

**573 4<sup>TH</sup> AVENUE**

**BROOKLYN, NEW YORK**

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# **Remedial Investigation Report**

**NYC VCP Site: 13EH-N282K**

**Prepared for:**

Mr. Benny Zhao

New Empire Builder Corp.

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Brooklyn, New York

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**OCTOBER 2013**

# REMEDIAL INVESTIGATION REPORT

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## LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
CAMP	Community Air Monitoring Plan
COC	Contaminant of Concern
CPP	Citizen Participation Plan
CSM	Conceptual Site Model
DER-10	New York State Department of Environmental Conservation Technical Guide 10
FID	Flame Ionization Detector
GPS	Global Positioning System
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
IRM	Interim Remedial Measure
NAPL	Non-aqueous Phase Liquid
NYC VCP	New York City Voluntary Cleanup Program
NYC DOHMH	New York City Department of Health and Mental Hygiene
NYC OER	New York City Office of Environmental Remediation
NYS DOH ELAP	New York State Department of Health Environmental Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
PID	Photoionization Detector
QEP	Qualified Environmental Professional
RI	Remedial Investigation
RIR	Remedial Investigation Report
SCO	Soil Cleanup Objective
SPEED	Searchable Property Environmental Electronic Database

# CERTIFICATION

I, Paul P. Stewart, am a Qualified Environmental Professional, as defined in RCNY § 43-1402(ar). I have primary direct responsibility for implementation of the Remedial Investigation for the 573 47<sup>th</sup> Avenue, (NYC VCP Site: 14CVCP177K and OER project number 13EH-N282K). I am responsible for the content of this Remedial Investigation Report (RIR), have reviewed its contents and certify that this RIR is accurate to the best of my knowledge and contains all available environmental information and data regarding the property.

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Qualified Environmental Professional

Date

Signature

# **EXECUTIVE SUMMARY**

The Remedial Investigation Report (RIR) provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy pursuant to RCNY§ 43-1407(f). The remedial investigation (RI) described in this document is consistent with applicable guidance.

## **Site Location and Current Usage**

The Site is located at 573 4<sup>th</sup> Avenue in the Gowanus section of Brooklyn, New York and is identified as Block 1052, Lot 6 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 2,107-square feet and is bounded by a two-story residential building to the north, an auto repair shop to the south, 16<sup>th</sup> Street, followed by multi-use buildings to the east, and 4<sup>th</sup> Avenue, followed by a twelve-story apartment building to the west. A map of the site boundary is shown in Figure 2. Currently, the Site is vacant but the most recent usage was an auto repair shop with residential space on the second floor. The eastern portion of the property is covered by a makeshift roof, built-out to cover the remaining area of the property. The concrete ground floor is covered with large metal plates. A concrete trench runs down the middle of the eastern portion of the building. Fill and vent pipes were noted on the sidewalk in front of the existing building.

## **Summary of Proposed Redevelopment Plan**

The proposed future use of the Site will consist of a new multi-use ten-story building. Layout of the proposed site development is presented in Figure 3. The current zoning designation is C2-4/R8A for commercial and residential use. The proposed use is consistent with existing zoning for the property.

The proposed building for 573 4<sup>th</sup> Avenue will contain a partial 6-foot basement that will cover approximately 40% of the property and will contain utilities and the elevator vault. The foundation for the building, basement and footings will be installed to a final depth of 8' bgs. The first floor will be for commercial usage with residences on the upper 9 floors. As part of development, the referenced lot is expected to remain exclusively on lot 6. The building will be constructed to a height of approximately 95 feet for the 9 floors and be approximately 9,521 gross square feet. There are no areas proposed for landscaping. The water table is expected at approximately 49 feet bgs.

## **Summary of Past Uses of Site and Areas of Concern**

A Phase I investigation was conducted by Grant Engineering and completed in March 2012. The results of a review of fire insurance maps show the existing two-story building on the site was constructed in 1906 and was initially utilized as a blacksmith. The site is located in a commercial district and designated as C2-4/R8A. While the building is currently unoccupied the most recent use of the building was an auto repair shop on the first floor and residential living space on the second.

The AOCs identified for this site include:

1. Area where a historic underground fuel oil tank is located.
2. Area where there may be potential impacts from former auto repair operations.

## **Summary of the Work Performed under the Remedial Investigation**

Advanced Cleanup Technologies performed the following scope of work:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Performed ground penetrating radar to determine the existence and location of an historic underground storage tank in the vicinity of fill and vent pipes along the northwest side of the building;
3. Installed four soil borings across the entire project Site, and collected eight soil samples for chemical analysis from the soil borings to evaluate soil quality;
4. Attempted to install temporary ground water monitoring wells and collect ground water samples from 2 separate locations;
5. Installed three soil vapor probes around Site perimeter and collected three samples for chemical analysis;
6. Perform indoor air collection and sampling of one location inside the building.

## **Summary of Environmental Findings**

1. Elevation of the property ranges from 53 to 56 feet.

2. Groundwater has not been encountered at the site. Standing water was encountered at approximately 4.5' below ground surface on the west side of the Site.
3. Groundwater flow is expected to flow from east to west toward the Upper Bay.
4. Bedrock was not encountered during the remedial investigation.
5. The stratigraphy of the site, from the surface down, consists of 10 feet of orange-brown silty sands underlain by 5 feet of orange, medium to very coarse-grained sands.
6. Soil/fill samples collected during investigations showed low level concentrations of VOCs, SVOCs or PCBs. No pesticides were detected in any soil samples. PCB (Arocolor 1260) was detected in one soil sample at a concentration of 42 mg/Kg, and below Unrestricted Use SCOs. Trace concentrations of petroleum VOCs (1,2,4,5-trimethylbenzene, naphthalene, p-diethylbenzene) and chlorinated VOCs (cis-1,2-dichloroethene, trichloroethene (1.4 ug/Kg) and tetrachloroethene (14 ug/Kg)) were detected in three of eight of the soil samples obtained. Acetone (23 ug/Kg) was detected in one soil sample and methylene chloride (max. of 16 ug/Kg) was detected in four of eight samples. However, none of the VOC compounds were detected above its Unrestricted Use SCO (UUSCO). Several SVOC compounds were identified, but none of them exceeded their respective Unrestricted Use SCOs. Several metals were detected in soil samples, and of these, lead (at 2,360 mg/Kg and 98.8 mg/Kg in two soil samples) and mercury (max. of 2.67 mg/Kg in four soil samples), exceeded Restricted Residential SCOs. Lead was detected in two shallow soils sample(s), and one mercury sample exceeded its Unrestricted Use SCO in deep soils. Overall, findings were consistent with observations for historical fill sites in areas throughout NYC.
7. Groundwater samples were obtained during this investigation. Groundwater wells will be attempted following the demolition of the building to allow better access for sampling equipment. Groundwater is expected to be found at 49' bgs.
8. Soil vapor samples collected during the RI showed petroleum and chlorinated VOCs at moderate concentrations. Most compounds were detected at concentrations less than 30  $\mu\text{g}/\text{m}^3$ , except for ethanol at 99  $\mu\text{g}/\text{m}^3$ , toluene at 55  $\mu\text{g}/\text{m}^3$  and xylenes at a maximum concentration of 68  $\mu\text{g}/\text{m}^3$ . Total concentrations of approximately 14 total petroleum-related VOCs in soil vapor ranged from 187  $\mu\text{g}/\text{m}^3$  to 260  $\mu\text{g}/\text{m}^3$ . Chlorinated VOCs

including tetrachloroethylene (PCE) was identified in one of three soil vapor samples at a concentration of 1,830  $\mu\text{g}/\text{m}^3$ , trichloroethylene (TCE) (max. 2.26  $\mu\text{g}/\text{m}^3$ ) and carbon tetrachloride (max. 4.47  $\mu\text{g}/\text{m}^3$ ). 1,1,1-trichloroethane was not detected in site soil vapor. Single detection of PCE was above guidance matrix established by the NYS DOH. PCE and TCE were identified in site soils at low concentrations. 1,1,1- TCA was not detected in site soils.

# REMEDIAL INVESTIGATION REPORT

## 1.0 SITE BACKGROUND

New Empire Builder Corp. has applied to enroll in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a 0.5-acre site located at 573 4<sup>th</sup> Avenue in the Gowanus section of Brooklyn, New York. Mixed commercial/residential use is proposed for the property. The RI work was performed on June 20, 2013. This RIR summarizes the nature and extent of contamination and provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy that is protective of human health and the environment consistent with the use of the property pursuant to RCNY§ 43-1407(f).

### 1.1 Site Location and Current Usage

The Site is located at 573 4<sup>th</sup> Avenue in the Gowanus section of Brooklyn, New York and is identified as Block 1052, Lot 6 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 2,107-square feet and is bounded by a two-story residential building to the north, an auto repair shop to the south, 16<sup>th</sup> Street, followed by multi-use buildings to the east, and 4<sup>th</sup> Avenue, followed by a twelve-story apartment building to the west. A map of the site boundary is shown in Figure 2. Currently, the Site building is vacant but the most recent usage was an auto repair shop with residential space on the second floor. The eastern portion of the property is covered by a makeshift roof, built-out to cover the remaining area of the property. The concrete ground floor is covered with large metal plates. A concrete trench runs down the middle of the eastern portion of the building. Fill and vent pipes were noted on the sidewalk in front of the existing building.

### 1.2 Proposed Redevelopment Plan

The proposed future use of the Site will consist of a new multi-use ten-story building. Layout of the proposed site development is presented in Figure 3. The current zoning designation is C2-4/R8A for commercial and residential use. The proposed use is consistent with existing zoning for the property.

The proposed building for 573 4<sup>th</sup> Avenue will contain a partial 6-foot basement that will cover approximately 40% of the property and will contain utilities and the elevator vault. The

foundation for the building, basement and footings will be installed to a final depth of 8' bgs. The first floor will be for commercial usage with residences on the upper 9 floors. As part of development, the referenced lot is expected to remain exclusively on lot 6. The building will be constructed to a height of approximately 95 feet for the 9 floors and be approximately 9,521 gross square feet. There are no areas proposed for landscaping. The water table is expected at approximately 49 feet bgs.

### **1.3 Description of Surrounding Property**

The site is located at 573 4<sup>th</sup> Avenue, and is in the Gowanus section of Brooklyn. It is predominantly multi-use buildings with commercial and residential uses. The site is zoned in a C2-4/R8A commercial and residential district. In addition the site was issued an "E" designation, E-152 for Hazmat and Noise, by the NYC Department of Buildings in 2005 as part of the South Park Slope Rezoning and Text Resolution (CEQR number 06DCP014K).

An auto repair shop bounds the site to the south and the north side of the property is bounded by a 2-story residential building. To the west of the Site a 12-story mixed-use commercial/residential building follows 4th Avenue and the east is predominantly mixed-use residential buildings with commercial uses. There is one public school P.S. 124 Silas B. Dutcher located approximately 528 feet North of the site at 515 4<sup>th</sup> Avenue, Brooklyn. There are no day care centers or hospitals within a 500-foot radius of the site.

## **2.0 SITE HISTORY**

### **2.1 Past Uses and Ownership**

A Phase I investigation was conducted by Grant Engineering and completed in March 2012. The results of a review of fire insurance maps show the existing two-story building on the site was constructed in 1906 and was initially utilized as a blacksmith. The site is located in a commercial district and designated as C2-4/R8A. While the building is currently unoccupied the most recent use of the building was an auto repair shop on the first floor and residential living space on the second.

### **2.2 Previous Investigations**

The Phase I investigation included a review of regulatory agency databases, historical documents and visual observations of the site. Fire insurance maps (Sanborn Maps) were reviewed from 1888 through 2007. Aerial maps were reviewed from 1924-2006 and topographical maps were reviewed from 1900 through 1995. Grant Engineering did not identify any recognized environmental conditions, with the exception of the E-designation for HAZMAT and noise.

### **2.3 Site Inspection**

Steven Walls of ACT performed a site inspection on September 25, 2012. The site inspection was performed to identify potential areas of concern and to determine possible problems that could be encountered during subsurface investigations. The site inspection identified a fill and vent pipe on the sidewalk adjacent to the building. The sampling locations were chosen based on areas that were not sampled during the previous subsurface investigation, they included soil, groundwater and soil vapor throughout the site.

### **2.4 Areas of Concern**

The AOCs identified for this site include:

1. Area where a historic underground fuel oil tank is located.
2. Area where there may be potential impacts from former auto repair operations.
3. Concrete lined trench behind the building.

Phase 1 Report is presented in Appendix 1.

## **3.0 PROJECT MANAGEMENT**

### **3.1 Project Organization**

The Qualified Environmental Profession (QEP) responsible for preparation of this RIR is Paul P. Stewart.

### **3.2 Health and Safety**

All work described in this RIR was performed in full compliance with applicable laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements.

### **3.3 Materials Management**

All material encountered during the RI was managed in accordance with applicable laws and regulations.

## **4.0 REMEDIAL INVESTIGATION ACTIVITIES**

Advanced Cleanup Technologies performed the following scope of work:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Performed ground penetrating radar to determine the existence and location of an historic underground storage tank in the vicinity of fill and vent pipes along the northwest side of the building;
3. Installed four soil borings across the entire project Site, and collected eight soil samples for chemical analysis from the soil borings to evaluate soil quality;
4. Attempted to install temporary ground water monitoring wells and collect ground water samples from 2 separate locations;
5. Installed three soil vapor probes around Site perimeter and collected three samples for chemical analysis;
6. Performed indoor air collection and sampling of one location inside the building.

### **4.1 Geophysical Investigation**

A geophysical survey was performed on October 17, 2012 encompassing the sidewalk in front of the building to investigate for the presence of potential USTs that were identified during Site reconnaissance. The survey was performed utilizing an SIR-2000 GPR Unit. The survey was performed at a range to allow for the identification of anomalies to a depth of approximately 10 bgs. The GPR survey produced an anomaly characterized by partial parabolic reflections indicative of an underground storage tank in the area of the observed fill pipe. The results of the survey were included in the preliminary Phase II investigation and already submitted to the NYCOER.

### **4.2 Borings and Monitoring Wells**

#### **Drilling and Soil Logging**

Two (2) soil borings were installed at the site at the locations depicted in Figure 4. Each boring was installed utilizing a Geoprobe-style drill rig in combination with five foot-macro core soil samples containing dedicated acetate liners. All down hole drilling equipment was

decontaminated between sampling events to minimize the possibility of cross contamination. Field notes are provided in Appendix 2. Soil boring logs are provided in Appendix 3.

Soil was continuously sampled in each soil boring from ground surface to a depth of 10' bgs in SB-3 and a depth of 5' bgs in SB-4. All soil samples were screened for volatile organic compounds (VOCs) utilizing a Photovac 2020 Photo Ionization Detector (PID) and visually examined for lithology and the presence of contamination. None of the soil boring locations had evidence of staining or PID levels greater than 0.0 ppm.

Two soil samples were collected from each soil boring and placed in appropriate laboratory issued containers. The samples were collected from the shallow soils 0-2' bgs and from deeper soils 8-10' bgs in SB-3 and 3-5' bgs in SB-4.

A total of four soil samples were submitted to Ecotest Laboratories. Soil samples were analyzed for VOCs in accordance with EPA Method 8260, SVOCs in accordance with EPA Method 8270, Metals in accordance with EPA Methods 6010 and 7471 and lastly PCBs and Pesticides in accordance with EPA Methods 8081 and 8082. Copies of the laboratory reports are included in Appendix 4.

### **4.3 Sample Collection and Chemical Analysis**

Sampling performed as part of the field investigation was conducted for all Areas of Concern and also considered other means for bias of sampling based on professional judgment, area history, discolored soil, stressed vegetation, drainage patterns, field instrument measurements, odor, or other field indicators. Soil and soil vapor have been sampled and evaluated in the RIR. Due to access issues, groundwater wells were not installed during this investigation, but will be installed as soon as on-site buildings are demolished and prior to redevelopment. Discrete (grab) samples have been used for final delineation of the nature and extent of contamination and to determine the impact of contaminants on public health and the environment. Measurements were taken to record the locations of all sampling points; they are included in the field notes. The sampling performed and presented in this RIR provides sufficient basis for evaluation of remedial action alternatives, establishment of a qualitative human health exposure assessment, and selection of a final remedy.

## **Soil Sampling**

Four soil samples were collected for chemical analysis during this RI. Data on soil sample collection for chemical analyses, including dates of collection and sample depths, is reported in Tables 1 through 4. Figure 4 shows the location of samples collected in this investigation. Laboratories and analytical methods are shown below.

All equipment was properly decontaminated between each sampling event after each use to prevent the contamination of samples. Care was taken to store and transport the equipment away from cleaning solvents and gasoline. Cleaned equipment was handled as little as possible prior to use and disposable gloves were worn during the handling. Sampling equipment was field decontaminated according to the following steps;

- Washed with solution of non-phosphate detergent in tap water;
- Rinsed with tap water;
- Rinsed with distilled/de-ionized water;
- Rinsed with methanol;
- Rinsed with distilled/de-ionized water;
- Air dry.

A decontamination area was set up in a non-contaminated are of the site, away from the work area. A polyethylene tarp was placed on the ground and the cleaning/rinsing solutions were stored in laboratory wash bottles to reduce water generation. Scrub brushes were used to remove residue from the equipment. All rinse solutions were collected into one-gallon polyethylene containers and transported to ACT's Hicksville office for disposal as manifested laboratory waste.

## **Groundwater Sampling**

Groundwater wells were not installed due to access problems related to existing building. After building is demolished, groundwater wells will be installed prior to property redevelopment. Groundwater is expected to be at a depth of 49 feet below ground surface.

## Soil Vapor Sampling

Prior to sample collection, helium tracer gas and a portable helium detector were utilized to verify that a proper seal was created between the soil vapor implant and the ground surface. The portion of the polyethylene tube emerging from the ground was connected to a low flow vacuum pump that purged the probe of soil vapor at a flow rate that did not exceed 0.2 liters per minute. A 6-Liter stainless steel Summa canister with a flow regulator set to a flow rate of approximately 0.02 liters per minute was connected to the polyethylene tubing and collected soil vapor until the pressure regulators read below 10 inches of Hg but above 0" of Hg (which will achieve the minimum reporting limits), approximately 5 hours. The polyethylene tubing for SV-3 was installed to a final depth of 5' bgs. Due to standing water in the location for SV-2 the tubing was installed to a depth of 4' bgs to avoid undermining the integrity of the sample obtained.

Three soil vapor probes were installed and three soil vapor samples were collected for chemical analysis during this RI. Soil vapor sampling locations are shown in Figure 4. Soil vapor sample collection data is reported in Table 5. Methodologies used for soil vapor assessment conform to the *NYS DOH Final Guidance on Soil Vapor Intrusion, October 2006*.

## Chemical Analysis

Chemical analytical work presented in this RIR has been performed in the following manner:

<b>Factor</b>	<b>Description</b>
Quality Assurance Officer	The chemical analytical quality assurance is directed by Paul P. Stewart.
Chemical Analytical Laboratory	Chemical analytical laboratory(s) used in the RI is NYS ELAP certified was ECOTEST Laboratories, Inc (NYSDOH #10320).
Chemical Analytical Methods	Soil analytical methods: <ul style="list-style-type: none"><li>• TAL Metals by EPA Method 6010C (rev. 2007);</li><li>• VOCs by EPA Method 8260C (rev. 2006);</li><li>• SVOCs by EPA Method 8270D (rev. 2007);</li></ul>

	<ul style="list-style-type: none"> <li>• Pesticides by EPA Method 8081B (rev. 2000);</li> <li>• PCBs by EPA Method 8082A (rev. 2000);</li> </ul> <p>Groundwater analytical methods:</p> <ul style="list-style-type: none"> <li>• TAL Metals by EPA Method 6010C (rev. 2007);</li> <li>• VOCs by EPA Method 8260C (rev. 2006);</li> <li>• SVOCs by EPA Method 8270D (rev. 2007);</li> <li>• Pesticides by EPA Method 8081B (rev. 2000);</li> <li>• PCBs by EPA Method 8082A (rev. 2000);</li> </ul> <p>Soil vapor analytical methods:</p> <ul style="list-style-type: none"> <li>• VOCs by TO-15 VOC parameters..</li> </ul>
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### Results of Chemical Analyses

Laboratory data for soil and soil vapor are summarized in Table 1 and 2, respectively. Laboratory data deliverables for all samples evaluated in this RIR are provided in digital form in Appendix 4.

## **5.0 ENVIRONMENTAL EVALUATION**

### **5.1 Geological and Hydrogeological Conditions**

The site is located in the borough of Brooklyn, New York. The subsurface geologic units in the area consist of unconsolidated sediments of Late Cretaceous and Pleistocene pre-Sangamon and Sangamon ages that are underlain by Precambrian crystalline bedrock, overlain by glacial deposits of Wisconsin age, and to a less extent, by Holocene deposits. Glacial drift deposits of Pleistocene age cover the majority of Kings County.

#### **Hydrogeology**

The site lies within the Brooklyn-Queens Aquifer System, which includes Kings and Queens counties. The main aquifer underlying the subject site is the Jameco Gravel unit. The major part of this aquifer is in a buried valley, which extends from the Flushing Meadow area to John F. Kennedy International Airport. Smaller parts of the Jameco aquifer occur in the Maspeth area, which is located near the site. In this area, the thickness of the Jameco aquifer is generally less than 50 feet. The nearest body of water to the site is the Gowanus Bay, which is located approximately ½ mile southwest of the site.

### **5.2 Soil Chemistry**

Data collected during the RI is sufficient to delineate the vertical and horizontal distribution of contaminants in soil/fill at the Site. A summary table of data for chemical analyses performed on soil is included in Tables 1 through 4. The soil quality data was compared to unrestricted, restricted residential and restricted commercial use soil cleanup objectives (UUSCOs, RRSCOs and CSCOs, respectively) found in Table 6.8 of 6 NYCRR Part 375.

Soil/fill samples collected during investigations showed low level concentrations of VOCs, SVOCs or PCBs. No pesticides were detected in any soil samples. PCB (Arocolor 1260) was detected in one soil sample at a concentration of 42 mg/Kg, and below Unrestricted Use SCOs. Trace concentrations of petroleum VOCs (1,2,4,5-trimethylbenzene, naphthalene, p-diethylbenzene) and chlorinated VOCs (cis-1,2-dichloroethene, trichloroethene (1.4 ug/Kg) and tetrachloroethene (14 ug/Kg)) were detected in three of eight of the soil samples obtained. Acetone (23 ug/Kg) was detected in one soil sample and methylene chloride (max. of 16 ug/Kg) was detected in four of eight samples. However, none of the VOC compounds were detected above its Unrestricted Use SCO (UUSCO). Several SVOC compounds were identified, but none

of them exceeded their respective Unrestricted Use SCOs. Several metals were detected in soil samples, and of these, lead (at 2,360 mg/Kg and 98.8 mg/Kg in two soil samples) and mercury (max. of 2.67 mg/Kg in four soil samples), exceeded Restricted Residential SCOs. Lead was detected in two shallow soils sample(s), and one mercury sample exceeded its Unrestricted Use SCO in deep soils. Overall, findings were consistent with observations for historical fill sites in areas throughout NYC.

### **5.3 Groundwater Chemistry**

Groundwater was not sampled during this investigation.

### **5.4 Soil Vapor Chemistry**

The analytical results for the soil vapor samples are summarized in Table 5. Soil vapor samples collected during the RI showed petroleum and chlorinated VOCs at moderate concentrations. Most compounds were detected at concentrations less than  $30 \mu\text{g}/\text{m}^3$ , except for ethanol at  $99 \mu\text{g}/\text{m}^3$ , toluene at  $55 \mu\text{g}/\text{m}^3$  and xylenes at a maximum concentration of  $68 \mu\text{g}/\text{m}^3$ . Total concentrations of approximately 14 total petroleum-related VOCs in soil vapor ranged from  $187 \mu\text{g}/\text{m}^3$  to  $260 \mu\text{g}/\text{m}^3$ . Chlorinated VOCs including tetrachloroethylene (PCE) was identified in one of three soil vapor samples at a concentration of  $1,830 \mu\text{g}/\text{m}^3$ , trichloroethylene (TCE) (max.  $2.26 \mu\text{g}/\text{m}^3$ ) and carbon tetrachloride (max.  $4.47 \mu\text{g}/\text{m}^3$ ). 1,1,1-trichloroethane was not detected in site soil vapor. Single detection of PCE was above guidance matrix established by the NYS DOH. PCE and TCE were identified in site soils at low concentrations. 1,1,1- TCA was not detected in site soils.

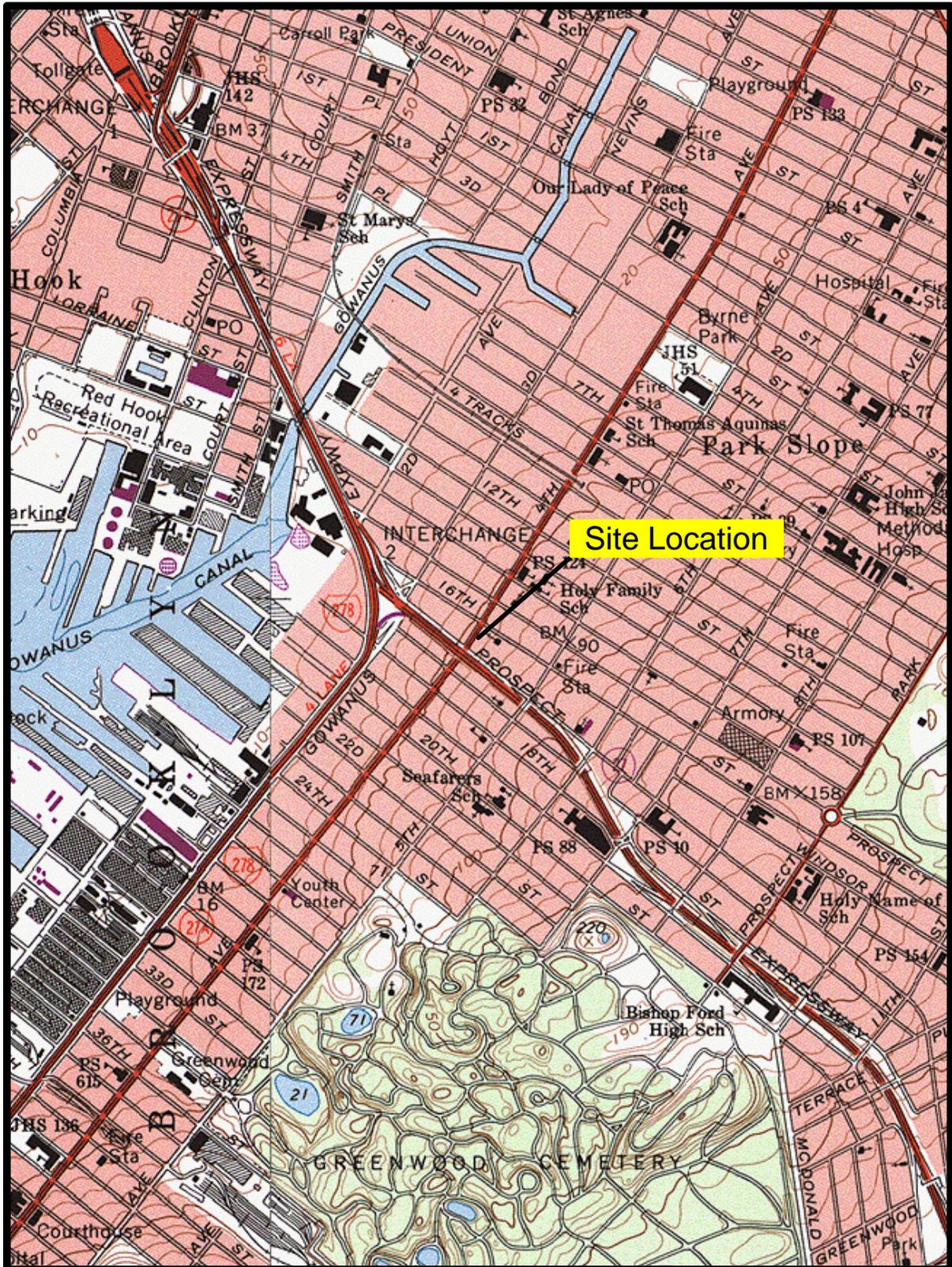
### **5.5 Prior Activity**

Based on an evaluation of the data and information from the RIR, disposal of significant amounts of hazardous waste is not suspected at this site.

### **5.6 Impediments to Remedial Action**

There are no known impediments to remedial action at this property, with the exception of groundwater chemistry. Groundwater samples will be attempted following the demolition of the building to allow better access for sampling equipment. Groundwater is expected to be found at 49' bgs.

## **FIGURES**



From USGS 7.5 Minute Topographic Map Of Brooklyn, New York Quadrangle



<b>Locational Diagram</b> 	
960 S. Broadway, Suite 100, Hicksville, New York 11801 Tel: 516-933-0655 Fax: 516-933-0659	
Project No.: 7115-BKNY	Figure No.: 1
Date: 10/19/2012	Scale: 1 inch = 2000 feet

**4TH AVENUE**

Possible UST

Fill

573

Roll up

SV-1

IA-1

SB-2

Concrete Lined Trench



Legend	
	Soil vapor point installed on September 25, 2012.
	Soil boring installed on September 25, 2012.
	Indoor air sampled on September 25, 2012.

Site Diagram	
960 S. Broadway, Suite 100, Hicksville, New York 11801 Tel: 516-933-0655 Fax: 516-933-0659	
Project No.: 7115-BKNY	Figure No.: 2
Date: 06/23/2013	Scale: Not To Scale



DOB EMPLOYEE STAMP AND SIGNATURE (APPROVAL STAMP):

CLIENT:  
**CPCC MANAGEMENT LLC**  
**WUJIE, ZHAO**  
 4920 3RD AVENUE  
 BROOKLYN, NEW YORK 11220  
 TEL (718) 439-4688

REVISIONS:

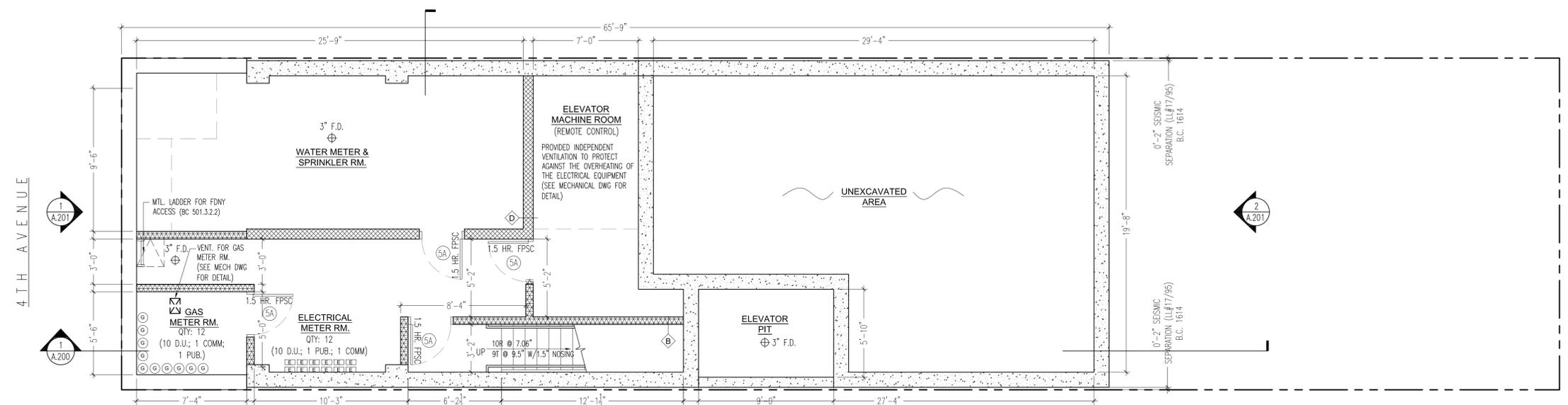
REV. NO.	DATE	DESCRIPTION
NO. 1		
NO. 2		
NO. 3		
NO. 3		
NO. 2		
NO. 1		
ISSUE NO.	DATE	ISSUED TO

and the reproduction of this drawing or the use of ideas and arrangements indicated on this drawing without the written approval of this office is prohibited. Written dimensions take precedence over scaled dimensions. The contractor shall verify dimensions and conditions at the job and report discrepancies to the architect/engineer prior to the start of the work.

