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.3	0.41	ug/kg	
75-35-4	1,1-Dichloroethene	ND	6.4	0.37	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	6.4	0.26	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	6.4	0.54	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.4	0.56	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.4	0.29	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.4	0.34	ug/kg	
123-91-1	1,4-Dioxane	ND	160	98	ug/kg	
100-41-4	Ethylbenzene	ND	1.3	0.22	ug/kg	
76-13-1	Freon 113	ND	6.4	0.56	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-2C	
Lab Sample ID: JB57687-11	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 97.9
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	6.4	2.3	ug/kg	
98-82-8	Isopropylbenzene	ND	6.4	0.19	ug/kg	
79-20-9	Methyl Acetate	ND	6.4	2.1	ug/kg	
108-87-2	Methylcyclohexane	ND	6.4	0.21	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.3	0.44	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.4	1.7	ug/kg	
75-09-2	Methylene chloride	ND	6.4	2.2	ug/kg	
100-42-5	Styrene	ND	6.4	0.30	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.4	0.44	ug/kg	
127-18-4	Tetrachloroethene	3.5	6.4	0.52	ug/kg	J
108-88-3	Toluene	ND	1.3	0.18	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.4	0.26	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.4	0.23	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.4	0.37	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	6.4	1.0	ug/kg	
79-01-6	Trichloroethene	ND	6.4	0.45	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.4	0.29	ug/kg	
75-01-4	Vinyl chloride	ND	6.4	0.44	ug/kg	
	m,p-Xylene	ND	1.3	0.62	ug/kg	
95-47-6	o-Xylene	ND	1.3	0.23	ug/kg	
1330-20-7	Xylene (total)	ND	1.3	0.23	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		59-130%
17060-07-0	1,2-Dichloroethane-D4	107%		65-123%
2037-26-5	Toluene-D8	91%		80-124%
460-00-4	4-Bromofluorobenzene	104%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-2D	
Lab Sample ID:	JB57687-12	Date Sampled: 01/13/14
Matrix:	SO - Soil	Date Received: 01/14/14
Method:	SW846 8270D SW846 3550C	Percent Solids: 97.3
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P5950.D	1	01/17/14	ALS	01/16/14	OP72045	E5P283
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	34.8 g	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	59	30	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	150	30	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	150	48	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	150	50	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	590	36	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	590	36	ug/kg	
95-48-7	2-Methylphenol	ND	59	34	ug/kg	
	3&4-Methylphenol	ND	59	38	ug/kg	
88-75-5	2-Nitrophenol	ND	150	31	ug/kg	
100-02-7	4-Nitrophenol	ND	300	50	ug/kg	
87-86-5	Pentachlorophenol	ND	300	51	ug/kg	
108-95-2	Phenol	ND	59	31	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	150	30	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	150	34	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	150	28	ug/kg	
83-32-9	Acenaphthene	ND	30	8.6	ug/kg	
208-96-8	Acenaphthylene	ND	30	9.5	ug/kg	
98-86-2	Acetophenone	ND	150	5.2	ug/kg	
120-12-7	Anthracene	ND	30	10	ug/kg	
1912-24-9	Atrazine	ND	59	5.8	ug/kg	
56-55-3	Benzo(a)anthracene	ND	30	9.6	ug/kg	
50-32-8	Benzo(a)pyrene	ND	30	9.0	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	30	9.9	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	30	11	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	30	11	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	59	11	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	59	17	ug/kg	
92-52-4	1,1'-Biphenyl	ND	59	3.4	ug/kg	
100-52-7	Benzaldehyde	ND	150	6.8	ug/kg	
91-58-7	2-Chloronaphthalene	ND	59	9.2	ug/kg	
106-47-8	4-Chloroaniline	ND	150	9.5	ug/kg	
86-74-8	Carbazole	ND	59	14	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-2D		
Lab Sample ID: JB57687-12		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8270D SW846 3550C		Percent Solids: 97.3
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	59	9.3	ug/kg	
218-01-9	Chrysene	ND	30	10	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	59	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	59	8.9	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	59	8.8	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	59	8.9	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	30	13	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	30	11	ug/kg	
91-94-1	3,3' -Dichlorobenzidine	ND	59	7.5	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	30	10	ug/kg	
132-64-9	Dibenzofuran	ND	59	8.8	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	59	6.6	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	59	14	ug/kg	
84-66-2	Diethyl phthalate	ND	59	10	ug/kg	
131-11-3	Dimethyl phthalate	ND	59	10	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	59	26	ug/kg	
206-44-0	Fluoranthene	ND	30	13	ug/kg	
86-73-7	Fluorene	ND	30	9.7	ug/kg	
118-74-1	Hexachlorobenzene	ND	59	9.6	ug/kg	
87-68-3	Hexachlorobutadiene	ND	30	8.2	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	300	30	ug/kg	
67-72-1	Hexachloroethane	ND	150	8.2	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	30	10	ug/kg	
78-59-1	Isophorone	ND	59	7.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	59	16	ug/kg	
88-74-4	2-Nitroaniline	ND	150	13	ug/kg	
99-09-2	3-Nitroaniline	ND	150	12	ug/kg	
100-01-6	4-Nitroaniline	ND	150	12	ug/kg	
91-20-3	Naphthalene	ND	30	8.1	ug/kg	
98-95-3	Nitrobenzene	ND	59	8.5	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	59	7.2	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	150	18	ug/kg	
85-01-8	Phenanthrene	ND	30	13	ug/kg	
129-00-0	Pyrene	ND	30	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	150	9.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	79%		13-110%
4165-62-2	Phenol-d5	78%		15-110%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-2D	
Lab Sample ID: JB57687-12	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8270D SW846 3550C	Percent Solids: 97.3
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	77%		20-123%
4165-60-0	Nitrobenzene-d5	74%		10-110%
321-60-8	2-Fluorobiphenyl	72%		17-110%
3386-33-2	1-Chlorooctadecane	0%		-%
1718-51-0	Terphenyl-d14	80%		30-124%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-2D	
Lab Sample ID:	JB57687-12	Date Sampled: 01/13/14
Matrix:	SO - Soil	Date Received: 01/14/14
Method:	SW846 8081B SW846 3546	Percent Solids: 97.3
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G40260.D	1	01/20/14	DG	01/15/14	OP72037	G4G1005
Run #2							

	Initial Weight	Final Volume
Run #1	15.8 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.65	0.30	ug/kg	
319-84-6	alpha-BHC	ND	0.65	0.19	ug/kg	
319-85-7	beta-BHC	ND	0.65	0.41	ug/kg	
319-86-8	delta-BHC	ND	0.65	0.32	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.65	0.32	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.65	0.24	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.65	0.45	ug/kg	
60-57-1	Dieldrin	ND	0.65	0.25	ug/kg	
72-54-8	4,4'-DDD	ND	0.65	0.36	ug/kg	
72-55-9	4,4'-DDE	ND	0.65	0.26	ug/kg	
50-29-3	4,4'-DDT	ND	0.65	0.32	ug/kg	
72-20-8	Endrin	ND	0.65	0.21	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.65	0.28	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.65	0.34	ug/kg	
959-98-8	Endosulfan-I	ND	0.65	0.25	ug/kg	
33213-65-9	Endosulfan-II	ND	0.65	0.39	ug/kg	
76-44-8	Heptachlor	ND	0.65	0.32	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.65	0.24	ug/kg	
72-43-5	Methoxychlor	ND	1.3	0.64	ug/kg	
53494-70-5	Endrin ketone	ND	0.65	0.26	ug/kg	
8001-35-2	Toxaphene	ND	16	8.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	20%		10-147%
877-09-8	Tetrachloro-m-xylene	19%		10-147%
2051-24-3	Decachlorobiphenyl	16%		10-154%
2051-24-3	Decachlorobiphenyl	17%		10-154%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-2D		
Lab Sample ID: JB57687-12		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8082A SW846 3546		Percent Solids: 97.3
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G22220.D	1	01/17/14	JR	01/15/14	OP72036	G5G572
Run #2							

	Initial Weight	Final Volume
Run #1	15.8 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	8.5	ug/kg	
11104-28-2	Aroclor 1221	ND	33	20	ug/kg	
11141-16-5	Aroclor 1232	ND	33	16	ug/kg	
53469-21-9	Aroclor 1242	ND	33	10	ug/kg	
12672-29-6	Aroclor 1248	ND	33	9.9	ug/kg	
11097-69-1	Aroclor 1254	ND	33	15	ug/kg	
11096-82-5	Aroclor 1260	ND	33	11	ug/kg	
11100-14-4	Aroclor 1268	ND	33	9.6	ug/kg	
37324-23-5	Aroclor 1262	ND	33	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	20%		14-139%
877-09-8	Tetrachloro-m-xylene	20%		14-139%
2051-24-3	Decachlorobiphenyl	20%		10-155%
2051-24-3	Decachlorobiphenyl	20%		10-155%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-2D	Date Sampled: 01/13/14
Lab Sample ID: JB57687-12	Date Received: 01/14/14
Matrix: SO - Soil	Percent Solids: 97.3
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	4560	52	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Antimony	< 2.1	2.1	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Arsenic	< 2.1	2.1	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Barium	25.3	21	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Beryllium	< 0.21	0.21	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Cadmium	< 0.52	0.52	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Calcium	2240	520	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Chromium	12.2	1.0	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Cobalt	< 5.2	5.2	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Copper	10.6	2.6	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Iron	10100	52	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Lead	3.0	2.1	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Magnesium	2940	520	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Manganese	219	1.6	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Mercury	< 0.033	0.033	mg/kg	1	01/17/14	01/17/14	DP	SW846 7471B ¹ SW846 7471B ⁴
Nickel	10.8	4.2	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Potassium	< 1000	1000	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Selenium	< 2.1	2.1	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Silver	< 0.52	0.52	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Sodium	< 1000	1000	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Thallium	< 1.0	1.0	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Vanadium	17.6	5.2	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³
Zinc	25.0	2.1	mg/kg	1	01/16/14	01/17/14	ND	SW846 6010C ² SW846 3050B ³

(1) Instrument QC Batch: MA33090

(2) Instrument QC Batch: MA33099

(3) Prep QC Batch: MP77247

(4) Prep QC Batch: MP77272

RL = Reporting Limit

Report of Analysis

Client Sample ID: B-2E		
Lab Sample ID: JB57687-13		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 84.4
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191805.D	1	01/17/14	SJM	01/15/14 09:00	n/a	VI7749
Run #2							

Run #1	Initial Weight
Run #1	3.5 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	17	7.7	ug/kg	
71-43-2	Benzene	ND	1.7	0.21	ug/kg	
74-97-5	Bromochloromethane	ND	8.5	0.88	ug/kg	
75-27-4	Bromodichloromethane	ND	8.5	0.48	ug/kg	
75-25-2	Bromoform	ND	8.5	0.44	ug/kg	
74-83-9	Bromomethane	ND	8.5	0.81	ug/kg	
78-93-3	2-Butanone (MEK)	ND	17	7.4	ug/kg	
75-15-0	Carbon disulfide	ND	8.5	0.24	ug/kg	
56-23-5	Carbon tetrachloride	ND	8.5	0.42	ug/kg	
108-90-7	Chlorobenzene	ND	8.5	0.33	ug/kg	
75-00-3	Chloroethane	ND	8.5	1.7	ug/kg	
67-66-3	Chloroform	ND	8.5	0.43	ug/kg	
74-87-3	Chloromethane	ND	8.5	0.58	ug/kg	
110-82-7	Cyclohexane	ND	8.5	0.44	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	17	2.3	ug/kg	
124-48-1	Dibromochloromethane	ND	8.5	0.41	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.7	0.93	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	8.5	0.57	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	8.5	0.37	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	8.5	0.42	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	8.5	0.60	ug/kg	
75-34-3	1,1-Dichloroethane	ND	8.5	0.53	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.7	0.54	ug/kg	
75-35-4	1,1-Dichloroethene	ND	8.5	0.49	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	8.5	0.35	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	8.5	0.72	ug/kg	
78-87-5	1,2-Dichloropropane	ND	8.5	0.74	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	8.5	0.38	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	8.5	0.46	ug/kg	
123-91-1	1,4-Dioxane	ND	210	130	ug/kg	
100-41-4	Ethylbenzene	ND	1.7	0.30	ug/kg	
76-13-1	Freon 113	ND	8.5	0.74	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-2E		Date Sampled: 01/13/14
Lab Sample ID: JB57687-13		Date Received: 01/14/14
Matrix: SO - Soil		Percent Solids: 84.4
Method: SW846 8260C SW846 5035		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	8.5	3.0	ug/kg	
98-82-8	Isopropylbenzene	ND	8.5	0.25	ug/kg	
79-20-9	Methyl Acetate	ND	8.5	2.8	ug/kg	
108-87-2	Methylcyclohexane	ND	8.5	0.28	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.7	0.58	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	8.5	2.2	ug/kg	
75-09-2	Methylene chloride	ND	8.5	2.9	ug/kg	
100-42-5	Styrene	ND	8.5	0.39	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.5	0.58	ug/kg	
127-18-4	Tetrachloroethene	1.3	8.5	0.69	ug/kg	J
108-88-3	Toluene	ND	1.7	0.24	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	8.5	0.35	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	8.5	0.31	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	8.5	0.49	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	8.5	1.4	ug/kg	
79-01-6	Trichloroethene	ND	8.5	0.59	ug/kg	
75-69-4	Trichlorofluoromethane	ND	8.5	0.38	ug/kg	
75-01-4	Vinyl chloride	ND	8.5	0.58	ug/kg	
	m,p-Xylene	ND	1.7	0.82	ug/kg	
95-47-6	o-Xylene	ND	1.7	0.30	ug/kg	
1330-20-7	Xylene (total)	ND	1.7	0.30	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%		59-130%
17060-07-0	1,2-Dichloroethane-D4	91%		65-123%
2037-26-5	Toluene-D8	94%		80-124%
460-00-4	4-Bromofluorobenzene	106%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5A		
Lab Sample ID: JB57687-14		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 96.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191806.D	1	01/17/14	SJM	01/15/14 09:00	n/a	VI7749
Run #2							

Run #1	Initial Weight
Run #1	4.5 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	12	5.3	ug/kg	
71-43-2	Benzene	ND	1.2	0.15	ug/kg	
74-97-5	Bromochloromethane	ND	5.8	0.60	ug/kg	
75-27-4	Bromodichloromethane	ND	5.8	0.32	ug/kg	
75-25-2	Bromoform	ND	5.8	0.30	ug/kg	
74-83-9	Bromomethane	ND	5.8	0.55	ug/kg	
78-93-3	2-Butanone (MEK)	ND	12	5.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.8	0.16	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.8	0.29	ug/kg	
108-90-7	Chlorobenzene	ND	5.8	0.23	ug/kg	
75-00-3	Chloroethane	ND	5.8	1.1	ug/kg	
67-66-3	Chloroform	ND	5.8	0.29	ug/kg	
74-87-3	Chloromethane	ND	5.8	0.39	ug/kg	
110-82-7	Cyclohexane	ND	5.8	0.30	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	12	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.8	0.28	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.2	0.63	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.8	0.39	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.8	0.25	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.8	0.29	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.8	0.41	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.8	0.36	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.37	ug/kg	
75-35-4	1,1-Dichloroethene	ND	5.8	0.33	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	5.8	0.24	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	5.8	0.49	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.8	0.50	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.8	0.26	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.8	0.31	ug/kg	
123-91-1	1,4-Dioxane	ND	140	88	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.20	ug/kg	
76-13-1	Freon 113	ND	5.8	0.50	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5A	
Lab Sample ID: JB57687-14	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 96.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.8	2.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.8	0.17	ug/kg	
79-20-9	Methyl Acetate	ND	5.8	1.9	ug/kg	
108-87-2	Methylcyclohexane	ND	5.8	0.19	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.2	0.39	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.8	1.5	ug/kg	
75-09-2	Methylene chloride	ND	5.8	2.0	ug/kg	
100-42-5	Styrene	ND	5.8	0.27	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.8	0.39	ug/kg	
127-18-4	Tetrachloroethene	8.5	5.8	0.47	ug/kg	
108-88-3	Toluene	ND	1.2	0.16	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.8	0.24	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.8	0.21	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.8	0.33	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.8	0.95	ug/kg	
79-01-6	Trichloroethene	ND	5.8	0.40	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.8	0.26	ug/kg	
75-01-4	Vinyl chloride	ND	5.8	0.39	ug/kg	
	m,p-Xylene	ND	1.2	0.56	ug/kg	
95-47-6	o-Xylene	ND	1.2	0.20	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		59-130%
17060-07-0	1,2-Dichloroethane-D4	111%		65-123%
2037-26-5	Toluene-D8	90%		80-124%
460-00-4	4-Bromofluorobenzene	99%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5B		
Lab Sample ID: JB57687-15		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8270D SW846 3550C		Percent Solids: 91.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P81904.D	1	01/17/14	JL	01/16/14	OP72071	EP3485
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	32.5 g	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	67	34	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	34	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	54	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	56	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	670	41	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	670	41	ug/kg	
95-48-7	2-Methylphenol	ND	67	38	ug/kg	
	3&4-Methylphenol	ND	67	43	ug/kg	
88-75-5	2-Nitrophenol	ND	170	36	ug/kg	
100-02-7	4-Nitrophenol	ND	340	57	ug/kg	
87-86-5	Pentachlorophenol	ND	340	58	ug/kg	
108-95-2	Phenol	ND	67	35	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	35	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	39	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	32	ug/kg	
83-32-9	Acenaphthene	ND	34	9.8	ug/kg	
208-96-8	Acenaphthylene	ND	34	11	ug/kg	
98-86-2	Acetophenone	ND	170	5.9	ug/kg	
120-12-7	Anthracene	ND	34	12	ug/kg	
1912-24-9	Atrazine	ND	67	6.6	ug/kg	
56-55-3	Benzo(a)anthracene	23.2	34	11	ug/kg	J
50-32-8	Benzo(a)pyrene	22.5	34	10	ug/kg	J
205-99-2	Benzo(b)fluoranthene	29.1	34	11	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	18.6	34	13	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	34	13	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	67	12	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	67	19	ug/kg	
92-52-4	1,1'-Biphenyl	ND	67	3.9	ug/kg	
100-52-7	Benzaldehyde	ND	170	7.7	ug/kg	
91-58-7	2-Chloronaphthalene	ND	67	10	ug/kg	
106-47-8	4-Chloroaniline	ND	170	11	ug/kg	
86-74-8	Carbazole	ND	67	16	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5B	
Lab Sample ID: JB57687-15	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8270D SW846 3550C	Percent Solids: 91.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	67	11	ug/kg	
218-01-9	Chrysene	28.5	34	11	ug/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	67	14	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	67	10	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	67	10	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	67	10	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	34	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	34	13	ug/kg	
91-94-1	3,3' -Dichlorobenzidine	ND	67	8.5	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	34	11	ug/kg	
132-64-9	Dibenzofuran	ND	67	10	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	67	7.5	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	67	16	ug/kg	
84-66-2	Diethyl phthalate	ND	67	11	ug/kg	
131-11-3	Dimethyl phthalate	ND	67	12	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	67	30	ug/kg	
206-44-0	Fluoranthene	54.5	34	15	ug/kg	
86-73-7	Fluorene	ND	34	11	ug/kg	
118-74-1	Hexachlorobenzene	ND	67	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	34	9.3	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	340	34	ug/kg	
67-72-1	Hexachloroethane	ND	170	9.3	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	22.0	34	12	ug/kg	J
78-59-1	Isophorone	ND	67	9.0	ug/kg	
91-57-6	2-Methylnaphthalene	ND	67	19	ug/kg	
88-74-4	2-Nitroaniline	ND	170	15	ug/kg	
99-09-2	3-Nitroaniline	ND	170	13	ug/kg	
100-01-6	4-Nitroaniline	ND	170	13	ug/kg	
91-20-3	Naphthalene	ND	34	9.2	ug/kg	
98-95-3	Nitrobenzene	ND	67	9.7	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	67	8.2	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	20	ug/kg	
85-01-8	Phenanthrene	25.4	34	15	ug/kg	J
129-00-0	Pyrene	43.1	34	13	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	83%		13-110%
4165-62-2	Phenol-d5	78%		15-110%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5B	
Lab Sample ID: JB57687-15	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8270D SW846 3550C	Percent Solids: 91.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	97%		20-123%
4165-60-0	Nitrobenzene-d5	79%		10-110%
321-60-8	2-Fluorobiphenyl	85%		17-110%
1718-51-0	Terphenyl-d14	93%		30-124%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-5B	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-15	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	91.5
Method:	SW846 8081B SW846 3546		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G8370.D	1	01/20/14	JN	01/16/14	OP72052	G6G237
Run #2							

Run #	Initial Weight	Final Volume
Run #1	15.9 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.69	0.32	ug/kg	
319-84-6	alpha-BHC	ND	0.69	0.21	ug/kg	
319-85-7	beta-BHC	ND	0.69	0.43	ug/kg	
319-86-8	delta-BHC	ND	0.69	0.34	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.69	0.34	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.69	0.25	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.69	0.47	ug/kg	
60-57-1	Dieldrin	ND	0.69	0.27	ug/kg	
72-54-8	4,4'-DDD	ND	0.69	0.38	ug/kg	
72-55-9	4,4'-DDE	ND	0.69	0.28	ug/kg	
50-29-3	4,4'-DDT	ND	0.69	0.34	ug/kg	
72-20-8	Endrin	ND	0.69	0.22	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.69	0.30	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.69	0.36	ug/kg	
959-98-8	Endosulfan-I	ND	0.69	0.26	ug/kg	
33213-65-9	Endosulfan-II	ND	0.69	0.41	ug/kg	
76-44-8	Heptachlor	ND	0.69	0.33	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.69	0.26	ug/kg	
72-43-5	Methoxychlor	ND	1.4	0.67	ug/kg	
53494-70-5	Endrin ketone	ND	0.69	0.28	ug/kg	
8001-35-2	Toxaphene	ND	17	8.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	32%		10-147%
877-09-8	Tetrachloro-m-xylene	30%		10-147%
2051-24-3	Decachlorobiphenyl	23%		10-154%
2051-24-3	Decachlorobiphenyl	30%		10-154%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-5B	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-15	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	91.5
Method:	SW846 8082A SW846 3546		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX144332.D	1	01/17/14	JR	01/16/14	OP72072	GXX4867
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.9 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	34	8.9	ug/kg	
11104-28-2	Aroclor 1221	ND	34	21	ug/kg	
11141-16-5	Aroclor 1232	ND	34	17	ug/kg	
53469-21-9	Aroclor 1242	ND	34	11	ug/kg	
12672-29-6	Aroclor 1248	ND	34	10	ug/kg	
11097-69-1	Aroclor 1254	ND	34	16	ug/kg	
11096-82-5	Aroclor 1260	ND	34	11	ug/kg	
11100-14-4	Aroclor 1268	ND	34	10	ug/kg	
37324-23-5	Aroclor 1262	ND	34	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	34%		14-139%
877-09-8	Tetrachloro-m-xylene	36%		14-139%
2051-24-3	Decachlorobiphenyl	42%		10-155%
2051-24-3	Decachlorobiphenyl	31%		10-155%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5B	Date Sampled: 01/13/14
Lab Sample ID: JB57687-15	Date Received: 01/14/14
Matrix: SO - Soil	Percent Solids: 91.5
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	12900	53	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Antimony	< 2.1	2.1	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Arsenic	3.4	2.1	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Barium	48.1	21	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Beryllium	0.40	0.21	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Cadmium	< 0.53	0.53	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Calcium	1690	530	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Chromium	28.9	1.1	mg/kg	1	01/17/14	01/21/14	RR SW846 6010C ³	SW846 3050B ⁴
Cobalt	6.5	5.3	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Copper	13.0	2.7	mg/kg	1	01/17/14	01/21/14	RR SW846 6010C ³	SW846 3050B ⁴
Iron	17200	53	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Lead	16.4	2.1	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Magnesium	3980	530	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Manganese	378	1.6	mg/kg	1	01/17/14	01/21/14	RR SW846 6010C ³	SW846 3050B ⁴
Mercury	0.091	0.033	mg/kg	1	01/17/14	01/17/14	DP SW846 7471B ¹	SW846 7471B ⁵
Nickel	14.1	4.2	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Potassium	< 1100	1100	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Selenium	< 2.1	2.1	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Silver	< 0.53	0.53	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Sodium	< 1100	1100	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Thallium	< 1.1	1.1	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴
Vanadium	29.3	5.3	mg/kg	1	01/17/14	01/21/14	RR SW846 6010C ³	SW846 3050B ⁴
Zinc	50.0	2.1	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ⁴

(1) Instrument QC Batch: MA33090

(2) Instrument QC Batch: MA33099

(3) Instrument QC Batch: MA33118

(4) Prep QC Batch: MP77261

(5) Prep QC Batch: MP77272

Report of Analysis

Client Sample ID: B-5C		
Lab Sample ID: JB57687-16		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 85.3
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191808.D	1	01/17/14	SJM	01/15/14 09:00	n/a	VI7749
Run #2							

Run #1	Initial Weight
Run #1	5.0 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	12	5.3	ug/kg	
71-43-2	Benzene	ND	1.2	0.15	ug/kg	
74-97-5	Bromochloromethane	ND	5.9	0.61	ug/kg	
75-27-4	Bromodichloromethane	ND	5.9	0.33	ug/kg	
75-25-2	Bromoform	ND	5.9	0.31	ug/kg	
74-83-9	Bromomethane	ND	5.9	0.56	ug/kg	
78-93-3	2-Butanone (MEK)	ND	12	5.2	ug/kg	
75-15-0	Carbon disulfide	ND	5.9	0.17	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.9	0.29	ug/kg	
108-90-7	Chlorobenzene	ND	5.9	0.23	ug/kg	
75-00-3	Chloroethane	ND	5.9	1.2	ug/kg	
67-66-3	Chloroform	ND	5.9	0.30	ug/kg	
74-87-3	Chloromethane	ND	5.9	0.40	ug/kg	
110-82-7	Cyclohexane	ND	5.9	0.30	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	12	1.6	ug/kg	
124-48-1	Dibromochloromethane	ND	5.9	0.28	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.2	0.64	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.9	0.40	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.9	0.26	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.9	0.29	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.9	0.41	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.9	0.37	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.38	ug/kg	
75-35-4	1,1-Dichloroethene	ND	5.9	0.34	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	5.9	0.24	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	5.9	0.50	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.9	0.51	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.9	0.27	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.9	0.32	ug/kg	
123-91-1	1,4-Dioxane	ND	150	90	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.21	ug/kg	
76-13-1	Freon 113	ND	5.9	0.51	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5C	
Lab Sample ID: JB57687-16	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 85.3
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.9	2.1	ug/kg	
98-82-8	Isopropylbenzene	ND	5.9	0.17	ug/kg	
79-20-9	Methyl Acetate	ND	5.9	2.0	ug/kg	
108-87-2	Methylcyclohexane	ND	5.9	0.19	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.2	0.40	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.9	1.5	ug/kg	
75-09-2	Methylene chloride	ND	5.9	2.0	ug/kg	
100-42-5	Styrene	ND	5.9	0.27	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.9	0.40	ug/kg	
127-18-4	Tetrachloroethene	0.92	5.9	0.48	ug/kg	J
108-88-3	Toluene	ND	1.2	0.17	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.9	0.24	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.9	0.21	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.9	0.34	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.9	0.96	ug/kg	
79-01-6	Trichloroethene	ND	5.9	0.41	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.9	0.26	ug/kg	
75-01-4	Vinyl chloride	ND	5.9	0.40	ug/kg	
	m,p-Xylene	ND	1.2	0.57	ug/kg	
95-47-6	o-Xylene	ND	1.2	0.21	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.21	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		59-130%
17060-07-0	1,2-Dichloroethane-D4	106%		65-123%
2037-26-5	Toluene-D8	92%		80-124%
460-00-4	4-Bromofluorobenzene	103%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5D		
Lab Sample ID: JB57687-17		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 97.3
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191809.D	1	01/17/14	SJM	01/15/14 09:00	n/a	VI7749
Run #2							

Run #	Initial Weight
Run #1	3.9 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	13	6.0	ug/kg	
71-43-2	Benzene	ND	1.3	0.17	ug/kg	
74-97-5	Bromochloromethane	ND	6.6	0.68	ug/kg	
75-27-4	Bromodichloromethane	ND	6.6	0.37	ug/kg	
75-25-2	Bromoform	ND	6.6	0.35	ug/kg	
74-83-9	Bromomethane	ND	6.6	0.63	ug/kg	
78-93-3	2-Butanone (MEK)	ND	13	5.8	ug/kg	
75-15-0	Carbon disulfide	ND	6.6	0.19	ug/kg	
56-23-5	Carbon tetrachloride	ND	6.6	0.33	ug/kg	
108-90-7	Chlorobenzene	ND	6.6	0.26	ug/kg	
75-00-3	Chloroethane	ND	6.6	1.3	ug/kg	
67-66-3	Chloroform	ND	6.6	0.33	ug/kg	
74-87-3	Chloromethane	ND	6.6	0.45	ug/kg	
110-82-7	Cyclohexane	ND	6.6	0.34	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	13	1.8	ug/kg	
124-48-1	Dibromochloromethane	ND	6.6	0.32	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.3	0.72	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	6.6	0.45	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	6.6	0.29	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	6.6	0.33	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.6	0.47	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6.6	0.41	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.3	0.42	ug/kg	
75-35-4	1,1-Dichloroethene	ND	6.6	0.38	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	6.6	0.27	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	6.6	0.56	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.6	0.57	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.6	0.30	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.6	0.36	ug/kg	
123-91-1	1,4-Dioxane	ND	160	100	ug/kg	
100-41-4	Ethylbenzene	ND	1.3	0.23	ug/kg	
76-13-1	Freon 113	ND	6.6	0.57	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5D	
Lab Sample ID: JB57687-17	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 97.3
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	6.6	2.3	ug/kg	
98-82-8	Isopropylbenzene	ND	6.6	0.19	ug/kg	
79-20-9	Methyl Acetate	ND	6.6	2.2	ug/kg	
108-87-2	Methylcyclohexane	ND	6.6	0.22	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.3	0.45	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.6	1.7	ug/kg	
75-09-2	Methylene chloride	3.0	6.6	2.2	ug/kg	J
100-42-5	Styrene	ND	6.6	0.31	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.6	0.45	ug/kg	
127-18-4	Tetrachloroethene	1.2	6.6	0.54	ug/kg	J
108-88-3	Toluene	ND	1.3	0.19	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.6	0.27	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.6	0.24	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.6	0.38	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	6.6	1.1	ug/kg	
79-01-6	Trichloroethene	ND	6.6	0.46	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.6	0.30	ug/kg	
75-01-4	Vinyl chloride	ND	6.6	0.45	ug/kg	
	m,p-Xylene	ND	1.3	0.64	ug/kg	
95-47-6	o-Xylene	ND	1.3	0.23	ug/kg	
1330-20-7	Xylene (total)	ND	1.3	0.23	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		59-130%
17060-07-0	1,2-Dichloroethane-D4	107%		65-123%
2037-26-5	Toluene-D8	92%		80-124%
460-00-4	4-Bromofluorobenzene	102%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5E		
Lab Sample ID: JB57687-18		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 94.8
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191810.D	1	01/17/14	SJM	01/15/14 09:00	n/a	VI7749
Run #2							

Run #1	Initial Weight
Run #1	3.9 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	14	6.2	ug/kg	
71-43-2	Benzene	ND	1.4	0.17	ug/kg	
74-97-5	Bromochloromethane	ND	6.8	0.70	ug/kg	
75-27-4	Bromodichloromethane	ND	6.8	0.38	ug/kg	
75-25-2	Bromoform	ND	6.8	0.35	ug/kg	
74-83-9	Bromomethane	ND	6.8	0.65	ug/kg	
78-93-3	2-Butanone (MEK)	ND	14	6.0	ug/kg	
75-15-0	Carbon disulfide	ND	6.8	0.19	ug/kg	
56-23-5	Carbon tetrachloride	ND	6.8	0.34	ug/kg	
108-90-7	Chlorobenzene	ND	6.8	0.27	ug/kg	
75-00-3	Chloroethane	ND	6.8	1.3	ug/kg	
67-66-3	Chloroform	ND	6.8	0.34	ug/kg	
74-87-3	Chloromethane	ND	6.8	0.46	ug/kg	
110-82-7	Cyclohexane	ND	6.8	0.35	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	14	1.8	ug/kg	
124-48-1	Dibromochloromethane	ND	6.8	0.33	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.4	0.74	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	6.8	0.46	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	6.8	0.29	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	6.8	0.34	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.8	0.48	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6.8	0.42	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.4	0.43	ug/kg	
75-35-4	1,1-Dichloroethene	ND	6.8	0.39	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	6.8	0.28	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	6.8	0.57	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.8	0.59	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.8	0.31	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.8	0.37	ug/kg	
123-91-1	1,4-Dioxane	ND	170	100	ug/kg	
100-41-4	Ethylbenzene	ND	1.4	0.24	ug/kg	
76-13-1	Freon 113	ND	6.8	0.59	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5E	
Lab Sample ID: JB57687-18	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 94.8
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	6.8	2.4	ug/kg	
98-82-8	Isopropylbenzene	ND	6.8	0.20	ug/kg	
79-20-9	Methyl Acetate	ND	6.8	2.3	ug/kg	
108-87-2	Methylcyclohexane	ND	6.8	0.22	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.4	0.46	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.8	1.8	ug/kg	
75-09-2	Methylene chloride	ND	6.8	2.3	ug/kg	
100-42-5	Styrene	ND	6.8	0.31	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.8	0.46	ug/kg	
127-18-4	Tetrachloroethene	0.95	6.8	0.55	ug/kg	J
108-88-3	Toluene	ND	1.4	0.19	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.8	0.28	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.8	0.24	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.8	0.39	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	6.8	1.1	ug/kg	
79-01-6	Trichloroethene	ND	6.8	0.47	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.8	0.30	ug/kg	
75-01-4	Vinyl chloride	ND	6.8	0.46	ug/kg	
	m,p-Xylene	ND	1.4	0.65	ug/kg	
95-47-6	o-Xylene	ND	1.4	0.24	ug/kg	
1330-20-7	Xylene (total)	ND	1.4	0.24	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		59-130%
17060-07-0	1,2-Dichloroethane-D4	106%		65-123%
2037-26-5	Toluene-D8	93%		80-124%
460-00-4	4-Bromofluorobenzene	105%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-3A	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-19	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	94.6
Method:	SW846 8260C SW846 5035		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191811.D	1	01/17/14	SJM	01/15/14 09:00	n/a	VI7749
Run #2							

Run #	Initial Weight
Run #1	4.5 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	12	5.4	ug/kg	
71-43-2	Benzene	ND	1.2	0.15	ug/kg	
74-97-5	Bromochloromethane	ND	5.9	0.61	ug/kg	
75-27-4	Bromodichloromethane	ND	5.9	0.33	ug/kg	
75-25-2	Bromoform	ND	5.9	0.31	ug/kg	
74-83-9	Bromomethane	ND	5.9	0.56	ug/kg	
78-93-3	2-Butanone (MEK)	ND	12	5.2	ug/kg	
75-15-0	Carbon disulfide	ND	5.9	0.17	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.9	0.29	ug/kg	
108-90-7	Chlorobenzene	ND	5.9	0.23	ug/kg	
75-00-3	Chloroethane	ND	5.9	1.2	ug/kg	
67-66-3	Chloroform	ND	5.9	0.30	ug/kg	
74-87-3	Chloromethane	ND	5.9	0.40	ug/kg	
110-82-7	Cyclohexane	ND	5.9	0.30	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	12	1.6	ug/kg	
124-48-1	Dibromochloromethane	ND	5.9	0.28	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.2	0.64	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.9	0.40	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.9	0.26	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.9	0.29	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.9	0.41	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.9	0.37	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.38	ug/kg	
75-35-4	1,1-Dichloroethene	ND	5.9	0.34	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	5.9	0.24	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	5.9	0.50	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.9	0.51	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.9	0.27	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.9	0.32	ug/kg	
123-91-1	1,4-Dioxane	ND	150	90	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.21	ug/kg	
76-13-1	Freon 113	ND	5.9	0.51	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-3A	
Lab Sample ID: JB57687-19	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 94.6
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.9	2.1	ug/kg	
98-82-8	Isopropylbenzene	ND	5.9	0.17	ug/kg	
79-20-9	Methyl Acetate	ND	5.9	2.0	ug/kg	
108-87-2	Methylcyclohexane	ND	5.9	0.19	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.2	0.40	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.9	1.6	ug/kg	
75-09-2	Methylene chloride	ND	5.9	2.0	ug/kg	
100-42-5	Styrene	ND	5.9	0.27	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.9	0.40	ug/kg	
127-18-4	Tetrachloroethene	8.6	5.9	0.48	ug/kg	
108-88-3	Toluene	ND	1.2	0.17	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.9	0.24	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.9	0.21	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.9	0.34	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.9	0.96	ug/kg	
79-01-6	Trichloroethene	ND	5.9	0.41	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.9	0.26	ug/kg	
75-01-4	Vinyl chloride	ND	5.9	0.40	ug/kg	
	m,p-Xylene	ND	1.2	0.57	ug/kg	
95-47-6	o-Xylene	ND	1.2	0.21	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.21	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		59-130%
17060-07-0	1,2-Dichloroethane-D4	103%		65-123%
2037-26-5	Toluene-D8	92%		80-124%
460-00-4	4-Bromofluorobenzene	104%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-3B		
Lab Sample ID: JB57687-20		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 97.0
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191812.D	1	01/17/14	SJM	01/15/14 09:00	n/a	VI7749
Run #2							

Run #1	Initial Weight
Run #1	4.0 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	13	5.9	ug/kg	
71-43-2	Benzene	ND	1.3	0.16	ug/kg	
74-97-5	Bromochloromethane	ND	6.4	0.67	ug/kg	
75-27-4	Bromodichloromethane	ND	6.4	0.36	ug/kg	
75-25-2	Bromoform	ND	6.4	0.34	ug/kg	
74-83-9	Bromomethane	ND	6.4	0.62	ug/kg	
78-93-3	2-Butanone (MEK)	ND	13	5.7	ug/kg	
75-15-0	Carbon disulfide	ND	6.4	0.18	ug/kg	
56-23-5	Carbon tetrachloride	ND	6.4	0.32	ug/kg	
108-90-7	Chlorobenzene	ND	6.4	0.25	ug/kg	
75-00-3	Chloroethane	ND	6.4	1.3	ug/kg	
67-66-3	Chloroform	ND	6.4	0.33	ug/kg	
74-87-3	Chloromethane	ND	6.4	0.44	ug/kg	
110-82-7	Cyclohexane	ND	6.4	0.33	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	13	1.7	ug/kg	
124-48-1	Dibromochloromethane	ND	6.4	0.31	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.3	0.71	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	6.4	0.44	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	6.4	0.28	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	6.4	0.32	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.4	0.45	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6.4	0.40	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.3	0.41	ug/kg	
75-35-4	1,1-Dichloroethene	ND	6.4	0.37	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	6.4	0.27	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	6.4	0.55	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.4	0.56	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.4	0.29	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.4	0.35	ug/kg	
123-91-1	1,4-Dioxane	ND	160	98	ug/kg	
100-41-4	Ethylbenzene	ND	1.3	0.23	ug/kg	
76-13-1	Freon 113	ND	6.4	0.56	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-3B	
Lab Sample ID: JB57687-20	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 97.0
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	6.4	2.3	ug/kg	
98-82-8	Isopropylbenzene	ND	6.4	0.19	ug/kg	
79-20-9	Methyl Acetate	ND	6.4	2.2	ug/kg	
108-87-2	Methylcyclohexane	ND	6.4	0.21	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.3	0.44	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.4	1.7	ug/kg	
75-09-2	Methylene chloride	ND	6.4	2.2	ug/kg	
100-42-5	Styrene	ND	6.4	0.30	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.4	0.44	ug/kg	
127-18-4	Tetrachloroethene	6.9	6.4	0.53	ug/kg	
108-88-3	Toluene	ND	1.3	0.18	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.4	0.27	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.4	0.23	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.4	0.37	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	6.4	1.1	ug/kg	
79-01-6	Trichloroethene	ND	6.4	0.45	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.4	0.29	ug/kg	
75-01-4	Vinyl chloride	ND	6.4	0.44	ug/kg	
	m,p-Xylene	ND	1.3	0.62	ug/kg	
95-47-6	o-Xylene	ND	1.3	0.23	ug/kg	
1330-20-7	Xylene (total)	ND	1.3	0.23	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		59-130%
17060-07-0	1,2-Dichloroethane-D4	105%		65-123%
2037-26-5	Toluene-D8	92%		80-124%
460-00-4	4-Bromofluorobenzene	102%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-3C		
Lab Sample ID: JB57687-21		Date Sampled: 01/13/14
Matrix: SO - Soil		Date Received: 01/14/14
Method: SW846 8260C SW846 5035		Percent Solids: 95.4
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191813.D	1	01/17/14	SJM	01/15/14 09:00	n/a	VI7749
Run #2							

Run #1	Initial Weight
Run #1	4.2 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	12	5.7	ug/kg	
71-43-2	Benzene	ND	1.2	0.16	ug/kg	
74-97-5	Bromochloromethane	ND	6.2	0.65	ug/kg	
75-27-4	Bromodichloromethane	ND	6.2	0.35	ug/kg	
75-25-2	Bromoform	ND	6.2	0.33	ug/kg	
74-83-9	Bromomethane	ND	6.2	0.60	ug/kg	
78-93-3	2-Butanone (MEK)	ND	12	5.5	ug/kg	
75-15-0	Carbon disulfide	ND	6.2	0.18	ug/kg	
56-23-5	Carbon tetrachloride	ND	6.2	0.31	ug/kg	
108-90-7	Chlorobenzene	ND	6.2	0.25	ug/kg	
75-00-3	Chloroethane	ND	6.2	1.2	ug/kg	
67-66-3	Chloroform	ND	6.2	0.32	ug/kg	
74-87-3	Chloromethane	ND	6.2	0.43	ug/kg	
110-82-7	Cyclohexane	ND	6.2	0.32	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	12	1.7	ug/kg	
124-48-1	Dibromochloromethane	ND	6.2	0.30	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.2	0.68	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	6.2	0.42	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	6.2	0.27	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	6.2	0.31	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.2	0.44	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6.2	0.39	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.40	ug/kg	
75-35-4	1,1-Dichloroethene	ND	6.2	0.36	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	6.2	0.26	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	6.2	0.53	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.2	0.54	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.2	0.28	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.2	0.34	ug/kg	
123-91-1	1,4-Dioxane	ND	160	95	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.22	ug/kg	
76-13-1	Freon 113	ND	6.2	0.54	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-3C	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-21	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	95.4
Method:	SW846 8260C SW846 5035		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	6.2	2.2	ug/kg	
98-82-8	Isopropylbenzene	ND	6.2	0.18	ug/kg	
79-20-9	Methyl Acetate	ND	6.2	2.1	ug/kg	
108-87-2	Methylcyclohexane	ND	6.2	0.20	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.2	0.43	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.2	1.6	ug/kg	
75-09-2	Methylene chloride	ND	6.2	2.1	ug/kg	
100-42-5	Styrene	ND	6.2	0.29	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.2	0.43	ug/kg	
127-18-4	Tetrachloroethene	2.2	6.2	0.51	ug/kg	J
108-88-3	Toluene	ND	1.2	0.18	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.2	0.26	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.2	0.23	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.2	0.36	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	6.2	1.0	ug/kg	
79-01-6	Trichloroethene	ND	6.2	0.44	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.2	0.28	ug/kg	
75-01-4	Vinyl chloride	ND	6.2	0.43	ug/kg	
	m,p-Xylene	ND	1.2	0.60	ug/kg	
95-47-6	o-Xylene	ND	1.2	0.22	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.22	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		59-130%
17060-07-0	1,2-Dichloroethane-D4	106%		65-123%
2037-26-5	Toluene-D8	92%		80-124%
460-00-4	4-Bromofluorobenzene	102%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-3D	
Lab Sample ID:	JB57687-22	Date Sampled: 01/13/14
Matrix:	SO - Soil	Date Received: 01/14/14
Method:	SW846 8270D SW846 3550C	Percent Solids: 95.2
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P81905.D	1	01/17/14	JL	01/16/14	OP72071	EP3485
Run #2							

	Initial Weight	Final Volume
Run #1	32.2 g	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	66	33	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	160	33	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	160	53	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	160	55	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	660	40	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	660	40	ug/kg	
95-48-7	2-Methylphenol	ND	66	38	ug/kg	
	3&4-Methylphenol	ND	66	42	ug/kg	
88-75-5	2-Nitrophenol	ND	160	35	ug/kg	
100-02-7	4-Nitrophenol	ND	330	56	ug/kg	
87-86-5	Pentachlorophenol	ND	330	56	ug/kg	
108-95-2	Phenol	ND	66	35	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	160	34	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	160	38	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	160	31	ug/kg	
83-32-9	Acenaphthene	ND	33	9.5	ug/kg	
208-96-8	Acenaphthylene	ND	33	11	ug/kg	
98-86-2	Acetophenone	ND	160	5.8	ug/kg	
120-12-7	Anthracene	ND	33	12	ug/kg	
1912-24-9	Atrazine	ND	66	6.5	ug/kg	
56-55-3	Benzo(a)anthracene	ND	33	11	ug/kg	
50-32-8	Benzo(a)pyrene	ND	33	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	33	11	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	33	12	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	33	12	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	66	12	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	66	19	ug/kg	
92-52-4	1,1'-Biphenyl	ND	66	3.8	ug/kg	
100-52-7	Benzaldehyde	ND	160	7.6	ug/kg	
91-58-7	2-Chloronaphthalene	ND	66	10	ug/kg	
106-47-8	4-Chloroaniline	ND	160	11	ug/kg	
86-74-8	Carbazole	ND	66	15	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-3D	Date Sampled:	01/13/14
Lab Sample ID:	JB57687-22	Date Received:	01/14/14
Matrix:	SO - Soil	Percent Solids:	95.2
Method:	SW846 8270D SW846 3550C		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	66	10	ug/kg	
218-01-9	Chrysene	ND	33	11	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	66	13	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	66	9.9	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	66	9.8	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	66	9.9	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	33	14	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	33	13	ug/kg	
91-94-1	3,3' -Dichlorobenzidine	ND	66	8.4	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	33	11	ug/kg	
132-64-9	Dibenzofuran	ND	66	9.8	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	66	7.3	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	66	16	ug/kg	
84-66-2	Diethyl phthalate	ND	66	11	ug/kg	
131-11-3	Dimethyl phthalate	ND	66	12	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	43.8	66	29	ug/kg	J
206-44-0	Fluoranthene	ND	33	15	ug/kg	
86-73-7	Fluorene	ND	33	11	ug/kg	
118-74-1	Hexachlorobenzene	ND	66	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	33	9.1	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	330	34	ug/kg	
67-72-1	Hexachloroethane	ND	160	9.1	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	33	11	ug/kg	
78-59-1	Isophorone	ND	66	8.8	ug/kg	
91-57-6	2-Methylnaphthalene	ND	66	18	ug/kg	
88-74-4	2-Nitroaniline	ND	160	14	ug/kg	
99-09-2	3-Nitroaniline	ND	160	13	ug/kg	
100-01-6	4-Nitroaniline	ND	160	13	ug/kg	
91-20-3	Naphthalene	ND	33	9.0	ug/kg	
98-95-3	Nitrobenzene	ND	66	9.5	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	66	8.0	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	160	20	ug/kg	
85-01-8	Phenanthrene	ND	33	15	ug/kg	
129-00-0	Pyrene	ND	33	13	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	160	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	79%		13-110%
4165-62-2	Phenol-d5	74%		15-110%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-3D	
Lab Sample ID: JB57687-22	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8270D SW846 3550C	Percent Solids: 95.2
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	92%		20-123%
4165-60-0	Nitrobenzene-d5	73%		10-110%
321-60-8	2-Fluorobiphenyl	79%		17-110%
1718-51-0	Terphenyl-d14	88%		30-124%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-3D	
Lab Sample ID:	JB57687-22	Date Sampled: 01/13/14
Matrix:	SO - Soil	Date Received: 01/14/14
Method:	SW846 8081B SW846 3546	Percent Solids: 95.2
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G8371.D	1	01/20/14	JN	01/16/14	OP72052	G6G237
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.71	0.32	ug/kg	
319-84-6	alpha-BHC	ND	0.71	0.21	ug/kg	
319-85-7	beta-BHC	ND	0.71	0.44	ug/kg	
319-86-8	delta-BHC	ND	0.71	0.35	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.71	0.35	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.71	0.26	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.71	0.49	ug/kg	
60-57-1	Dieldrin	ND	0.71	0.28	ug/kg	
72-54-8	4,4'-DDD	ND	0.71	0.39	ug/kg	
72-55-9	4,4'-DDE	ND	0.71	0.28	ug/kg	
50-29-3	4,4'-DDT	ND	0.71	0.35	ug/kg	
72-20-8	Endrin	ND	0.71	0.23	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.71	0.30	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.71	0.37	ug/kg	
959-98-8	Endosulfan-I	ND	0.71	0.27	ug/kg	
33213-65-9	Endosulfan-II	ND	0.71	0.42	ug/kg	
76-44-8	Heptachlor	ND	0.71	0.34	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.71	0.26	ug/kg	
72-43-5	Methoxychlor	ND	1.4	0.69	ug/kg	
53494-70-5	Endrin ketone	ND	0.71	0.29	ug/kg	
8001-35-2	Toxaphene	ND	18	8.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	22%		10-147%
877-09-8	Tetrachloro-m-xylene	22%		10-147%
2051-24-3	Decachlorobiphenyl	13%		10-154%
2051-24-3	Decachlorobiphenyl	20%		10-154%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-3D						
Lab Sample ID:	JB57687-22					Date Sampled:	01/13/14
Matrix:	SO - Soil					Date Received:	01/14/14
Method:	SW846 8082A SW846 3546					Percent Solids:	95.2
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX144337.D	1	01/17/14	JR	01/16/14	OP72072	GXX4867
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	35	9.2	ug/kg	
11104-28-2	Aroclor 1221	ND	35	21	ug/kg	
11141-16-5	Aroclor 1232	ND	35	18	ug/kg	
53469-21-9	Aroclor 1242	ND	35	11	ug/kg	
12672-29-6	Aroclor 1248	ND	35	11	ug/kg	
11097-69-1	Aroclor 1254	ND	35	17	ug/kg	
11096-82-5	Aroclor 1260	ND	35	12	ug/kg	
11100-14-4	Aroclor 1268	ND	35	10	ug/kg	
37324-23-5	Aroclor 1262	ND	35	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	20%		14-139%
877-09-8	Tetrachloro-m-xylene	21%		14-139%
2051-24-3	Decachlorobiphenyl	24%		10-155%
2051-24-3	Decachlorobiphenyl	18%		10-155%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-3D	Date Sampled: 01/13/14
Lab Sample ID: JB57687-22	Date Received: 01/14/14
Matrix: SO - Soil	Percent Solids: 95.2
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	7650	52	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Antimony	< 2.1	2.1	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Arsenic	< 2.1	2.1	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Barium	33.1	21	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Beryllium	0.28	0.21	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Cadmium	< 0.52	0.52	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Calcium	1290	520	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Chromium	14.5	1.0	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Cobalt	5.8	5.2	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Copper	13.3	2.6	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Iron	12000	52	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Lead	3.2	2.1	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Magnesium	5270	520	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Manganese	272	1.6	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Mercury	< 0.034	0.034	mg/kg	1	01/17/14	01/17/14	DP SW846 7471B ¹	SW846 7471B ⁴
Nickel	15.0	4.2	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Potassium	1190	1000	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Selenium	< 2.1	2.1	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Silver	< 0.52	0.52	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Sodium	< 1000	1000	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Thallium	< 1.0	1.0	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Vanadium	19.7	5.2	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³
Zinc	42.3	2.1	mg/kg	1	01/17/14	01/17/14	ND SW846 6010C ²	SW846 3050B ³

(1) Instrument QC Batch: MA33090

(2) Instrument QC Batch: MA33099

(3) Prep QC Batch: MP77261

(4) Prep QC Batch: MP77272

Report of Analysis

Client Sample ID:	B-3E	
Lab Sample ID:	JB57687-23	Date Sampled: 01/13/14
Matrix:	SO - Soil	Date Received: 01/14/14
Method:	SW846 8260C SW846 5035	Percent Solids: 92.7
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I191814.D	1	01/17/14	SJM	01/15/14 09:00	n/a	VI7749
Run #2							