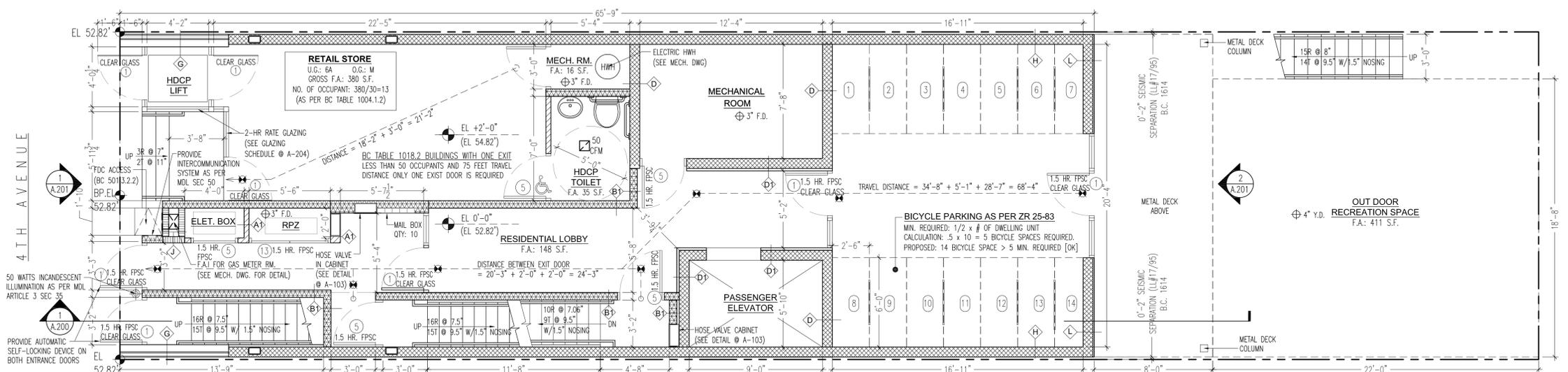
PROJECT:  
**573 4TH AVENUE**  
**BROOKLYN, NEW YORK 11215**

DRAWING TITLE:  
**PROPOSED CELLAR, 1ST & 2ND FLOOR PLAN**

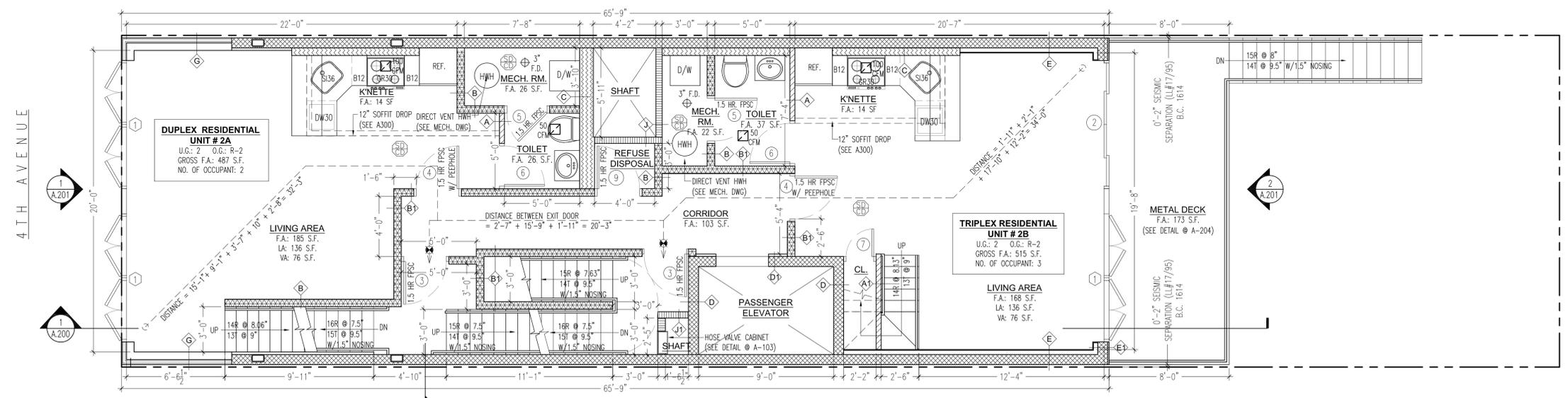
ISSUED: 12.11.12  
 PROJECT NO:  
 DRAWN BY: JZ  
 CHECK BY: TCO  
 DWG NO:  
**A-100.00**  
 SEAL AND SIGNATURE:  
 FILE: 573 4TH AVENUE SHEET: 10 OF  
 DOB JOB NO:



**CELLAR PLAN**  
 SCALE: 1/4" = 1'-0"



**1ST FLOOR PLAN**  
 SCALE: 1/4" = 1'-0"



**2ND FLOOR PLAN**  
 SCALE: 1/4" = 1'-0"

4TH AVENUE

4TH AVENUE

4TH AVENUE

DOB EMPLOYEE STAMP AND SIGNATURE (APPROVAL STAMP):

CLIENT:  
**CPCC MANAGEMENT LLC**  
**WUJIE, ZHAO**  
 4920 3RD AVENUE  
 BROOKLYN, NEW YORK 11220  
 TEL (718) 439-4688

REVISIONS:

REV. NO.	DATE	DESCRIPTION
NO. 1		
NO. 2		
NO. 3		
NO. 3		
NO. 2		
NO. 1		
ISSUE NO.	DATE	ISSUED TO

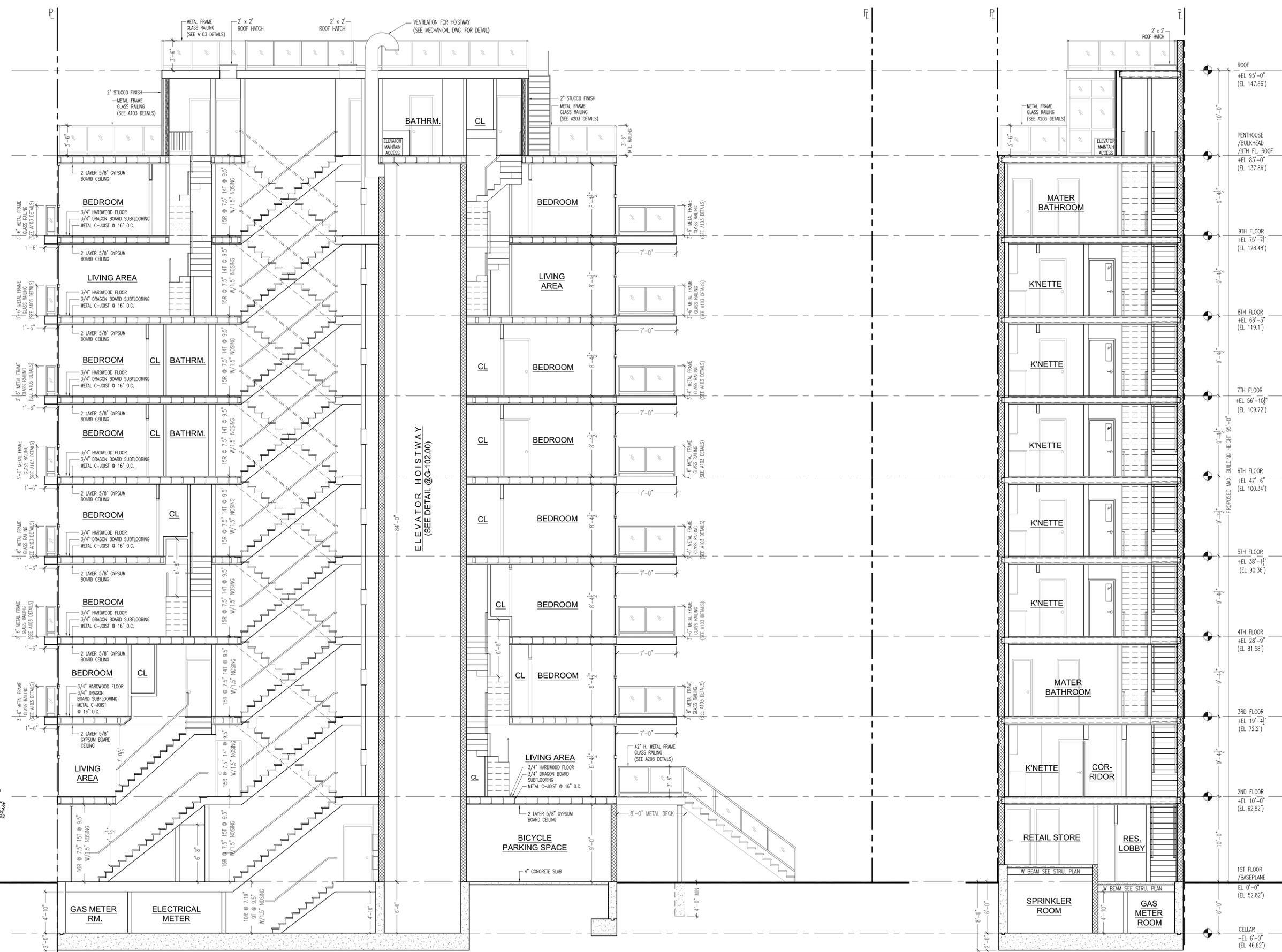
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PROJECT:  
**573 4TH AVENUE**  
**BROOKLYN, NEW YORK 11215**

DRAWING TITLE:

**BUILDING SECTIONS**

ISSUED: 12.11.12	SEAL AND SIGNATURE:
PROJECT NO:	
DRAWN BY: JC	
CHECK BY: TCO	
DWG NO:	
<b>A-200.00</b>	
FILE: 573 4TH AVENUE	SHEET: 14 OF
DOB JOB NO:	



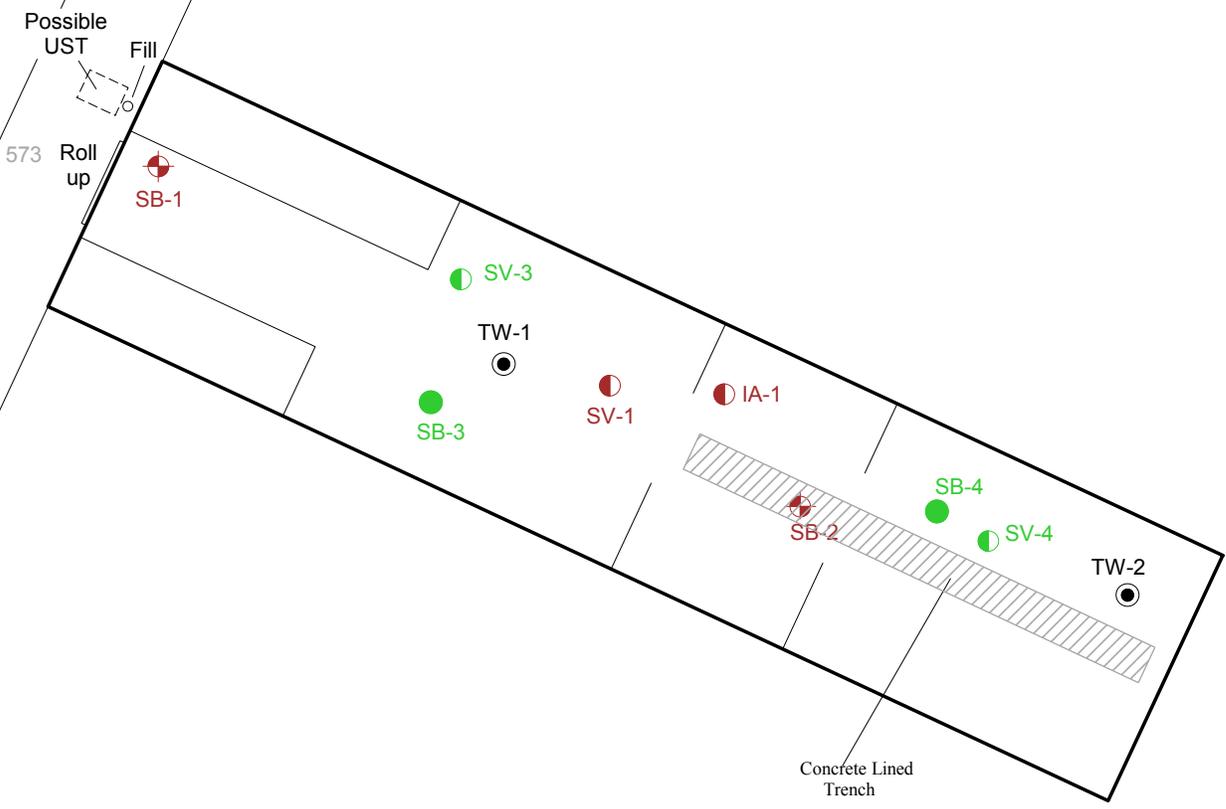
**1 LONGITUDINAL SECTION**  
 SCALE: 1/4" = 1'-0"

**2 TRANSVERSAL SECTION**  
 SCALE: 1/4" = 1'-0"



4TH AVE.

**4TH AVENUE**



Concrete Lined Trench

Legend	
 SV-1	Soil vapor point installed on September 25, 2012.
 SB-1	Soil boring installed on September 25, 2012.
 IA-1	Indoor air sampled on September 25, 2012.
 SB-3	Soil boring installed on June 20, 2013.
 SV-2	Soil vapor point installed on June 20, 2013.
 TW-1	Proposed sampling point for temporary well. (Pending access and building demo.)



**Sampling Diagram**



960 S. Broadway, Suite 100, Hicksville, New York 11801  
 Tel: 516-933-0655 Fax: 516-933-0659

Project No.: 7115-BKNY	Figure No.: 4
Date: 06/23/2013	Scale: Not To Scale

4TH AVENUE

Possible UST  
Fill

573 Roll up

SB-1 (0-2') Value Standard  
Mercury 0.429 0.18(UUSCO)

SV-1(6") Value Standard  
PCE 1,830 100

IA-1	Value	Background Value
1,2,4-Trimethylbenzene	11.2	5.1
Benzene	12.5	5.1
Ethylbenzene	7.95	3.4
n-Hexane	13.8	6.4
Toluene	33.1	25.9
Xylenes (m&p)	12.2	25.8
Xylenes (o)	10.2	4.4

SB-3 (0-2') Value Standard  
Lead 98.8 63(UUSCO)

SB-2 (0-2') Value Standard  
Lead 2,360 1,000(CSCO)  
Mercury 2.67 0.81(RRSCO)

SB-2 (10-12') Value Standard  
Mercury 0.232 0.81(RRSCO)

Concrete Lined Trench

Legend	
	Soil vapor point installed on September 25, 2012.
	Soil boring installed on September 25, 2012.
	Indoor air sampled on September 25, 2012.
	Soil boring installed on June 20, 2013.
	Soil vapor point installed on June 20, 2013.
	Proposed sampling point for temporary well. (Pending access and building demo.)

Standards and Background Values
Unrestricted Use Soil Cleanup Objectives (UUSCO) Table 375-6.8(a), 6NYCRR 375, NYSDEC 2006
Restricted Residential Soil Cleanup Objectives (RRSCO) Table 375-6.8(b), 6NYCRR 375, NYSDEC 2006
Commercial Soil Cleanup Objectives (CSCO) Table 375-6.8(b), 6NYCRR 375, NYSDEC 2006
Background Values derived from EPA 2001 Building Assessment and Survey Evaluation (BASE) database



Exceedence Diagram	
	
960 S. Broadway, Suite 100, Hicksville, New York 11801 Tel: 516-933-0655 Fax: 516-933-0659	
Project No.: 7115-BKNY	Figure No.: 4
Date: 06/23/2013	Scale: Not To Scale

## **TABLES**

**Table 1**  
**Volatile Organic Compounds in Soil [EPA Method 8260 (ug/kg)]**  
**573 4th Avenue**  
**Brooklyn, NY**  
**ACT Project No.: 7115-BKNY**

Sample ID Sample Date	UUSCO <sup>1</sup>	Standard RRSCO <sup>2</sup>	CSCO <sup>3</sup>	SB-1 (0-2') 9/25/12	SB-1 (10-12') 9/25/12	SB-2 (0-2') 9/25/12	SB-2 (10-12') 9/25/12	SB-3 (0-2') 6/20/13	SB-3 (8-10') 6/20/13	SB-4 (0-2') 6/20/13	SB-4 (3-5') 6/20/13
1,1,1-Trichloroethane	680	100,000	500,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,1,2,2-Tetrachloroethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,1,2-Trichloroethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,1-Dichloroethane	270	26,000	240,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,1-Dichloroethene	330	100,000	500,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,2,4-Trichlorobenzene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,2-Dibromo-3-chloropropane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,2-Dibromoethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,2-Dichlorobenzene	1,100	100,000	500,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,2-Dichloroethane	20	3,100	30,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,2-Dichloropropane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,3-Dichlorobenzene	2,400	49,000	280,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
1,4-Dichlorobenzene	1,800	13,000	130,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
2-Butanone	120	100,000	500,000	<6.0	<5.8	<5.8	<6.2	<13	<11	<11	<11
2-Hexanone	NS	NS	NS	<6.0	<5.8	<5.8	<6.2	<13	<11	<11	<11
4-Methyl-2-pentanone	NS	NS	NS	<6.0	<5.8	<5.8	<6.2	<13	<11	<11	<11
Acetone	50	100,000	500,000	<b>23.0</b>	<5.8	<5.8	<6.2	<13	<11	<11	<11
Benzene	60	4,800	44,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Bromodichloromethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Bromoform	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Bromomethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Carbon disulfide	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Carbon tetrachloride	760	2,400	22,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Chlorobenzene	1,100	100,000	500,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Chloroethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Chloroform	370	49,000	350,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Chloromethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
cis-1,2-Dichloroethene	250	100,000	500,000	<b>1.7</b>	<2.3	<2.3	<2.5	<13	<11	<11	<11
cis-1,3-Dichloropropene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Cyclohexane	NS	NS	NS	NA	NA	NA	NA	<13	<11	<11	<11
Dibromochloromethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Dichlorodifluoromethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Ethylbenzene	1,000	41,000	390,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Isopropylbenzene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Methyl Acetate	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Methyl tert-butyl ether	930	100,000	500,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Methylcyclohexane	NS	NS	NS	NA	NA	NA	NA	<13	<11	<11	<11
Methylene chloride	50	100,000	500,000	<b>16.0</b>	<b>6.3</b>	<b>7.7</b>	<b>6.0</b>	<13	<11	<11	<11
Styrene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Tetrachloroethene	1,300	19,000	150,000	<b>14.0</b>	<b>1.9</b>	<b>5.4</b>	<2.5	<13	<11	<11	<11
Toluene	700	100,000	500,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
trans-1,2-Dichloroethene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
trans-1,3-Dichloropropene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Trichloroethene	470	21,000	200,000	<b>1.4</b>	<2.3	<b>0.40</b>	<2.5	<13	<11	<11	<11
Trichlorofluoromethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Vinyl chloride	20	900	13,000	<2.4	<2.3	<2.3	<2.5	<13	<11	<11	<11
Xylenes (Total)	260	100,000	500,000	<7.2	<6.9	<6.9	<7.4	<13	<11	<11	<11

<sup>1</sup> Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006  
<sup>2</sup> Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006  
<sup>3</sup> Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006  
 Bolded values signify detection above method detection limit  
 Highlighted values signify exceedance of regulatory guidance  
 NA = Not Analyzed  
 NS = No Standard

Table 1 continued: Semi-Volatile Organic Compounds in Soil [EPA Method 8270 (ug/kg)]

Sample ID Sample Date	UUSCO <sup>1</sup>	Standard RRSCO <sup>2</sup>	CSCO <sup>3</sup>	SB-1 (0-2') 9/25/12	SB-1 (10-12') 9/25/12	SB-2 (0-2') 9/25/12	SB-2 (10-12') 9/25/12	SB-3 (0-2') 6/20/13	SB-3 (8-10') 6/20/13	SB-4 (0-2') 6/20/13	SB-4 (3-5') 6/20/13
1,1'-Biphenyl	NS	NS	NS	NA	NA	NA	NA	<380	<400	<370	<370
2,2'-oxybis(1-chloropropane)	NS	NS	NS	NA	NA	NA	NA	<380	<400	<370	<370
2,4,5-Trichlorophenol	NS	NS	NS	<290	<280	<290	<310	<960	<1,000	<920	<920
2,4,6-Trichlorophenol	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
2,4-Dichlorophenol	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
2,4-Dimethylphenol	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
2,4-Dinitrophenol	NS	NS	NS	<290	<280	<290	<310	<960	<1,000	<920	<920
2,4-Dinitrotoluene	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
2,6-Dinitrotoluene	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
2-Chloronaphthalene	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
2-Chlorophenol	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
2-Methylnaphthalene	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
2-Methylphenol	330	100,000	500,000	<290	<280	<290	<310	<380	<400	<370	<370
2-Nitroaniline	NS	NS	NS	<290	<280	<290	<310	<960	<1,000	<920	<920
2-Nitrophenol	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
3,3'-Dichlorobenzidine	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
3-Nitroaniline	NS	NS	NS	<290	<280	<290	<310	<380	<1,000	<370	<370
4,6-Dinitro-2-methylphenol	NS	NS	NS	<290	<280	<290	<310	<380	<1,000	<370	<370
4-Bromophenyl-phenylether	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
4-Chloro-3-methylphenol	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
4-Chloroaniline	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
4-Chlorophenyl phenyl ether	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
4-Methylphenol	NS	NS	NS	NA	NA	NA	NA	<380	<400	<370	<370
4-Nitroaniline	NS	NS	NS	<290	<280	<290	<310	<960	<1,000	<920	<920
4-Nitrophenol	NS	NS	NS	<290	<280	<290	<310	<960	<1,000	<920	<920
Acenaphthene	20,000	100,000	500,000	<290	<280	<b>95.0</b>	<310	<380	<400	<370	<370
Acenaphthylene	100,000	100,000	500,000	<290	<280	<b>34.0</b>	<310	<380	<400	<370	<370
Acetophenone	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Anthracene	100,000	100,000	500,000	<b>44.0</b>	<280	<b>270</b>	<310	<380	<400	<370	<370
Atrazine	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Benzaldehyde	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Benzo(a)anthracene	1,000	1,000	5,600	<b>170</b>	<280	<b>670</b>	<310	<380	<400	<370	<370
Benzo(a)pyrene	1,000	1,000	1,000	<b>170</b>	<280	<b>560</b>	<310	<380	<400	<370	<370
Benzo(b)fluoranthene	1,000	1,000	5,600	<b>150</b>	<280	<b>480</b>	<310	<380	<400	<370	<370
Benzo(g,h,i)perylene	100,000	100,000	500,000	<b>100</b>	<280	<b>370</b>	<310	<380	<400	<370	<370
Benzo(k)fluoranthene	800	3,900	56,000	<b>130</b>	<280	<b>510</b>	<310	<380	<400	<370	<370
Bis(2-chloroethoxy)methane	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Bis(2-chloroethyl)ether	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Bis(2-ethylhexyl)phthalate	NS	NS	NS	<b>400</b>	<b>120</b>	<b>180</b>	<b>150</b>	<380	<400	<370	<370
Butyl benzyl phthalate	NS	NS	NS	<b>52.0</b>	<280	<290	<310	<380	<400	<370	<370
Caprolactam	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Carbazole	NS	NS	NS	<290	<280	<b>75.0</b>	<310	<380	<400	<370	<370
Chrysene	1,000	3,900	56,000	<b>230</b>	<280	<b>690</b>	<310	<380	<400	<370	<370
Dibenzo(a,h)anthracene	330	330	560	<b>37.0</b>	<280	<290	<310	<380	<400	<370	<370
Dibenzofuran	NS	NS	NS	<290	<280	<b>54.0</b>	<310	<380	<400	<370	<370
Diethyl phthalate	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Dimethyl phthalate	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Di-n-butyl phthalate	NS	NS	NS	<b>780</b>	<b>480</b>	<b>640</b>	<b>740</b>	<380	<400	<370	<370
Di-n-octyl phthalate	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Fluoranthene	100,000	100,000	500,000	<b>330</b>	<280	<b>1,900</b>	<b>33.0</b>	<380	<400	<370	<370
Fluorene	30,000	100,000	500,000	<290	<280	<b>93.0</b>	<310	<380	<400	<370	<370
Hexachlorobenzene	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Hexachlorobutadiene	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Hexachlorocyclopentadiene	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Hexachloroethane	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Indeno(1,2,3-c,d)pyrene	500	500	5,600	<b>100</b>	<280	<b>400</b>	<310	<380	<400	<370	<370
Isophorone	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Naphthalene	12,000	100,000	500,000	<290	<280	<290	<310	<380	<400	<370	<370
Nitrobenzene	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
N-Nitrosodi-n-propylamine	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
N-Nitrosodiphenylamine	NS	NS	NS	<290	<280	<290	<310	<380	<400	<370	<370
Pentachlorophenol	800	6,700	6,700	<290	<280	<290	<310	<960	<1,000	<920	<920
Phenanthrene	100,000	100,000	500,000	<b>220</b>	<280	<b>1,500</b>	<310	<380	<400	<370	<370
Phenol	330	100,000	500,000	<290	<280	<290	<310	<380	<400	<370	<370
Pyrene	100,000	100,000	500,000	<b>310</b>	<280	<b>1,500</b>	<310	<380	<400	<370	<370

<sup>1</sup> Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006  
<sup>2</sup> Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006  
<sup>3</sup> Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006  
 Bolded values signify detection above method detection limit  
 Highlighted values signify exceedance of regulatory guidance  
 NA = Not Analyzed  
 NS = No Standard

Table 1 continued: Metals in Soil [EPA Method 6010 and 7471(ug/kg)]											
Sample ID	UUSCO <sup>1</sup>	Standard RRSCO <sup>2</sup>	CSCO <sup>3</sup>	SB-1 (0-2')	SB-1 (10-12')	SB-2 (0-2')	SB-2 (10-12')	SB-3 (0-2')	SB-3 (8-10')	SB-4 (0-2')	SB-4 (3-5')
Sample Date				9/25/12	9/25/12	9/25/12	9/25/12	6/20/13	6/20/13	6/20/13	6/20/13
Aluminum	NS	NS	NS	NA	NA	NA	NA	4,490	4,480	10,000	4,760
Antimony	NS	NS	NS	NA	NA	NA	NA	<6.93	<7.27	<6.66	<6.66
Arsenic	13	16	16	4.1	4.5	4.1	4.3	7.2	2.1	3.8	2.6
Barium	350	400	400	67.2	21.2	72.2	61.3	41.3	34.8	48.6	37.7
Beryllium	7.2	72	590	NA	NA	NA	NA	<0.58	<0.61	<0.55	<0.55
Cadmium	2.5	4.3	9.3	0.451	<0.458	2.4	<0.488	<0.58	<0.61	<0.55	<0.55
Calcium	NS	NS	NS	NA	NA	NA	NA	1,440	1,080	2,720	1,070
Chromium	30	180	1,500	10.5	8.62	21.5	19.0	15.2	14.1	17.7	15.9
Cobalt	NS	NS	NS	NA	NA	NA	NA	<5.78	<6.06	6.44	<5.55
Copper	50	270	270	NA	NA	NA	NA	12.7	10.2	9.1	9.2
Iron	NS	NS	NS	NA	NA	NA	NA	15,100	10,100	15,400	13,000
Lead	63	400	1,000	34.9	7.49	2,360	28.6	98.8	3.6	33.5	4.7
Magnesium	NS	NS	NS	NA	NA	NA	NA	1,760	1,850	2,020	1,900
Manganese	1,600	2,000	10,000	NA	NA	NA	NA	148	190	304	190
Mercury	0.18	0.81	2.8	0.429	0.0349	2.67	0.232	0.44	<0.24	<0.22	<0.22
Nickel	30	310	310	NA	NA	NA	NA	11.3	11.6	10.3	8.8
Potassium	NS	NS	NS	NA	NA	NA	NA	1,050	1,110	1,020	1,160
Selenium	3.9	180	1,500	0.329	<0.572	<0.569	<0.610	<0.58	<0.61	<0.55	<0.55
Silver	2	180	1,500	0.123	<0.458	0.723	<0.488	<1.16	<1.21	<1.11	<1.11
Sodium	NS	NS	NS	NA	NA	NA	NA	53.6	38.1	43.0	34.5
Thallium	NS	NS	NS	NA	NA	NA	NA	<1.16	<1.21	<1.11	<1.11
Vanadium	NS	NS	NS	NA	NA	NA	NA	26.3	19.1	20.9	24.1
Zinc	109	10,000	10,000	NA	NA	NA	NA	51.5	24.6	42.2	24.5

Table 1 continued: PCBs and Pesticides in Soil [EPA Method 8081/8082(ug/kg)]											
Sample ID	UUSCO <sup>1</sup>	Standard RRSCO <sup>2</sup>	CSCO <sup>3</sup>	SB-1 (0-2')	SB-1 (10-12')	SB-2 (0-2')	SB-2 (10-12')	SB-3 (0-2')	SB-3 (8-10')	SB-4 (0-2')	SB-4 (3-5')
Sample Date				9/25/12	9/25/12	9/25/12	9/25/12	6/20/13	6/20/13	6/20/13	6/20/13
4,4'-DDD	3.3	2,800	92,000	NA	NA	NA	NA	<3.8	<4.0	<11	<3.6
4,4'-DDE	3.3	1,800	62,000	NA	NA	NA	NA	<3.8	<4.0	<11	<3.6
4,4'-DDT	3.3	1,700	47,000	NA	NA	NA	NA	<3.8	<4.0	<11	<3.6
Aldrin	5	19	680	NA	NA	NA	NA	<2.0	<2.1	<5.6	<1.9
alpha-BHC	20	97	3,400	NA	NA	NA	NA	<2.0	<2.1	<5.6	<1.9
alpha-Chlordane	94	4,200	24,000	NA	NA	NA	NA	<2.0	<2.1	<5.6	<1.9
Aroclor 1016	100	1,000	1,000	NA	NA	NA	NA	<38	<40	<110	<36
Aroclor 1221	100	1,000	1,000	NA	NA	NA	NA	<77	<81	<220	<74
Aroclor 1232	100	1,000	1,000	NA	NA	NA	NA	<38	<40	<110	<36
Aroclor 1242	100	1,000	1,000	NA	NA	NA	NA	<38	<40	<110	<36
Aroclor 1248	100	1,000	1,000	NA	NA	NA	NA	<38	<40	<110	<36
Aroclor 1254	100	1,000	1,000	NA	NA	NA	NA	<38	<40	<110	<36
Aroclor 1260	100	1,000	1,000	NA	NA	NA	NA	<38	<40	<110	42
beta-BHC	36	72	3,000	NA	NA	NA	NA	<2.0	<2.1	<5.6	<1.9
delta-BHC	40	100,000	500,000	NA	NA	NA	NA	<2.0	<2.1	<5.6	<1.9
Dieldrin	5	39	1,400	NA	NA	NA	NA	<3.8	<4.0	<11	<3.6
Endosulfan I	2,400	4,800	200,000	NA	NA	NA	NA	<2.0	<2.1	<5.6	<1.9
Endosulfan II	2,400	4,800	200,000	NA	NA	NA	NA	<3.8	<4.0	<11	<3.6
Endosulfan sulfate	2,400	4,800	200,000	NA	NA	NA	NA	<3.8	<4.0	<11	<3.6
Endrin	14	2,200	89,000	NA	NA	NA	NA	<3.8	<4.0	<11	<3.6
Endrin aldehyde	NS	NS	NS	NA	NA	NA	NA	<3.8	<4.0	<11	<3.6
Endrin ketone	NS	NS	NS	NA	NA	NA	NA	<3.8	<4.0	<5.6	<3.6
gamma-BHC	100	280	9,200	NA	NA	NA	NA	<2.0	<2.1	<5.6	<1.9
gamma-Chlordane	NS	NS	NS	NA	NA	NA	NA	<2.0	<2.1	<5.6	<1.9
Heptachlor	42	420	15,000	NA	NA	NA	NA	<2.0	<2.1	<5.6	<1.9
Heptachlor epoxide	NS	NS	NS	NA	NA	NA	NA	<2.0	<2.1	<5.6	<1.9
Methoxychlor	NS	NS	NS	NA	NA	NA	NA	<20	<21	<56	<19
Toxaphene	NS	NS	NS	NA	NA	NA	NA	<200	<210	<560	<190

<sup>1</sup> Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006  
<sup>2</sup> Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006  
<sup>3</sup> Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006  
 Bolded values signify detection above method detection limit  
 Highlighted values signify exceedance of regulatory guidance  
 NA = Not Analyzed  
 NS = No Standard

Table 2

Volatile Organic Compounds in Sub-Slab Vapor (ug/m3)  
EPA Method TO-15  
573 4th Avenue  
Brooklyn, NY

ACT Project No.: 6533-JANY

Sample ID Sample Date	NYSDOH Guideline <sup>1</sup>	Background Value <sup>2</sup>	IA-1 9/13/12	SV-1 (6") 9/13/12	SV-3 (4') 6/20/13	SV-4 (5') 6/20/13
1,1,1-Trichloroethane	NA	11	<1.09	<1.09	<1.09	<1.09
1,1,2,2-Tetrachloroethane	NA	NS	<1.37	<1.37	<1.37	<1.37
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NS	<0.766	<0.766	<0.77	<0.77
1,1,2-Trichloroethane	NA	<1.4	<1.09	<1.09	<1.09	<1.09
1,1-Dichloroethane	NA	<0.5	<0.809	<0.809	<0.81	<0.81
1,1-Dichloroethene	NA	<1.2	<0.793	<0.793	<0.79	<0.79
1,2,4-Trichlorobenzene	NA	<1.2	<1.48	<1.48	<1.48	<1.48
1,2,4-Trimethylbenzene	NA	5	<b>11.2</b>	<b>29.2</b>	<b>10.3</b>	<b>9.5</b>
1,2-Dibromoethane	NA	<1.4	<1.54	<1.54	<1.54	<1.54
1,2-Dichlorobenzene	NA	<1.0	<1.20	<1.20	<1.20	<1.20
1,2-Dichloroethane	NA	<0.7	<0.809	<0.809	<0.81	<0.81
1,2-Dichloroethene (cis)	NA	<1.2	<0.793	<0.793	<0.79	<0.79
1,2-Dichloroethene (trans)	NA	NS	<0.793	<0.793	<0.79	<0.79
1,2-Dichloropropane	NA	<1.6	<0.924	<0.924	<0.92	<0.92
1,2-Dichlorotetrafluoroethane	NA	NS	<1.40	<1.40	<1.40	<1.40
1,3,5-Trimethylbenzene	NA	<4.6	<b>3.6</b>	<b>8.6</b>	<b>3.2</b>	<b>2.9</b>
1,3-Butadiene	NA	<2.7	<0.442	<0.442	<0.44	<0.44
1,3-Dichlorobenzene	NA	<1.1	<1.20	<1.20	<1.20	<1.02
1,3-Dichloropropene (cis)	NA	<2.0	<0.908	<0.908	<0.91	<0.91
1,3-Dichloropropene (trans)	NA	<1.2	<0.908	<0.908	<0.91	<0.91
1,3-Hexachlorobutadiene	NA	NS	<2.13	<2.13	<2.13	<2.13
1,4-Dichlorobenzene	NA	1	<1.20	<1.20	<1.20	<1.2
1,4-Dioxane	NA	NS	<0.721	<0.721	<0.72	<0.72
2,2,4-Trimethylpentane	NA	NS	<b>21.0</b>	<b>6.9</b>	<b>29.9</b>	<b>24.0</b>
4-Ethyltoluene	NA	<3.1	<b>2.9</b>	<b>7.4</b>	<b>3.1</b>	<b>2.8</b>
Acetone	NA	60	<0.475	<b>34.1</b>	<b>13.4</b>	<b>10.9</b>
Benzene	NA	5	<b>12.5</b>	<b>4.4</b>	<b>16.0</b>	<b>15.8</b>
Bromodichloromethane	NA	NS	<1.34	<1.34	<1.34	<1.34
Bromoform	NA	NS	<2.07	<2.07	<2.07	<2.07
Bromomethane	NA	<1.1	<0.777	<0.777	<0.78	<0.78
Carbon disulfide	NA	2	<0.623	<b>0.903</b>	<0.62	<0.62
Carbon tetrachloride	NA	<1.1	<1.26	<b>4.5</b>	<1.26	<1.26
Chlorobenzene	NA	<0.8	<0.921	<0.921	<0.92	<0.92
Chloroethane	NA	<1.0	<0.528	<0.528	<0.53	<0.53
Chloroform	NA	<1.2	<0.977	<b>1.1</b>	<b>1.1</b>	<0.98
Chloromethane	NA	3	<b>0.950</b>	<0.413	<b>1.1</b>	<b>1.1</b>
Cyclohexane	NA	NS	<b>4.5</b>	<b>2.68</b>	<b>6.3</b>	<b>5.1</b>
Dibromochloromethane	NA	NS	<1.70	<1.70	<1.70	<1.70
Dichlorodifluoromethane	NA	11	<b>2.3</b>	<b>2.0</b>	<b>2.4</b>	<b>2.4</b>
Ethanol	NA	140	<b>67.4</b>	<b>9.0</b>	<b>99.9</b>	<b>68.2</b>
Ethyl acetate	NA	3	<0.721	<0.721	<0.72	<0.72
Ethylbenzene	NA	3	<b>8.0</b>	<b>18.2</b>	<b>7.6</b>	<b>6.3</b>
Isopropanol	NA	NS	<b>2.2</b>	<b>1.3</b>	<b>2.5</b>	<b>1.6</b>
Methyl butyl ketone	NA	NS	<0.819	<0.819	<0.82	<0.82
Methyl ethyl ketone	NA	8	<b>2.5</b>	<b>9.8</b>	<b>3.0</b>	<b>2.5</b>
Methyl isobutyl ketone	NA	3	<0.820	<0.820	<0.82	<0.82
Methyl tert-butyl ether	NA	<6.4	<0.721	<0.721	<0.72	<0.72
Methylene chloride	60	5	<b>1.8</b>	<b>1.9</b>	<b>4.8</b>	<b>3.3</b>
n-Heptane	NA	<1.6	<b>7.9</b>	<b>11.0</b>	<b>10.6</b>	<b>8.0</b>
n-Hexane	NA	6	<b>13.8</b>	<b>9.2</b>	<b>17.7</b>	<b>13.0</b>
Propylene	NA	NS	<b>18.2</b>	<b>4.5</b>	<b>20.1</b>	<b>29.1</b>
Styrene	NA	<2.3	<b>3.5</b>	<b>0.980</b>	<b>1.5</b>	<b>1.6</b>
tert-Butyl Alcohol	NA	NS	<0.606	<b>3.0</b>	<b>6.0</b>	<b>6.6</b>
Tetrachloroethene	100	6	<1.36	<b>1,830</b>	<1.36	<1.36
Tetrahydrofuran	NA	NS	<0.590	<b>37.9</b>	<b>1.2</b>	<b>0.9</b>
Toluene	NA	26	<b>33.1</b>	<b>55.4</b>	<b>44.3</b>	<b>38.7</b>
Trichloroethene	5	1.2	<1.07	<b>2.3</b>	<1.07	<1.07
Trichlorofluoromethane	NA	7	<b>1.4</b>	<b>1.6</b>	<b>1.5</b>	<b>1.4</b>
Vinyl acetate	NA	NS	<0.704	<0.704	<0.70	<0.70
Vinyl bromide	NA	NS	<0.874	<0.874	<0.87	<0.87
Vinyl chloride	NA	<1.0	<0.511	<0.511	<0.51	<0.51
Xylenes (m&p)	NA	12	<b>25.8</b>	<b>68.1</b>	<b>26.4</b>	<b>21.4</b>
Xylenes (o)	NA	4	<b>10.2</b>	<b>25.6</b>	<b>9.4</b>	<b>8.1</b>

<sup>1</sup> Table 3.1, NYSDOH "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York", October 2006.<sup>2</sup> Background values are derived from EPA 2001 Building Assessment and Survey Evaluation (BASE) Database, 75th Percentile of

Bolted values signify detection above method detection limit

NA = Not Available

## **APPENDICIES**

## **APPENDIX 1 – PREVIOUS ENVIRONMENTAL REPORTS**

*\*All information located within this document is privileged, confidential and/or proprietary\**

-- FINAL --

**Phase I Environmental Site Assessment (ESA)**

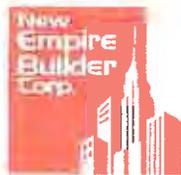
for

**573 4<sup>th</sup> Avenue, Brooklyn, NY**

**Block 1052, Lot 6**



Prepared for:



4920 3<sup>rd</sup> Avenue, Brooklyn, NY 11220

[www.usneb.com](http://www.usneb.com)

Prepared by:



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March 05, 2012

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## EXECUTIVE SUMMARY

At the request of New Empire Builder Corp., the Client, GRANT engineering (GRANT) conducted a Phase I Environmental Site Assessment (ESA) of the property located at 573 4<sup>th</sup> Avenue, Brooklyn, NY 11215 (hereinafter referred to as the "Site"). It is identified by the New York City Department of Building as Block 1052, Lot 6. This Phase I ESA was conducted as part of a due diligence to support a potential development of the Site by New Empire Builder Corp. It is understood that the Site has historically been utilized for the purpose of residential and office use. New Empire Builder Corp. intends to convert the Site to a multifamily residential building. Structural redevelopment and expansion plans were not in place for the Site at the time of this report.

According to review of fire insurance maps, the two-story building on the site was constructed in the year 1906 and was used as a blacksmith. The Site measures approximately 2,090 square feet. The Site's current listed owner is CPCC Management. The Site is in a commercial district, designated as C2-4/R8A by zoning map 16d. The Site is in a commercial district and abutted to the north and south by light commercial businesses and residential. Across 4<sup>th</sup> Avenue to the west is a large private development. Refer to **Figure 1 - Site Location Map** and **Figure 2 - Site Location Plan**.

The main objective of the Phase I ESA was to identify the presence or likely presence, use, or release of hazardous substances or petroleum products at the Site which are defined in the American Society of Testing and Materials (ASTM) Standard Practice E 1527-05 as *recognized environmental conditions (RECs)*. In addition, other environmental issues and conditions that, in the opinion of the *environmental professional* conducting the assessment, would not be considered *RECs* are identified in this assessment. These may include *historical RECs* or *de minimis* conditions. The Phase I ESA also includes a preliminary evaluation of specific potential environmental issues or conditions that are, according to ASTM E 1527-05, considered non-scope considerations. These issues include radon, asbestos-containing materials (ACM), lead-based paint (LBP) and polychlorinated biphenyls (PCBs).

The Site investigation conducted by GRANT included a walkthrough and interview with residents of adjacent buildings.

### Summary of Current Recognized Environmental Conditions

The Phase I ESA included a review of regulatory agency databases and historical documents and visual observations of the Site and adjoining properties. Fire insurance maps (Sanborn Maps) from the years 1888, 1906, 1926, 1951, 1965, 1978-1980, 1982, 1985, 1987-1988, 1991-1995, and 2001-2007 were assessed. Aerial maps from the years 1924, 1943, 1953, 1954, 1965, 1975, 1984, 1994, 1995, and 2006 assessed. Historical topographical maps from the years 1900, 1947, 1956, 1967, 1979, and 1995 were also assessed.

Review of the regulatory agency database indicated that the Site is listed as E-Designation for HAZMAT and Noise.

The Site is not known to be impacted by any environmental contamination associated with hazardous waste sites, landfills, hazardous waste generators or hazardous waste treatment, storage or disposal facilities. No other RECs were identified throughout the course of the Phase I ESA.

Consequently, GRANT does not recommend any further assessments or investigations of the Site at this time. However, should development of the Site be planned, it is recommends meeting with the Mayor's Office of Environmental Remediation (OER) to discuss the proper environmental measures to be taken prior to and during construction activities due to the E-Designation associated with the Site.

## 1.0 INTRODUCTION

At the request of New Empire Builder Corp., GRANT engineering (GRANT) conducted a Phase I Environmental Site Assessment (ESA) of the property located at 573 4<sup>th</sup> Avenue, Brooklyn, NY 11215 (hereinafter referred to as the “Site”). It is identified by the New York Department of Building (NYC DOB) as Block 1052, Lot 6.

This Phase I ESA was conducted as part of a due diligence to support a potential development of the Site by New Empire Builder Corp. It is understood that the Site has historically been utilized for the purposes of a commercial shop on the first floor with a residential apartment on the second floor. New Empire Builder Corp. intends to convert the Site to a multi story commercial and residential building. No structural redevelopment or expansion plans are in place for the Site at the time of this report.

According to review of fire insurance maps, the two-story brick building on the site was constructed in the year 1906 and was designated as blacksmithing. The Site measures approximately 22ft x 95ft and totaling 2,090 square feet. The Site’s current listed owner is CPCC Management. The Site is in a commercial district, designated as C2-4/R8A by zoning map 16d. Along 4<sup>th</sup> Avenue to the north of the site, there is a two-story residential building, to the south is a two-story commercial business building, and abutted to the east and west are light commercial businesses. Across 4<sup>th</sup> Avenue to the west is a private development, Picassos Building. Refer to **Figure 1 - Site Location Map** and **Figure 2 - Site Location Plan**.

The main objective of the Phase I ESA was to identify the presence or likely presence, use, or release of hazardous substances or petroleum products at the Site which are defined in the American Society of Testing and Materials (ASTM) Standard Practice E 1527-05 as *recognized environmental conditions (RECs)*. In addition, other environmental issues and conditions that, in the opinion of the *environmental professional* conducting the assessment, would not be considered *RECs* are identified in this assessment. These may include *historical RECs* or *de minimis* conditions. The Phase I ESA also includes a preliminary evaluation of specific potential environmental issues or conditions that are, according to ASTM E 1527-05, considered non-scope considerations. These issues include radon, asbestos-containing materials (ACM), lead-based paint (LBP) and polychlorinated biphenyls (PCBs).

The Site investigation conducted by GRANT included a walkthrough of the site and surroundings and an interview of the building

The Phase I ESA included a review of regulatory agency databases and historical documents and visual observations of the Site and adjoining properties.

This report has been prepared for New Empire Builder Corp. and conforms to the American Society for Testing and Materials (ASTM) *Standard Practice for Phase I Environmental Site Assessments* (E 1527-05), in accordance with the “due diligence” regulations of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and in accordance with Section 9601 (35)(b) of the Superfund Amendments and Reauthorization Act (SARA), which requires that “all appropriate inquiry” be made into the presence or potential presence of hazardous substances or petroleum products on site.

The site reconnaissance was conducted on February 22, 2012 and recorded surficial conditions only. Such a review cannot be expected to reveal all hazardous materials or conditions that might be present on site; the possibility exists that some hazardous materials or conditions might exist and not be detected because they are beyond the scope of this study. See **Appendix A** for photo documentation of the Site and surrounding properties.



This ESA was conducted in a manner consistent with the level of care and skill exercised by environmental professionals currently practicing under similar conditions, and was based on information made available to GRANT representatives.

### *1.1 Purpose and Scope of Work*

The purpose of this Phase I ESA was to do the following:

1. Identify the presence or release of any hazardous substances affecting the Site;
2. Determine the level of compliance with current environmental standards, laws, regulations and permits (if any) with respect to the Site;
3. Provide a basis for the valuation of the Site;
4. Evaluate any risk to the health and well-being of the Client's agents, employees, and contractors, as well as to the general public;
5. Identify whether any hazardous substances have been stored, released or disposed of on the Site; and
6. Identify the need for additional testing to evaluate the scope, location, source and nature of any releases of hazardous substances affecting the Site.

The scope of work for this investigation consisted of a physical inspection of the Site and neighboring properties, interviewing persons familiar with the property and review of available information regarding the Site obtained from relevant regulatory agencies. See **Appendix B** for a copy of the completed User Questionnaire. The Site Inspection also included verification of permits and building records as necessary. This report summarizes the findings of the Site Reconnaissance and includes a summary of pertinent regulatory files searched with regard to hazardous materials and wastes. Mr. Stephen Morse, PE, LEED AP O+M of GRANT performed the review.

GRANT has made a reasonable effort, using commonly accepted industry standards, to discover and interpret available historical information and current conditions regarding the Site. **Appendix C** contains fire insurance (Sanborn) maps, **Appendix D** contains aerial maps, and **Appendix E** contains historical topographic maps that were reviewed for this property. Please refer to Section 5 of this report for GRANT's recommendations for further Site action.

### *1.2 Involved Parties / Information Sources*

A review of federal, state, and local records for the Site was accomplished by contacting offices of various regulatory agencies. The results of the review of local records are presented below. Copies of the correspondences are included in **Appendix F**.

Environmental Data Resources, Inc (EDR) was subcontracted for the task of performing a search of relevant environmental records. EDR maintains a comprehensive database of environmental records pertinent to sites such as this one. This database was searched for sites within a quarter mile and one mile of the subject Site. Results of this database search are discussed in Section 4. Section 8 contains a list of Information Sources used during this assessment. EDR Historical Data report is contained in **Appendix G**.

## 2.0 SITE CONDITIONS AND ENVIRONMENTAL SETTING

An inspection of the Site was conducted on February 22, 2012 by Mr. Matthew Petrucci of GRANT. The Site Inspection included a Site assessment, observation of neighboring properties and verification of permits and building records as necessary. The objective of the Site Inspection was to observe any unusual features indicative of potential environmental contamination (i.e. leaking, staining, soil discoloration, and stressed vegetation). Current land use activities were observed and inquiries were made concerning past land use. Photographs of the Site and adjoining properties are provided in **Appendix A**.

A User Questionnaire was completed by the site New Empire Builder Corp., the Site manager so to provide information that may assist in the completion of all appropriate inquiry in accordance with ASTM standard Practice E1527-05. The completed User Questionnaire is included in **Appendix B**. Information provided in this User Questionnaire does not indicate the presence of a REC, historical REC, environmental concern or *de-minimis* condition at the Site with the exception of the potential presence of fluorescent light fixtures.

### 2.1 Site Location

The Site is located at 573 4<sup>th</sup> Avenue, Brooklyn, NY 11215. The property is located on the east side of 4th Avenue. The Site consists of a rectangular shaped lot developed with a 2-story brick building. The sidewalk exists along the western property line. The northern and southern property lines abut light commercial buildings. Across 4th Avenue to the west is a 13 story private development. To the east of the Site are residential lots. Land usage of the surrounding area is mixed consisting of residential and commercial properties.

#### 2.1.1 Topography

According to the U.S.G.S. (U.S. Geological Survey) 7.5/24K series Topographic Map of New York City Quadrangle, dated 1995, the Site elevation is approximately 53.0 ft above mean sea level (MSL). The surrounding topography slopes downward toward the southwest. Topographic maps are provided in **Appendix E**.

#### 2.1.2 Geology

The Site is located in the Borough of Brooklyn (Kings County), New York within the Atlantic Coastal Plain physiographic province. The subsurface geologic units in Kings County consist of sequences of unconsolidated sediments of Late Cretaceous and Pleistocene pre-Sangamon and Sangamon ages that are underlain by Precambrian crystalline bedrock, overlain by glacial deposits of Wisconsin age, and to a less extent, by Holocene deposits. Glacial drift deposits of Pleistocene (Wisconsin) age cover the majority of Kings County.

The Site is located in an area of unconsolidated glacial drift deposits. These deposits overlie the Gardiners Clay, Jameco Gravel and crystalline bedrock. The Jameco Gravel is believed to be Illinoian age, and comprises coarse sand and gravel with small amounts of silt and clay. The Gardiners Clay is an interglacial deposit of marine origin. It consists of clay with some intercalated thin sandy and gravelly beds, and marine fossil deposits. The upper Pleistocene deposits are mostly composed of glacial-drift material such as till, lacustrine deposits and outwash sand and gravel.

### 2.1.3 Hydrology

The Site lies within the Brooklyn-Queens Aquifer System, which includes Kings and Queens counties. The main aquifer underlying the subject sites is the Jameco Gravel unit. The major part of this aquifer is in a buried valley, which extends from the Flushing Meadow area to the area of the John F. Kennedy International Airport. Smaller parts of the Jameco occur in the Maspeth area, which is near the subject site. In this area, the thickness of the Jameco aquifer is generally less than 50 feet. The upper glacial aquifer is the uppermost water-bearing unit at the site.

The nearest surface water body to the Site is Gowanus Bay, which connects to Upper New York Bay and ultimately, the Atlantic Ocean. Gowanus Bay is located approximately one-half mile to the southwest of the Site.

### 2.1.4 Radon

Radon is a colorless, odorless radioactive gas that results from the natural breakdown of uranium minerals in soil, rock, and water, which subsequently enters the atmosphere. It can concentrate in buildings, entering through cracks and other penetrations of a building foundation or from water usage from an on-site ground water supply well. Some areas are more likely to have elevated concentrations of radon than others, reflecting subsurface lithologic conditions.

The New York State Department of Health (NYSDOH) maintains a database of radon test results on a local and county level. According to the 2010 NYSDOH Measured Basement Screening Radon Levels, the average Radon Screening Concentration is 1.370 picocuries per liter (pCi/L) for Kings County, New York. The area radon information reviewed indicates that the Site is in an area classified as Zone 3 (Low Potential) where the average indoor concentration of radon is less than 2 pCi/L, which is less than the United States Environmental Protection Agency (USEPA) Action Level of 4 pCi/L. As such, GRANT concludes that it is unlikely that elevated levels of radon gas are present at the Site (NYSDOH, 2010). Radon is not considered an REC at the Site.

There is no evidence that this facility is located on or near sites, which were used for phosphate extraction or for uranium, thorium or radium processing.

### 2.1.5 Limited Asbestos Inspection

No suspect Asbestos-Containing Materials, (ACM) were found on the site.

### 2.1.6 Above Ground Storage Tanks (ASTs) and Underground Storage Tanks (USTs)

The Site records and search did not reveal any petroleum underground bulk storage tanks (USTs) or above ground storage tanks (ASTs) on-Site.

### 2.1.7 Lead

No Lead based paint inspection was necessary.

2.1.8 Waste Disposal Facilities, Hazardous Waste Generation, Storage and Disposal

No hazardous waste generation, storage or disposal was observed at the Site during the Site inspection. There was no observation of stressed vegetation, stained soil, foul fumes or smells within the Site or the surrounding area.

2.1.9 Storage of Hazardous Materials

GRANT's visual inspection of the Site revealed no hazardous materials used or stored at the Site.

2.1.10 Urea Formaldehyde Foam Insulation (UFFI)

GRANT's visual inspection did not reveal any newly installed urea formaldehyde foam insulation (UFFI) at the Site. Newly installed UFFI has been associated with indoor air quality problems.

2.1.11 Petroleum Hydrocarbon Contamination

No petroleum hydrocarbon contamination was noted at the Site. No distinct odors of hydrocarbons or waste oil were noted. Section 4 contains additional information on other nearby storage tanks.

2.1.12 Polychlorinated Biphenyls (PCBs)

GRANT's visual inspection did not reveal any electrical transformers at the Site. The User Questionnaire indicated that fluorescent light fixtures may be present at the Site.

2.1.13 Pesticides and Herbicides

There was no sign of the use of pesticides or herbicides within the Site.

2.1.14 Regulatory Actions

Based on a review of regulatory databases, no previous or outstanding regulatory actions on the Site were found.

**2.2 Surrounding Properties**

The current usage and nature of surrounding properties includes single and multi family houses, apartment buildings, a vacant lot, a church, commercial storefronts and the LIRR. None of these adjacent land uses are suspected of using hazardous materials in quantities that if released, might have the potential to impact the environmental status of the subject property. Therefore, it is not believed that the land usage at surrounding properties is a REC.

The primary mechanism by which one property can affect another is by transport of contaminants in surface and ground water from one property to another. The concern for released liquids and storm-water runoff from the adjacent properties is unfounded according to the records search. The Histories of those sites are not of the type that would be associated with the disposal of hazardous materials. GRANT's visual inspection and record search of the neighboring properties did not reveal any industries within the immediate vicinity of the Site which may have the potential to impact the soil or groundwater beneath the



Site. No obvious illegal hazardous waste activities were noted in the vicinity of the Site. The soil of the property did not reveal any sign of stressed vegetation, which is an indication of oil or fuel spill pollution. No suspicious discharges, emissions or apparent sources of contamination were observed from the adjoining properties.

### 3.0 HISTORICAL RESEARCH

The information obtained during the historical use research is a preliminary means of assessing the potential for hazardous material contamination to be present at the Site.

According to the Historical maps, the earliest record of the site usage was in 1906. Based on available information, the existing building was constructed around 1906 as a two-story commercial property for the use of a blacksmith. Determination of past ownership and associated use of the subject property for each owner was not part of the scope of this report.

#### 3.1 Sanborn Fire Insurance Maps

Fire insurance maps (Sanborn Maps) identify historical land uses at the Site and adjacent area, as well as potential areas of environmental concern. They typically document land use, structural changes, street addresses, occupants, gas storage areas, raw material pilings and types of products manufactured and/or stored on-site. GRANT reviewed Sanborn Maps from the years 1888, 1906, 1926, 1951, 1965, 1978-1980, 1982, 1985, 1987-1988, 1991-1995, and 2001-2007 for the Site (See Appendix C) and surrounding area in order to identify historical land uses that may have involved hazardous substances and petroleum products. The following table summarizes descriptions and interpretations from the Sanborn map review:

Year	Description
1888	<b>Site:</b> The Site has been parceled, but no building has been developed. <b>Surrounding Properties:</b> The surrounding properties are somewhat developed with 2 and 3-story dwellings.
1906	<b>Site:</b> The Site has been developed with a 2 story brick building, whose primary use was a Blacksmith. <b>Surrounding Properties:</b> The surrounding properties are now fully developed with 2 and 3-story residential dwellings. Some of the surrounding properties contain commercial storefronts.
1926	<b>Site:</b> The Site appears unchanged from the 1906 map. <b>Surrounding Properties:</b> The surrounding properties remain relatively unchanged from the 1906 map, however, a chemical company has been established at 18 <sup>th</sup> Street and Fourth Avenue approximately 400 feet to the southwest of the site.
1951	<b>Site:</b> The Site is now an office with an adjoining electrical room. <b>Surrounding Properties:</b> The surrounding properties remain relatively unchanged from the 1926 map, however, a filling station is now located on the corner of Fourth Avenue and Prospect Avenue, approximately 120 feet to the southwest of the Site.
1965	<b>Site:</b> The Site structures appear unchanged from the 1951 map. <b>Surrounding Properties:</b> The surrounding properties remain relatively unchanged from the 1951 map.
1978-1980	<b>Site:</b> The Site appears unchanged from the 1965 map. <b>Surrounding Properties:</b> The surrounding properties remain relatively unchanged from the 1965 map. The chemical company has been replaced with a vacant lot. An auto repair facility has been established adjacent the filling station. A second auto repair facility has been established on Fourth Avenue between 16 <sup>th</sup> and 17 <sup>th</sup> Street, located approximately 400 feet to the northwest of the Site. A third auto repair facility has been established on 15 <sup>th</sup> Street between Third and Fourth Avenue, approximately 600 feet to the northwest of the Site.
1982	<b>Site:</b> The Site appears unchanged from the 1978-1980 maps. <b>Surrounding Properties:</b> The surrounding properties remain relatively unchanged from the 1978-1980 maps.
1985	<b>Site:</b> The Site appears unchanged from the 1982 map <b>Surrounding Properties:</b> The surrounding properties remain relatively unchanged from the 1982 map. An auto repair facility has been established on the corner of 18 <sup>th</sup> Street and Fourth Avenue, approximately 400 feet to the southwest of the Site.



Year	Description
1987-1988	<b>Site:</b> The Site appears unchanged from the 1985 map. <b>Surrounding Properties:</b> The surrounding properties remain relatively unchanged from the 1985 map. The auto repair facility that was on 15 <sup>th</sup> Street between Third and Fourth Avenue has been replaced with offices.
1991-1995	<b>Site:</b> The Site appears unchanged from the 1987-1988 maps. <b>Surrounding Properties:</b> The surrounding properties remain relatively unchanged from the 1987-1988 maps.
2001-2007	<b>Site:</b> The Site appears unchanged from the 1991-1995 maps. <b>Surrounding Properties:</b> The surrounding properties remain relatively unchanged from the 1991-1995 maps. The auto repair facility adjacent to the filling station on the corner of Fourth Avenue and Prospect Avenue has been removed in 2007.

### 3.2 Aerials Maps

Aerial Maps identify historical land uses at the Site and adjacent area, as well as potential areas of environmental concern. They typically document land use, structural changes, street addresses, occupants, gas storage areas, raw material pilings and types of products manufactured and/or stored on-site. GRANT reviewed aerial maps from the years 1924, 1943, 1953, 1954, 1965, 1975, 1984, 1994, 1995, and 2006 for the Site (See **Appendix D**) and surrounding area in order to identify historical land uses that may have involved hazardous substances and petroleum products. The following table summarizes descriptions and interpretations from the aerial map review:

Year	Description
1924	<b>Site:</b> The Site appears to be developed with a small structure. <b>Surrounding Properties:</b> The surrounding properties appear to be developed into blocks of small residential or offices structures. The surrounding roads appear to be established but not heavily developed.
1943	<b>Site:</b> The Site appears to be relatively unchanged from the 1924 map. <b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1924 map. The roadways are now heavily developed. The roadway along Prospect Avenue has expanded an expressway.
1953	<b>Site:</b> The Site appears to be relatively unchanged from the 1943 map. <b>Surrounding Properties:</b> The surrounding properties appear to have more industrial growth to the west of the property. Otherwise the area is relatively unchanged from the 1943 map.
1954	<b>Site:</b> The Site appears to be relatively unchanged from the 1953 map. <b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1953 map.
1965	<b>Site:</b> The Site appears to be relatively unchanged from the 1954 map. <b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1954 map.
1975	<b>Site:</b> The Site appears to be relatively unchanged from the 1965 map. <b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1965 map.
1984	<b>Site:</b> The Site appears to be relatively unchanged from the 1975 map. <b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1975 map.
1994	<b>Site:</b> The Site appears to be relatively unchanged from the 1984 map. <b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1924 map.
1995	<b>Site:</b> The Site appears to be relatively unchanged from the 1994 map. <b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1924 map.

Year	Description
2006	<p><b>Site:</b> The Site appears to be relatively unchanged from the 1924 map.</p> <p><b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1924 map.</p>

### 3.2 Topographic Maps

Topographical maps identify historical land uses and elevations at the Site and adjacent area, as well as gradients for potential areas of environmental concern. They typically document changes in the land elevation. GRANT reviewed topographic maps from the years 1900, 1947, 1956, 1967, 1979, and 1995 for the Site (See **Appendix E**) and surrounding area in order to identify historical changes in land elevation which may influence the direction of infiltration that transport hazardous substances and petroleum products. The following table summarizes descriptions and interpretations from the topographic map review:

Year	Description
1900	<p><b>Site:</b> The Site appears to be at an elevation of 55 feet above sea level</p> <p><b>Surrounding Properties:</b> The surrounding properties have a west, northwest gradient that slopes from Prospect Park to the east towards Gowanus Bay to the west. The slope is approximately a 5% slope.</p>
1947	<p><b>Site:</b> The Site appears to be relatively unchanged from the 1900 map.</p> <p><b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1900 map.</p>
1956	<p><b>Site:</b> The Site appears to be relatively unchanged from the 1947 map.</p> <p><b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1947 map.</p>
1967	<p><b>Site:</b> The Site appears to be relatively unchanged from the 1956 map.</p> <p><b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1956 map.</p>
1979	<p><b>Site:</b> The Site appears to be relatively unchanged from the 1967 map.</p> <p><b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1967 map.</p>
1995	<p><b>Site:</b> The Site appears to be relatively unchanged from the 1979 map.</p> <p><b>Surrounding Properties:</b> The surrounding properties appear to be relatively unchanged from the 1979 map.</p>

A review of historical United States Geological Survey Topographic Quadrangles and aerial maps did not indicate RECs at the Site and surrounding areas. They are also found in **Appendix C, D and E**.

#### 4.0 REVIEW OF PUBLIC RECORDS

The databases discussed in this section, provided by Environmental Data Resources Inc., were reviewed for information regarding documented and/or suspected releases of regulated hazardous substances and/or petroleum products on or near the Site. GRANT also reviewed the “unmappable” (also referred to as “orphan”) listings within the database report, cross-referencing available address information and facility names. Unmappable sites are listings that cannot be plotted with confidence, but are identified as being located within the general area of the Site based on the partial street address, city name, or zip code. In general, a listing cannot be mapped due to inaccurate or incomplete address information in the database that was supplied by the corresponding regulatory agency. A copy of the federal and state regulatory agency database is presented in Appendix G.

#### 4.1 Federal and State Regulatory Agency Database Reviews

A summary of sites identified through the federal and state regulatory agency databases review is provided below:

Federal and State List	Site Appears on List	Search Radius	No. of Sites within Search Radius	Last Updated
National Priority List for Federal Superfund Cleanup (NPL) and Delisted NPL Sites	No	1 mile	1	06/30/2011
		1 mile	0	
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) / No Further Remedial Action Planned (NFRAP)	No	1/2 mile	1	2/25/2010
	No	1/2 mile	2	
Resource Conservation and Recovery Information System - RCRA Corrective Action Activity (CORRACTS) / Treatment, Storage or Disposal Facilities (RCRA-TSD)	No	1 mile	2	8/9/2011
	No	1/2 mile	1	
Resource Conservation and Recovery Information System - Generators/Transporters (RCRA-LQR/SQG/CESQG)	No	1/4 mile	1	6/15/2011
		1/4 mile	1	
		1/4 mile	4	
Emergency Response Notification System (ERNS)	No	Site	0	1/31/2000
State Hazardous Waste Sites (SHWS)	No	1 mile	2	11/22/2011
Solid Waste Facilities/Landfill Sites (SWF/LF)	No	1 mile	3	1/11/2012
		1/2 mile		
State and Tribal Leaking Storage Tank Lists: Leaking Storage Tank Incident Reports (LTANKS) / Historical Leaking Storage Tank Incident Report (HIST LTANKS)	No	1/2 mile	41	11/22/2011
		1/2 mile	28	
State and tribal registered storage tank lists: Underground Storage Tank (UST)/ The Aboveground Storage Tank (AST)	No	1/4 mile	21	1/3/2012
		1/4 mile	19	
State and tribal voluntary cleanup sites: Voluntary Cleanup (VCP)	No	1/2 mile	1	11/22/2011
Brownfield Sites	No	1/4mile/ 1/2 mile	0	9/1/2010
Local Lists of Hazardous waste / Contaminated Sites: DEL SHWS	No	1 mile	2	8/23/2011
Local Lists of Registered Storage Tanks (HIST UST)	No	1/4 mile	1	1/1/2002
NYS Spills: NY Spills/ NY Hist Spills	No/No	1/8 mile	15	11/22/2011
		1/8 mile	13	
Resource Conservation and Recovery Act (RCRA): Non-Generators	No	1/4 mile	15	6/15/2011

Manifest	No	1/4 mile	25	11/01/2011
Drycleaners	No	1/4 mile	2	12/20/2011
E-Designation	Yes	1/8 mile	30	10/5/2011
Manufactured Gas Plants	No	1 mile	3	1/31/2000

The following subsections provide a discussion of the surrounding properties, which have been identified within the search radius and listed in the table:

#### 4.1.1 National Priorities List (NPL) and Delisted NPL Sites – Superfund

The United States Environmental Protection Agency's (USEPA) NPL (or Superfund List) is a federal listing of uncontrolled or abandoned hazardous waste sites. The list is created from the CERCLIS database (see below) and is primarily based upon a score that each site or facility receives from the USEPA's Hazard Ranking System. The USEPA conducts an assessment of the property after a site or facility has been identified as a CERCLIS site. The ranking score associated with the degree of contamination found is one of the determinations made as to whether the site is placed on the NPL. These sites are then prioritized for possible long-term remedial action and referred to the state for further action under state programs. The database search indicated that the Site itself is not an NPL site and that there is one (1) NPL and one (1) Proposed NPL site within 1/2 mile northwest of the Site which is hydraulically sidegradient of the Site and therefore do not constitute a REC. The Site itself is not a delisted NPL site and there are no delisted NPL sites within one half-mile of the Site.

#### 4.1.2 Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)/No Further Remedial Action Planned (NFRAP)

The CERCLIS list is a compilation of records from a nationwide database created to maintain and regulate those facilities or sites that the USEPA has investigated or will investigate for suspected or uncontrolled releases of hazardous substances, contaminants or pollutants as reported by states, municipalities, private companies and private citizens under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or the Superfund Program). Once a site is placed on the CERCLIS list, it may be subjected to several additional levels of evaluation to determine the severity of the contamination. These levels of evaluation range from discovery and preliminary assessment to site inspection, and possibly to the Hazard Ranking System. Such a determination could ultimately place the site under consideration for inclusion on the NPL. Inclusion on the CERCLIS list does not confirm the presence of an environmental problem or a public health threat. Former CERCLIS sites that have been granted the status of No Further Remedial Action Planned (NFRAP) are also included in this database. A review of the CERCLIS/NFRAP database did reveal two (2) large waste generators within one-half mile of the Site, which are hydraulically downgradient of the Site and therefore do not constitute a REC. The Site itself is not identified in the database.

#### 4.1.3 Resource Conservation and Recovery Information System – Treatment, Storage, or Disposal Facilities (RCRA TSD)/RCRA Corrective Action Activity (CORRACTS)

The Resource Conservation and Recovery Act (RCRA) program identifies and tracks hazardous wastes from the point of generation to the point of disposal. The RCRA TSD database tracks those facilities that treat, store and/or dispose of hazardous materials as defined by RCRA. The RCRA CORRACTS database identifies TSD facilities that have conducted, or are currently conducting, corrective action(s) as regulated under RCRA. A review of the CERCLIS/NFRAP database did reveal one (1) facility within one half-mile radius listed in the RCRA-TSD database and two (2) facilities within one half-mile radius listed in the RCRA CORRACTS database. All three (3) facilities are hydraulically downgradient of the Site and therefore do not constitute a REC. The Site was not identified in the database.

#### 4.1.4 Resource Conservation and Recovery Information System Generators/ Transporters (RCRA Gen/Trans)

This list includes any operation that generates or transports hazardous waste and that must obtain a hazardous waste generator identification number or transporter permit. Inclusion on the RCRA database is not necessarily indicative of contamination; rather, it indicates only the presence of potential sources of contamination. A review of the RCRA Gen/Trans database did reveal fourteen (14) large waste generators within one-quarter mile of the site. Of these fourteen (14), one (1) is located hydraulically upgradient of the Site to the south, southeast, however there has been no reports of spills or leaks or other notable environmental issues and therefore it does not constitute a REC. The site was not identified in the database.

#### 4.1.5 Emergency Response Notification System (ERNS)

The Emergency Response Notification System (ERNS) is a national database used to collect information on reported releases of oil and hazardous substances. The database was researched to identify listings within one-quarter mile of the Site. A review of the ERNS database did not reveal any incidents that were reported with respect to the subject Site.

#### 4.1.6 State Hazard Waste Sites

The State Hazardous Waste Sites (SHWS) records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. A review of the SHWS database did reveal two (2) facilities within one-mile radius hydraulically downgradient of the Site and therefore do not constitute a REC. The Site was not identified in the database.

#### 4.1.7 Solid Waste Facilities/Landfill Sites (SWF/LF)

The Solid Waste Facilities/Landfill Sites (SWF/LF) records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. A review of the SHWS database did reveal three (3) facilities within one half-mile radius hydraulically downgradient of the Site and therefore do not constitute a REC. The Site was not identified in the database.

#### 4.1.8 State and Tribal Leaking Storage Tank Lists

These records contain an inventory of reported leaking storage tank (LTANKS) incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking



aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills. A review of the LTANKS database did reveal fourteen (14) incidents within one half-mile radius of the Site that were hydraulically upgradient from the site. However all listings have been properly closed as reported by New York State Department of Environmental Conservation and therefore do not constitute a REC. The Site was not identified in the database.