Run #1	Initial Weight
Run #1	4.5 g
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	12	5.5	ug/kg	
71-43-2	Benzene	ND	1.2	0.15	ug/kg	
74-97-5	Bromochloromethane	ND	6.0	0.62	ug/kg	
75-27-4	Bromodichloromethane	ND	6.0	0.34	ug/kg	
75-25-2	Bromoform	ND	6.0	0.31	ug/kg	
74-83-9	Bromomethane	ND	6.0	0.58	ug/kg	
78-93-3	2-Butanone (MEK)	ND	12	5.3	ug/kg	
75-15-0	Carbon disulfide	ND	6.0	0.17	ug/kg	
56-23-5	Carbon tetrachloride	ND	6.0	0.30	ug/kg	
108-90-7	Chlorobenzene	ND	6.0	0.24	ug/kg	
75-00-3	Chloroethane	ND	6.0	1.2	ug/kg	
67-66-3	Chloroform	ND	6.0	0.30	ug/kg	
74-87-3	Chloromethane	ND	6.0	0.41	ug/kg	
110-82-7	Cyclohexane	ND	6.0	0.31	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	12	1.6	ug/kg	
124-48-1	Dibromochloromethane	ND	6.0	0.29	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.2	0.66	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	6.0	0.41	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	6.0	0.26	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	6.0	0.30	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.0	0.42	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6.0	0.38	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.38	ug/kg	
75-35-4	1,1-Dichloroethene	ND	6.0	0.34	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	6.0	0.25	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	6.0	0.51	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.0	0.52	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.0	0.27	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.0	0.32	ug/kg	
123-91-1	1,4-Dioxane	ND	150	92	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.21	ug/kg	
76-13-1	Freon 113	ND	6.0	0.52	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-3E	
Lab Sample ID: JB57687-23	Date Sampled: 01/13/14
Matrix: SO - Soil	Date Received: 01/14/14
Method: SW846 8260C SW846 5035	Percent Solids: 92.7
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	6.0	2.1	ug/kg	
98-82-8	Isopropylbenzene	ND	6.0	0.18	ug/kg	
79-20-9	Methyl Acetate	ND	6.0	2.0	ug/kg	
108-87-2	Methylcyclohexane	ND	6.0	0.20	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.2	0.41	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.0	1.6	ug/kg	
75-09-2	Methylene chloride	ND	6.0	2.0	ug/kg	
100-42-5	Styrene	ND	6.0	0.28	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.0	0.41	ug/kg	
127-18-4	Tetrachloroethene	2.3	6.0	0.49	ug/kg	J
108-88-3	Toluene	ND	1.2	0.17	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.0	0.25	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.0	0.22	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.0	0.34	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	6.0	0.98	ug/kg	
79-01-6	Trichloroethene	ND	6.0	0.42	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.0	0.27	ug/kg	
75-01-4	Vinyl chloride	ND	6.0	0.41	ug/kg	
	m,p-Xylene	ND	1.2	0.58	ug/kg	
95-47-6	o-Xylene	ND	1.2	0.21	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.21	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		59-130%
17060-07-0	1,2-Dichloroethane-D4	106%		65-123%
2037-26-5	Toluene-D8	92%		80-124%
460-00-4	4-Bromofluorobenzene	103%		71-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

SLL
30

CHAIN OF CUSTODY

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FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JB57687

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)				Matrix Codes
Company Name Sustainable Development, Inc		Project Name SDI - Bridge		TCL VOC TCL SVOC PCBs Pesticides TAL Metals				DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank
Street Address 166 Woodside Avenue		Street 39-26 30th Street						
City State Zip West Harrison, NY 10604		City State Zip Long Island City NY						
Project Contact Al Neshelawat		Project # BC-001						
Phone # 914-220-2404		Client Purchase Order # BC-001						
Fax # 914-400-6714		Project Manager Al Neshelawat		Attention:				

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection		Sampled by	Matrix	# of bottles	Number of preserved Bottles										LAB USE ONLY
			Date	Time				HCl	NH3	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE			
1	B-1A		1/13/14	9:10	AK	S	4											D29
2	B-1B			9:18		S	4											14373
3	B-1C			9:25		S	4											14B4
4	B-1D			9:34		S	5					2						4984
5	B-4A			11:32		S	4											
6	B-4B			11:37		S	4											
7	B-4C			11:44		S	5					2						
8	B-4D			11:52		S	4											
9	B-2A			12:39		S	4											
10	B-2B			12:47		S	4											
11	B-2C			12:50		S	4											
12	B-2D			13:04		S	1											

Turnaround Time (Business days)	Approved By (Accutest PM) / Date:	Data Deliverable Information	Comments / Special Instructions
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY <input type="checkbox"/> other		<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> NJ Reduced <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input type="checkbox"/> Other	3 Encores per 5 samples @ 1/14/14 An

Sample Custody must be documented below each time samples change possession, including courier delivery.							
Relinquished by: <i>[Signature]</i>	Date Time: 1/14/14 1040	Received By: <i>[Signature]</i>	Date Time: 1/14/14	Relinquished by: <i>[Signature]</i>	Date Time: 1/14/14	Received By: <i>[Signature]</i>	Date Time: 1/14/14
Relinquished by: <i>[Signature]</i>	Date Time:	Received By: <i>[Signature]</i>	Date Time:	Relinquished by: <i>[Signature]</i>	Date Time:	Received By: <i>[Signature]</i>	Date Time:
Relinquished by: <i>[Signature]</i>	Date Time:	Received By: <i>[Signature]</i>	Date Time:	Relinquished by: <i>[Signature]</i>	Date Time:	Received By: <i>[Signature]</i>	Date Time:

Custody Seal # **N/A** Intact Not intact
 Preserved where applicable
 On Ice **0.0°C**
PR

JB57687: Chain of Custody

Page 1 of 6

2235 Route 130, Dayton, NJ 08810
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FED-EX Tracking #
Accutest Quota #
Bottle Order Control #
Accutest Job # JB57687

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)										Matrix Codes
Company Name <u>Jasbinable Development, Inc.</u>		Project Name <u>SDI - Bridge</u>		<p>TCL VOC TCL SVOC PCBs Pesticides TAL Metals</p>										DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank
Street Address <u>166 Woodside Avenue</u>		Street <u>39-26 30th street</u>												
City <u>West Harrison, NY 10604</u>		City <u>Long Island City, NY</u>		Billing Information (if different from Report to)										LAB USE ONLY
Project Contact <u>AI Nesheiwst</u>		Project #		Company Name <u>same</u>										
Phone # <u>914-220-2404</u>		Client Purchase Order # <u>BC-001</u>		Street Address										
Sampler(s) Name(s) <u>Bill Morrison</u>		Project Manager <u>AI Nesheiwst</u>		City										
Phone # <u>444-9784</u>		Attention:		State										
Zip <u>10604</u>		Collection		Zip										

Account Sample #	Field ID / Point of Collection	MECH/DI Val #	Date	Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles																
								HCl	NaOH	HNO3	H2SO4	None	DI Water	MEQH	EMCORE									
13	B-2E		1/13/14	13:00	BA	5	4																	
14	B-5A			13:50		5	4																	
15	B-5B			13:52		5	1																	
16	B-5C			13:56		5	4																	
17	B-5D			14:04		5	4																	
18	B-5E			14:10		5	4																	
19	B-3A			15:08		5	4																	
20	B-3B			15:14		5	4																	
21	B-3C			15:22		5	4																	
22	B-3D			15:30		5	1																	
23	B-3E	300		15:33		5	4																	

Turnaround Time (Business days)
 Std. 10 Business Days
 5 Day RUSH
 3 Day EMERGENCY
 2 Day EMERGENCY
 1 Day EMERGENCY
 other

Approved By (Accutest PM): / Date:
 _____ / _____

Data Deliverable Information
 Commercial "A" (Level 1)
 Commercial "B" (Level 2)
 FULLT1 (Level 3+4)
 NJ Reduced
 Commercial "C"
 NYASP Category A
 NYASP Category B
 State Forms
 EDD Format
 Other

Comments / Special Instructions

Emergency & Rush TIA data available VIA Lablink

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: <u>Bill Morrison</u>	Date/Time: <u>1/14/14 10:40</u>	Received By: <u>[Signature]</u>	Date/Time: <u>1/14/14 10:40</u>	Relinquished By: <u>[Signature]</u>	Date/Time: <u>1/14/14 10:40</u>	Received By: <u>[Signature]</u>
Relinquished by Sampler: <u>[Signature]</u>	Date/Time: <u></u>	Received By: <u>[Signature]</u>	Date/Time: <u></u>	Relinquished By: <u>[Signature]</u>	Date/Time: <u></u>	Received By: <u>[Signature]</u>
Relinquished by:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:

Custody Seal # N/A Intact Not Intact
 Preserved where applicable On Ice Dry Temp 0.0°C

JB57687: Chain of Custody

Page 2 of 6



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB57687
 Client: SUSTAINABLE DEVELOP INC
 Project: SDI BRIDGE
Date / Time Received: 1/14/2014 1845
 Delivery Method: Accutest Courier
 Airbill #s:

Cooler Temps (Initial/Adjusted): 0

<u>Cooler Security</u>	<u>Y or N</u>	<u>Y or N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>	3. COC Present: <input checked="" type="checkbox"/> <input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/> <input type="checkbox"/>	4. Smpl Dates/Time OK <input checked="" type="checkbox"/> <input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y or N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Cooler temp verification:	Bar Therm
3. Cooler media:	Ice (Bag)
4. No. Coolers	1

<u>Quality Control Preservation</u>	<u>Y</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. VOCs headspace free:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y or N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/> <input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/> <input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y or N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/> <input type="checkbox"/>
3. Condition of sample:	Intact

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Bottles received for unspecified tests:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Compositing instructions clear:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments No analyses marked off on COC page 2.
 -15 Rec'd 1x 8 oz.
 -22 Rec'd 1x 300ml
 -13,14 thru 21, 23 Rec'd 1x 60ml and 3 encores



Sample Receipt Summary - Problem Resolution

Accutest Job Number: JB57687

CSR: Tammy McCloskey

Response Date: 1/16/2014

Response: Client (Bill Krafton) has sent a revised coc showing analysis required for all samples on page 2 of 2



SLU
90

CHAIN OF CUSTODY

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FED-EX Tracking #
Bolite Order Control #
Account Quote #
Accutest Job # **JB57687**

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)										Matrix Codes		
Company Name Sustainable Development, Inc.		Project Name SDI - Bridge		<p style="writing-mode: vertical-rl; transform: rotate(180deg);"> TCL VOC TCL SVOC PCBs Pesticides TAL Metals </p>										<p> DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB-Field Blank EB-Equipment Blank RB - Rinse Blank TB-Trip Blank </p>		
Street Address 166 Woodside Avenue		Street 39-26 30th Street														
City West Haverhill, NY 10604		City Long Island City, NY														
Project Contact Al Neshelwitz		Project # XXXXXXXXXX														
Phone # 914-220-2404		Client Purchase Order # BC-001														
Sample(s) Name(s) Bill Koston		Project Manager Al Neshelwitz														
Account Sample #	Field ID / Point of Collection	MEQ/MDL Val #	Date	Time	Sampled by	Matrix	# of bottles	IC1	MECH	HMDD	HMDD4	HMDD6	DI Water	MECH	EMCORE	LAB USE ONLY
1	B-1A		1/13/14	9:10	DK	S	4					1	3	3	✓	D79
2	B-1B			9:18		S	4					1	3	3	✓	M4373
3	B-1C			9:25		S	4					1	3	3	✓	1484
4	B-1D			9:34		S	8					2	3	3	✓	4984
5	B-4A			11:32		S	4					1	3	3	✓	
6	B-4B			11:37		S	4					1	3	3	✓	
7	B-4C			11:44		S	5					2	3	3	✓	
8	B-4D			11:52		S	4					1	3	3	✓	
9	B-2A			12:33		S	4					1	3	3	✓	
10	B-2B			12:41		S	4					1	3	3	✓	
11	B-2C		✓	12:50		S	4					1	3	3	✓	
12	B-2D			13:09		S	1					1	3	3	✓	
Turnaround Time (Business days)		Approved By (Accutest PM) / Date:		Data Deliverable Information										Comments / Special Instructions		
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY <input type="checkbox"/> other				<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULLT1 (Level 344) <input type="checkbox"/> NJ Reduced <input type="checkbox"/> Commercial "C" Commercial "A" = Results Only Commercial "B" = Results + QC Summary NJ Reduced = Results + QC Summary + Partial Raw data										<input checked="" type="checkbox"/> NYASP Category A <input checked="" type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input type="checkbox"/> Other		
Emergency & Rush TIA data available VIA Lablink																
Sample Custody must be documented below each time samples change possession, including courier delivery.																
Relinquished by: Bill Koston		Date/Time: 1/14/14 1040		Received By: [Signature]		Date/Time: 1/14/14		Relinquished by: [Signature]		Date/Time: 1/14/14		Received By: [Signature]				
Relinquished by: [Signature]		Date/Time:		Received By: [Signature]		Date/Time:		Relinquished by: [Signature]		Date/Time:		Received By: [Signature]				
Relinquished by: [Signature]		Date/Time:		Received By: [Signature]		Date/Time:		Relinquished by: [Signature]		Date/Time:		Received By: [Signature]				
				Custody Seal #				<input type="checkbox"/> Intact <input type="checkbox"/> Not intact				Preserved where applicable <input type="checkbox"/> On Ice <input checked="" type="checkbox"/> Cool Temp 0.0°C-B				

B An

MDL

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FED-EX Tracking #
Accu-Test Quote #
Revised
Accu-Test Job # JB57687

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)										Matrix Codes							
Company Name Sustainable Development, Inc		Project Name SDI - Bridge		TCL VOC TCL SVOC PCBs Pesticides TAL Metals										DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WPT - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank							
Street Address 146 Woodside Avenue		Street 39-26 30th Street																			
City West Harrison, NY 10604		City Leopoldstadt, NY												LAB USE ONLY							
Project Contact Al Nesheiwat		Billing Information (if differed from Report to) Company Name Same																			
Phone # 914-220-2404		Client Purchase Order # BC-001																			
Sampler(s) Name(s) Bill Nesheiwat		Project Manager Al Nesheiwat																			
Access Sample #	Field ID / Point of Collection	MEDION Val #	Date	Time	Sampled By	Mats	# of bottles	HD	HHCH	HHCH	HHCH	HHCH	HHCH	HHCH	HHCH	HHCH	HHCH	HHCH	HHCH	HHCH	
13	B-2E		1/13/14	13:01	AK	5	4														
14	B-5A			13:50		5	4														
15	B-5B			13:52		5	4														
16	B-5C			13:56		5	4														
17	B-5D			14:04		5	4														
18	B-5E			14:10		5	4														
19	B-3A			15:05		5	4														
20	B-3B			15:14		5	4														
21	B-3C			15:22		5	4														
22	B-3D			15:30		5	4														
23	B-3E	340		15:33		5	4														

JB57687: Chain of Custody

Page 6 of 6

Appendix N:
Groundwater Analytical Reports

Sample Summary

SES (Sustainable Environmental)

Job No: JB59477

SDI-Bridge, 39-26 30th Street, Long Island City, NY
 Project No: BC-001

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JB59477-1	02/08/14	10:25 BK	02/08/14	AQ	Ground Water	MW-5
JB59477-1D	02/08/14	10:25 BK	02/08/14	AQ	Water Dup/MSD	MW-5
JB59477-1S	02/08/14	10:25 BK	02/08/14	AQ	Water Matrix Spike	MW-5
JB59477-2	02/08/14	10:30 BK	02/08/14	AQ	Ground Water	MW-50
JB59477-3	02/08/14	12:15 BK	02/08/14	AQ	Ground Water	GW-3
JB59477-4	02/08/14	13:45 BK	02/08/14	AQ	Ground Water	GW-4
JB59477-5	02/08/14	15:05 BK	02/08/14	AQ	Ground Water	GW-1
JB59477-6	02/08/14	16:15 BK	02/08/14	AQ	Ground Water	GW-2
JB59477-7	02/08/14	16:15 BK	02/08/14	AQ	Trip Blank Water	TRIP

Report of Analysis

Client Sample ID: MW-5		
Lab Sample ID: JB59477-1		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8260C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C188718.D	1	02/12/14	TDN	n/a	n/a	VC6853
Run #2	C188748.D	10	02/14/14	TDN	n/a	n/a	VC6855

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	1.0	0.28	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.21	ug/l	
75-25-2	Bromoform	ND	4.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.56	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.35	ug/l	
75-00-3	Chloroethane	ND	1.0	0.39	ug/l	
67-66-3	Chloroform	2.3	1.0	0.25	ug/l	
74-87-3	Chloromethane	ND	1.0	0.36	ug/l	
110-82-7	Cyclohexane	0.62	5.0	0.18	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.19	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.16	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.20	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.30	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.22	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.34	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.24	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.38	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
123-91-1	1,4-Dioxane	ND	130	73	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
76-13-1	Freon 113	ND	5.0	0.77	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5	Date Sampled:	02/08/14
Lab Sample ID:	JB59477-1	Date Received:	02/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	1.0	5.0	0.15	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	5.0	0.30	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	340 ^a	10	2.5	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	6.9	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%	86%	79-117%
17060-07-0	1,2-Dichloroethane-D4	83%	83%	72-123%
2037-26-5	Toluene-D8	92%	92%	82-118%
460-00-4	4-Bromofluorobenzene	91%	89%	75-118%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-5		
Lab Sample ID: JB59477-1		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8270D SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M101830.D	1	02/12/14	KR	02/11/14	OP72594	EM4146
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.97	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.8	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.5	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	17	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	20	0.99	ug/l	
95-48-7	2-Methylphenol	ND	2.0	1.0	ug/l	
	3&4-Methylphenol	ND	2.0	0.93	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.5	ug/l	
100-02-7	4-Nitrophenol	ND	10	5.2	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.4	ug/l	
108-95-2	Phenol	ND	2.0	1.3	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.94	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.6	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.3	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.26	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.23	ug/l	
98-86-2	Acetophenone	ND	2.0	0.29	ug/l	
120-12-7	Anthracene	ND	1.0	0.29	ug/l	
1912-24-9	Atrazine	ND	2.0	0.49	ug/l	
100-52-7	Benzaldehyde	ND	5.0	3.3	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.23	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.23	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.46	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.32	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.51	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.36	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.29	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.30	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.53	ug/l	
86-74-8	Carbazole	ND	1.0	0.36	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-5		Date Sampled: 02/08/14
Lab Sample ID: JB59477-1		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8270D SW846 3510C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.69	ug/l	
218-01-9	Chrysene	ND	1.0	0.29	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.45	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.31	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.43	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.46	ug/l	
91-94-1	3,3' -Dichlorobenzidine	ND	2.0	0.36	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.38	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.56	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.31	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.33	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.28	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.59	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.32	ug/l	
86-73-7	Fluorene	ND	1.0	0.28	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.34	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.51	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	7.1	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.55	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.37	ug/l	
78-59-1	Isophorone	ND	2.0	0.27	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.38	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	1.3	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	1.7	ug/l	
91-20-3	Naphthalene	ND	1.0	0.26	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.42	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.30	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.31	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.29	ug/l	
129-00-0	Pyrene	ND	1.0	0.27	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.31	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		10-110%
4165-62-2	Phenol-d5	31%		10-110%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-5	
Lab Sample ID: JB59477-1	Date Sampled: 02/08/14
Matrix: AQ - Ground Water	Date Received: 02/08/14
Method: SW846 8270D SW846 3510C	Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	91%		29-139%
4165-60-0	Nitrobenzene-d5	91%		28-131%
321-60-8	2-Fluorobiphenyl	82%		30-121%
1718-51-0	Terphenyl-d14	68%		16-147%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-5		
Lab Sample ID: JB59477-1		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8081B SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G82615.D	1	02/14/14	VDT	02/11/14	OP72600	G3G2828
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.010	0.0079	ug/l	
319-84-6	alpha-BHC	ND	0.010	0.0023	ug/l	
319-85-7	beta-BHC	ND	0.010	0.0023	ug/l	
319-86-8	delta-BHC	ND	0.010	0.0019	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.010	0.0017	ug/l	
5103-71-9	alpha-Chlordane	ND	0.010	0.0029	ug/l	
5103-74-2	gamma-Chlordane	ND	0.010	0.0021	ug/l	
60-57-1	Dieldrin	0.018	0.010	0.0016	ug/l	
72-54-8	4,4'-DDD	ND	0.010	0.0025	ug/l	
72-55-9	4,4'-DDE	ND	0.010	0.0017	ug/l	
50-29-3	4,4'-DDT	ND	0.010	0.0032	ug/l	
72-20-8	Endrin	ND	0.010	0.0020	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.010	0.0019	ug/l	
7421-93-4	Endrin aldehyde	ND	0.010	0.0037	ug/l	
53494-70-5	Endrin ketone	ND	0.010	0.0047	ug/l	
959-98-8	Endosulfan-I	ND	0.010	0.0028	ug/l	
33213-65-9	Endosulfan-II	ND	0.010	0.0020	ug/l	
76-44-8	Heptachlor	ND	0.010	0.0022	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.010	0.0026	ug/l	
72-43-5	Methoxychlor	ND	0.020	0.0041	ug/l	
8001-35-2	Toxaphene	ND	0.25	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	63%		14-144%
877-09-8	Tetrachloro-m-xylene	60%		14-144%
2051-24-3	Decachlorobiphenyl	75%		10-128%
2051-24-3	Decachlorobiphenyl	76%		10-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-5		
Lab Sample ID: JB59477-1		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8082A SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF126992.D	1	02/12/14	JP	02/11/14	OP72599	GEF4967
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	0.27	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	0.39	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	0.086	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	0.15	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	0.14	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	0.21	ug/l	
11100-14-4	Aroclor 1268	ND	0.50	0.13	ug/l	
37324-23-5	Aroclor 1262	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	51%		16-140%
877-09-8	Tetrachloro-m-xylene	65%		16-140%
2051-24-3	Decachlorobiphenyl	55%		10-125%
2051-24-3	Decachlorobiphenyl	67%		10-125%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-5	Date Sampled: 02/08/14
Lab Sample ID: JB59477-1	Date Received: 02/08/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 200	200	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Arsenic	< 3.0	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Barium	< 200	200	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Calcium	120000	5000	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Chromium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Copper	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Iron	113	100	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Lead	< 3.0	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Magnesium	47900	5000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Manganese	485	15	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	02/11/14	02/11/14 JW	SW846 7470A ¹	SW846 7470A ⁶
Nickel	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Potassium	< 10000	10000	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Silver	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Sodium	167000	10000	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Thallium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Zinc	< 20	20	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵

(1) Instrument QC Batch: MA33264

(2) Instrument QC Batch: MA33266

(3) Instrument QC Batch: MA33272

(4) Instrument QC Batch: MA33283

(5) Prep QC Batch: MP77667

(6) Prep QC Batch: MP77682

Report of Analysis

Client Sample ID: MW-50		
Lab Sample ID: JB59477-2		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8260C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C188728.D	1	02/12/14	TDN	n/a	n/a	VC6853
Run #2	C188749.D	10	02/14/14	TDN	n/a	n/a	VC6855

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	1.0	0.28	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.21	ug/l	
75-25-2	Bromoform	ND	4.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.56	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.35	ug/l	
75-00-3	Chloroethane	ND	1.0	0.39	ug/l	
67-66-3	Chloroform	2.2	1.0	0.25	ug/l	
74-87-3	Chloromethane	ND	1.0	0.36	ug/l	
110-82-7	Cyclohexane	0.82	5.0	0.18	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.19	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.16	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.20	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.30	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.22	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.34	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.24	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.38	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
123-91-1	1,4-Dioxane	ND	130	73	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
76-13-1	Freon 113	ND	5.0	0.77	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-50		Date Sampled: 02/08/14
Lab Sample ID: JB59477-2		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	1.5	5.0	0.15	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	5.0	0.30	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	363 ^a	10	2.5	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	7.8	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%	86%	79-117%
17060-07-0	1,2-Dichloroethane-D4	84%	83%	72-123%
2037-26-5	Toluene-D8	92%	92%	82-118%
460-00-4	4-Bromofluorobenzene	90%	89%	75-118%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-50		
Lab Sample ID: JB59477-2		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8270D SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M101840.D	1	02/12/14	KR	02/11/14	OP72594	EM4146
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.2	1.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.2	1.9	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.1	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.2	1.6	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	17	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	21	1.0	ug/l	
95-48-7	2-Methylphenol	ND	2.1	1.1	ug/l	
	3&4-Methylphenol	ND	2.1	0.96	ug/l	
88-75-5	2-Nitrophenol	ND	5.2	1.6	ug/l	
100-02-7	4-Nitrophenol	ND	10	5.4	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.4	ug/l	
108-95-2	Phenol	ND	2.1	1.3	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.2	0.98	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.2	1.6	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.2	1.3	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.27	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.24	ug/l	
98-86-2	Acetophenone	ND	2.1	0.30	ug/l	
120-12-7	Anthracene	ND	1.0	0.30	ug/l	
1912-24-9	Atrazine	ND	2.1	0.51	ug/l	
100-52-7	Benzaldehyde	ND	5.2	3.4	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.24	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.48	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.34	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.53	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.1	0.37	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.1	0.30	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.32	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.1	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	5.2	0.55	ug/l	
86-74-8	Carbazole	ND	1.0	0.38	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-50		Date Sampled: 02/08/14
Lab Sample ID: JB59477-2		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8270D SW846 3510C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.1	0.72	ug/l	
218-01-9	Chrysene	ND	1.0	0.30	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.1	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.1	0.32	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.1	0.47	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.1	0.33	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.44	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.48	ug/l	
91-94-1	3,3' -Dichlorobenzidine	ND	2.1	0.38	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.39	ug/l	
132-64-9	Dibenzofuran	ND	5.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.1	0.58	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.1	0.32	ug/l	
84-66-2	Diethyl phthalate	ND	2.1	0.34	ug/l	
131-11-3	Dimethyl phthalate	ND	2.1	0.29	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.2	2.1	0.61	ug/l	J
206-44-0	Fluoranthene	ND	1.0	0.33	ug/l	
86-73-7	Fluorene	ND	1.0	0.29	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.35	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.53	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	7.4	ug/l	
67-72-1	Hexachloroethane	ND	2.1	0.57	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.39	ug/l	
78-59-1	Isophorone	ND	2.1	0.28	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.40	ug/l	
88-74-4	2-Nitroaniline	ND	5.2	1.2	ug/l	
99-09-2	3-Nitroaniline	ND	5.2	1.3	ug/l	
100-01-6	4-Nitroaniline	ND	5.2	1.7	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
98-95-3	Nitrobenzene	ND	2.1	0.44	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.1	0.31	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.32	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.30	ug/l	
129-00-0	Pyrene	ND	1.0	0.28	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.1	0.32	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		10-110%
4165-62-2	Phenol-d5	29%		10-110%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-50	
Lab Sample ID: JB59477-2	Date Sampled: 02/08/14
Matrix: AQ - Ground Water	Date Received: 02/08/14
Method: SW846 8270D SW846 3510C	Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	80%		29-139%
4165-60-0	Nitrobenzene-d5	84%		28-131%
321-60-8	2-Fluorobiphenyl	75%		30-121%
1718-51-0	Terphenyl-d14	71%		16-147%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-50		
Lab Sample ID: JB59477-2		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8081B SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G82616.D	1	02/14/14	VDT	02/11/14	OP72600	G3G2828
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.010	0.0079	ug/l	
319-84-6	alpha-BHC	ND	0.010	0.0023	ug/l	
319-85-7	beta-BHC	ND	0.010	0.0023	ug/l	
319-86-8	delta-BHC	ND	0.010	0.0019	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.010	0.0017	ug/l	
5103-71-9	alpha-Chlordane	ND	0.010	0.0029	ug/l	
5103-74-2	gamma-Chlordane	ND	0.010	0.0021	ug/l	
60-57-1	Dieldrin	0.019	0.010	0.0016	ug/l	
72-54-8	4,4'-DDD	ND	0.010	0.0025	ug/l	
72-55-9	4,4'-DDE	ND	0.010	0.0017	ug/l	
50-29-3	4,4'-DDT	ND	0.010	0.0032	ug/l	
72-20-8	Endrin	ND	0.010	0.0020	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.010	0.0019	ug/l	
7421-93-4	Endrin aldehyde	ND	0.010	0.0037	ug/l	
53494-70-5	Endrin ketone	ND	0.010	0.0047	ug/l	
959-98-8	Endosulfan-I	ND	0.010	0.0028	ug/l	
33213-65-9	Endosulfan-II	ND	0.010	0.0020	ug/l	
76-44-8	Heptachlor	ND	0.010	0.0022	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.010	0.0026	ug/l	
72-43-5	Methoxychlor	ND	0.020	0.0041	ug/l	
8001-35-2	Toxaphene	ND	0.25	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	91%		14-144%
877-09-8	Tetrachloro-m-xylene	87%		14-144%
2051-24-3	Decachlorobiphenyl	65%		10-128%
2051-24-3	Decachlorobiphenyl	65%		10-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-50		
Lab Sample ID: JB59477-2		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8082A SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF126993.D	1	02/12/14	JP	02/11/14	OP72599	GEF4967
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	0.27	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	0.39	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	0.086	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	0.15	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	0.14	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	0.21	ug/l	
11100-14-4	Aroclor 1268	ND	0.50	0.13	ug/l	
37324-23-5	Aroclor 1262	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	73%		16-140%
877-09-8	Tetrachloro-m-xylene	89%		16-140%
2051-24-3	Decachlorobiphenyl	37%		10-125%
2051-24-3	Decachlorobiphenyl	40%		10-125%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

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J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-50	Date Sampled: 02/08/14
Lab Sample ID: JB59477-2	Date Received: 02/08/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 200	200	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Arsenic	< 3.0	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Barium	< 200	200	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Calcium	127000	5000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Chromium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Copper	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Iron	< 100	100	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Lead	< 3.0	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Magnesium	58000	5000	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Manganese	478	15	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	02/11/14	02/11/14 JW	SW846 7470A ¹	SW846 7470A ⁶
Nickel	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Potassium	< 10000	10000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Silver	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Sodium	160000	10000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Thallium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Zinc	< 20	20	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵

(1) Instrument QC Batch: MA33264

(2) Instrument QC Batch: MA33266

(3) Instrument QC Batch: MA33272

(4) Instrument QC Batch: MA33283

(5) Prep QC Batch: MP77667

(6) Prep QC Batch: MP77682

Report of Analysis

Client Sample ID: GW-3		Date Sampled: 02/08/14
Lab Sample ID: JB59477-3		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C188720.D	1	02/12/14	TDN	n/a	n/a	VC6853
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	1.0	0.28	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.21	ug/l	
75-25-2	Bromoform	ND	4.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.56	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.35	ug/l	
75-00-3	Chloroethane	ND	1.0	0.39	ug/l	
67-66-3	Chloroform	2.6	1.0	0.25	ug/l	
74-87-3	Chloromethane	ND	1.0	0.36	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.18	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.19	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.16	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.20	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.30	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.22	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.34	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.39	1.0	0.24	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.38	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
123-91-1	1,4-Dioxane	ND	130	73	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
76-13-1	Freon 113	ND	5.0	0.77	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-3		Date Sampled: 02/08/14
Lab Sample ID: JB59477-3		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.15	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	5.0	0.30	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	175	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	2.0	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		79-117%
17060-07-0	1,2-Dichloroethane-D4	83%		72-123%
2037-26-5	Toluene-D8	92%		82-118%
460-00-4	4-Bromofluorobenzene	89%		75-118%

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 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-3		
Lab Sample ID: JB59477-3		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8270D SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M101841.D	1	02/12/14	KR	02/11/14	OP72594	EM4146
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.97	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.8	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.5	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	17	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	20	0.99	ug/l	
95-48-7	2-Methylphenol	ND	2.0	1.0	ug/l	
	3&4-Methylphenol	ND	2.0	0.93	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.5	ug/l	
100-02-7	4-Nitrophenol	ND	10	5.2	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.4	ug/l	
108-95-2	Phenol	ND	2.0	1.3	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.94	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.6	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.3	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.26	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.23	ug/l	
98-86-2	Acetophenone	ND	2.0	0.29	ug/l	
120-12-7	Anthracene	ND	1.0	0.29	ug/l	
1912-24-9	Atrazine	ND	2.0	0.49	ug/l	
100-52-7	Benzaldehyde	ND	5.0	3.3	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.23	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.23	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.46	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.32	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.51	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.36	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.29	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.30	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.53	ug/l	
86-74-8	Carbazole	ND	1.0	0.36	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-3		Date Sampled: 02/08/14
Lab Sample ID: JB59477-3		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8270D SW846 3510C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.69	ug/l	
218-01-9	Chrysene	ND	1.0	0.29	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.45	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.31	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.43	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.46	ug/l	
91-94-1	3,3' -Dichlorobenzidine	ND	2.0	0.36	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.38	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.56	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.31	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.33	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.28	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.59	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.32	ug/l	
86-73-7	Fluorene	ND	1.0	0.28	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.34	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.51	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	7.1	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.55	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.37	ug/l	
78-59-1	Isophorone	ND	2.0	0.27	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.38	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	1.3	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	1.7	ug/l	
91-20-3	Naphthalene	ND	1.0	0.26	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.42	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.30	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.31	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.29	ug/l	
129-00-0	Pyrene	ND	1.0	0.27	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.31	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		10-110%
4165-62-2	Phenol-d5	30%		10-110%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-3	
Lab Sample ID: JB59477-3	Date Sampled: 02/08/14
Matrix: AQ - Ground Water	Date Received: 02/08/14
Method: SW846 8270D SW846 3510C	Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	89%		29-139%
4165-60-0	Nitrobenzene-d5	93%		28-131%
321-60-8	2-Fluorobiphenyl	82%		30-121%
1718-51-0	Terphenyl-d14	74%		16-147%

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Report of Analysis

Client Sample ID: GW-3		
Lab Sample ID: JB59477-3		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8081B SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G82617.D	1	02/14/14	VDT	02/11/14	OP72600	G3G2828
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.010	0.0080	ug/l	
319-84-6	alpha-BHC	ND	0.010	0.0024	ug/l	
319-85-7	beta-BHC	ND	0.010	0.0023	ug/l	
319-86-8	delta-BHC	ND	0.010	0.0019	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.010	0.0018	ug/l	
5103-71-9	alpha-Chlordane	ND	0.010	0.0029	ug/l	
5103-74-2	gamma-Chlordane	ND	0.010	0.0022	ug/l	
60-57-1	Dieldrin	ND	0.010	0.0016	ug/l	
72-54-8	4,4'-DDD	ND	0.010	0.0025	ug/l	
72-55-9	4,4'-DDE	ND	0.010	0.0017	ug/l	
50-29-3	4,4'-DDT	ND	0.010	0.0032	ug/l	
72-20-8	Endrin	ND	0.010	0.0020	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.010	0.0019	ug/l	
7421-93-4	Endrin aldehyde	ND	0.010	0.0037	ug/l	
53494-70-5	Endrin ketone	ND	0.010	0.0048	ug/l	
959-98-8	Endosulfan-I	ND	0.010	0.0029	ug/l	
33213-65-9	Endosulfan-II	ND	0.010	0.0020	ug/l	
76-44-8	Heptachlor	ND	0.010	0.0022	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.010	0.0027	ug/l	
72-43-5	Methoxychlor	ND	0.020	0.0041	ug/l	
8001-35-2	Toxaphene	ND	0.26	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	80%		14-144%
877-09-8	Tetrachloro-m-xylene	78%		14-144%
2051-24-3	Decachlorobiphenyl	61%		10-128%
2051-24-3	Decachlorobiphenyl	60%		10-128%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-3		
Lab Sample ID: JB59477-3		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8082A SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF126994.D	1	02/12/14	JP	02/11/14	OP72599	GEF4967
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.51	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.51	0.28	ug/l	
11141-16-5	Aroclor 1232	ND	0.51	0.39	ug/l	
53469-21-9	Aroclor 1242	ND	0.51	0.088	ug/l	
12672-29-6	Aroclor 1248	ND	0.51	0.15	ug/l	
11097-69-1	Aroclor 1254	ND	0.51	0.14	ug/l	
11096-82-5	Aroclor 1260	ND	0.51	0.21	ug/l	
11100-14-4	Aroclor 1268	ND	0.51	0.13	ug/l	
37324-23-5	Aroclor 1262	ND	0.51	0.061	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	64%		16-140%
877-09-8	Tetrachloro-m-xylene	75%		16-140%
2051-24-3	Decachlorobiphenyl	50%		10-125%
2051-24-3	Decachlorobiphenyl	49%		10-125%

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 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-3	Date Sampled: 02/08/14
Lab Sample ID: JB59477-3	Date Received: 02/08/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	18500	200	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Arsenic	5.7	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Barium	305	200	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Calcium	172000	5000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Chromium	74.2	10	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Copper	65.4	10	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Iron	39600	100	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Lead	35.7	3.0	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Magnesium	74800	5000	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Manganese	2240	15	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	02/11/14	02/11/14 JW	SW846 7470A ¹	SW846 7470A ⁶
Nickel	65.7	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Potassium	10200	10000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Silver	< 10	10	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Sodium	189000	10000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Thallium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Zinc	101	20	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵

(1) Instrument QC Batch: MA33264

(2) Instrument QC Batch: MA33266

(3) Instrument QC Batch: MA33272

(4) Instrument QC Batch: MA33283

(5) Prep QC Batch: MP77667

(6) Prep QC Batch: MP77682

Report of Analysis

Client Sample ID: GW-4		
Lab Sample ID: JB59477-4		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8260C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C188725.D	1	02/12/14	TDN	n/a	n/a	VC6853
Run #2	C188750.D	10	02/14/14	TDN	n/a	n/a	VC6855

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	1.0	0.28	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.21	ug/l	
75-25-2	Bromoform	ND	4.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.56	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.35	ug/l	
75-00-3	Chloroethane	ND	1.0	0.39	ug/l	
67-66-3	Chloroform	2.4	1.0	0.25	ug/l	
74-87-3	Chloromethane	ND	1.0	0.36	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.18	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.19	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.16	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.20	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.30	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.22	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.34	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.1	1.0	0.24	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.38	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
123-91-1	1,4-Dioxane	ND	130	73	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
76-13-1	Freon 113	ND	5.0	0.77	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-4		Date Sampled: 02/08/14
Lab Sample ID: JB59477-4		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.15	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	5.0	0.30	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	254 ^a	10	2.5	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	2.6	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%	87%	79-117%
17060-07-0	1,2-Dichloroethane-D4	83%	84%	72-123%
2037-26-5	Toluene-D8	92%	91%	82-118%
460-00-4	4-Bromofluorobenzene	89%	88%	75-118%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-4		
Lab Sample ID: JB59477-4		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8270D SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M101842.D	1	02/12/14	KR	02/11/14	OP72594	EM4146
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.97	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.8	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.5	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	17	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	20	0.99	ug/l	
95-48-7	2-Methylphenol	ND	2.0	1.0	ug/l	
	3&4-Methylphenol	ND	2.0	0.93	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.5	ug/l	
100-02-7	4-Nitrophenol	ND	10	5.2	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.4	ug/l	
108-95-2	Phenol	ND	2.0	1.3	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.94	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.6	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.3	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.26	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.23	ug/l	
98-86-2	Acetophenone	ND	2.0	0.29	ug/l	
120-12-7	Anthracene	ND	1.0	0.29	ug/l	
1912-24-9	Atrazine	ND	2.0	0.49	ug/l	
100-52-7	Benzaldehyde	ND	5.0	3.3	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.23	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.23	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.46	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.32	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.51	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.36	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.29	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.30	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.53	ug/l	
86-74-8	Carbazole	ND	1.0	0.36	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-4		Date Sampled: 02/08/14
Lab Sample ID: JB59477-4		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8270D SW846 3510C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.69	ug/l	
218-01-9	Chrysene	ND	1.0	0.29	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.45	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.31	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.43	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.46	ug/l	
91-94-1	3,3' -Dichlorobenzidine	ND	2.0	0.36	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.38	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.56	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.31	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.33	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.28	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.1	2.0	0.59	ug/l	J
206-44-0	Fluoranthene	ND	1.0	0.32	ug/l	
86-73-7	Fluorene	ND	1.0	0.28	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.34	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.51	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	7.1	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.55	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.37	ug/l	
78-59-1	Isophorone	ND	2.0	0.27	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.38	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	1.3	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	1.7	ug/l	
91-20-3	Naphthalene	ND	1.0	0.26	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.42	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.30	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.31	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.29	ug/l	
129-00-0	Pyrene	ND	1.0	0.27	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.31	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	52%		10-110%
4165-62-2	Phenol-d5	33%		10-110%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-4		Date Sampled: 02/08/14
Lab Sample ID: JB59477-4		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8270D SW846 3510C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	90%		29-139%
4165-60-0	Nitrobenzene-d5	92%		28-131%
321-60-8	2-Fluorobiphenyl	84%		30-121%
1718-51-0	Terphenyl-d14	75%		16-147%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-4	Date Sampled: 02/08/14
Lab Sample ID: JB59477-4	Date Received: 02/08/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	16800	200	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Arsenic	9.8	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Barium	219	200	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Calcium	115000	5000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Chromium	104	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Copper	66.4	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Iron	35000	100	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Lead	70.5	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Magnesium	47900	5000	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Manganese	1620	15	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	02/11/14	02/11/14 JW	SW846 7470A ¹	SW846 7470A ⁶
Nickel	69.0	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Potassium	< 10000	10000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Silver	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Sodium	142000	10000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Thallium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Zinc	132	20	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵

(1) Instrument QC Batch: MA33264

(2) Instrument QC Batch: MA33266

(3) Instrument QC Batch: MA33272

(4) Instrument QC Batch: MA33283

(5) Prep QC Batch: MP77667

(6) Prep QC Batch: MP77682

RL = Reporting Limit

Report of Analysis

Client Sample ID: GW-1		
Lab Sample ID: JB59477-5		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8260C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C188726.D	1	02/12/14	TDN	n/a	n/a	VC6853
Run #2	C188751.D	10	02/14/14	TDN	n/a	n/a	VC6855

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	1.0	0.28	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.21	ug/l	
75-25-2	Bromoform	ND	4.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.56	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.35	ug/l	
75-00-3	Chloroethane	ND	1.0	0.39	ug/l	
67-66-3	Chloroform	0.99	1.0	0.25	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.36	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.18	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.19	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.16	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.20	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.30	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.22	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.34	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.34	1.0	0.24	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.38	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
123-91-1	1,4-Dioxane	ND	130	73	ug/l	
100-41-4	Ethylbenzene	1.2	1.0	0.21	ug/l	
76-13-1	Freon 113	ND	5.0	0.77	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-1	Date Sampled:	02/08/14
Lab Sample ID:	JB59477-5	Date Received:	02/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	1.6	2.0	0.22	ug/l	J
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.15	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	5.0	0.30	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	280 ^a	10	2.5	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	5.4	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	3.2	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	3.2	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%	86%	79-117%
17060-07-0	1,2-Dichloroethane-D4	84%	84%	72-123%
2037-26-5	Toluene-D8	92%	92%	82-118%
460-00-4	4-Bromofluorobenzene	90%	89%	75-118%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-1		
Lab Sample ID: JB59477-5		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8270D SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M101843.D	1	02/12/14	KR	02/11/14	OP72594	EM4146
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.97	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.8	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.5	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	17	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	20	0.99	ug/l	
95-48-7	2-Methylphenol	ND	2.0	1.0	ug/l	
	3&4-Methylphenol	ND	2.0	0.93	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.5	ug/l	
100-02-7	4-Nitrophenol	ND	10	5.2	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.4	ug/l	
108-95-2	Phenol	ND	2.0	1.3	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.94	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.6	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.3	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.26	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.23	ug/l	
98-86-2	Acetophenone	ND	2.0	0.29	ug/l	
120-12-7	Anthracene	ND	1.0	0.29	ug/l	
1912-24-9	Atrazine	ND	2.0	0.49	ug/l	
100-52-7	Benzaldehyde	ND	5.0	3.3	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.23	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.23	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.46	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.32	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.51	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.36	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.29	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.30	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.53	ug/l	
86-74-8	Carbazole	ND	1.0	0.36	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-1		Date Sampled: 02/08/14
Lab Sample ID: JB59477-5		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8270D SW846 3510C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.69	ug/l	
218-01-9	Chrysene	ND	1.0	0.29	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.45	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.31	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.43	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.46	ug/l	
91-94-1	3,3' -Dichlorobenzidine	ND	2.0	0.36	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.38	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.56	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.31	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.33	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.28	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.1	2.0	0.59	ug/l	J
206-44-0	Fluoranthene	ND	1.0	0.32	ug/l	
86-73-7	Fluorene	ND	1.0	0.28	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.34	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.51	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	7.1	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.55	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.37	ug/l	
78-59-1	Isophorone	ND	2.0	0.27	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.38	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	1.3	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	1.7	ug/l	
91-20-3	Naphthalene	ND	1.0	0.26	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.42	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.30	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.31	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.29	ug/l	
129-00-0	Pyrene	ND	1.0	0.27	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.31	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	52%		10-110%
4165-62-2	Phenol-d5	32%		10-110%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-1		Date Sampled: 02/08/14
Lab Sample ID: JB59477-5		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8270D SW846 3510C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	92%		29-139%
4165-60-0	Nitrobenzene-d5	92%		28-131%
321-60-8	2-Fluorobiphenyl	84%		30-121%
1718-51-0	Terphenyl-d14	75%		16-147%

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 RL = Reporting Limit
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 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-1	Date Sampled: 02/08/14
Lab Sample ID: JB59477-5	Date Received: 02/08/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	4610	200	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Arsenic	< 3.0	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Barium	< 200	200	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Calcium	101000	5000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Chromium	53.4	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Copper	18.2	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Iron	8540	100	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Lead	20.9	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Magnesium	28500	5000	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Manganese	277	15	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	02/11/14	02/11/14 JW	SW846 7470A ¹	SW846 7470A ⁶
Nickel	30.0	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Potassium	< 10000	10000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Silver	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Sodium	113000	10000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Thallium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Zinc	33.8	20	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵

(1) Instrument QC Batch: MA33264

(2) Instrument QC Batch: MA33266

(3) Instrument QC Batch: MA33272

(4) Instrument QC Batch: MA33283

(5) Prep QC Batch: MP77667

(6) Prep QC Batch: MP77682

RL = Reporting Limit

Report of Analysis

Client Sample ID: GW-2		
Lab Sample ID: JB59477-6		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8260C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C188727.D	1	02/12/14	TDN	n/a	n/a	VC6853
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	1.0	0.28	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.21	ug/l	
75-25-2	Bromoform	ND	4.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.56	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.35	ug/l	
75-00-3	Chloroethane	ND	1.0	0.39	ug/l	
67-66-3	Chloroform	4.2	1.0	0.25	ug/l	
74-87-3	Chloromethane	ND	1.0	0.36	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.18	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.19	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.16	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.20	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.30	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.22	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.34	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.81	1.0	0.24	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.38	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
123-91-1	1,4-Dioxane	ND	130	73	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
76-13-1	Freon 113	ND	5.0	0.77	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-2		Date Sampled: 02/08/14
Lab Sample ID: JB59477-6		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.15	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	5.0	0.30	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	165	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	2.4	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		79-117%
17060-07-0	1,2-Dichloroethane-D4	83%		72-123%
2037-26-5	Toluene-D8	92%		82-118%
460-00-4	4-Bromofluorobenzene	90%		75-118%

ND = Not detected MDL - Method Detection Limit
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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-2		
Lab Sample ID: JB59477-6		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8270D SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M101844.D	1	02/12/14	KR	02/11/14	OP72594	EM4146
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.97	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.8	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.5	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	17	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	20	0.99	ug/l	
95-48-7	2-Methylphenol	ND	2.0	1.0	ug/l	
	3&4-Methylphenol	ND	2.0	0.93	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.5	ug/l	
100-02-7	4-Nitrophenol	ND	10	5.2	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.4	ug/l	
108-95-2	Phenol	ND	2.0	1.3	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.94	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.6	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.3	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.26	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.23	ug/l	
98-86-2	Acetophenone	ND	2.0	0.29	ug/l	
120-12-7	Anthracene	ND	1.0	0.29	ug/l	
1912-24-9	Atrazine	ND	2.0	0.49	ug/l	
100-52-7	Benzaldehyde	ND	5.0	3.3	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.23	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.23	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.46	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.32	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.51	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.36	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.29	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.30	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.30	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.53	ug/l	
86-74-8	Carbazole	ND	1.0	0.36	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-2		Date Sampled: 02/08/14
Lab Sample ID: JB59477-6		Date Received: 02/08/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8270D SW846 3510C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.69	ug/l	
218-01-9	Chrysene	ND	1.0	0.29	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.45	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.31	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.43	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.46	ug/l	
91-94-1	3,3' -Dichlorobenzidine	ND	2.0	0.36	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.38	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.56	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.31	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.33	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.28	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.1	2.0	0.59	ug/l	J
206-44-0	Fluoranthene	ND	1.0	0.32	ug/l	
86-73-7	Fluorene	ND	1.0	0.28	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.34	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.51	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	7.1	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.55	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.37	ug/l	
78-59-1	Isophorone	ND	2.0	0.27	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.38	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	1.1	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	1.3	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	1.7	ug/l	
91-20-3	Naphthalene	ND	1.0	0.26	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.42	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.30	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.31	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.29	ug/l	
129-00-0	Pyrene	ND	1.0	0.27	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.31	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		10-110%
4165-62-2	Phenol-d5	28%		10-110%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-2	
Lab Sample ID: JB59477-6	Date Sampled: 02/08/14
Matrix: AQ - Ground Water	Date Received: 02/08/14
Method: SW846 8270D SW846 3510C	Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	82%		29-139%
4165-60-0	Nitrobenzene-d5	83%		28-131%
321-60-8	2-Fluorobiphenyl	78%		30-121%
1718-51-0	Terphenyl-d14	68%		16-147%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-2		
Lab Sample ID: JB59477-6		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8081B SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G82618.D	1	02/14/14	VDT	02/11/14	OP72600	G3G2828
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.010	0.0079	ug/l	
319-84-6	alpha-BHC	ND	0.010	0.0023	ug/l	
319-85-7	beta-BHC	ND	0.010	0.0023	ug/l	
319-86-8	delta-BHC	ND	0.010	0.0019	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.010	0.0017	ug/l	
5103-71-9	alpha-Chlordane	ND	0.010	0.0029	ug/l	
5103-74-2	gamma-Chlordane	ND	0.010	0.0021	ug/l	
60-57-1	Dieldrin	ND	0.010	0.0016	ug/l	
72-54-8	4,4'-DDD	ND	0.010	0.0025	ug/l	
72-55-9	4,4'-DDE	ND	0.010	0.0017	ug/l	
50-29-3	4,4'-DDT	ND	0.010	0.0032	ug/l	
72-20-8	Endrin	ND	0.010	0.0020	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.010	0.0019	ug/l	
7421-93-4	Endrin aldehyde	ND	0.010	0.0037	ug/l	
53494-70-5	Endrin ketone	ND	0.010	0.0047	ug/l	
959-98-8	Endosulfan-I	ND	0.010	0.0028	ug/l	
33213-65-9	Endosulfan-II	ND	0.010	0.0020	ug/l	
76-44-8	Heptachlor	ND	0.010	0.0022	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.010	0.0026	ug/l	
72-43-5	Methoxychlor	ND	0.020	0.0041	ug/l	
8001-35-2	Toxaphene	ND	0.25	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		14-144%
877-09-8	Tetrachloro-m-xylene	76%		14-144%
2051-24-3	Decachlorobiphenyl	48%		10-128%
2051-24-3	Decachlorobiphenyl	50%		10-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-2		
Lab Sample ID: JB59477-6		Date Sampled: 02/08/14
Matrix: AQ - Ground Water		Date Received: 02/08/14
Method: SW846 8082A SW846 3510C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF126995.D	1	02/12/14	JP	02/11/14	OP72599	GEF4967
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	0.27	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	0.39	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	0.086	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	0.15	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	0.14	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	0.21	ug/l	
11100-14-4	Aroclor 1268	ND	0.50	0.13	ug/l	
37324-23-5	Aroclor 1262	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	62%		16-140%
877-09-8	Tetrachloro-m-xylene	74%		16-140%
2051-24-3	Decachlorobiphenyl	45%		10-125%
2051-24-3	Decachlorobiphenyl	43%		10-125%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-2	Date Sampled: 02/08/14
Lab Sample ID: JB59477-6	Date Received: 02/08/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	6830	200	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Antimony	< 6.0	6.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Arsenic	4.9	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Barium	< 200	200	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Beryllium	< 1.0	1.0	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Cadmium	< 3.0	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Calcium	130000	5000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Chromium	34.4	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Cobalt	< 50	50	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Copper	15.1	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Iron	13700	100	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Lead	10.4	3.0	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Magnesium	70100	5000	ug/l	1	02/10/14	02/12/14 KK	SW846 6010C ³	SW846 3010A ⁵
Manganese	427	15	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Mercury	< 0.20	0.20	ug/l	1	02/11/14	02/11/14 JW	SW846 7470A ¹	SW846 7470A ⁶
Nickel	24.6	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Potassium	< 10000	10000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Selenium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Silver	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Sodium	142000	10000	ug/l	1	02/10/14	02/13/14 KK	SW846 6010C ⁴	SW846 3010A ⁵
Thallium	< 10	10	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Vanadium	< 50	50	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵
Zinc	39.6	20	ug/l	1	02/10/14	02/11/14 RR	SW846 6010C ²	SW846 3010A ⁵