Additionally, GRANT reviewed a listing of historical leaking underground and aboveground storage tanks (HIST LTANKS). The causes of the incidents are tank test failures, tank failures or tank overfills. A review of the HIST LTANKS database did reveal 28 incidents within one half-mile radius of the Site. Of the 28, eleven (11) are hydraulically upgradient to the Site, however according to NYS DEC, all the spills have taken the necessary corrective actions and therefore do not constitute a REC. The Site was not identified in the database.

#### 4.1.9 State and tribal registered storage tank lists

The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database. The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database. A review of the database did reveal 21 USTs and 19 AST incidents within one quarter-mile radius of the Site. Of the 21 USTs, ten (10) are located hydraulically upgradient to the Site, however none of the USTs have had any reports of spills or leaks or other notable environmental issues and therefore do not constitute a REC. The site was not identified in the database.

Of the 19 ASTs, ten (10) are located hydraulically upgradient to the Site, however none of the ASTs have had any reports of spills or leaks or other notable environmental issues and therefore they do not constitute a REC. The site was not identified in the database.

#### 4.1.10 Voluntary Cleanup Agreements (VCP)

The voluntary remedial program uses private monies to get contaminated sites remediated to levels allowing for the sites' productive use. The program covers virtually any kind of site and contamination. A review of the database did reveal one (1) VCP within one half-mile radius hydraulically downgradient of the Site to the north, northwest and therefore it does not constitute a REC. The Site was not identified in the database.

#### 4.1.11 State and Tribal Brownfields Sites

There were no state or tribal Brownfields Sites identified within one-half mile of the Subject Property in the environmental database report.

#### 4.1.12 Local Lists of Hazardous waste / Contaminated Sites (DEL SHWS)

A database listing of sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites. A review of the database did reveal two (2) DEL SHWS within one-mile radius hydraulically downgradient of the Site to the northwest and therefore do not constitute a REC. The Site was not identified in the database.

PCL XL error  
Error: ExtraData  
Operator: ReadImage  
Position: 1973

PCL XL error  
Error: ExtraData  
Operator: ReadImage  
Position: 19

PCL XL error  
Error: ExtraData  
Operator: ReadImage  
Position: 19

aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills. A review of the LTANKS database did reveal fourteen (14) incidents within one half-mile radius of the Site that were hydraulically upgradient from the site. However all listings have been properly closed as reported by New York State Department of Environmental Conservation and therefore do not constitute a REC. The Site was not identified in the database.

Additionally, GRANT reviewed a listing of historical leaking underground and aboveground storage tanks (HIST LTANKS). The causes of the incidents are tank test failures, tank failures or tank overfills. A review of the HIST LTANKS database did reveal 28 incidents within one half-mile radius of the Site. Of the 28, eleven (11) are hydraulically upgradient to the Site, however according to NYS DEC, all the spills have taken the necessary corrective actions and therefore do not constitute a REC. The Site was not identified in the database.

#### 4.1.9 State and tribal registered storage tank lists

The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database. The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database. A review of the database did reveal 21 USTs and 19 AST incidents within one quarter-mile radius of the Site. Of the 21 USTs, ten (10) are located hydraulically upgradient to the Site, however none of the USTs have had any reports of spills or leaks or other notable environmental issues and therefore do not constitute a REC. The site was not identified in the database.

Of the 19 ASTs, ten (10) are located hydraulically upgradient to the Site, however none of the ASTs have had any reports of spills or leaks or other notable environmental issues and therefore they do not constitute a REC. The site was not identified in the database.

#### 4.1.10 Voluntary Cleanup Agreements (VCP)

The voluntary remedial program uses private monies to get contaminated sites remediated to levels allowing for the sites' productive use. The program covers virtually any kind of site and contamination. A review of the database did reveal one (1) VCP within one half-mile radius hydraulically downgradient of the Site to the north, northwest and therefore it does not constitute a REC. The Site was not identified in the database.

#### 4.1.11 State and Tribal Brownfields Sites

There were no state or tribal Brownfields Sites identified within one-half mile of the Subject Property in the environmental database report.

#### 4.1.12 Local Lists of Hazardous waste / Contaminated Sites (DEL SHWS)

A database listing of sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites. A review of the database did reveal two (2) DEL SHWS within one-mile radius hydraulically downgradient of the Site to the northwest and therefore do not constitute a REC. The Site was not identified in the database.



#### 4.1.13 Local Lists of Registered Storage Tanks

The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database. A review of the database did reveal twelve (12) HIST USTs within one quarter-mile radius of the Site. Of the twelve (12), five (5) were located upgradient to the Site, however after review there has been no reports of spills or leaks or other notable environmental issues and therefore do not constitute a REC. The Site was not identified in the database.

#### 4.1.14 NYS Spills/ NYS Historical Spills

The NYS Spills Information Database includes both active and closed spills reported to Department of Environmental Conservation (DEC). This was researched to identify sites with active spills and closed spills. A review of these databases did reveal fifteen (15) recent NY Spills within one-half mile of the Site, of which three (3) are located hydraulically upgradient. However, after review of NYC DEP records, all the spills have taken the necessary corrective actions and properly closed the sites and therefore do not constitute a REC. The Site was not identified on the database.

A review of these databases did reveal thirteen (13) recent NY Historical Spills within one-half mile of the Site of which two (2) are located hydraulically upgradient. However, after review of NYC DEP records, all the spills have taken the necessary corrective actions and properly closed the sites and therefore do not constitute a REC. The Site was not identified on the database.

#### 4.1.15 State & Tribal Petroleum Bulk Storage Sites

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites, which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste. A review of these databases did reveal fifteen (15) generators within one-quarter mile. Of the fifteen (15), four (4) are located upgradient of the Site to the northwest, however after review there has been no reports of spills or leaks or other notable environmental issues and therefore do not constitute a REC. The Site was not identified in the database.

#### 4.1.16 Manifest

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility. A review of these databases did reveal 25 manifests within one-quarter mile of the Site. Of the 25, seven (7) are located upgradient of the Site, however after review there has been no reports of spills or leaks or other notable environmental issues and therefore do not constitute a REC

#### 4.1.17 Inactive Hazardous Waste Disposal Site Registry

A review of the Drycleaners database revealed that there are two (2) Drycleaners sites within one-mile of the Site and one (1) that is located upgradient, however after review there has been no reports of spills or leaks or other notable environmental issues and therefore it does not constitute a REC.

#### 4.1.18 E-Designation

Lots designation with an “E” on the Zoning Maps of the City of New York for potential hazardous material contamination, air and/or noise quality impacts. A review of the E-Designation list, as provided by EDR, and dated 10/05/2011 has revealed that there are 30 E-Designation sites within an eighth mile of the Site. Additionally the site is considered E-Designation for HAZMAT and Noise, which is considered a REC.

#### 4.1.19 Inactive Hazardous Waste Disposal Site Registry

The EDR Proprietary Manufactured Gas Plant Database (MGP) includes records of coal gas plants (manufactured gas plants) compiled by EDR’s researchers. Manufactured gas sites were used in the United States from the 1800’s to 1950’s to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination. A review of the database revealed that there are three (3) within one-mile radius downgradient of the Site and therefore do not constitute a REC.

## **4.2 Agency Correspondence**

A review of federal, state, and local records for the Site was accomplished by contacting offices of various regulatory agencies. The results of the review of local records are presented below. Copies of the correspondences are included in **Appendix F**.

### 4.2.1 New York City Department of Environmental Protection (NYC DEP)

NYC DEP information concerning the Site was requested in an email dated February 24, 2010. However, responses were not received in time for inclusion in this report. Any significant information received will be forwarded as an addendum to this report.

### 4.2.2 New York City Department of City Planning (NYC DCP)

NYC DCP information concerning the Site was requested in an email dated February 23, 2012. The response was a document outlining the properties rezoning jurisdiction. In 2005, the Site and the surrounding properties fell under the jurisdiction of a rezoning law that placed to properties under the classification of Little E for Hazmat and Noise. Please see **Appendix F** for reference.

### 4.2.3 New York City Fire Department (FDNY)

A request for information concerning the Site was requested in a letter dated February 23, 2012 from FDNY. However, responses were not received in time for inclusion in this report. Any significant information received will be forwarded as an addendum to this report.

4.2.4 New York City Department of Buildings (NYC DOB)

NYC DOB information concerning the Site was obtained from the Building's Information System that is provided on [www.nyc.gov](http://www.nyc.gov) dated February 23, 2012. Findings concluded that the property has no current outstanding building code violations. Additionally, the property has filed an application for the proposed development on the site. Within the application, the property was noted as Zoning Exhibit Record (I,II,III, etc.) and "Little E' Hazmat Site.

4.2.5 New York City Department of Health (NYC DOH)

The NYC DOB information concerning the Site was requested in a letter dated February 23, 2012. However, responses were not received in time for inclusion in this report. Any significant information received will be forwarded as an addendum to this report.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

The main objective of the Phase I ESA was to identify the presence or likely presence, use, or release of hazardous substances or petroleum products at the Site which are defined in the American Society of Testing and Materials (ASTM) Standard Practice E 1527-05 as *recognized environmental conditions (RECs)*. In addition, other environmental issues and conditions that, in the opinion of the *environmental professional* conducting the assessment, would not be considered *RECs* are identified in this assessment. These may include *historical RECs* or *de minimis* conditions. The Phase I ESA also includes a preliminary evaluation of specific potential environmental issues or conditions that are, according to ASTM E 1527-05, considered non-scope considerations. These issues include radon, asbestos-containing materials (ACM), lead-based paint (LBP) and polychlorinated biphenyls (PCBs).

The Phase I ESA included a review of regulatory agency databases and historical documents and visual observations of the Site and adjoining properties. Fire insurance maps (Sanborn Maps) from the years 1888, 1906, 1926, 1951, 1965, 1978-1980, 1982, 1985, 1987-1988, 1991-1995, and 2001-2007 were assessed. Aerial maps from the years 1924, 1943, 1953, 1954, 1965, 1975, 1984, 1994, 1995, and 2006 assessed. Historical topographical maps from the years 1900, 1947, 1956, 1967, 1979, and 1995 were also assessed.

Review of the regulatory agency database indicated that the Site is listed as E-Designation for HAZMAT and Noise.

The Site is not known to be impacted by any environmental contamination associated with hazardous waste sites, landfills, hazardous waste generators or hazardous waste treatment, storage or disposal facilities. No other RECs were identified throughout the course of the Phase I ESA.

Consequently, GRANT does not recommend any further assessments or investigations of the Site at this time. However, should development of the Site be planned, it is recommends meeting with the Mayor's Office of Environmental Remediation (OER) to discuss the proper environmental measures to be taken prior to and during construction activities due to the E-Designation associated with the Site.

## 6.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS

GRANT engineering recognizes that the client is relying on the contents of this report in evaluating the subject property. This report is based on services performed by GRANT's professional staff. We represent that observations made in this report are accurate to the best of our knowledge, and that no findings or observations concerning the potential release of hazardous substances have been withheld or amended. The research and inspections have been conducted in a manner consistent with industry and professional standards. GRANT shall have no liability or obligation to any party other than New Empire Builder Corp., their successors or assigns, and GRANT's obligations and liabilities to New Empire Builder Corp., their successors or assigns is limited to fraudulent statements made, or negligent or willful acts or omission.

This Phase I ESA was limited to the review of available records, interviews with local officials and persons familiar with the Site, and an on-site visual inspection. The site inspection was limited to observation of surficial conditions only. Such an inspection cannot be expected to reveal all oil or hazardous materials or situations that might be present on-site; some hazardous materials or conditions may exist and not be detected because they are beyond the scope of this study. The investigation was conducted in a manner consistent with that level of care and skill exercised by environmental professionals currently practicing under similar conditions and was based on information made available to the representatives of GRANT. All documents prepared by or furnished by GRANT pursuant to this project are to be used in the context of the scope of services contracted. This document is not intended or represented to be suitable for reuse by the client or others on modifications of the project scope. Reuse or release to third parties without the expressed written permission of the consultant is prohibited.

The environmental professionals whose signatures are provided below performed and reviewed this Phase I ESA. **Appendix H** contains supporting documentation of the qualifications of the environmental professionals who conducted the site reconnaissance and interviews in this Phase I ESA.

We declare that, to the best of our knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Site. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

This report has been prepared exclusively for the sole use of GRANT's client for this proposed project, and the results and interpretations are not to be utilized on other projects or transferred to subsequent users without the written authorization of GRANT.

This report is issued with the understanding that it is the responsibility of the owner, or of their representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans where applicable, and/or the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field. Costs for purchase and installation of products are estimates and do not constitute actual quotes. Costs provided are to be used for guidance purposes only.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of one year.

**Report Prepared by:**



Stephen A. Morse, PE, LEED AP O+M

[smorse@GRANTpllc.com](mailto:smorse@GRANTpllc.com)

**7.0 CONFIDENTIALITY STATEMENT**

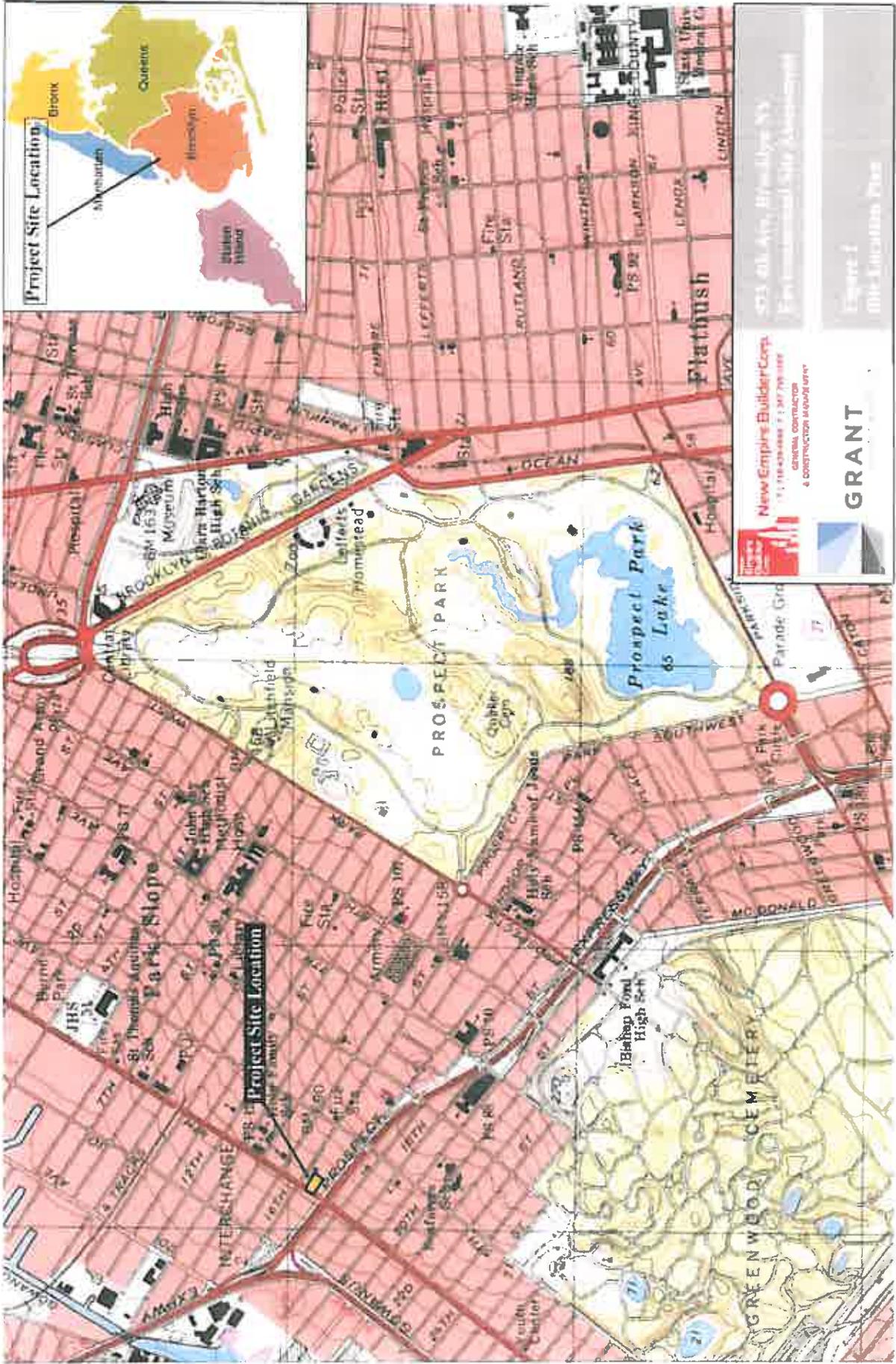
GRANT agrees to hold the information contained in these report, or any portion thereof, confidential. This report or information contained herein will not be released to any party except as required by law, without the consent of New Empire Builder Corp. Upon Client approval, this report will be issued to any designated party.

## 8.0 REFERENCES

- American Society for Testing and Materials (ASTM) 2005 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, ASTM Designation E 1527-05.
- Environmental Data Resources Inc, EDR Historical Topographic Map Report. February 17, 2012.
- Environmental Data Resources Inc, EDR Aerial Photo Decade Package. February 17, 2012.
- United States Environmental Protection Agency. (February 2007).” Measured Basement Screening Levels by County. February 2007.
- Environmental Data Resources Inc, *Sanborn Fire Insurance Maps of New York City: years 1888, 1906, 1926, 1951, 1965, 1978-1980, 1982, 1985, 1987-1988, 1991-1995, & 2001-2007*.
- Environmental Data Resources Inc, Radius Map Report *573 4<sup>th</sup> Avenue, Brooklyn, NY*, 11215. February 17, 2012

**FIGURES**

- |                 |                    |
|-----------------|--------------------|
| <b>Figure 1</b> | Site Location Map  |
| <b>Figure 2</b> | Site Location Plan |



**New Empire Builder Corp.**  
 111-28-08888 • 347-79-1888  
 GENERAL CONTRACTOR  
 & CONSTRUCTION ADMINISTRATION



**GRANT**

Expert in  
 Old Location Plans

573 0th Ave, Brooklyn, NY  
 Environmental Site Assessment

**Project Site Location**



**APPENDIX A**  
**SITE PHOTOGRAPHIC LOG**



**PHOTO 01:** VIEW OF MAIN ENTRANCE. PROPERTY IS A TWO (2) STORY BUILDING.



**PHOTO 04:** VIEW LOOK WEST ACROSS 4<sup>TH</sup> AVENUE OF THE SITE. THE BUILDING IS A LEARNING CENTER.



**PHOTO 02:** VIEW LOOKING NORTH OF PROPERTY ALONG 4<sup>TH</sup> AVENUE. COMMERCIAL AND RESIDENTIAL PROPERTIES ARE ALONG THE 4<sup>TH</sup> AVENUE.



**PHOTO 05:** VIEW SOUTH OF PROPERTY OF PARKWAY AND SUBWAY LINE.



**PHOTO 03:** VIEW LOOKING SOUTH OF PROPERTY ALONG 4<sup>TH</sup> AVENUE. ADJACENT PROPERTIES CONSIST OF WINDOW TINTING FACILITY AND AUTO BODY SHOP. END OF BLOCK IS A FREEWAY. ACROSS STREET IS SUBWAY.



**PHOTO 06:** VIEW OF LOOKING EAST TOWARD SITE AND THE ADJACENT PROPERTIES ACROSS 4<sup>TH</sup> AVENUE.



**PHOTO 08:** VIEW OF MAIN ENTRANCE GARAGE DOOR ON THE FIRST FLOOR.



**PHOTO 11:** VIEW OF EQUIPMENT. NATURAL GAS BOILER AND WATER HEATER. BOILER HAS DEDICATED EXHAUST. THE PARTITION TO THE LEFT CONTAINS THE CITY UTILITY CONNECTIONS (GAS, ELECTRICITY, DOM. WATER).



**PHOTO 09:** VIEW THE WEST ROOM OF THE PROPERTY LOCATED ON THE FIRST FLOOR OF THE BUILDING.



**PHOTO 12:** TYPICAL LIGHTING FIXTURES AND LAMPS OF PROPERTY FLOOR. COMPACT FLORENCENT.



**PHOTO 10:** VIEW THE WEST ROOM OF THE PROPERTY LOCATED ON THE FIRST FLOOR OF THE BUILDING.



**PHOTO 13:** VIEW THE EAST ROOM OF THE PROPERTY ON THE FIRST FLOOR.



**PHOTO 15: TENNANT KITCHEN AND LIVING SPACE.**



**PHOTO 16: TENNANT KITCHEN AND LIVING SPACE.**

**APPENDIX B**  
**PHASE I ESA USER QUESTIONNAIRE**



## ENVIRONMENTAL SITE ASSESSMENT QUESTIONNAIRE

Please complete to the best of your knowledge. For those questions that are not applicable, please respond with an "N/A". For those questions that are unknown, please respond with "unknown".

### 1. PROPERTY INFORMATION:

<b>Property Name:</b> 573 4 <sup>th</sup> Avenue		
<b>Property Address:</b> 573 4 <sup>th</sup> Avenue		
<b>City</b> Brooklyn	<b>State</b> New York	<b>Zip</b> 11215
<b>Assessor's Parcel Number</b> 3-1052-6		
<b>Property Owner &amp; Contact Information:</b> CPC Management		
<b>Date Property Owner Purchased:</b> 2011		
<b>Key Site Manager &amp; Contact Information:</b> Brian Lui (646) 315-3918		

### 2. COMPLETED BY

<b>Signature</b>	<b>Date</b> February 22, 2012
<b>Printed Name</b> Brian Lui	<b>Relation to Subject Property</b> Site Manager

### 3. PREVIOUS INVESTIGATIONS

Have any previous environmental investigations been performed at the property, including Phase I ESAs, Phase II Subsurface Investigations, Remediation, Asbestos or Lead-Based Paint surveys? None (If yes, please provide copies)

### 4. PROPERTY DESCRIPTION

Property Size: 22'x95'; 2,090 SQ FT Number of Building(s): 1 Building

Size of Building(s): 1<sup>st</sup> floor is 22'x95', 2<sup>nd</sup> floor is 22'x46'

Date of Construction: ~1920

Property Type: (please circle)

Multi-Family Hotel Mobile Home Park Retail/Commercial Industrial Office

Other: First floor is commercial and second floor is residential

Please provide Rent Roll if Applicable.

Historical Use of Property: \_\_\_\_\_

**5. SURROUNDING PROPERTY USES**

DIRECTION	Use
North	COMMERCIAL AND RESIDENTIAL PROPERTIES, BLOCK BOUND BY 16 <sup>TH</sup> STREET
South	COMMERCIAL AND RESIDENTIAL PROPERTIES, BLOCK BOUND BY PROSPECT AVENUE
East	ADJACENT RESIDENTIAL PROPERTIES
West	4 <sup>TH</sup> AVENUE

Are you aware of any potential environmental concerns associated with surrounding properties?

X  YES   NO

If yes, please describe:  The property is designated as haz-mat "E" according to the Building Information System. No specific environmental contamination is known.

**6. UTILITIES & SERVICES**

Please provide the name of the utility or contractor providing the following:

Electric	<u> Consolidated Edison </u>	Bio-hazardous Waste	<u> N/A </u>
Gas	<u> Consolidated Edison </u>	Elevator Maintenance	<u> N/A </u>
Potable Water	<u> NYC DEP </u>	Used Grease	<u> N/A </u>
Sanitary Sewer	<u> NYC DEP </u>	Hazardous Waste	<u> N/A </u>

**7. ON SITE OPERATIONS**

Are you aware of any of the following conditions at the site or have you been notified by the permittee?	Yes	No	Comments
1. Stored Chemicals	Yes	<input checked="" type="checkbox"/> No	
2. Underground Storage Tanks	Yes	No	Previous boiler could have been oil
3. Aboveground Storage Tanks	Yes	<input checked="" type="checkbox"/> No	
4. Spills or Releases	Yes	<input checked="" type="checkbox"/> No	
5. Dump Areas/Landfills	Yes	<input checked="" type="checkbox"/> No	
6. Waste Treatment Systems	Yes	<input checked="" type="checkbox"/> No	
7. Clarifiers/Separators	Yes	<input checked="" type="checkbox"/> No	
8. Vents/Odors	Yes	<input checked="" type="checkbox"/> No	
9. Floor Drains/Sumps	Yes	<input checked="" type="checkbox"/> No	
10. Stained Soil	Yes	<input checked="" type="checkbox"/> No	
11. Electrical Transformers	Yes	<input checked="" type="checkbox"/> No	
12. Hydraulic Lifts/Elevators	Yes	<input checked="" type="checkbox"/> No	
13. Dry Cleaning Operations	Yes	<input checked="" type="checkbox"/> No	
14. Oil/Gas/Water/Monitoring Wells	Yes	<input checked="" type="checkbox"/> No	
15. Environmental Permits	Yes	<input checked="" type="checkbox"/> No	

**APPENDIX C**  
**FIRE INSURANCE (SANDBORN) MAPS**

# Advanced Cleanup Technologies, Inc.

**ENVIRONMENTAL CONSULTANTS**

## **PHASE II SUBSURFACE INVESTIGATION REPORT**

**573 4th Avenue  
Brooklyn, New York 11215  
Block 1052, Lot 6**

**ACT Project No. 7115-BKNY**

**November 13, 2012**

**Prepared for:**

**Mr. Charles Lin  
Cathay Bank  
40-14 Main Street  
Flushing, New York 11354**

**Prepared by:**

**Advanced Cleanup Technologies, Inc.  
960 South Broadway, Suite #100  
Hicksville, New York 11801**



<b><u>TABLE OF CONTENTS</u></b>		<b><u>Page No.</u></b>
1.0	Introduction and Scope of the Investigation	1
2.0	Site Description	1
2.1	Site Location	1
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2.3	Previous Environmental Reports	2
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3.1	Ground Penetrating Radar Survey	2
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3.3	Sub-Slab Vapor and Indoor Air Quality	5
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## **FIGURES**

<u>NUMBER</u>	<u>TITLE</u>
1	Locational Diagram
2	Sampling Diagram

## **TABLES**

<u>NUMBER</u>	<u>TITLE</u>
1	Volatile Organic Compounds in Soil
2	Semi Volatile Organic Compounds in Soil
3	Metals in Soil
4	Volatile Organic Compounds in Indoor Air and Sub-Slab Vapor

## **APPENDICES**

<u>SECTION</u>	<u>TITLE</u>
A	Field Notes
B	Boring Logs
C	Laboratory Reports



## **1.0 INTRODUCTION AND SCOPE OF INVESTIGATION**

A Phase II Subsurface Investigation was performed by Advanced Cleanup Technologies, Inc. (ACT) on September 25 and October 17, 2012 at the property located at 573 4th Avenue, Brooklyn, New York (“the Site”). The purpose for the Phase II Investigation was to determine any impacts associated with historic hazardous materials use, storage and/or disposal at the Site or adjacent properties, including the presence of historic fill materials.

The scope of work included the installation, screening and sampling of two soil borings, a sub-slab vapor probe and an indoor air canister inside of the building. During the Phase II Investigation, a cemented fill pipe was observed in the sidewalk in front of the property. A ground penetrating radar survey was performed to determine if any underground storage tanks were present in the vicinity of the fill pipe and soil sampling locations was adjusted accordingly.

The scope of work also included the laboratory analysis of four soil samples, a sub-slab vapor sample and an indoor air sample by a New York State Department of Health (NYSDOH) certified laboratory in accordance with protocols established by the United States Environmental Protection Agency (USEPA). Soil quality data was compared to New York State Department of Environmental Conservation (NYSDEC) soil cleanup objectives contained in 6 NYCRR 375 (2006). Sub-slab vapor and indoor air quality data were compared to NYSDOH guidelines as specified in “Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York” (October, 2006).

## **2.0 SITE DESCRIPTION**

### **2.1 Site Location**

A diagram of the vicinity of the Site is provided as Figure 1. The Site is located on the east side of 4th Avenue, between 16th Street and Prospect Avenue in a commercial and residential area in the western portion of Brooklyn, New York. The Site is bounded by 2-story residential apartment buildings to the north, auto repair shops to the south, 2 and 3-story residential apartment buildings to



the east and a 12-story residential apartment building and construction site to the west.

The nearest surface water body, the Gowanus Canal, is located approximately 2,000 feet to the west. The Gowanus Bay is located approximately 1 mile to the west. Regional ground water flow is expected to be in a westerly direction towards the Upper Bay.

## **2.2 General Description**

The site (Block 1052, Lot 6) consists of a 2-story commercial auto shop with a residential unit on the second floor. The Site is approximately 2,107 square feet in area and is fully built out. The first floor was covered with metal plates and could not be fully accessed at the time of the investigation.

## **2.3 Previous Environmental Reports**

A Phase I Environmental Site Assessment (Phase I) dated March 5, 2012 was performed by Grant Engineering. The Phase I indicated that the Site was an E-Designated site for hazardous materials and noise. No other recognized environmental conditions were identified at the Site.

# **3.0 FINDINGS OF THE INVESTIGATION**

## **3.1 Ground-Penetrating Radar Survey**

A GPR survey was performed to determine whether any underground storage tanks were present beneath the subject property. The survey was performed utilizing an SIR-2000 GPR Unit and a 500 megahertz transducer. The transducer was pulled along pre-determined transects, emitting radar into the subsurface. The radar signal reflects off stratigraphical materials and foreign objects in the subsurface and back to the transducer based upon differences in the conductivity and dielectric constant of subsurface features. The radar signal is then converted into an electrical signal which is visually displayed on a video monitor.



The GPR survey encompassed the sidewalk in front of the building, in the vicinity of the fill pipe. The radar antenna was pulled along transects at right angles to each other in a 5 foot by 5 foot grid pattern so as to form a rectangular grid over the surface. The GPR survey covered an area of approximately 250 square feet.

The survey was performed at a range to allow for the identification of anomalies to a depth of approximately 10 feet below ground surface. The surveyed area produced an anomaly characterized by partial parabolic reflections indicative of an underground storage tank in the area of the fill cap. The anomaly measured approximately 2 to 3 feet wide and 4 feet long and was located approximately 2 feet below ground surface. Natural gas service was observed in the vicinity of the anomaly. A magnetometer used to identify shallow buried metal objects produced strong readings in the area around the anomaly. The remainder of the surveyed area produced horizontal reflections of low to moderate conductivity representative of native soil or fill material.

GPR is primarily used as a preliminary survey of a property for the development of subsurface information prior to a formal site assessment. Surface cover, subsurface soil types or buried debris can mask or conceal the presence and precise locations of underground structures or even suggest their presence when none exist. The presence, absence or precise locations of underground structures indicated during a GPR survey should be confirmed by excavation or other invasive procedures.

### **3.2 Soil Quality**

Two soil borings were installed in the basement of the Site at the locations indicated in Figure 2. Both soil borings were installed utilizing a portable Geoprobe-style drill unit in combination with 5 foot macro-core soil samplers containing dedicated acetate liners. All down hole drilling equipment was decontaminated between sampling events to minimize the possibility of cross-contamination between sampling locations. Field notes are contained in Appendix A. Boring logs are contained in Appendix B.



Soil boring SB-1 was installed to a depth of 15 feet below ground surface in the western portion of the building. The location of SB-1 was modified to account for the possible underground storage tank identified during the GPR survey. Soil beneath the concrete slab generally consisted of orange to brown silt to a depth of 15 feet below ground surface with some ash and coal in the top 2 feet of the boring. No contamination was observed indicative of a spill from the possible underground storage tank located in the vicinity of the soil boring.

Soil boring SB-2 was installed in the eastern portion of the building to a depth of 15 feet below ground surface. Soil beneath the concrete slab in SB-2 generally consisted of orange to brown silt to a depth of 15 feet below ground surface with some ash and coal in the top 2 feet of the boring. Additionally, gray silty clay with some organic matter and a marsh odor was identified from 12 to 15 feet below ground surface in SB-2.

Soil samples were visually examined for lithology and the presence of contamination and field screened utilizing a Photovac 2020 hand held photoionization detector (PID). The PID is capable of detecting organic vapors at concentrations as low as 0.1 parts per million (ppm). A PID reading of 0.0 ppm was recorded for soil screened in all borings over their entire depth. No visual or olfactory evidence of contamination was observed in either of the soil borings except for a marsh odor from 12 to 15 feet below ground surface in SB-2.

Temporary monitoring wells installed at each boring location in an attempt to monitor and collect ground water samples. The water table was not encountered in either temporary well to a maximum depth of 18 feet below ground surface where refusal was encountered.

Soil samples from each soil boring were collected from 0 to 2 feet and 10 to 12 feet below ground surface. All soil samples were containerized and placed in a cooler for laboratory analysis. Upon completion of drilling, each boring was backfilled to just below the concrete floor with drill cuttings. A concrete patch was installed flush with the floor surface.



A total of four soil samples were transmitted under chain of custody to American Analytical Laboratories (NYSDOH # 11418). Soil samples were analyzed for volatile organic compounds (VOCs) in accordance with EPA Method 8260, semi-volatile organic compounds (SVOCs) in accordance with EPA Method 8270 and RCRA Metals in accordance with EPA Methods 6010 and 7471. Copies of the laboratory reports are contained as Appendix C.

### **3.3 Sub-Slab Vapor and Indoor Air Quality**

Sub-slab vapor quality was determined by collecting one sub-slab vapor sample (SV-1) from beneath the concrete slab foundation of the building. The sub-slab vapor sample was collected by drilling a hole through the foundation floor and installing a polyethylene probe to a depth of no more than 6 inches below the base of the concrete slab. Once the probe was installed, a non-VOC putty was placed around the annulus of the probe to provide a seal with the floor surface. A 6 liter Summa Canister equipped with a low flow regulator was attached to the portion of the polyethylene probe exiting the ground and allowed to fill with sub-slab vapor for approximately 4 hours at a flow rate of approximately 20 ml/min.

Indoor air quality was determined by contemporaneously collecting one air sample (IA-1) from inside the same building. The indoor air sample was collected by placing a laboratory issued 6 liter Summa Canister equipped with a low flow regulator on a table top and set to collect an air sample over a 4 hour time period.

Once the canister pressures dropped to less than 10 in. Hg, each Summa canister was sealed and transported to H2M Labs, Inc. (NYSDOH # 10478) for volatile organic compound analysis in accordance with EPA Method TO-15.



### **3.4 Discussion of Laboratory Results**

The analytical results for the soil samples from borings SB-1 and SB-2 are summarized in Tables 1, 2 and 3. The soil quality data was compared to unrestricted, restricted residential and commercial use soil cleanup objectives (UUSCOs, RRSCO and CSCOs) contained in Table 6.8 of 6 NYCRR Part 375.

It can be seen from Table 1 that eight VOCs were detected in the shallow soil sample from SB-1 and five VOCs were detected in the shallow soil sample from SB-2. None of the compounds detected in soil samples from both soil borings were found above regulatory guidance values.

Tetrachloroethene was the most prevalent VOC, being found in both shallow soil samples and the deep sample from SB-1. Trichloroethene, Naphthalene and 1,2,4,5-Tetramethylbenzene were found in both shallow soil samples but not the deep samples. Methylene chloride was detected in trace concentrations in all soil samples and the laboratory method blank. Its presence can be attributed to laboratory equipment.

It can be seen from Table that 16 SVOCs were detected in the shallow soil sample from SB-1 and 19 SVOCs were detected in the shallow soil sample from SB-2. Up to four of these SVOCs were also detected in the deep soil samples. None of the detected compounds were found above regulatory guidance values in soil samples from either of the soil borings.

As Table 3 indicates, all eight RCRA metals were detected in the shallow soil sample from SB-1. Five of the detected metals were found in the deep soil sample from SB-1. Seven RCRA metals were detected in the shallow soil sample from SB-2, five of which were also detected in the deep soil sample.



All of these metals were detected within background levels except for lead and mercury. Lead was detected above CSCOs in the shallow soil sample from SB-2. Lead concentrations did not exceed regulatory guidance values in any of the other soil samples. Mercury was detected above UUSCOs but below RRSCOs in the shallow soil sample from SB-1; it did not exceed regulatory guidance valued in the deep sample. Mercury was detected above RRSCOs but below UUSCOs in the shallow soil sample from SB-2; it was detected above UUSCOs but below RRSCOs in the deep sample from SB-2.

The analytical results for the sub-slab vapor and indoor samples are summarized in Table 4. It can be seen from Table 4 that 28 VOCs were detected in SV-1 and 21 VOCs were detected in IA-1. None of the compounds detected in SV-1 were found above guidance values except PCE, which was found at a concentration of 1,830 ug/m<sup>3</sup>.

A total of 21 VOCs were detected in the indoor air sample (IA-1). All of these compounds were found within background concentrations in the metropolitan area except for 1,2,4-Trimethylbenzene, Benzene, Ethylbenzene, n-Hexane, Toluene and Xylenes. It should be noted that PCE was not detected in air within the building during the current investigation.

Matrix II of the Soil Vapor/Indoor Air Matrix pertaining to PCE in the NYSDOH's 2006 Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York indicates that PCE found in sub-slab vapor at a concentration of 1,830 ug/m<sup>3</sup> requires mitigation including sealing cracks and voids in the ground-level floor, vapor barrier installation and sub-slab depressurization. The NYSDOH guidance would apply even if PCE is not found in air within the building.



## 4.0 CONCLUSIONS

The results of the Phase II Investigation are contained in this report. Based upon this investigation, ACT makes the following conclusions concerning the environmental quality of the Site.

- A GPR survey has indicates that an underground storage tank appears to be present beneath the sidewalk in front of the building at the Site;
- Soil beneath the site is not impacted by VOCs above regulatory criteria;
- Soil beneath the site is impacted by SVOCs and metals above regulatory criteria. These exceedances are attributable to historic fill material commonly encountered in the metropolitan area;
- PCE is present in sub-slab vapor at concentrations exceeding regulatory guidance and requiring the installation of mitigation measures. PCE was not found in air within the building at the time of the survey.

## 5.0 RECOMMENDATIONS

ACT makes the following recommendations with respect to the above conclusions:

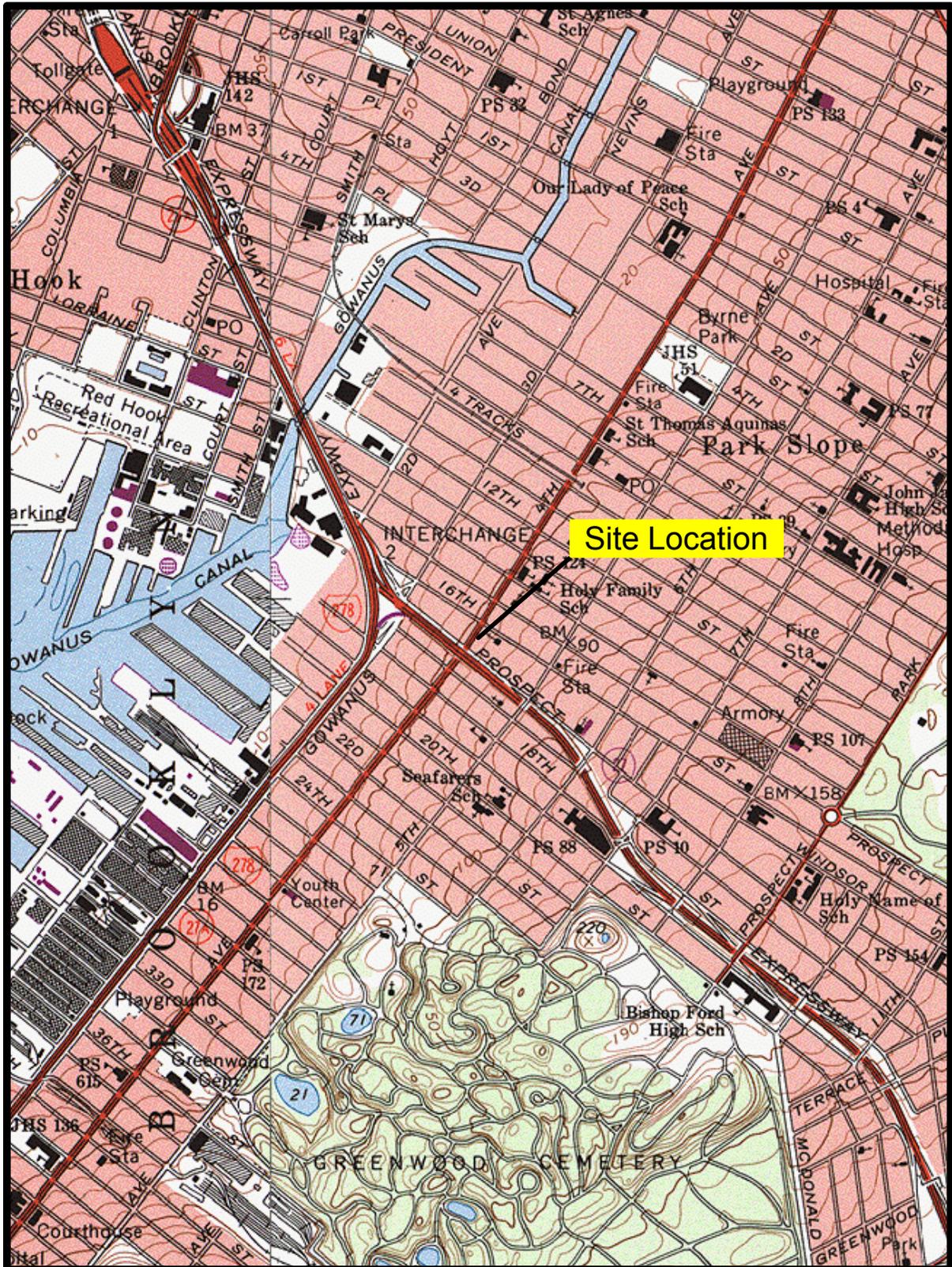
- The suspect underground storage tank should be removed from beneath the property.
- A 20 mil High Density Polyethylene (HDPE) liner or similar approved material should be installed as an impermeable vapor barrier underneath the entire foundation of any future construction at the site. In the interim, all cracks and voids in the foundation floor should be sealed to avoid air penetration.
- A sub-slab depressurization system should be installed beneath the existing building and any future construction to reduce the likelihood of sub-slab vapors infiltrating into air inside the building.



## **6.0 EXCLUSIONS AND DISCLAIMER**

The purpose of this investigation was to assess the potential environmental liabilities at the subject site with respect to data which Advanced Cleanup Technologies, Inc. has accumulated during the Phase II Subsurface Investigation. The conclusions presented in this report are based solely on the observations of the site at the time of the investigation. Data provided, including information provided by others, was utilized in assessing the site conditions. The accuracy of this report is subject to the accuracy of the information provided. Advanced Cleanup Technologies, Inc. is not responsible for areas not seen or information not collected. This report is given without a warranty or guarantee of any kind, expressed or implied. Advanced Cleanup Technologies, Inc. assumes no responsibility for losses associated with the use of this report.

## **FIGURES**



From USGS 7.5 Minute Topographic Map Of Brooklyn, New York Quadrangle



**Locational Diagram**

*Advanced Cleanup Technologies, Inc.*  
ENVIRONMENTAL CONSULTANTS

960 S. Broadway, Suite 100, Hicksville, New York 11801  
Tel: 516-933-0655 Fax: 516-933-0659

Project No.: 7115-BKNY	Figure No.: 1
Date: 10/19/2012	Scale: 1 inch = 2000 feet

4TH AVENUE

Possible UST

Fill

573

Roll up

SB-1

SV-1

IA-1

SB-2



### Sampling Diagram

Advanced Cleanup Technologies, Inc.  
ENVIRONMENTAL CONSULTANTS



960 S. Broadway, Suite 100, Hicksville, New York 11801  
Tel: 516-933-0655 Fax: 516-933-0659

Project No.: 7115-BKNY

Figure No.: 2

Date: 10/19/2012

Scale: Not To Scale

## **TABLES**

Table 1

Volatile Organic Compounds in Soil (ug/kg)  
EPA Method 8260  
573 4th Avenue  
Brooklyn, NY

ACT Project No.: 7115-BKNY

Sample ID Sample Date	UUSCO <sup>1</sup>	Standard RRSCO <sup>2</sup>	CSCO <sup>3</sup>	SB-1 (0-2') 9/25/2012	SB-1 (10-12') 9/25/2012	SB-2 (0-2') 9/25/2012	SB-2 (10-12') 9/25/2012
1,1,1,2-Tetrachloroethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
1,1,1-Trichloroethane	680	100,000	500,000	<2.4	<2.3	<2.3	<2.5
1,1,2,2-Tetrachloroethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
1,1,2-Trichloroethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
1,1-Dichloroethane	270	26,000	240,000	<2.4	<2.3	<2.3	<2.5
1,1-Dichloroethene	330	100,000	500,000	<2.4	<2.3	<2.3	<2.5
1,1-Dichloropropene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
1,2,3-Trichlorobenzene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
1,2,3-Trichloropropane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
1,2,4,5-Tetramethylbenzene	NS	NS	NS	<b>2.2</b>	<2.3	<b>1.5</b>	<2.5
1,2,4-Trichlorobenzene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
1,2,4-Trimethylbenzene	3,600	52,000	190,000	<2.4	<2.3	<2.3	<2.5
1,2-Dibromo-3-chloropropane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
1,2-Dibromoethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
1,2-Dichlorobenzene	1,100	100,000	500,000	<2.4	<2.3	<2.3	<2.5
1,2-Dichloroethane	20	3,100	30,000	<2.4	<2.3	<2.3	<2.5
1,2-Dichloropropane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
1,3,5-Trimethylbenzene	8,400	52,000	190,000	<2.4	<2.3	<2.3	<2.5
1,3-Dichlorobenzene	2,400	49,000	280,000	<2.4	<2.3	<2.3	<2.5
1,3-dichloropropane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
1,4-Dichlorobenzene	1,800	13,000	130,000	<2.4	<2.3	<2.3	<2.5
1,4-Dioxane	100	13,000	130,000	<2.4	<2.3	<2.3	<2.5
2,2-Dichloropropane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
2-Butanone	120	100,000	500,000	<6.0	<5.8	<5.8	<6.2
2-Chloroethyl vinyl ether	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
2-Chlorotoluene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
2-Hexanone	NS	NS	NS	<6.0	<5.8	<5.8	<6.2
2-Propanol	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
4-Chlorotoluene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
4-Isopropyltoluene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
4-Methyl-2-pentanone	NS	NS	NS	<6.0	<5.8	<5.8	<6.2
Acetone	50	100,000	500,000	<b>23</b>	<5.8	<5.8	<6.2
Acrolein	NS	NS	NS	<12	<12	<12	<12
Acrylonitrile	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Benzene	60	4,800	44,000	<2.4	<2.3	<2.3	<2.5
Bromobenzene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Bromochloromethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Bromodichloromethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Bromoform	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Bromomethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Carbon disulfide	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Carbon tetrachloride	760	2,400	22,000	<2.4	<2.3	<2.3	<2.5

Table 1 Continued

Sample ID Sample Date	UUSCO <sup>1</sup>	Standard RRSCO <sup>2</sup>	CSCO <sup>3</sup>	SB-1 (0-2') 9/25/2012	SB-1 (10-12') 9/25/2012	SB-2 (0-2') 9/25/2012	SB-2 (10-12') 9/25/2012
Chlorobenzene	1,100	100,000	500,000	<2.4	<2.3	<2.3	<2.5
Chlorodifluoromethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Chloroethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Chloroform	370	49,000	350,000	<2.4	<2.3	<2.3	<2.5
Chloromethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
cis-1,2-Dichloroethene	250	100,000	500,000	<b>1.7</b>	<2.3	<2.3	<2.5
cis-1,3-Dichloropropene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Dibromochloromethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Dibromomethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Dichlorodifluoromethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Diisopropyl ether	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Ethanol	NS	NS	NS	<6.0	<5.8	<5.8	<6.2
Ethyl acetate	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Ethylbenzene	1,000	41,000	390,000	<2.4	<2.3	<2.3	<2.5
Freon-114	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Hexachlorobutadiene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Isopropyl acetate	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Isopropylbenzene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
m,p-Xylene	260	100,000	500,000	<4.8	<4.6	<4.6	<4.9
Methyl Acetate	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Methyl tert-butyl ether	930	100,000	500,000	<2.4	<2.3	<2.3	<2.5
Methylene chloride	50	100,000	500,000	<b>16</b>	<b>6.3</b>	<b>7.7</b>	<b>6.0</b>
n-Amyl acetate	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Naphthalene	NS	NS	NS	<b>8.9</b>	<2.3	<b>4.1</b>	<2.5
n-Butyl acetate	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
n-Butylbenzene	12,000	100,000	500,000	<2.4	<2.3	<2.3	<2.5
n-Propyl acetate	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
n-Propylbenzene	3,900	100,000	500,000	<2.4	<2.3	<2.3	<2.5
o-Xylene	260	100,000	500,000	<2.4	<2.3	<2.3	<2.5
p-Diethylbenzene	NS	NS	NS	<b>0.36</b>	<2.3	<2.3	<2.5
p-Ethyltoluene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
sec-Butylbenzene	11,000	100,000	500,000	<2.4	<2.3	<2.3	<2.5
Styrene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
t-Butyl alcohol	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
tert-Butylbenzene	5,900	100,000	500,000	<2.4	<2.3	<2.3	<2.5
Tetrachloroethene	1,300	19,000	150,000	<b>14</b>	<b>1.9</b>	<b>5.4</b>	<2.5
Toluene	700	100,000	500,000	<2.4	<2.3	<2.3	<2.5
trans-1,2-Dichloroethene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
trans-1,3-Dichloropropene	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Trichloroethene	470	21,000	200,000	<b>1.4</b>	<2.3	<b>0.40</b>	<2.5
Trichlorofluoromethane	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Vinyl acetate	NS	NS	NS	<2.4	<2.3	<2.3	<2.5
Vinyl chloride	20	900	13,000	<2.4	<2.3	<2.3	<2.5

<sup>1</sup> Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006

<sup>2</sup> Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006

<sup>3</sup> Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006

Bolded values signify detection above method detection limit

NS = No Standard

Table 2

Semi Volatile Organic Compounds in Soil (ug/kg)  
EPA Method 8270  
573 4th Avenue  
Brooklyn, NY

ACT Project No.: 7115-BKNY

Sample ID Sample Date	UUSCO <sup>1</sup>	Standard RRSCO <sup>2</sup>	CSCO <sup>3</sup>	SB-1 (0-2') 9/25/2012	SB-1 (10-12') 9/25/2012	SB-2 (0-2') 9/25/2012	SB-2 (10-12') 9/25/2012
1,2,4-Trichlorobenzene	NS	NS	NS	<290	<280	<290	<310
1,2-Dichlorobenzene	NS	NS	NS	<290	<280	<290	<310
1,3-Dichlorobenzene	NS	NS	NS	<290	<280	<290	<310
1,4-Dichlorobenzene	NS	NS	NS	<290	<280	<290	<310
2,3,4,6-Tetrachlorophenol	NS	NS	NS	<290	<280	<290	<310
2,4,5-Trichlorophenol	NS	NS	NS	<290	<280	<290	<310
2,4,6-Trichlorophenol	NS	NS	NS	<290	<280	<290	<310
2,4-Dichlorophenol	NS	NS	NS	<290	<280	<290	<310
2,4-Dimethylphenol	NS	NS	NS	<290	<280	<290	<310
2,4-Dinitrophenol	NS	NS	NS	<290	<280	<290	<310
2,4-Dinitrotoluene	NS	NS	NS	<290	<280	<290	<310
2,6-Dinitrotoluene	NS	NS	NS	<290	<280	<290	<310
2-Chloronaphthalene	NS	NS	NS	<290	<280	<290	<310
2-Chlorophenol	NS	NS	NS	<290	<280	<290	<310
2-Methylnaphthalene	NS	NS	NS	<290	<280	<290	<310
2-Methylphenol	330	100,000	500,000	<290	<280	<290	<310
2-Nitroaniline	NS	NS	NS	<290	<280	<290	<310
2-Nitrophenol	NS	NS	NS	<290	<280	<290	<310
3,3'-Dichlorobenzidine	NS	NS	NS	<290	<280	<290	<310
3+4-Methylphenol	330	100,000	500,000	<290	<280	<290	<310
3-Nitroaniline	NS	NS	NS	<290	<280	<290	<310
4,6-Dinitro-2-methylphenol	NS	NS	NS	<290	<280	<290	<310
4-Bromophenyl phenyl ether	NS	NS	NS	<290	<280	<290	<310
4-Chloro-3-methylphenol	NS	NS	NS	<290	<280	<290	<310
4-Chloroaniline	NS	NS	NS	<290	<280	<290	<310
4-Chlorophenyl phenyl ether	NS	NS	NS	<290	<280	<290	<310
4-Nitroaniline	NS	NS	NS	<290	<280	<290	<310
4-Nitrophenol	NS	NS	NS	<290	<280	<290	<310
Acenaphthene	20,000	100,000	500,000	<290	<280	<b>95</b>	<310
Acenaphthylene	100,000	100,000	500,000	<290	<280	<b>34</b>	<310
Acetophenone	NS	NS	NS	<290	<280	<290	<310
Aniline	NS	NS	NS	<290	<280	<290	<310
Anthracene	100,000	100,000	500,000	<b>44</b>	<280	<b>270</b>	<310
Atrazine	NS	NS	NS	<290	<280	<290	<310
Azobenzene	NS	NS	NS	<290	<280	<290	<310
Benzaldehyde	NS	NS	NS	<290	<280	<290	<310
Benzidine	NS	NS	NS	<290	<280	<290	<310
Benzo(a)anthracene	1,000	1,000	5,600	<b>170</b>	<280	<b>670</b>	<310
Benzo(a)pyrene	1,000	1,000	1,000	<b>170</b>	<280	<b>560</b>	<310
Benzo(b)fluoranthene	1,000	1,000	5,600	<b>150</b>	<280	<b>480</b>	<310

Table 2 Continued

Sample ID Sample Date	UUSCO <sup>1</sup>	Standard RRSCO <sup>2</sup>	CSCO <sup>3</sup>	SB-1 (0-2')	SB-1 (10-12')	SB-2 (0-2')	SB-2 (10-12')
				9/25/2012	9/25/2012	9/25/2012	9/25/2012
Benzo(g,h,i)perylene	100,000	100,000	500,000	<b>100</b>	<280	<b>370</b>	<310
Benzo(k)fluoranthene	800	3,900	56,000	<b>130</b>	<280	<b>510</b>	<310
Benzoic acid	NS	NS	NS	<290	<280	<290	<310
Benzyl alcohol	NS	NS	NS	<b>220</b>	<b>280</b>	<b>220</b>	<b>300</b>
Biphenyl	NS	NS	NS	<290	<280	<290	<310
Bis(2-chloroethoxy)methane	NS	NS	NS	<290	<280	<290	<310
Bis(2-chloroethyl)ether	NS	NS	NS	<290	<280	<290	<310
Bis(2-chloroisopropyl)ether	NS	NS	NS	<290	<280	<290	<310
Bis(2-ethylhexyl)phthalate	NS	NS	NS	<b>400</b>	<b>120</b>	<b>180</b>	<b>150</b>
Butyl benzyl phthalate	NS	NS	NS	<b>52</b>	<280	<290	<310
Caprolactam	NS	NS	NS	<290	<280	<290	<310
Carbazole	NS	NS	NS	<290	<280	<b>75</b>	<310
Chrysene	1,000	3,900	56,000	<b>230</b>	<280	<b>690</b>	<310
Dibenzo(a,h)anthracene	330	330	560	<b>37</b>	<280	<290	<310
Dibenzofuran	NS	NS	NS	<290	<280	<b>54</b>	<310
Diethyl phthalate	NS	NS	NS	<290	<280	<290	<310
Dimethyl phthalate	NS	NS	NS	<290	<280	<290	<310
Di-n-butyl phthalate	NS	NS	NS	<b>780</b>	<b>480</b>	<b>640</b>	<b>740</b>
Di-n-octyl phthalate	NS	NS	NS	<290	<280	<290	<310
Fluoranthene	100,000	100,000	500,000	<b>330</b>	<280	<b>1,900</b>	<b>33</b>
Fluorene	30,000	100,000	500,000	<290	<280	<b>93</b>	<310
Hexachlorobenzene	NS	NS	NS	<290	<280	<290	<310
Hexachlorobutadiene	NS	NS	NS	<290	<280	<290	<310
Hexachlorocyclopentadiene	NS	NS	NS	<290	<280	<290	<310
Hexachloroethane	NS	NS	NS	<290	<280	<290	<310
Indeno(1,2,3-c,d)pyrene	500	500	5,600	<b>100</b>	<280	<b>400</b>	<310
Isophorone	NS	NS	NS	<290	<280	<290	<310
Naphthalene	12,000	100,000	500,000	<290	<280	<290	<310
Nitrobenzene	NS	NS	NS	<290	<280	<290	<310
N-Nitrosodimethylamine	NS	NS	NS	<290	<280	<290	<310
N-Nitrosodi-n-propylamine	NS	NS	NS	<290	<280	<290	<310
N-Nitrosodiphenylamine	NS	NS	NS	<290	<280	<290	<310
Parathion	NS	NS	NS	<290	<280	<290	<310
Pentachlorophenol	800	6,700	6,700	<290	<280	<290	<310
Phenanthrene	100,000	100,000	500,000	<b>220</b>	<280	<b>1,500</b>	<310
Phenol	330	100,000	500,000	<290	<280	<290	<310
Pyrene	100,000	100,000	500,000	<b>310</b>	<280	<b>1,500</b>	<310
Pyridine	NS	NS	NS	<290	<280	<290	<310

<sup>1</sup> Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006

<sup>2</sup> Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006

<sup>3</sup> Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006

Bolded values signify detection above method detection limit

Highlighted values signify exceedance of regulatory guidance

NS = No Standard

Table 3

RCRA Metals in Soil (mg/kg)  
EPA Method 6010 and 7471  
573 4th Avenue  
Brooklyn, NY

ACT Project No.: 7115-BKNY

Sample ID Sample Date	UUSCO <sup>1</sup>	Standard RRSCO <sup>2</sup>	CSCO <sup>3</sup>	SB-1 (0-2') 9/25/2012	SB-1 (10-12') 9/25/2012	SB-2 (0-2') 9/25/2012	SB-2 (10-12') 9/25/2012
Arsenic	13	16	16	<b>4.11</b>	<b>4.46</b>	<b>4.07</b>	<b>4.32</b>
Barium	350	400	400	<b>67.2</b>	<b>21.2</b>	<b>72.2</b>	<b>61.3</b>
Cadmium	2.5	4.3	9.3	<b>0.451</b>	<0.458	<b>2.44</b>	<0.488
Chromium	30	180	1,500	<b>10.5</b>	<b>8.62</b>	<b>21.5</b>	<b>19.0</b>
Lead	63	400	1,000	<b>34.9</b>	<b>7.49</b>	<b>2,360</b>	<b>28.6</b>
Mercury	0.18	0.81	2.8	<b>0.429</b>	<b>0.0349</b>	<b>2.67</b>	<b>0.232</b>
Selenium	3.9	180	1,500	<b>0.329</b>	<0.572	<0.569	<0.610
Silver	2	180	1,500	<b>0.123</b>	<0.458	<b>0.723</b>	<0.488

<sup>1</sup> Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006

<sup>2</sup> Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006

<sup>3</sup> Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006

Bolded values signify detection above method detection limit

Highlighted values signify exceedance of regulatory guidance

Table 4

**Volatile Organic Compounds in Indoor Air and Sub-Slab Vapor (ug/m3)**  
**EPA Method TO-15**  
**573 4th Avenue**  
**Brooklyn, NY**

ACT Project No.: 7115-BKNY

Sample ID Sample Date	Indoor Air Guidance <sup>1</sup>	Background Value <sup>2</sup>	IA-1 9/13/2012	SV-1 9/13/2012
1,1,1-Trichloroethane	100	10.8	<1.09	<1.09
1,1,2,2-Tetrachloroethane	NS	NS	<1.37	<1.37
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	<0.766	<0.766
1,1,2-Trichloroethane	NS	<1.4	<1.09	<1.09
1,1-Dichloroethane	NS	<0.5	<0.809	<0.809
1,1-Dichloroethene	NS	<1.2	<0.793	<0.793
1,2,4-Trichlorobenzene	NS	<1.2	<1.48	<1.48
1,2,4-Trimethylbenzene	NS	5.1	<b>11.2</b>	<b>29.2</b>
1,2-Dibromoethane	NS	<1.4	<1.54	<1.54
1,2-Dichlorobenzene	NS	<1.0	<1.20	<1.20
1,2-Dichloroethane	NS	<0.7	<0.809	<0.809
1,2-Dichloroethene (cis)	NS	<1.2	<0.793	<0.793
1,2-Dichloroethene (trans)	NS	NS	<0.793	<0.793
1,2-Dichloropropane	NS	<1.6	<0.924	<0.924
1,2-Dichlorotetrafluoroethane	NS	NS	<1.40	<1.40
1,3,5-Trimethylbenzene	NS	<4.6	<b>3.59</b>	<b>8.60</b>
1,3-Butadiene	NS	<2.7	<0.442	<0.442
1,3-Dichlorobenzene	NS	<1.1	<1.20	<1.20
1,3-Dichloropropene (cis)	NS	<2.0	<0.908	<0.908
1,3-Dichloropropene (trans)	NS	<1.2	<0.908	<0.908
1,3-Hexachlorobutadiene	NS	NS	<2.13	<2.13
1,4-Dichlorobenzene	NS	1.4	<1.20	<1.20
1,4-Dioxane	NS	NS	<0.721	<0.721
2,2,4-Trimethylpentane	NS	NS	<b>21.0</b>	<b>6.87</b>
4-Ethyltoluene	NS	<3.1	<b>2.90</b>	<b>7.37</b>
Acetone	NS	59.8	<0.475	<b>34.1</b>
Benzene	NS	5.1	<b>12.5</b>	<b>4.38</b>
Bromodichloromethane	NS	NS	<1.34	<1.34
Bromoform	NS	NS	<2.07	<2.07
Bromomethane	NS	<1.1	<0.777	<0.777
Carbon disulfide	NS	2.1	<0.623	<b>0.903</b>
Carbon tetrachloride	5	<1.1	<1.26	<b>4.47</b>
Chlorobenzene	NS	<0.8	<0.921	<0.921
Chloroethane	NS	<1.0	<0.528	<0.528
Chloroform	NS	<1.2	<0.977	<b>1.07</b>
Chloromethane	NS	3.1	<b>0.950</b>	<0.413

Table 4 Continued

Sample ID Sample Date	Indoor Air Guidance <sup>1</sup>	Background Value <sup>2</sup>	IA-1 9/13/2012	SV-1 9/13/2012
Cyclohexane	NS	NS	<b>4.51</b>	<b>2.68</b>
Dibromochloromethane	NS	NS	<1.70	<1.70
Dichlorodifluoromethane	NS	10.5	<b>2.32</b>	<b>2.03</b>
Ethanol	NS	140	<b>67.4</b>	<b>9.03</b>
Ethyl acetate	NS	3.2	<0.721	<0.721
Ethylbenzene	NS	3.4	<b>7.95</b>	<b>18.2</b>
Isopropanol	NS	NS	<b>2.21</b>	<b>1.33</b>
Methyl butyl ketone	NS	NS	<0.819	<0.819
Methyl ethyl ketone	NS	7.5	<b>2.51</b>	<b>9.76</b>
Methyl isobutyl ketone	NS	3.0	<0.820	<0.820
Methyl tert-butyl ether	NS	<6.4	<0.721	<0.721
Methylene chloride	NS	5.0	<b>1.83</b>	<b>1.94</b>
n-Heptane	NS	<1.6	<b>7.87</b>	<b>11.0</b>
n-Hexane	NS	6.4	<b>13.8</b>	<b>9.16</b>
Propylene	NS	NS	<b>18.2</b>	<b>4.47</b>
Styrene	NS	<2.3	<b>3.49</b>	<b>0.980</b>
tert-Butyl Alcohol	NS	NS	<0.606	<b>3.03</b>
Tetrachloroethene	100	5.9	<1.36	<b>1,830</b>
Tetrahydrofuran	NS	NS	<0.590	<b>37.9</b>
Toluene	NS	25.9	<b>33.1</b>	<b>55.4</b>
Trichloroethene	5	1.2	<1.07	<b>2.26</b>
Trichlorofluoromethane	NS	6.7	<b>1.35</b>	<b>1.63</b>
Vinyl acetate	NS	NS	<0.704	<0.704
Vinyl bromide	NS	NS	<0.874	<0.874
Vinyl chloride	NS	<1.0	<0.511	<0.511
Xylenes (m&p)	NS	12.2	<b>25.8</b>	<b>68.1</b>
Xylenes (o)	NS	4.4	<b>10.2</b>	<b>25.6</b>

<sup>1</sup> NYSDOH "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York", October 2006.

<sup>2</sup> Background values are derived from EPA 2001 Building Assessment and Survey Evaluation (BASE) Database, Bolded values signify detection above method detection limit

Highlighted values signify exceedance of regulatory guidance and/or background value

NS = No Standard

**APPENDIX A**  
**FIELD NOTES**

573 4th Ave. #7115-BKNY 9/25/12

Brooklyn, NY PH-II

→ No Basement Metal plates cover most of floor

SB-1 0-15' No Odor PID=0

0-5" concrete

5"-2' ash, coal, some orange-brown fine silt, moist

2-15' orange-brown fine silt, moist

Recovery 70%  
\* sampled @ 0-2' + 10-12'

TW-1

→ Ground water attempt, TW-1 refusal at 18 ft. No water

SB-2 0-15' No Odor PID=0

Recovery 60%  
Petra

0-3" concrete

3"-2' ash, coal, orange-brown fine silt, very moist

2'-12' orange-brown fine silt very moist

12-15' orange-brown to gray silty clay, marsh odor some organic matter

\* Sampled @ 0-2' and 10-12'

Air ID	Sampling Canister	Regulator	Time	P	T
IA-1	1601	1676	11:25 - 2:48	30	70
SV-1	1611	2123	11:55 - 2:48	30	68

SB-2 near metal plate with old wooden floor with steel bars below

SB-1 close to cemented fill near front of building

TW-2 Refusal at 18ft  
No water

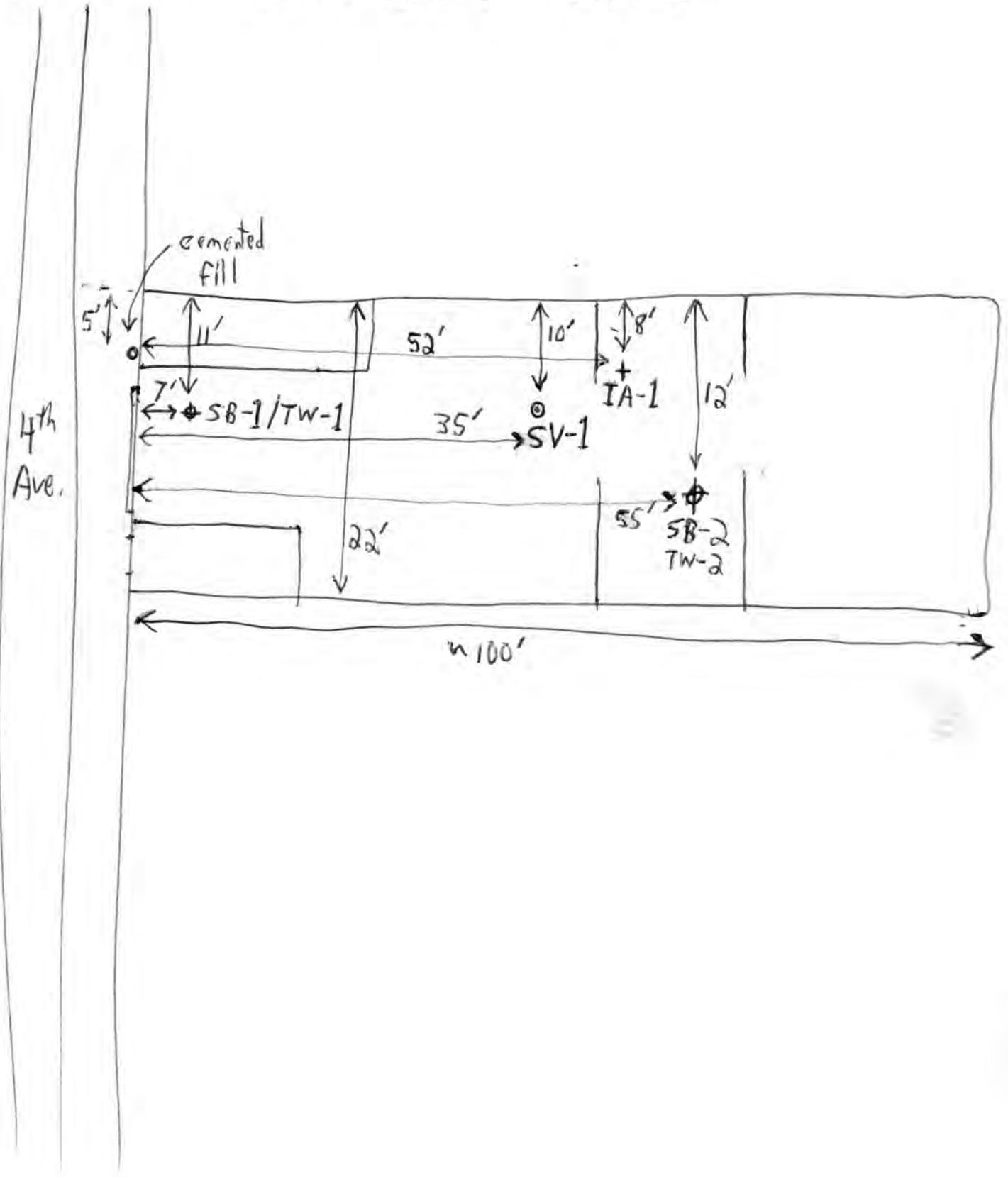
→ Cemented fill found in sidewalk at front of building

→ Some holes in floor covered by metal + wood plates

→ Construction materials stored on ground floor, 2 story building

573 4th Ave, Brooklyn, NY  
#7115-BKNY PH-II

9/25/12





**APPENDIX B**  
**SOIL BORING LOGS**

# Soil Boring Log



**Project No:** 7115-BKNY  
**Site:** 573 4th Avenue  
**Client:** Cathay Bank

**Boring No:** SB-1  
**Date Drilled:** 9/25/2012  
**Geologist:** Steven Walls

**Water Table Level:** Not encountered

Depth (feet)	Description (Unified Soils Classification)	Sample Depth	PID (ppmv)	% Recovery	Remarks
0	0-5": Concrete				No odor throughout boring
1	5"-2': Ash, coal, some orange to brown silt, moist	0 to 2'	0.0	70	
2					
3					
4					
5					
6	2-15': Orange to brown silt, moist		0.0	70	
7					
8					
9					
10					
11		10 to 12'	0.0	70	Ground water attempt refused at 18' End of boring
12					
13					
14					
15					

**Rig Type:** AMS Power Probe  
**Driller:** ACT - Steven Walls

**Reviewed by:** Paul Stewart  
**Sheet No:** 1 of 1

# Soil Boring Log



**Project No:** 7115-BKNY  
**Site:** 573 4th Avenue  
**Client:** Cathay Bank

**Boring No:** SB-2  
**Date Drilled:** 9/25/2012  
**Geologist:** Steven Walls

**Water Table Level:** Not encountered

Depth (feet)	Description (Unified Soils Classification)	Sample Depth	PID (ppmv)	% Recovery	Remarks
0	0-3": Concrete				No odor throughout boring
1	3"-2': Ash, coal, orange to brown silt, very moist	0 to 2'	0.0	60	
2					
3					
4					
5					
6	2-12': Orange to brown silt, very moist		0.0	60	
7					
8					
9					
10					
11	12-15': Orange to brown to gray silty clay, marsh odor and some organic matter	10 to 12'	0.0	60	Ground water attempt refused at 18' End of boring
12					
13					
14					
15					

**Rig Type:** AMS Power Probe  
**Driller:** ACT - Steven Walls

**Reviewed by:** Paul Stewart  
**Sheet No:** 1 of 1

**APPENDIX C**  
**LABORATORY REPORTS**

Friday, October 12, 2012

Paul P. Stewart  
Advanced Cleanup Technologies, Inc.  
960 So. Broadway, Suite 100  
Hicksville, NY 11801

TEL: (516) 933-0655  
FAX (516) 933-0659

RE: 573 4th Avenue, Brooklyn, NY (7115-BKN)

Order No.: 1210121

Dear Paul P. Stewart:

American Analytical Laboratories, LLC. received 1 sample(s) on 9/26/2012 for the analyses presented in the following report.