(1) Instrument QC Batch: MA33264

(2) Instrument QC Batch: MA33266

(3) Instrument QC Batch: MA33272

(4) Instrument QC Batch: MA33283

(5) Prep QC Batch: MP77667

(6) Prep QC Batch: MP77682

RL = Reporting Limit

Report of Analysis

Client Sample ID: TRIP		
Lab Sample ID: JB59477-7		Date Sampled: 02/08/14
Matrix: AQ - Trip Blank Water		Date Received: 02/08/14
Method: SW846 8260C		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C188747.D	1	02/14/14	TDN	n/a	n/a	VC6855
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/l	
71-43-2	Benzene	ND	1.0	0.28	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.21	ug/l	
75-25-2	Bromoform	ND	4.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.56	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	3.2	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.35	ug/l	
75-00-3	Chloroethane	ND	1.0	0.39	ug/l	
67-66-3	Chloroform	ND	1.0	0.25	ug/l	
74-87-3	Chloromethane	ND	1.0	0.36	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.18	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.3	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.19	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.16	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.20	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.31	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.30	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.63	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.22	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.34	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.24	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.38	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.15	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
123-91-1	1,4-Dioxane	ND	130	73	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
76-13-1	Freon 113	ND	5.0	0.77	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TRIP		Date Sampled: 02/08/14
Lab Sample ID: JB59477-7		Date Received: 02/08/14
Matrix: AQ - Trip Blank Water		Percent Solids: n/a
Method: SW846 8260C		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.5	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.15	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.29	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.5	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.86	ug/l	
100-42-5	Styrene	ND	5.0	0.30	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.44	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.33	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	1.0	0.40	ug/l	
95-47-6	o-Xylene	ND	1.0	0.19	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		79-117%
17060-07-0	1,2-Dichloroethane-D4	83%		72-123%
2037-26-5	Toluene-D8	92%		82-118%
460-00-4	4-Bromofluorobenzene	89%		75-118%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



GW
LTB

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL: 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JB59477

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)										Matrix Codes																																								
Company Name Sustainable Development Inc.		Project Name SDI - Bridge		<div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Post-cides + PCBs</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TAL Metals/s</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TCL SVOC</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TCL VOC</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">MS/MSD on MW-5</div> </div>										DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank																																								
Street Address 166 Woodside Avenue		Street 39-26 30th Street																																																				
City State Zip West Harrison, NY 10604		City State Long Island City, NY																																																				
Project Contact AJ Nesheiwat		Billing Information (If different from Report to) Company Name Same																																																				
Phone # 914-220-2404 814 671-4004		Client Purchase Order # BC-001																																																				
E-mail BillKroft@sdinyc.com		Street Address																																																				
Sampler(s) Name(s) Bill Kroft		Project Manager AJ Nesheiwat		<table border="1"> <tr> <th colspan="10">Number of preserved Bottles</th> </tr> <tr> <th>UCL</th> <th>ML</th> <th>ML</th> <th>ML</th> <th>ML</th> <th>ML</th> <th>ML</th> <th>ML</th> <th>ML</th> <th>ML</th> </tr> <tr> <td>8</td> <td>3</td> <td>1</td> <td>4</td> <td>6</td> <td>3</td> <td>1</td> <td>2</td> <td>8</td> <td>3</td> </tr> <tr> <td>2</td> <td>1</td> <td>4</td> <td>2</td> <td>2</td> <td>4</td> <td>2</td> <td>4</td> <td>2</td> <td>4</td> </tr> </table>										Number of preserved Bottles										UCL	ML	ML	ML	ML	ML	ML	ML	ML	ML	8	3	1	4	6	3	1	2	8	3	2	1	4	2	2	4	2	4	2	4	E38 A7 V333
Number of preserved Bottles																																																						
UCL	ML	ML	ML	ML	ML	ML	ML	ML	ML																																													
8	3	1	4	6	3	1	2	8	3																																													
2	1	4	2	2	4	2	4	2	4																																													
Accout Sample #	Field ID / Point of Collection	MEQHD/Val #	Date	Time	Sampled by	Matrix	# of bottles	UCL	ML	ML	ML	ML	ML	ML	ML	ML	ML	LAB USE ONLY																																				
1	MW-5		2/8/14	10:25	BA	GW	16	8	3	1	4	6	3	1	2	8	3																																					
2	MW-50			10:30			8	3	1	4	6	3	1	2	8	3																																						
3	GW-3			12:15			8	3	1	4	6	3	1	2	8	3																																						
4	GW-4			13:45			6	3	1	4	6	3	1	2	8	3																																						
5	GW-1			15:05			6	3	1	4	6	3	1	2	8	3																																						
6	GW-2			16:15			8	3	1	4	6	3	1	2	8	3																																						
7	Trip			16:15			2	2																																														

Turnaround Time (Business days)	Approved By (Accutest PM): / Date:	<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> NJ Reduced <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NYASP Category A <input checked="" type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input type="checkbox"/> Other	Comments / Special Instructions
----------------------------------	------------------------------------	---	---------------------------------

Emergency & Rush T/A data available VIA Lablink

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1 BA	Date Time: 02/08/14 17:15	Received By: 2 BA	Date Time: 02/08/14	Relinquished by: 3	Date Time: 20:15	Received By: 4
Relinquished by Sampler: 3	Date Time:	Received By: 5	Date Time:	Relinquished by: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By:	Date Time:	Custody Seal # 490, 488, 486	<input checked="" type="checkbox"/> Intact <input type="checkbox"/> Not intact	Preserved where applicable Dry Ice Coolant Temp 2.0, 17, 2.2

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JB59477: Chain of Custody

Page 1 of 2



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB59477 Client: _____ Project: _____

Date / Time Received: 2/8/2014 Delivery Method: _____ Airbill #'s: _____

Cooler Temps (Initial/Adjusted): #1: (2/2); #2: (1.7/1.7); #3: (2.2/2.2); 0

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	3		

<u>Quality Control Preservatio</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	Intact		

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

Accutest Laboratories
V: 732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www.accutest.com

JB59477: Chain of Custody

Page 2 of 2

Appendix O:
Sub-Slab and IAQ Sampling Logs



CHAIN OF CUSTODY

Air Sampling Field Data Sheet

FED-EX Tracking #	Bottle Order Control # HM-01/28/2014-03
Lab Quote #	Lab Job # JB59487

PA

Client / Reporting Information						Weather Parameters					Requested Analysis						
Company Name Sustainable Development Inc.			Project Name Former Bridge Cleaners Indoor Air			Temperature (Fahrenheit) Start: 21.0 degree f Maximum: 28.9 degree f Stop: 28.0 degree f Minimum: 21.0 degree f					Requested Analysis VTO15STD SIM						
Address Suite 2A 166 Woodside Ave			Street 39-26 30th Street			Atmospheric Pressure (Inches of Hg) Start: 30.34 in Maximum: 30.34 in Stop: 30.19 in Minimum: 30.19 in											
City West Harrison, N.Y. 10604			City Long Island City, N.Y.			Other weather comment:											
Project Contact Mr. Al M. Nesheiwat E-mail: alnesheiwat@aol.com			Project #														
Phone # (914) 220-2404 Fax # (914) 671-4004			Client Purchase Order #														
Sampler(s) Name(s)						Start Sampling Information					Stop Sampling Information						
Lab Sample #	Field ID / Point of Collection	Air Type		Sampling Equipment Info			Start Sampling Information					Stop Sampling Information					
		Indoor(I) Soil Vap(SV) Ambient(A)	Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.		
1	IAQ- 1	I.	A208	6l	FC-230	2/8/14	9:20	32.0	50.5	HM	2/8/2014	17:20	7.0	58.0	HM	X	
2	IAQ- 2	I.	A668	6l	FC-462	2/8/14	9:28	32.0	49.5	HM	2/8/2014	10:50	2.0	54.5	HM	X	
3	IAQ- 2B	I.	A1160	6l	FC-626	2/8/14	10:45	29.0	55.0	HM	2/8/2014	17:35	9.0	59.0	HM	X	
4	IAQ- 3	I.	A280	6l	FC-347	2/8/14	9:23	32.0	54.0	HM	2/8/2014	17:23	6.0	61.5	HM	X	
5	IAQ- 4	I.	A203	6l	FC-280	2/8/14	9:25	32.0	49.5	HM	2/8/2014	17:25	2.0	57.0	HM	X	
6	Ambient Air	A	A1071	6l	FC-605	2/8/14	9:32	32.0	15.0	HM	2/8/2014	17:32	5.0	21.5	HM	X	
Turnaround Time (Business days)						Data Deliverable Information					Comments / Remarks						
Standard - 15 Days 10 Day <input checked="" type="checkbox"/> X 5 Day 3 Day 2 Day 1 Day Other 24 hrs						All NJDEP TO-15 is mandatory Full T1 Comm A Comm B Reduced T2 Full T1 Other: <input checked="" type="checkbox"/> X ASP Cat 'B'					S044A						
Sample Custody must be documented below each time samples change possession, including courier delivery.																	
Relinquished by Laboratory: 1 Roy Maronians		Date Time: 2/6/2014 11:30		Received By: [Signature]		Relinquished By: [Signature]		Date Time: 02/08/14 20:00		Received By: [Signature]		Relinquished by: 3		Date Time:		Received By: 4	
Relinquished by: 5		Date Time:		Received By: 5		Custody Seal #											

1B

JB59487: Chain of Custody

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CHAIN OF CUSTODY

Air Sampling Field Data Sheet

FED-EX Tracking #	Bottle Order Control # HM-01/29/2014-03
Lab Quote #	Lab Job # JB59487

Client / Reporting Information						Weather Parameters						Requested Analysis					
Company Name: Sustainable Development Inc.			Project Name: Former Bridge Cleaners Sub Slab Air			Temperature (Fahrenheit)											
Address: Suite 2A 166 Woodside Ave			Street: 39-26 30th Street			Start: 21.0 degree f Maximum: 28.9 degree f											
City: West Harrison, N.Y. 10604			City: Long Island City, N.Y.			Stop: 28.0 degree f Minimum: 21.0 degree f											
Project Contact: Mr. Al M. Nesheiwat E-mail: alnesheiwat@aol.com			Project #			Atmospheric Pressure (Inches of Hg)											
Phone # (914) 220-2404 Fax # (914) 671-4004			Client Purchase Order #			Start: 30.34 in Maximum: 30.34 in						VOC/SS/STD SIM					
Sampler(s) Name(s)			Other weather comment:			Stop: 30.19 in Minimum: 30.19 in											
Lab Sample #	Field ID / Point of Collection	Air Type			Start Sampling Information					Stop Sampling Information							
		Indoor(I) Soil Vap(SV) Ambient(A)	Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Date			Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.
7	SS- 1	SV	A223	6l	FC-231	2/8/14	12:12	30.0	52.2	HM	2/8/2014	17:40	52.0	12.0	HM	X	
8	SS- 2	SV	A-668	6l	FC-462	2/8/14	12:22	28.0	47.5	HM	2/8/2014	17:50	52.5	8.0	HM	X	
9	SS- 3	SV	A308	6l	FC-396	2/8/14	12:14	30.0	54.7	HM	2/8/2014	17:42	24.5	14.0	HM	X	
10	SS- 4	SV	A278	6l	FC-289	2/8/14	12:16	27.0	54.3	HM	2/8/2014	17:44	55.0	13.0	HM	X	
11	SS- 5	SV	A-773	6l	FC-513	2/8/14	12:24	33.0	45.3	HM	2/8/2014	17:52	50.5	18.0	HM	X	
12	SS- 6	SV	A756	6l	FC-478	2/8/14	12:18	32.0	50.7	HM	2/8/2014	17:46	15.0	54.5	HM	X	
13	SS- 7	SV	A-998	6l	FC-586	2/8/14	12:20	32.0	47.8	HM	2/8/2014	17:48	13.0	51.5	HM	X	
Turnaround Time (Business days)						Data Deliverable Information						Comments / Remarks					
Standard - 15 Days 10 Day <input checked="" type="checkbox"/> X 5 Day _____ 3 Day _____ 2 Day _____ 1 Day _____ Other _____ 24 hrs						All NJDEP TO-15 is mandatory Full T1 Comm A _____ Comm B _____ Reduced T2 _____ Full T1 _____ Other: <input checked="" type="checkbox"/> X ASP Cat 'B'											
Sample Custody must be documented below each time samples change possession, including courier delivery.																	
Relinquished by Laboratory: 1 Ray Maroulanos			Date Time: 2/6/2014 11:30			Received By: 1			Relinquished By: 2			Date Time: 2/8/14 20:00			Received By: 2		
Relinquished by: 3			Date Time:			Received By: 3			Relinquished By: 4			Date Time:			Received By:		
Relinquished by: 5			Date Time:			Received By: 5			Custody Seal #								

JB59487: Chain of Custody

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Job# JB59487
(REQUIRED)

Unused Summa Return Form

Client Sustainable Development Office West Harrison, NY
Project Home Bridge Cleaners Indoor Air

#Summas 2 #Flow Controllers (4)

Summa#s	FC#s
A 1080	-14 FC520
A 776	-15 FC427
	-16 FC275
	-17 FC623

Rec'd By [Signature] Rec'd Date/Time 2/8/14 20:00

Rec'd via Arrest sampling form
(Attach any client paperwork, documentation, or airbills if available)

Notes



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB59487
 Client: SUSTAINABLE DEVELOPMENT
 Project: FORMER BRIDGE CLEANERS INDOOR AIR
Date / Time Received: 2/08/2014 20:00
 Delivery Method: Accutest Courier
 Airbill #s:

Cooler Temps (Initial/Adjusted):

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:	_____		
3. Cooler media:	_____		
4. No, Coolers	_____		

<u>Quality Control Preservation</u>	<u>Y</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input type="checkbox"/>		<input checked="" type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input type="checkbox"/>		<input checked="" type="checkbox"/>
3. Condition of sample:	Intact		

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments
 1. -5: Did not receive FC280. We did receive FC520 as an extra, possibly a typo?
 2. -2: IAQ-2 is on a label tag that is attached to summa cannister A469, not A668 as it is typed on the COC. This sample is noted as being faulty during sampling. The FC462 that is listed for faulty sample -2 is also listed as being the FC for sample -8, SS-2.



Sample Receipt Summary - Problem Resolution

Accutest Job Number: JB59487

Initiator: timh

CSR: Tammy McCloskey

Response Date: 2/14/2014

Response: 1. This was a typo, FC520 is correct flow controller

2. IAQ-2 should be summa A469, please run this sample. Flow controller number for -8 (SS-2) should be FC275

Per Harold Meissner

Confirmed with client that SIM analysis is not required, use NY LL test codes.

Indoor Air Work Sheet

JB59487
field/
COC

Sustainable Environmental
Former Bridge Cleaners
2/8/2014

Field ID / Point of Collection	Air Type <small>Soil Vap(Sv) Ambient(A)</small>	Sampling Equipment Info			Start Sampling Information					Stop Sampling Information				
		Canister Serial #	Size 6L or 1L	Flow Controller	Date	Time (24hr)	Canister Pressure	Interior Temp (F)	Sampler Init.	Date	Time (24hr)	Canister Pressure	Interior Temp (F)	Sampler Init.
IAQ- 1	I.	A208	6l	FC-230	2/8/14	9:20	32.0	50.5	HM	2/8/2014	17:20	7.0	58.0	HM
IAQ- 2	I.	A668	6l	FC-462	2/8/14	9:28	32.0	49.5	HM	2/8/2014	10:50	2.0	54.5	HM
IAQ- 2B	I.	A1160	6l	FC-626	2/8/14	10:45	29.0	55.0	HM	2/8/2014	17:35	9.0	59.0	HM
IAQ- 3	I.	A280	6l	FC-347	2/8/14	9:23	32.0	54.0	HM	2/8/2014	17:23	6.0	61.5	HM
IAQ- 4	I.	A203	6l	FC-280	2/8/14	9:25	32.0	49.5	HM	2/8/2014	17:25	2.0	57.0	HM
Ambient Air	A	A1071	6l	FC-605	2/8/14	9:32	32.0	15.0	HM	2/8/2014	17:32	5.0	21.5	HM

JB59487: Chain of Custody

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JB59487
field
COC

Indoor Air Work Sheet

Sustainable Environmental
Former Bridge Cleaners
2/8/2014

Field ID / Point of Collection	Sampling Equipment Info			Start Sampling Information					Stop Sampling Information				
	Canister Serial #	Size or 1L	Flow Controller	Date	Time (24hr)	Canister Pressure	Interior Temp (F)	Sampler Init.	Date	Time (24hr)	Canister Pressure	Interior Temp (F)	Sampler Init.
SS- 1	A223	6l	FC-231	2/8/14	12:12	30.0	52.2	HM	2/8/2014	17:40	52.0	12.0	HM
SS- 2	A-668	6l	FC-462	2/8/14	12:22	28.0	47.5	HM	2/8/2014	17:50	52.5	8.0	HM
SS- 3	A308	6l	FC-396	2/8/14	12:14	30.0	54.7	HM	2/8/2014	17:42	24.5	14.0	HM
SS- 4	A278	6l	FC-289	2/8/14	12:16	27.0	54.3	HM	2/8/2014	17:44	55.0	13.0	HM
SS- 5	A-773	6l	FC-513	2/8/14	12:24	33.0	45.3	HM	2/8/2014	17:52	50.5	18.0	HM
SS- 6	A756	6l	FC-478	2/8/14	12:18	32.0	50.7	HM	2/8/2014	17:46	15.0	54.5	HM
SS- 7	A-998	6l	FC-586	2/8/14	12:20	32.0	47.8	HM	2/8/2014	17:48	13.0	51.5	HM

JB59487: Chain of Custody

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JB59487
 fidd/ notes
 coc



INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, Inc.
 92 North Main St, Building 20
 Windsor, NJ 08561
 Toll-free: (800) 301-9663

Pine Environmental Services, Inc.

Instrument ID 11814
Description Dielectric MGD-2002
Calibrated 2/7/2014 12:15:01PM

Manufacturer Dielectric
Model Number MGD-2002
Serial Number/ Lot Number 41110
Location New Jersey
Department
State Certified
Status Pass
Temp °C 22.2
Humidity % 21

Calibration Specifications		
Group #	1	
Group Name	Helium Test	
Test Performed: Yes	As Found Result: Pass	As Left Result: Pass

Test Instruments Used During the Calibration			(As Of Cal Entry Date)	
Test Standard ID	Description	Manufacturer	Model Number	Serial Number/ Lot Number
NJ HELIUM - 0605FD13	UHP Helium	Spec Air	Helium	0605FD13
				Opened Date 7/1/2017

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Daniel Teller

All instruments are calibrated by Pine Environmental Services, Inc. according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services, Inc. of any defect within 24 hours of receipt of equipment
Please call 866-960-7463 for Technical Assistance

Pine Environmental Services, Inc., Windsor Industrial Park, 92 North Main Street, Bldg 20, Windsor, NJ 08561, 800-301-9663
 www.pine-environmental.com

JB59487

Field/

CoC

Field Notes

Sustainable Environmental

Former Bridge Cleaners

2/8/2014

- Arrive on site at 06:34 app 1 hr early
- Building Not accessible at 08:10 Building was a large warehouse type area presently being used as a textile (cloth material) cutting business. While sampling some carpentry work (installing large shelving units) was being done on the north wall of the building
- After bringing all equipment and supplies into the building I assist in setting up ground water sampling equipment.
- All canisters and Flow controllers were removed from boxes and prepped for deployment.
- Install and imitate indoor air units between 09:20 and 09:30
- Ambient air sample set up at 09:32 between the sidewalk and curb. Snow piles covering area.
- Prepare sub slab sampling points for Tracer Gas monitoring
Installed 14"x20" containment bonnets centered over SS sampling points. Sealed bonnets to the floor using molten Bees Was. Helium was used as tracer gas. Both the atmosphere inside the bonnet, and in the sampling line were measured for Helium concentrations using a Dielectric Model MGD-2002 Helium detector (rented, and calibrated by Pine Environmental).
- Concentrations of Helium were checked on all sampling points prior to installing Summa Canisters inline, and starting sampling.
- Sub Slab Samplers were initiated between 12:10 and 12:30

Problems

- It was observed that the Summa set up on Indoor Air IAQ-2 was running low on pressure. In only 70 minutes of run time. Fearing that it was actually low on pressure (not just a pressure gauge malfunction) an extra sampling set up was installed and started at 10:45. This second sample is referred to as IAQ-2B. The original sample IAQ-2 was ended at

JB59487: Chain of Custody

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JB59487.

field

10:50 The sample order had delivered three extra suma units. One was used on IAQ-2B. The other units two were not used.

COC

- After cleaning up and loading truck left site at 18:15.

JB59487
Field/
COC

Sub Slab Tracer Gas Sheet

Sustainable Environmental
Former Bridge Cleaners
2/8/2014

Sample ID	He in Containment %	He in Sample Line PPM
SS-1	97	0.0
SS-2	96	0.0
SS-3	96	0.0
SS-4	93	0.0
SS-5	95	0.0
SS-6	97	0.0
SS-7	96	0.0



Job Change Order: JB59487

Requested Date: 2/24/2014 **Received Date:** 2/10/2014
Account Name: SES (Sustainable Environmental) **Due Date:** 2/24/2014
Project Description: SDI-Bridge, 39-26 30th Street, Long Island City, NY **Deliverable:** NYASPB
CSR: tammym **TAT (Days):** 0

Sample #: JB59487-2 **Change:**
 please cancel analysis, sampling failed, summa was received at
 29.4" HG
Dept:

IAQ-2

Above Changes Per: Air Lab **Date:** 2/24/2014

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Appendix P:
Sub-Slab Vapor and Indoor Air Analytical Reports

Sample Summary

SES (Sustainable Environmental)

Job No: JB59487

SDI-Bridge, 39-26 30th Street, Long Island City, NY

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JB59487-1	02/08/14	17:20 HM	02/10/14	AIR	Indoor Air Comp.	IAQ-1
JB59487-2	02/08/14	10:50 HM	02/10/14	AIR	Indoor Air Comp.	IAQ-2
JB59487-3	02/08/14	17:35 HM	02/10/14	AIR	Indoor Air Comp.	IAQ-2B
JB59487-4	02/08/14	17:23 HM	02/10/14	AIR	Indoor Air Comp.	IAQ-3
JB59487-5	02/08/14	17:25 HM	02/10/14	AIR	Indoor Air Comp.	IAQ-4
JB59487-6	02/08/14	17:32 HM	02/10/14	AIR	Ambient Air Comp.	AMBIENT AIR
JB59487-7	02/08/14	17:40 HM	02/10/14	AIR	Soil Vapor Comp.	SS-1
JB59487-8	02/08/14	17:50 HM	02/10/14	AIR	Soil Vapor Comp.	SS-2
JB59487-9	02/08/14	17:42 HM	02/10/14	AIR	Soil Vapor Comp.	SS-3
JB59487-10	02/08/14	17:44 HM	02/10/14	AIR	Soil Vapor Comp.	SS-4
JB59487-11	02/08/14	17:52 HM	02/10/14	AIR	Soil Vapor Comp.	SS-5
JB59487-12	02/08/14	17:46 HM	02/10/14	AIR	Soil Vapor Comp.	SS-6
JB59487-13	02/08/14	17:48 HM	02/10/14	AIR	Soil Vapor Comp.	SS-7

Report of Analysis

Client Sample ID: IAQ-1		
Lab Sample ID: JB59487-1		Date Sampled: 02/08/14
Matrix: AIR - Indoor Air Comp. Summa ID: A208		Date Received: 02/10/14
Method: TO-15		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W45868.D	1	02/14/14	DFT	n/a	n/a	VW1831
Run #2							

Run #1	Initial Volume
Run #1	400 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	5.4	0.20	0.034	ppbv		13	0.48	0.081	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	0.044	ug/m3
71-43-2	78.11	Benzene	0.41	0.20	0.021	ppbv		1.3	0.64	0.067	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	0.17	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	0.23	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	0.066	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	0.061	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	0.13	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	0.053	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	0.12	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	0.053	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	0.093	ug/m3
74-87-3	50.49	Chloromethane	0.73	0.20	0.034	ppbv		1.5	0.41	0.070	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	0.088	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	0.10	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	0.069	ug/m3
110-82-7	84.16	Cyclohexane	0.17	0.20	0.058	ppbv	J	0.59	0.69	0.20	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	0.065	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	0.083	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	0.21	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	0.065	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	0.18	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	0.22	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.57	0.20	0.015	ppbv		2.8	0.99	0.074	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	0.25	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	0.059	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	0.14	0.20	0.028	ppbv	J	0.56	0.79	0.11	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	0.086	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	0.15	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	0.17	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	0.13	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	0.095	ug/m3

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IAQ-1		
Lab Sample ID: JB59487-1		Date Sampled: 02/08/14
Matrix: AIR - Indoor Air Comp. Summa ID: A208		Date Received: 02/10/14
Method: TO-15		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	26.8	0.50	0.19	ppbv		50.5	0.94	0.36	ug/m3
100-41-4	106.2	Ethylbenzene	0.16	0.20	0.020	ppbv	J	0.69	0.87	0.087	ug/m3
141-78-6	88	Ethyl Acetate	2.2	0.20	0.057	ppbv		7.9	0.72	0.21	ug/m3
622-96-8	120.2	4-Ethyltoluene	0.11	0.20	0.015	ppbv	J	0.54	0.98	0.074	ug/m3
76-13-1	187.4	Freon 113	0.40	0.20	0.021	ppbv		3.1	1.5	0.16	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	0.15	ug/m3
142-82-5	100.2	Heptane	0.20	0.20	0.020	ppbv		0.82	0.82	0.082	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	0.67	ug/m3
110-54-3	86.17	Hexane	0.55	0.20	0.016	ppbv		1.9	0.70	0.056	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	0.10	ug/m3
67-63-0	60.1	Isopropyl Alcohol	1.5	0.20	0.039	ppbv		3.7	0.49	0.096	ug/m3
75-09-2	84.94	Methylene chloride	1.8	0.20	0.047	ppbv		6.3	0.69	0.16	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.56	0.20	0.058	ppbv		1.7	0.59	0.17	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	0.12	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	0.061	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	0.16	ug/m3
115-07-1	42	Propylene	ND	0.50	0.031	ppbv		ND	0.86	0.053	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.020	ppbv		ND	0.85	0.085	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	0.087	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	0.21	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	0.17	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	0.59	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.33	0.20	0.017	ppbv		1.6	0.98	0.084	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.12	0.20	0.015	ppbv	J	0.59	0.98	0.074	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.14	0.20	0.021	ppbv	J	0.65	0.93	0.098	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	0.13	ug/m3
127-18-4	165.8	Tetrachloroethylene	22.4	0.040	0.029	ppbv		152	0.27	0.20	ug/m3
109-99-9	72.11	Tetrahydrofuran	0.18	0.20	0.045	ppbv	J	0.53	0.59	0.13	ug/m3
108-88-3	92.14	Toluene	0.94	0.20	0.020	ppbv		3.5	0.75	0.075	ug/m3
79-01-6	131.4	Trichloroethylene	0.23	0.040	0.019	ppbv		1.2	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.22	0.20	0.014	ppbv		1.2	1.1	0.079	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	0.043	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	0.20	ug/m3
	106.2	m,p-Xylene	0.52	0.20	0.032	ppbv		2.3	0.87	0.14	ug/m3
95-47-6	106.2	o-Xylene	0.20	0.20	0.019	ppbv		0.87	0.87	0.083	ug/m3
1330-20-7	106.2	Xylenes (total)	0.73	0.20	0.019	ppbv		3.2	0.87	0.083	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		65-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IAQ-2B	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-3	Date Received:	02/10/14
Matrix:	AIR - Indoor Air Comp. Summa ID: A1160	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W45869.D	1.6	02/15/14	DFT	n/a	n/a	VW1831
Run #2							

Run #1	Initial Volume
Run #1	640 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	4.6	0.20	0.034	ppbv		11	0.48	0.081	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	0.044	ug/m3
71-43-2	78.11	Benzene	0.45	0.20	0.021	ppbv		1.4	0.64	0.067	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	0.17	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	0.23	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	0.066	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	0.061	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	0.13	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	0.053	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	0.12	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	0.053	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	0.093	ug/m3
74-87-3	50.49	Chloromethane	0.69	0.20	0.034	ppbv		1.4	0.41	0.070	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	0.088	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	0.10	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	0.069	ug/m3
110-82-7	84.16	Cyclohexane	0.94	0.20	0.058	ppbv		3.2	0.69	0.20	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	0.065	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	0.083	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	0.21	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	0.065	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	0.18	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	0.22	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.51	0.20	0.015	ppbv		2.5	0.99	0.074	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	0.25	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	0.059	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	0.11	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	0.086	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	0.15	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	0.17	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	0.13	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	0.095	ug/m3

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IAQ-2B	
Lab Sample ID: JB59487-3	
Matrix: AIR - Indoor Air Comp. Summa ID: A1160	Date Sampled: 02/08/14
Method: TO-15	Date Received: 02/10/14
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY	Percent Solids: n/a

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	19.2	0.50	0.19	ppbv		36.2	0.94	0.36	ug/m3
100-41-4	106.2	Ethylbenzene	0.21	0.20	0.020	ppbv		0.91	0.87	0.087	ug/m3
141-78-6	88	Ethyl Acetate	0.94	0.20	0.057	ppbv		3.4	0.72	0.21	ug/m3
622-96-8	120.2	4-Ethyltoluene	0.13	0.20	0.015	ppbv	J	0.64	0.98	0.074	ug/m3
76-13-1	187.4	Freon 113	0.21	0.20	0.021	ppbv		1.6	1.5	0.16	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	0.15	ug/m3
142-82-5	100.2	Heptane	1.1	0.20	0.020	ppbv		4.5	0.82	0.082	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	0.67	ug/m3
110-54-3	86.17	Hexane	2.4	0.20	0.016	ppbv		8.5	0.70	0.056	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	0.10	ug/m3
67-63-0	60.1	Isopropyl Alcohol	1.6	0.20	0.039	ppbv		3.9	0.49	0.096	ug/m3
75-09-2	84.94	Methylene chloride	1.2	0.20	0.047	ppbv		4.2	0.69	0.16	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.75	0.20	0.058	ppbv		2.2	0.59	0.17	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	0.12	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	0.061	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	0.16	ug/m3
115-07-1	42	Propylene	ND	0.50	0.031	ppbv		ND	0.86	0.053	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.020	ppbv		ND	0.85	0.085	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	0.087	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	0.21	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	0.17	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	0.59	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.35	0.20	0.017	ppbv		1.7	0.98	0.084	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.13	0.20	0.015	ppbv	J	0.64	0.98	0.074	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.80	0.20	0.021	ppbv		3.7	0.93	0.098	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	0.13	ug/m3
127-18-4	165.8	Tetrachloroethylene	34.8	0.040	0.029	ppbv		236	0.27	0.20	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	0.13	ug/m3
108-88-3	92.14	Toluene	0.94	0.20	0.020	ppbv		3.5	0.75	0.075	ug/m3
79-01-6	131.4	Trichloroethylene	0.41	0.040	0.019	ppbv		2.2	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.19	0.20	0.014	ppbv	J	1.1	1.1	0.079	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	0.043	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	0.20	ug/m3
	106.2	m,p-Xylene	0.59	0.20	0.032	ppbv		2.6	0.87	0.14	ug/m3
95-47-6	106.2	o-Xylene	0.23	0.20	0.019	ppbv		1.0	0.87	0.083	ug/m3
1330-20-7	106.2	Xylenes (total)	0.83	0.20	0.019	ppbv		3.6	0.87	0.083	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	85%		65-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IAQ-3		
Lab Sample ID: JB59487-4		Date Sampled: 02/08/14
Matrix: AIR - Indoor Air Comp. Summa ID: A280		Date Received: 02/10/14
Method: TO-15		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	W45870.D	1	02/15/14	DFT	n/a	n/a	VW1831

Run #1	Initial Volume
Run #2	400 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	3.9	0.20	0.034	ppbv		9.3	0.48	0.081	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	0.044	ug/m3
71-43-2	78.11	Benzene	0.40	0.20	0.021	ppbv		1.3	0.64	0.067	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	0.17	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	0.23	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	0.066	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	0.061	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	0.13	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	0.053	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	0.12	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	0.053	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	0.093	ug/m3
74-87-3	50.49	Chloromethane	0.69	0.20	0.034	ppbv		1.4	0.41	0.070	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	0.088	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	0.10	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	0.069	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	0.058	ppbv		ND	0.69	0.20	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	0.065	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	0.083	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	0.21	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	0.065	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	0.18	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	0.22	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.56	0.20	0.015	ppbv		2.8	0.99	0.074	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	0.25	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	0.059	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	0.11	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	0.086	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	0.15	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	0.17	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	0.13	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	0.095	ug/m3

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IAQ-3		
Lab Sample ID: JB59487-4		Date Sampled: 02/08/14
Matrix: AIR - Indoor Air Comp. Summa ID: A280		Date Received: 02/10/14
Method: TO-15		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	16.1	0.50	0.19	ppbv		30.3	0.94	0.36	ug/m3
100-41-4	106.2	Ethylbenzene	0.16	0.20	0.020	ppbv	J	0.69	0.87	0.087	ug/m3
141-78-6	88	Ethyl Acetate	0.52	0.20	0.057	ppbv		1.9	0.72	0.21	ug/m3
622-96-8	120.2	4-Ethyltoluene	0.10	0.20	0.015	ppbv	J	0.49	0.98	0.074	ug/m3
76-13-1	187.4	Freon 113	0.49	0.20	0.021	ppbv		3.8	1.5	0.16	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	0.15	ug/m3
142-82-5	100.2	Heptane	0.19	0.20	0.020	ppbv	J	0.78	0.82	0.082	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	0.67	ug/m3
110-54-3	86.17	Hexane	0.57	0.20	0.016	ppbv		2.0	0.70	0.056	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	0.10	ug/m3
67-63-0	60.1	Isopropyl Alcohol	1.3	0.20	0.039	ppbv		3.2	0.49	0.096	ug/m3
75-09-2	84.94	Methylene chloride	1.8	0.20	0.047	ppbv		6.3	0.69	0.16	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.45	0.20	0.058	ppbv		1.3	0.59	0.17	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	0.12	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	0.061	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	0.16	ug/m3
115-07-1	42	Propylene	ND	0.50	0.031	ppbv		ND	0.86	0.053	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.020	ppbv		ND	0.85	0.085	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	0.087	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	0.21	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	0.17	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	0.59	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.32	0.20	0.017	ppbv		1.6	0.98	0.084	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.11	0.20	0.015	ppbv	J	0.54	0.98	0.074	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.13	0.20	0.021	ppbv	J	0.61	0.93	0.098	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	0.13	ug/m3
127-18-4	165.8	Tetrachloroethylene	23.3	0.040	0.029	ppbv		158	0.27	0.20	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	0.13	ug/m3
108-88-3	92.14	Toluene	0.89	0.20	0.020	ppbv		3.4	0.75	0.075	ug/m3
79-01-6	131.4	Trichloroethylene	0.21	0.040	0.019	ppbv		1.1	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.21	0.20	0.014	ppbv		1.2	1.1	0.079	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	0.043	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	0.20	ug/m3
	106.2	m,p-Xylene	0.52	0.20	0.032	ppbv		2.3	0.87	0.14	ug/m3
95-47-6	106.2	o-Xylene	0.20	0.20	0.019	ppbv		0.87	0.87	0.083	ug/m3
1330-20-7	106.2	Xylenes (total)	0.71	0.20	0.019	ppbv		3.1	0.87	0.083	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	89%		65-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IAQ-4	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-5	Date Received:	02/10/14
Matrix:	AIR - Indoor Air Comp. Summa ID: A203	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W45872.D	1	02/15/14	DFT	n/a	n/a	VW1831
Run #2	W45914.D	1	02/17/14	DFT	n/a	n/a	VW1832

Run #	Initial Volume
Run #1	400 ml
Run #2	100 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	4.2	0.20	0.034	ppbv		10	0.48	0.081	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	0.044	ug/m3
71-43-2	78.11	Benzene	0.41	0.20	0.021	ppbv		1.3	0.64	0.067	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	0.17	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	0.23	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	0.066	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	0.061	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	0.13	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	0.053	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	0.12	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	0.053	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	0.093	ug/m3
74-87-3	50.49	Chloromethane	0.69	0.20	0.034	ppbv		1.4	0.41	0.070	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	0.088	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	0.10	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	0.069	ug/m3
110-82-7	84.16	Cyclohexane	0.14	0.20	0.058	ppbv	J	0.48	0.69	0.20	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	0.065	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	0.083	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	0.21	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	0.065	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	0.18	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	0.22	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.55	0.20	0.015	ppbv		2.7	0.99	0.074	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	0.25	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	0.059	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	0.24	0.20	0.028	ppbv		0.95	0.79	0.11	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	0.086	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	0.15	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	0.17	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	0.13	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	0.095	ug/m3

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IAQ-4	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-5	Date Received:	02/10/14
Matrix:	AIR - Indoor Air Comp. Summa ID: A203	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	15.8	0.50	0.19	ppbv		29.8	0.94	0.36	ug/m3
100-41-4	106.2	Ethylbenzene	0.18	0.20	0.020	ppbv	J	0.78	0.87	0.087	ug/m3
141-78-6	88	Ethyl Acetate	0.57	0.20	0.057	ppbv		2.1	0.72	0.21	ug/m3
622-96-8	120.2	4-Ethyltoluene	0.12	0.20	0.015	ppbv	J	0.59	0.98	0.074	ug/m3
76-13-1	187.4	Freon 113	0.15	0.20	0.021	ppbv	J	1.1	1.5	0.16	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	0.15	ug/m3
142-82-5	100.2	Heptane	0.19	0.20	0.020	ppbv	J	0.78	0.82	0.082	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	0.67	ug/m3
110-54-3	86.17	Hexane	0.30	0.20	0.016	ppbv		1.1	0.70	0.056	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	0.10	ug/m3
67-63-0	60.1	Isopropyl Alcohol	8.8	0.20	0.039	ppbv		22	0.49	0.096	ug/m3
75-09-2	84.94	Methylene chloride	0.95	0.20	0.047	ppbv		3.3	0.69	0.16	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.54	0.20	0.058	ppbv		1.6	0.59	0.17	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	0.12	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	0.061	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	0.16	ug/m3
115-07-1	42	Propylene	ND	0.50	0.031	ppbv		ND	0.86	0.053	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.020	ppbv		ND	0.85	0.085	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	0.087	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	0.21	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	0.17	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	0.59	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.39	0.20	0.017	ppbv		1.9	0.98	0.084	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.15	0.20	0.015	ppbv	J	0.74	0.98	0.074	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.13	0.20	0.021	ppbv	J	0.61	0.93	0.098	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	0.13	ug/m3
127-18-4	165.8	Tetrachloroethylene	41.1 ^a	0.16	0.12	ppbv		279 ^a	1.1	0.81	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	0.13	ug/m3
108-88-3	92.14	Toluene	0.98	0.20	0.020	ppbv		3.7	0.75	0.075	ug/m3
79-01-6	131.4	Trichloroethylene	0.34	0.040	0.019	ppbv		1.8	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.18	0.20	0.014	ppbv	J	1.0	1.1	0.079	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	0.043	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	0.20	ug/m3
	106.2	m,p-Xylene	0.51	0.20	0.032	ppbv		2.2	0.87	0.14	ug/m3
95-47-6	106.2	o-Xylene	0.22	0.20	0.019	ppbv		0.96	0.87	0.083	ug/m3
1330-20-7	106.2	Xylenes (total)	0.73	0.20	0.019	ppbv		3.2	0.87	0.083	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	86%	81%	65-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IAQ-4		Date Sampled: 02/08/14
Lab Sample ID: JB59487-5		Date Received: 02/10/14
Matrix: AIR - Indoor Air Comp. Summa ID: A203		Percent Solids: n/a
Method: TO-15		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
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(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AMBIENT AIR	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-6	Date Received:	02/10/14
Matrix:	AIR - Ambient Air Comp. Summa ID: A1071	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	W45873.D	1	02/15/14	DFT	n/a	n/a	VW1831

Run #1	Initial Volume
Run #2	400 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	2.7	0.20	0.034	ppbv		6.4	0.48	0.081	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.020	ppbv		ND	0.44	0.044	ug/m3
71-43-2	78.11	Benzene	0.38	0.20	0.021	ppbv		1.2	0.64	0.067	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.025	ppbv		ND	1.3	0.17	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.022	ppbv		ND	2.1	0.23	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.017	ppbv		ND	0.78	0.066	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.014	ppbv		ND	0.87	0.061	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	0.025	ppbv		ND	1.0	0.13	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.017	ppbv		ND	0.62	0.053	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.025	ppbv		ND	0.92	0.12	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.020	ppbv		ND	0.53	0.053	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.019	ppbv		ND	0.98	0.093	ug/m3
74-87-3	50.49	Chloromethane	0.61	0.20	0.034	ppbv		1.3	0.41	0.070	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.028	ppbv		ND	0.63	0.088	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	0.020	ppbv		ND	1.0	0.10	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.011	ppbv		ND	1.3	0.069	ug/m3
110-82-7	84.16	Cyclohexane	0.15	0.20	0.058	ppbv	J	0.52	0.69	0.20	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	0.065	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.021	ppbv		ND	0.79	0.083	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	0.21	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.016	ppbv		ND	0.81	0.065	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.040	ppbv		ND	0.92	0.18	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.060	ppbv		ND	0.72	0.22	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.52	0.20	0.015	ppbv		2.6	0.99	0.074	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.029	ppbv		ND	1.7	0.25	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.015	ppbv		ND	0.79	0.059	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	0.11	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.019	ppbv		ND	0.91	0.086	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.025	ppbv		ND	1.2	0.15	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	0.17	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	0.13	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.021	ppbv		ND	0.91	0.095	ug/m3

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AMBIENT AIR	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-6	Date Received:	02/10/14
Matrix:	AIR - Ambient Air Comp. Summa ID: A1071	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	9.2	0.50	0.19	ppbv		17	0.94	0.36	ug/m3
100-41-4	106.2	Ethylbenzene	0.12	0.20	0.020	ppbv	J	0.52	0.87	0.087	ug/m3
141-78-6	88	Ethyl Acetate	0.99	0.20	0.057	ppbv		3.6	0.72	0.21	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	0.015	ppbv		ND	0.98	0.074	ug/m3
76-13-1	187.4	Freon 113	0.61	0.20	0.021	ppbv		4.7	1.5	0.16	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.021	ppbv		ND	1.4	0.15	ug/m3
142-82-5	100.2	Heptane	0.21	0.20	0.020	ppbv		0.86	0.82	0.082	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.063	ppbv		ND	2.1	0.67	ug/m3
110-54-3	86.17	Hexane	0.95	0.20	0.016	ppbv		3.3	0.70	0.056	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.025	ppbv		ND	0.82	0.10	ug/m3
67-63-0	60.1	Isopropyl Alcohol	0.74	0.20	0.039	ppbv		1.8	0.49	0.096	ug/m3
75-09-2	84.94	Methylene chloride	2.3	0.20	0.047	ppbv		8.0	0.69	0.16	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.22	0.20	0.058	ppbv		0.65	0.59	0.17	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.029	ppbv		ND	0.82	0.12	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.017	ppbv		ND	0.72	0.061	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.040	ppbv		ND	0.82	0.16	ug/m3
115-07-1	42	Propylene	1.2	0.50	0.031	ppbv		2.1	0.86	0.053	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.020	ppbv		ND	0.85	0.085	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.016	ppbv		ND	1.1	0.087	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.030	ppbv		ND	1.4	0.21	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.031	ppbv		ND	1.1	0.17	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.079	ppbv		ND	1.5	0.59	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.20	0.017	ppbv		ND	0.98	0.084	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	0.015	ppbv		ND	0.98	0.074	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.17	0.20	0.021	ppbv	J	0.79	0.93	0.098	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	0.13	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.64	0.040	0.029	ppbv		4.3	0.27	0.20	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.045	ppbv		ND	0.59	0.13	ug/m3
108-88-3	92.14	Toluene	0.79	0.20	0.020	ppbv		3.0	0.75	0.075	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.20	0.20	0.014	ppbv		1.1	1.1	0.079	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.017	ppbv		ND	0.51	0.043	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.058	ppbv		ND	0.70	0.20	ug/m3
	106.2	m,p-Xylene	0.42	0.20	0.032	ppbv		1.8	0.87	0.14	ug/m3
95-47-6	106.2	o-Xylene	0.13	0.20	0.019	ppbv	J	0.56	0.87	0.083	ug/m3
1330-20-7	106.2	Xylenes (total)	0.55	0.20	0.019	ppbv		2.4	0.87	0.083	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	81%		65-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SS-1		
Lab Sample ID: JB59487-7		Date Sampled: 02/08/14
Matrix: AIR - Soil Vapor Comp. Summa ID: A223,A701		Date Received: 02/10/14
Method: TO-15		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	3W39085.D	82	02/20/14	YMH	n/a	n/a	V3W1487

Run #1	Initial Volume
Run #2	200 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	ND	33	5.6	ppbv		ND	78	13	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	33	3.2	ppbv		ND	73	7.1	ug/m3
71-43-2	78.11	Benzene	ND	33	3.5	ppbv		ND	110	11	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	33	4.1	ppbv		ND	220	27	ug/m3
75-25-2	252.8	Bromoform	ND	33	3.5	ppbv		ND	340	36	ug/m3
74-83-9	94.94	Bromomethane	ND	33	2.8	ppbv		ND	130	11	ug/m3
593-60-2	106.9	Bromoethene	ND	33	2.3	ppbv		ND	140	10	ug/m3
100-44-7	126	Benzyl Chloride	ND	33	4.1	ppbv		ND	170	21	ug/m3
75-15-0	76.14	Carbon disulfide	ND	33	2.8	ppbv		ND	100	8.7	ug/m3
108-90-7	112.6	Chlorobenzene	ND	33	4.2	ppbv		ND	150	19	ug/m3
75-00-3	64.52	Chloroethane	ND	33	3.3	ppbv		ND	87	8.7	ug/m3
67-66-3	119.4	Chloroform	ND	33	3.0	ppbv		ND	160	15	ug/m3
74-87-3	50.49	Chloromethane	ND	33	5.5	ppbv		ND	68	11	ug/m3
107-05-1	76.53	3-Chloropropene	ND	33	4.5	ppbv		ND	100	14	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	33	3.3	ppbv		ND	170	17	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	33	1.9	ppbv		ND	210	12	ug/m3
110-82-7	84.16	Cyclohexane	ND	33	9.6	ppbv		ND	110	33	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	33	2.7	ppbv		ND	130	11	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	33	3.5	ppbv		ND	130	14	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	33	4.5	ppbv		ND	250	35	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	33	2.7	ppbv		ND	130	11	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	33	6.5	ppbv		ND	150	30	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	33	9.9	ppbv		ND	120	36	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	33	2.5	ppbv		ND	160	12	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	33	4.7	ppbv		ND	280	40	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	33	2.4	ppbv		ND	130	9.5	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	33	4.5	ppbv		ND	130	18	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	33	3.1	ppbv		ND	150	14	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	33	4.1	ppbv		ND	200	25	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	33	4.8	ppbv		ND	200	29	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	33	3.5	ppbv		ND	200	21	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	33	3.5	ppbv		ND	150	16	ug/m3

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-1	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-7	Date Received:	02/10/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A223,A701	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	ND	82	31	ppbv		ND	150	58	ug/m3
100-41-4	106.2	Ethylbenzene	ND	33	3.3	ppbv		ND	140	14	ug/m3
141-78-6	88	Ethyl Acetate	ND	33	9.4	ppbv		ND	120	34	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	33	2.5	ppbv		ND	160	12	ug/m3
76-13-1	187.4	Freon 113	ND	33	3.4	ppbv		ND	250	26	ug/m3
76-14-2	170.9	Freon 114	ND	33	3.5	ppbv		ND	230	24	ug/m3
142-82-5	100.2	Heptane	ND	33	3.2	ppbv		ND	140	13	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	33	10	ppbv		ND	350	110	ug/m3
110-54-3	86.17	Hexane	ND	33	2.6	ppbv		ND	120	9.2	ug/m3
591-78-6	100	2-Hexanone	ND	33	4.0	ppbv		ND	130	16	ug/m3
67-63-0	60.1	Isopropyl Alcohol	10600	33	6.3	ppbv	E	26100	81	15	ug/m3
75-09-2	84.94	Methylene chloride	ND	33	7.6	ppbv		ND	110	26	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	33	9.6	ppbv		ND	97	28	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	33	4.8	ppbv		ND	140	20	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	33	2.8	ppbv		ND	120	10	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	33	6.6	ppbv		ND	140	27	ug/m3
115-07-1	42	Propylene	ND	82	5.1	ppbv		ND	140	8.8	ug/m3
100-42-5	104.1	Styrene	ND	33	3.2	ppbv		ND	140	14	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	33	2.7	ppbv		ND	180	15	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	33	5.0	ppbv		ND	230	34	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	33	5.1	ppbv		ND	180	28	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	33	13	ppbv		ND	240	97	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	33	2.7	ppbv		ND	160	13	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	33	2.5	ppbv		ND	160	12	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	33	3.5	ppbv		ND	150	16	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	33	7.2	ppbv		ND	100	22	ug/m3
127-18-4	165.8	Tetrachloroethylene	4680	6.6	4.7	ppbv		31700	45	32	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	33	7.4	ppbv		ND	97	22	ug/m3
108-88-3	92.14	Toluene	ND	33	3.3	ppbv		ND	120	12	ug/m3
79-01-6	131.4	Trichloroethylene	116	6.6	3.2	ppbv		623	35	17	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	33	2.2	ppbv		ND	190	12	ug/m3
75-01-4	62.5	Vinyl chloride	ND	33	2.8	ppbv		ND	84	7.2	ug/m3
108-05-4	86	Vinyl Acetate	ND	33	9.6	ppbv		ND	120	34	ug/m3
	106.2	m,p-Xylene	ND	33	5.3	ppbv		ND	140	23	ug/m3
95-47-6	106.2	o-Xylene	ND	33	3.2	ppbv		ND	140	14	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	33	3.2	ppbv		ND	140	14	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	87%		65-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SS-2		
Lab Sample ID: JB59487-8		Date Sampled: 02/08/14
Matrix: AIR - Soil Vapor Comp. Summa ID: A668,A1143		Date Received: 02/10/14
Method: TO-15		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	3W39086.D	59.2	02/21/14	YMH	n/a	n/a	V3W1487

Run #1	Initial Volume
Run #2	200 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	29.9	24	4.0	ppbv		71.0	57	9.5	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	24	2.3	ppbv		ND	53	5.1	ug/m3
71-43-2	78.11	Benzene	ND	24	2.5	ppbv		ND	77	8.0	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	24	2.9	ppbv		ND	160	19	ug/m3
75-25-2	252.8	Bromoform	ND	24	2.5	ppbv		ND	250	26	ug/m3
74-83-9	94.94	Bromomethane	ND	24	2.0	ppbv		ND	93	7.8	ug/m3
593-60-2	106.9	Bromoethene	ND	24	1.7	ppbv		ND	100	7.4	ug/m3
100-44-7	126	Benzyl Chloride	ND	24	2.9	ppbv		ND	120	15	ug/m3
75-15-0	76.14	Carbon disulfide	ND	24	2.0	ppbv		ND	75	6.2	ug/m3
108-90-7	112.6	Chlorobenzene	ND	24	3.0	ppbv		ND	110	14	ug/m3
75-00-3	64.52	Chloroethane	ND	24	2.4	ppbv		ND	63	6.3	ug/m3
67-66-3	119.4	Chloroform	ND	24	2.2	ppbv		ND	120	11	ug/m3
74-87-3	50.49	Chloromethane	ND	24	4.0	ppbv		ND	50	8.3	ug/m3
107-05-1	76.53	3-Chloropropene	ND	24	3.3	ppbv		ND	75	10	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	24	2.4	ppbv		ND	120	12	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	24	1.3	ppbv		ND	150	8.2	ug/m3
110-82-7	84.16	Cyclohexane	ND	24	6.9	ppbv		ND	83	24	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	24	1.9	ppbv		ND	97	7.7	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	24	2.5	ppbv		ND	95	9.9	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	24	3.2	ppbv		ND	180	25	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	24	1.9	ppbv		ND	97	7.7	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	24	4.7	ppbv		ND	110	22	ug/m3
123-91-1	88.12	1,4-Dioxane	45.4	24	7.1	ppbv		164	86	26	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	24	1.8	ppbv		ND	120	8.9	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	24	3.4	ppbv		ND	200	29	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	24	1.8	ppbv		ND	95	7.1	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	232	24	3.3	ppbv		920	95	13	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	24	2.2	ppbv		ND	110	10	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	24	2.9	ppbv		ND	140	17	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	24	3.5	ppbv		ND	140	21	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	24	2.6	ppbv		ND	140	16	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	24	2.5	ppbv		ND	110	11	ug/m3