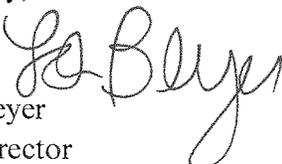
Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report.

The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified either on the sample results or in the QC section of the report. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. This report consists of 6 pages.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,

  
Lori Beyer  
Lab Director

**American Analytical Laboratories, LLC.**

**Date:** 12-Oct-12

---

**CLIENT:** Advanced Cleanup Technologies, Inc.  
**Project:** 573 4th Avenue, Brooklyn, NY (7115-BKNY)  
**Lab Order:** 1210121

**Work Order Sample Summary**

---

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Date Collected</b>	<b>Date Received</b>
1210121-01A	SB-2 (0-2')	9/25/2012 1:00:00 PM	9/26/2012



56 TOLEDO STREET • FARMINGDALE, NEW YORK 11735  
 (631) 454-6100 • FAX (631) 454-8027  
 www.american-analytical.com

NYSDOH 11418  
 CTDOH PH-0205  
 NJDEP NY050  
 PADEP 68-573

# CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS <b>ACT</b> 960 S Broadway, Suite 100 Hicksville, NY 11801		CONTACT: <b>Paul Stewart</b>		SAMPLE(S) SEALED <i>(Signature)</i>		YES / NO
PROJECT LOCATION: 573 4th Avenue, Brooklyn, NY 7115-BKNY		ANALYSIS REQUIRED EPA 8210 (Benzene) EPA 8210 (Methals) TSP PM 10 PM 2.5		CORRECT CONTAINER(S)		YES / NO
SAMPLER NAME (PRINT) <b>Steve Walls</b>		TEMPERATURE (°C)		TEMPERATURE (°C)		YES / NO
LABORATORY ID# LAB USE ONLY	MATRIX/ TYPE	NO. OF CONTAINERS	SAMPLING DATE	SAMPLING TIME	SAMPLE # - LOCATION	
1209260-01AS	S	3	9/25/12	10 am	SB-1 (0-2')	X X X
OBAS	S	3	9/25/12	11 am	SB-1 (10-12')	X X X
OBAS	S	3	9/25/12	1 pm	SB-2 (0-2')	X X X
OBAS	S	3	9/25/12	2 pm	SB-2 (10-12')	X X X
/						
COMMENTS / INSTRUCTIONS						
Samples must be on ICE (<6° C)						
MATRIX S=SOIL; W=WATER; SL=SLUDGE; A=AIR; M=MISCELLANEOUS		TURNAROUND REQUIRED		E-MAIL ADDRESS FOR RESULTS:		
TYPE G=GRAB; C=COMPOSITE		STANDARD STAT <input checked="" type="checkbox"/>		BY / /		
RELINQUISHED BY (SIGNATURE) <i>(Signature)</i>		PRINTED NAME <b>Yi Song Yang</b>		DATE 9/26/12 TIME 7:31 AM		PRINTED NAME <b>CORA BLY</b>
RELINQUISHED BY (SIGNATURE) <i>(Signature)</i>		PRINTED NAME <b>Yi Song Yang</b>		DATE 9/26/12 TIME 7:31 AM		PRINTED NAME <b>CORA BLY</b>

WHITE-OFFICE / CANARY-LAB / PINK-SAMPLE CUSTODIAN / GOLDENROD-CLIENT

American Analytical Laboratories, LLC.

Sample Receipt Checklist

Client Name - ADVANCED CLEANUP TECH

Date and Time Receive 10/4/2012 10:51:08 AM

Work Order Numbe 1210060

RcptNo: 1

Received by CF

COC\_ID:

CoolerID:

Checklist completed b

Signature

Date 10/4/12

Reviewed by

Initials JCB

Date 10/4/12

Matrix

Carrier name Courier

- Shipping container/cooler in good condition? Yes  No  Not Presen
- Custody seals intact on shipping container/cooler? Yes  No  Not Presen
- Custody seals intact on sample bottles? Yes  No  Not Presen
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No
- Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No
- Water - pH acceptable upon receipt? Yes  No  N/A

Adjusted?

Checked b

Any No and/or NA (not applicable) response must be detailed in the comments section b

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

ELAP ID : 11418

<b>CLIENT:</b>	Advanced Cleanup Technologies, Inc.	<b>Client Sample ID:</b>	SB-2 (0-2')
<b>Lab Order:</b>	1210121	<b>Collection Date:</b>	9/25/2012 1:00:00 PM
<b>Project:</b>	573 4th Avenue, Brooklyn, NY (7115-BKNY)	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	1210121-01A		

**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
TCLP LEAD							Analyst: JP
Lead	0.0218	0.005	0.0500	J	mg/L	1	10/11/2012 10:37:33 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735  
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



- |                    |     |                                                       |     |                                                        |
|--------------------|-----|-------------------------------------------------------|-----|--------------------------------------------------------|
| <b>Qualifiers:</b> | B   | Analyte detected in the associated Method Blank       | C   | Calibration %RSD/%D exceeded for non-CCC analytes      |
|                    | E   | Value above quantitation range                        | H   | Holding times for preparation or analysis exceeded     |
|                    | J   | Analyte detected below quantitation limits            | LOD | Limit of Detection                                     |
|                    | LOQ | Limit of Quantitation                                 | P   | >40% diff for detected conc between the two GC columns |
|                    | PQL | Practical Quantitation Limit                          | S   | Spike Recovery outside accepted recovery limits        |
|                    | U   | Indicates the compound was analyzed but not detected. |     |                                                        |

American Analytical Laboratories, LLC.

Date: 12-Oct-12

CLIENT: Advanced Cleanup Technologies, Inc.  
 Work Order: 1210121  
 Project: 573 4th Avenue, Brooklyn, NY (7115-BKNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: TCLP\_PB

Sample ID: MBW101112AT	SampType: MBLK	TestCode: TCLP_PB	Units: mg/L	Prep Date:	RunNo: 65702						
Client ID: PBS	Batch ID: 37664	TestNo: SW6010C	SW1311	Analysis Date: 10/11/2012	SeqNo: 932747						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	U	0.0500									

Sample ID: LCSW101112AT	SampType: LCS	TestCode: TCLP_PB	Units: mg/L	Prep Date:	RunNo: 65702						
Client ID: LCSS	Batch ID: 37664	TestNo: SW6010C	SW1311	Analysis Date: 10/11/2012	SeqNo: 932748						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.93	0.0500	2.000	0	96.7	80	120				

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy  
 J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit  
 R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed



575 Broad Hollow Road, Melville, NY  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

**LABORATORY RESULTS**

Results for the samples and analytes requested

**Sample Information...**

**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, New York 11801**

**Lab No. : 1209D37-001**  
**Client Sample ID: IA-1**

Type : Air

Attn To : Paul Stewart

Origin:

Collected : 9/25/2012 3:20:00 PM

Received : 9/26/2012 1:15:00 PM

Method: ETO-15	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Parameter(s)							
1,1,1-Trichloroethane	< 0.200	ppbv		1	< 1.09	µg/m³	09/28/2012 3:21 AM
1,1,2,2-Tetrachloroethane	< 0.200	ppbv		1	< 1.37	µg/m³	09/28/2012 3:21 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.100	ppbv		1	< 0.766	µg/m³	09/28/2012 3:21 AM
1,1,2-Trichloroethane	< 0.200	ppbv		1	< 1.09	µg/m³	09/28/2012 3:21 AM
1,1-Dichloroethane	< 0.200	ppbv		1	< 0.809	µg/m³	09/28/2012 3:21 AM
1,1-Dichloroethene	< 0.200	ppbv		1	< 0.793	µg/m³	09/28/2012 3:21 AM
1,2,4-Trichlorobenzene	< 0.200	ppbv	s	1	< 1.48	µg/m³	09/28/2012 3:21 AM
1,2,4-Trimethylbenzene	2.28	ppbv		1	11.2	µg/m³	09/28/2012 3:21 AM
1,2-Dibromoethane	< 0.200	ppbv		1	< 1.54	µg/m³	09/28/2012 3:21 AM
1,2-Dichlorobenzene	< 0.200	ppbv		1	< 1.20	µg/m³	09/28/2012 3:21 AM
1,2-Dichloroethane	< 0.200	ppbv		1	< 0.809	µg/m³	09/28/2012 3:21 AM
1,2-Dichloroethene (cis)	< 0.200	ppbv		1	< 0.793	µg/m³	09/28/2012 3:21 AM
1,2-Dichloroethene (trans)	< 0.200	ppbv		1	< 0.793	µg/m³	09/28/2012 3:21 AM
1,2-Dichloropropane	< 0.200	ppbv		1	< 0.924	µg/m³	09/28/2012 3:21 AM
1,2-Dichlorotetrafluoroethane	< 0.200	ppbv		1	< 1.40	µg/m³	09/28/2012 3:21 AM
1,3,5-Trimethylbenzene	0.730	ppbv		1	3.59	µg/m³	09/28/2012 3:21 AM
1,3-Butadiene	< 0.200	ppbv		1	< 0.442	µg/m³	09/28/2012 3:21 AM
1,3-Dichlorobenzene	< 0.200	ppbv		1	< 1.20	µg/m³	09/28/2012 3:21 AM
1,3-Dichloropropene (cis)	< 0.200	ppbv		1	< 0.908	µg/m³	09/28/2012 3:21 AM
1,3-Dichloropropene (trans)	< 0.200	ppbv		1	< 0.908	µg/m³	09/28/2012 3:21 AM
1,3-Hexachlorobutadiene	< 0.200	ppbv		1	< 2.13	µg/m³	09/28/2012 3:21 AM
1,4-Dichlorobenzene	< 0.200	ppbv		1	< 1.20	µg/m³	09/28/2012 3:21 AM
1,4-Dioxane	< 0.200	ppbv		1	< 0.721	µg/m³	09/28/2012 3:21 AM
2,2,4-Trimethylpentane	4.49	ppbv		1	21.0	µg/m³	09/28/2012 3:21 AM
4-Ethyltoluene	0.590	ppbv		1	2.90	µg/m³	09/28/2012 3:21 AM
Acetone	< 0.200	ppbv		1	< 0.475	µg/m³	09/28/2012 3:21 AM
Benzene	3.90	ppbv		1	12.5	µg/m³	09/28/2012 3:21 AM
Bromodichloromethane	< 0.200	ppbv		1	< 1.34	µg/m³	09/28/2012 3:21 AM
Bromoform	< 0.200	ppbv		1	< 2.07	µg/m³	09/28/2012 3:21 AM
Bromomethane	< 0.200	ppbv		1	< 0.777	µg/m³	09/28/2012 3:21 AM
Carbon disulfide	< 0.200	ppbv		1	< 0.623	µg/m³	09/28/2012 3:21 AM
Carbon tetrachloride	< 0.200	ppbv		1	< 1.26	µg/m³	09/28/2012 3:21 AM
Chlorobenzene	< 0.200	ppbv		1	< 0.921	µg/m³	09/28/2012 3:21 AM
Chloroethane	< 0.200	ppbv		1	< 0.528	µg/m³	09/28/2012 3:21 AM
Chloroform	< 0.200	ppbv		1	< 0.977	µg/m³	09/28/2012 3:21 AM
Chloromethane	0.460	ppbv		1	0.950	µg/m³	09/28/2012 3:21 AM
Cyclohexane	1.31	ppbv		1	4.51	µg/m³	09/28/2012 3:21 AM

Qualifiers: E = Value above quantitation range  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit below calibration range  
 J = Estimated value - below calibration range  
 s = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Christina P. Crespi*  
 QA Manager



575 Broad Hollow Road, Melville, NY  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

**LABORATORY RESULTS**

Results for the samples and analytes requested

**Sample Information...**

**Advanced Cleanup Technologies**  
 960 South Broadway, Suite 100  
 Hicksville, New York 11801

**Lab No. : 1209D37-001**  
 Client Sample ID: IA-1

Type : Air

Origin:

Attn To : Paul Stewart

Collected : 9/25/2012 3:20:00 PM

Received : 9/26/2012 1:15:00 PM

Method: ETO-15 Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Dibromochloromethane	< 0.200	ppbv		1	< 1.70	µg/m³	09/28/2012 3:21 AM
Dichlorodifluoromethane	0.470	ppbv		1	2.32	µg/m³	09/28/2012 3:21 AM
Ethanol	35.8	ppbv		1	67.4	µg/m³	09/28/2012 3:21 AM
Ethyl acetate	< 0.200	ppbv		1	< 0.721	µg/m³	09/28/2012 3:21 AM
Ethylbenzene	1.83	ppbv		1	7.95	µg/m³	09/28/2012 3:21 AM
Isopropanol	0.900	ppbv		1	2.21	µg/m³	09/28/2012 3:21 AM
Methyl butyl ketone	< 0.200	ppbv		1	< 0.819	µg/m³	09/28/2012 3:21 AM
Methyl ethyl ketone	0.850	ppbv		1	2.51	µg/m³	09/28/2012 3:21 AM
Methyl isobutyl ketone	< 0.200	ppbv		1	< 0.820	µg/m³	09/28/2012 3:21 AM
Methyl tert-butyl ether	< 0.200	ppbv		1	< 0.721	µg/m³	09/28/2012 3:21 AM
Methylene chloride	0.470	ppbv		1	1.83	µg/m³	09/28/2012 3:21 AM
n-Heptane	1.92	ppbv		1	7.87	µg/m³	09/28/2012 3:21 AM
n-Hexane	3.92	ppbv		1	13.8	µg/m³	09/28/2012 3:21 AM
Propylene	10.6	ppbv		1	18.2	µg/m³	09/28/2012 3:21 AM
Styrene	0.820	ppbv		1	3.49	µg/m³	09/28/2012 3:21 AM
tert-Butyl Alcohol	< 0.200	ppbv		1	< 0.606	µg/m³	09/28/2012 3:21 AM
Tetrachloroethene	< 0.200	ppbv		1	< 1.36	µg/m³	09/28/2012 3:21 AM
Tetrahydrofuran	< 0.200	ppbv	+	1	< 0.590	µg/m³	09/28/2012 3:21 AM
Toluene	8.80	ppbv		1	33.1	µg/m³	09/28/2012 3:21 AM
Trichloroethene	< 0.200	ppbv		1	< 1.07	µg/m³	09/28/2012 3:21 AM
Trichlorofluoromethane	0.240	ppbv		1	1.35	µg/m³	09/28/2012 3:21 AM
Vinyl acetate	< 0.200	ppbv		1	< 0.704	µg/m³	09/28/2012 3:21 AM
Vinyl bromide	< 0.200	ppbv		1	< 0.874	µg/m³	09/28/2012 3:21 AM
Vinyl chloride	< 0.200	ppbv		1	< 0.511	µg/m³	09/28/2012 3:21 AM
Xylenes (m&p)	5.93	ppbv		1	25.8	µg/m³	09/28/2012 3:21 AM
Xylenes (o)	2.34	ppbv		1	10.2	µg/m³	09/28/2012 3:21 AM
Surr: 4-Bromofluorobenzene	105	%REC	Limit	70-130	No M.W. Data		09/28/2012 3:21 AM
TIC: Acrylonitrile	< 0.200	ppbv		1	< 0.434	µg/m³	09/28/2012 3:21 AM

Qualifiers: E = Value above quantitation range  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
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 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit below calibration range  
 J = Estimated value - below calibration range  
 s = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Christina P. Crespi*  
 QA Manager



575 Broad Hollow Road, Melville, NY  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

**LABORATORY RESULTS**

Results for the samples and analytes requested

**Sample Information...**

**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, New York 11801**

**Lab No. : 1209D37-002**  
**Client Sample ID: SV-1**

Type : Air

Attn To : Paul Stewart

Origin:

Collected : 9/25/2012 3:00:00 PM

Received : 9/26/2012 1:15:00 PM

Method: ETO-15	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Parameter(s)							
1,1,1-Trichloroethane	< 0.200	ppbv		1	< 1.09	µg/m³	09/28/2012 4:03 AM
1,1,2,2-Tetrachloroethane	< 0.200	ppbv		1	< 1.37	µg/m³	09/28/2012 4:03 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.100	ppbv		1	< 0.766	µg/m³	09/28/2012 4:03 AM
1,1,2-Trichloroethane	< 0.200	ppbv		1	< 1.09	µg/m³	09/28/2012 4:03 AM
1,1-Dichloroethane	< 0.200	ppbv		1	< 0.809	µg/m³	09/28/2012 4:03 AM
1,1-Dichloroethene	< 0.200	ppbv		1	< 0.793	µg/m³	09/28/2012 4:03 AM
1,2,4-Trichlorobenzene	< 0.200	ppbv	s	1	< 1.48	µg/m³	09/28/2012 4:03 AM
1,2,4-Trimethylbenzene	5.94	ppbv		1	29.2	µg/m³	09/28/2012 4:03 AM
1,2-Dibromoethane	< 0.200	ppbv		1	< 1.54	µg/m³	09/28/2012 4:03 AM
1,2-Dichlorobenzene	< 0.200	ppbv		1	< 1.20	µg/m³	09/28/2012 4:03 AM
1,2-Dichloroethane	< 0.200	ppbv		1	< 0.809	µg/m³	09/28/2012 4:03 AM
1,2-Dichloroethene (cis)	< 0.200	ppbv		1	< 0.793	µg/m³	09/28/2012 4:03 AM
1,2-Dichloroethene (trans)	< 0.200	ppbv		1	< 0.793	µg/m³	09/28/2012 4:03 AM
1,2-Dichloropropane	< 0.200	ppbv		1	< 0.924	µg/m³	09/28/2012 4:03 AM
1,2-Dichlorotetrafluoroethane	< 0.200	ppbv		1	< 1.40	µg/m³	09/28/2012 4:03 AM
1,3,5-Trimethylbenzene	1.75	ppbv		1	8.60	µg/m³	09/28/2012 4:03 AM
1,3-Butadiene	< 0.200	ppbv		1	< 0.442	µg/m³	09/28/2012 4:03 AM
1,3-Dichlorobenzene	< 0.200	ppbv		1	< 1.20	µg/m³	09/28/2012 4:03 AM
1,3-Dichloropropene (cis)	< 0.200	ppbv		1	< 0.908	µg/m³	09/28/2012 4:03 AM
1,3-Dichloropropene (trans)	< 0.200	ppbv		1	< 0.908	µg/m³	09/28/2012 4:03 AM
1,3-Hexachlorobutadiene	< 0.200	ppbv		1	< 2.13	µg/m³	09/28/2012 4:03 AM
1,4-Dichlorobenzene	< 0.200	ppbv		1	< 1.20	µg/m³	09/28/2012 4:03 AM
1,4-Dioxane	< 0.200	ppbv		1	< 0.721	µg/m³	09/28/2012 4:03 AM
2,2,4-Trimethylpentane	1.47	ppbv		1	6.87	µg/m³	09/28/2012 4:03 AM
4-Ethyltoluene	1.50	ppbv		1	7.37	µg/m³	09/28/2012 4:03 AM
Acetone	14.4	ppbv		1	34.1	µg/m³	09/28/2012 4:03 AM
Benzene	1.37	ppbv		1	4.38	µg/m³	09/28/2012 4:03 AM
Bromodichloromethane	< 0.200	ppbv		1	< 1.34	µg/m³	09/28/2012 4:03 AM
Bromoform	< 0.200	ppbv		1	< 2.07	µg/m³	09/28/2012 4:03 AM
Bromomethane	< 0.200	ppbv		1	< 0.777	µg/m³	09/28/2012 4:03 AM
Carbon disulfide	0.290	ppbv		1	0.903	µg/m³	09/28/2012 4:03 AM
Carbon tetrachloride	0.710	ppbv		1	4.47	µg/m³	09/28/2012 4:03 AM
Chlorobenzene	< 0.200	ppbv		1	< 0.921	µg/m³	09/28/2012 4:03 AM
Chloroethane	< 0.200	ppbv		1	< 0.528	µg/m³	09/28/2012 4:03 AM
Chloroform	0.220	ppbv		1	1.07	µg/m³	09/28/2012 4:03 AM
Chloromethane	< 0.200	ppbv		1	< 0.413	µg/m³	09/28/2012 4:03 AM
Cyclohexane	0.780	ppbv		1	2.68	µg/m³	09/28/2012 4:03 AM

Qualifiers: E = Value above quantitation range  
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 r = Reporting limit below calibration range  
 J = Estimated value - below calibration range  
 s = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Christina P. Crespi*  
 QA Manager



575 Broad Hollow Road, Melville, NY  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

**LABORATORY RESULTS**

Results for the samples and analytes requested

**Sample Information...**

**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, New York 11801**

**Lab No. : 1209D37-002**  
**Client Sample ID: SV-1**

Type : Air

Origin:

Attn To : Paul Stewart

Collected : 9/25/2012 3:00:00 PM

Received : 9/26/2012 1:15:00 PM

Method: ETO-15 Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Dibromochloromethane	< 0.200	ppbv		1	< 1.70	µg/m³	09/28/2012 4:03 AM
Dichlorodifluoromethane	0.410	ppbv		1	2.03	µg/m³	09/28/2012 4:03 AM
Ethanol	4.79	ppbv		1	9.03	µg/m³	09/28/2012 4:03 AM
Ethyl acetate	< 0.200	ppbv		1	< 0.721	µg/m³	09/28/2012 4:03 AM
Ethylbenzene	4.18	ppbv		1	18.2	µg/m³	09/28/2012 4:03 AM
Isopropanol	0.540	ppbv		1	1.33	µg/m³	09/28/2012 4:03 AM
Methyl butyl ketone	< 0.200	ppbv		1	< 0.819	µg/m³	09/28/2012 4:03 AM
Methyl ethyl ketone	3.31	ppbv		1	9.76	µg/m³	09/28/2012 4:03 AM
Methyl isobutyl ketone	< 0.200	ppbv		1	< 0.820	µg/m³	09/28/2012 4:03 AM
Methyl tert-butyl ether	< 0.200	ppbv		1	< 0.721	µg/m³	09/28/2012 4:03 AM
Methylene chloride	0.500	ppbv		1	1.94	µg/m³	09/28/2012 4:03 AM
n-Heptane	2.68	ppbv		1	11.0	µg/m³	09/28/2012 4:03 AM
n-Hexane	2.60	ppbv		1	9.16	µg/m³	09/28/2012 4:03 AM
Propylene	2.60	ppbv		1	4.47	µg/m³	09/28/2012 4:03 AM
Styrene	0.230	ppbv		1	0.980	µg/m³	09/28/2012 4:03 AM
tert-Butyl Alcohol	1.00	ppbv		1	3.03	µg/m³	09/28/2012 4:03 AM
Tetrachloroethene	270	ppbv	D	10	1830	µg/m³	09/28/2012 11:05 AM
Tetrahydrofuran	12.8	ppbv	+	1	37.9	µg/m³	09/28/2012 4:03 AM
Toluene	14.7	ppbv		1	55.4	µg/m³	09/28/2012 4:03 AM
Trichloroethene	0.420	ppbv		1	2.26	µg/m³	09/28/2012 4:03 AM
Trichlorofluoromethane	0.290	ppbv		1	1.63	µg/m³	09/28/2012 4:03 AM
Vinyl acetate	< 0.200	ppbv		1	< 0.704	µg/m³	09/28/2012 4:03 AM
Vinyl bromide	< 0.200	ppbv		1	< 0.874	µg/m³	09/28/2012 4:03 AM
Vinyl chloride	< 0.200	ppbv		1	< 0.511	µg/m³	09/28/2012 4:03 AM
Xylenes (m&p)	15.7	ppbv		1	68.1	µg/m³	09/28/2012 4:03 AM
Xylenes (o)	5.90	ppbv		1	25.6	µg/m³	09/28/2012 4:03 AM
Surr: 4-Bromofluorobenzene	111	%REC	Limit	70-130	No M.W. Data		09/28/2012 4:03 AM
TIC: Acrylonitrile	< 0.200	ppbv		1	< 0.434	µg/m³	09/28/2012 4:03 AM

Qualifiers: E = Value above quantitation range  
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*Christina P. Crespi*  
 QA Manager



H2M LABS INC  
 575 Broad Hollow Road  
 Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 Website: www.h2mlabs.com

# Sample Receipt Checklist

Client Name **ACT-ECO**

Date and Time Received: **9/26/2012 1:15:00 PM**

Work Order Number: **1209D37**

RcptNo: **1**

Received by **Tamika Ricks**

Completed by: 

Reviewed by: 

Completed Date: 9/26/2012

Reviewed Date: 9/30/2012 8:09:16 PM

Carrier name: Client

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Are matrices correctly identified on Chain of custody? Yes  No
- Is it clear what analyses were requested? Yes  No
- Custody seals intact on sample bottles? Yes  No  Not Present
- Samples in proper container/bottle? Yes  No
- Were correct preservatives used and noted? Yes  No  NA
- Preservative added to bottles:
- Sample Condition? Intact  Broken  Leaking
- Sufficient sample volume for indicated test? Yes  No
- Were container labels complete (ID, Pres, Date)? Yes  No
- All samples received within holding time? Yes  No
- Was an attempt made to cool the samples? Yes  No  NA
- All samples received at a temp. of > 0° C to 6.0° C? Yes  No  NA
- Response when temperature is outside of range: Not required
- Sample Temp. taken and recorded upon receipt? Yes  No  To °
- Water - Were bubbles absent in VOC vials? Yes  No  No Vials
- Water - Was there Chlorine Present? Yes  No  NA
- Water - pH acceptable upon receipt? Yes  No  No Water
- Are Samples considered acceptable? Yes  No
- Custody Seals present? Yes  No
- Airbill or Sticker? Air Bil  Sticker  Not Present

Airbill No:

Case Number:

SDG:

SAS:

Any No response should be detailed in the comments section below, if applicable.

Client Contacted?  Yes  No      Person Contacted:

Contact Mode:  Phone:  Fax:  Email:  In Person:

Client Instructions:

Date Contacted:      Contacted By:

Regarding:

Comments:

CorrectiveAction:

## **APPENDIX 2 – FIELD NOTES**

(573 4th Avenue Brooklyn)

7115-BKNY

6/20/13

2752-NYNY

Theresa+Jeff

10:00

Vehicle: Matrix

Set biosone @ 1% solution into  
with double diaphragm pump  
out of MW-3 before leaving.

STP DTW \*Initial\*

- 4.98

- 4.78

- 5.14

3.08 6.15 - well previously injected w/ <sup>Biosone</sup>

Injecting around 10:30-10:45  
1-1. Adjusted flow from sink to  
ately. 5gal per minute. Adjusted  
ic pump to lowest flow possible.  
checks on the pump revealed  
pump clogs + needs to be  
reversed + on again. Finished  
1.5 @ 12:17. Total 500gal water

solve:

DTW \*Final\*

3.00

4.10

left site ~ 12:45

V: Matrix

Theresa Jeff, Steve

Obj: Install 2 vapor points and  
2 soil borings at site.

Started breaking concrete to install  
SV-3. Moved location due to no  
access from scaffolding

SV-3 - SN: 3403 regulator SN: 917.

Helium detector 25ppm

11:19 Started

SV-2 SN: 3402 regulator SN: 1076.

standing water @ US 1st floor pulled

probe up to ~ 4' bgs - helium 50.

ppm. started @ 12:58

SB-3-0-5' ~ 36' recovery

Most red brown silty sand, layer  
of black brittle material ~ 4" below surface

sampled ~ 0-2' 14:15

PID 0.0 throughout

5-10': Most red brown silty sand

Mixed w/ clay (fine sands).

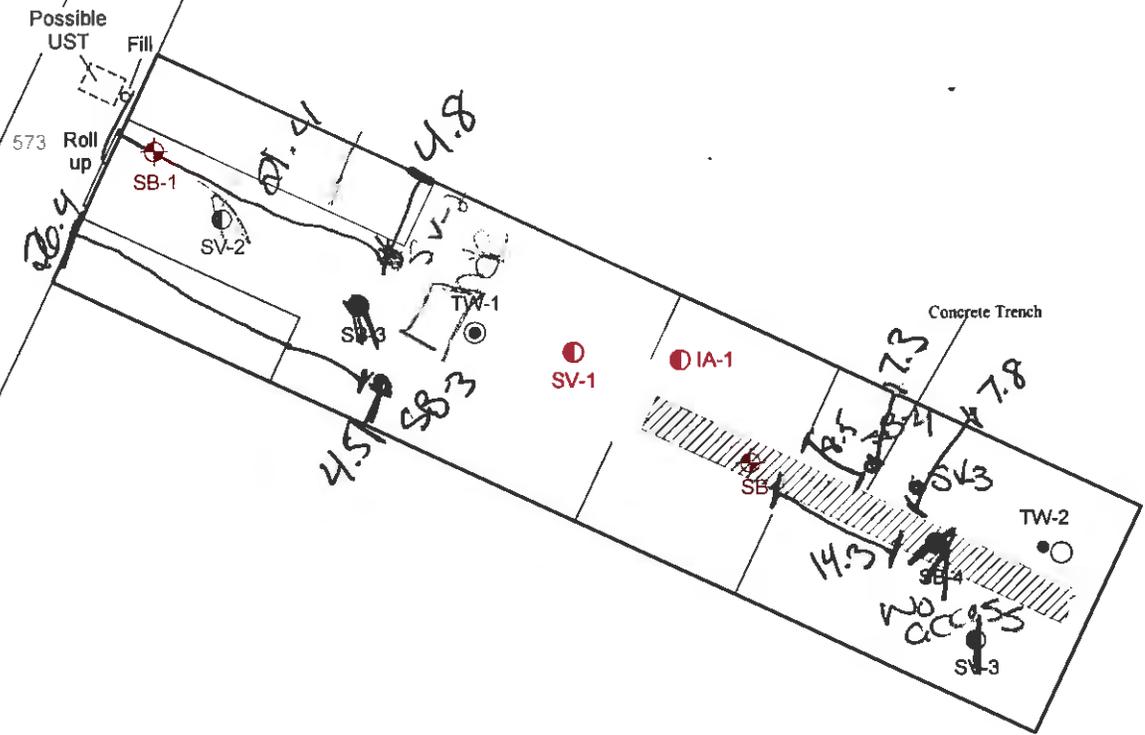
sampled ~ 8-10' 14:38

PID 0.0 throughout

SB-4-0-5' ~ 45" recovery  
Dry red brown soft clay to moist  
red brown (4'-5') silty fine sands  
sampled 0-2 ~ 15:00  
sampled 3-5 ~ 15:15  
PID- 0.0 Throughout

Calvin 1-718-908-8187  
 Benny 1-917-690-1988

4TH AVENUE



All sampling points in brown were installed on September 25, 2012.

All sampling points in black are proposed for summer 2013.

Sampling Diagram	
<b>Advanced Cleanup Technologies, Inc.</b> <small>ENVIRONMENTAL CONSULTANTS</small>	
960 S. Broadway, Suite 100, Hicksville, New York 11801 Tel: 516-933-0655 Fax: 516-933-0659	
Project No : 7115-BKNY	Figure No.: 3
Date: 04/18/2013	Scale: Not To Scale

## **APPENDIX 3 – SOIL BORING LOGS**

# Soil Boring Log



**Project No:** 7115-BKNY  
**Site:** 573 4th Avenue  
**Client:** Cathay Bank

**Boring No:** SB-1  
**Date Drilled:** 9/25/2012  
**Geologist:** Steven Walls

**Water Table Level:** Not encountered

Depth (feet)	Description (Unified Soils Classification)	Sample Depth	PID (ppmv)	% Recovery	Remarks
0	0-5": Concrete				No odor throughout boring
1	5"-2': Ash, coal, some orange to brown silt, moist	0 to 2'	0.0	70	
2					
3					
4					
5					
6	2-15': Orange to brown silt, moist		0.0	70	
7					
8					
9					
10					
11		10 to 12'	0.0	70	Ground water attempt refused at 18' End of boring
12					
13					
14					
15					

Rig Type: **AMS Power Probe**  
 Driller: **ACT - Steven Walls**

Reviewed by: **Paul Stewart**  
 Sheet No: 1 of 1

# Soil Boring Log



**Project No:** 7115-BKNY  
**Site:** 573 4th Avenue  
**Client:** Cathay Bank

**Boring No:** SB-2  
**Date Drilled:** 9/25/2012  
**Geologist:** Steven Walls

**Water Table Level:** Not encountered

Depth (feet)	Description (Unified Soils Classification)	Sample Depth	PID (ppmv)	% Recovery	Remarks
0	0-3": Concrete				No odor throughout boring
1	3"-2': Ash, coal, orange to brown silt, very moist	0 to 2'	0.0	60	
2					
3					
4					
5					
6	2-12': Orange to brown silt, very moist		0.0	60	
7					
8					
9					
10					
11	12-15': Orange to brown to gray silty clay, marsh odor and some organic matter	10 to 12'	0.0	60	Ground water attempt refused at 18' End of boring
12					
13					
14					
15					

**Rig Type:** AMS Power Probe  
**Driller:** ACT - Steven Walls

**Reviewed by:** Paul Stewart  
**Sheet No:** 1 of 1

## Soil Boring Log

**Advanced Cleanup Technologies, Inc.**  
ENVIRONMENTAL CONSULTANTS



**Project No:** 7115-BKNY  
**Site:** 573 4th Avenue  
**Client:** Cathay Bank  
**Water Table Level:** Not encountered

**Boring No:** SB-3  
**Date Drilled:** 6/20/13  
**Geologist:** Steven Walls

Depth (feet)	Description (Unified Soils Classification)	Sample Depth	PID (ppmv)	% Recovery	Remarks
0	0-5": Concrete				No odor throughout boring
1	~4"-5": Dry, black, brittle, unknown material	0 to 2'			
2					
3	5"-2': Moist, red-brown silty sand		0.0	60	
4					
5					
6					
7					
8	5'-10: Moist, red-brown silty sand mixed with clay and some fine sand	8 to 10'	0.0	90	End of boring.
9					
10					

**Rig Type:** AMS Power Probe  
**Driller:** ACT - Steven Walls

**Reviewed by:** Paul Stewart  
**Sheet No:** 1 of 1

## Soil Boring Log



**Project No:** 7115-BKNY  
**Site:** 573 4th Avenue  
**Client:** Cathay Bank

**Boring No:** SB-4  
**Date Drilled:** 6/20/13  
**Geologist:** Steven Walls

**Water Table Level:** Not encountered

Depth (feet)	Description (Unified Soils Classification)	Sample Depth	PID (ppmv)	% Recovery	Remarks
0	0-3": Concrete	0 to 2'	0.0	75	No odor throughout boring
1					
2	3"-5": Dry, red-brown, silty/fine sands	3 to 5'	0.0	75	End of boring.
3					
4					
5					

**Rig Type:** AMS Power Probe

**Reviewed by:** Paul Stewart

**Driller:** ACT - Steven Walls

**Sheet No:** 1 of 1

## **APPENDIX 4 – ANALYTICAL REPORTS**

575 Broad Hollow Rd., Melville, NY 11747  
TEL: (631) 694-3040 FAX: (631) 420-8436  
NYSDOH ID#10478

## LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 2:15:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-001**  
Client Sample ID: **SB-3 (0-2')**

7115-BK NY, 573 4TH AVE, BROOKLYN, NY

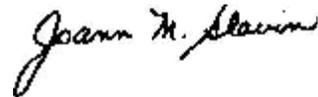
### Sample Information:

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Aluminum	4,490		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Antimony	< 6.93		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Arsenic	7.15		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Barium	41.3		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Beryllium	< 0.58		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Cadmium	< 0.58		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Calcium	1,440		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Chromium	15.2		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Cobalt	< 5.78		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Copper	12.7		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Iron	15,100		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Lead	98.8		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Magnesium	1,760		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Manganese	148		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Nickel	11.3		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Potassium	1,050		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Selenium	< 0.58		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Silver	< 1.16		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Sodium	53.6		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Thallium	< 1.16		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Vanadium	26.3		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01
Zinc	51.5		1	mg/kg-dry	06/27/2013 4:51 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range  
B = Found in Blank  
D.F. = Dilution Factor D = Results for Dilution  
H = Received/analyzed outside of analytical holding time  
+ = ELAP / NELAC does not offer certification for this analyte  
c = Calibration acceptability criteria exceeded for this analyte  
r = Reporting limit > MDL and < LOQ  
J = Estimated value - below calibration range  
s = Recovery exceeded control limits for this analyte  
N = Indicates presumptive evidence of compound



Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

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575 Broad Hollow Rd., Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

## LABORATORY RESULTS

Results for the samples and analytes requested

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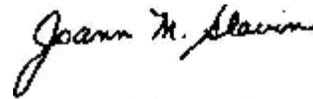
**Sample Information:**

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Prep Date: 6/26/2013 9:30:22 AM	Analyst: KB	Container:
4,4'-DDD	< 3.8		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
4,4'-DDE	< 3.8		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
4,4'-DDT	< 3.8		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Aldrin	< 2.0		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
alpha-BHC	< 2.0		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
alpha-Chlordane	< 2.0		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Aroclor 1016	< 38		1	µg/Kg-dry	06/28/2013 7:32 PM		Container-01 of 01
Aroclor 1221	< 77		1	µg/Kg-dry	06/28/2013 7:32 PM		Container-01 of 01
Aroclor 1232	< 38		1	µg/Kg-dry	06/28/2013 7:32 PM		Container-01 of 01
Aroclor 1242	< 38		1	µg/Kg-dry	06/28/2013 7:32 PM		Container-01 of 01
Aroclor 1248	< 38		1	µg/Kg-dry	06/28/2013 7:32 PM		Container-01 of 01
Aroclor 1254	< 38		1	µg/Kg-dry	06/28/2013 7:32 PM		Container-01 of 01
Aroclor 1260	< 38		1	µg/Kg-dry	06/28/2013 7:32 PM		Container-01 of 01
beta-BHC	< 2.0		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
delta-BHC	< 2.0		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Dieldrin	< 3.8		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Endosulfan I	< 2.0		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Endosulfan II	< 3.8		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Endosulfan sulfate	< 3.8		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Endrin	< 3.8		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Endrin aldehyde	< 3.8		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Endrin ketone	< 3.8		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
gamma-BHC	< 2.0		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
gamma-Chlordane	< 2.0		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Heptachlor	< 2.0		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Heptachlor epoxide	< 2.0		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Methoxychlor	< 20		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Toxaphene	< 200		1	µg/Kg-dry	07/01/2013 9:10 PM		Container-01 of 01
Surr: Decachlorobiphenyl	76.2		1	%REC	Limit 30-150	07/01/2013 9:10 PM	Container-01 of 01
Surr: Decachlorobiphenyl	66.8		1	%REC	Limit 30-150	06/28/2013 7:32 PM	Container-01 of 01
Surr: Tetrachloro-m-xylene	85.3		1	%REC	Limit 30-150	06/28/2013 7:32 PM	Container-01 of 01
Surr: Tetrachloro-m-xylene	66.7		1	%REC	Limit 30-150	07/01/2013 9:10 PM	Container-01 of 01

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 NYSDOH ID#10478

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**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Lab No. : **1306C51-001**

**Sample Information:**

Type : Soil

Attn To : Karen Friedman

Client Sample ID: **SB-3 (0-2')**

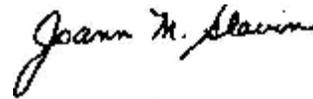
Origin:

Collected : 6/20/2013 2:15:00 PM  
 Received : 6/21/2013 1:13:00 PM  
 Collected By CLIENT

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1-Trichloroethane	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
1,1,2,2-Tetrachloroethane	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
1,1,2-Trichloroethane	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
1,1-Dichloroethane	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
1,1-Dichloroethene	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
1,2-Dichloroethane	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
1,2-Dichloropropane	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
2-Butanone	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
2-Hexanone	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
4-Methyl-2-pentanone	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Acetone	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Benzene	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Bromodichloromethane	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Bromoform	< 13	c	1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Bromomethane	< 13	c	1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Carbon disulfide	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Carbon tetrachloride	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Chlorobenzene	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Chloroethane	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Chloroform	< 13	S	1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Chloromethane	< 13	c	1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
cis-1,2-Dichloroethene	< 13	S	1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
cis-1,3-Dichloropropene	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Dibromochloromethane	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Ethylbenzene	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Methylene chloride	< 13	c	1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Styrene	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Tetrachloroethene	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Toluene	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
trans-1,2-Dichloroethene	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
trans-1,3-Dichloropropene	< 13	c	1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04
Trichloroethene	< 13		1	µg/Kg-dry	06/25/2013 8:46 PM	Container-01 of 04

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 NYSDOH ID#10478

**LABORATORY RESULTS**

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Collected : 6/20/2013 2:15:00 PM

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Collected By CLIENT

Lab No. : **1306C51-001**  
 Client Sample ID: **SB-3 (0-2')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

**Sample Information:**

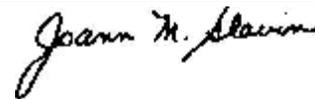
Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
Vinyl chloride	< 13		1	µg/Kg-dry		06/25/2013 8:46 PM	Container-01 of 04
Xylene (total)	< 13		1	µg/Kg-dry		06/25/2013 8:46 PM	Container-01 of 04
Surr: 1,2-Dichloroethane-d4	88.4		1	%REC	33-145	06/25/2013 8:46 PM	Container-01 of 04
Surr: 4-Bromofluorobenzene	86.6		1	%REC	60-148	06/25/2013 8:46 PM	Container-01 of 04
Surr: Toluene-d8	82.1		1	%REC	60-132	06/25/2013 8:46 PM	Container-01 of 04

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Date Reported : 7/10/2013



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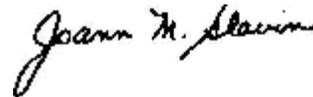
**Sample Information:**

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1'-Biphenyl	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2,2'-oxybis(1-chloropropane)	< 380	c	1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2,4,5-Trichlorophenol	< 960		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2,4,6-Trichlorophenol	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2,4-Dichlorophenol	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2,4-Dimethylphenol	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2,4-Dinitrophenol	< 960		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2,4-Dinitrotoluene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2,6-Dinitrotoluene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2-Chloronaphthalene	< 380	c	1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2-Chlorophenol	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2-Methylnaphthalene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2-Methylphenol	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2-Nitroaniline	< 960		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
2-Nitrophenol	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
3,3'-Dichlorobenzidine	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
3-Nitroaniline	< 960		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
4,6-Dinitro-2-methylphenol	< 960		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
4-Bromophenyl-phenylether	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
4-Chloro-3-methylphenol	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
4-Chloroaniline	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
4-Chlorophenyl-phenylether	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
4-Methylphenol	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
4-Nitroaniline	< 960		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
4-Nitrophenol	< 960		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Acenaphthene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Acenaphthylene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Acetophenone	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Anthracene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Atrazine	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Benzaldehyde	< 380	c	1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Benzo(a)anthracene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01

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Lab No. : **1306C51-001**  
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**Sample Information:**

Type : Soil

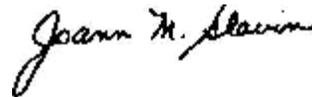
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 Collected By CLIENT

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Benzo(a)pyrene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Benzo(b)fluoranthene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Benzo(g,h,i)perylene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Benzo(k)fluoranthene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Bis(2-chloroethoxy)methane	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Bis(2-chloroethyl)ether	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Bis(2-ethylhexyl)phthalate	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Butyl benzyl phthalate	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Caprolactam	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Carbazole	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Chrysene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Dibenzo(a,h)anthracene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Dibenzofuran	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Diethylphthalate	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Dimethylphthalate	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Di-n-butyl phthalate	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Di-n-octyl phthalate	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Fluoranthene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Fluorene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Hexachlorobenzene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Hexachlorobutadiene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Hexachlorocyclopentadiene	< 380	c	1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Hexachloroethane	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Indeno(1,2,3-cd)pyrene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Isophorone	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Naphthalene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Nitrobenzene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
N-Nitroso-di-n-propylamine	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
N-Nitrosodiphenylamine	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Pentachlorophenol	< 960		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Phenanthrene	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01
Phenol	< 380		1	µg/Kg-dry	06/27/2013 4:02 AM	Container-01 of 01

Qualifiers: E = Value above quantitation range  
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 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ  
 J = Estimated value - below calibration range  
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Laboratory Manager

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575 Broad Hollow Rd., Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 2:15:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-001**  
 Client Sample ID: **SB-3 (0-2')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

**Sample Information:**

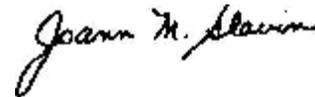
Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
Analytical Method: SW8270C : Prep Method: SW3545 Prep Date: 6/24/2013 9:16:13 AM Analyst: SH							
Pyrene	< 380		1	µg/Kg-dry		06/27/2013 4:02 AM	Container-01 of 01
Surr: 1,2-Dichlorobenzene-d4	69.9		1	%REC	Limit 20-130	06/27/2013 4:02 AM	Container-01 of 01
Surr: 2,4,6-Tribromophenol	74.2		1	%REC	Limit 19-122	06/27/2013 4:02 AM	Container-01 of 01
Surr: 2-Chlorophenol-d4	81.0		1	%REC	Limit 20-130	06/27/2013 4:02 AM	Container-01 of 01
Surr: 2-Fluorobiphenyl	82.6		1	%REC	Limit 30-115	06/27/2013 4:02 AM	Container-01 of 01
Surr: 2-Fluorophenol	78.7		1	%REC	Limit 25-121	06/27/2013 4:02 AM	Container-01 of 01
Surr: 4-Terphenyl-d14	89.3		1	%REC	Limit 18-137	06/27/2013 4:02 AM	Container-01 of 01
Surr: Nitrobenzene-d5	78.6		1	%REC	Limit 23-120	06/27/2013 4:02 AM	Container-01 of 01
Surr: Phenol-d5	90.7		1	%REC	Limit 24-113	06/27/2013 4:02 AM	Container-01 of 01
Analytical Method: SW7471 : Prep Method: SW7471 Prep Date: 6/25/2013 1:15:00 PM Analyst: Aba							
Mercury	0.44		1	mg/Kg-dry		06/26/2013 1:38 PM	Container-01 of 01
Analytical Method: D2216 : Analyst: MLM							
Percent Moisture	13.5		1	wt%		06/24/2013 11:27 AM	Container-01 of 01

Qualifiers: E = Value above quantitation range  
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 r = Reporting limit > MDL and < LOQ  
 J = Estimated value - below calibration range  
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 N = Indicates presumptive evidence of compound

Date Reported : 7/10/2013



Laboratory Manager

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575 Broad Hollow Rd., Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

**LABORATORY RESULTS**

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 2:30:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-002**  
 Client Sample ID: **SB-3 (8-10')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

**Sample Information:**

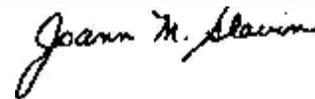
Type : Soil

Origin:

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Analyzed:</u>	<u>Container:</u>
Aluminum	4,480		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Antimony	< 7.27		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Arsenic	2.13		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Barium	34.8		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Beryllium	< 0.61		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Cadmium	< 0.61		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Calcium	1,080		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Chromium	14.1		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Cobalt	< 6.06		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Copper	10.2		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Iron	10,100		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Lead	3.60		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Magnesium	1,850		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Manganese	190		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Nickel	11.6		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Potassium	1,110		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Selenium	< 0.61		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Silver	< 1.21		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Sodium	38.1		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Thallium	< 1.21		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Vanadium	19.1		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01
Zinc	24.6		1	mg/kg-dry	06/27/2013 4:55 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range  
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Date Reported : 7/10/2013



Laboratory Manager

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575 Broad Hollow Rd., Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

## LABORATORY RESULTS

Results for the samples and analytes requested

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Lab No. : **1306C51-002**

**Sample Information:**

Type : Soil

Attn To : Karen Friedman

Client Sample ID: **SB-3 (8-10')**

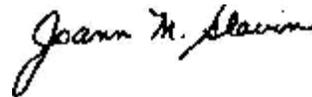
Origin:

Collected : 6/20/2013 2:30:00 PM  
 Received : 6/21/2013 1:13:00 PM  
 Collected By CLIENT

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

Parameter(s)	Results	Qualifier	D.F.	Units	Prep Date: 6/26/2013 9:30:22 AM	Analyst: KB	Container:
4,4'-DDD	< 4.0		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
4,4'-DDE	< 4.0		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
4,4'-DDT	< 4.0		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Aldrin	< 2.1		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
alpha-BHC	< 2.1		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
alpha-Chlordane	< 2.1		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Aroclor 1016	< 40		1	µg/Kg-dry	06/28/2013 7:49 PM		Container-01 of 01
Aroclor 1221	< 81		1	µg/Kg-dry	06/28/2013 7:49 PM		Container-01 of 01
Aroclor 1232	< 40		1	µg/Kg-dry	06/28/2013 7:49 PM		Container-01 of 01
Aroclor 1242	< 40		1	µg/Kg-dry	06/28/2013 7:49 PM		Container-01 of 01
Aroclor 1248	< 40		1	µg/Kg-dry	06/28/2013 7:49 PM		Container-01 of 01
Aroclor 1254	< 40		1	µg/Kg-dry	06/28/2013 7:49 PM		Container-01 of 01
Aroclor 1260	< 40		1	µg/Kg-dry	06/28/2013 7:49 PM		Container-01 of 01
beta-BHC	< 2.1		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
delta-BHC	< 2.1		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Dieldrin	< 4.0		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Endosulfan I	< 2.1		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Endosulfan II	< 4.0		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Endosulfan sulfate	< 4.0		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Endrin	< 4.0		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Endrin aldehyde	< 4.0		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Endrin ketone	< 4.0		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
gamma-BHC	< 2.1		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
gamma-Chlordane	< 2.1		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Heptachlor	< 2.1		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Heptachlor epoxide	< 2.1		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Methoxychlor	< 21		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Toxaphene	< 210		1	µg/Kg-dry	07/01/2013 9:54 PM		Container-01 of 01
Surr: Decachlorobiphenyl	61.7		1	%REC	Limit 30-150	07/01/2013 9:54 PM	Container-01 of 01
Surr: Decachlorobiphenyl	58.9		1	%REC	Limit 30-150	06/28/2013 7:49 PM	Container-01 of 01
Surr: Tetrachloro-m-xylene	85.2		1	%REC	Limit 30-150	06/28/2013 7:49 PM	Container-01 of 01
Surr: Tetrachloro-m-xylene	66.6		1	%REC	Limit 30-150	07/01/2013 9:54 PM	Container-01 of 01

Qualifiers: E = Value above quantitation range  
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 H = Received/analyzed outside of analytical holding time  
 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ  
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Laboratory Manager

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575 Broad Hollow Rd., Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

## LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Lab No. : **1306C51-002**  
 Client Sample ID: **SB-3 (8-10')**

**Sample Information:**

Type : Soil

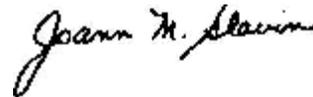
Origin:

Collected : 6/20/2013 2:30:00 PM  
 Received : 6/21/2013 1:13:00 PM  
 Collected By CLIENT

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1-Trichloroethane	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
1,1,2,2-Tetrachloroethane	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
1,1,2-Trichloroethane	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
1,1-Dichloroethane	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
1,1-Dichloroethene	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
1,2-Dichloroethane	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
1,2-Dichloropropane	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
2-Butanone	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
2-Hexanone	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
4-Methyl-2-pentanone	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Acetone	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Benzene	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Bromodichloromethane	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Bromoform	< 11	c	1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Bromomethane	< 11	c	1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Carbon disulfide	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Carbon tetrachloride	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Chlorobenzene	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Chloroethane	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Chloroform	< 11	S	1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Chloromethane	< 11	c	1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
cis-1,2-Dichloroethene	< 11	S	1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
cis-1,3-Dichloropropene	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Dibromochloromethane	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Ethylbenzene	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Methylene chloride	< 11	c	1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Styrene	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Tetrachloroethene	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Toluene	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
trans-1,2-Dichloroethene	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
trans-1,3-Dichloropropene	< 11	c	1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Trichloroethene	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04

Qualifiers: E = Value above quantitation range  
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Laboratory Manager

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575 Broad Hollow Rd. , Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 2:30:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-002**  
 Client Sample ID: **SB-3 (8-10')**

**Sample Information:**

Type : Soil

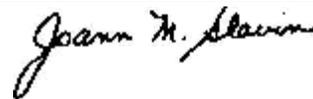
Origin:

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Analyzed:</u>	<u>Container:</u>
Vinyl chloride	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Xylene (total)	< 11		1	µg/Kg-dry	06/25/2013 9:15 PM	Container-01 of 04
Surr: 1,2-Dichloroethane-d4	93.8		1	%REC Limit 33-145	06/25/2013 9:15 PM	Container-01 of 04
Surr: 4-Bromofluorobenzene	83.6		1	%REC Limit 60-148	06/25/2013 9:15 PM	Container-01 of 04
Surr: Toluene-d8	89.6		1	%REC Limit 60-132	06/25/2013 9:15 PM	Container-01 of 04

Qualifiers: E = Value above quantitation range  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
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 N = Indicates presumptive evidence of compound

Date Reported : 7/10/2013



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 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

## LABORATORY RESULTS

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 2:30:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-002**  
 Client Sample ID: **SB-3 (8-10')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

**Sample Information:**

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1'-Biphenyl	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2,2'-oxybis(1-chloropropane)	< 400	c	1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2,4,5-Trichlorophenol	< 1,000		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2,4,6-Trichlorophenol	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2,4-Dichlorophenol	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2,4-Dimethylphenol	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2,4-Dinitrophenol	< 1,000		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2,4-Dinitrotoluene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2,6-Dinitrotoluene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2-Chloronaphthalene	< 400	c	1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2-Chlorophenol	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2-Methylnaphthalene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2-Methylphenol	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2-Nitroaniline	< 1,000		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
2-Nitrophenol	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
3,3'-Dichlorobenzidine	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
3-Nitroaniline	< 1,000		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
4,6-Dinitro-2-methylphenol	< 1,000		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
4-Bromophenyl-phenylether	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
4-Chloro-3-methylphenol	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
4-Chloroaniline	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
4-Chlorophenyl-phenylether	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
4-Methylphenol	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
4-Nitroaniline	< 1,000		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
4-Nitrophenol	< 1,000		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Acenaphthene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Acenaphthylene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Acetophenone	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Anthracene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Atrazine	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Benzaldehyde	< 400	c	1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Benzo(a)anthracene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01

Qualifiers: E = Value above quantitation range  
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 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ  
 J = Estimated value - below calibration range  
 s = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Joann M. Slavina*  
 Laboratory Manager

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575 Broad Hollow Rd., Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

## LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Lab No. : **1306C51-002**  
 Client Sample ID: **SB-3 (8-10')**

**Sample Information:**

Type : Soil

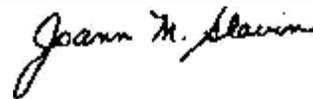
Origin:

Collected : 6/20/2013 2:30:00 PM  
 Received : 6/21/2013 1:13:00 PM  
 Collected By CLIENT

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Benzo(a)pyrene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Benzo(b)fluoranthene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Benzo(g,h,i)perylene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Benzo(k)fluoranthene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Bis(2-chloroethoxy)methane	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Bis(2-chloroethyl)ether	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Bis(2-ethylhexyl)phthalate	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Butyl benzyl phthalate	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Caprolactam	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Carbazole	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Chrysene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Dibenzo(a,h)anthracene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Dibenzofuran	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Diethylphthalate	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Dimethylphthalate	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Di-n-butyl phthalate	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Di-n-octyl phthalate	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Fluoranthene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Fluorene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Hexachlorobenzene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Hexachlorobutadiene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Hexachlorocyclopentadiene	< 400	c	1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Hexachloroethane	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Indeno(1,2,3-cd)pyrene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Isophorone	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Naphthalene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Nitrobenzene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
N-Nitroso-di-n-propylamine	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
N-Nitrosodiphenylamine	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Pentachlorophenol	< 1,000		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Phenanthrene	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01
Phenol	< 400		1	µg/Kg-dry	06/27/2013 4:32 AM	Container-01 of 01

Qualifiers: E = Value above quantitation range  
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Laboratory Manager

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575 Broad Hollow Rd., Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

**LABORATORY RESULTS**

Results for the samples and analytes requested

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 2:30:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-002**  
 Client Sample ID: **SB-3 (8-10')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

**Sample Information:**

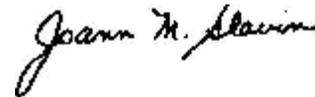
Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
Analytical Method: SW8270C : Prep Method: SW3545 Prep Date: 6/24/2013 9:16:13 AM Analyst: SH							
Pyrene	< 400		1	µg/Kg-dry		06/27/2013 4:32 AM	Container-01 of 01
Surr: 1,2-Dichlorobenzene-d4	71.6		1	%REC	Limit 20-130	06/27/2013 4:32 AM	Container-01 of 01
Surr: 2,4,6-Tribromophenol	73.5		1	%REC	Limit 19-122	06/27/2013 4:32 AM	Container-01 of 01
Surr: 2-Chlorophenol-d4	80.7		1	%REC	Limit 20-130	06/27/2013 4:32 AM	Container-01 of 01
Surr: 2-Fluorobiphenyl	86.2		1	%REC	Limit 30-115	06/27/2013 4:32 AM	Container-01 of 01
Surr: 2-Fluorophenol	81.4		1	%REC	Limit 25-121	06/27/2013 4:32 AM	Container-01 of 01
Surr: 4-Terphenyl-d14	95.9		1	%REC	Limit 18-137	06/27/2013 4:32 AM	Container-01 of 01
Surr: Nitrobenzene-d5	83.0		1	%REC	Limit 23-120	06/27/2013 4:32 AM	Container-01 of 01
Surr: Phenol-d5	94.0		1	%REC	Limit 24-113	06/27/2013 4:32 AM	Container-01 of 01
Analytical Method: SW7471 : Prep Method: SW7471 Prep Date: 6/25/2013 1:15:00 PM Analyst: Aba							
Mercury	< 0.24		1	mg/Kg-dry		06/26/2013 1:40 PM	Container-01 of 01
Analytical Method: D2216 : Analyst: MLM							
Percent Moisture	17.5		1	wt%		06/24/2013 11:28 AM	Container-01 of 01

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Date Reported : 7/10/2013



Laboratory Manager

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 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

**LABORATORY RESULTS**

Results for the samples and analytes requested

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 3:00:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-003**  
 Client Sample ID: **SB-4 (0-2')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

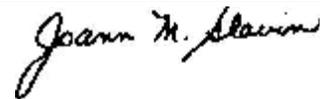
**Sample Information:**

Type : Soil

Origin:

<u>Analytical Method:</u>	<u>SW6010B :</u>	<u>Prep Method:</u>	<u>SW3050A</u>	<u>Prep Date:</u>	<u>6/27/2013 9:58:00 AM</u>	<u>Analyst:</u>	<u>CM</u>
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Analyzed:</u>	<u>Container:</u>	
Aluminum	10,000		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Antimony	< 6.66		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Arsenic	3.79		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Barium	48.6		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Beryllium	< 0.55		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Cadmium	< 0.55		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Calcium	2,720		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Chromium	17.7		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Cobalt	6.44		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Copper	9.10		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Iron	15,400		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Lead	33.5		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Magnesium	2,020		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Manganese	304		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Nickel	10.3		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Potassium	1,020		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Selenium	< 0.55		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Silver	< 1.11		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Sodium	43.0		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Thallium	< 1.11		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Vanadium	20.9		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	
Zinc	42.2		1	mg/kg-dry	06/27/2013 4:59 PM	Container-01 of 01	

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Laboratory Manager

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 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

## LABORATORY RESULTS

Results for the samples and analytes requested

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 3:00:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-003**  
 Client Sample ID: **SB-4 (0-2')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

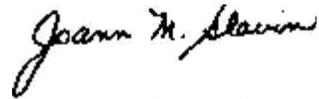
**Sample Information:**

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Prep Date: 6/26/2013 9:30:22 AM	Analyst: KB	Container:
4,4'-DDD	< 11		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
4,4'-DDE	< 11		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
4,4'-DDT	< 11		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Aldrin	< 5.6		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
alpha-BHC	< 5.6		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
alpha-Chlordane	< 5.6		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Aroclor 1016	< 110		1	µg/Kg-dry	06/28/2013 8:05 PM		Container-01 of 01
Aroclor 1221	< 220		1	µg/Kg-dry	06/28/2013 8:05 PM		Container-01 of 01
Aroclor 1232	< 110		1	µg/Kg-dry	06/28/2013 8:05 PM		Container-01 of 01
Aroclor 1242	< 110		1	µg/Kg-dry	06/28/2013 8:05 PM		Container-01 of 01
Aroclor 1248	< 110		1	µg/Kg-dry	06/28/2013 8:05 PM		Container-01 of 01
Aroclor 1254	< 110		1	µg/Kg-dry	06/28/2013 8:05 PM		Container-01 of 01
Aroclor 1260	< 110		1	µg/Kg-dry	06/28/2013 8:05 PM		Container-01 of 01
beta-BHC	< 5.6		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
delta-BHC	< 5.6		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Dieldrin	< 11		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Endosulfan I	< 5.6		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Endosulfan II	< 11		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Endosulfan sulfate	< 11		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Endrin	< 11		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Endrin aldehyde	< 11		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Endrin ketone	< 11		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
gamma-BHC	< 5.6		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
gamma-Chlordane	< 5.6		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Heptachlor	< 5.6		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Heptachlor epoxide	< 5.6		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Methoxychlor	< 56		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Toxaphene	< 560		1	µg/Kg-dry	07/01/2013 10:09 PM		Container-01 of 01
Surr: Decachlorobiphenyl	56.7		1	%REC	Limit 30-150	07/01/2013 10:09 PM	Container-01 of 01
Surr: Decachlorobiphenyl	58.1		1	%REC	Limit 30-150	06/28/2013 8:05 PM	Container-01 of 01
Surr: Tetrachloro-m-xylene	89.6		1	%REC	Limit 30-150	06/28/2013 8:05 PM	Container-01 of 01
Surr: Tetrachloro-m-xylene	65.3		1	%REC	Limit 30-150	07/01/2013 10:09 PM	Container-01 of 01

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 Laboratory Manager

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 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

## LABORATORY RESULTS

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**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 3:00:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-003**  
 Client Sample ID: **SB-4 (0-2')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

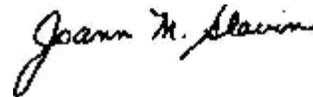
**Sample Information:**

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1-Trichloroethane	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
1,1,2,2-Tetrachloroethane	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
1,1,2-Trichloroethane	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
1,1-Dichloroethane	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
1,1-Dichloroethene	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
1,2-Dichloroethane	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
1,2-Dichloropropane	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
2-Butanone	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
2-Hexanone	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
4-Methyl-2-pentanone	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Acetone	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Benzene	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Bromodichloromethane	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Bromoform	< 11	c	1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Bromomethane	< 11	c	1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Carbon disulfide	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Carbon tetrachloride	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Chlorobenzene	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Chloroethane	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Chloroform	< 11	S	1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Chloromethane	< 11	c	1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
cis-1,2-Dichloroethene	< 11	S	1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
cis-1,3-Dichloropropene	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Dibromochloromethane	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Ethylbenzene	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Methylene chloride	< 11	c	1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Styrene	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Tetrachloroethene	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Toluene	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
trans-1,2-Dichloroethene	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
trans-1,3-Dichloropropene	< 11	c	1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Trichloroethene	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04

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Laboratory Manager

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575 Broad Hollow Rd. , Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

**LABORATORY RESULTS**

Results for the samples and analytes requested

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 3:00:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-003**  
 Client Sample ID: **SB-4 (0-2')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

**Sample Information:**

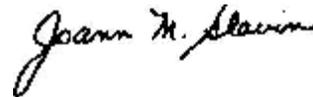
Type : Soil

Origin:

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Analyzed:</u>	<u>Container:</u>
Vinyl chloride	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Xylene (total)	< 11		1	µg/Kg-dry	06/25/2013 9:45 PM	Container-01 of 04
Surr: 1,2-Dichloroethane-d4	88.3		1	%REC Limit 33-145	06/25/2013 9:45 PM	Container-01 of 04
Surr: 4-Bromofluorobenzene	83.0		1	%REC Limit 60-148	06/25/2013 9:45 PM	Container-01 of 04
Surr: Toluene-d8	94.9		1	%REC Limit 60-132	06/25/2013 9:45 PM	Container-01 of 04

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Date Reported : 7/10/2013



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Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-003**  
 Client Sample ID: **SB-4 (0-2')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

**Sample Information:**

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1'-Biphenyl	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2,2'-oxybis(1-chloropropane)	< 370	c	1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2,4,5-Trichlorophenol	< 920		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2,4,6-Trichlorophenol	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2,4-Dichlorophenol	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2,4-Dimethylphenol	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2,4-Dinitrophenol	< 920		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2,4-Dinitrotoluene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2,6-Dinitrotoluene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2-Chloronaphthalene	< 370	c	1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2-Chlorophenol	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2-Methylnaphthalene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2-Methylphenol	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2-Nitroaniline	< 920		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
2-Nitrophenol	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
3,3'-Dichlorobenzidine	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
3-Nitroaniline	< 920		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
4,6-Dinitro-2-methylphenol	< 920		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
4-Bromophenyl-phenylether	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
4-Chloro-3-methylphenol	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
4-Chloroaniline	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
4-Chlorophenyl-phenylether	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
4-Methylphenol	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
4-Nitroaniline	< 920		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
4-Nitrophenol	< 920		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Acenaphthene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Acenaphthylene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Acetophenone	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Anthracene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Atrazine	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Benzaldehyde	< 370	c	1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Benzo(a)anthracene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01

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*Joann M. Slavina*  
 Laboratory Manager

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 NYSDOH ID#10478

## LABORATORY RESULTS

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 3:00:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-003**  
 Client Sample ID: **SB-4 (0-2')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

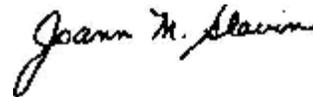
**Sample Information:**

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Benzo(a)pyrene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Benzo(b)fluoranthene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Benzo(g,h,i)perylene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Benzo(k)fluoranthene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Bis(2-chloroethoxy)methane	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Bis(2-chloroethyl)ether	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Bis(2-ethylhexyl)phthalate	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Butyl benzyl phthalate	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Caprolactam	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Carbazole	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Chrysene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Dibenzo(a,h)anthracene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Dibenzofuran	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Diethylphthalate	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Dimethylphthalate	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Di-n-butyl phthalate	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Di-n-octyl phthalate	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Fluoranthene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Fluorene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Hexachlorobenzene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Hexachlorobutadiene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Hexachlorocyclopentadiene	< 370	c	1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Hexachloroethane	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Indeno(1,2,3-cd)pyrene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Isophorone	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Naphthalene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Nitrobenzene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
N-Nitroso-di-n-propylamine	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
N-Nitrosodiphenylamine	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Pentachlorophenol	< 920		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Phenanthrene	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01
Phenol	< 370		1	µg/Kg-dry	06/27/2013 5:01 AM	Container-01 of 01