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-2	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-8	Date Received:	02/10/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A668,A1143	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	ND	59	22	ppbv		ND	110	41	ug/m3
100-41-4	106.2	Ethylbenzene	ND	24	2.4	ppbv		ND	100	10	ug/m3
141-78-6	88	Ethyl Acetate	ND	24	6.8	ppbv		ND	86	24	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	24	1.8	ppbv		ND	120	8.8	ug/m3
76-13-1	187.4	Freon 113	ND	24	2.4	ppbv		ND	180	18	ug/m3
76-14-2	170.9	Freon 114	ND	24	2.5	ppbv		ND	170	17	ug/m3
142-82-5	100.2	Heptane	ND	24	2.3	ppbv		ND	98	9.4	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	24	7.4	ppbv		ND	260	79	ug/m3
110-54-3	86.17	Hexane	ND	24	1.9	ppbv		ND	85	6.7	ug/m3
591-78-6	100	2-Hexanone	ND	24	2.9	ppbv		ND	98	12	ug/m3
67-63-0	60.1	Isopropyl Alcohol	10300	24	4.6	ppbv	E	25300	59	11	ug/m3
75-09-2	84.94	Methylene chloride	ND	24	5.5	ppbv		ND	83	19	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	24	6.9	ppbv		ND	71	20	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	24	3.5	ppbv		ND	98	14	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	24	2.0	ppbv		ND	87	7.2	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	24	4.8	ppbv		ND	98	20	ug/m3
115-07-1	42	Propylene	ND	59	3.7	ppbv		ND	100	6.4	ug/m3
100-42-5	104.1	Styrene	ND	24	2.3	ppbv		ND	100	9.8	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	24	1.9	ppbv		ND	130	10	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	24	3.6	ppbv		ND	160	25	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	24	3.7	ppbv		ND	130	20	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	24	9.3	ppbv		ND	180	69	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	24	2.0	ppbv		ND	120	9.8	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	24	1.8	ppbv		ND	120	8.8	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	24	2.5	ppbv		ND	110	12	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	24	5.2	ppbv		ND	73	16	ug/m3
127-18-4	165.8	Tetrachloroethylene	4490	4.7	3.4	ppbv		30400	32	23	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	24	5.3	ppbv		ND	71	16	ug/m3
108-88-3	92.14	Toluene	ND	24	2.4	ppbv		ND	90	9.0	ug/m3
79-01-6	131.4	Trichloroethylene	162	4.7	2.3	ppbv		871	25	12	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	24	1.6	ppbv		ND	130	9.0	ug/m3
75-01-4	62.5	Vinyl chloride	ND	24	2.0	ppbv		ND	61	5.1	ug/m3
108-05-4	86	Vinyl Acetate	ND	24	6.9	ppbv		ND	84	24	ug/m3
	106.2	m,p-Xylene	ND	24	3.8	ppbv		ND	100	17	ug/m3
95-47-6	106.2	o-Xylene	ND	24	2.3	ppbv		ND	100	10	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	24	2.3	ppbv		ND	100	10	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		65-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-3	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-9	Date Received:	02/10/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A308,A538	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W39087.D	190	02/21/14	YMH	n/a	n/a	V3W1487
Run #2	3W39105.D	190	02/21/14	YMH	n/a	n/a	V3W1488

	Initial Volume
Run #1	200 ml
Run #2	100 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	41.8	76	13	ppbv	J	99.3	180	31	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	76	7.4	ppbv		ND	170	16	ug/m3
71-43-2	78.11	Benzene	ND	76	8.0	ppbv		ND	240	26	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	76	9.4	ppbv		ND	510	63	ug/m3
75-25-2	252.8	Bromoform	ND	76	8.2	ppbv		ND	790	85	ug/m3
74-83-9	94.94	Bromomethane	ND	76	6.5	ppbv		ND	300	25	ug/m3
593-60-2	106.9	Bromoethene	ND	76	5.4	ppbv		ND	330	24	ug/m3
100-44-7	126	Benzyl Chloride	ND	76	9.4	ppbv		ND	390	48	ug/m3
75-15-0	76.14	Carbon disulfide	ND	76	6.6	ppbv		ND	240	21	ug/m3
108-90-7	112.6	Chlorobenzene	ND	76	9.7	ppbv		ND	350	45	ug/m3
75-00-3	64.52	Chloroethane	ND	76	7.8	ppbv		ND	200	21	ug/m3
67-66-3	119.4	Chloroform	ND	76	7.0	ppbv		ND	370	34	ug/m3
74-87-3	50.49	Chloromethane	ND	76	13	ppbv		ND	160	27	ug/m3
107-05-1	76.53	3-Chloropropene	ND	76	10	ppbv		ND	240	31	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	76	7.6	ppbv		ND	390	39	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	76	4.3	ppbv		ND	480	27	ug/m3
110-82-7	84.16	Cyclohexane	ND	76	22	ppbv		ND	260	76	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	76	6.2	ppbv		ND	310	25	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	76	8.0	ppbv		ND	300	32	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	76	10	ppbv		ND	580	77	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	76	6.2	ppbv		ND	310	25	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	76	15	ppbv		ND	350	69	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	76	23	ppbv		ND	270	83	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	76	5.9	ppbv		ND	380	29	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	76	11	ppbv		ND	650	94	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	76	5.6	ppbv		ND	300	22	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	76	10	ppbv		ND	300	40	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	76	7.1	ppbv		ND	350	32	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	76	9.4	ppbv		ND	460	57	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	76	11	ppbv		ND	460	66	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	76	8.2	ppbv		ND	460	49	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	76	8.0	ppbv		ND	350	36	ug/m3

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-3	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-9	Date Received:	02/10/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A308,A538	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	ND	190	71	ppbv		ND	360	130	ug/m3
100-41-4	106.2	Ethylbenzene	ND	76	7.7	ppbv		ND	330	33	ug/m3
141-78-6	88	Ethyl Acetate	ND	76	22	ppbv		ND	270	79	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	76	5.7	ppbv		ND	370	28	ug/m3
76-13-1	187.4	Freon 113	ND	76	7.8	ppbv		ND	580	60	ug/m3
76-14-2	170.9	Freon 114	ND	76	8.1	ppbv		ND	530	57	ug/m3
142-82-5	100.2	Heptane	ND	76	7.4	ppbv		ND	310	30	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	76	24	ppbv		ND	810	260	ug/m3
110-54-3	86.17	Hexane	ND	76	6.0	ppbv		ND	270	21	ug/m3
591-78-6	100	2-Hexanone	ND	76	9.3	ppbv		ND	310	38	ug/m3
67-63-0	60.1	Isopropyl Alcohol	10600	76	15	ppbv		26100	190	37	ug/m3
75-09-2	84.94	Methylene chloride	ND	76	18	ppbv		ND	260	63	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	76	22	ppbv		ND	220	65	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	76	11	ppbv		ND	310	45	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	76	6.5	ppbv		ND	270	23	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	76	15	ppbv		ND	310	61	ug/m3
115-07-1	42	Propylene	ND	190	12	ppbv		ND	330	21	ug/m3
100-42-5	104.1	Styrene	ND	76	7.5	ppbv		ND	320	32	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	76	6.2	ppbv		ND	410	34	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	76	12	ppbv		ND	520	82	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	76	12	ppbv		ND	410	65	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	76	30	ppbv		ND	560	220	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	76	6.3	ppbv		ND	370	31	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	76	5.7	ppbv		ND	370	28	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	76	8.0	ppbv		ND	350	37	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	76	17	ppbv		ND	230	52	ug/m3
127-18-4	165.8	Tetrachloroethylene	25100 ^a	30	22	ppbv		170000 ^a	200	150	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	76	17	ppbv		ND	220	50	ug/m3
108-88-3	92.14	Toluene	ND	76	7.7	ppbv		ND	290	29	ug/m3
79-01-6	131.4	Trichloroethylene	103	15	7.4	ppbv		554	81	40	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	76	5.2	ppbv		ND	430	29	ug/m3
75-01-4	62.5	Vinyl chloride	ND	76	6.5	ppbv		ND	190	17	ug/m3
108-05-4	86	Vinyl Acetate	ND	76	22	ppbv		ND	270	77	ug/m3
	106.2	m,p-Xylene	ND	76	12	ppbv		ND	330	52	ug/m3
95-47-6	106.2	o-Xylene	ND	76	7.3	ppbv		ND	330	32	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	76	7.3	ppbv		ND	330	32	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	87%	90%	65-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SS-3		
Lab Sample ID: JB59487-9		Date Sampled: 02/08/14
Matrix: AIR - Soil Vapor Comp. Summa ID: A308,A538		Date Received: 02/10/14
Method: TO-15		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
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(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SS-4		
Lab Sample ID: JB59487-10		Date Sampled: 02/08/14
Matrix: AIR - Soil Vapor Comp. Summa ID: A278,A426		Date Received: 02/10/14
Method: TO-15		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3W39088.D	210	02/21/14	YMH	n/a	n/a	V3W1487
Run #2	3W39106.D	210	02/21/14	YMH	n/a	n/a	V3W1488

	Initial Volume
Run #1	100 ml
Run #2	10.0 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	279	170	29	ppbv		663	400	69	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	170	16	ppbv		ND	380	35	ug/m3
71-43-2	78.11	Benzene	ND	170	18	ppbv		ND	540	58	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	170	21	ppbv		ND	1100	140	ug/m3
75-25-2	252.8	Bromoform	ND	170	18	ppbv		ND	1800	190	ug/m3
74-83-9	94.94	Bromomethane	ND	170	14	ppbv		ND	660	54	ug/m3
593-60-2	106.9	Bromoethene	ND	170	12	ppbv		ND	740	52	ug/m3
100-44-7	126	Benzyl Chloride	ND	170	21	ppbv		ND	880	110	ug/m3
75-15-0	76.14	Carbon disulfide	ND	170	15	ppbv		ND	530	47	ug/m3
108-90-7	112.6	Chlorobenzene	ND	170	21	ppbv		ND	780	97	ug/m3
75-00-3	64.52	Chloroethane	ND	170	17	ppbv		ND	450	45	ug/m3
67-66-3	119.4	Chloroform	ND	170	16	ppbv		ND	830	78	ug/m3
74-87-3	50.49	Chloromethane	ND	170	28	ppbv		ND	350	58	ug/m3
107-05-1	76.53	3-Chloropropene	ND	170	23	ppbv		ND	530	72	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	170	17	ppbv		ND	880	88	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	170	9.5	ppbv		ND	1100	60	ug/m3
110-82-7	84.16	Cyclohexane	ND	170	49	ppbv		ND	590	170	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	170	14	ppbv		ND	690	57	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	170	18	ppbv		ND	670	71	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	170	23	ppbv		ND	1300	180	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	170	14	ppbv		ND	690	57	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	170	33	ppbv		ND	790	150	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	170	51	ppbv		ND	610	180	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	170	13	ppbv		ND	840	64	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	170	24	ppbv		ND	1400	200	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	170	12	ppbv		ND	670	48	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	336	170	23	ppbv		1330	670	91	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	170	16	ppbv		ND	770	73	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	170	21	ppbv		ND	1000	130	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	170	25	ppbv		ND	1000	150	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	170	18	ppbv		ND	1000	110	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	170	18	ppbv		ND	770	82	ug/m3

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-4	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-10	Date Received:	02/10/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A278,A426	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	ND	420	160	ppbv		ND	790	300	ug/m3
100-41-4	106.2	Ethylbenzene	ND	170	17	ppbv		ND	740	74	ug/m3
141-78-6	88	Ethyl Acetate	ND	170	48	ppbv		ND	610	170	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	170	13	ppbv		ND	840	64	ug/m3
76-13-1	187.4	Freon 113	282	170	17	ppbv		2160	1300	130	ug/m3
76-14-2	170.9	Freon 114	ND	170	18	ppbv		ND	1200	130	ug/m3
142-82-5	100.2	Heptane	ND	170	16	ppbv		ND	700	66	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	170	53	ppbv		ND	1800	570	ug/m3
110-54-3	86.17	Hexane	238	170	13	ppbv		839	600	46	ug/m3
591-78-6	100	2-Hexanone	ND	170	21	ppbv		ND	700	86	ug/m3
67-63-0	60.1	Isopropyl Alcohol	13200	170	33	ppbv		32400	420	81	ug/m3
75-09-2	84.94	Methylene chloride	883	170	39	ppbv		3070	590	140	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	170	49	ppbv		ND	500	140	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	170	25	ppbv		ND	700	100	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	170	14	ppbv		ND	610	50	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	170	34	ppbv		ND	700	140	ug/m3
115-07-1	42	Propylene	ND	420	26	ppbv		ND	720	45	ug/m3
100-42-5	104.1	Styrene	ND	170	17	ppbv		ND	720	72	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	170	14	ppbv		ND	930	76	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	170	25	ppbv		ND	1200	170	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	170	26	ppbv		ND	930	140	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	170	66	ppbv		ND	1300	490	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	170	14	ppbv		ND	840	69	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	170	13	ppbv		ND	840	64	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	170	18	ppbv		ND	790	84	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	170	37	ppbv		ND	520	110	ug/m3
127-18-4	165.8	Tetrachloroethylene	98500 ^a	340	240	ppbv		668000 ^a	2300	1600	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	170	38	ppbv		ND	500	110	ug/m3
108-88-3	92.14	Toluene	ND	170	17	ppbv		ND	640	64	ug/m3
79-01-6	131.4	Trichloroethylene	399	34	16	ppbv		2140	180	86	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	170	12	ppbv		ND	960	67	ug/m3
75-01-4	62.5	Vinyl chloride	ND	170	14	ppbv		ND	430	36	ug/m3
108-05-4	86	Vinyl Acetate	ND	170	49	ppbv		ND	600	170	ug/m3
	106.2	m,p-Xylene	ND	170	27	ppbv		ND	740	120	ug/m3
95-47-6	106.2	o-Xylene	ND	170	16	ppbv		ND	740	69	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	170	16	ppbv		ND	740	69	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%	90%	65-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SS-4		
Lab Sample ID: JB59487-10		Date Sampled: 02/08/14
Matrix: AIR - Soil Vapor Comp. Summa ID: A278,A426		Date Received: 02/10/14
Method: TO-15		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
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(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-5	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-11	Date Received:	02/10/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A773	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5W2710.D	2.05	02/19/14	ML	n/a	n/a	V5W108
Run #2							

Run #	Initial Volume
Run #1	10.0 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	ND	16	2.8	ppbv		ND	38	6.7	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	16	1.6	ppbv		ND	35	3.5	ug/m3
71-43-2	78.11	Benzene	ND	16	1.7	ppbv		ND	51	5.4	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	16	2.0	ppbv		ND	110	13	ug/m3
75-25-2	252.8	Bromoform	ND	16	1.8	ppbv		ND	170	19	ug/m3
74-83-9	94.94	Bromomethane	ND	16	1.4	ppbv		ND	62	5.4	ug/m3
593-60-2	106.9	Bromoethene	ND	16	1.2	ppbv		ND	70	5.2	ug/m3
100-44-7	126	Benzyl Chloride	ND	16	2.0	ppbv		ND	82	10	ug/m3
75-15-0	76.14	Carbon disulfide	ND	16	1.4	ppbv		ND	50	4.4	ug/m3
108-90-7	112.6	Chlorobenzene	ND	16	2.1	ppbv		ND	74	9.7	ug/m3
75-00-3	64.52	Chloroethane	ND	16	1.7	ppbv		ND	42	4.5	ug/m3
67-66-3	119.4	Chloroform	ND	16	1.5	ppbv		ND	78	7.3	ug/m3
74-87-3	50.49	Chloromethane	ND	16	2.8	ppbv		ND	33	5.8	ug/m3
107-05-1	76.53	3-Chloropropene	ND	16	2.3	ppbv		ND	50	7.2	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	16	1.6	ppbv		ND	83	8.3	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	16	0.93	ppbv		ND	100	5.9	ug/m3
110-82-7	84.16	Cyclohexane	ND	16	4.8	ppbv		ND	55	17	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	16	1.3	ppbv		ND	65	5.3	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	16	1.7	ppbv		ND	63	6.7	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	16	2.2	ppbv		ND	120	17	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	16	1.3	ppbv		ND	65	5.3	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	16	3.3	ppbv		ND	74	15	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	16	4.9	ppbv		ND	58	18	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	16	1.3	ppbv		ND	79	6.4	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	16	2.4	ppbv		ND	140	20	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	16	1.2	ppbv		ND	63	4.8	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	16	2.3	ppbv		ND	63	9.1	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	16	1.5	ppbv		ND	73	6.8	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	16	2.0	ppbv		ND	96	12	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	16	2.4	ppbv		ND	96	14	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	16	1.8	ppbv		ND	96	11	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	16	1.7	ppbv		ND	73	7.7	ug/m3

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-5	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-11	Date Received:	02/10/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A773	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	ND	41	15	ppbv		ND	77	28	ug/m3
100-41-4	106.2	Ethylbenzene	ND	16	1.7	ppbv		ND	69	7.4	ug/m3
141-78-6	88	Ethyl Acetate	ND	16	4.7	ppbv		ND	58	17	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	16	1.2	ppbv		ND	79	5.9	ug/m3
76-13-1	187.4	Freon 113	ND	16	1.7	ppbv		ND	120	13	ug/m3
76-14-2	170.9	Freon 114	ND	16	1.7	ppbv		ND	110	12	ug/m3
142-82-5	100.2	Heptane	ND	16	1.6	ppbv		ND	66	6.6	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	16	5.1	ppbv		ND	170	54	ug/m3
110-54-3	86.17	Hexane	ND	16	1.3	ppbv		ND	56	4.6	ug/m3
591-78-6	100	2-Hexanone	ND	16	2.0	ppbv		ND	65	8.2	ug/m3
67-63-0	60.1	Isopropyl Alcohol	9580	16	3.2	ppbv	E	23500	39	7.9	ug/m3
75-09-2	84.94	Methylene chloride	ND	16	3.8	ppbv		ND	56	13	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	16	4.8	ppbv		ND	47	14	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	16	2.4	ppbv		ND	66	9.8	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	16	1.4	ppbv		ND	58	5.0	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	16	3.3	ppbv		ND	66	14	ug/m3
115-07-1	42	Propylene	ND	41	2.6	ppbv		ND	70	4.5	ug/m3
100-42-5	104.1	Styrene	ND	16	1.6	ppbv		ND	68	6.8	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	16	1.3	ppbv		ND	87	7.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	16	2.5	ppbv		ND	110	17	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	16	2.5	ppbv		ND	87	14	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	16	6.5	ppbv		ND	120	48	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	16	1.4	ppbv		ND	79	6.9	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	16	1.2	ppbv		ND	79	5.9	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	16	1.7	ppbv		ND	75	7.9	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	16	3.6	ppbv		ND	49	11	ug/m3
127-18-4	165.8	Tetrachloroethylene	3160	3.3	2.4	ppbv		21400	22	16	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	16	3.7	ppbv		ND	47	11	ug/m3
108-88-3	92.14	Toluene	ND	16	1.7	ppbv		ND	60	6.4	ug/m3
79-01-6	131.4	Trichloroethylene	171	3.3	1.6	ppbv		919	18	8.6	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	16	1.1	ppbv		ND	90	6.2	ug/m3
75-01-4	62.5	Vinyl chloride	ND	16	1.4	ppbv		ND	41	3.6	ug/m3
108-05-4	86	Vinyl Acetate	ND	16	4.8	ppbv		ND	56	17	ug/m3
	106.2	m,p-Xylene	ND	16	2.6	ppbv		ND	69	11	ug/m3
95-47-6	106.2	o-Xylene	ND	16	1.6	ppbv		ND	69	6.9	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	16	1.6	ppbv		ND	69	6.9	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%		65-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-6	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-12	Date Received:	02/10/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A756,A808	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5W2711.D	430	02/19/14	ML	n/a	n/a	V5W108
Run #2							

Run #	Initial Volume
Run #1	100 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	210	340	59	ppbv	J	499	810	140	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	340	34	ppbv		ND	750	75	ug/m3
71-43-2	78.11	Benzene	ND	340	36	ppbv		ND	1100	120	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	340	42	ppbv		ND	2300	280	ug/m3
75-25-2	252.8	Bromoform	ND	340	37	ppbv		ND	3500	380	ug/m3
74-83-9	94.94	Bromomethane	ND	340	30	ppbv		ND	1300	120	ug/m3
593-60-2	106.9	Bromoethene	ND	340	25	ppbv		ND	1500	110	ug/m3
100-44-7	126	Benzyl Chloride	ND	340	42	ppbv		ND	1800	220	ug/m3
75-15-0	76.14	Carbon disulfide	ND	340	30	ppbv		ND	1100	93	ug/m3
108-90-7	112.6	Chlorobenzene	ND	340	44	ppbv		ND	1600	200	ug/m3
75-00-3	64.52	Chloroethane	ND	340	35	ppbv		ND	900	92	ug/m3
67-66-3	119.4	Chloroform	ND	340	32	ppbv		ND	1700	160	ug/m3
74-87-3	50.49	Chloromethane	ND	340	58	ppbv		ND	700	120	ug/m3
107-05-1	76.53	3-Chloropropene	ND	340	47	ppbv		ND	1100	150	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	340	34	ppbv		ND	1800	180	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	340	19	ppbv		ND	2100	120	ug/m3
110-82-7	84.16	Cyclohexane	ND	340	100	ppbv		ND	1200	340	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	340	28	ppbv		ND	1400	110	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	340	36	ppbv		ND	1300	140	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	340	47	ppbv		ND	2600	360	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	340	28	ppbv		ND	1400	110	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	340	68	ppbv		ND	1600	310	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	340	100	ppbv		ND	1200	360	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	340	26	ppbv		ND	1700	130	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	340	50	ppbv		ND	2900	430	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	340	25	ppbv		ND	1300	99	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	402	340	47	ppbv		1590	1300	190	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	340	32	ppbv		ND	1500	150	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	340	43	ppbv		ND	2000	260	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	340	50	ppbv		ND	2000	300	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	340	37	ppbv		ND	2000	220	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	340	36	ppbv		ND	1500	160	ug/m3

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SS-6		Date Sampled: 02/08/14
Lab Sample ID: JB59487-12		Date Received: 02/10/14
Matrix: AIR - Soil Vapor Comp. Summa ID: A756,A808		Percent Solids: n/a
Method: TO-15		
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	ND	860	320	ppbv		ND	1600	600	ug/m3
100-41-4	106.2	Ethylbenzene	ND	340	35	ppbv		ND	1500	150	ug/m3
141-78-6	88	Ethyl Acetate	ND	340	98	ppbv		ND	1200	350	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	340	26	ppbv		ND	1700	130	ug/m3
76-13-1	187.4	Freon 113	ND	340	35	ppbv		ND	2600	270	ug/m3
76-14-2	170.9	Freon 114	ND	340	36	ppbv		ND	2400	250	ug/m3
142-82-5	100.2	Heptane	ND	340	34	ppbv		ND	1400	140	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	340	110	ppbv		ND	3600	1200	ug/m3
110-54-3	86.17	Hexane	ND	340	27	ppbv		ND	1200	95	ug/m3
591-78-6	100	2-Hexanone	ND	340	42	ppbv		ND	1400	170	ug/m3
67-63-0	60.1	Isopropyl Alcohol	16900	340	67	ppbv		41500	840	160	ug/m3
75-09-2	84.94	Methylene chloride	255	340	80	ppbv	J	886	1200	280	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	340	100	ppbv		ND	1000	290	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	340	50	ppbv		ND	1400	200	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	340	29	ppbv		ND	1200	100	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	340	69	ppbv		ND	1400	280	ug/m3
115-07-1	42	Propylene	ND	860	54	ppbv		ND	1500	93	ug/m3
100-42-5	104.1	Styrene	ND	340	34	ppbv		ND	1400	140	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	340	28	ppbv		ND	1900	150	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	340	52	ppbv		ND	2300	360	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	340	53	ppbv		ND	1900	290	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	340	140	ppbv		ND	2500	1000	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	340	29	ppbv		ND	1700	140	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	340	26	ppbv		ND	1700	130	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	340	36	ppbv		ND	1600	170	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	340	76	ppbv		ND	1000	230	ug/m3
127-18-4	165.8	Tetrachloroethylene	36300	69	50	ppbv		246000	470	340	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	340	77	ppbv		ND	1000	230	ug/m3
108-88-3	92.14	Toluene	ND	340	35	ppbv		ND	1300	130	ug/m3
79-01-6	131.4	Trichloroethylene	360	69	33	ppbv		1930	370	180	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	340	24	ppbv		ND	1900	130	ug/m3
75-01-4	62.5	Vinyl chloride	ND	340	29	ppbv		ND	870	74	ug/m3
108-05-4	86	Vinyl Acetate	ND	340	100	ppbv		ND	1200	350	ug/m3
	106.2	m,p-Xylene	ND	340	56	ppbv		ND	1500	240	ug/m3
95-47-6	106.2	o-Xylene	ND	340	33	ppbv		ND	1500	140	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	340	33	ppbv		ND	1500	140	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	103%		65-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SS-7		
Lab Sample ID: JB59487-13		Date Sampled: 02/08/14
Matrix: AIR - Soil Vapor Comp. Summa ID: A998,A590		Date Received: 02/10/14
Method: TO-15		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5W2733.D	102.5	02/20/14	ML	n/a	n/a	V5W109
Run #2	5W2712.D	102.5	02/19/14	ML	n/a	n/a	V5W108

	Initial Volume
Run #1	200 ml
Run #2	100 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	240	41	7.0	ppbv		570	97	17	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	41	4.0	ppbv		ND	91	8.8	ug/m3
71-43-2	78.11	Benzene	ND	41	4.3	ppbv		ND	130	14	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	41	5.1	ppbv		ND	270	34	ug/m3
75-25-2	252.8	Bromoform	ND	41	4.4	ppbv		ND	420	45	ug/m3
74-83-9	94.94	Bromomethane	ND	41	3.5	ppbv		ND	160	14	ug/m3
593-60-2	106.9	Bromoethene	ND	41	2.9	ppbv		ND	180	13	ug/m3
100-44-7	126	Benzyl Chloride	ND	41	5.1	ppbv		ND	210	26	ug/m3
75-15-0	76.14	Carbon disulfide	ND	41	3.5	ppbv		ND	130	11	ug/m3
108-90-7	112.6	Chlorobenzene	ND	41	5.2	ppbv		ND	190	24	ug/m3
75-00-3	64.52	Chloroethane	ND	41	4.2	ppbv		ND	110	11	ug/m3
67-66-3	119.4	Chloroform	ND	41	3.8	ppbv		ND	200	19	ug/m3
74-87-3	50.49	Chloromethane	ND	41	6.9	ppbv		ND	85	14	ug/m3
107-05-1	76.53	3-Chloropropene	ND	41	5.6	ppbv		ND	130	18	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	41	4.1	ppbv		ND	210	21	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	41	2.3	ppbv		ND	260	14	ug/m3
110-82-7	84.16	Cyclohexane	ND	41	12	ppbv		ND	140	41	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	41	3.4	ppbv		ND	170	14	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	41	4.3	ppbv		ND	160	17	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	41	5.6	ppbv		ND	320	43	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	41	3.4	ppbv		ND	170	14	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	41	8.2	ppbv		ND	190	38	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	41	12	ppbv		ND	150	43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	41	3.2	ppbv		ND	200	16	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	41	5.9	ppbv		ND	350	50	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	41	3.0	ppbv		ND	160	12	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	63.4	41	5.7	ppbv		251	160	23	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	41	3.8	ppbv		ND	190	17	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	41	5.1	ppbv		ND	250	31	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	41	6.0	ppbv		ND	250	36	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	41	4.4	ppbv		ND	250	26	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	41	4.3	ppbv		ND	190	20	ug/m3

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-7	Date Sampled:	02/08/14
Lab Sample ID:	JB59487-13	Date Received:	02/10/14
Matrix:	AIR - Soil Vapor Comp. Summa ID: A998,A590	Percent Solids:	n/a
Method:	TO-15		
Project:	SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	ND	100	38	ppbv		ND	190	72	ug/m3
100-41-4	106.2	Ethylbenzene	ND	41	4.1	ppbv		ND	180	18	ug/m3
141-78-6	88	Ethyl Acetate	168	41	12	ppbv		605	150	43	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	41	3.1	ppbv		ND	200	15	ug/m3
76-13-1	187.4	Freon 113	13.8	41	4.2	ppbv	J	106	310	32	ug/m3
76-14-2	170.9	Freon 114	ND	41	4.3	ppbv		ND	290	30	ug/m3
142-82-5	100.2	Heptane	ND	41	4.0	ppbv		ND	170	16	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	41	13	ppbv		ND	440	140	ug/m3
110-54-3	86.17	Hexane	ND	41	3.3	ppbv		ND	140	12	ug/m3
591-78-6	100	2-Hexanone	ND	41	5.0	ppbv		ND	170	20	ug/m3
67-63-0	60.1	Isopropyl Alcohol	19300 ^a	82	16	ppbv	E	47400 ^a	200	39	ug/m3
75-09-2	84.94	Methylene chloride	80.8	41	9.5	ppbv		281	140	33	ug/m3
78-93-3	72.11	Methyl ethyl ketone	21.8	41	12	ppbv	J	64.3	120	35	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	41	6.0	ppbv		ND	170	25	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	41	3.5	ppbv		ND	150	13	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	41	8.3	ppbv		ND	170	34	ug/m3
115-07-1	42	Propylene	ND	100	6.4	ppbv		ND	170	11	ug/m3
100-42-5	104.1	Styrene	ND	41	4.1	ppbv		ND	170	17	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	41	3.4	ppbv		ND	220	19	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	41	6.2	ppbv		ND	280	43	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	41	6.3	ppbv		ND	220	34	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	41	16	ppbv		ND	300	120	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	41	3.4	ppbv		ND	200	17	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	41	3.1	ppbv		ND	200	15	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	41	4.3	ppbv		ND	190	20	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	41	9.0	ppbv		ND	120	27	ug/m3
127-18-4	165.8	Tetrachloroethylene	6490	8.2	5.9	ppbv		44000	56	40	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	41	9.2	ppbv		ND	120	27	ug/m3
108-88-3	92.14	Toluene	ND	41	4.1	ppbv		ND	150	15	ug/m3
79-01-6	131.4	Trichloroethylene	107	8.2	4.0	ppbv		575	44	21	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	41	2.8	ppbv		ND	230	16	ug/m3
75-01-4	62.5	Vinyl chloride	ND	41	3.5	ppbv		ND	100	8.9	ug/m3
108-05-4	86	Vinyl Acetate	ND	41	12	ppbv		ND	140	42	ug/m3
	106.2	m,p-Xylene	38.4	41	6.6	ppbv	J	167	180	29	ug/m3
95-47-6	106.2	o-Xylene	21.6	41	4.0	ppbv	J	93.8	180	17	ug/m3
1330-20-7	106.2	Xylenes (total)	59.9	41	4.0	ppbv		260	180	17	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%	104%	65-128%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SS-7		
Lab Sample ID: JB59487-13		Date Sampled: 02/08/14
Matrix: AIR - Soil Vapor Comp. Summa ID: A998,A590		Date Received: 02/10/14
Method: TO-15		Percent Solids: n/a
Project: SDI-Bridge, 39-26 30th Street, Long Island City, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
---------	----	----------	--------	----	-----	-------	---	--------	----	-----	-------

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

APPENDIX B

DATA EVALUATION REPORT



Integral Engineering, P.C.
61 Broadway
Suite 1601
New York, NY 10006

telephone: 212.962.4303
facsimile: 212.962.4302
www.integral-corp.com

July 1, 2015

Project No. E075

Ruth E. Curley, P.E.
Environmental Engineer II
New York State Department of Environmental Conservation

Subject: **Data Evaluation Report**
Former Bridge Cleaners, 39-26 30th St, Long Island City, NY
BCP Site No. C241127

Dear Ms. Curley:

Integral Engineering, P.C. (Integral) is pleased to present this Data Evaluation Report Letter (Letter) on behalf of Zhong Chuang Properties LLC (Zhong Chuang or Volunteer) that describes the results of the Supplemental Remedial Investigation for the property located at 39-26 30th Street, Long Island City, NY (Site). The Volunteer installed two soil borings on-Site in December 2014 and identified constituents above applicable standards in each boring. The Volunteer was unsuccessful in accessing any off-Site properties. The Site is currently enrolled in the New York State Brownfield Cleanup Program (BCP) and listed as Site No. C241127.

SITE BACKGROUND

A number of previous investigations and assessments have been performed at the Site between 2011 and 2014. These investigations primarily consisted of limited subsurface assessments conducted by various consultants on behalf of the Site owner or the New York State Department of Environmental Conservation (NYSDEC). Integral has been provided with the following investigation reports:

- Limited Sub-Surface Site Investigation, Long Island Laboratories, Inc., dated September 2011
- Site Characterization Report, Ecology and Environmental Engineering, P.C., May 2012

- Remedial Investigation Report, TechSolutions Engineering, P.C., June 2014

According to the June 2014 Remedial Investigation Report (RIR) prepared by TechSolutions Engineering, P.C. (TechSolutions)¹, the Site was used as a dry cleaner from 1997 until about 2011. Other historical uses included warehousing and distribution.

The RIR summarized soil, groundwater, and soil vapor results from investigations performed at the Site between September 2011 and February 2014. In general, elevated tetrachloroethylene (PCE) and trichloroethylene (TCE) concentrations were found in groundwater and soil vapor samples collected within and nearby the Site. PCE and TCE were identified in soil samples at the Site, but did not exceed NYSDEC Unrestricted Soil Cleanup Objectives (SCOs).

On November 21, 2014, NYSDEC approved the Supplemental Remedial Investigation Proposal submitted by the Volunteer on November 19, 2014. This Data Evaluation Report discusses the results of the approved investigation.

SUPPLEMENTAL REMEDIAL INVESTIGATION RESULTS

Integral was unsuccessful in obtaining access to neighboring properties to conduct the off-Site portion of the Supplemental Remedial Investigation, but was able to complete the on-Site portion of the Supplemental Remedial Investigation.

Off-Site Access Attempts

On behalf of the Volunteer, Integral made multiple, unsuccessful attempts to obtain access to the off-Site properties to implement the Supplemental Remedial Investigation. On November 26, 2014, Integral sent access requests to the property owners via FedEx with signature required (records enclosed). Each request was received by the owner/operator except for the request sent to the Brazilian Missionary Church to the north of the Site; no one answered the door at the Church after three delivery attempts.

¹ This RIR was rejected by the NYSDEC in a letter dated September 10, 2014, though it has been utilized in this Work Plan for reference.

Integral followed up with each property owner/operator to discuss obtaining access for the Investigation. Below is a summary of this outreach:

Lot	Address	Owner/Operator	Dates Contacted	Result
29	39-22 30 th St.	Brazilian Missionary Church, Inc.	12/5/14, 12/11/14	No response.
12	39-21/23 29 th St.	JM-AM Realty Corp.	12/11/14, 12/15/14, 12/19/14	Declined access.
10	39-25 29 th St.	Frank Falco	12/11/14, 12/11/14	Declined access.
7	39-31 29 th St.	Alma Publishing Corp.	12/8/14	Declined access.
34	39-40 30 th St.	Ganesh Management, LLC	12/11/14, 12/12/14	Declined access; already performing soil vapor sampling; will provide Integral with results.

None of the off-Site properties were willing to grant access for the Investigation.

On-Site Investigation

A soil investigation conducted by Integral in December 2014 that identified concentrations of PCE above the Unrestricted SCO, but below the Industrial SCO, in four soil samples collected from beneath the northern corner of the on-Site building. A total of five soil samples, inclusive of one duplicate, were collected at depths ranging from beneath the floor slab to a maximum of 18.5 feet below ground surface (ft bgs). PCE was the only analyte detected in any of the samples. In four of the five samples, PCE was identified above the Unrestricted SCO and the Protection of Groundwater SCO (to the extent the Protection of Groundwater SCO is applicable to this Site), both 1.3 mg/kg, but below the Industrial SCO of 300 mg/kg (see table below). The maximum observed concentration was 9.6 mg/kg.

Sample Location	Depth (ft bgs)	Result (ppm)	Unrestricted SCO (ppm)	Industrial SCO (ppm)	Protection of Groundwater SCO (ppm)
SB-06	11.5 - 12	6.9	1.3	300	1.3
SB-07	0 - 4	4.8	1.3	300	1.3
SB-07	0 - 4 (duplicate)	9.6	1.3	300	1.3
SB-07	15 - 17.5	1.8	1.3	300	1.3

The complete laboratory data package and the boring logs are enclosed. The electronic data deliverable will be uploaded to the NYSDEC EQuIS system when the complete Remedial Investigation Report is issued.

UPDATED CONCEPTUAL SITE MODEL

The conceptual site model (CSM) is that there are residual chlorinated hydrocarbons in the unsaturated subsurface near the northern corner of the building, which are potentially causing secondary impacts to groundwater. This residual material may have discharged from a boiler drain in the northern corner of the building into the subsurface. However, while there is a small concrete patch in this area, there is no evidence that such a drain existed in the building. The CSM also must consider the possibility that a release occurred off-Site and is contributing to the observed conditions. The magnitude of the release, whether on-Site or off-Site (or both), is unknown, though the chlorinated hydrocarbon concentrations identified in the unsaturated on-Site soil lead to the conclusion that any on-Site release was minor.

Below is additional supporting information to the CSM:

- The groundwater at the Site, based on previous reports, generally flows from north to south. PCE concentrations in groundwater ranged from 176 to 340 µg/L, and were within the same order of magnitude across the Site, although slightly higher to the south.

Ruth E. Curley, P.E.

July 1, 2015

Page 5

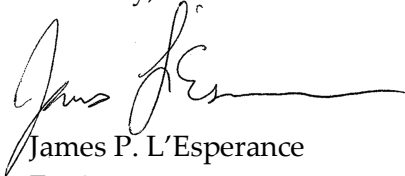
- Soil vapor concentrations of PCE ranged from 21,400 to 668,000 $\mu\text{g}/\text{m}^3$ across the Site. The larger concentrations were found in the northern portion of the building, indicating potential residual source material nearby (in unsaturated soil).
- A boiler room was historically present in the northern corner of the building. In the past, it was not uncommon for buildings to construct a drain (dry well) for boiler condensate blow-down. No evidence of a drain or dry well has been observed or provided, although there appears to be a small concrete patch in this area.
- PCE was identified in soil samples collected from the northern corner of the Site building with a maximum concentration of 9.6 mg/kg, which is below the Industrial SCO of 300 mg/kg, but above the Unrestricted Use and Protection of Groundwater SCOs of 1.3 mg/kg, to the extent the Protection of Groundwater SCO is applicable to this Site.

REMEDIAL ACTION

The concentrations of PCE and TCE in soil and groundwater at the Site are being addressed through remedial actions at the Site. A soil vapor extraction / air sparge pilot test is currently being implemented in accordance with the approved *Interim Remedial Measure Pilot Test Work Plan* dated May 29, 2015.

Please let us know if you have any questions during your review of this Report. We look forward to continuing to work with NYSDEC on this project.

Sincerely,



James P. L'Esperance
Engineer



Keith P. Brodock, P.E.
Managing Engineer

Figure 1 – Site Location Map

Figure 2 – Site Plan

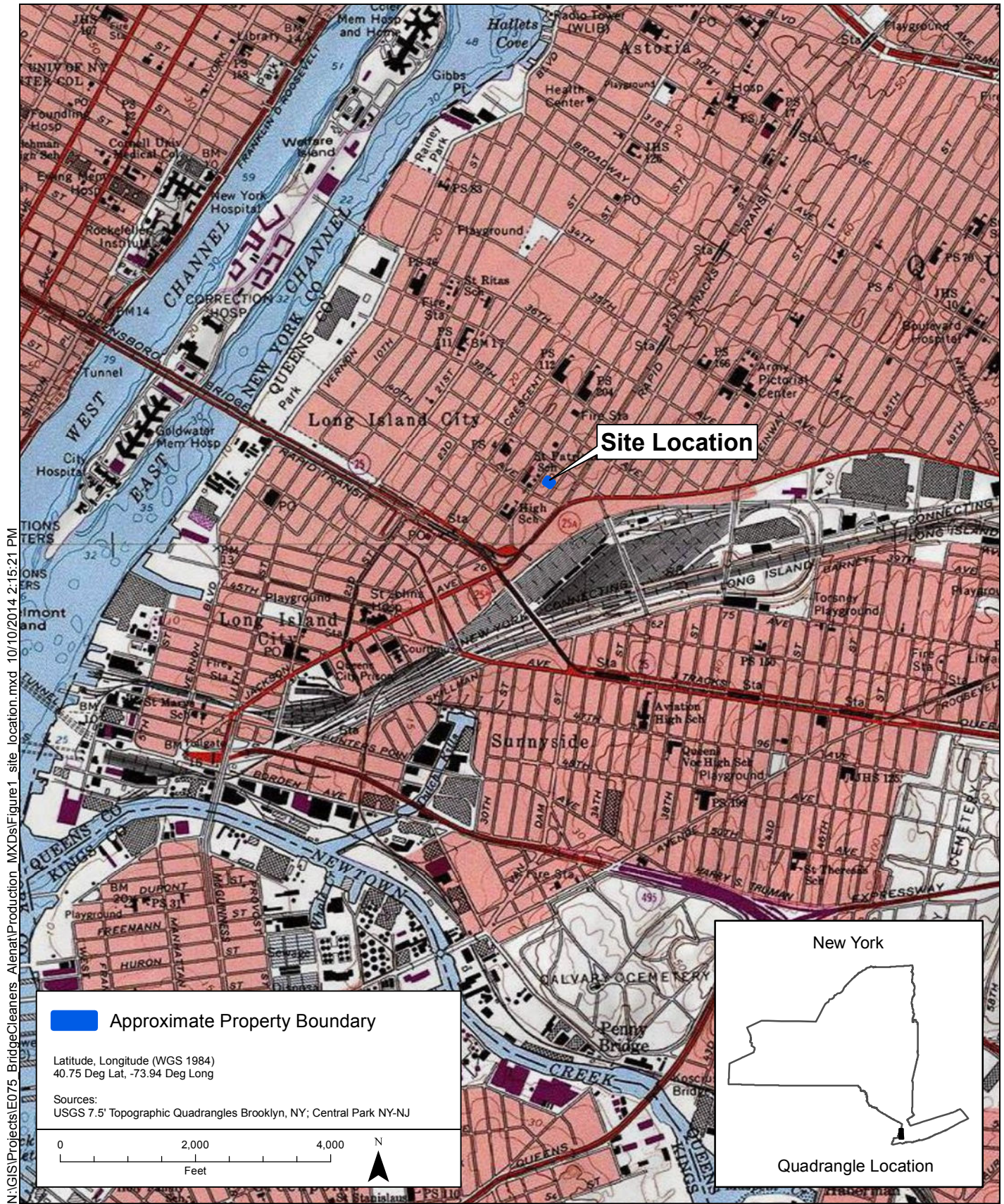
Figure 3 – Sampling Locations

Appendix A – Boring Logs

Appendix B – Off-Site Access Attempts

Appendix C – Lab Data Report

FIGURES



Approximate Property Boundary

Latitude, Longitude (WGS 1984)
40.75 Deg Lat, -73.94 Deg Long

Sources:
USGS 7.5' Topographic Quadrangles Brooklyn, NY; Central Park NY-NJ

0 2,000 4,000 Feet

N



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Figure 1.
Site Location Map
39-26 30th St.
Long Island City, NY

N:\GIS\Projects\E075_BridgeCleaners_Alenah\Production_MXD\Site\Figure2_site_plan.mxd 10/10/2014 2:33:44 PM

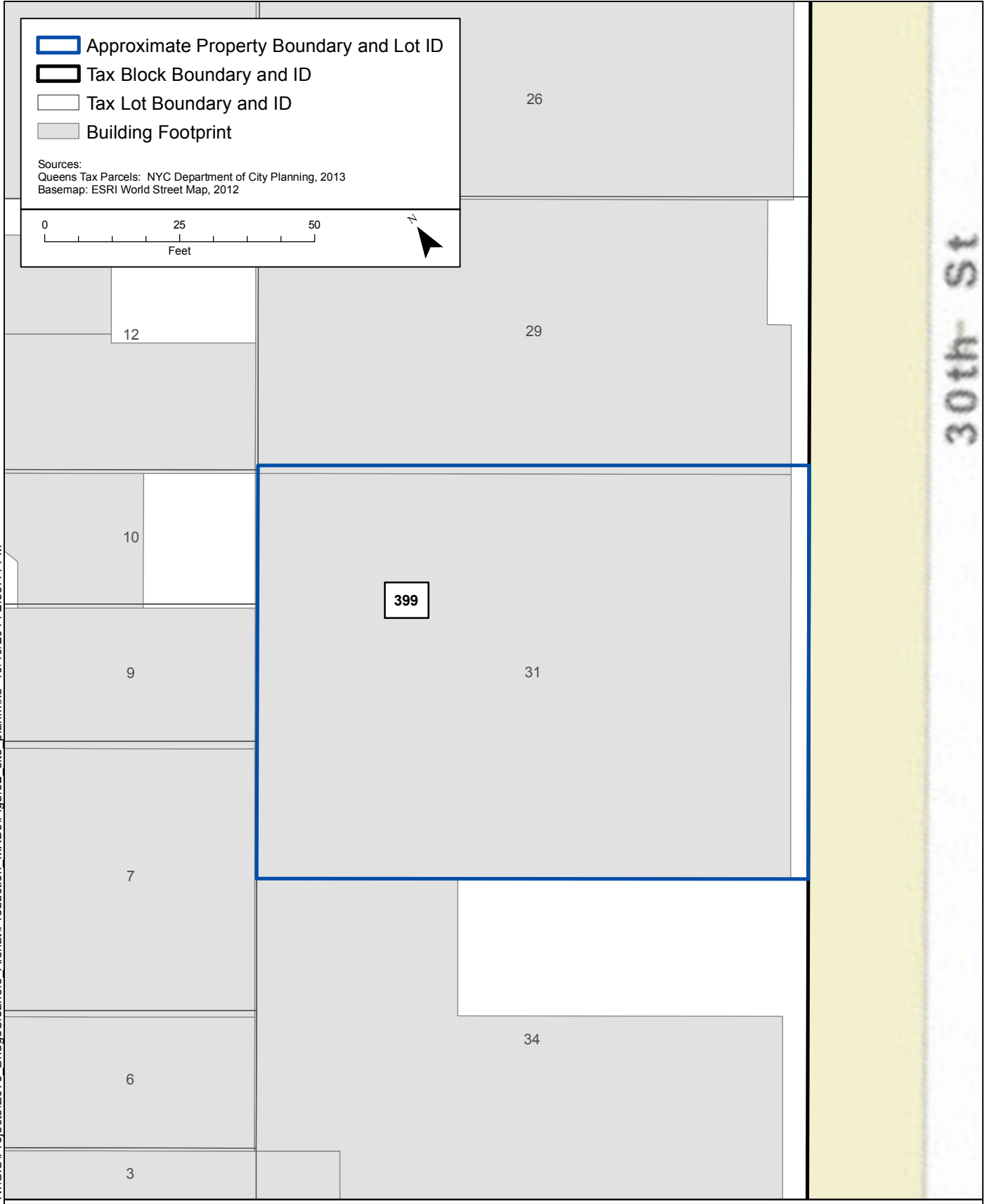


Figure 2.
Site Plan
39-26 30th St
Long Island City, NY

N:\GIS\Projects\E075_BridgeCleaners_Alenat\Production_MXD\Figure4_proposed_sample_locs.mxd 11/10/2014 1:38:43 PM

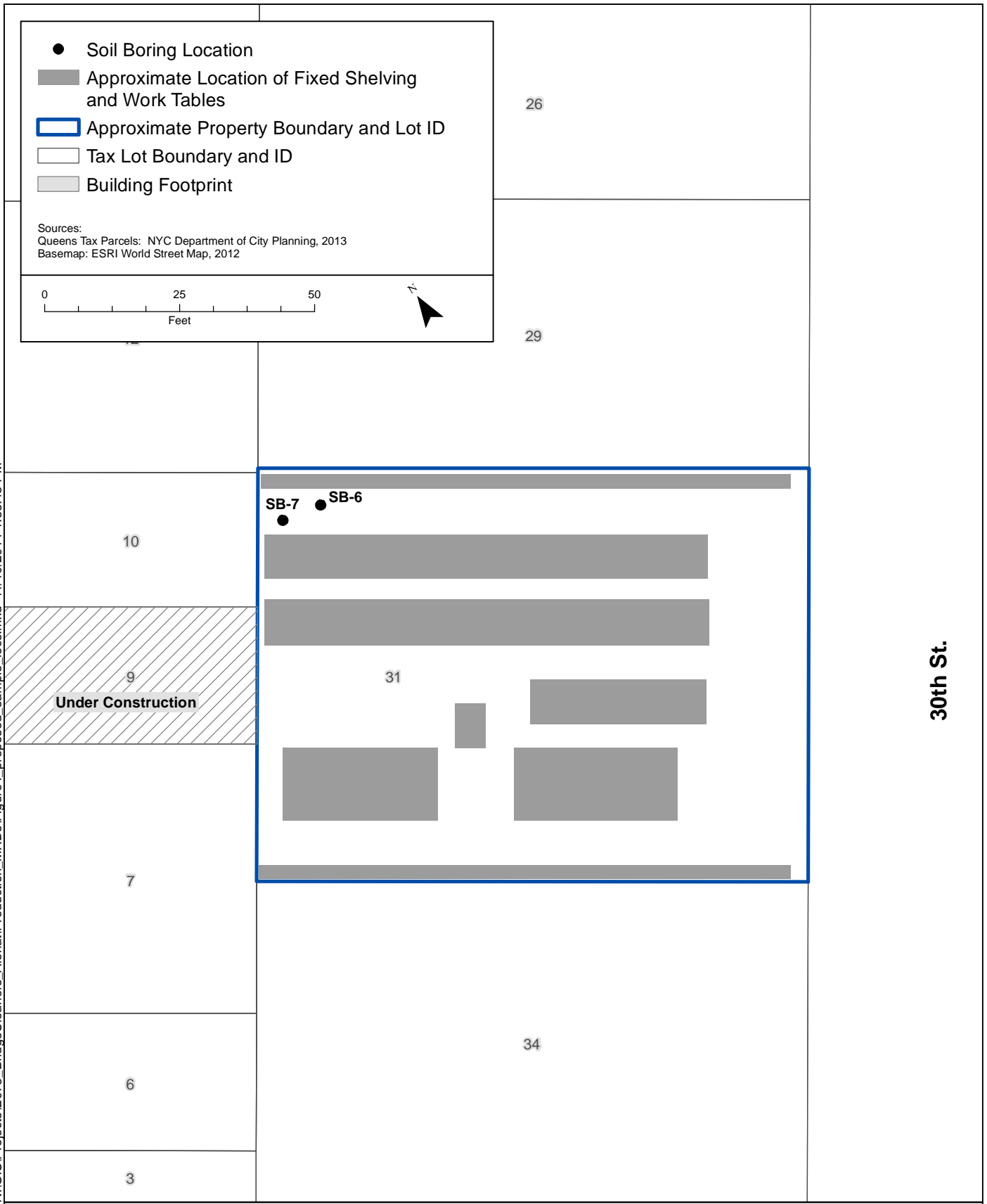


Figure 3.
Sample Locations
39-26 30th St
Long Island City, NY

APPENDIX A

BORING LOGS



LOG OF BOREHOLE

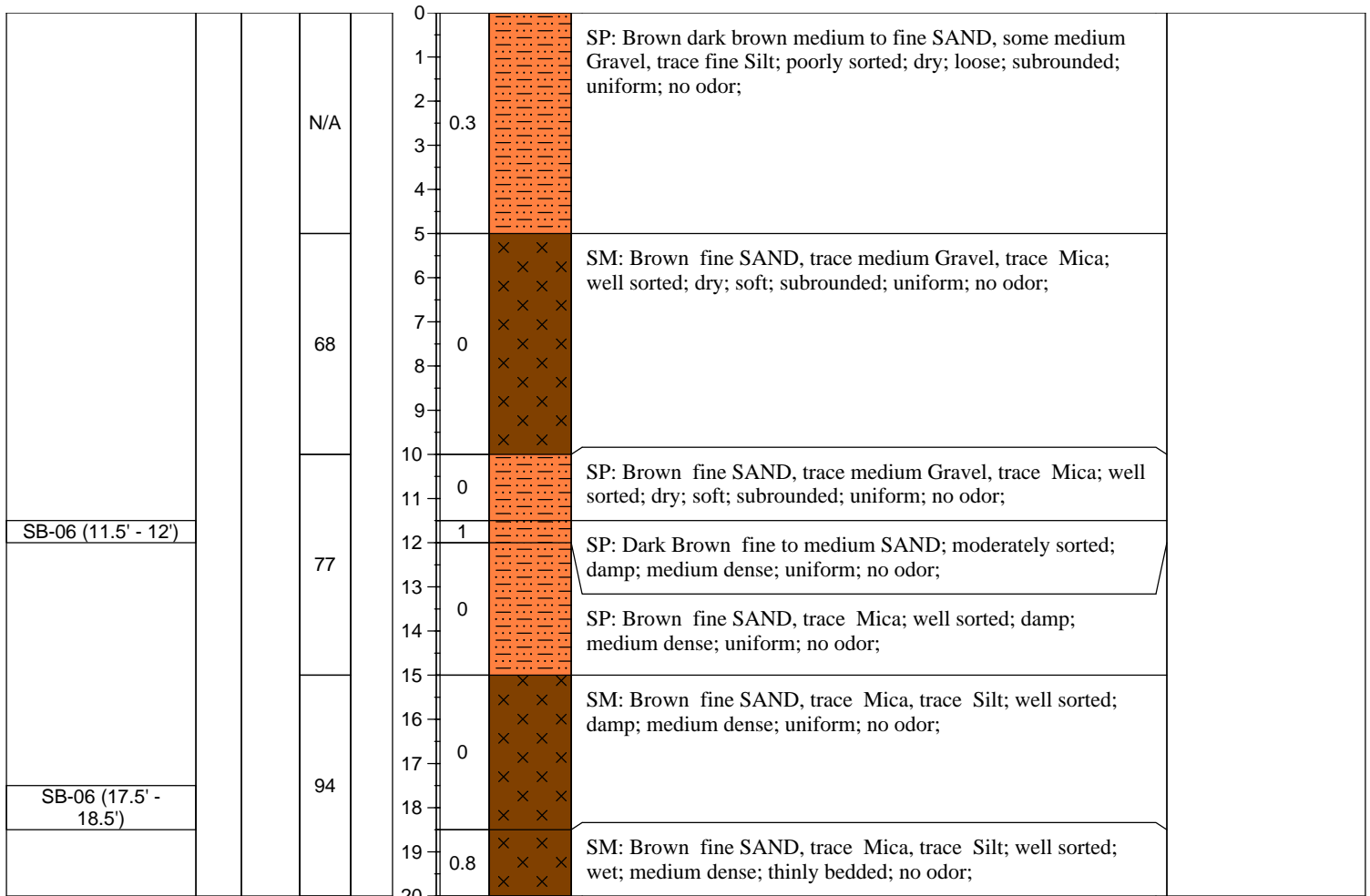
SB-06

PROJECT NUMBER: **PE075**
 PROJECT NAME: **Bridge Cleaners**
 LOCATION: **39-26 30th Street, LIC, NY**
 GEOLOGIST: **SM/LW**
 DATE BEGUN: **12/30/14** DATE COMPLETED: **12/30/14**
 BORING START **9:00** BORING COMPLETE: **10:50**

TOTAL DEPTH: **20'**
 GROUND SURFACE ELEVATION: **38'**

STATIC WATER LEVEL (BLS)	
Depth (ft)	Observed at ~18.5 ft bgs
Time	10:50
Date	12/30/2014

Sample ID	Time	Tag	% Recovery	Sheen	Depth (Feet)	PID (ppm)	Lithology USCS	DESCRIPTION	WELL INSTALLATION
-----------	------	-----	------------	-------	--------------	-----------	----------------	-------------	-------------------



DRILLING CONTRACTOR: **AARCO**
 DRILLING METHOD: **Hydraulic Hammer**
 DRILLING EQUIPMENT: **Geoprobe 7720 DT**
 SAMPLING EQUIPMENT: **57.5" Macro Core**
 LATITUDE: **40°45'9.50"N**
 LONGITUDE: **73°56'4.69"W**

NOTES: **SB-06 (11.5'-12') - VOCs Analysis**
SB-06 (17.5'-18.5') - VOCs Analysis



LOG OF BOREHOLE

SB-07

PROJECT NUMBER: **PE075**
 PROJECT NAME: **Bridge Cleaners**
 LOCATION: **39-26 30th Street, LIC, NY**
 GEOLOGIST: **SM/LW**
 DATE BEGUN: **12/30/14** DATE COMPLETED: **12/30/14**
 BORING START **10:50** BORING COMPLETE: **11:30**

TOTAL DEPTH: **20'**
 GROUND SURFACE ELEVATION: **38'**

STATIC WATER LEVEL (BLS)	
Depth (ft)	Observed at ~18.5 ft bgs
Time	11:30
Date	12/30/2014

Sample ID	Time	Tag	% Recovery	Sheen	Depth (Feet)	PID (ppm)	Lithology USCS	DESCRIPTION	WELL INSTALLATION
-----------	------	-----	------------	-------	--------------	-----------	----------------	-------------	-------------------

SB-07 (0-4') and Duplicate			N/A		0		SW: Brown fine to medium SAND, some Silt, some Gravel; moderately sorted; damp; loose; uniform; no odor;	
					0.2	SP: Brown fine SAND, trace medium Sand; well sorted; dry; soft; uniform; no odor;		
SB-07 (15 - 17.5')			63		4	0	SM: Dark Brown fine to medium SAND, trace Silt, trace medium Gravel; well sorted; damp; soft; subrounded; uniform; no odor;	
					0	SP: Brown fine to medium SAND; well sorted; dry; soft; uniform; no odor;		
					0.2	SP: Brown fine to medium SAND, trace medium Pebbles, trace Mica; moderately sorted; damp; medium dense; subrounded; uniform; no odor;		
			83		10	0	SP: Brown medium SAND, trace medium Pebbles, trace Mica; moderately sorted; damp; medium dense; subrounded; thinly bedded; no odor;	
			94		15	0	SP: Brown fine SAND, some Silt, trace Mica; well sorted; wet; medium dense; thinly bedded; no odor;	
					18	2		

DRILLING CONTRACTOR: **AARCO**
 DRILLING METHOD: **Hydraulic Hammer**
 DRILLING EQUIPMENT: **Geoprobe 7720 DT**
 SAMPLING EQUIPMENT: **57.5" Macro Core**
 LATITUDE: **40°45'9.54"N**
 LONGITUDE: **73°56'4.82"W**

NOTES: **SB-07 (0-4') - VOCs Analysis**
Duplicate - SB-07 (0-4')
SB-07 (15-17.5') - VOCs Analysis

APPENDIX B

OFF-SITE ACCESS ATTEMPTS



Integral Engineering, P.C.
61 Broadway
Suite 1601
New York, NY 10006

telephone: 212.962.4303
facsimile: 212.962.4302
www.integral-corp.com

November 26, 2014

Via Federal Express – Signature Requested

Alma Publishing Corp.
20 Fairway Ct.
Roslyn, NY 11576

Subject: **Environmental Sampling at 39-31 29th Street, Long Island City, NY 11101**

Dear Sir or Madam,

The New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) have recommended that sub-slab soil vapor and indoor air sampling be conducted at the above-mentioned property, in order to assess potential impacts from the adjacent building (the Site) located at 39-26 30th Street. As a result of historical operations, soil vapor contaminated with Volatile Organic Compounds (VOCs) may be emanating from the Site or other nearby property. On behalf of the Remedial Party responsible for the Site (Zhong Chuang Properties LLC), Integral Engineering P.C. is contacting you to request access to your property to perform the recommended sampling. **You are not responsible for any costs associated with this assessment.**

The assessment at your property would involve accessing the building to collect an indoor air sample and sub-slab soil vapor sample through the [basement] floor. An indoor air sample is collected using a small, metal container resting on a table or a tripod for an eight- or twenty-four-hour period (similar to radon testing). After the testing is complete, the container is removed and sent to the laboratory for analysis.

To obtain the sub-slab vapor sample, a small diameter hole (approximately two inches) would be drilled through the concrete slab floor. A probe would be installed into the hole and allowed to rest for approximately one week. After the rest period, a sample would be collected over an eight- or twenty-four-hour period (concurrent with the indoor air sample described above). At your discretion, we can either cap the sub-slab vapor probe with a

Alma Publishing Corp.
20 Fairway Ct.
Roslyn, NY 11576
November 26, 2014
Page 2

small cover, flush with the slab, or remove the probe and patch the floor to match the existing finish.

Both the indoor air and sub-slab soil vapor samples will be analyzed by a certified laboratory; you will be provided with the results.

Please review, sign, and return the attached consent form in the enclosed stamped and pre-addressed envelope. Please note that authorization to collect sub-slab soil vapor samples from the property will only be acknowledged by receipt of this consent form signed by the property owner or the property owner's representative. As noted on the attached consent form, please provide a time when you can be reached so that the specific activities to be conducted at your property may be discussed with you. We anticipate collecting these samples in mid-December.

Should you have any questions or concerns, please feel free to contact me at (212) 440-6702 or at kbrodock@integral-corp.com. If you have questions for the NYSDEC project manager, you may contact Ruth Curley at (518) 402-9767 or at ruth.curley@dec.ny.gov. If you have any questions regarding public health matters, please contact Christopher Doroski of NYSDOH at (518) 402-7860 or at christopher.doroski@health.ny.gov. Thank you very much for your cooperation.

Sincerely,



Keith P. Brodock, P.E.
Managing Engineer

Enclosure

cc: Ruth E. Curley, P.E.; NYSDEC
Christopher Doroski; NYSDOH

FedEx[®] Tracking**772004793592**

Ship (P/U) date :

Wed 11/26/2014 2:40 pm

Actual delivery :

Fri 11/28/2014 11:52 am

NEW YORK, NY US

ROSLYN, NY US

**Delivered***Signature not required*

Travel History

▲ Date/Time	Activity	Location
- 11/28/2014 - Friday		
11:52 am	Delivered	ROSLYN, NY
	Left at front door. Package delivered to recipient address - release authorized	
8:43 am	On FedEx vehicle for delivery	GARDEN CITY, NY
7:59 am	At local FedEx facility	GARDEN CITY, NY
- 11/27/2014 - Thursday		
5:40 am	At destination sort facility	JAMAICA, NY
4:32 am	Departed FedEx location	NEWARK, NJ
- 11/26/2014 - Wednesday		
2:40 pm	Picked up	NEW YORK, NY
11:18 am	Shipment information sent to FedEx	

Shipment Facts

Tracking number	772004793592	Service	FedEx Standard Overnight
Weight	0.5 lbs / 0.23 kgs	Delivered To	Residence
Total pieces	1	Total shipment weight	0.5 lbs / 0.23 kgs
Shipper reference	PE075	Packaging	FedEx Envelope
Special handling section	Deliver Weekday, Residential Delivery		



Integral Engineering, P.C.
61 Broadway
Suite 1601
New York, NY 10006

telephone: 212.962.4303
facsimile: 212.962.4302
www.integral-corp.com

November 26, 2014

Via Federal Express – Signature Requested

Frank Falco
3320 214th Street
Bayside, NY 11361

Subject: **Environmental Sampling at 39-25 29th Street, Long Island City, NY 11101**

Dear Mr. Falco,

The New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) have recommended that sub-slab soil vapor and indoor air sampling be conducted at the above-mentioned property, in order to assess potential impacts from the adjacent building (the Site) located at 39-26 30th Street. As a result of historical operations, soil vapor contaminated with Volatile Organic Compounds (VOCs) may be emanating from the Site or other nearby property. On behalf of the Remedial Party responsible for the Site (Zhong Chuang Properties LLC), Integral Engineering P.C. is contacting you to request access to your property to perform the recommended sampling. **You are not responsible for any costs associated with this assessment.**

The assessment at your property would involve accessing the building to collect an indoor air sample and sub-slab soil vapor sample through the [basement] floor. An indoor air sample is collected using a small, metal container resting on a table or a tripod for an eight- or twenty-four-hour period (similar to radon testing). After the testing is complete, the container is removed and sent to the laboratory for analysis.

To obtain the sub-slab vapor sample, a small diameter hole (approximately two inches) would be drilled through the concrete slab floor. A probe would be installed into the hole and allowed to rest for approximately one week. After the rest period, a sample would be collected over an eight- or twenty-four-hour period (concurrent with the indoor air sample described above). At your discretion, we can either cap the sub-slab vapor probe with a

Frank Falco
3320 214th Street
Bayside, NY 11361
November 26, 2014
Page 2

small cover, flush with the slab, or remove the probe and patch the floor to match the existing finish.

Both the indoor air and sub-slab soil vapor samples will be analyzed by a certified laboratory; you will be provided with the results.

Please review, sign, and return the attached consent form in the enclosed stamped and pre-addressed envelope. Please note that authorization to collect sub-slab soil vapor samples from the property will only be acknowledged by receipt of this consent form signed by the property owner or the property owner's representative. As noted on the attached consent form, please provide a time when you can be reached so that the specific activities to be conducted at your property may be discussed with you. We anticipate collecting these samples in mid-December.

Should you have any questions or concerns, please feel free to contact me at (212) 440-6702 or at kbrodock@integral-corp.com. If you have questions for the NYSDEC project manager, you may contact Ruth Curley at (518) 402-9767 or at ruth.curley@dec.ny.gov. If you have any questions regarding public health matters, please contact Christopher Doroski of NYSDOH at (518) 402-7860 or at christopher.doroski@health.ny.gov. Thank you very much for your cooperation.

Sincerely,



Keith P. Brodock, P.E.
Managing Engineer

Enclosure

cc: Ruth E. Curley, P.E.; NYSDEC
Christopher Doroski; NYSDOH

Frank Falco
3320 214th Street
Bayside, NY 11361
November 26, 2014
Page 3

CONSENT FOR ACCESS TO PROPERTY

Name:	
Company (if any):	
Address of Property:	
Relationship to Owner:	

I (We) consent to allow Integral Engineering, P.C. (working on behalf of Zhong Chuang Properties LLC) and its authorized representatives and contractors to enter and have continued access to the above-referenced property to: (i) collect a sub-slab soil vapor sample through the basement floor; and (ii) collect an indoor air sample.

I (We) understand that upon obtaining the sample, the finished condition of the floor will be restored.

I (We) understand that Integral Engineering, P.C. will notify us at least seven days prior to initially accessing my (our) property. This written permission is given by me (us) voluntarily with knowledge of our right to refuse and without threats or promises of any kind.

Date

Signature of Property Owner or Owner's Authorized Representative

Owner Name: _____

Address: _____

Phone _____

Preferred Meeting Date and Time: _____



772004671301

Ship (P/U) date :
Wed 11/26/2014 2:40 pm

Actual delivery :
Fri 11/28/2014 1:01 pm

New York, NY US

BAYSIDE, NY US



Delivered

Signature not required

Travel History

▲ Date/Time	Activity	Location
- 11/28/2014 - Friday		
1:01 pm	Delivered Left at front door. Package delivered to recipient address - release authorized	BAYSIDE, NY
8:55 am	On FedEx vehicle for delivery	MASPETH, NY
7:53 am	At local FedEx facility	MASPETH, NY
- 11/27/2014 - Thursday		
5:40 am	At destination sort facility	JAMAICA, NY
4:32 am	Departed FedEx location	NEWARK, NJ
- 11/26/2014 - Wednesday		
2:40 pm	Picked up	NEW YORK, NY
11:22 am	Shipment information sent to FedEx	

Shipment Facts

Tracking number	772004671301	Service	FedEx Standard Overnight
Weight	0.5 lbs / 0.23 kgs	Delivered To	Residence
Total pieces	1	Total shipment weight	0.5 lbs / 0.23 kgs
Shipper reference	PE075	Packaging	FedEx Envelope
Special handling section	Deliver Weekday, Residential Delivery		



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telephone: 212.962.4303
facsimile: 212.962.4302
www.integral-corp.com

November 26, 2014

Via Federal Express – Signature Requested

JM-AM Realty Corp.
39-23 29th Street
Long Island City, NY 11101

Subject: **Environmental Sampling at 39-21/23 29th Street, Long Island City, NY 11101**

Dear Sir or Madam,

The New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) have recommended that sub-slab soil vapor and indoor air sampling be conducted at the above-mentioned property, in order to assess potential impacts from the adjacent building (the Site) located at 39-26 30th Street. As a result of historical operations, soil vapor contaminated with Volatile Organic Compounds (VOCs) may be emanating from the Site or other nearby property. On behalf of the Remedial Party responsible for the Site (Zhong Chuang Properties LLC), Integral Engineering P.C. is contacting you to request access to your property to perform the recommended sampling. **You are not responsible for any costs associated with this assessment.**

The assessment at your property would involve accessing the building to collect an indoor air sample and sub-slab soil vapor sample through the [basement] floor. An indoor air sample is collected using a small, metal container resting on a table or a tripod for an eight- or twenty-four-hour period (similar to radon testing). After the testing is complete, the container is removed and sent to the laboratory for analysis.

To obtain the sub-slab vapor sample, a small diameter hole (approximately two inches) would be drilled through the concrete slab floor. A probe would be installed into the hole and allowed to rest for approximately one week. After the rest period, a sample would be collected over an eight- or twenty-four-hour period (concurrent with the indoor air sample described above). At your discretion, we can either cap the sub-slab vapor probe with a

JM-AM Realty Corp.
39-23 29th Street
Long Island City, NY 11101
November 26, 2014
Page 2

small cover, flush with the slab, or remove the probe and patch the floor to match the existing finish.

Both the indoor air and sub-slab soil vapor samples will be analyzed by a certified laboratory; you will be provided with the results.

Please review, sign, and return the attached consent form in the enclosed stamped and pre-addressed envelope. Please note that authorization to collect sub-slab soil vapor samples from the property will only be acknowledged by receipt of this consent form signed by the property owner or the property owner's representative. As noted on the attached consent form, please provide a time when you can be reached so that the specific activities to be conducted at your property may be discussed with you. We anticipate collecting these samples in mid-December.

Should you have any questions or concerns, please feel free to contact me at (212) 440-6702 or at kbrodock@integral-corp.com. If you have questions for the NYSDEC project manager, you may contact Ruth Curley at (518) 402-9767 or at ruth.curley@dec.ny.gov. If you have any questions regarding public health matters, please contact Christopher Doroski of NYSDOH at (518) 402-7860 or at christopher.doroski@health.ny.gov. Thank you very much for your cooperation.

Sincerely,



Keith P. Brodock, P.E.
Managing Engineer

Enclosure

cc: Ruth E. Curley, P.E.; NYSDEC
Christopher Doroski; NYSDOH

JM-AM Realty Corp.
39-23 29th Street
Long Island City, NY 11101
November 26, 2014
Page 3

CONSENT FOR ACCESS TO PROPERTY

Name:	
Company (if any):	
Address of Property:	
Relationship to Owner:	

I (We) consent to allow Integral Engineering, P.C. (working on behalf of Zhong Chuang Properties LLC) and its authorized representatives and contractors to enter and have continued access to the above-referenced property to: (i) collect a sub-slab soil vapor sample through the basement floor; and (ii) collect an indoor air sample.

I (We) understand that upon obtaining the sample, the finished condition of the floor will be restored.

I (We) understand that Integral Engineering, P.C. will notify us at least seven days prior to initially accessing my (our) property. This written permission is given by me (us) voluntarily with knowledge of our right to refuse and without threats or promises of any kind.

Date

Signature of Property Owner or Owner's Authorized Representative

Owner Name:

Address:

Phone

Preferred Meeting Date and Time:



772004513096

Ship (P/U) date :
Wed 11/26/2014 2:40 pm

Actual delivery :
Mon 12/01/2014 1:00 pm

New York, NY US

LONG ISLAND CITY, NY US



Delivered

Signed for by: J.MORGAN

Travel History

▲ Date/Time	Activity	Location
- 12/01/2014 - Monday		
1:00 pm	Delivered	LONG ISLAND CITY, NY
7:01 am	On FedEx vehicle for delivery	MASPETH, NY
- 11/28/2014 - Friday		
7:00 pm	At local FedEx facility	MASPETH, NY
9:57 am	Delivery exception Business closed - No delivery attempt	MASPETH, NY
9:52 am	At local FedEx facility	MASPETH, NY
7:59 am	At local FedEx facility	MASPETH, NY
- 11/27/2014 - Thursday		
5:40 am	At destination sort facility	JAMAICA, NY
4:32 am	Departed FedEx location	NEWARK, NJ
- 11/26/2014 - Wednesday		
2:40 pm	Picked up	NEW YORK, NY
11:21 am	Shipment information sent to FedEx	

Shipment Facts

Tracking number	772004513096	Service	FedEx Standard Overnight
Weight	0.5 lbs / 0.23 kgs	Delivered To	Receptionist/Front Desk
Total pieces	1	Total shipment weight	0.5 lbs / 0.23 kgs
Shipper reference	PE075	Packaging	FedEx Envelope
Special handling section	Deliver Weekday		



Integral Engineering, P.C.
61 Broadway
Suite 1601
New York, NY 10006

telephone: 212.962.4303
facsimile: 212.962.4302
www.integral-corp.com

November 26, 2014

Via Federal Express – Signature Requested

Brazilian Missionary Church
39-22 30th Street
Long Island City, NY 11101

Subject: **Environmental Sampling at 39-22 30th Street, Long Island City, NY 11101**

Dear Sir or Madam,

The New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) have recommended that sub-slab soil vapor and indoor air sampling be conducted at the above-mentioned property, in order to assess potential impacts from the adjacent building (the Site) located at 39-26 30th Street. As a result of historical operations, soil vapor contaminated with Volatile Organic Compounds (VOCs) may be emanating from the Site or other nearby property. On behalf of the Remedial Party responsible for the Site (Zhong Chuang Properties LLC), Integral Engineering P.C. is contacting you to request access to your property to perform the recommended sampling. **You are not responsible for any costs associated with this assessment.**

The assessment at your property would involve accessing the building to collect an indoor air sample and sub-slab soil vapor sample through the [basement] floor. An indoor air sample is collected using a small, metal container resting on a table or a tripod for an eight- or twenty-four-hour period (similar to radon testing). After the testing is complete, the container is removed and sent to the laboratory for analysis.

To obtain the sub-slab vapor sample, a small diameter hole (approximately two inches) would be drilled through the concrete slab floor. A probe would be installed into the hole and allowed to rest for approximately one week. After the rest period, a sample would be collected over an eight- or twenty-four-hour period (concurrent with the indoor air sample described above). At your discretion, we can either cap the sub-slab vapor probe with a

Brazilian Missionary Church
39-22 30th Street
Long Island City, NY 11101
November 26, 2014
Page 2

small cover, flush with the slab, or remove the probe and patch the floor to match the existing finish.

Both the indoor air and sub-slab soil vapor samples will be analyzed by a certified laboratory; you will be provided with the results.

Please review, sign, and return the attached consent form in the enclosed stamped and pre-addressed envelope. Please note that authorization to collect sub-slab soil vapor samples from the property will only be acknowledged by receipt of this consent form signed by the property owner or the property owner's representative. As noted on the attached consent form, please provide a time when you can be reached so that the specific activities to be conducted at your property may be discussed with you. We anticipate collecting these samples in mid-December.

Should you have any questions or concerns, please feel free to contact me at (212) 440-6702 or at kbrodock@integral-corp.com. If you have questions for the NYSDEC project manager, you may contact Ruth Curley at (518) 402-9767 or at ruth.curley@dec.ny.gov. If you have any questions regarding public health matters, please contact Christopher Doroski of NYSDOH at (518) 402-7860 or at christopher.doroski@health.ny.gov. Thank you very much for your cooperation.

Sincerely,



Keith P. Brodock, P.E.
Managing Engineer

Enclosure

cc: Ruth E. Curley, P.E.; NYSDEC
Christopher Doroski; NYSDOH

Brazilian Missionary Church
39-22 30th Street
Long Island City, NY 11101
November 26, 2014
Page 3

CONSENT FOR ACCESS TO PROPERTY

Name:	
Company (if any):	
Address of Property:	
Relationship to Owner:	

I (We) consent to allow Integral Engineering, P.C. (working on behalf of Zhong Chuang Properties LLC) and its authorized representatives and contractors to enter and have continued access to the above-referenced property to: (i) collect a sub-slab soil vapor sample through the basement floor; and (ii) collect an indoor air sample.

I (We) understand that upon obtaining the sample, the finished condition of the floor will be restored.

I (We) understand that Integral Engineering, P.C. will notify us at least seven days prior to initially accessing my (our) property. This written permission is given by me (us) voluntarily with knowledge of our right to refuse and without threats or promises of any kind.

Date

Signature of Property Owner or Owner's Authorized Representative

Owner Name: _____

Address: _____

Phone _____

Preferred Meeting Date and Time: _____

FedEx[®] Tracking**772004381201**Ship (P/U) date :
Wed 11/26/2014 2:40 pmEstimated delivery :
N/A

New York, NY US

LONG ISLAND CITY, NY US

**Delivery exception**

MASPETH, NY

Unable to deliver shipment, returned to shipper**Recommended action:**

No action is required. The package is being returned to the shipper.

No estimated delivery date available at this time.

Travel History

▲ Date/Time	Activity	Location
- 12/04/2014 - Thursday		
8:28 pm	Returning package to shipper Return tracking number 619196611887	MASPETH, NY
- 12/03/2014 - Wednesday		
9:29 pm	At local FedEx facility	MASPETH, NY
- 12/02/2014 - Tuesday		
8:52 pm	At local FedEx facility	MASPETH, NY
4:13 pm	Delivery exception Customer not available or business closed	MASPETH, NY
2:03 pm	Delivery exception Customer not available or business closed	MASPETH, NY
8:31 am	On FedEx vehicle for delivery	MASPETH, NY
- 12/01/2014 - Monday		
9:55 pm	At local FedEx facility	MASPETH, NY
7:23 pm	Delivery exception Customer not available or business closed	MASPETH, NY
6:43 pm	Delivery exception Customer not available or business closed	MASPETH, NY
1:33 pm	Delivery exception Customer not available or business closed	MASPETH, NY
7:01 am	On FedEx vehicle for delivery	MASPETH, NY
- 11/28/2014 - Friday		
7:00 pm	At local FedEx facility	MASPETH, NY
9:57 am	Delivery exception Business closed - No delivery attempt	MASPETH, NY
9:52 am	At local FedEx facility	MASPETH, NY
7:56 am	At local FedEx facility	MASPETH, NY
- 11/27/2014 - Thursday		
5:40 am	At destination sort facility	JAMAICA, NY
4:32 am	Departed FedEx location	NEWARK, NJ
- 11/26/2014 - Wednesday		
2:40 pm	Picked up	NEW YORK, NY
11:03 am	Shipment information sent to FedEx	

Shipment Facts

Tracking number	772004381201	Service	FedEx Standard Overnight
Door tag number	DT103847017383	Weight	0.5 lbs / 0.23 kgs
Total pieces	1	Total shipment weight	0.5 lbs / 0.23 kgs
Shipper reference	PE075	Packaging	FedEx Envelope

Special handling
section Deliver Weekday

Pull to open.

Pull to open.

FedEx

FedEx

Returned Shipment

Original Tracking Number: 772004381201
Return Tracking Number: 619196611887

FTD 136763 Loc: LGAA 04DEC14 20:25

4301
/ Inc.
06
82-1068
Missionary Ch
Street
AND CITY, NY

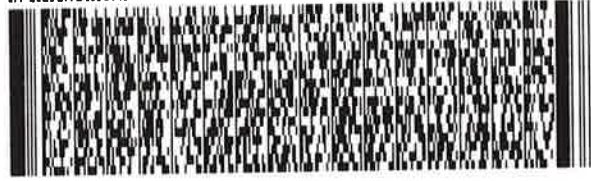
TO KEITH BRODOCK
INTEGRAL CONSULTING INC
61 BROADWAY
1601
NEW YORK NY 10006

ORIGIN ID:GAMA (800) 463-3339
ROB SCAPARRO
FEDEX
58-95 MAURICE AVE
MASPETH, NY 11378
UNITED STATES US

SHIP DATE: 04DEC14
ACTWGT: 0.5 LB MAN
CAD: 25913/CAFE2B06

BILL RECIPIENT

REF: RTS 772004381201



FedEx
Express
E

J1412140723001 UV

TRK# 6191 9661 1887
0201

TUE - 09 DEC AA
EXPRESS SAVER

E3 PCTA

10006
NY-US EWR

1st Attempt 2nd Attempt Final Attempt Date 12/2 Time 204
DT1038 4701 7383

1st Attempt 2nd Attempt Final Attempt Date 12/1 Time 135
DT1038 4701 7328

RT 389
FZ B06
9 16:00
1201 11:28

RT 389
FZ B06
10/1

RT 389
FZ B06
9 16:00
1201 12:01

document here.



Integral Engineering, P.C.
61 Broadway
Suite 1601
New York, NY 10006

telephone: 212.962.4303
facsimile: 212.962.4302
www.integral-corp.com

November 26, 2014

Via Federal Express – Signature Requested

Ganesh Management LLC
39-40 30th Street
Long Island City, NY 11101

Subject: **Environmental Sampling at 39-40 30th Street, Long Island City, NY 11101**

Dear Sir or Madam,

The New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) have recommended that sub-slab soil vapor and indoor air sampling be conducted at the above-mentioned property, in order to assess potential impacts from the adjacent building (the Site) located at 39-26 30th Street. As a result of historical operations, soil vapor contaminated with Volatile Organic Compounds (VOCs) may be emanating from the Site or other nearby property. On behalf of the Remedial Party responsible for the Site (Zhong Chuang Properties LLC), Integral Engineering P.C. is contacting you to request access to your property to perform the recommended sampling. **You are not responsible for any costs associated with this assessment.**

The assessment at your property would involve accessing the building to collect an indoor air sample and sub-slab soil vapor sample through the [basement] floor. An indoor air sample is collected using a small, metal container resting on a table or a tripod for an eight- or twenty-four-hour period (similar to radon testing). After the testing is complete, the container is removed and sent to the laboratory for analysis.

To obtain the sub-slab vapor sample, a small diameter hole (approximately two inches) would be drilled through the concrete slab floor. A probe would be installed into the hole and allowed to rest for approximately one week. After the rest period, a sample would be collected over an eight- or twenty-four-hour period (concurrent with the indoor air sample described above). At your discretion, we can either cap the sub-slab vapor probe with a

Ganesh Management LLC
39-40 30th Street
Long Island City, NY 11101
November 26, 2014
Page 2

small cover, flush with the slab, or remove the probe and patch the floor to match the existing finish.

Both the indoor air and sub-slab soil vapor samples will be analyzed by a certified laboratory; you will be provided with the results.

Please review, sign, and return the attached consent form in the enclosed stamped and pre-addressed envelope. Please note that authorization to collect sub-slab soil vapor samples from the property will only be acknowledged by receipt of this consent form signed by the property owner or the property owner's representative. As noted on the attached consent form, please provide a time when you can be reached so that the specific activities to be conducted at your property may be discussed with you. We anticipate collecting these samples in mid-December.

Should you have any questions or concerns, please feel free to contact me at (212) 440-6702 or at kbrodock@integral-corp.com. If you have questions for the NYSDEC project manager, you may contact Ruth Curley at (518) 402-9767 or at ruth.curley@dec.ny.gov. If you have any questions regarding public health matters, please contact Christopher Doroski of NYSDOH at (518) 402-7860 or at christopher.doroski@health.ny.gov. Thank you very much for your cooperation.

Sincerely,



Keith P. Brodock, P.E.
Managing Engineer

Enclosure

cc: Ruth E. Curley, P.E.; NYSDEC
Christopher Doroski; NYSDOH

Ganesh Management LLC
39-40 30th Street
Long Island City, NY 11101
November 26, 2014
Page 3

CONSENT FOR ACCESS TO PROPERTY

Name:	
Company (if any):	
Address of Property:	
Relationship to Owner:	

I (We) consent to allow Integral Engineering, P.C. (working on behalf of Zhong Chuang Properties LLC) and its authorized representatives and contractors to enter and have continued access to the above-referenced property to: (i) collect a sub-slab soil vapor sample through the basement floor; and (ii) collect an indoor air sample.

I (We) understand that upon obtaining the sample, the finished condition of the floor will be restored.

I (We) understand that Integral Engineering, P.C. will notify us at least seven days prior to initially accessing my (our) property. This written permission is given by me (us) voluntarily with knowledge of our right to refuse and without threats or promises of any kind.

Integral Engineering, P.C. will list Ganesh Management, LLC as additional insured on its General Liability policy and will provide evidence thereof.

Date

Signature of Property Owner or Owner's Authorized Representative

Owner Name: _____

Address: _____

Phone _____

Preferred Meeting Date and Time: _____

FedEx[®] Tracking**772004876548**

Ship (P/U) date :

Wed 11/26/2014 2:40 pm

Actual delivery :

Fri 11/28/2014 9:34 am

NEW YORK, NY US



LONG ISLAND CITY, NY US

Delivered

Signed for by: K.SHAH

Travel History

▲ Date/Time	Activity	Location
- 11/28/2014 - Friday		
9:34 am	Delivered	LONG ISLAND CITY, NY
9:06 am	On FedEx vehicle for delivery	MASPETH, NY
7:59 am	At local FedEx facility	MASPETH, NY
- 11/27/2014 - Thursday		
5:40 am	At destination sort facility	JAMAICA, NY
4:32 am	Departed FedEx location	NEWARK, NJ
- 11/26/2014 - Wednesday		
2:40 pm	Picked up	NEW YORK, NY
11:36 am	Shipment information sent to FedEx	

Shipment Facts

Tracking number	772004876548	Service	FedEx Standard Overnight
Weight	0.5 lbs / 0.23 kgs	Delivered To	Receptionist/Front Desk
Total pieces	1	Total shipment weight	0.5 lbs / 0.23 kgs
Shipper reference	PE075	Packaging	FedEx Envelope
Special handling section	Deliver Weekday		

APPENDIX C

LAB DATA REPORT



ANALYTICAL REPORT

Lab Number:	L1431287
Client:	Integral Consulting, Inc. 61 Broadway Suite 1601 New York, NY 10006-2756
ATTN:	Keith Brodock
Phone:	(212) 962-4301
Project Name:	BRIDGE CLEANERS
Project Number:	PE075
Report Date:	01/08/15

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1431287-01	SB-06 (11.5-12')	SOIL	39-26 30TH ST., LIC	12/30/14 11:30	12/30/14
L1431287-02	SB-06 (17.5-18.5')	SOIL	39-26 30TH ST., LIC	12/30/14 11:30	12/30/14
L1431287-03	SB-07 (0-4')	SOIL	39-26 30TH ST., LIC	12/30/14 10:45	12/30/14
L1431287-04	SB-07 (15-17.5')	SOIL	39-26 30TH ST., LIC	12/30/14 10:50	12/30/14
L1431287-05	DUPLICATE (12-30-14)	SOIL	39-26 30TH ST., LIC	12/30/14 10:50	12/30/14
L1431287-06	TRIP BLANK (12-30-14)	WATER	39-26 30TH ST., LIC	12/30/14 00:00	12/30/14

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Bryan Vangel

Title: Technical Director/Representative

Date: 01/08/15

ORGANICS

VOLATILES

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-01
 Client ID: SB-06 (11.5-12')
 Sample Location: 39-26 30TH ST., LIC
 Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 01/07/15 20:01
 Analyst: MV
 Percent Solids: 96%

Date Collected: 12/30/14 11:30
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	690	77.	1
1,1-Dichloroethane	ND		ug/kg	100	5.9	1
Chloroform	ND		ug/kg	100	26.	1
Carbon tetrachloride	ND		ug/kg	69	14.	1
1,2-Dichloropropane	ND		ug/kg	240	16.	1
Dibromochloromethane	ND		ug/kg	69	11.	1
1,1,2-Trichloroethane	ND		ug/kg	100	21.	1
Tetrachloroethene	6900		ug/kg	69	9.7	1
Chlorobenzene	ND		ug/kg	69	24.	1
Trichlorofluoromethane	ND		ug/kg	350	27.	1
1,2-Dichloroethane	ND		ug/kg	69	7.9	1
1,1,1-Trichloroethane	ND		ug/kg	69	7.7	1
Bromodichloromethane	ND		ug/kg	69	12.	1
trans-1,3-Dichloropropene	ND		ug/kg	69	8.4	1
cis-1,3-Dichloropropene	ND		ug/kg	69	8.2	1
1,3-Dichloropropene, Total	ND		ug/kg	69	8.2	1
1,1-Dichloropropene	ND		ug/kg	350	9.8	1
Bromoform	ND		ug/kg	280	16.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	69	7.0	1
Benzene	ND		ug/kg	69	8.2	1
Toluene	ND		ug/kg	100	14.	1
Ethylbenzene	ND		ug/kg	69	8.8	1
Chloromethane	ND		ug/kg	350	20.	1
Bromomethane	ND		ug/kg	140	23.	1
Vinyl chloride	ND		ug/kg	140	8.2	1
Chloroethane	ND		ug/kg	140	22.	1
1,1-Dichloroethene	ND		ug/kg	69	18.	1
trans-1,2-Dichloroethene	ND		ug/kg	100	15.	1
Trichloroethene	ND		ug/kg	69	8.7	1
1,2-Dichlorobenzene	ND		ug/kg	350	11.	1

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-01
 Client ID: SB-06 (11.5-12')
 Sample Location: 39-26 30TH ST., LIC

Date Collected: 12/30/14 11:30
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	350	9.4	1
1,4-Dichlorobenzene	ND		ug/kg	350	9.6	1
Methyl tert butyl ether	ND		ug/kg	140	5.9	1
p/m-Xylene	ND		ug/kg	140	14.	1
o-Xylene	ND		ug/kg	140	12.	1
Xylene (Total)	ND		ug/kg	140	12.	1
cis-1,2-Dichloroethene	ND		ug/kg	69	9.9	1
1,2-Dichloroethene (total)	ND		ug/kg	69	9.9	1
Dibromomethane	ND		ug/kg	690	11.	1
Styrene	ND		ug/kg	140	28.	1
Dichlorodifluoromethane	ND		ug/kg	690	13.	1
Acetone	ND		ug/kg	690	72.	1
Carbon disulfide	ND		ug/kg	690	76.	1
2-Butanone	ND		ug/kg	690	19.	1
Vinyl acetate	ND		ug/kg	690	9.2	1
4-Methyl-2-pentanone	ND		ug/kg	690	17.	1
1,2,3-Trichloropropane	ND		ug/kg	690	11.	1
2-Hexanone	ND		ug/kg	690	46.	1
Bromochloromethane	ND		ug/kg	350	19.	1
2,2-Dichloropropane	ND		ug/kg	350	16.	1
1,2-Dibromoethane	ND		ug/kg	280	12.	1
1,3-Dichloropropane	ND		ug/kg	350	10.	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	69	22.	1
Bromobenzene	ND		ug/kg	350	14.	1
n-Butylbenzene	ND		ug/kg	69	8.0	1
sec-Butylbenzene	ND		ug/kg	69	8.5	1
tert-Butylbenzene	ND		ug/kg	350	9.4	1
o-Chlorotoluene	ND		ug/kg	350	11.	1
p-Chlorotoluene	ND		ug/kg	350	9.2	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	350	28.	1
Hexachlorobutadiene	ND		ug/kg	350	16.	1
Isopropylbenzene	ND		ug/kg	69	7.2	1
p-Isopropyltoluene	ND		ug/kg	69	8.7	1
Naphthalene	ND		ug/kg	350	9.6	1
Acrylonitrile	ND		ug/kg	690	36.	1
n-Propylbenzene	ND		ug/kg	69	7.6	1
1,2,3-Trichlorobenzene	ND		ug/kg	350	10.	1
1,2,4-Trichlorobenzene	ND		ug/kg	350	13.	1
1,3,5-Trimethylbenzene	ND		ug/kg	350	10.	1

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-01
 Client ID: SB-06 (11.5-12')
 Sample Location: 39-26 30TH ST., LIC

Date Collected: 12/30/14 11:30
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	350	9.8	1
1,4-Dioxane	ND		ug/kg	6900	1000	1
1,4-Diethylbenzene	ND		ug/kg	280	11.	1
4-Ethyltoluene	ND		ug/kg	280	8.6	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	280	9.0	1
Ethyl ether	ND		ug/kg	350	18.	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	350	27.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	101		70-130

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-02
 Client ID: SB-06 (17.5-18.5')
 Sample Location: 39-26 30TH ST., LIC
 Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 01/07/15 19:34
 Analyst: MV
 Percent Solids: 80%

Date Collected: 12/30/14 11:30
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	15	1.7	1
1,1-Dichloroethane	ND		ug/kg	2.3	0.13	1
Chloroform	ND		ug/kg	2.3	0.56	1
Carbon tetrachloride	ND		ug/kg	1.5	0.32	1
1,2-Dichloropropane	ND		ug/kg	5.3	0.34	1
Dibromochloromethane	ND		ug/kg	1.5	0.23	1
1,1,2-Trichloroethane	ND		ug/kg	2.3	0.46	1
Tetrachloroethene	87		ug/kg	1.5	0.21	1
Chlorobenzene	ND		ug/kg	1.5	0.53	1
Trichlorofluoromethane	ND		ug/kg	7.6	0.59	1
1,2-Dichloroethane	ND		ug/kg	1.5	0.17	1
1,1,1-Trichloroethane	ND		ug/kg	1.5	0.17	1
Bromodichloromethane	ND		ug/kg	1.5	0.26	1
trans-1,3-Dichloropropene	ND		ug/kg	1.5	0.18	1
cis-1,3-Dichloropropene	ND		ug/kg	1.5	0.18	1
1,3-Dichloropropene, Total	ND		ug/kg	1.5	0.18	1
1,1-Dichloropropene	ND		ug/kg	7.6	0.21	1
Bromoform	ND		ug/kg	6.1	0.36	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.5	0.15	1
Benzene	ND		ug/kg	1.5	0.18	1
Toluene	ND		ug/kg	2.3	0.30	1
Ethylbenzene	ND		ug/kg	1.5	0.19	1
Chloromethane	ND		ug/kg	7.6	0.44	1
Bromomethane	ND		ug/kg	3.0	0.51	1
Vinyl chloride	ND		ug/kg	3.0	0.18	1
Chloroethane	ND		ug/kg	3.0	0.48	1
1,1-Dichloroethene	ND		ug/kg	1.5	0.40	1
trans-1,2-Dichloroethene	ND		ug/kg	2.3	0.32	1
Trichloroethene	ND		ug/kg	1.5	0.19	1
1,2-Dichlorobenzene	ND		ug/kg	7.6	0.23	1

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-02
 Client ID: SB-06 (17.5-18.5')
 Sample Location: 39-26 30TH ST., LIC

Date Collected: 12/30/14 11:30
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	7.6	0.20	1
1,4-Dichlorobenzene	ND		ug/kg	7.6	0.21	1
Methyl tert butyl ether	ND		ug/kg	3.0	0.13	1
p/m-Xylene	ND		ug/kg	3.0	0.30	1
o-Xylene	ND		ug/kg	3.0	0.26	1
Xylene (Total)	ND		ug/kg	3.0	0.26	1
cis-1,2-Dichloroethene	ND		ug/kg	1.5	0.22	1
1,2-Dichloroethene (total)	ND		ug/kg	1.5	0.22	1
Dibromomethane	ND		ug/kg	15	0.25	1
Styrene	ND		ug/kg	3.0	0.61	1
Dichlorodifluoromethane	ND		ug/kg	15	0.29	1
Acetone	ND		ug/kg	15	1.6	1
Carbon disulfide	ND		ug/kg	15	1.7	1
2-Butanone	ND		ug/kg	15	0.41	1
Vinyl acetate	ND		ug/kg	15	0.20	1
4-Methyl-2-pentanone	ND		ug/kg	15	0.37	1
1,2,3-Trichloropropane	ND		ug/kg	15	0.25	1
2-Hexanone	ND		ug/kg	15	1.0	1
Bromochloromethane	ND		ug/kg	7.6	0.42	1
2,2-Dichloropropane	ND		ug/kg	7.6	0.34	1
1,2-Dibromoethane	ND		ug/kg	6.1	0.26	1
1,3-Dichloropropane	ND		ug/kg	7.6	0.22	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.5	0.48	1
Bromobenzene	ND		ug/kg	7.6	0.32	1
n-Butylbenzene	ND		ug/kg	1.5	0.17	1
sec-Butylbenzene	ND		ug/kg	1.5	0.18	1
tert-Butylbenzene	ND		ug/kg	7.6	0.20	1
o-Chlorotoluene	ND		ug/kg	7.6	0.24	1
p-Chlorotoluene	ND		ug/kg	7.6	0.20	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	7.6	0.60	1
Hexachlorobutadiene	ND		ug/kg	7.6	0.34	1
Isopropylbenzene	ND		ug/kg	1.5	0.16	1
p-Isopropyltoluene	ND		ug/kg	1.5	0.19	1
Naphthalene	ND		ug/kg	7.6	0.21	1
Acrylonitrile	ND		ug/kg	15	0.78	1
n-Propylbenzene	ND		ug/kg	1.5	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	7.6	0.22	1
1,2,4-Trichlorobenzene	ND		ug/kg	7.6	0.28	1
1,3,5-Trimethylbenzene	ND		ug/kg	7.6	0.22	1

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-02
 Client ID: SB-06 (17.5-18.5')
 Sample Location: 39-26 30TH ST., LIC

Date Collected: 12/30/14 11:30
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	7.6	0.21	1
1,4-Dioxane	ND		ug/kg	150	22.	1
1,4-Diethylbenzene	ND		ug/kg	6.1	0.24	1
4-Ethyltoluene	ND		ug/kg	6.1	0.19	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	6.1	0.20	1
Ethyl ether	ND		ug/kg	7.6	0.39	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	7.6	0.59	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	102		70-130

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-03
 Client ID: SB-07 (0-4')
 Sample Location: 39-26 30TH ST., LIC
 Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 01/07/15 20:28
 Analyst: MV
 Percent Solids: 88%

Date Collected: 12/30/14 10:45
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	550	61.	1
1,1-Dichloroethane	ND		ug/kg	82	4.7	1
Chloroform	ND		ug/kg	82	20.	1
Carbon tetrachloride	ND		ug/kg	55	12.	1
1,2-Dichloropropane	ND		ug/kg	190	12.	1
Dibromochloromethane	ND		ug/kg	55	8.4	1
1,1,2-Trichloroethane	ND		ug/kg	82	17.	1
Tetrachloroethene	4800		ug/kg	55	7.7	1
Chlorobenzene	ND		ug/kg	55	19.	1
Trichlorofluoromethane	ND		ug/kg	270	21.	1
1,2-Dichloroethane	ND		ug/kg	55	6.2	1
1,1,1-Trichloroethane	ND		ug/kg	55	6.1	1
Bromodichloromethane	ND		ug/kg	55	9.5	1
trans-1,3-Dichloropropene	ND		ug/kg	55	6.6	1
cis-1,3-Dichloropropene	ND		ug/kg	55	6.5	1
1,3-Dichloropropene, Total	ND		ug/kg	55	6.5	1
1,1-Dichloropropene	ND		ug/kg	270	7.8	1
Bromoform	ND		ug/kg	220	13.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	55	5.5	1
Benzene	ND		ug/kg	55	6.5	1
Toluene	ND		ug/kg	82	11.	1
Ethylbenzene	ND		ug/kg	55	7.0	1
Chloromethane	ND		ug/kg	270	16.	1
Bromomethane	ND		ug/kg	110	18.	1
Vinyl chloride	ND		ug/kg	110	6.4	1
Chloroethane	ND		ug/kg	110	17.	1
1,1-Dichloroethene	ND		ug/kg	55	14.	1
trans-1,2-Dichloroethene	ND		ug/kg	82	12.	1
Trichloroethene	ND		ug/kg	55	6.9	1
1,2-Dichlorobenzene	ND		ug/kg	270	8.4	1

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-03
 Client ID: SB-07 (0-4')
 Sample Location: 39-26 30TH ST., LIC

Date Collected: 12/30/14 10:45
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	270	7.4	1
1,4-Dichlorobenzene	ND		ug/kg	270	7.6	1
Methyl tert butyl ether	ND		ug/kg	110	4.6	1
p/m-Xylene	ND		ug/kg	110	11.	1
o-Xylene	ND		ug/kg	110	9.4	1
Xylene (Total)	ND		ug/kg	110	9.4	1
cis-1,2-Dichloroethene	ND		ug/kg	55	7.8	1
1,2-Dichloroethene (total)	ND		ug/kg	55	7.8	1
Dibromomethane	ND		ug/kg	550	9.0	1
Styrene	ND		ug/kg	110	22.	1
Dichlorodifluoromethane	ND		ug/kg	550	10.	1
Acetone	ND		ug/kg	550	57.	1
Carbon disulfide	ND		ug/kg	550	60.	1
2-Butanone	ND		ug/kg	550	15.	1
Vinyl acetate	ND		ug/kg	550	7.3	1
4-Methyl-2-pentanone	ND		ug/kg	550	13.	1
1,2,3-Trichloropropane	ND		ug/kg	550	8.9	1
2-Hexanone	ND		ug/kg	550	37.	1
Bromochloromethane	ND		ug/kg	270	15.	1
2,2-Dichloropropane	ND		ug/kg	270	12.	1
1,2-Dibromoethane	ND		ug/kg	220	9.6	1
1,3-Dichloropropane	ND		ug/kg	270	8.0	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	55	17.	1
Bromobenzene	ND		ug/kg	270	11.	1
n-Butylbenzene	ND		ug/kg	55	6.3	1
sec-Butylbenzene	ND		ug/kg	55	6.7	1
tert-Butylbenzene	ND		ug/kg	270	7.4	1
o-Chlorotoluene	ND		ug/kg	270	8.8	1
p-Chlorotoluene	ND		ug/kg	270	7.3	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	270	22.	1
Hexachlorobutadiene	ND		ug/kg	270	12.	1
Isopropylbenzene	ND		ug/kg	55	5.7	1
p-Isopropyltoluene	ND		ug/kg	55	6.9	1
Naphthalene	ND		ug/kg	270	7.6	1
Acrylonitrile	ND		ug/kg	550	28.	1
n-Propylbenzene	ND		ug/kg	55	6.0	1
1,2,3-Trichlorobenzene	ND		ug/kg	270	8.1	1
1,2,4-Trichlorobenzene	ND		ug/kg	270	10.	1
1,3,5-Trimethylbenzene	ND		ug/kg	270	7.9	1

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-03
 Client ID: SB-07 (0-4')
 Sample Location: 39-26 30TH ST., LIC

Date Collected: 12/30/14 10:45
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	270	7.8	1
1,4-Dioxane	ND		ug/kg	5500	790	1
1,4-Diethylbenzene	ND		ug/kg	220	8.8	1
4-Ethyltoluene	ND		ug/kg	220	6.8	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	220	7.2	1
Ethyl ether	ND		ug/kg	270	14.	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	270	22.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	100		70-130

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-04
 Client ID: SB-07 (15-17.5')
 Sample Location: 39-26 30TH ST., LIC
 Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 01/07/15 20:54
 Analyst: MV
 Percent Solids: 94%

Date Collected: 12/30/14 10:50
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	680	75.	1
1,1-Dichloroethane	ND		ug/kg	100	5.8	1
Chloroform	ND		ug/kg	100	25.	1
Carbon tetrachloride	ND		ug/kg	68	14.	1
1,2-Dichloropropane	ND		ug/kg	240	16.	1
Dibromochloromethane	ND		ug/kg	68	10.	1
1,1,2-Trichloroethane	ND		ug/kg	100	21.	1
Tetrachloroethene	1800		ug/kg	68	9.5	1
Chlorobenzene	ND		ug/kg	68	24.	1
Trichlorofluoromethane	ND		ug/kg	340	26.	1
1,2-Dichloroethane	ND		ug/kg	68	7.7	1
1,1,1-Trichloroethane	ND		ug/kg	68	7.5	1
Bromodichloromethane	ND		ug/kg	68	12.	1
trans-1,3-Dichloropropene	ND		ug/kg	68	8.2	1
cis-1,3-Dichloropropene	ND		ug/kg	68	8.0	1
1,3-Dichloropropene, Total	ND		ug/kg	68	8.0	1
1,1-Dichloropropene	ND		ug/kg	340	9.6	1
Bromoform	ND		ug/kg	270	16.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	68	6.9	1
Benzene	ND		ug/kg	68	8.0	1
Toluene	ND		ug/kg	100	13.	1
Ethylbenzene	ND		ug/kg	68	8.7	1
Chloromethane	ND		ug/kg	340	20.	1
Bromomethane	ND		ug/kg	140	23.	1
Vinyl chloride	ND		ug/kg	140	8.0	1
Chloroethane	ND		ug/kg	140	22.	1
1,1-Dichloroethene	ND		ug/kg	68	18.	1
trans-1,2-Dichloroethene	ND		ug/kg	100	14.	1
Trichloroethene	ND		ug/kg	68	8.5	1
1,2-Dichlorobenzene	ND		ug/kg	340	10.	1

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-04
 Client ID: SB-07 (15-17.5')
 Sample Location: 39-26 30TH ST., LIC

Date Collected: 12/30/14 10:50
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	340	9.2	1
1,4-Dichlorobenzene	ND		ug/kg	340	9.4	1
Methyl tert butyl ether	ND		ug/kg	140	5.7	1
p/m-Xylene	ND		ug/kg	140	13.	1
o-Xylene	ND		ug/kg	140	12.	1
Xylene (Total)	ND		ug/kg	140	12.	1
cis-1,2-Dichloroethene	ND		ug/kg	68	9.7	1
1,2-Dichloroethene (total)	ND		ug/kg	68	9.7	1
Dibromomethane	ND		ug/kg	680	11.	1
Styrene	ND		ug/kg	140	27.	1
Dichlorodifluoromethane	ND		ug/kg	680	13.	1
Acetone	ND		ug/kg	680	70.	1
Carbon disulfide	ND		ug/kg	680	75.	1
2-Butanone	ND		ug/kg	680	18.	1
Vinyl acetate	ND		ug/kg	680	9.0	1
4-Methyl-2-pentanone	ND		ug/kg	680	17.	1
1,2,3-Trichloropropane	ND		ug/kg	680	11.	1
2-Hexanone	ND		ug/kg	680	45.	1
Bromochloromethane	ND		ug/kg	340	19.	1
2,2-Dichloropropane	ND		ug/kg	340	15.	1
1,2-Dibromoethane	ND		ug/kg	270	12.	1
1,3-Dichloropropane	ND		ug/kg	340	9.9	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	68	22.	1
Bromobenzene	ND		ug/kg	340	14.	1
n-Butylbenzene	ND		ug/kg	68	7.8	1
sec-Butylbenzene	ND		ug/kg	68	8.3	1
tert-Butylbenzene	ND		ug/kg	340	9.2	1
o-Chlorotoluene	ND		ug/kg	340	11.	1
p-Chlorotoluene	ND		ug/kg	340	9.0	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	340	27.	1
Hexachlorobutadiene	ND		ug/kg	340	16.	1
Isopropylbenzene	ND		ug/kg	68	7.1	1
p-Isopropyltoluene	ND		ug/kg	68	8.5	1
Naphthalene	ND		ug/kg	340	9.4	1
Acrylonitrile	ND		ug/kg	680	35.	1
n-Propylbenzene	ND		ug/kg	68	7.4	1
1,2,3-Trichlorobenzene	ND		ug/kg	340	10.	1
1,2,4-Trichlorobenzene	ND		ug/kg	340	12.	1
1,3,5-Trimethylbenzene	ND		ug/kg	340	9.8	1

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-04
 Client ID: SB-07 (15-17.5')
 Sample Location: 39-26 30TH ST., LIC

Date Collected: 12/30/14 10:50
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	340	9.6	1
1,4-Dioxane	ND		ug/kg	6800	980	1
1,4-Diethylbenzene	ND		ug/kg	270	11.	1
4-Ethyltoluene	ND		ug/kg	270	8.4	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	270	8.9	1
Ethyl ether	ND		ug/kg	340	18.	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	340	27.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	102		70-130

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-05
 Client ID: DUPLICATE (12-30-14)
 Sample Location: 39-26 30TH ST., LIC
 Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 01/07/15 21:21
 Analyst: MV
 Percent Solids: 79%

Date Collected: 12/30/14 10:50
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	730	81.	1
1,1-Dichloroethane	ND		ug/kg	110	6.3	1
Chloroform	ND		ug/kg	110	27.	1
Carbon tetrachloride	ND		ug/kg	73	15.	1
1,2-Dichloropropane	ND		ug/kg	260	17.	1
Dibromochloromethane	ND		ug/kg	73	11.	1
1,1,2-Trichloroethane	ND		ug/kg	110	22.	1
Tetrachloroethene	9600		ug/kg	73	10.	1
Chlorobenzene	ND		ug/kg	73	26.	1
Trichlorofluoromethane	ND		ug/kg	370	28.	1
1,2-Dichloroethane	ND		ug/kg	73	8.3	1
1,1,1-Trichloroethane	ND		ug/kg	73	8.1	1
Bromodichloromethane	ND		ug/kg	73	13.	1
trans-1,3-Dichloropropene	ND		ug/kg	73	8.8	1
cis-1,3-Dichloropropene	ND		ug/kg	73	8.6	1
1,3-Dichloropropene, Total	ND		ug/kg	73	8.6	1
1,1-Dichloropropene	ND		ug/kg	370	10.	1
Bromoform	ND		ug/kg	290	17.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	73	7.4	1
Benzene	ND		ug/kg	73	8.6	1
Toluene	ND		ug/kg	110	14.	1
Ethylbenzene	ND		ug/kg	73	9.3	1
Chloromethane	ND		ug/kg	370	22.	1
Bromomethane	ND		ug/kg	150	25.	1
Vinyl chloride	ND		ug/kg	150	8.6	1
Chloroethane	ND		ug/kg	150	23.	1
1,1-Dichloroethene	ND		ug/kg	73	19.	1
trans-1,2-Dichloroethene	ND		ug/kg	110	16.	1
Trichloroethene	ND		ug/kg	73	9.2	1
1,2-Dichlorobenzene	ND		ug/kg	370	11.	1

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-05
 Client ID: DUPLICATE (12-30-14)
 Sample Location: 39-26 30TH ST., LIC

Date Collected: 12/30/14 10:50
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	370	9.9	1
1,4-Dichlorobenzene	ND		ug/kg	370	10.	1
Methyl tert butyl ether	ND		ug/kg	150	6.2	1
p/m-Xylene	ND		ug/kg	150	14.	1
o-Xylene	ND		ug/kg	150	12.	1
Xylene (Total)	ND		ug/kg	150	12.	1
cis-1,2-Dichloroethene	ND		ug/kg	73	10.	1
1,2-Dichloroethene (total)	ND		ug/kg	73	10.	1
Dibromomethane	ND		ug/kg	730	12.	1
Styrene	ND		ug/kg	150	29.	1
Dichlorodifluoromethane	ND		ug/kg	730	14.	1
Acetone	ND		ug/kg	730	76.	1
Carbon disulfide	ND		ug/kg	730	81.	1
2-Butanone	ND		ug/kg	730	20.	1
Vinyl acetate	ND		ug/kg	730	9.7	1
4-Methyl-2-pentanone	ND		ug/kg	730	18.	1
1,2,3-Trichloropropane	ND		ug/kg	730	12.	1
2-Hexanone	ND		ug/kg	730	49.	1
Bromochloromethane	ND		ug/kg	370	20.	1
2,2-Dichloropropane	ND		ug/kg	370	16.	1
1,2-Dibromoethane	ND		ug/kg	290	13.	1
1,3-Dichloropropane	ND		ug/kg	370	11.	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	73	23.	1
Bromobenzene	ND		ug/kg	370	15.	1
n-Butylbenzene	ND		ug/kg	73	8.4	1
sec-Butylbenzene	ND		ug/kg	73	8.9	1
tert-Butylbenzene	ND		ug/kg	370	9.9	1
o-Chlorotoluene	ND		ug/kg	370	12.	1
p-Chlorotoluene	ND		ug/kg	370	9.7	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	370	29.	1
Hexachlorobutadiene	ND		ug/kg	370	17.	1
Isopropylbenzene	ND		ug/kg	73	7.6	1
p-Isopropyltoluene	ND		ug/kg	73	9.2	1
Naphthalene	ND		ug/kg	370	10.	1
Acrylonitrile	ND		ug/kg	730	38.	1
n-Propylbenzene	ND		ug/kg	73	8.0	1
1,2,3-Trichlorobenzene	ND		ug/kg	370	11.	1
1,2,4-Trichlorobenzene	ND		ug/kg	370	13.	1
1,3,5-Trimethylbenzene	ND		ug/kg	370	10.	1

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-05
 Client ID: DUPLICATE (12-30-14)
 Sample Location: 39-26 30TH ST., LIC

Date Collected: 12/30/14 10:50
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	370	10.	1
1,4-Dioxane	ND		ug/kg	7300	1000	1
1,4-Diethylbenzene	ND		ug/kg	290	12.	1
4-Ethyltoluene	ND		ug/kg	290	9.1	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	290	9.5	1
Ethyl ether	ND		ug/kg	370	19.	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	370	29.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	98		70-130

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-06
 Client ID: TRIP BLANK (12-30-14)
 Sample Location: 39-26 30TH ST., LIC
 Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 01/06/15 14:40
 Analyst: PD

Date Collected: 12/30/14 00:00
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-06
 Client ID: TRIP BLANK (12-30-14)
 Sample Location: 39-26 30TH ST., LIC

Date Collected: 12/30/14 00:00
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	1.9	J	ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-06
 Client ID: TRIP BLANK (12-30-14)
 Sample Location: 39-26 30TH ST., LIC

Date Collected: 12/30/14 00:00
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	83		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	98		70-130

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 01/06/15 10:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 06 Batch: WG753703-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
2-Chloroethylvinyl ether	ND		ug/l	10	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.33
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 01/06/15 10:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 06 Batch: WG753703-3					
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Diisopropyl Ether	ND		ug/l	2.0	0.65
Tert-Butyl Alcohol	ND		ug/l	10	0.90
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Acrolein	ND		ug/l	5.0	0.63
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 01/06/15 10:00
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 06 Batch: WG753703-3					
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Ethyl Acetate	ND		ug/l	10	0.70
Cyclohexane	ND		ug/l	10	0.27
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.5	0.70
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	41.
Freon-113	ND		ug/l	2.5	0.70
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Tetrahydrofuran	ND		ug/l	5.0	1.5
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 01/06/15 10:00
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 06 Batch: WG753703-3					
Iodomethane	ND		ug/l	5.0	5.0
Methyl cyclohexane	ND		ug/l	10	0.40

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	78		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	97		70-130

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 01/07/15 12:20
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02 Batch: WG754173-3					
Methylene chloride	ND		ug/kg	10	1.1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.15
2-Chloroethylvinyl ether	ND		ug/kg	20	0.62
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.39
1,2-Dichloroethane	ND		ug/kg	1.0	0.11
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.17
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12
1,1-Dichloropropene	ND		ug/kg	5.0	0.14
Bromoform	ND		ug/kg	4.0	0.24
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.19
Ethylbenzene	ND		ug/kg	1.0	0.13
Chloromethane	ND		ug/kg	5.0	0.29
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.12
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.26
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21

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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 01/07/15 12:20
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02 Batch: WG754173-3					
Trichloroethene	ND		ug/kg	1.0	0.12
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.15
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.14
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.14
Methyl tert butyl ether	ND		ug/kg	2.0	0.08
p/m-Xylene	ND		ug/kg	2.0	0.20
o-Xylene	ND		ug/kg	2.0	0.17
Xylene (Total)	ND		ug/kg	2.0	0.17
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14
1,2-Dichloroethene (total)	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.40
Dichlorodifluoromethane	ND		ug/kg	10	0.19
Acetone	4.0	J	ug/kg	10	1.0
Carbon disulfide	ND		ug/kg	10	1.1
2-Butanone	ND		ug/kg	10	0.27
Vinyl acetate	ND		ug/kg	10	0.13
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.16
2-Hexanone	ND		ug/kg	10	0.67
Bromochloromethane	ND		ug/kg	5.0	0.28
2,2-Dichloropropane	ND		ug/kg	5.0	0.23
1,2-Dibromoethane	ND		ug/kg	4.0	0.17
1,3-Dichloropropane	ND		ug/kg	5.0	0.14
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
n-Butylbenzene	ND		ug/kg	1.0	0.11
sec-Butylbenzene	ND		ug/kg	1.0	0.12
tert-Butylbenzene	ND		ug/kg	5.0	0.14

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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
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Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02 Batch: WG754173-3					
o-Chlorotoluene	ND		ug/kg	5.0	0.16
p-Chlorotoluene	ND		ug/kg	5.0	0.13
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.40
Hexachlorobutadiene	ND		ug/kg	5.0	0.23
Isopropylbenzene	ND		ug/kg	1.0	0.10
p-Isopropyltoluene	ND		ug/kg	1.0	0.12
Naphthalene	ND		ug/kg	5.0	0.14
Acrylonitrile	ND		ug/kg	10	0.51
Isopropyl Ether	ND		ug/kg	4.0	0.14
tert-Butyl Alcohol	ND		ug/kg	60	2.9
n-Propylbenzene	ND		ug/kg	1.0	0.11
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.15
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.18
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.14
Methyl Acetate	ND		ug/kg	20	0.27
Ethyl Acetate	ND		ug/kg	20	0.92
Acrolein	ND		ug/kg	25	8.1
Cyclohexane	ND		ug/kg	20	0.15
1,4-Dioxane	ND		ug/kg	100	14.
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	20	0.27
1,4-Diethylbenzene	ND		ug/kg	4.0	0.16
4-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Tetrahydrofuran	ND		ug/kg	20	1.0
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.39
Methyl cyclohexane	ND		ug/kg	4.0	0.15
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.0	0.12

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**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8260C
 Analytical Date: 01/07/15 12:20
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02 Batch: WG754173-3					
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.0	0.10

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	101		70-130

Project Name: BRIDGE CLEANERS
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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
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Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01,03-05 Batch: WG754174-3					
Methylene chloride	ND		ug/kg	500	55.
1,1-Dichloroethane	ND		ug/kg	75	4.3
Chloroform	ND		ug/kg	75	18.
Carbon tetrachloride	ND		ug/kg	50	10.
1,2-Dichloropropane	ND		ug/kg	180	11.
Dibromochloromethane	ND		ug/kg	50	7.7
2-Chloroethylvinyl ether	ND		ug/kg	1000	31.
1,1,2-Trichloroethane	ND		ug/kg	75	15.
Tetrachloroethene	ND		ug/kg	50	7.0
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	19.
1,2-Dichloroethane	ND		ug/kg	50	5.7
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Bromodichloromethane	ND		ug/kg	50	8.7
trans-1,3-Dichloropropene	ND		ug/kg	50	6.0
cis-1,3-Dichloropropene	ND		ug/kg	50	5.9
1,3-Dichloropropene, Total	ND		ug/kg	50	5.9
1,1-Dichloropropene	ND		ug/kg	250	7.1
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	50	5.0
Benzene	ND		ug/kg	50	5.9
Toluene	ND		ug/kg	75	9.7
Ethylbenzene	ND		ug/kg	50	6.4
Chloromethane	ND		ug/kg	250	15.
Bromomethane	ND		ug/kg	100	17.
Vinyl chloride	ND		ug/kg	100	5.9
Chloroethane	ND		ug/kg	100	16.
1,1-Dichloroethene	ND		ug/kg	50	13.
trans-1,2-Dichloroethene	ND		ug/kg	75	11.

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Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01,03-05 Batch: WG754174-3					
Trichloroethene	ND		ug/kg	50	6.2
1,2-Dichlorobenzene	ND		ug/kg	250	7.7
1,3-Dichlorobenzene	ND		ug/kg	250	6.8
1,4-Dichlorobenzene	ND		ug/kg	250	6.9
Methyl tert butyl ether	ND		ug/kg	100	4.2
p/m-Xylene	ND		ug/kg	100	9.9
o-Xylene	ND		ug/kg	100	8.6
Xylene (Total)	ND		ug/kg	100	8.6
cis-1,2-Dichloroethene	ND		ug/kg	50	7.1
1,2-Dichloroethene (total)	ND		ug/kg	50	7.1
Dibromomethane	ND		ug/kg	500	8.2
Styrene	ND		ug/kg	100	20.
Dichlorodifluoromethane	ND		ug/kg	500	9.5
Acetone	200	J	ug/kg	500	52.
Carbon disulfide	ND		ug/kg	500	55.
2-Butanone	ND		ug/kg	500	14.
Vinyl acetate	ND		ug/kg	500	6.6
4-Methyl-2-pentanone	ND		ug/kg	500	12.
1,2,3-Trichloropropane	ND		ug/kg	500	8.1
2-Hexanone	ND		ug/kg	500	33.
Bromochloromethane	ND		ug/kg	250	14.
2,2-Dichloropropane	ND		ug/kg	250	11.
1,2-Dibromoethane	ND		ug/kg	200	8.7
1,3-Dichloropropane	ND		ug/kg	250	7.3
1,1,1,2-Tetrachloroethane	ND		ug/kg	50	16.
Bromobenzene	ND		ug/kg	250	10.
n-Butylbenzene	ND		ug/kg	50	5.7
sec-Butylbenzene	ND		ug/kg	50	6.1
tert-Butylbenzene	ND		ug/kg	250	6.8

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Batch Quality Control

Analytical Method: 1,8260C
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Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01,03-05 Batch: WG754174-3					
o-Chlorotoluene	ND		ug/kg	250	8.0
p-Chlorotoluene	ND		ug/kg	250	6.6
1,2-Dibromo-3-chloropropane	ND		ug/kg	250	20.
Hexachlorobutadiene	ND		ug/kg	250	11.
Isopropylbenzene	ND		ug/kg	50	5.2
p-Isopropyltoluene	ND		ug/kg	50	6.2
Naphthalene	ND		ug/kg	250	6.9
Acrylonitrile	ND		ug/kg	500	26.
Isopropyl Ether	ND		ug/kg	200	7.0
tert-Butyl Alcohol	ND		ug/kg	3000	150
n-Propylbenzene	ND		ug/kg	50	5.5
1,2,3-Trichlorobenzene	ND		ug/kg	250	7.4
1,2,4-Trichlorobenzene	ND		ug/kg	250	9.1
1,3,5-Trimethylbenzene	ND		ug/kg	250	7.2
1,2,4-Trimethylbenzene	ND		ug/kg	250	7.1
Methyl Acetate	ND		ug/kg	1000	14.
Ethyl Acetate	ND		ug/kg	1000	46.
Acrolein	ND		ug/kg	1200	400
Cyclohexane	ND		ug/kg	1000	7.3
1,4-Dioxane	ND		ug/kg	5000	720
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	1000	14.
1,4-Diethylbenzene	ND		ug/kg	200	8.0
4-Ethyltoluene	ND		ug/kg	200	6.2
1,2,4,5-Tetramethylbenzene	ND		ug/kg	200	6.5
Tetrahydrofuran	ND		ug/kg	1000	50.
Ethyl ether	ND		ug/kg	250	13.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	20.
Methyl cyclohexane	ND		ug/kg	200	7.7
Ethyl-Tert-Butyl-Ether	ND		ug/kg	200	5.8

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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
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Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01,03-05 Batch: WG754174-3					
Tertiary-Amyl Methyl Ether	ND		ug/kg	200	4.8

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis

Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG753703-1 WG753703-2								
Methylene chloride	107		104		70-130	3		20
1,1-Dichloroethane	112		108		70-130	4		20
Chloroform	106		103		70-130	3		20
Carbon tetrachloride	99		100		63-132	1		20
1,2-Dichloropropane	111		107		70-130	4		20
Dibromochloromethane	94		91		63-130	3		20
1,1,2-Trichloroethane	98		92		70-130	6		20
Tetrachloroethene	116		112		70-130	4		20
Chlorobenzene	115		107		75-130	7		20
Trichlorofluoromethane	94		96		62-150	2		20
1,2-Dichloroethane	90		86		70-130	5		20
1,1,1-Trichloroethane	103		103		67-130	0		20
Bromodichloromethane	97		95		67-130	2		20
trans-1,3-Dichloropropene	94		90		70-130	4		20
cis-1,3-Dichloropropene	97		92		70-130	5		20
1,1-Dichloropropene	107		105		70-130	2		20
Bromoform	95		92		54-136	3		20
1,1,2,2-Tetrachloroethane	97		93		67-130	4		20
Benzene	111		109		70-130	2		20
Toluene	117		112		70-130	4		20
Ethylbenzene	114		108		70-130	5		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

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Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG753703-1 WG753703-2								
Chloromethane	103		102		64-130	1		20
Bromomethane	186	Q	157	Q	39-139	17		20
Vinyl chloride	97		96		55-140	1		20
Chloroethane	110		103		55-138	7		20
1,1-Dichloroethene	96		96		61-145	0		20
trans-1,2-Dichloroethene	112		112		70-130	0		20
Trichloroethene	108		107		70-130	1		20
1,2-Dichlorobenzene	106		102		70-130	4		20
1,3-Dichlorobenzene	116		109		70-130	6		20
1,4-Dichlorobenzene	110		106		70-130	4		20
Methyl tert butyl ether	79		77		63-130	3		20
p/m-Xylene	115		109		70-130	5		20
o-Xylene	109		105		70-130	4		20
cis-1,2-Dichloroethene	110		107		70-130	3		20
Dibromomethane	92		87		70-130	6		20
1,2,3-Trichloropropane	93		92		64-130	1		20
Acrylonitrile	90		84		70-130	7		20
Diisopropyl Ether	103		100		70-130	3		20
Tert-Butyl Alcohol	82		82		70-130	0		20
Styrene	105		101		70-130	4		20
Dichlorodifluoromethane	83		85		36-147	2		20

Lab Control Sample Analysis

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG753703-1 WG753703-2								
Acetone	40	Q	38	Q	58-148	5		20
Carbon disulfide	88		87		51-130	1		20
2-Butanone	66		64		63-138	3		20
Vinyl acetate	77		73		70-130	5		20
4-Methyl-2-pentanone	80		70		59-130	13		20
2-Hexanone	61		56	Q	57-130	9		20
Acrolein	94		91		40-160	3		20
Bromochloromethane	108		106		70-130	2		20
2,2-Dichloropropane	107		106		63-133	1		20
1,2-Dibromoethane	89		87		70-130	2		20
1,3-Dichloropropane	95		93		70-130	2		20
1,1,1,2-Tetrachloroethane	106		105		64-130	1		20
Bromobenzene	116		112		70-130	4		20
n-Butylbenzene	115		102		53-136	12		20
sec-Butylbenzene	119		112		70-130	6		20
tert-Butylbenzene	121		114		70-130	6		20
o-Chlorotoluene	120		118		70-130	2		20
p-Chlorotoluene	118		111		70-130	6		20
1,2-Dibromo-3-chloropropane	88		88		41-144	0		20
Hexachlorobutadiene	99		89		63-130	11		20
Isopropylbenzene	124		119		70-130	4		20

Lab Control Sample Analysis

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG753703-1 WG753703-2								
p-Isopropyltoluene	117		108		70-130	8		20
Naphthalene	61	Q	68	Q	70-130	11		20
n-Propylbenzene	120		116		69-130	3		20
1,2,3-Trichlorobenzene	76		80		70-130	5		20
1,2,4-Trichlorobenzene	72		74		70-130	3		20
1,3,5-Trimethylbenzene	120		114		64-130	5		20
1,2,4-Trimethylbenzene	121		114		70-130	6		20
Methyl Acetate	83		79		70-130	5		20
Ethyl Acetate	74		69	Q	70-130	7		20
Cyclohexane	112		112		70-130	0		20
Ethyl-Tert-Butyl-Ether	98		95		70-130	3		20
Tertiary-Amyl Methyl Ether	90		88		66-130	2		20
1,4-Dioxane	75		73		56-162	3		20
Freon-113	101		102		70-130	1		20
p-Diethylbenzene	114		104		70-130	9		20
p-Ethyltoluene	122		116		70-130	5		20
1,2,4,5-Tetramethylbenzene	107		102		70-130	5		20
Ethyl ether	90		88		59-134	2		20
trans-1,4-Dichloro-2-butene	84		76		70-130	10		20
Iodomethane	85		106		70-130	22	Q	20
Methyl cyclohexane	113		113		70-130	0		20

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Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG753703-1 WG753703-2

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
1,2-Dichloroethane-d4	77		77		70-130
Toluene-d8	102		103		70-130
4-Bromofluorobenzene	101		103		70-130
Dibromofluoromethane	94		97		70-130

Lab Control Sample Analysis

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Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG754173-1 WG754173-2								
Methylene chloride	95		98		70-130	3		30
1,1-Dichloroethane	86		92		70-130	7		30
Chloroform	89		91		70-130	2		30
Carbon tetrachloride	83		92		70-130	10		30
1,2-Dichloropropane	90		94		70-130	4		30
Dibromochloromethane	97		98		70-130	1		30
2-Chloroethylvinyl ether	100		99		70-130	1		30
1,1,2-Trichloroethane	98		99		70-130	1		30
Tetrachloroethene	82		90		70-130	9		30
Chlorobenzene	92		96		70-130	4		30
Trichlorofluoromethane	107		123		70-139	14		30
1,2-Dichloroethane	95		96		70-130	1		30
1,1,1-Trichloroethane	83		92		70-130	10		30
Bromodichloromethane	92		95		70-130	3		30
trans-1,3-Dichloropropene	92		93		70-130	1		30
cis-1,3-Dichloropropene	90		92		70-130	2		30
1,1-Dichloropropene	81		91		70-130	12		30
Bromoform	97		98		70-130	1		30
1,1,2,2-Tetrachloroethane	96		94		70-130	2		30
Benzene	88		93		70-130	6		30
Toluene	87		95		70-130	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG754173-1 WG754173-2								
Ethylbenzene	86		93		70-130	8		30
Chloromethane	80		89		52-130	11		30
Bromomethane	132		142		57-147	7		30
Vinyl chloride	100		114		67-130	13		30
Chloroethane	119		134		50-151	12		30
1,1-Dichloroethene	82		92		65-135	11		30
trans-1,2-Dichloroethene	84		92		70-130	9		30
Trichloroethene	86		92		70-130	7		30
1,2-Dichlorobenzene	95		97		70-130	2		30
1,3-Dichlorobenzene	93		96		70-130	3		30
1,4-Dichlorobenzene	94		98		70-130	4		30
Methyl tert butyl ether	93		93		66-130	0		30
p/m-Xylene	90		97		70-130	7		30
o-Xylene	91		96		70-130	5		30
cis-1,2-Dichloroethene	91		96		70-130	5		30
Dibromomethane	99		98		70-130	1		30
Styrene	95		100		70-130	5		30
Dichlorodifluoromethane	77		88		30-146	13		30
Acetone	110		106		54-140	4		30
Carbon disulfide	79		87		59-130	10		30
2-Butanone	113		110		70-130	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG754173-1 WG754173-2								
Vinyl acetate	91		91		70-130	0		30
4-Methyl-2-pentanone	92		91		70-130	1		30
1,2,3-Trichloropropane	97		94		68-130	3		30
2-Hexanone	80		80		70-130	0		30
Bromochloromethane	100		100		70-130	0		30
2,2-Dichloropropane	77		86		70-130	11		30
1,2-Dibromoethane	98		101		70-130	3		30
1,3-Dichloropropane	95		97		69-130	2		30
1,1,1,2-Tetrachloroethane	92		95		70-130	3		30
Bromobenzene	91		92		70-130	1		30
n-Butylbenzene	86		95		70-130	10		30
sec-Butylbenzene	85		94		70-130	10		30
tert-Butylbenzene	85		92		70-130	8		30
o-Chlorotoluene	103		108		70-130	5		30
p-Chlorotoluene	88		92		70-130	4		30
1,2-Dibromo-3-chloropropane	96		92		68-130	4		30
Hexachlorobutadiene	72		81		67-130	12		30
Isopropylbenzene	85		91		70-130	7		30
p-Isopropyltoluene	86		93		70-130	8		30
Naphthalene	92		92		70-130	0		30
Acrylonitrile	102		98		70-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG754173-1 WG754173-2								
Isopropyl Ether	89		92		66-130	3		30
tert-Butyl Alcohol	83		83		70-130	0		30
n-Propylbenzene	85		92		70-130	8		30
1,2,3-Trichlorobenzene	88		89		70-130	1		30
1,2,4-Trichlorobenzene	87		90		70-130	3		30
1,3,5-Trimethylbenzene	86		91		70-130	6		30
1,2,4-Trimethylbenzene	88		92		70-130	4		30
Methyl Acetate	96		96		51-146	0		30
Ethyl Acetate	93		82		70-130	13		30
Acrolein	93		91		70-130	2		30
Cyclohexane	78		90		59-142	14		30
1,4-Dioxane	97		92		65-136	5		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	84		95		50-139	12		30
1,4-Diethylbenzene	86		93		70-130	8		30
4-Ethyltoluene	88		94		70-130	7		30
1,2,4,5-Tetramethylbenzene	86		90		70-130	5		30
Tetrahydrofuran	87		85		66-130	2		30
Ethyl ether	132	Q	135	Q	67-130	2		30
trans-1,4-Dichloro-2-butene	91		89		70-130	2		30
Methyl cyclohexane	78		90		70-130	14		30
Ethyl-Tert-Butyl-Ether	91		93		70-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG754173-1 WG754173-2								
Tertiary-Amyl Methyl Ether	94		94		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		97		70-130
Toluene-d8	100		100		70-130
4-Bromofluorobenzene	92		91		70-130
Dibromofluoromethane	102		102		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01,03-05 Batch: WG754174-1 WG754174-2								
Methylene chloride	95		98		70-130	3		30
1,1-Dichloroethane	86		92		70-130	7		30
Chloroform	89		91		70-130	2		30
Carbon tetrachloride	83		92		70-130	10		30
1,2-Dichloropropane	90		94		70-130	4		30
Dibromochloromethane	97		98		70-130	1		30
2-Chloroethylvinyl ether	100		99		70-130	1		30
1,1,2-Trichloroethane	98		99		70-130	1		30
Tetrachloroethene	82		90		70-130	9		30
Chlorobenzene	92		96		70-130	4		30
Trichlorofluoromethane	107		123		70-139	14		30
1,2-Dichloroethane	95		96		70-130	1		30
1,1,1-Trichloroethane	83		92		70-130	10		30
Bromodichloromethane	92		95		70-130	3		30
trans-1,3-Dichloropropene	92		93		70-130	1		30
cis-1,3-Dichloropropene	90		92		70-130	2		30
1,1-Dichloropropene	81		91		70-130	12		30
Bromoform	97		98		70-130	1		30
1,1,2,2-Tetrachloroethane	96		94		70-130	2		30
Benzene	88		93		70-130	6		30
Toluene	87		95		70-130	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01,03-05 Batch: WG754174-1 WG754174-2								
Ethylbenzene	86		93		70-130	8		30
Chloromethane	80		89		52-130	11		30
Bromomethane	132		142		57-147	7		30
Vinyl chloride	100		114		67-130	13		30
Chloroethane	119		134		50-151	12		30
1,1-Dichloroethene	82		92		65-135	11		30
trans-1,2-Dichloroethene	84		92		70-130	9		30
Trichloroethene	86		92		70-130	7		30
1,2-Dichlorobenzene	95		97		70-130	2		30
1,3-Dichlorobenzene	93		96		70-130	3		30
1,4-Dichlorobenzene	94		98		70-130	4		30
Methyl tert butyl ether	93		93		66-130	0		30
p/m-Xylene	90		97		70-130	7		30
o-Xylene	91		96		70-130	5		30
cis-1,2-Dichloroethene	91		96		70-130	5		30
Dibromomethane	99		98		70-130	1		30
Styrene	95		100		70-130	5		30
Dichlorodifluoromethane	77		88		30-146	13		30
Acetone	110		106		54-140	4		30
Carbon disulfide	79		87		59-130	10		30
2-Butanone	113		110		70-130	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01,03-05 Batch: WG754174-1 WG754174-2								
Vinyl acetate	91		91		70-130	0		30
4-Methyl-2-pentanone	92		91		70-130	1		30
1,2,3-Trichloropropane	97		94		68-130	3		30
2-Hexanone	80		80		70-130	0		30
Bromochloromethane	100		100		70-130	0		30
2,2-Dichloropropane	77		86		70-130	11		30
1,2-Dibromoethane	98		101		70-130	3		30
1,3-Dichloropropane	95		97		69-130	2		30
1,1,1,2-Tetrachloroethane	92		95		70-130	3		30
Bromobenzene	91		92		70-130	1		30
n-Butylbenzene	86		95		70-130	10		30
sec-Butylbenzene	85		94		70-130	10		30
tert-Butylbenzene	85		92		70-130	8		30
o-Chlorotoluene	103		108		70-130	5		30
p-Chlorotoluene	88		92		70-130	4		30
1,2-Dibromo-3-chloropropane	96		92		68-130	4		30
Hexachlorobutadiene	72		81		67-130	12		30
Isopropylbenzene	85		91		70-130	7		30
p-Isopropyltoluene	86		93		70-130	8		30
Naphthalene	92		92		70-130	0		30
Acrylonitrile	102		98		70-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01,03-05 Batch: WG754174-1 WG754174-2								
Isopropyl Ether	89		92		66-130	3		30
tert-Butyl Alcohol	83		83		70-130	0		30
n-Propylbenzene	85		92		70-130	8		30
1,2,3-Trichlorobenzene	88		89		70-130	1		30
1,2,4-Trichlorobenzene	87		90		70-130	3		30
1,3,5-Trimethylbenzene	86		91		70-130	6		30
1,2,4-Trimethylbenzene	88		92		70-130	4		30
Methyl Acetate	96		96		51-146	0		30
Ethyl Acetate	93		82		70-130	13		30
Acrolein	93		91		70-130	2		30
Cyclohexane	78		90		59-142	14		30
1,4-Dioxane	97		92		65-136	5		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	84		95		50-139	12		30
1,4-Diethylbenzene	86		93		70-130	8		30
4-Ethyltoluene	88		94		70-130	7		30
1,2,4,5-Tetramethylbenzene	86		90		70-130	5		30
Tetrahydrofuran	87		85		66-130	2		30
Ethyl ether	132	Q	135	Q	67-130	2		30
trans-1,4-Dichloro-2-butene	91		89		70-130	2		30
Methyl cyclohexane	78		90		70-130	14		30
Ethyl-Tert-Butyl-Ether	91		93		70-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01,03-05 Batch: WG754174-1 WG754174-2								
Tertiary-Amyl Methyl Ether	94		94		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		97		70-130
Toluene-d8	100		100		70-130
4-Bromofluorobenzene	92		91		70-130
Dibromofluoromethane	102		102		70-130

INORGANICS & MISCELLANEOUS

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-01
 Client ID: SB-06 (11.5-12')
 Sample Location: 39-26 30TH ST., LIC
 Matrix: Soil

Date Collected: 12/30/14 11:30
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	95.5		%	0.100	NA	1	-	12/31/14 22:08	30,2540G	RT



Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-02
 Client ID: SB-06 (17.5-18.5')
 Sample Location: 39-26 30TH ST., LIC
 Matrix: Soil

Date Collected: 12/30/14 11:30
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.4		%	0.100	NA	1	-	12/31/14 22:08	30,2540G	RT



Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-03

Date Collected: 12/30/14 10:45

Client ID: SB-07 (0-4')

Date Received: 12/30/14

Sample Location: 39-26 30TH ST., LIC

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88.0		%	0.100	NA	1	-	12/31/14 22:08	30,2540G	RT



Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-04
 Client ID: SB-07 (15-17.5')
 Sample Location: 39-26 30TH ST., LIC
 Matrix: Soil

Date Collected: 12/30/14 10:50
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.0		%	0.100	NA	1	-	12/31/14 22:08	30,2540G	RT



Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1431287-05
 Client ID: DUPLICATE (12-30-14)
 Sample Location: 39-26 30TH ST., LIC
 Matrix: Soil

Date Collected: 12/30/14 10:50
 Date Received: 12/30/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.8		%	0.100	NA	1	-	12/31/14 22:08	30,2540G	RT



Lab Duplicate Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Project Number: PE075

Lab Number: L1431287

Report Date: 01/08/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG753012-1 QC Sample: L1431286-03 Client ID: DUP Sample						
Solids, Total	85.3	85.8	%	1		20

Project Name: BRIDGE CLEANERS

Lab Number: L1431287

Project Number: PE075

Report Date: 01/08/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 12/31/2014 01:43

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1431287-01A	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-01B	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-01C	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-01D	Plastic 2oz unpreserved for TS	A	N/A	3.8	Y	Absent	TS(7)
L1431287-01X	Vial MeOH preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-01Y	Vial Water preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-01Z	Vial Water preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-02A	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-02B	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-02C	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-02D	Plastic 2oz unpreserved for TS	A	N/A	3.8	Y	Absent	TS(7)
L1431287-02X	Vial MeOH preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-02Y	Vial Water preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-02Z	Vial Water preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-03A	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-03B	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-03C	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-03D	Plastic 2oz unpreserved for TS	A	N/A	3.8	Y	Absent	TS(7)
L1431287-03X	Vial MeOH preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-03Y	Vial Water preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-03Z	Vial Water preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-04A	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-04B	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-04C	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-04D	Plastic 2oz unpreserved for TS	A	N/A	3.8	Y	Absent	TS(7)
L1431287-04X	Vial MeOH preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-04Y	Vial Water preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)

*Values in parentheses indicate holding time in days

Project Name: BRIDGE CLEANERS**Project Number:** PE075**Lab Number:** L1431287**Report Date:** 01/08/15**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1431287-04Z	Vial Water preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-05A	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-05B	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-05C	5 gram Encore Sampler	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(2)
L1431287-05D	Plastic 2oz unpreserved for TS	A	N/A	3.8	Y	Absent	TS(7)
L1431287-05X	Vial MeOH preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-05Y	Vial Water preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-05Z	Vial Water preserved split	A	N/A	3.8	Y	Absent	NYTCL-8260HLW(14)
L1431287-06A	Vial HCl preserved	A	N/A	3.8	Y	Absent	NYTCL-8260(14)
L1431287-06B	Vial HCl preserved	A	N/A	3.8	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: DU Report with 'J' Qualifiers



Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

Data Qualifiers

- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Project Name: BRIDGE CLEANERS
Project Number: PE075

Lab Number: L1431287
Report Date: 01/08/15

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility

EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 625: 4-Chloroaniline, 4-Methylphenol.

SM4500: Soil: Total Phosphorus, TKN, NO₂, NO₃.

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

EPA 332: Perchlorate.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water

EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



CHAIN OF CUSTODY

PAGE ____ OF ____

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3286

Project Information

Project Name: ~~PE075~~ BRIDGE CLEANERS
Project Location: 39-26 30TH ST., LIC

Date Rec'd in Lab: 12/30/14

ALPHA Job #: 61431287

Report Information - Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables

Billing Information

Same as Client info PO #:

Client Information

Client: INTEGRAL CONSULTING INC.
Address: 61 BROADWAY SUITE 1601
NEW YORK, NY
Phone: 212-440-6715
Fax: SMCTAVBY@INTEGRAL-CORP.COM

Project #: PE075
Project Manager: KETH BRODOUK
ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved!)
Date Due: 01/08/15 Time:

Email: KBRODOUK@ " " "

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Regulatory Requirements/Report Limits

State /Fed Program Criteria

ANALYSIS

TZL VOC'S VIA 8260X

SAMPLE HANDLING

Filtration _____

Done

Not needed

Lab to do Preservation

Lab to do

(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials							Sample Specific Comments	
		Date	Time										
31087-01	SB-06 (11.5-12')	12/30	11:30	S	SM	X						CAT B DELIVERABLES	4
02	SB-06 (17.5-18.5')		11:30			X							4
03	SB-07 (0-4')		10:45			X							4
04	SB-07 (15-17.5')		10:50			X							4
05	DUPLICATE (12-30-14)		10:50			X							4
06	TRIP BLANK (12-30-14) n/a	n/a	n/a	AQ	-	X							2

Container Type E

Preservative A

Relinquished By:	Date/Time	Received By:	Date/Time
	12/30 - 14:25		12-30-14 1425
	12-30-14		12-30-14 1400
	12-30-14 0930		12/30/14 0930

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

APPENDIX C

PILOT TESTING BORING LOGS



LOG OF BOREHOLE

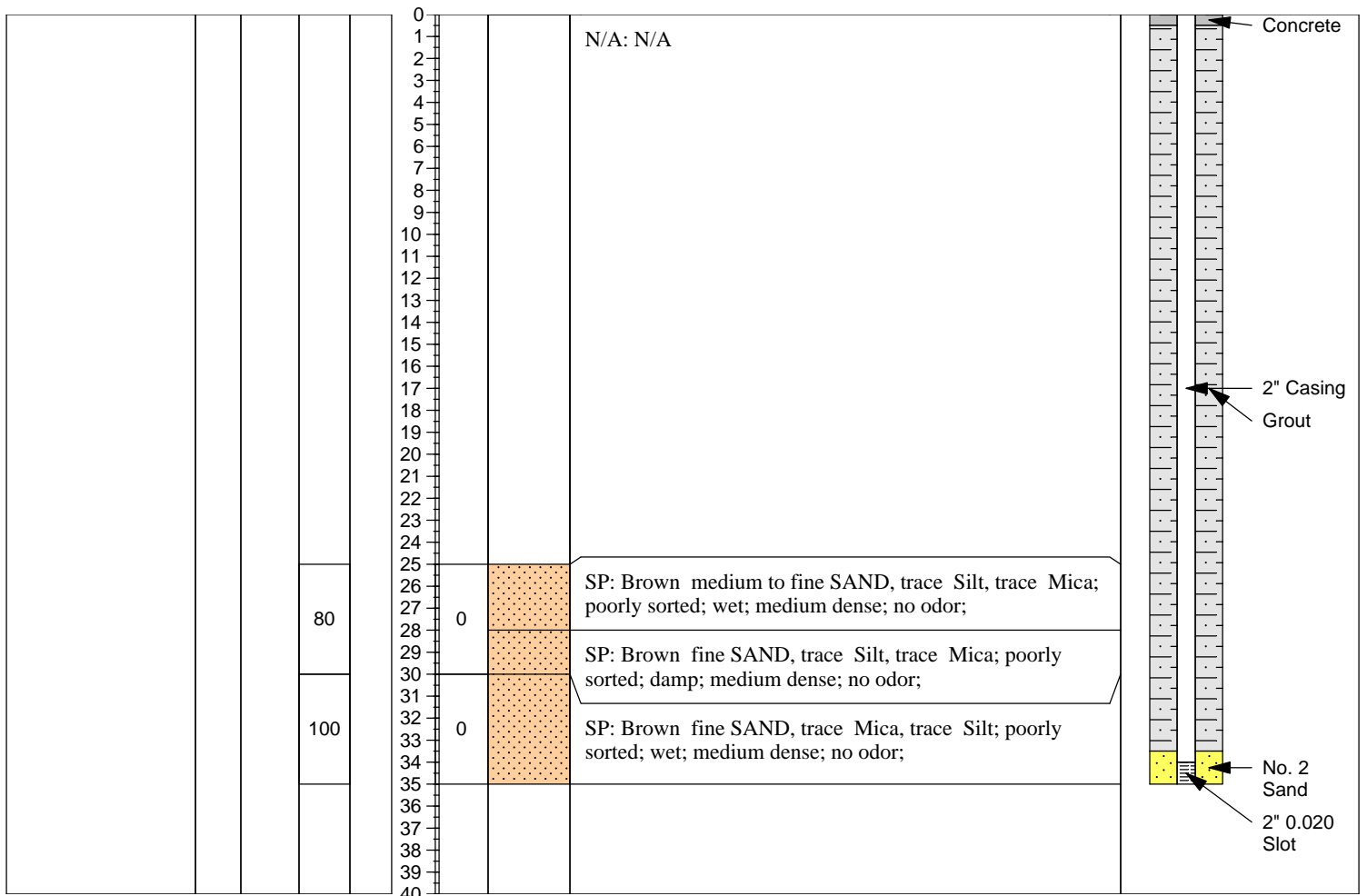
AI-01

PROJECT NUMBER: **PE075**
 PROJECT NAME: **Bridge Cleaners**
 LOCATION: **39-26 30th Street, LIC, NY**
 GEOLOGIST: **SGM**
 DATE BEGUN: **8/8/2015** DATE COMPLETED: **8/8/2015**
 BORING START **8:00** BORING COMPLETE: **12:10**

TOTAL DEPTH: **35**
 GROUND SURFACE ELEVATION: **N/A**

STATIC WATER LEVEL (BLS)	
Depth (ft)	N/A
Time	N/A
Date	N/A

Sample ID	Time	Tag	% Recovery	Sheen	Depth (Feet)	PID (ppm)	Lithology USCS	DESCRIPTION	WELL INSTALLATION
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DRILLING CONTRACTOR: **AARCO** NOTES:

DRILLING METHOD: **Hydraulic Hammer**

DRILLING EQUIPMENT: **Geoprobe 6610 DT**

SAMPLING EQUIPMENT: **5' Macro Core**

LATITUDE: **N/A**

LONGITUDE: **N/A**



LOG OF BOREHOLE

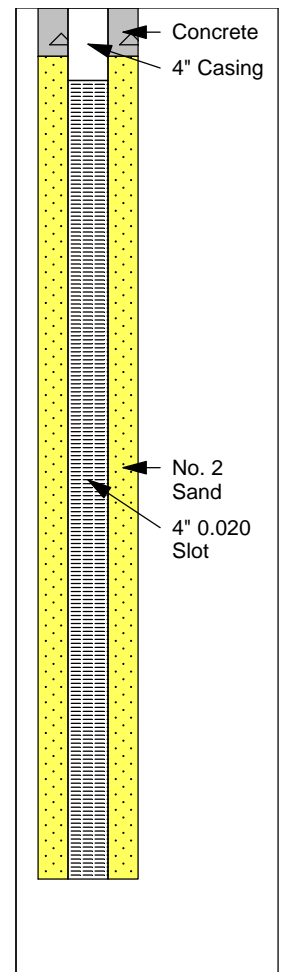
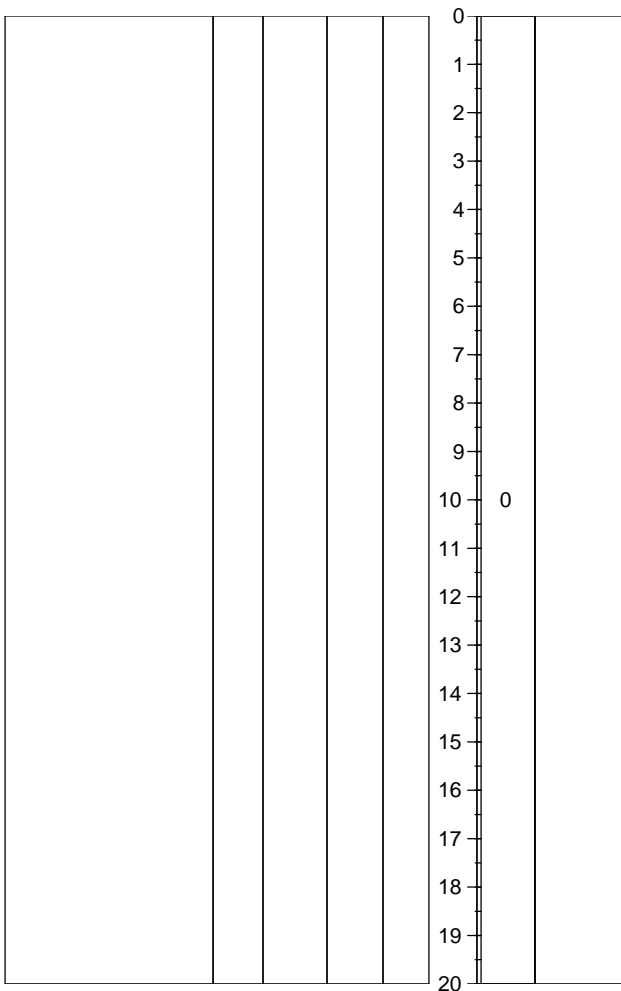
RW-01

PROJECT NUMBER: **PE075**
 PROJECT NAME: **Bridge Cleaners**
 LOCATION: **39-26 30th Street, LIC, NY**
 GEOLOGIST: **SGM**
 DATE BEGUN: **8/8/2015** DATE COMPLETED: **8/8/2015**
 BORING START **13:15** BORING COMPLETE: **15:30**

TOTAL DEPTH: **20**
 GROUND SURFACE ELEVATION: **N/A**

STATIC WATER LEVEL (BLS)	
Depth (ft)	N/A
Time	N/A
Date	N/A

Sample ID	Time	Tag	% Recovery	Sheen	Depth (Feet)	PID (ppm)	Lithology USCS	DESCRIPTION	WELL INSTALLATION



DRILLING CONTRACTOR: **AARCO**
 DRILLING METHOD: **Hydraulic Hammer**
 DRILLING EQUIPMENT: **Geoprobe 6610 DT**
 SAMPLING EQUIPMENT: **5' Macro Core**
 LATITUDE: **N/A**
 LONGITUDE: **N/A**

NOTES:



LOG OF BOREHOLE

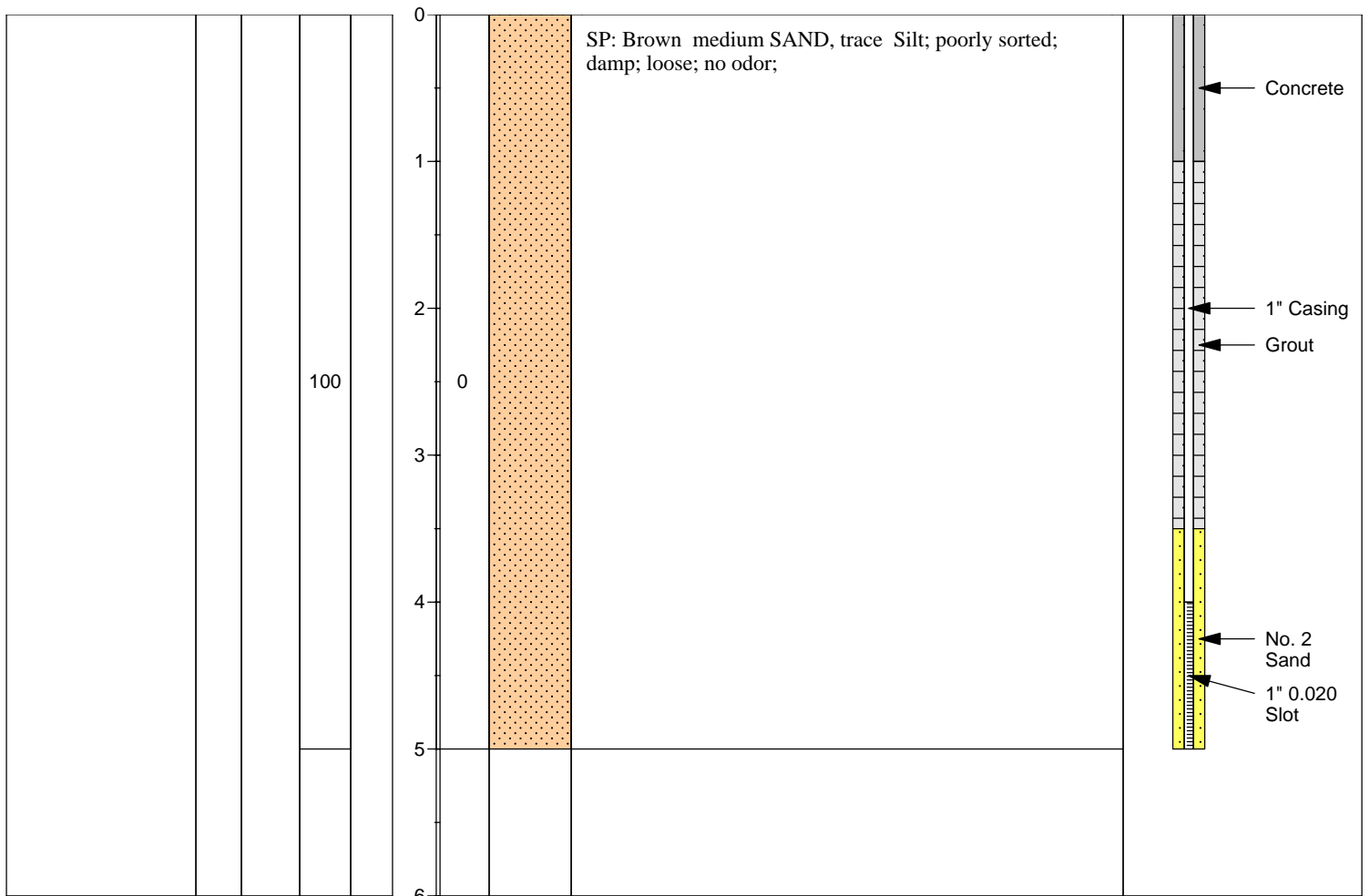
VM-01

PROJECT NUMBER: **PE075**
 PROJECT NAME: **Bridge Cleaners**
 LOCATION: **39-26 30th Street, LIC, NY**
 GEOLOGIST: **SGM**
 DATE BEGUN: **8/8/2015** DATE COMPLETED: **8/8/2015**
 BORING START **12:45** BORING COMPLETE: **13:15**

TOTAL DEPTH: **5**
 GROUND SURFACE ELEVATION: **N/A**

STATIC WATER LEVEL (BLS)	
Depth (ft)	N/A
Time	N/A
Date	N/A

Sample ID	Time	Tag	% Recovery	Sheen	Depth (Feet)	PID (ppm)	Lithology USCS	DESCRIPTION	WELL INSTALLATION
-----------	------	-----	------------	-------	--------------	-----------	----------------	-------------	-------------------



DRILLING CONTRACTOR: **AARCO** NOTES:

DRILLING METHOD: **3" Hand Auger**

DRILLING EQUIPMENT: **Hand Auger**

SAMPLING EQUIPMENT: **Grab**

LATITUDE: **N/A**

LONGITUDE: **N/A**



LOG OF BOREHOLE

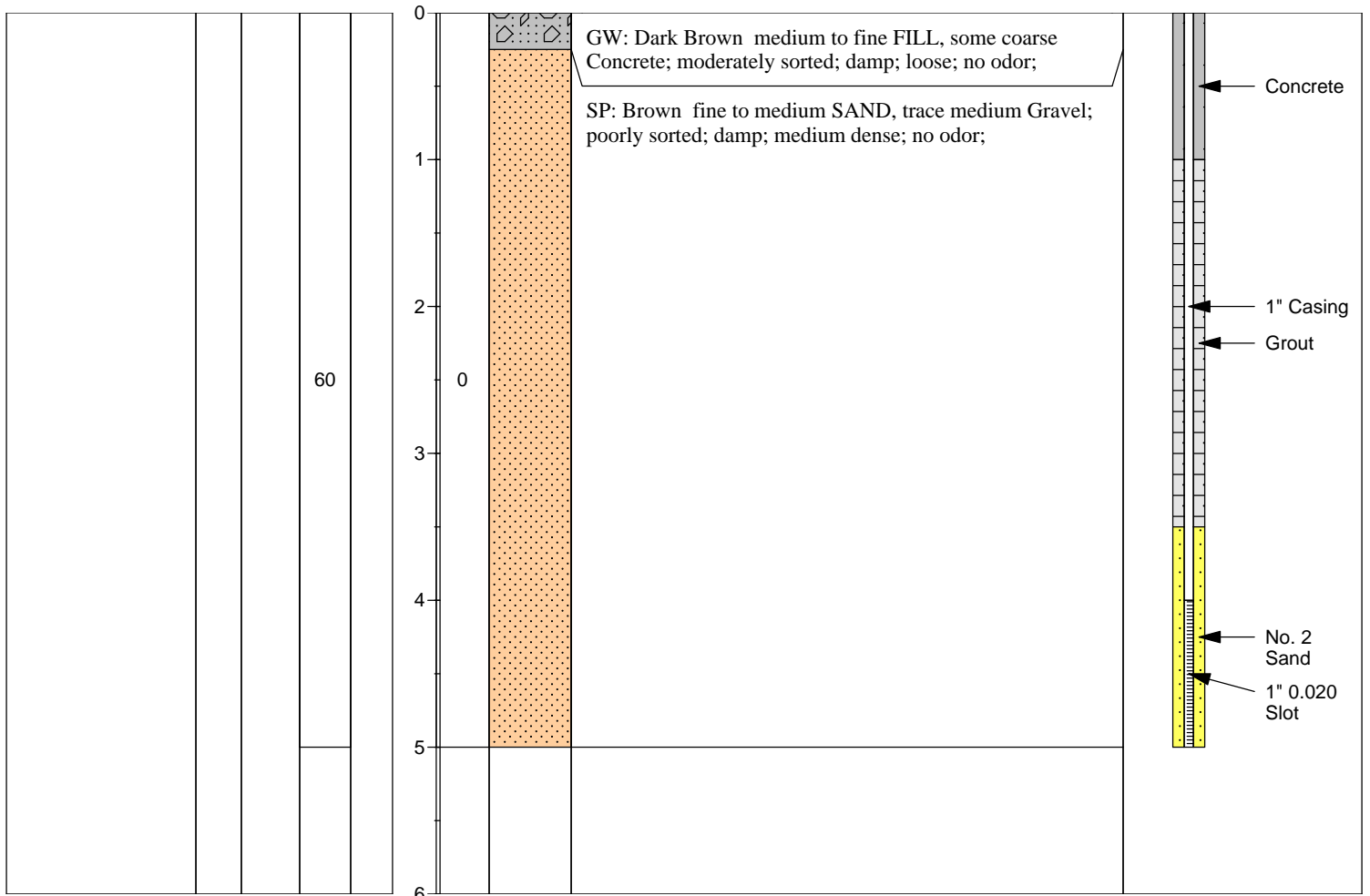
VM-02

PROJECT NUMBER: **PE075**
 PROJECT NAME: **Bridge Cleaners**
 LOCATION: **39-26 30th Street, LIC, NY**
 GEOLOGIST: **SGM**
 DATE BEGUN: **8/8/2015** DATE COMPLETED: **8/8/2015**
 BORING START **16:25** BORING COMPLETE: **16:35**

TOTAL DEPTH: **5**
 GROUND SURFACE ELEVATION: **N/A**

STATIC WATER LEVEL (BLS)	
Depth (ft)	N/A
Time	N/A
Date	N/A

Sample ID	Time	Tag	% Recovery	Sheen	Depth (Feet)	PID (ppm)	Lithology USCS	DESCRIPTION	WELL INSTALLATION
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DRILLING CONTRACTOR: **AARCO** NOTES:
 DRILLING METHOD: **Hydraulic Hammer**
 DRILLING EQUIPMENT: **Geoprobe 6610 DT**
 SAMPLING EQUIPMENT: **5' Macro Core**
 LATITUDE: **N/A**
 LONGITUDE: **N/A**



LOG OF BOREHOLE

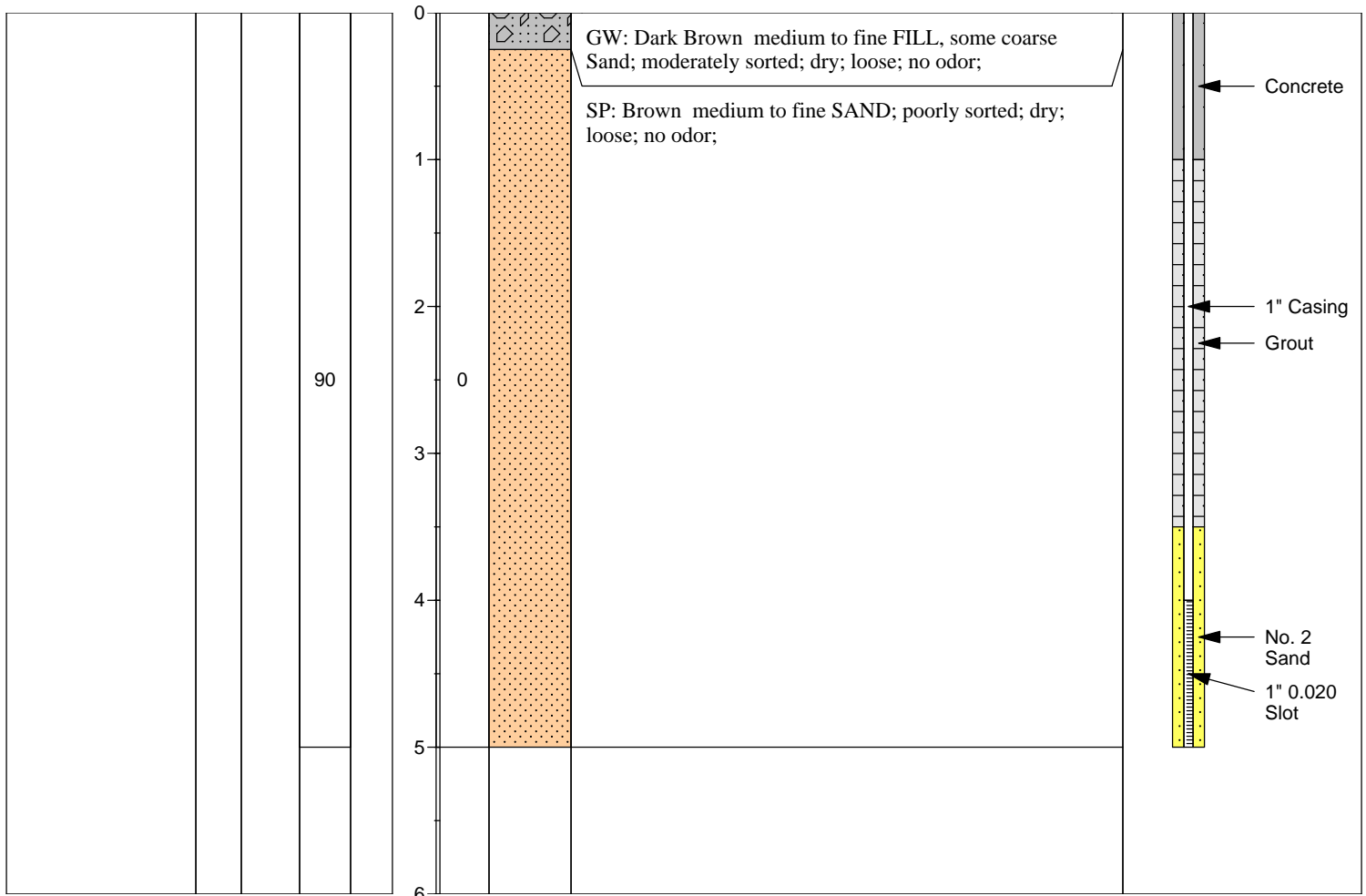
VM-03

PROJECT NUMBER: **PE075**
 PROJECT NAME: **Bridge Cleaners**
 LOCATION: **39-26 30th Street, LIC, NY**
 GEOLOGIST: **SGM**
 DATE BEGUN: **8/8/2015** DATE COMPLETED: **8/8/2015**
 BORING START **17:20** BORING COMPLETE: **17:30**

TOTAL DEPTH: **5**
 GROUND SURFACE ELEVATION: **N/A**

STATIC WATER LEVEL (BLS)	
Depth (ft)	N/A
Time	N/A
Date	N/A

Sample ID	Time	Tag	% Recovery	Sheen	Depth (Feet)	PID (ppm)	Lithology USCS	DESCRIPTION	WELL INSTALLATION
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DRILLING CONTRACTOR: **AARCO** NOTES:

DRILLING METHOD: **Hydraulic Hammer**

DRILLING EQUIPMENT: **Geoprobe 6610 DT**

SAMPLING EQUIPMENT: **5' Macro Core**

LATITUDE: **N/A**

LONGITUDE: **N/A**



LOG OF BOREHOLE

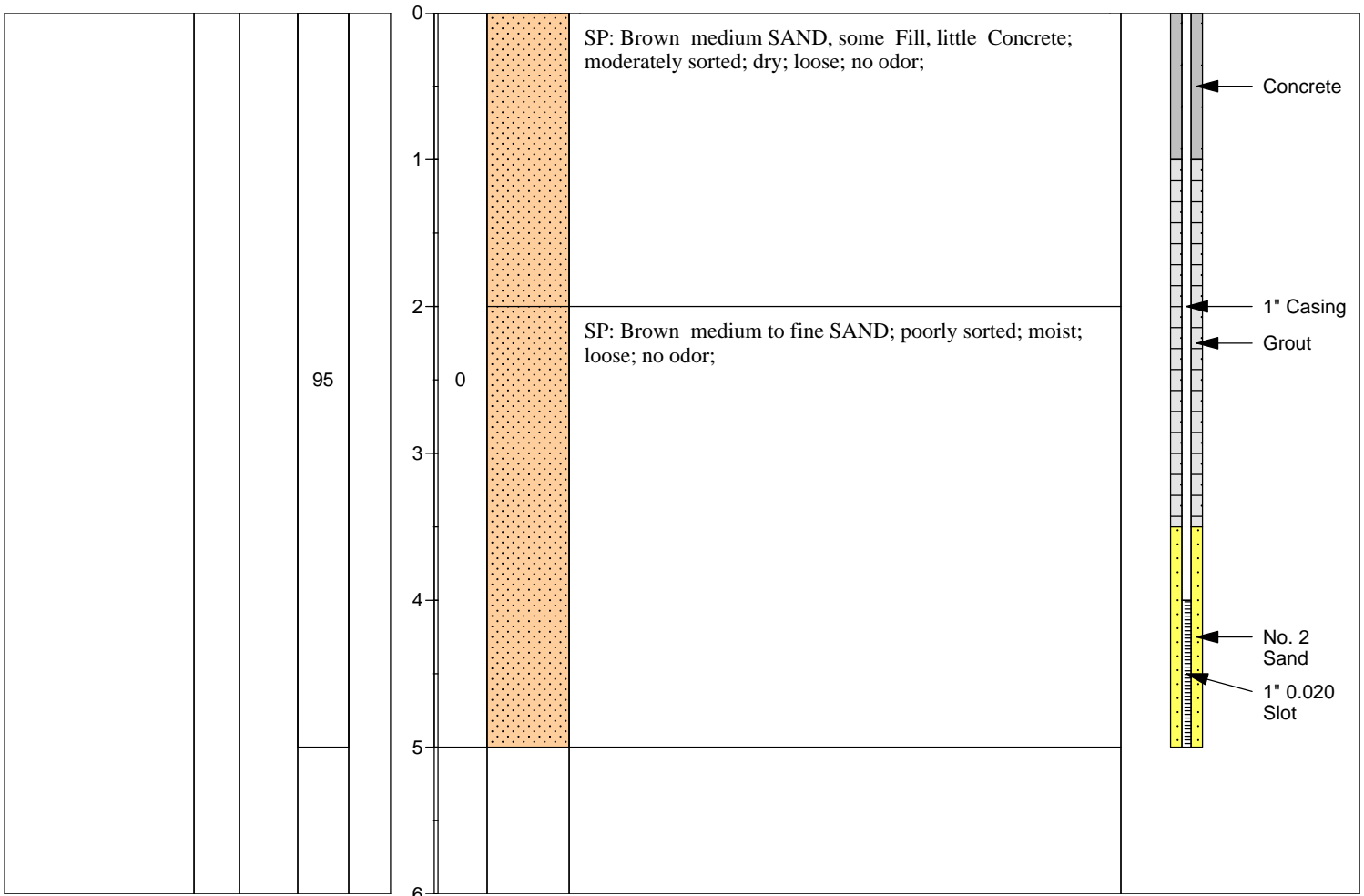
VM-04

PROJECT NUMBER: **PE075**
 PROJECT NAME: **Bridge Cleaners**
 LOCATION: **39-26 30th Street, LIC, NY**
 GEOLOGIST: **SGM**
 DATE BEGUN: **8/8/2015** DATE COMPLETED: **8/8/2015**
 BORING START **12:55** BORING COMPLETE: **13:05**

TOTAL DEPTH: **5**
 GROUND SURFACE ELEVATION: **N/A**

STATIC WATER LEVEL (BLS)	
Depth (ft)	N/A
Time	N/A
Date	N/A

Sample ID	Time	Tag	% Recovery	Sheen	Depth (Feet)	PID (ppm)	Lithology USCS	DESCRIPTION	WELL INSTALLATION
-----------	------	-----	------------	-------	--------------	-----------	----------------	-------------	-------------------



DRILLING CONTRACTOR: **AARCO** NOTES:

DRILLING METHOD: **Hydraulic Hammer**

DRILLING EQUIPMENT: **Geoprobe 6610 DT**

SAMPLING EQUIPMENT: **5' Macro Core**

LATITUDE: **N/A**

LONGITUDE: **N/A**



LOG OF BOREHOLE

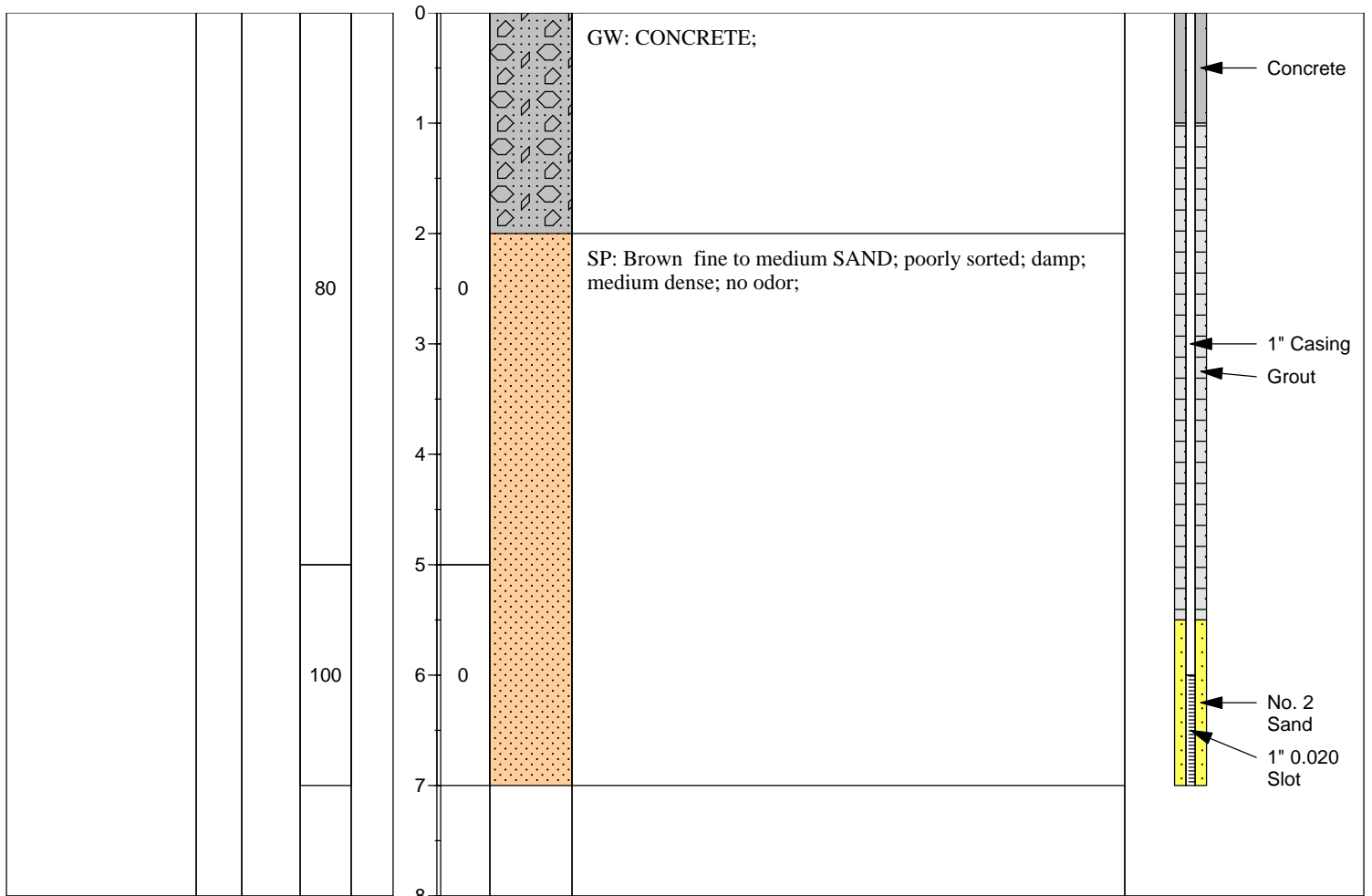
VM-05

PROJECT NUMBER: **PE075**
 PROJECT NAME: **Bridge Cleaners**
 LOCATION: **39-26 30th Street, LIC, NY**
 GEOLOGIST: **SGM**
 DATE BEGUN: **8/8/2015** DATE COMPLETED: **8/8/2015**
 BORING START **15:40** BORING COMPLETE: **16:00**

TOTAL DEPTH: **7**
 GROUND SURFACE ELEVATION: **N/A**

STATIC WATER LEVEL (BLS)	
Depth (ft)	N/A
Time	N/A
Date	N/A

Sample ID	Time	Tag	% Recovery	Sheen	Depth (Feet)	PID (ppm)	Lithology USCS	DESCRIPTION	WELL INSTALLATION
-----------	------	-----	------------	-------	--------------	-----------	----------------	-------------	-------------------



DRILLING CONTRACTOR: **AARCO** NOTES:
 DRILLING METHOD: **Hydraulic Hammer**
 DRILLING EQUIPMENT: **Geoprobe 6610 DT**
 SAMPLING EQUIPMENT: **5' Macro Core**
 LATITUDE: **N/A**
 LONGITUDE: **N/A**



LOG OF BOREHOLE

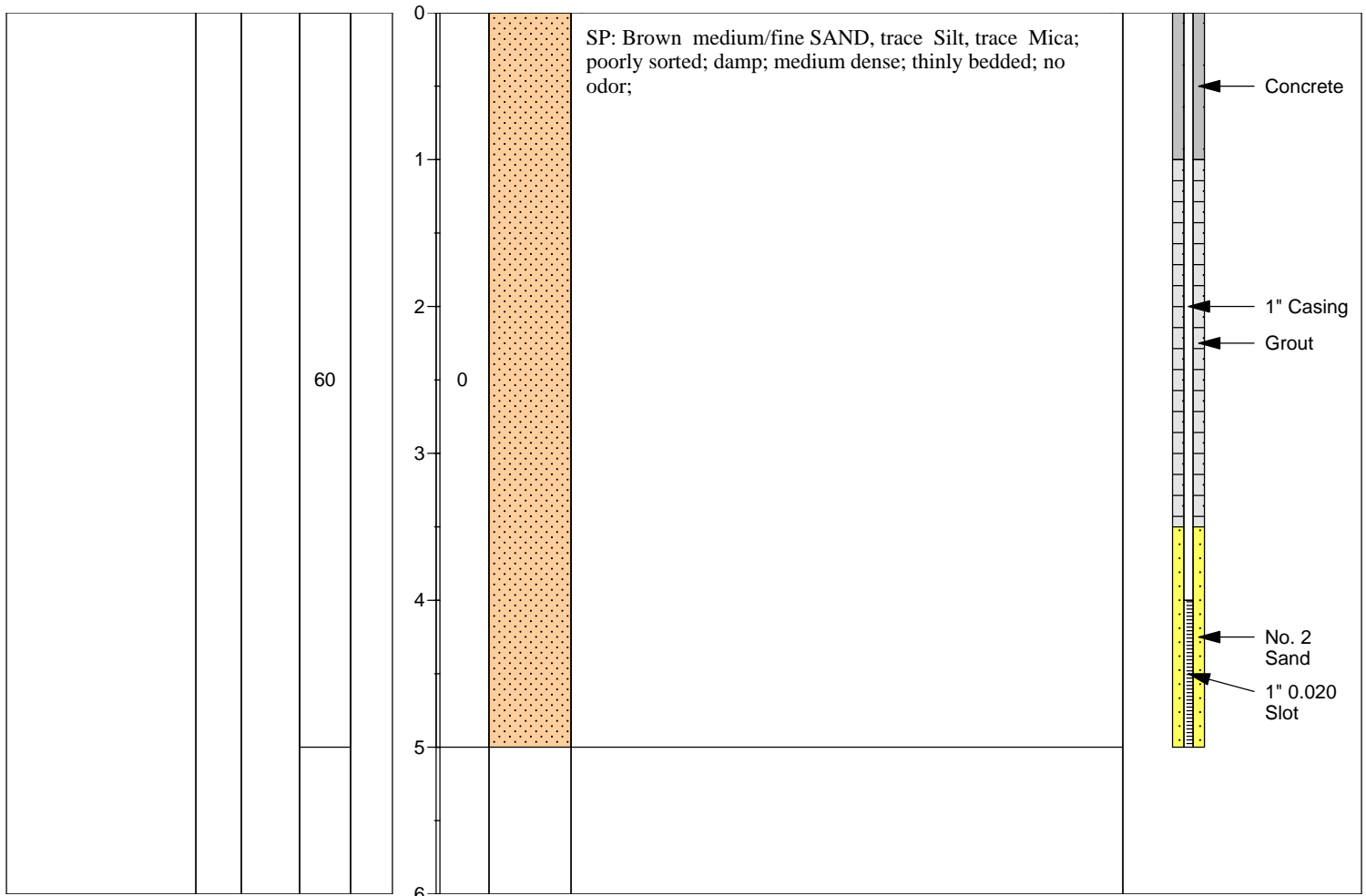
VM-06

PROJECT NUMBER: **PE075**
 PROJECT NAME: **Bridge Cleaners**
 LOCATION: **39-26 30th Street, LIC, NY**
 GEOLOGIST: **SGM**
 DATE BEGUN: **8/8/2015** DATE COMPLETED: **8/8/2015**
 BORING START **12:30** BORING COMPLETE: **12:40**

TOTAL DEPTH: **5**
 GROUND SURFACE ELEVATION: **N/A**

STATIC WATER LEVEL (BLS)	
Depth (ft)	N/A
Time	N/A
Date	N/A

Sample ID	Time	Tag	% Recovery	Sheen	Depth (Feet)	PID (ppm)	Lithology USCS	DESCRIPTION	WELL INSTALLATION
-----------	------	-----	------------	-------	--------------	-----------	----------------	-------------	-------------------



DRILLING CONTRACTOR: **AARCO** NOTES:

DRILLING METHOD: **Hydraulic Hammer**

DRILLING EQUIPMENT: **Geoprobe 6610 DT**

SAMPLING EQUIPMENT: **5' Macro Core**

LATITUDE: **N/A**

LONGITUDE: **N/A**



LOG OF BOREHOLE

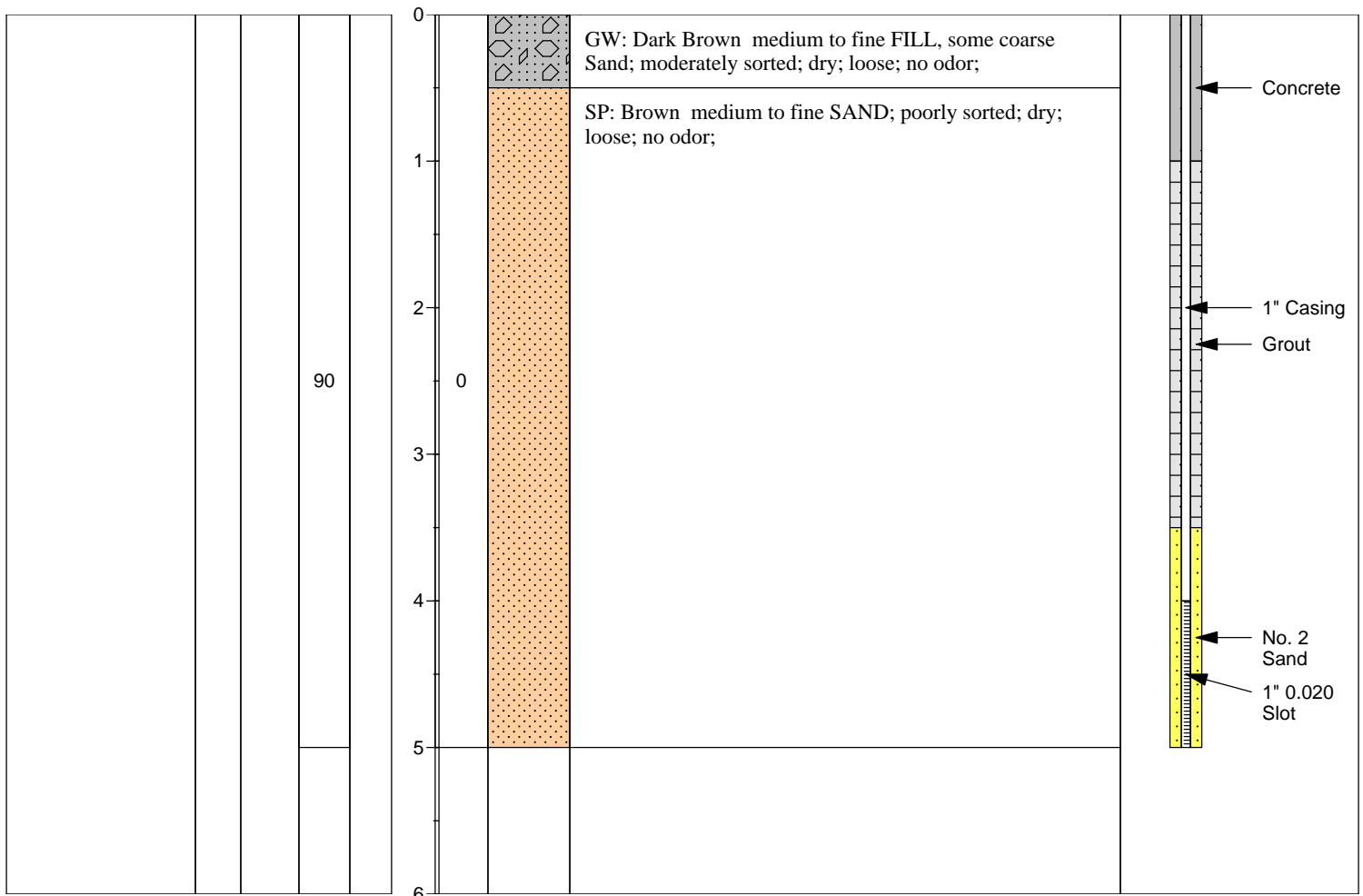
VM-07

PROJECT NUMBER: **PE075**
 PROJECT NAME: **Bridge Cleaners**
 LOCATION: **39-26 30th Street, LIC, NY**
 GEOLOGIST: **SGM**
 DATE BEGUN: **8/8/2015** DATE COMPLETED: **8/8/2015**
 BORING START **17:05** BORING COMPLETE: **17:15**

TOTAL DEPTH: **5**
 GROUND SURFACE ELEVATION: **N/A**

STATIC WATER LEVEL (BLS)	
Depth (ft)	N/A
Time	N/A
Date	N/A

Sample ID	Time	Tag	% Recovery	Sheen	Depth (Feet)	PID (ppm)	Lithology USCS	DESCRIPTION	WELL INSTALLATION
-----------	------	-----	------------	-------	--------------	-----------	----------------	-------------	-------------------



DRILLING CONTRACTOR: **AARCO** NOTES:
 DRILLING METHOD: **Hydraulic Hammer**
 DRILLING EQUIPMENT: **Geoprobe 6610 DT**
 SAMPLING EQUIPMENT: **5' Macro Core**
 LATITUDE: **N/A**
 LONGITUDE: **N/A**



LOG OF BOREHOLE

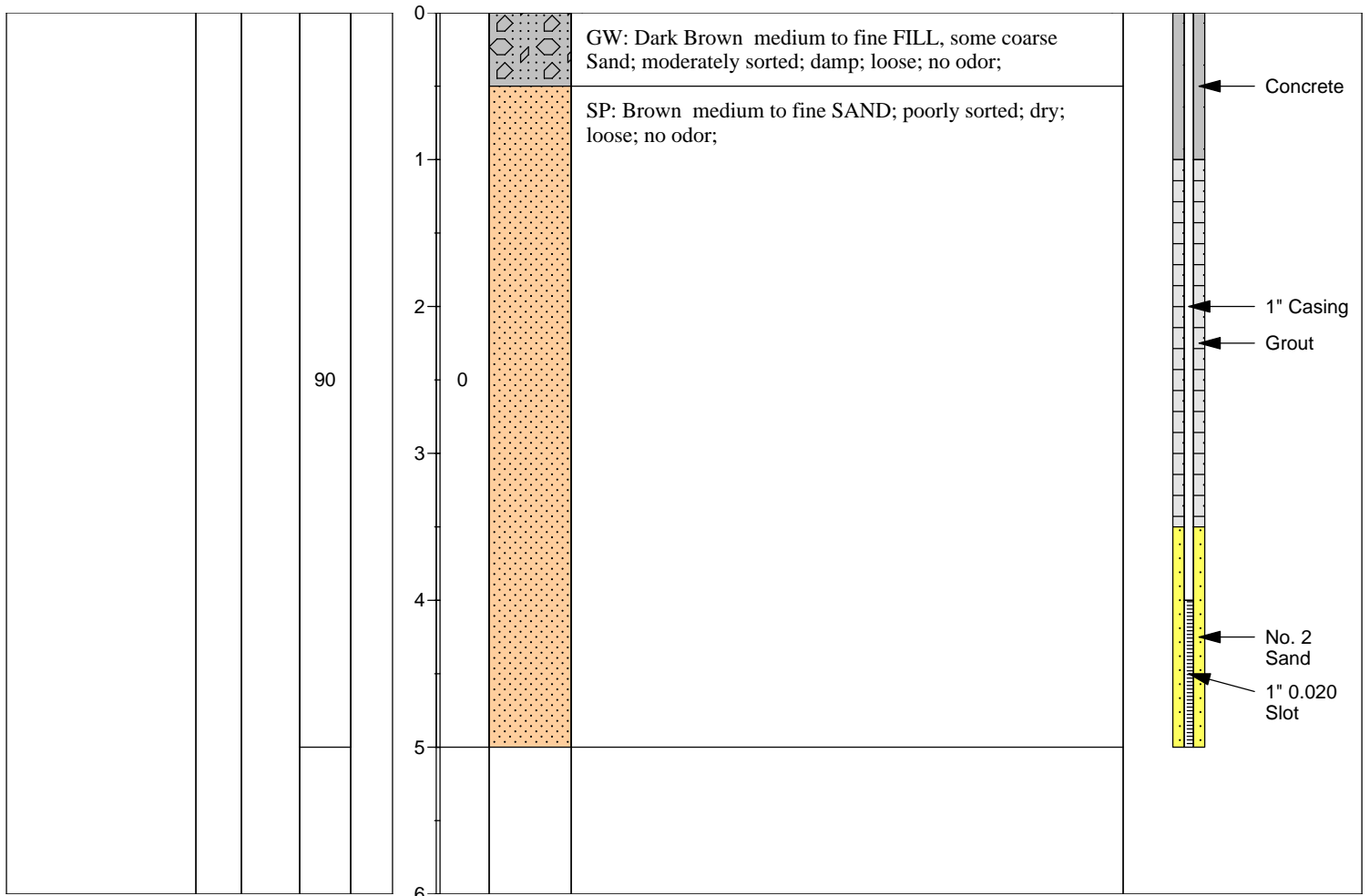
VM-08

PROJECT NUMBER: **PE075**
 PROJECT NAME: **Bridge Cleaners**
 LOCATION: **39-26 30th Street, LIC, NY**
 GEOLOGIST: **SGM**
 DATE BEGUN: **8/8/2015** DATE COMPLETED: **8/8/2015**
 BORING START **16:45** BORING COMPLETE: **17:55**

TOTAL DEPTH: **5**
 GROUND SURFACE ELEVATION: **N/A**

STATIC WATER LEVEL (BLS)	
Depth (ft)	N/A
Time	N/A
Date	N/A

Sample ID	Time	Tag	% Recovery	Sheen	Depth (Feet)	PID (ppm)	Lithology USCS	DESCRIPTION	WELL INSTALLATION
-----------	------	-----	------------	-------	--------------	-----------	----------------	-------------	-------------------



DRILLING CONTRACTOR: **AARCO** NOTES:

DRILLING METHOD: **Hydraulic Hammer**

DRILLING EQUIPMENT: **Geoprobe 6610 DT**

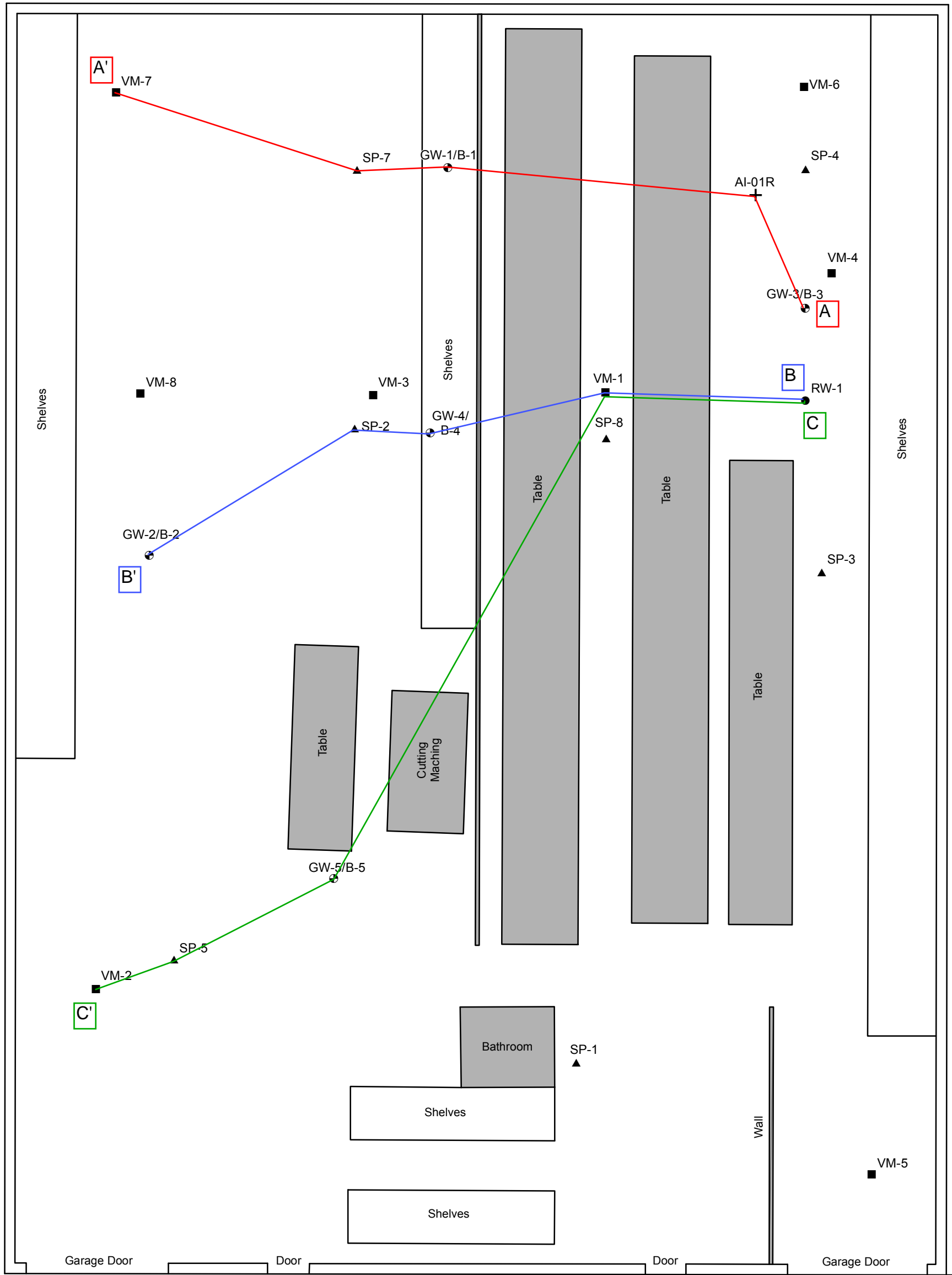
SAMPLING EQUIPMENT: **5' Macro Core**

LATITUDE: **N/A**

LONGITUDE: **N/A**

APPENDIX D

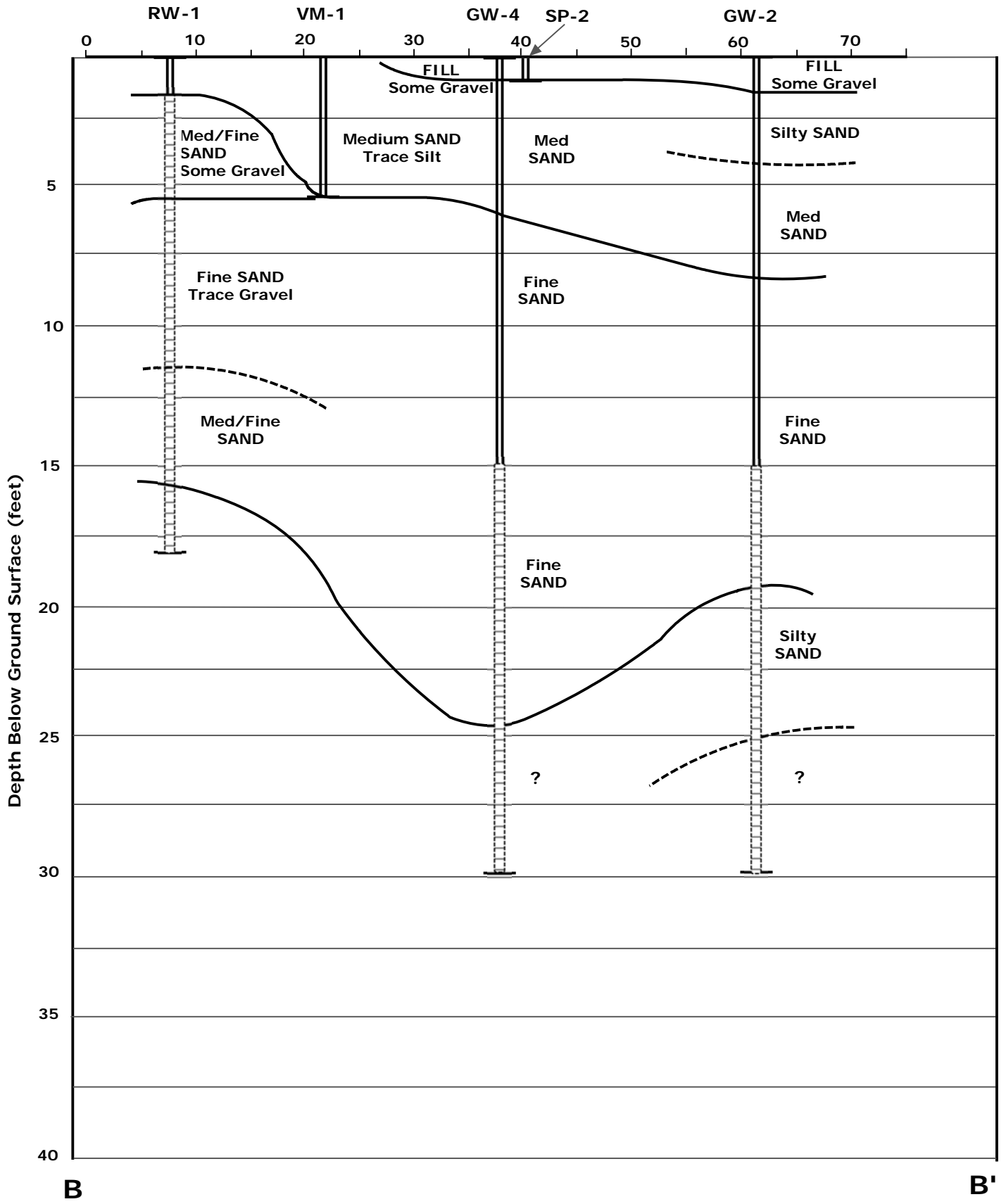
CROSS-SECTIONS



●	Vapor Extraction Well
⊕	Groundwater Monitoring Well/Soil Boring
+	Air Injection Well
■	Vacuum Monitoring Point
▲	Soil Vapor Point

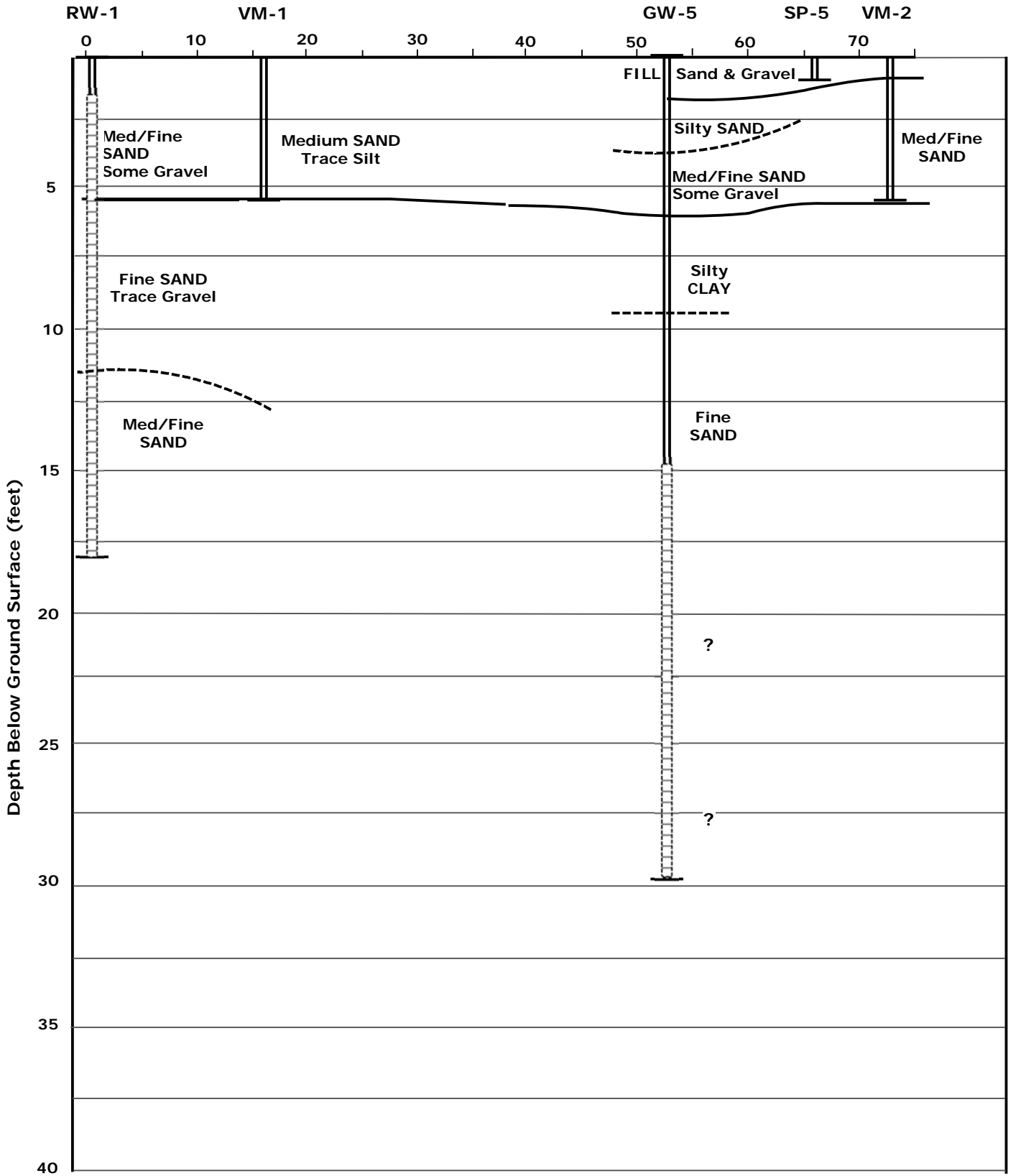
0 5 10
Feet

Figure D1.
Cross-Section Layout
39-26 30th St Long
Island City, NY



B

B'



C

C'

APPENDIX E

PILOT TESTING: SLUG TEST CALCULATIONS

Bouwer & Rice Slug Test Method

$$K = \frac{r_c^2 \cdot \ln(R_e/r_w)}{2L_e} \cdot \frac{1}{t} \cdot \ln\left(\frac{y_0}{y_t}\right)$$

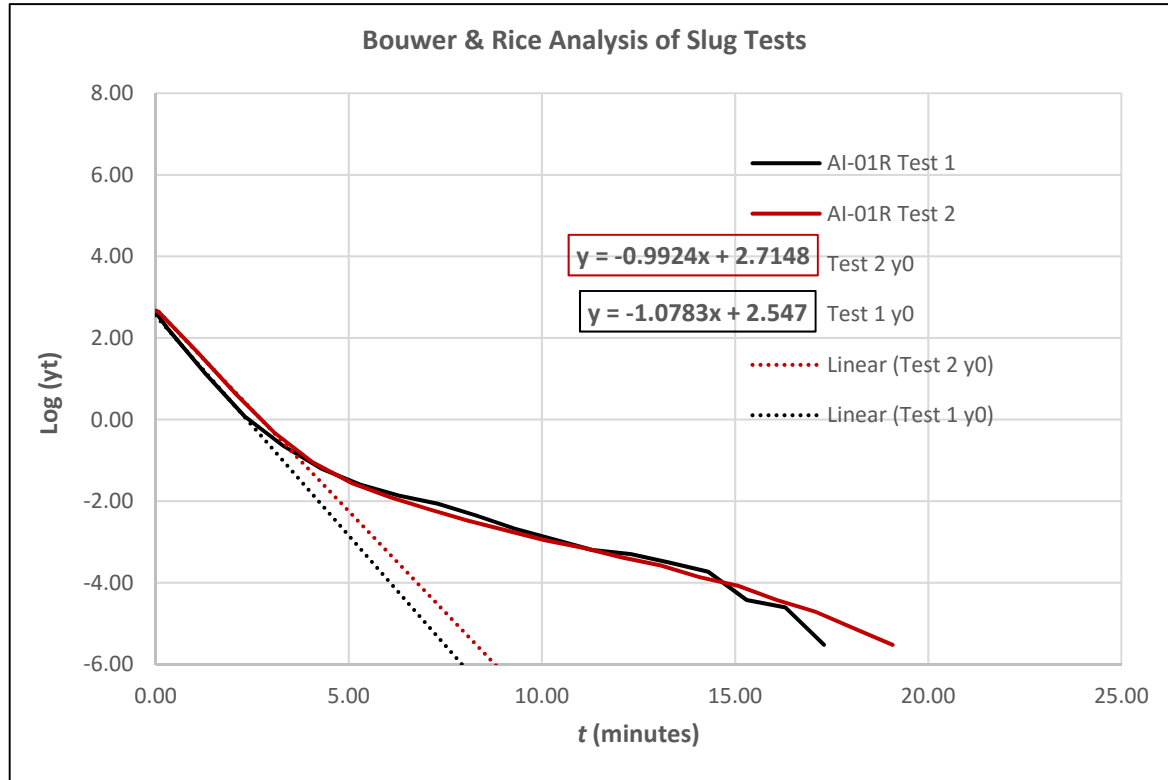
L_e = 1 Length of screened portion of well
 Aquifer Thickness
 $b = H =$ 40
 Static Water Level = 40.0
 Transducer Static = 9.94

DTW = 20.2
 DTB = 30.0
 L_w = 9.8

L_w = Water column length in well
 K = Hydraulic Conductivity
 r_c^2 = Radius of the casing (squared)
 R_e = Effective radial distance over which y is dissipated
 r_w = Radial distance to undisturbed portion of aquifer from center line
 y_0 = y at time zero
 y_t = y at time t = difference between level in well verses static water level outside well

Zero Adjust Factor	Elapse Time (minutes)		Transducer Data		y_t		Test 1 y_0	Test 2 y_0
	0.70	0.923					Ln(y_t)	
	AI-1 Test 1	AI-1 Test 2	AI-01R Test 1	AI-1 Test 2	AI-1 Test 1	AI-1 Test 2	AI-1 Test 1	AI-01R Test 2
	0.00	0.00	23.92	24.44	13.978	14.499	2.64	2.67
	0.30	0.08	19.33	23.94	9.394	14.001	2.24	2.64
	1.30	1.08	12.98	15.19	3.041	5.253	1.11	1.66
	2.30	2.08	11.03	11.81	1.087	1.868	0.08	0.62
	3.30	3.08	10.47	10.66	0.527	0.723	-0.64	-0.32
	4.30	4.08	10.24	10.29	0.299	0.349	-1.21	-1.05
	5.30	5.08	10.14	10.15	0.203	0.211	-1.59	-1.56
	6.30	6.08	10.10	10.09	0.155	0.149	-1.86	-1.90
	7.30	7.08	10.07	10.05	0.127	0.111	-2.06	-2.20
	8.30	8.08	10.04	10.02	0.095	0.084	-2.35	-2.48
	9.30	9.08	10.01	10.01	0.069	0.066	-2.67	-2.72
	10.30	10.08	9.99	9.99	0.053	0.052	-2.94	-2.96
	11.30	11.08	9.98	9.98	0.041	0.043	-3.19	-3.15
	12.30	12.08	9.98	9.97	0.037	0.034	-3.30	-3.38
	13.30	13.08	9.97	9.97	0.030	0.028	-3.51	-3.58
	14.30	14.08	9.96	9.96	0.024	0.021	-3.73	-3.86
	15.30	15.08	9.95	9.96	0.012	0.017	-4.42	-4.07
	16.30	16.08	9.95	9.95	0.010	0.012	-4.61	-4.42
	17.30	17.08	9.94	9.95	0.004	0.009	-5.52	-4.71
		18.08		9.95		0.006		-5.12
		19.08		9.94		0.004		-5.52

Bouwer & Rice Slug Test Method



	AI-1 Test 1	AI-1 Test 2		
$\ln(y_t)$ at t=0	2.547	1.533	Intercept from Graph	Note: $\ln(y_0/t_0)$ cannot be calculated from the slope of the semi-log curve. Convert to the same scale and then calculate the slope.
y_0	12.769	4.632	(b in equation)	
y_t	0.171		At point on straight line	
t	4.0		Interval between y_0 & y_t	
$\ln(y_0/y_t)/t$	1.078		Slope by calculating above	
$\ln(y_0/y_t)/t$	1.078	0.992	Slope from Graph equation (Note sign is reversed)	
H =	40 feet		Aquifer Depth	
L_w =	9.8 feet		Vertical distance of water in well	
L_e =	1.0 feet		Screen Length	
ID	2.067 inches		Nom. 2" PVC ID	
OD	2.375 inches		Nom. 2" PVC OD	
Drill Hole OD	4.0 inches		0.333 feet	
r_w =	2.0 inches		0.167 feet	
r_c =	1.034 inches		0.086 feet	
L_w/r_w =	59			
L_e/r_w =	6.0	See		
A =	1.0	Bouwer		
B =	0.5	Table &		
$\ln(R_e/r_w)$ =	0.933	Equations		
K	0.0037	0.0034	ft/min	
	40.2	37.0	GPD/ft ²	

$$K = \frac{r_c^2 \cdot \ln(R_e/r_w)}{2L_e} \cdot \frac{1}{t} \cdot \ln\left(\frac{y_0}{y_t}\right)$$

APPENDIX F

PILOT TESTING: AIR SPARGE CALCULATIONS

Evaluation of Air Sparging

Constants, Conversions and Definitions

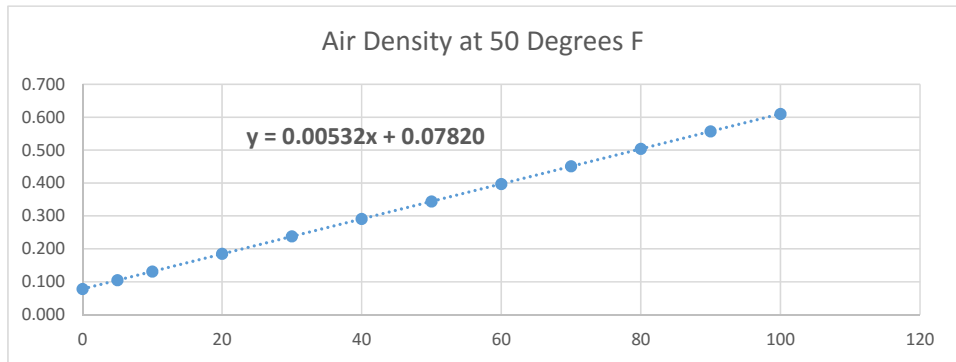
Dynamic Viscosity	μ	3.90E-07 lb-sec/ft ²	2.71E-09 lb-sec/in ²						
Convert to ->	psi	Pascal	Bar	Technical Atmosphere	Atmosphere	Torr	Manometer Readings		
Convert from	lb./in ²	kg/(m•sec ²)	(bar)	kg/cm ²	kg/m ²	(atm)	1 mm hg	in. H ₂ O, iwc	in. hg
1 psi	1	6.89E+03	6.89E-02	7.03E-02	7.03E+02	6.80E-02	5.17E+01	2.77E+01	2.04E+00
Pascal	1.5E-04	1	1.00E-05	1.02E-05	1.02E-01	9.87E-06	7.50E-03	4.0E-03	2.96E-04
Bar	1.45E+01	1.00E+05	1	1.02E+00	1.02E+04	9.87E-01	7.50E+02	4.02E+02	2.95E+01
kg/cm ²	1.42E+01	9.81E+04	9.81E-01	1	1.00E+04	9.68E-01	7.36E+02	3.94E+02	2.90E+01
kg/m ²	1.42E-03	9.81E+00	9.81E-05	1.00E-04	1	9.68E-05	7.36E-02	3.94E-02	2.90E-03
1 atm	1.47E+01	1.01E+05	1.01E+00	1.03E+00	1.03E+04	1	7.60E+02	4.07E+02	2.99E+01
Torr	1.93E-02	1.33E+02	1.33E-03	1.36E-03	1.36E+01	1.32E-03	1	5.36E-01	3.94E-02
in. H ₂ O, iwc	3.61E-02	2.49E+02	2.49E-03	2.54E-03	2.54E+01	2.46E-03	1.87E+00	1	7.36E-02
in. hg	4.91E-01	3.38E+03	3.38E-02	3.45E-02	3.45E+02	3.34E-02	2.54E+01	1.36E+01	1

Length	1	meter	3.28	feet	39.37	inches			
Density	1.00	lb/ft ³	0.00058	lb/in ³	0.0316	lb-sec ² /ft ⁴	16.08	kg/m ³	

Hydraulic Conductivity & Intrinsic Permeability	$K = \frac{k_i \cdot \rho \cdot g}{\mu}$	K	cm/s	ρ	g/cm ³				
		k_i	Darcy	g	Acceleration due to gravity	cm/s ²			
Dynamic Viscosity air	μ	3.90E-07	lb-sec/ft ²	2.71E-09	lb-sec/in ²	1.87E-05	N·s/m ² or kg/s·m	1.87E-02	cPoise
Conversions	1	atm	=	14.696	psi	29.92	in. hg	406.8	iwc
Intrinsic Permeability	k_i	1	cm ²	=	1.01E+08	Darcy			
To Hydraulic Conductivity	1	cm ²	=	3,220	ft/sec	193,200	ft/min	1.85E+09	GPD/ft ²

Air Density at 50 Degrees F

Gauge Pressure	Air Density
psi	lb/ft ³
0	0.078
5	0.105
10	0.131
20	0.185
30	0.238
40	0.291
50	0.344
60	0.397
70	0.451
80	0.504
90	0.557
100	0.610
<i>a</i>	<i>b</i>
0.00532	0.07820



Air Density = a · Gauge Pressure + b

	OD	Thickness	ID	OD Area	ID Area	
Screen ID, 2 inch nominal, Sch. 40	2.375	0.154	2.067	4.43	3.36	in/in ²
	0.060	0.004	0.053	0.0029	0.0022	m/m ²
Drill Hole	4.0	inches	0.102	m		

Effective Pore Size & Capillary Pressures

Material	Effective <i>n</i>	Capillary Pressure		
		cm Hg	iwc	psi
Silty Sand, average	20%	6.0	0.021	0.042
Fine sand, maximum	28%	4.0	0.014	0.028

Total Pressures Resisting Lateral Flow of Air					Intrinsic Permeability and Hydraulic Conductivity	
Capillary Pressure	0.04	0.03	psi		Unsaturated Zone	Saturated Zone
	1.2	0.8	iwc			
Hydraulic Pressure = Water Column (from Section top)	(Variable)	6.1	psi			
	14	168.0	iwc			
Total Resisting Pressure top of Cylinder	6.1	0.42	Bar		k_i	2.14E-06
	168.8	42,009	kg/(m•sec ²)		K	0.414
						0.040

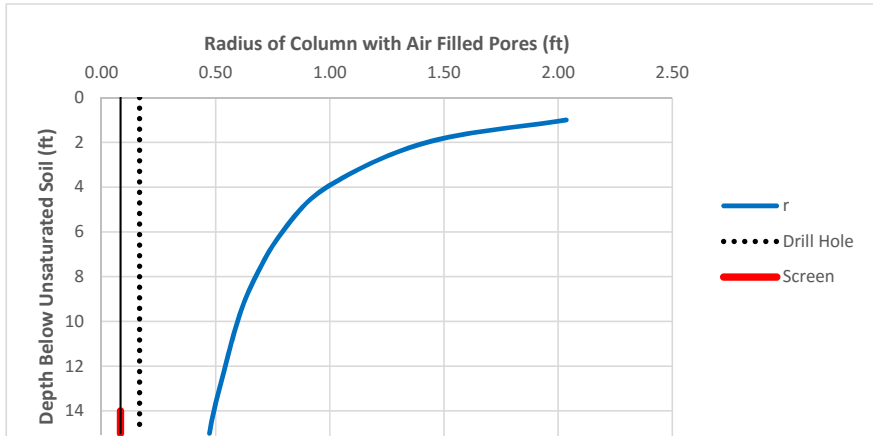
Evaluation of Air Sparging
Radius of Area of Vertical Flow at Pressures = Lateral Resisting Pressures (No Lateral Flow)

Using Darcy Equation for Vertical Air Flow				$Q = A \cdot (k_i \rho g / \mu) \cdot \Delta h / \Delta L$			$v = \frac{Q}{A \cdot n}$		
Hydraulic K for well zone							Zone: Unsaturated Saturated		
ρ	0.113	lb/ft ³	1.81E-06	kg/cm ³	1.81E-03	g/cm ³	k_i	2.14E-06	2.07E-07
g	32.20	ft/s/s	981.46	cm/s/s		9.81	K	0.414	0.040
μ	3.90E-07	lb-sec/ft ²	1.87E-03	cPoise		g/s-cm	Q (cfm) = 107		
K	Saturated Zone K		0.04	ft/min					
k_i	From Sat Zone K		2.07E-07	cm ²					
L_w	Depth		457.2	cm	15	ft	<u>Depth</u>	<u>r</u>	
Δh	180	iwc	448,017	g/(cm ³ sec ²)	6.499	psi gauge	1	2.04	
r	Flow Column Radius		14.4	cm	0.47	ft	2	1.42	
r_w	Drill Hole Radis		5.1	cm	2.00	inches	4	0.99	
A	Area Outside Drill Hole		572	cm ²			6	0.79	
Q	Flow		5.05E+04	cm ³ /s	107	cfm	8	0.68	
n			28%				10	0.60	
v			3.15	m/s	10.3	ft/s	14	0.49	
							15	0.47	

Check Sections Using Bournoulli Equation and Conservation of Mass

$$P_1 + \frac{1}{2} \rho V_1^2 + \rho g h_1 = P_2 + \frac{1}{2} \rho V_2^2 + \rho g h_2 \quad Q_1 = A_1 \cdot V_1 = Q_2 = A_2 \cdot V_2 = \pi r^2 \cdot n \cdot V_2$$

P	168	iwc	418,149	g/(cm ³ sec ²)	6.07	psi
ρ	0.110		1.78E-03	g/cm ³		
v	2.88	m/s	288	cm/s		
$1/2 \rho \cdot v^2$			73.84	g/(cm ³ sec ²)		
$\rho \cdot g \cdot h$			743.9	g/(cm ³ sec ²)		
Section 2	14	ft	418,967	g/(cm ³ sec ²)	6.08	psi
P	48	iwc	119,471	g/(cm ³ sec ²)	1.73	psi
ρ	0.087		1.41E-03	g/cm ³		
v	0.65	m/s	65	cm/s		
$1/2 \rho \cdot v^2$			58.43	g/(cm ³ sec ²)		
$\rho \cdot g \cdot h$			168.2	g/(cm ³ sec ²)		
Section 3	4	ft	119,698	g/(cm ³ sec ²)	1.74	psi
P	12	iwc	29,868	g/(cm ³ sec ²)	0.43	psi
ρ	0.081		1.29E-03	g/cm ³		
v	0.15	m/s	15	cm/s		
$1/2 \rho \cdot v^2$			53.81	g/(cm ³ sec ²)		
$\rho \cdot g \cdot h$			38.7	g/(cm ³ sec ²)		
Section 3	1	ft	29,960	g/(cm ³ sec ²)	0.43	psi



APPENDIX G

SOIL VAPOR LABORATORY REPORT



ANALYTICAL REPORT

Lab Number:	L1528291
Client:	Integral Consulting, Inc. 61 Broadway Suite 1601 New York, NY 10006-2756
ATTN:	Keith Brodock
Phone:	(212) 962-4301
Project Name:	BRIDGE CLEANERS
Project Number:	E075
Report Date:	11/25/15

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Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: BRIDGE CLEANERS
Project Number: E075

Lab Number: L1528291
Report Date: 11/25/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1528291-01	RW-01-110215	AIR	39-26 30TH ST, LIC	11/02/15 13:59	11/02/15
L1528291-02	VM-02-110215	AIR	39-26 30TH ST, LIC	11/02/15 14:00	11/02/15

Project Name: BRIDGE CLEANERS
Project Number: E075

Lab Number: L1528291
Report Date: 11/25/15

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: BRIDGE CLEANERS
Project Number: E075

Lab Number: L1528291
Report Date: 11/25/15

Case Narrative (continued)

Report Submission

This report replaces the report issued on November 9, 2015. It has been revised to change the Client ID for the L1528291-02 sample at the request of the client. The client declined to provide a revised CoC, the original has been provided in this submittal.

Volatile Organics in Air

Sample L1528291-01 was diluted and re-analyzed to quantify the sample within the calibration range. The result should be considered estimated, and are qualified with an E flag, for any compound that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range.

Samples L1528291-01 and -02: Samples were transferred from a Tedlar bag into a fused silica lined canister upon receipt in order to extend the holding time for analysis.

Samples L1528291-01 and -02: The samples have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the samples.

The WG837779-3 LCS recovery for 1,2,4-Trichlorobenzene (133%) is above the upper 130% acceptance limit. The response for this compound was elevated however it was not detected in any of the associated samples therefore no further action was required.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 11/25/15

AIR

Project Name: BRIDGE CLEANERS
Project Number: E075

Lab Number: L1528291
Report Date: 11/25/15

SAMPLE RESULTS

Lab ID: L1528291-01 D
 Client ID: RW-01-110215
 Sample Location: 39-26 30TH ST, LIC
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 11/06/15 02:31
 Analyst: RY

Date Collected: 11/02/15 13:59
 Date Received: 11/02/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	56.8	--	ND	281	--		284.3
Chloromethane	ND	56.8	--	ND	117	--		284.3
Freon-114	ND	56.8	--	ND	397	--		284.3
Vinyl chloride	ND	56.8	--	ND	145	--		284.3
1,3-Butadiene	ND	56.8	--	ND	126	--		284.3
Bromomethane	ND	56.8	--	ND	221	--		284.3
Chloroethane	ND	56.8	--	ND	150	--		284.3
Ethanol	ND	1420	--	ND	2680	--		284.3
Vinyl bromide	ND	56.8	--	ND	248	--		284.3
Acetone	ND	284	--	ND	675	--		284.3
Trichlorofluoromethane	ND	56.8	--	ND	319	--		284.3
Isopropanol	ND	142.	--	ND	349	--		284.3
1,1-Dichloroethene	ND	56.8	--	ND	225	--		284.3
Tertiary butyl Alcohol	ND	142.	--	ND	430	--		284.3
Methylene chloride	ND	142	--	ND	493	--		284.3
3-Chloropropene	ND	56.8	--	ND	178	--		284.3
Carbon disulfide	ND	56.8	--	ND	177	--		284.3
Freon-113	ND	56.8	--	ND	435	--		284.3
trans-1,2-Dichloroethene	ND	56.8	--	ND	225	--		284.3
1,1-Dichloroethane	ND	56.8	--	ND	230	--		284.3
Methyl tert butyl ether	ND	56.8	--	ND	205	--		284.3
2-Butanone	ND	142.	--	ND	419	--		284.3
cis-1,2-Dichloroethene	96.9	56.8	--	384	225	--		284.3
Ethyl Acetate	ND	142.	--	ND	512	--		284.3



Project Name: BRIDGE CLEANERS
Project Number: E075

Lab Number: L1528291
Report Date: 11/25/15

SAMPLE RESULTS

Lab ID: L1528291-01 D
 Client ID: RW-01-110215
 Sample Location: 39-26 30TH ST, LIC

Date Collected: 11/02/15 13:59
 Date Received: 11/02/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	56.8	--	ND	277	--		284.3
Tetrahydrofuran	ND	142.	--	ND	419	--		284.3
1,2-Dichloroethane	ND	56.8	--	ND	230	--		284.3
n-Hexane	ND	56.8	--	ND	200	--		284.3
1,1,1-Trichloroethane	ND	56.8	--	ND	310	--		284.3
Benzene	ND	56.8	--	ND	181	--		284.3
Carbon tetrachloride	ND	56.8	--	ND	357	--		284.3
Cyclohexane	ND	56.8	--	ND	196	--		284.3
1,2-Dichloropropane	ND	56.8	--	ND	263	--		284.3
Bromodichloromethane	ND	56.8	--	ND	381	--		284.3
1,4-Dioxane	ND	56.8	--	ND	205	--		284.3
Trichloroethene	205	56.8	--	1100	305	--		284.3
2,2,4-Trimethylpentane	ND	56.8	--	ND	265	--		284.3
Heptane	ND	56.8	--	ND	233	--		284.3
cis-1,3-Dichloropropene	ND	56.8	--	ND	258	--		284.3
4-Methyl-2-pentanone	ND	142.	--	ND	582	--		284.3
trans-1,3-Dichloropropene	ND	56.8	--	ND	258	--		284.3
1,1,2-Trichloroethane	ND	56.8	--	ND	310	--		284.3
Toluene	ND	56.8	--	ND	214	--		284.3
2-Hexanone	ND	56.8	--	ND	233	--		284.3
Dibromochloromethane	ND	56.8	--	ND	484	--		284.3
1,2-Dibromoethane	ND	56.8	--	ND	437	--		284.3
Tetrachloroethene	32400	56.8	--	220000	385	--	E	284.3
Chlorobenzene	ND	56.8	--	ND	262	--		284.3
Ethylbenzene	ND	56.8	--	ND	247	--		284.3
p/m-Xylene	ND	114	--	ND	495	--		284.3
Bromoform	ND	56.8	--	ND	587	--		284.3
Styrene	ND	56.8	--	ND	242	--		284.3



Project Name: BRIDGE CLEANERS**Lab Number:** L1528291**Project Number:** E075**Report Date:** 11/25/15**SAMPLE RESULTS**

Lab ID: L1528291-01 D
 Client ID: RW-01-110215
 Sample Location: 39-26 30TH ST, LIC

Date Collected: 11/02/15 13:59
 Date Received: 11/02/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	56.8	--	ND	390	--		284.3
o-Xylene	ND	56.8	--	ND	247	--		284.3
4-Ethyltoluene	ND	56.8	--	ND	279	--		284.3
1,3,5-Trimethylbenzene	ND	56.8	--	ND	279	--		284.3
1,2,4-Trimethylbenzene	ND	56.8	--	ND	279	--		284.3
Benzyl chloride	ND	56.8	--	ND	294	--		284.3
1,3-Dichlorobenzene	ND	56.8	--	ND	341	--		284.3
1,4-Dichlorobenzene	ND	56.8	--	ND	341	--		284.3
1,2-Dichlorobenzene	ND	56.8	--	ND	341	--		284.3
1,2,4-Trichlorobenzene	ND	56.8	--	ND	422	--		284.3
Hexachlorobutadiene	ND	56.8	--	ND	606	--		284.3

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	92		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	97		60-140



Project Name: BRIDGE CLEANERS**Lab Number:** L1528291**Project Number:** E075**Report Date:** 11/25/15**SAMPLE RESULTS**

Lab ID: L1528291-01 D2
 Client ID: RW-01-110215
 Sample Location: 39-26 30TH ST, LIC
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 11/06/15 09:00
 Analyst: RY

Date Collected: 11/02/15 13:59
 Date Received: 11/02/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tetrachloroethene	33400	114	--	226000	773	--		568.6

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	97		60-140



Project Name: BRIDGE CLEANERS
Project Number: E075

Lab Number: L1528291
Report Date: 11/25/15

SAMPLE RESULTS

Lab ID: L1528291-02 D
 Client ID: VM-02-110215
 Sample Location: 39-26 30TH ST, LIC
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 11/06/15 03:04
 Analyst: RY

Date Collected: 11/02/15 14:00
 Date Received: 11/02/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	148.	--	ND	732	--		742.3
Chloromethane	ND	148.	--	ND	306	--		742.3
Freon-114	ND	148.	--	ND	1030	--		742.3
Vinyl chloride	ND	148.	--	ND	378	--		742.3
1,3-Butadiene	ND	148.	--	ND	327	--		742.3
Bromomethane	ND	148.	--	ND	575	--		742.3
Chloroethane	ND	148.	--	ND	391	--		742.3
Ethanol	ND	3710	--	ND	6990	--		742.3
Vinyl bromide	ND	148.	--	ND	647	--		742.3
Acetone	ND	742	--	ND	1760	--		742.3
Trichlorofluoromethane	ND	148.	--	ND	832	--		742.3
Isopropanol	162000	371	--	398000	912	--		742.3
1,1-Dichloroethene	ND	148.	--	ND	587	--		742.3
Tertiary butyl Alcohol	ND	371.	--	ND	1120	--		742.3
Methylene chloride	ND	371	--	ND	1290	--		742.3
3-Chloropropene	ND	148.	--	ND	463	--		742.3
Carbon disulfide	ND	148.	--	ND	461	--		742.3
Freon-113	ND	148.	--	ND	1130	--		742.3
trans-1,2-Dichloroethene	ND	148.	--	ND	587	--		742.3
1,1-Dichloroethane	ND	148.	--	ND	599	--		742.3
Methyl tert butyl ether	ND	148.	--	ND	534	--		742.3
2-Butanone	ND	371.	--	ND	1090	--		742.3
cis-1,2-Dichloroethene	ND	148.	--	ND	587	--		742.3
Ethyl Acetate	ND	371.	--	ND	1340	--		742.3



Project Name: BRIDGE CLEANERS
Project Number: E075

Lab Number: L1528291
Report Date: 11/25/15

SAMPLE RESULTS

Lab ID: L1528291-02 D
 Client ID: VM-02-110215
 Sample Location: 39-26 30TH ST, LIC

Date Collected: 11/02/15 14:00
 Date Received: 11/02/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	148.	--	ND	723	--		742.3
Tetrahydrofuran	ND	371.	--	ND	1090	--		742.3
1,2-Dichloroethane	ND	148.	--	ND	599	--		742.3
n-Hexane	ND	148.	--	ND	522	--		742.3
1,1,1-Trichloroethane	ND	148.	--	ND	807	--		742.3
Benzene	ND	148.	--	ND	473	--		742.3
Carbon tetrachloride	ND	148.	--	ND	931	--		742.3
Cyclohexane	ND	148.	--	ND	509	--		742.3
1,2-Dichloropropane	ND	148.	--	ND	684	--		742.3
Bromodichloromethane	ND	148.	--	ND	992	--		742.3
1,4-Dioxane	ND	148.	--	ND	533	--		742.3
Trichloroethene	ND	148.	--	ND	795	--		742.3
2,2,4-Trimethylpentane	ND	148.	--	ND	691	--		742.3
Heptane	ND	148.	--	ND	607	--		742.3
cis-1,3-Dichloropropene	ND	148.	--	ND	672	--		742.3
4-Methyl-2-pentanone	ND	371.	--	ND	1520	--		742.3
trans-1,3-Dichloropropene	ND	148.	--	ND	672	--		742.3
1,1,2-Trichloroethane	ND	148.	--	ND	807	--		742.3
Toluene	ND	148.	--	ND	558	--		742.3
2-Hexanone	ND	148.	--	ND	607	--		742.3
Dibromochloromethane	ND	148.	--	ND	1260	--		742.3
1,2-Dibromoethane	ND	148.	--	ND	1140	--		742.3
Tetrachloroethene	8170	148.	--	55400	1000	--		742.3
Chlorobenzene	ND	148.	--	ND	682	--		742.3
Ethylbenzene	ND	148.	--	ND	643	--		742.3
p/m-Xylene	ND	297.	--	ND	1290	--		742.3
Bromoform	ND	148.	--	ND	1530	--		742.3
Styrene	ND	148.	--	ND	630	--		742.3



Project Name: BRIDGE CLEANERS**Lab Number:** L1528291**Project Number:** E075**Report Date:** 11/25/15**SAMPLE RESULTS**

Lab ID: L1528291-02 D
 Client ID: VM-02-110215
 Sample Location: 39-26 30TH ST, LIC

Date Collected: 11/02/15 14:00
 Date Received: 11/02/15
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	148.	--	ND	1020	--		742.3
o-Xylene	ND	148.	--	ND	643	--		742.3
4-Ethyltoluene	ND	148.	--	ND	728	--		742.3
1,3,5-Trimethylbenzene	ND	148.	--	ND	728	--		742.3
1,2,4-Trimethylbenzene	ND	148.	--	ND	728	--		742.3
Benzyl chloride	ND	148.	--	ND	766	--		742.3
1,3-Dichlorobenzene	ND	148.	--	ND	890	--		742.3
1,4-Dichlorobenzene	ND	148.	--	ND	890	--		742.3
1,2-Dichlorobenzene	ND	148.	--	ND	890	--		742.3
1,2,4-Trichlorobenzene	ND	148.	--	ND	1100	--		742.3
Hexachlorobutadiene	ND	148.	--	ND	1580	--		742.3

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	92		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	91		60-140



Project Name: BRIDGE CLEANERS

Lab Number: L1528291

Project Number: E075

Report Date: 11/25/15

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 11/05/15 15:38

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG837779-4								
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BRIDGE CLEANERS

Lab Number: L1528291

Project Number: E075

Report Date: 11/25/15

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 11/05/15 15:38

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG837779-4								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1



Project Name: BRIDGE CLEANERS

Lab Number: L1528291

Project Number: E075

Report Date: 11/25/15

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 11/05/15 15:38

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG837779-4								
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1528291

Project Number: E075

Report Date: 11/25/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG837779-3								
Chlorodifluoromethane	85		-		70-130	-		
Propylene	100		-		70-130	-		
Propane	67	Q	-		70-130	-		
Dichlorodifluoromethane	102		-		70-130	-		
Chloromethane	90		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	102		-		70-130	-		
Methanol	70		-		70-130	-		
Vinyl chloride	93		-		70-130	-		
1,3-Butadiene	93		-		70-130	-		
Butane	78		-		70-130	-		
Bromomethane	100		-		70-130	-		
Chloroethane	94		-		70-130	-		
Ethyl Alcohol	72		-		70-130	-		
Dichlorofluoromethane	85		-		70-130	-		
Vinyl bromide	102		-		70-130	-		
Acrolein	77		-		70-130	-		
Acetone	89		-		70-130	-		
Acetonitrile	79		-		70-130	-		
Trichlorofluoromethane	102		-		70-130	-		
iso-Propyl Alcohol	84		-		70-130	-		
Acrylonitrile	83		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1528291

Project Number: E075

Report Date: 11/25/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG837779-3								
Pentane	76		-		70-130	-		
Ethyl ether	72		-		70-130	-		
1,1-Dichloroethene	96		-		70-130	-		
tert-Butyl Alcohol	83		-		70-130	-		
Methylene chloride	94		-		70-130	-		
3-Chloropropene	88		-		70-130	-		
Carbon disulfide	100		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	105		-		70-130	-		
trans-1,2-Dichloroethene	87		-		70-130	-		
1,1-Dichloroethane	97		-		70-130	-		
Methyl tert butyl ether	93		-		70-130	-		
Vinyl acetate	107		-		70-130	-		
2-Butanone	89		-		70-130	-		
cis-1,2-Dichloroethene	105		-		70-130	-		
Ethyl Acetate	100		-		70-130	-		
Chloroform	102		-		70-130	-		
Tetrahydrofuran	83		-		70-130	-		
2,2-Dichloropropane	89		-		70-130	-		
1,2-Dichloroethane	95		-		70-130	-		
n-Hexane	88		-		70-130	-		
Isopropyl Ether	80		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1528291

Project Number: E075

Report Date: 11/25/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG837779-3								
Ethyl-Tert-Butyl-Ether	78		-		70-130	-		
1,1,1-Trichloroethane	92		-		70-130	-		
1,1-Dichloropropene	84		-		70-130	-		
Benzene	91		-		70-130	-		
Carbon tetrachloride	96		-		70-130	-		
Cyclohexane	84		-		70-130	-		
Tertiary-Amyl Methyl Ether	78		-		70-130	-		
Dibromomethane	88		-		70-130	-		
1,2-Dichloropropane	91		-		70-130	-		
Bromodichloromethane	93		-		70-130	-		
1,4-Dioxane	95		-		70-130	-		
Trichloroethene	107		-		70-130	-		
2,2,4-Trimethylpentane	88		-		70-130	-		
Methyl Methacrylate	79		-		70-130	-		
Heptane	84		-		70-130	-		
cis-1,3-Dichloropropene	96		-		70-130	-		
4-Methyl-2-pentanone	82		-		70-130	-		
trans-1,3-Dichloropropene	81		-		70-130	-		
1,1,2-Trichloroethane	101		-		70-130	-		
Toluene	106		-		70-130	-		
1,3-Dichloropropane	96		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1528291

Project Number: E075

Report Date: 11/25/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG837779-3								
2-Hexanone	98		-		70-130	-		
Dibromochloromethane	116		-		70-130	-		
1,2-Dibromoethane	109		-		70-130	-		
Butyl Acetate	94		-		70-130	-		
Octane	98		-		70-130	-		
Tetrachloroethene	118		-		70-130	-		
1,1,1,2-Tetrachloroethane	108		-		70-130	-		
Chlorobenzene	114		-		70-130	-		
Ethylbenzene	107		-		70-130	-		
p/m-Xylene	110		-		70-130	-		
Bromoform	121		-		70-130	-		
Styrene	109		-		70-130	-		
1,1,1,2-Tetrachloroethane	113		-		70-130	-		
o-Xylene	111		-		70-130	-		
1,2,3-Trichloropropane	99		-		70-130	-		
Nonane (C9)	91		-		70-130	-		
Isopropylbenzene	106		-		70-130	-		
Bromobenzene	98		-		70-130	-		
o-Chlorotoluene	108		-		70-130	-		
n-Propylbenzene	107		-		70-130	-		
p-Chlorotoluene	99		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Lab Number: L1528291

Project Number: E075

Report Date: 11/25/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG837779-3								
4-Ethyltoluene	108		-		70-130	-		
1,3,5-Trimethylbenzene	110		-		70-130	-		
tert-Butylbenzene	109		-		70-130	-		
1,2,4-Trimethylbenzene	116		-		70-130	-		
Decane (C10)	98		-		70-130	-		
Benzyl chloride	114		-		70-130	-		
1,3-Dichlorobenzene	122		-		70-130	-		
1,4-Dichlorobenzene	121		-		70-130	-		
sec-Butylbenzene	106		-		70-130	-		
p-Isopropyltoluene	102		-		70-130	-		
1,2-Dichlorobenzene	123		-		70-130	-		
n-Butylbenzene	108		-		70-130	-		
1,2-Dibromo-3-chloropropane	99		-		70-130	-		
Undecane	104		-		70-130	-		
Dodecane (C12)	107		-		70-130	-		
1,2,4-Trichlorobenzene	133	Q	-		70-130	-		
Naphthalene	120		-		70-130	-		
1,2,3-Trichlorobenzene	121		-		70-130	-		
Hexachlorobutadiene	130		-		70-130	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Project Number: E075

Lab Number: L1528291

Report Date: 11/25/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG837779-5 QC Sample: L1528284-01 Client ID: DUP Sample						
Dichlorodifluoromethane	0.418	0.502	ppbV	18		25
Chloromethane	ND	ND	ppbV	NC		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
1,3-Butadiene	0.781	0.846	ppbV	8		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethyl Alcohol	14.2	14.2	ppbV	0		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	45.8	48.3	ppbV	5		25
Trichlorofluoromethane	0.228	0.244	ppbV	7		25
iso-Propyl Alcohol	4.05	4.12	ppbV	2		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
tert-Butyl Alcohol	2.05	2.12	ppbV	3		25
Methylene chloride	0.953	1.04	ppbV	9		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	0.223	0.240	ppbV	7		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Project Number: E075

Lab Number: L1528291

Report Date: 11/25/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG837779-5 QC Sample: L1528284-01 Client ID: DUP Sample					
1,1-Dichloroethane	ND	ND	ppbV	NC	25
Methyl tert butyl ether	ND	ND	ppbV	NC	25
2-Butanone	3.90	4.14	ppbV	6	25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC	25
Ethyl Acetate	ND	ND	ppbV	NC	25
Chloroform	ND	ND	ppbV	NC	25
Tetrahydrofuran	ND	ND	ppbV	NC	25
1,2-Dichloroethane	ND	ND	ppbV	NC	25
n-Hexane	0.572	0.619	ppbV	8	25
1,1,1-Trichloroethane	1.12	1.16	ppbV	4	25
Benzene	2.56	2.60	ppbV	2	25
Carbon tetrachloride	ND	ND	ppbV	NC	25
Cyclohexane	0.493	0.533	ppbV	8	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
Bromodichloromethane	ND	ND	ppbV	NC	25
1,4-Dioxane	ND	ND	ppbV	NC	25
Trichloroethene	ND	ND	ppbV	NC	25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC	25
Heptane	0.604	0.659	ppbV	9	25

Lab Duplicate Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Project Number: E075

Lab Number: L1528291

Report Date: 11/25/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG837779-5 QC Sample: L1528284-01 Client ID: DUP Sample					
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
4-Methyl-2-pentanone	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
Toluene	7.34	7.40	ppbV	1	25
2-Hexanone	0.500	0.546	ppbV	9	25
Dibromochloromethane	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Tetrachloroethene	16.8	16.8	ppbV	0	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	1.10	1.08	ppbV	2	25
p/m-Xylene	4.43	4.47	ppbV	1	25
Bromoform	ND	ND	ppbV	NC	25
Styrene	0.311	0.331	ppbV	6	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
o-Xylene	2.05	2.08	ppbV	1	25
4-Ethyltoluene	0.506	0.482	ppbV	5	25
1,3,5-Trimethylbenzene	0.606	0.595	ppbV	2	25
1,2,4-Trimethylbenzene	2.39	2.38	ppbV	0	25

Lab Duplicate Analysis

Batch Quality Control

Project Name: BRIDGE CLEANERS

Project Number: E075

Lab Number: L1528291

Report Date: 11/25/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG837779-5 QC Sample: L1528284-01 Client ID: DUP Sample					
Benzyl chloride	ND	ND	ppbV	NC	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25
Hexachlorobutadiene	ND	ND	ppbV	NC	25

Project Name: BRIDGE CLEANERS**Project Number:** E075**Lab Number:** L1528291**Report Date:** 11/25/15**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Cooler Information Custody Seal**Cooler**

N/A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1528291-01A	Tedlar Bag 3 liter-Polypropylene	N/A	N/A		Y	Absent	TO15-LL(30)
L1528291-01X	Canister - 2.7 Liter (Split out	N/A	N/A		Y	Absent	TO15-LL(30)
L1528291-02A	Tedlar Bag 3 liter-Polypropylene	N/A	N/A		Y	Absent	TO15-LL(30)
L1528291-02X	Canister - 2.7 Liter (Split out	N/A	N/A		Y	Absent	TO15-LL(30)

*Values in parentheses indicate holding time in days

Project Name: BRIDGE CLEANERS
Project Number: E075

Lab Number: L1528291
Report Date: 11/25/15

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCS D	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

Report Format: Data Usability Report



Project Name: BRIDGE CLEANERS
Project Number: E075

Lab Number: L1528291
Report Date: 11/25/15

Data Qualifiers

- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: BRIDGE CLEANERS
Project Number: E075

Lab Number: L1528291
Report Date: 11/25/15

REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 8260C: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; Iodomethane (methyl iodide) (soil); Methyl methacrylate (soil); Azobenzene.

EPA 8270D: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 625: 4-Chloroaniline, 4-Methylphenol.

SM4500: Soil: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

EPA 332: Perchlorate.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water

EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



AIR ANALYSIS CHAIN OF CUSTODY

PAGE _____ OF _____

320 Forbes Blvd, Mansfield, MA 02048
 TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: Integral Consulting Inc

Address: 61 Broadway Suite 1601
 ny, nyc 10006

Phone: 212-440-6715

Fax: SMCTANBY@INTEGRAL-CORP.COM

Email: KBRODOCK@INTEGRAL-CORP.COM

These samples have been previously analyzed by Alpha

Project Information

Project Name: BRIDGE CLEANING

Project Location: 39-26 30th St, LIC

Project #: E075

Project Manager: KEITH BRODOCK

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved!)

Date Due: _____ Time: _____

Date Rec'd in Lab: 11/3/15

Report Information - Data Deliverables

FAX

ADEx

Criteria Checker: _____
 (Default based on Regulatory Criteria Indicated)

Other Formats: _____

EMAIL (standard pdf report)

Additional Deliverables: _____

Report to: (if different than Project Manager) _____

ALPHA Job #: L1528291

Billing Information

Same as Client info PO #: _____

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Other Project Specific Requirements/Comments:

VACUUM IN - LITERS PER MINUTE 2-ML TEDLAR BAGS RUN FOR TCEVOC'S

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection					Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	ANALYSIS						Sample Comments (i.e. PID)
		Date	Start Time	End Time	Initial Vacuum	Final Vacuum						TO-14A by TO-15	TO-15 SIM	TO-15 SIM APH	FIXED GASES	TO-13A	TO-4/ TO-10	
<u>28291.01</u>	<u>RN-01-110215</u>	<u>11/2/15</u>	<u>13:56</u>	<u>13:59</u>	<u>4.54m</u>	<u>4.8</u>	<u>AIR</u>	<u>SM</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>X</u>					<u>1 - TEDLAR BAG</u>	
<u>02</u>	<u>AI-01R-110215</u>	<u>11/2/15</u>	<u>14:00</u>	<u>14:03</u>	<u>4.54m</u>	<u>4.5</u>	<u>AIR</u>	<u>SM</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>X</u>					<u>1 - TEDLAR BAG</u>	

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
 SV = Soil Vapor/Landfill Gas/SVE
 Other = Please Specify

Container Type							

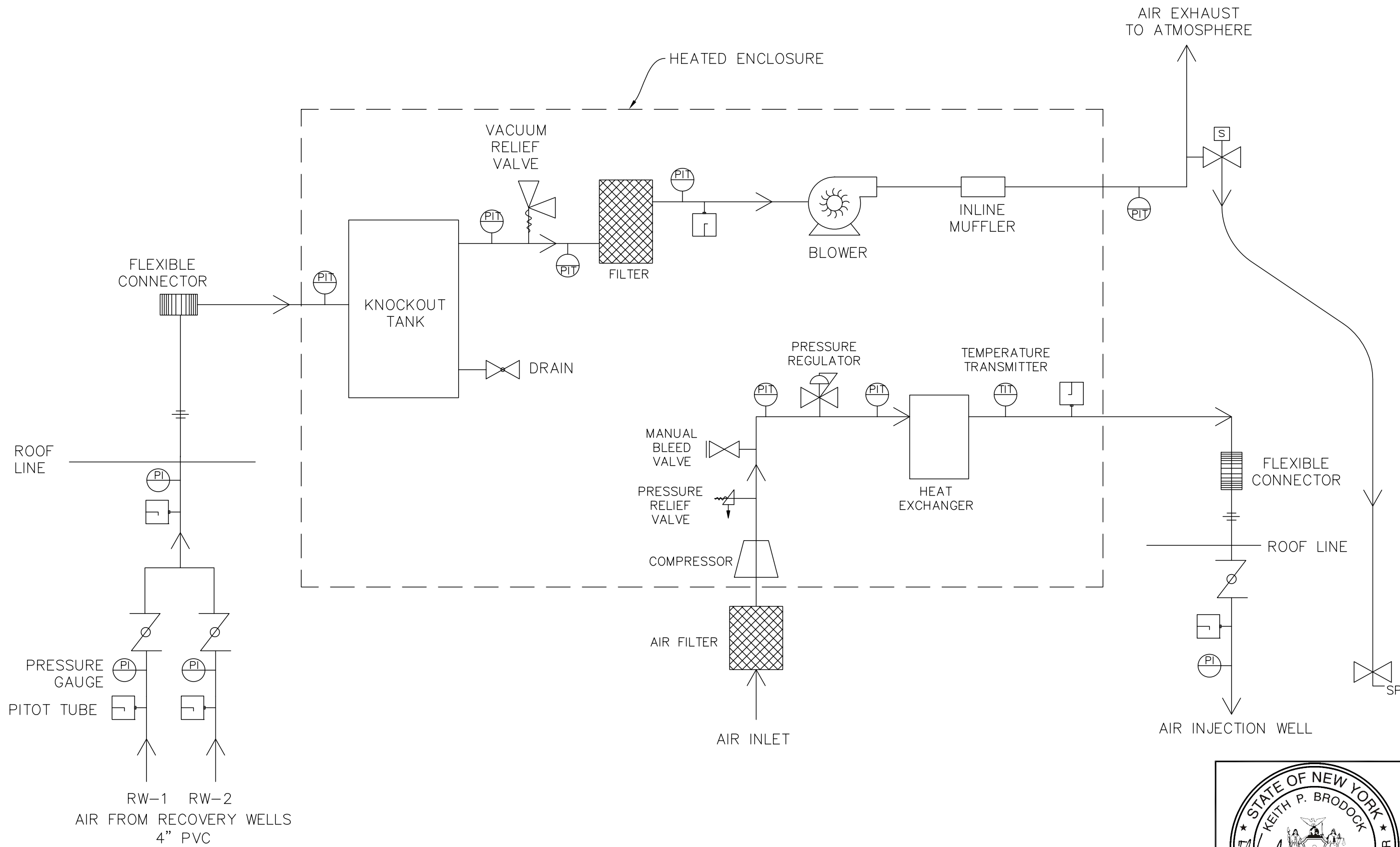
Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time
<u>[Signature]</u>	<u>11/2/15 15:30</u>	<u>Dan Hill (AAI)</u>	<u>11/2/15 15:30</u>
<u>[Signature]</u>	<u>11/2/15 22:30</u>	<u>Albert Williams</u>	<u>11/2/15 22:30</u>
<u>[Signature]</u>	<u>11/3/15 4:00</u>	<u>[Signature]</u>	<u>11/3/15 09:00</u>

APPENDIX H

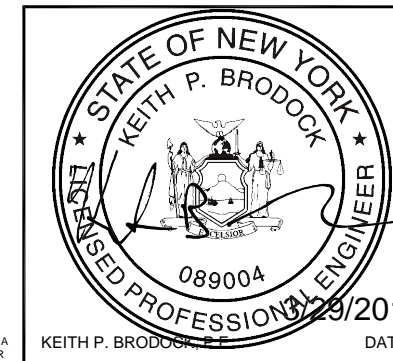
AS/SVE DESIGN PLANS & ELEVATIONS

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NOT TO SCALE

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON TO ALTER ANY DOCUMENT THAT BEARS THE SEAL OF A PROFESSIONAL ENGINEER, UNLESS THE PERSON IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER.



KEITH P. BRODOCK
NYSPE No. 089004

REV	DATE	DESCRIPTION	APP
0	3-29-2016	AS/SVE FOR REGULATORY APPROVAL	

APP	DATE	DESCRIPTION
	3-29-2016	
	3-29-2016	
	3-29-2016	
	NOT TO SCALE	
	H1_PFD.dwg	
	E075	

DESIGNER	MM	DATE	3-29-2016
DRAWN	KPB	DATE	3-29-2016
CHECKED	KPB	DATE	3-29-2016
SCALE	NOT TO SCALE		
PROJ. NO.	H1_PFD.dwg		
PROJ. %	E075		

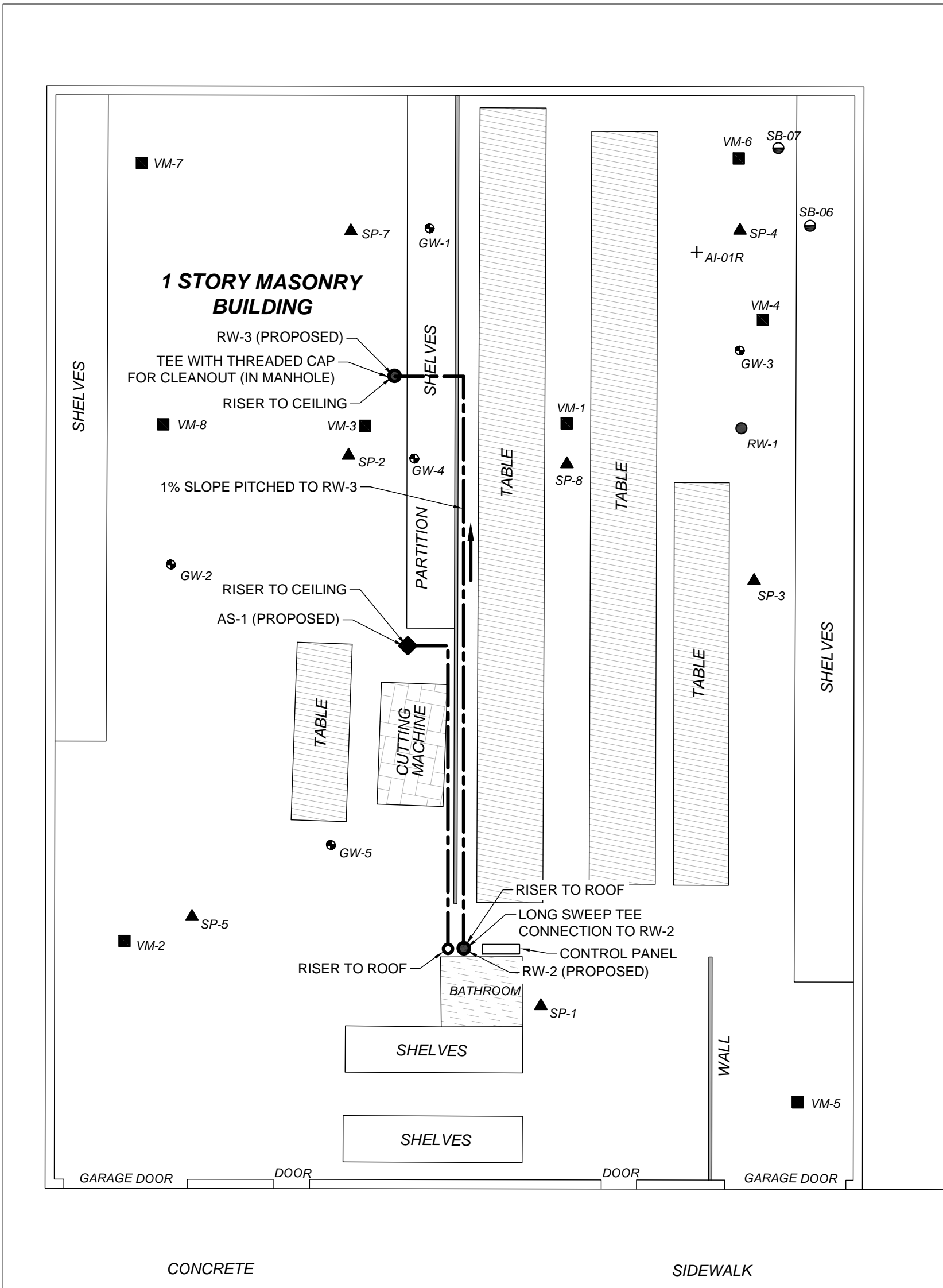
ZHONG CHUANG PROPERTIES LLC
BRIDGE CLEANERS SITE
 39-26 30th ST
 LONG ISLAND CITY
 NEW YORK

integral
 61 BROADWAY, SUITE 1601
 NEW YORK, NEW YORK 10007
 www.integral-corp.com

PROCESS FLOW DIAGRAM

SHEET **H1**
 OF 4 REV 0

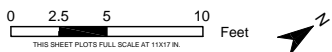
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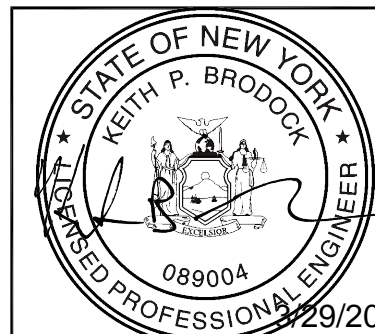
- PVC PIPE
- AIR SPARGE WELL
- VAPOR EXTRACTION WELL
- GROUNDWATER MONITORING WELL/SOIL BORING
- SOIL BORING
- AIR INJECTION WELL
- VACUUM MONITORING POINT
- SOIL VAPOR POINT

SOURCES:

1. BASEMAP: WELL ELEVATION SURVEY, BRIDGE CLEANERS, 39-26 30th STREET, LONG ISLAND CITY, NEW YORK, DONALD R. STEDGE, P.L.S., OCTOBER 30, 2015.



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KEITH P. BRODOCK, P.E.
NYSPE No. 089004

3/29/2016
DATE

REV	DATE	DESCRIPTION	APP
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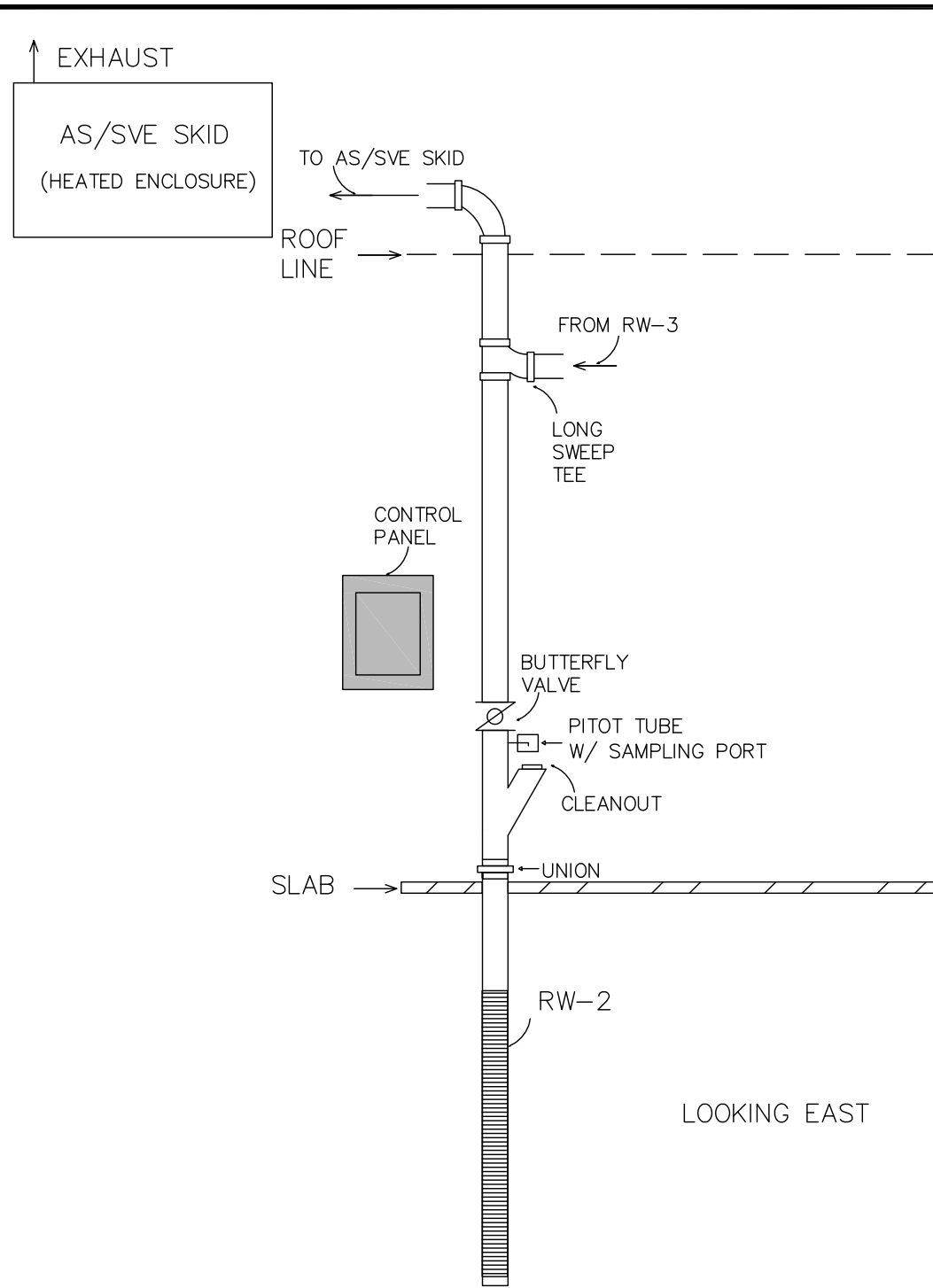
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SB	MM	KPB			
DES	CHK				

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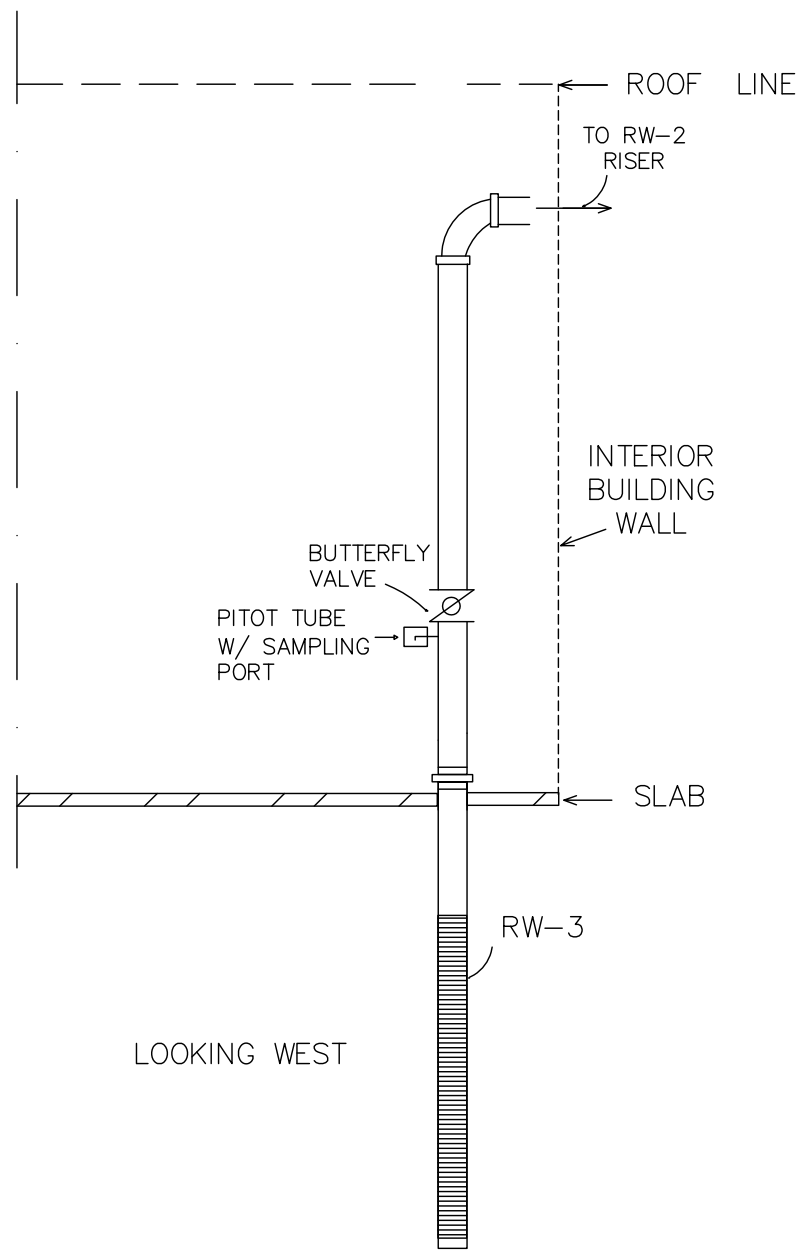
ZHONG CHUANG PROPERTIES LLC
BRIDGE CLEANERS SITE
 39-26 30th ST
 LONG ISLAND CITY, NEW YORK
 1st FLOOR PLAN

SHEET
H2
 OF 4 REV 0

N:\GIS\Projects\E075_BridgeCleaners_Alenat\CAD\Production Drawings\SVE_Elevations.dwg 3/29/2016 4:46:38 PM

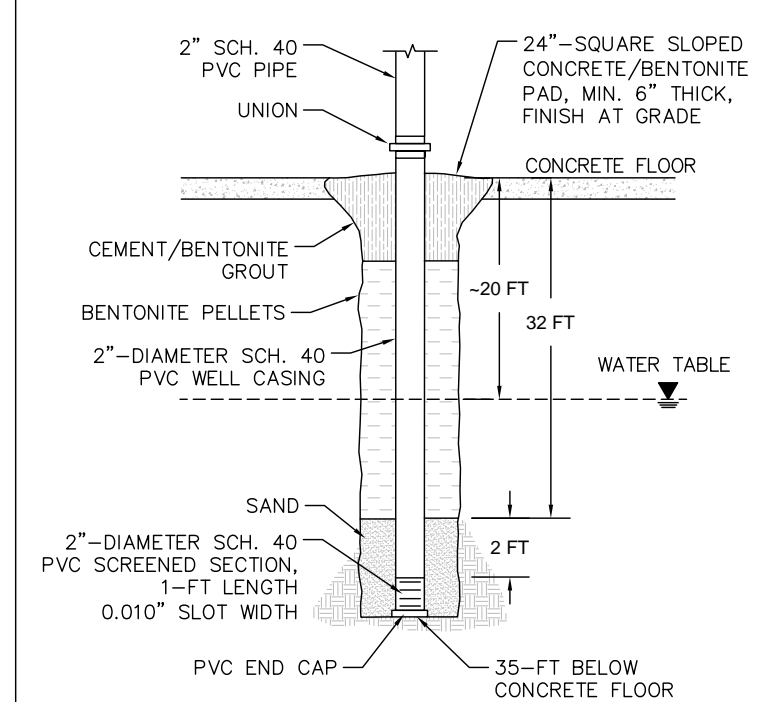


LOOKING EAST



LOOKING WEST

NOT TO SCALE



AIR SPARGE WELL DETAIL

NOT TO SCALE

REV	DATE	DESCRIPTION	APP
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DATE	BY	CHK	SCALE	PROJ
3-29-2016	KPB		NOT TO SCALE	H4_SVE Elevations.dwg
3-29-2016	KPB			
3-29-2016	KPB			

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 NEW YORK, NEW YORK 10007
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ZHONG CHUANG PROPERTIES LLC
BRIDGE CLEANERS SITE
 39-26 30th ST
 LONG ISLAND CITY
 NEW YORK
AS/SVE SYSTEM ELEVATIONS

DATE 3/29/2016
 KEITH P. BRODOCK
 NYSPE No. 089004

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APPENDIX I

AS/SVE SYSTEM STARTUP MONITORING LOG SHEET