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Laboratory Manager

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TEL: (631) 694-3040 FAX: (631) 420-8436  
NYSDOH ID#10478

## LABORATORY RESULTS

Results for the samples and analytes requested

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 3:00:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-003**  
Client Sample ID: **SB-4 (0-2')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

### Sample Information:

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Prep Date: 6/24/2013 9:16:13 AM	Analyst: SH	Analyzed:	Container:
Pyrene	< 370		1	µg/Kg-dry				06/27/2013 5:01 AM	Container-01 of 01
Surr: 1,2-Dichlorobenzene-d4	78.8		1	%REC	20-130			06/27/2013 5:01 AM	Container-01 of 01
Surr: 2,4,6-Tribromophenol	64.9		1	%REC	19-122			06/27/2013 5:01 AM	Container-01 of 01
Surr: 2-Chlorophenol-d4	66.0		1	%REC	20-130			06/27/2013 5:01 AM	Container-01 of 01
Surr: 2-Fluorobiphenyl	87.9		1	%REC	30-115			06/27/2013 5:01 AM	Container-01 of 01
Surr: 2-Fluorophenol	60.1		1	%REC	25-121			06/27/2013 5:01 AM	Container-01 of 01
Surr: 4-Terphenyl-d14	97.3		1	%REC	18-137			06/27/2013 5:01 AM	Container-01 of 01
Surr: Nitrobenzene-d5	82.7		1	%REC	23-120			06/27/2013 5:01 AM	Container-01 of 01
Surr: Phenol-d5	86.8		1	%REC	24-113			06/27/2013 5:01 AM	Container-01 of 01

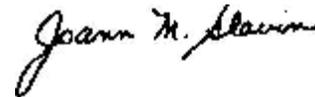
Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Prep Date: 6/25/2013 1:15:00 PM	Analyst: Aba	Analyzed:	Container:
Mercury	< 0.22		1	mg/Kg-dry				06/26/2013 1:48 PM	Container-01 of 01

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Prep Date: 6/25/2013 1:15:00 PM	Analyst: MLM	Analyzed:	Container:
Percent Moisture	9.9		1	wt%				06/24/2013 11:29 AM	Container-01 of 01

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Date Reported : 7/10/2013



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**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 3:15:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-004**  
 Client Sample ID: **SB-4 (3-5')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

**Sample Information:**

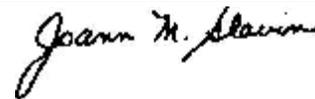
Type : Soil

Origin:

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Prep Date:</u> 6/27/2013 9:58:00 AM	<u>Analyst:</u> CM
Aluminum	4,760		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Antimony	< 6.66		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Arsenic	2.56		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Barium	37.7		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Beryllium	< 0.55		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Cadmium	< 0.55		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Calcium	1,070		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Chromium	15.9		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Cobalt	< 5.55		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Copper	9.17		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Iron	13,000		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Lead	4.72		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Magnesium	1,900		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Manganese	190		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Nickel	8.83		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Potassium	1,160		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Selenium	< 0.55		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Silver	< 1.11		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Sodium	34.5		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Thallium	< 1.11		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Vanadium	24.1		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01
Zinc	24.5		1	mg/kg-dry	06/27/2013 5:04 PM	Container-01 of 01

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**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 3:15:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-004**  
 Client Sample ID: **SB-4 (3-5')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

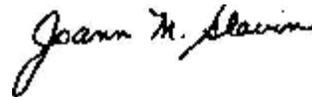
**Sample Information:**

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Prep Date: 6/26/2013 9:30:22 AM	Analyst: KB
4,4'-DDD	< 3.6		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
4,4'-DDE	< 3.6		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
4,4'-DDT	< 3.6		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Aldrin	< 1.9		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
alpha-BHC	< 1.9		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
alpha-Chlordane	< 1.9		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Aroclor 1016	< 36		1	µg/Kg-dry	06/28/2013 8:22 PM	Container-01 of 01
Aroclor 1221	< 74		1	µg/Kg-dry	06/28/2013 8:22 PM	Container-01 of 01
Aroclor 1232	< 36		1	µg/Kg-dry	06/28/2013 8:22 PM	Container-01 of 01
Aroclor 1242	< 36		1	µg/Kg-dry	06/28/2013 8:22 PM	Container-01 of 01
Aroclor 1248	< 36		1	µg/Kg-dry	06/28/2013 8:22 PM	Container-01 of 01
Aroclor 1254	< 36		1	µg/Kg-dry	06/28/2013 8:22 PM	Container-01 of 01
Aroclor 1260	42		1	µg/Kg-dry	06/28/2013 8:22 PM	Container-01 of 01
beta-BHC	< 1.9		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
delta-BHC	< 1.9		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Dieldrin	< 3.6		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Endosulfan I	< 1.9		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Endosulfan II	< 3.6		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Endosulfan sulfate	< 3.6		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Endrin	< 3.6		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Endrin aldehyde	< 3.6		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Endrin ketone	< 3.6		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
gamma-BHC	< 1.9		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
gamma-Chlordane	< 1.9		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Heptachlor	< 1.9		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Heptachlor epoxide	< 1.9		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Methoxychlor	< 19		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Toxaphene	< 190		1	µg/Kg-dry	07/01/2013 10:24 PM	Container-01 of 01
Surr: Decachlorobiphenyl	56.7		1	%REC	Limit 30-150	07/01/2013 10:24 PM
Surr: Decachlorobiphenyl	58.5		1	%REC	Limit 30-150	06/28/2013 8:22 PM
Surr: Tetrachloro-m-xylene	83.3		1	%REC	Limit 30-150	06/28/2013 8:22 PM
Surr: Tetrachloro-m-xylene	65.7		1	%REC	Limit 30-150	07/01/2013 10:24 PM

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 N = Indicates presumptive evidence of compound



Laboratory Manager

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575 Broad Hollow Rd., Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

## LABORATORY RESULTS

Results for the samples and analytes requested

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 3:15:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-004**  
 Client Sample ID: **SB-4 (3-5')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

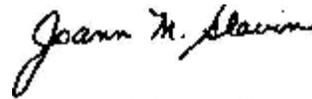
**Sample Information:**

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1,1-Trichloroethane	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
1,1,2,2-Tetrachloroethane	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
1,1,2-Trichloroethane	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
1,1-Dichloroethane	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
1,1-Dichloroethene	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
1,2-Dichloroethane	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
1,2-Dichloropropane	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
2-Butanone	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
2-Hexanone	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
4-Methyl-2-pentanone	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Acetone	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Benzene	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Bromodichloromethane	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Bromoform	< 11	c	1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Bromomethane	< 11	c	1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Carbon disulfide	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Carbon tetrachloride	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Chlorobenzene	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Chloroethane	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Chloroform	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Chloromethane	< 11	c	1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
cis-1,2-Dichloroethene	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
cis-1,3-Dichloropropene	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Dibromochloromethane	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Ethylbenzene	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Methylene chloride	< 11	c	1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Styrene	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Tetrachloroethene	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Toluene	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
trans-1,2-Dichloroethene	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
trans-1,3-Dichloropropene	< 11	c	1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04
Trichloroethene	< 11		1	µg/Kg-dry	06/27/2013 12:35 AM	Container-01 of 04

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Laboratory Manager

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 TEL: (631) 694-3040 FAX: (631) 420-8436  
 NYSDOH ID#10478

**LABORATORY RESULTS**

Results for the samples and analytes requested

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Lab No. : 1306C51-004

Client Sample ID: SB-4 (3-5')

**Sample Information:**

Type : Soil

Origin:

Collected : 6/20/2013 3:15:00 PM

Received : 6/21/2013 1:13:00 PM

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

Collected By CLIENT

Analytical Method: SW8260B :

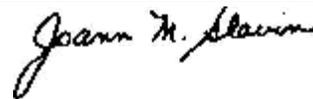
Prep Method: 5035A-L

Analyst: BL

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
Vinyl chloride	< 11		1	µg/Kg-dry		06/27/2013 12:35 AM	Container-01 of 04
Xylene (total)	< 11		1	µg/Kg-dry		06/27/2013 12:35 AM	Container-01 of 04
Surr: 1,2-Dichloroethane-d4	97.8		1	%REC	33-145	06/27/2013 12:35 AM	Container-01 of 04
Surr: 4-Bromofluorobenzene	85.1		1	%REC	60-148	06/27/2013 12:35 AM	Container-01 of 04
Surr: Toluene-d8	84.8		1	%REC	60-132	06/27/2013 12:35 AM	Container-01 of 04

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Date Reported : 7/10/2013



Laboratory Manager

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## LABORATORY RESULTS

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**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 3:15:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-004**  
 Client Sample ID: **SB-4 (3-5')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

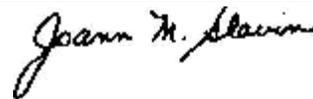
**Sample Information:**

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
1,1'-Biphenyl	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2,2'-oxybis(1-chloropropane)	< 370	c	1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2,4,5-Trichlorophenol	< 920		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2,4,6-Trichlorophenol	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2,4-Dichlorophenol	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2,4-Dimethylphenol	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2,4-Dinitrophenol	< 920		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2,4-Dinitrotoluene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2,6-Dinitrotoluene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2-Chloronaphthalene	< 370	c	1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2-Chlorophenol	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2-Methylnaphthalene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2-Methylphenol	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2-Nitroaniline	< 920		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
2-Nitrophenol	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
3,3'-Dichlorobenzidine	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
3-Nitroaniline	< 920		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
4,6-Dinitro-2-methylphenol	< 920		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
4-Bromophenyl-phenylether	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
4-Chloro-3-methylphenol	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
4-Chloroaniline	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
4-Chlorophenyl-phenylether	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
4-Methylphenol	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
4-Nitroaniline	< 920		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
4-Nitrophenol	< 920		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Acenaphthene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Acenaphthylene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Acetophenone	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Anthracene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Atrazine	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Benzaldehyde	< 370	c	1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Benzo(a)anthracene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01

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Laboratory Manager

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 NYSDOH ID#10478

## LABORATORY RESULTS

Results for the samples and analytes requested

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 3:15:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-004**  
 Client Sample ID: **SB-4 (3-5')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

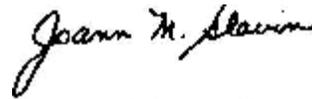
**Sample Information:**

Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Analyzed:	Container:
Benzo(a)pyrene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Benzo(b)fluoranthene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Benzo(g,h,i)perylene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Benzo(k)fluoranthene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Bis(2-chloroethoxy)methane	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Bis(2-chloroethyl)ether	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Bis(2-ethylhexyl)phthalate	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Butyl benzyl phthalate	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Caprolactam	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Carbazole	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Chrysene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Dibenzo(a,h)anthracene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Dibenzofuran	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Diethylphthalate	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Dimethylphthalate	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Di-n-butyl phthalate	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Di-n-octyl phthalate	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Fluoranthene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Fluorene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Hexachlorobenzene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Hexachlorobutadiene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Hexachlorocyclopentadiene	< 370	c	1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Hexachloroethane	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Indeno(1,2,3-cd)pyrene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Isophorone	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Naphthalene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Nitrobenzene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
N-Nitroso-di-n-propylamine	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
N-Nitrosodiphenylamine	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Pentachlorophenol	< 920		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Phenanthrene	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01
Phenol	< 370		1	µg/Kg-dry	06/27/2013 5:31 AM	Container-01 of 01

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 NYSDOH ID#10478

**LABORATORY RESULTS**

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**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Karen Friedman

Collected : 6/20/2013 3:15:00 PM

Received : 6/21/2013 1:13:00 PM

Collected By CLIENT

Lab No. : **1306C51-004**  
 Client Sample ID: **SB-4 (3-5')**

7115-BKNY, 573 4TH AVE, BROOKLYN, NY

**Sample Information:**

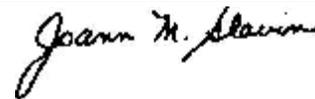
Type : Soil

Origin:

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
Analytical Method: SW8270C : Prep Method: SW3545 Prep Date: 6/24/2013 9:16:13 AM Analyst: SH							
Pyrene	< 370		1	µg/Kg-dry		06/27/2013 5:31 AM	Container-01 of 01
Surr: 1,2-Dichlorobenzene-d4	65.1		1	%REC	Limit 20-130	06/27/2013 5:31 AM	Container-01 of 01
Surr: 2,4,6-Tribromophenol	74.9		1	%REC	Limit 19-122	06/27/2013 5:31 AM	Container-01 of 01
Surr: 2-Chlorophenol-d4	72.3		1	%REC	Limit 20-130	06/27/2013 5:31 AM	Container-01 of 01
Surr: 2-Fluorobiphenyl	77.7		1	%REC	Limit 30-115	06/27/2013 5:31 AM	Container-01 of 01
Surr: 2-Fluorophenol	70.7		1	%REC	Limit 25-121	06/27/2013 5:31 AM	Container-01 of 01
Surr: 4-Terphenyl-d14	91.9		1	%REC	Limit 18-137	06/27/2013 5:31 AM	Container-01 of 01
Surr: Nitrobenzene-d5	76.8		1	%REC	Limit 23-120	06/27/2013 5:31 AM	Container-01 of 01
Surr: Phenol-d5	83.1		1	%REC	Limit 24-113	06/27/2013 5:31 AM	Container-01 of 01
Analytical Method: SW7471 : Prep Method: SW7471 Prep Date: 6/25/2013 1:15:00 PM Analyst: Aba							
Mercury	< 0.22		1	mg/Kg-dry		06/26/2013 1:50 PM	Container-01 of 01
Analytical Method: D2216 : Analyst: MLM							
Percent Moisture	9.9		1	wt%		06/24/2013 11:29 AM	Container-01 of 01

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 s = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

Date Reported : 7/10/2013



Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

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H2M LABS INC  
 575 Broad Hollow Rd.  
 Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 Website: www.h2mlabs.com

# Sample Receipt Checklist

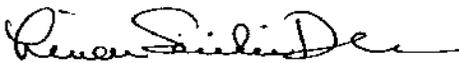
Client Name **ACT-ECO**

Date and Time Received: **6/21/2013 1:13:00 PM**

Work Order Number: **1306C51**

RcptNo: **1**

Received by **Josh Laedke**

Completed by: 

Reviewed by: 

Completed Date: 6/21/2013 5:08:54 PM

Reviewed Date: 6/25/2013 6:10:10 PM

Carrier name: Client

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Are matrices correctly identified on Chain of custody? Yes  No
- Is it clear what analyses were requested? Yes  No
- Custody seals intact on sample bottles? Yes  No  Not Present
- Samples in proper container/bottle? Yes  No
- Were correct preservatives used and noted? Yes  No  NA
- Preservative added to bottles:
- Sample Condition? Intact  Broken  Leaking
- Sufficient sample volume for indicated test? Yes  No
- Were container labels complete (ID, Pres, Date)? Yes  No
- All samples received within holding time? Yes  No
- Was an attempt made to cool the samples? Yes  No  NA
- All samples received at a temp. of > 0° C to 6.0° C? Yes  No  NA
- Response when temperature is outside of range:
- Sample Temp. taken and recorded upon receipt? Yes  No  To 0.8°
- Water - Were bubbles absent in VOC vials? Yes  No  No Vials
- Water - Was there Chlorine Present? Yes  No  NA
- Water - pH acceptable upon receipt? Yes  No  No Water
- Are Samples considered acceptable? Yes  No
- Custody Seals present? Yes  No
- Airbill or Sticker? Air Bil  Sticker  Not Present

Case Number:

SDG:

SAS:

Any No response should be detailed in the comments section below, if applicable.

Client Contacted?  Yes  No      Person Contacted:

Contact Mode:  Phone:  Fax:  Email:  In Person:

Client Instructions:

Date Contacted:      Contacted By:

Regarding:

Comments:

CorrectiveAction:

## LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

**Lab No. : 1306C30-001**

**Sample Information:**

Type : Air

Attn To : Paul Stewart

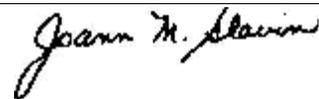
Client Sample ID: SV-3

Origin:

Collected : 6/20/2013 3:40:00 PM  
 Received : 6/21/2013 1:43:00 PM 7115-BKNY  
 Collected By CLIENT

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
1,1,1-Trichloroethane	< 0.20	ppbv		1	< 1.09	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,1,2,2-Tetrachloroethane	< 0.20	ppbv		1	< 1.37	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.10	ppbv		1	< 0.77	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,1,2-Trichloroethane	< 0.20	ppbv		1	< 1.09	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,1-Dichloroethane	< 0.20	ppbv		1	< 0.81	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,1-Dichloroethene	< 0.20	ppbv		1	< 0.79	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,2,4-Trichlorobenzene	< 0.20	ppbv		1	< 1.48	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,2,4-Trimethylbenzene	2.09	ppbv		1	10.3	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,2-Dibromoethane	< 0.20	ppbv		1	< 1.54	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,2-Dichlorobenzene	< 0.20	ppbv		1	< 1.20	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,2-Dichloroethane	< 0.20	ppbv		1	< 0.81	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,2-Dichloroethene (cis)	< 0.20	ppbv		1	< 0.79	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,2-Dichloroethene (trans)	< 0.20	ppbv		1	< 0.79	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,2-Dichloropropane	< 0.20	ppbv		1	< 0.92	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,2-Dichlorotetrafluoroethane	< 0.20	ppbv		1	< 1.40	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,3,5-Trimethylbenzene	0.64	ppbv		1	3.15	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,3-Butadiene	< 0.20	ppbv		1	< 0.44	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,3-Dichlorobenzene	< 0.20	ppbv		1	< 1.20	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,3-Dichloropropene (cis)	< 0.20	ppbv		1	< 0.91	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,3-Dichloropropene (trans)	< 0.20	ppbv		1	< 0.91	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,3-Hexachlorobutadiene	< 0.20	ppbv		1	< 2.13	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,4-Dichlorobenzene	< 0.20	ppbv		1	< 1.20	µg/m <sup>3</sup>	06/23/2013 2:10 AM
1,4-Dioxane	< 0.20	ppbv		1	< 0.72	µg/m <sup>3</sup>	06/23/2013 2:10 AM
2,2,4-Trimethylpentane	6.39	ppbv		1	29.9	µg/m <sup>3</sup>	06/23/2013 2:10 AM
4-Ethyltoluene	0.63	ppbv	+	1	3.10	µg/m <sup>3</sup>	06/23/2013 2:10 AM
Acetone	5.65	ppbv		1	13.4	µg/m <sup>3</sup>	06/23/2013 2:10 AM
Benzene	5.01	ppbv		1	16.0	µg/m <sup>3</sup>	06/23/2013 2:10 AM
Bromodichloromethane	< 0.20	ppbv		1	< 1.34	µg/m <sup>3</sup>	06/23/2013 2:10 AM
Bromoform	< 0.20	ppbv		1	< 2.07	µg/m <sup>3</sup>	06/23/2013 2:10 AM
Bromomethane	< 0.20	ppbv		1	< 0.78	µg/m <sup>3</sup>	06/23/2013 2:10 AM
Carbon disulfide	< 0.20	ppbv		1	< 0.62	µg/m <sup>3</sup>	06/23/2013 2:10 AM
Carbon tetrachloride	< 0.20	ppbv		1	< 1.26	µg/m <sup>3</sup>	06/23/2013 2:10 AM
Chlorobenzene	< 0.20	ppbv		1	< 0.92	µg/m <sup>3</sup>	06/23/2013 2:10 AM
Chloroethane	< 0.20	ppbv		1	< 0.53	µg/m <sup>3</sup>	06/23/2013 2:10 AM
Chloroform	0.22	ppbv		1	1.07	µg/m <sup>3</sup>	06/23/2013 2:10 AM

Qualifiers: E = Value above quantitation range  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ  
 J = Estimated value - below calibration range  
 s = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound



Laboratory Manager

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## LABORATORY RESULTS

Results for the samples and analytes requested

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Paul Stewart

Collected : 6/20/2013 3:40:00 PM  
 Received : 6/21/2013 1:43:00 PM 7115-BKNY  
 Collected By CLIENT

Lab No. : 1306C30-001

Client Sample ID: SV-3

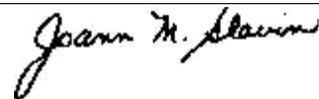
**Sample Information:**

Type : Air

Origin:

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Chloromethane	0.51	ppbv		1	1.05	µg/m³	06/23/2013 2:10 AM
Cyclohexane	1.82	ppbv		1	6.26	µg/m³	06/23/2013 2:10 AM
Dibromochloromethane	< 0.20	ppbv		1	< 1.70	µg/m³	06/23/2013 2:10 AM
Dichlorodifluoromethane	0.49	ppbv		1	2.42	µg/m³	06/23/2013 2:10 AM
Ethanol	53.0	ppbv	D +	2	99.9	µg/m³	06/23/2013 12:54 PM
Ethyl acetate	< 0.20	ppbv	+	1	< 0.72	µg/m³	06/23/2013 2:10 AM
Ethylbenzene	1.74	ppbv		1	7.56	µg/m³	06/23/2013 2:10 AM
Isopropanol	1.02	ppbv		1	2.51	µg/m³	06/23/2013 2:10 AM
Methyl butyl ketone	< 0.20	ppbv	+	1	< 0.82	µg/m³	06/23/2013 2:10 AM
Methyl ethyl ketone	1.01	ppbv		1	2.98	µg/m³	06/23/2013 2:10 AM
Methyl isobutyl ketone	< 0.20	ppbv		1	< 0.82	µg/m³	06/23/2013 2:10 AM
Methyl tert-butyl ether	< 0.20	ppbv		1	< 0.72	µg/m³	06/23/2013 2:10 AM
Methylene chloride	1.24	ppbv		1	4.81	µg/m³	06/23/2013 2:10 AM
n-Heptane	2.58	ppbv		1	10.6	µg/m³	06/23/2013 2:10 AM
n-Hexane	5.03	ppbv		1	17.7	µg/m³	06/23/2013 2:10 AM
Propylene	11.7	ppbv	+	1	20.1	µg/m³	06/23/2013 2:10 AM
Styrene	0.36	ppbv		1	1.53	µg/m³	06/23/2013 2:10 AM
tert-Butyl Alcohol	1.98	ppbv		1	6.00	µg/m³	06/23/2013 2:10 AM
Tetrachloroethene	< 0.20	ppbv		1	< 1.36	µg/m³	06/23/2013 2:10 AM
Tetrahydrofuran	0.39	ppbv	+	1	1.15	µg/m³	06/23/2013 2:10 AM
Toluene	11.8	ppbv		1	44.3	µg/m³	06/23/2013 2:10 AM
Trichloroethene	< 0.20	ppbv		1	< 1.07	µg/m³	06/23/2013 2:10 AM
Trichlorofluoromethane	0.26	ppbv		1	1.46	µg/m³	06/23/2013 2:10 AM
Vinyl acetate	< 0.20	ppbv		1	< 0.70	µg/m³	06/23/2013 2:10 AM
Vinyl bromide	< 0.20	ppbv		1	< 0.87	µg/m³	06/23/2013 2:10 AM
Vinyl chloride	< 0.20	ppbv		1	< 0.51	µg/m³	06/23/2013 2:10 AM
Xylenes (m&p)	5.67	ppbv		1	24.6	µg/m³	06/23/2013 2:10 AM
Xylenes (o)	2.16	ppbv		1	9.38	µg/m³	06/23/2013 2:10 AM
Surr: 4-Bromofluorobenzene	98.8	%REC	Limit	70-130	No M.W. Data		06/23/2013 2:10 AM

Qualifiers: E = Value above quantitation range  
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 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
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Laboratory Manager

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## LABORATORY RESULTS

Results for the samples and analytes requested

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**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Paul Stewart

Collected : 6/20/2013 3:00:00 PM  
 Received : 6/21/2013 1:43:00 PM 7115-BKNY  
 Collected By CLIENT

Lab No. : 1306C30-002

Client Sample ID: SV-4

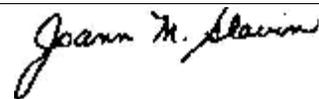
**Sample Information:**

Type : Air

Origin:

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
1,1,1-Trichloroethane	< 0.20	ppbv		1	< 1.09	µg/m³	06/23/2013 2:53 AM
1,1,2,2-Tetrachloroethane	< 0.20	ppbv		1	< 1.37	µg/m³	06/23/2013 2:53 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.10	ppbv		1	< 0.77	µg/m³	06/23/2013 2:53 AM
1,1,2-Trichloroethane	< 0.20	ppbv		1	< 1.09	µg/m³	06/23/2013 2:53 AM
1,1-Dichloroethane	< 0.20	ppbv		1	< 0.81	µg/m³	06/23/2013 2:53 AM
1,1-Dichloroethene	< 0.20	ppbv		1	< 0.79	µg/m³	06/23/2013 2:53 AM
1,2,4-Trichlorobenzene	< 0.20	ppbv		1	< 1.48	µg/m³	06/23/2013 2:53 AM
1,2,4-Trimethylbenzene	1.93	ppbv		1	9.49	µg/m³	06/23/2013 2:53 AM
1,2-Dibromoethane	< 0.20	ppbv		1	< 1.54	µg/m³	06/23/2013 2:53 AM
1,2-Dichlorobenzene	< 0.20	ppbv		1	< 1.20	µg/m³	06/23/2013 2:53 AM
1,2-Dichloroethane	< 0.20	ppbv		1	< 0.81	µg/m³	06/23/2013 2:53 AM
1,2-Dichloroethene (cis)	< 0.20	ppbv		1	< 0.79	µg/m³	06/23/2013 2:53 AM
1,2-Dichloroethene (trans)	< 0.20	ppbv		1	< 0.79	µg/m³	06/23/2013 2:53 AM
1,2-Dichloropropane	< 0.20	ppbv		1	< 0.92	µg/m³	06/23/2013 2:53 AM
1,2-Dichlorotetrafluoroethane	< 0.20	ppbv		1	< 1.40	µg/m³	06/23/2013 2:53 AM
1,3,5-Trimethylbenzene	0.59	ppbv		1	2.90	µg/m³	06/23/2013 2:53 AM
1,3-Butadiene	< 0.20	ppbv		1	< 0.44	µg/m³	06/23/2013 2:53 AM
1,3-Dichlorobenzene	< 0.20	ppbv		1	< 1.20	µg/m³	06/23/2013 2:53 AM
1,3-Dichloropropene (cis)	< 0.20	ppbv		1	< 0.91	µg/m³	06/23/2013 2:53 AM
1,3-Dichloropropene (trans)	< 0.20	ppbv		1	< 0.91	µg/m³	06/23/2013 2:53 AM
1,3-Hexachlorobutadiene	< 0.20	ppbv		1	< 2.13	µg/m³	06/23/2013 2:53 AM
1,4-Dichlorobenzene	< 0.20	ppbv		1	< 1.20	µg/m³	06/23/2013 2:53 AM
1,4-Dioxane	< 0.20	ppbv		1	< 0.72	µg/m³	06/23/2013 2:53 AM
2,2,4-Trimethylpentane	5.13	ppbv		1	24.0	µg/m³	06/23/2013 2:53 AM
4-Ethyltoluene	0.56	ppbv	+	1	2.75	µg/m³	06/23/2013 2:53 AM
Acetone	4.59	ppbv		1	10.9	µg/m³	06/23/2013 2:53 AM
Benzene	4.95	ppbv		1	15.8	µg/m³	06/23/2013 2:53 AM
Bromodichloromethane	< 0.20	ppbv		1	< 1.34	µg/m³	06/23/2013 2:53 AM
Bromoform	< 0.20	ppbv		1	< 2.07	µg/m³	06/23/2013 2:53 AM
Bromomethane	< 0.20	ppbv		1	< 0.78	µg/m³	06/23/2013 2:53 AM
Carbon disulfide	< 0.20	ppbv		1	< 0.62	µg/m³	06/23/2013 2:53 AM
Carbon tetrachloride	< 0.20	ppbv		1	< 1.26	µg/m³	06/23/2013 2:53 AM
Chlorobenzene	< 0.20	ppbv		1	< 0.92	µg/m³	06/23/2013 2:53 AM
Chloroethane	< 0.20	ppbv		1	< 0.53	µg/m³	06/23/2013 2:53 AM
Chloroform	< 0.20	ppbv		1	< 0.98	µg/m³	06/23/2013 2:53 AM

Qualifiers: E = Value above quantitation range  
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 D.F. = Dilution Factor D = Results for Dilution  
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 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
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 J = Estimated value - below calibration range  
 s = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound



Laboratory Manager

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## LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

**Advanced Cleanup Technologies**  
**960 South Broadway, Suite 100**  
**Hicksville, NY 11801**

Attn To : Paul Stewart

Lab No. : **1306C30-002**

Client Sample ID: **SV-4**

**Sample Information:**

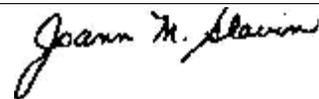
Type : Air

Origin:

Collected : 6/20/2013 3:00:00 PM  
 Received : 6/21/2013 1:43:00 PM 7115-BKNY  
 Collected By CLIENT

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Chloromethane	0.54	ppbv		1	1.12	µg/m³	06/23/2013 2:53 AM
Cyclohexane	1.48	ppbv		1	5.09	µg/m³	06/23/2013 2:53 AM
Dibromochloromethane	< 0.20	ppbv		1	< 1.70	µg/m³	06/23/2013 2:53 AM
Dichlorodifluoromethane	0.49	ppbv		1	2.42	µg/m³	06/23/2013 2:53 AM
Ethanol	36.2	ppbv	+	1	68.2	µg/m³	06/23/2013 2:53 AM
Ethyl acetate	< 0.20	ppbv	+	1	< 0.72	µg/m³	06/23/2013 2:53 AM
Ethylbenzene	1.46	ppbv		1	6.34	µg/m³	06/23/2013 2:53 AM
Isopropanol	0.64	ppbv		1	1.57	µg/m³	06/23/2013 2:53 AM
Methyl butyl ketone	< 0.20	ppbv	+	1	< 0.82	µg/m³	06/23/2013 2:53 AM
Methyl ethyl ketone	0.83	ppbv		1	2.45	µg/m³	06/23/2013 2:53 AM
Methyl isobutyl ketone	< 0.20	ppbv		1	< 0.82	µg/m³	06/23/2013 2:53 AM
Methyl tert-butyl ether	< 0.20	ppbv		1	< 0.72	µg/m³	06/23/2013 2:53 AM
Methylene chloride	0.85	ppbv		1	3.30	µg/m³	06/23/2013 2:53 AM
n-Heptane	1.94	ppbv		1	7.95	µg/m³	06/23/2013 2:53 AM
n-Hexane	3.68	ppbv		1	13.0	µg/m³	06/23/2013 2:53 AM
Propylene	16.9	ppbv	+	1	29.1	µg/m³	06/23/2013 2:53 AM
Styrene	0.37	ppbv		1	1.58	µg/m³	06/23/2013 2:53 AM
tert-Butyl Alcohol	2.16	ppbv		1	6.55	µg/m³	06/23/2013 2:53 AM
Tetrachloroethene	< 0.20	ppbv		1	< 1.36	µg/m³	06/23/2013 2:53 AM
Tetrahydrofuran	0.31	ppbv	+	1	0.91	µg/m³	06/23/2013 2:53 AM
Toluene	10.3	ppbv		1	38.7	µg/m³	06/23/2013 2:53 AM
Trichloroethene	< 0.20	ppbv		1	< 1.07	µg/m³	06/23/2013 2:53 AM
Trichlorofluoromethane	0.24	ppbv		1	1.35	µg/m³	06/23/2013 2:53 AM
Vinyl acetate	< 0.20	ppbv		1	< 0.70	µg/m³	06/23/2013 2:53 AM
Vinyl bromide	< 0.20	ppbv		1	< 0.87	µg/m³	06/23/2013 2:53 AM
Vinyl chloride	< 0.20	ppbv		1	< 0.51	µg/m³	06/23/2013 2:53 AM
Xylenes (m&p)	4.92	ppbv		1	21.4	µg/m³	06/23/2013 2:53 AM
Xylenes (o)	1.87	ppbv		1	8.12	µg/m³	06/23/2013 2:53 AM
Surr: 4-Bromofluorobenzene	97.6	%REC	Limit	70-130	No M.W. Data		06/23/2013 2:53 AM

Qualifiers: E = Value above quantitation range  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
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 s = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound



Laboratory Manager

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H2M LABS INC  
 575 Broad Hollow Rd.  
 Melville, NY 11747  
 TEL: (631) 694-3040 FAX: (631) 420-8436  
 Website: [www.h2mlabs.com](http://www.h2mlabs.com)

# Sample Receipt Checklist

Client Name **ACT-ECO**

Date and Time Received: **6/21/2013 1:43:00 PM**

Work Order Number: **1306C30**

RcptNo: **1**

Received by **Linda Siciliano**

Completed by:

Reviewed by:

Completed Date: 6/25/2013 6:46:35 PM

Reviewed Date: 6/25/2013 6:47:23 PM

Carrier name: Client

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Are matrices correctly identified on Chain of custody? Yes  No
- Is it clear what analyses were requested? Yes  No
- Custody seals intact on sample bottles? Yes  No  Not Present
- Samples in proper container/bottle? Yes  No
- Were correct preservatives used and noted? Yes  No  NA
- Preservative added to bottles:
- Sample Condition? Intact  Broken  Leaking
- Sufficient sample volume for indicated test? Yes  No
- Were container labels complete (ID, Pres, Date)? Yes  No
- All samples received within holding time? Yes  No
- Was an attempt made to cool the samples? Yes  No  NA
- All samples received at a temp. of > 0° C to 6.0° C? Yes  No  NA
- Response when temperature is outside of range:
- Sample Temp. taken and recorded upon receipt? Yes  No  To °
- Water - Were bubbles absent in VOC vials? Yes  No  No Vials
- Water - Was there Chlorine Present? Yes  No  NA
- Water - pH acceptable upon receipt? Yes  No  No Water
- Are Samples considered acceptable? Yes  No
- Custody Seals present? Yes  No
- Airbill or Sticker? Air Bil  Sticker  Not Present

Case Number:

SDG:

SAS:

Any No response should be detailed in the comments section below, if applicable.

Client Contacted?  Yes  No      Person Contacted:

Contact Mode:  Phone:  Fax:  Email:  In Person:

Client Instructions:

Date Contacted:      Contacted By:

Regarding:

Comments:

CorrectiveAction: