

**550 WEST 29TH STREET**

**NEW YORK, NEW YORK**

---

# **Remedial Investigation Report**

**546, 548, 550 West 29<sup>th</sup> Street**

**Block 700, Lots 59, 60, 61**

**OER Project Number 15EHAN008M**

**E-Designation E-142**

**CEQR Number 03DCP069M**

**Highline/West Chelsea Rezoning**

**Prepared for:**

550 West 29<sup>th</sup> Street, LLC

56 West 22<sup>nd</sup> Street, 5<sup>th</sup> Floor

New York, NY 10010

**Prepared by:**

Arnold F. Fleming, PE & Fleming-Lee Shue Inc.

158 West 29<sup>th</sup> Street, 9<sup>th</sup> Floor, New York, NY

kevin@flemingleeshue.com

(212) 675-3225

---

**September 2014**

# TABLE OF CONTENTS

LIST OF ACRONYMS .....	4
CERTIFICATION .....	5
EXECUTIVE SUMMARY .....	6
REMEDIAL INVESTIGATION REPORT .....	9
1.0 SITE BACKGROUND.....	9
1.1 Site Location and Current Usage .....	9
1.2 Proposed Redevelopment Plan .....	9
1.3 Description of Surrounding Property .....	10
2.0 SITE HISTORY .....	11
2.1 Past Uses and Ownership.....	11
2.2 Previous Investigations .....	11
2.3 Site Inspection.....	13
2.4 Areas of Concern .....	13
3.0 PROJECT MANAGEMENT .....	14
3.1 Project Organization .....	14
3.2 Health and Safety .....	14
3.3 Materials Management.....	14
4.0 REMEDIAL INVESTIGATION ACTIVITIES.....	15
4.1 Borings and Monitoring Wells.....	15
4.2 Sample Collection and Laboratory Analysis .....	16
5.0 ENVIRONMENTAL EVALUATION.....	19
5.1 Geological and Hydrogeological Conditions.....	19
5.2 Soil Analytical Results.....	19
5.3 Groundwater Analytical Results .....	21
5.4 Soil Vapor Analytical Results.....	22
5.5 Prior Activity .....	22
5.6 Impediments to Remedial Action .....	22

## **FIGURES**

Figure 1 – Site Location

Figure 2 – Layout of Proposed Development

Figure 3 – Site Plan with Sample Locations

## **TABLES**

Table 1 - Volatile Organic Compounds in Soil

Table 2 - Semi-Volatile Organic Compounds in Soil

Table 3 - Pesticides and Polychlorinated Biphenyls in Soil

Table 4 - Total Metals in Soil

Table 5 - Volatile Organic Compounds in Groundwater

Table 6 - Semi-Volatile Organic Compounds in Groundwater

Table 7 - Pesticides and Polychlorinated Biphenyls in Groundwater

Table 8 - Total and Dissolved Metals in Groundwater

Table 9 – Volatile Organic Compounds in Soil Vapor

## **APPENDICES**

Appendix A - Previous Environmental Reports

Appendix B - Soil Boring Geologic Logs

Appendix C - Laboratory Data Deliverables

## LIST OF ACRONYMS

<b>Acronym</b>	<b>Definition</b>
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, Kevin A. McGuinness, 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 550 West 29<sup>th</sup> Street Site, (NYC OER Site No. 15EHAN008M. 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.

Kevin A. McGuinness, PG.

---

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 546, 548 and 550 West 29<sup>th</sup> Street in the Chelsea section of Manhattan, New York and is identified as Block 700 and Lots 59, 60, and 61 on the New York City Tax Map. These lots will be combined into a single tax lot as part of development. The Site location is depicted on Figure 1. The Site is 7,500-square feet and is bounded by West 29<sup>th</sup> Street to the north, a newly constructed residential building to the south and west, and a commercial warehouse to the east. A map of the site boundary with the proposed development layout is depicted on Figure 2. The Site buildings, which are all currently vacant, consist of the following: a 2-story building at 546 West 29th Street (Lot 59), a 1-story building at 548 West 29th Street (Lot 60) and a 3-story building with a cellar at 550 West 29th Street (Lot 61). The Site is registered in the New York State Department of Environmental Conservation (NYSDEC) Petroleum Bulk Storage database as Facility ID #2-611575 for one 275-gallon waste oil aboveground storage tank (AST) at Lot 60. This AST is no longer present at the Site. The Site is associated with closed NYSDEC Spill Case #1201778, which was assigned to Lot 60 on May 18, 2012.

### Summary of Proposed Redevelopment Plan

The Site is proposed to be redeveloped with a 12 to 13-story mixed use commercial and residential building. The layout of the proposed site development is presented in Figure 2. The current zoning designation is C6-2/West Chelsea District, which allows for mixed commercial and residential use. The first floor will contain retail space, a residential lobby and mechanical. The remaining floors will contain 24-25 residential condominium units. The building will be constructed with a cellar covering most of the Site that will contain mechanical equipment and residential amenities including laundry, storage and recreation space. The cellar footprint will be set back 10 feet from the eastern property boundary. The proposed excavation depth is approximately 15 feet below grade (ft. bg.) for the cellar footprint and 5 ft. bg. for the setback

along the eastern property boundary. The depth-to-groundwater at the Site is approximately 9 ft. bg., so excavation below the groundwater table, with limited dewatering is anticipated. The footprint of the ground floor of the building will occupy the entire lot so there will be no grade-level open areas.

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

According to the April 2014 Phase I prepared by IVI Assessment, Inc., the Site has been used for a mix of residential and commercial purposes since development. Lot 59 was developed between 1899 and 1911 with a residential and office building in the northern portion as well as a garage in the southern portion. Subsequent uses of Lot 59 include a coppersmith, motor freight station and taxi repair shop. Lot 60 was developed prior to 1890 with a mixed use commercial and residential building and subsequent uses include an express depot, motor freight station and auto repair facility. Lot 61 was developed prior to 1890 with a mixed commercial and residential building. Lot 61 has been historically used for waste paper storage and bailing, offices and retail.

One area of concern was identified in the previous investigations. This is the underground storage tank (UST) that is depicted in the southern portion of Lot 60 on the 1930 historic Sanborn maps. Additionally, a Hydrogeologic and Forensic Report submitted by Fleming Lee-Shue (FLS) for adjacent Spill #0700587 identified a gasoline UST vent pipe on the roof of the building at Lot 60 of the Site.

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

FLS, on behalf of 550 West 29<sup>th</sup> Street LLC, performed the following scope of work:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Installed 6 soil borings across the entire project Site, and collected 12 soil samples for laboratory analysis from the soil borings to evaluate soil quality;
3. Installed 3 temporary groundwater monitoring wells throughout the Site, and collected 3 groundwater samples for laboratory analysis to evaluate groundwater quality;

4. Installed 4 soil vapor probes around the Site and collected four soil vapor samples and one ambient air sample for laboratory analysis.

### **Summary of Environmental Findings**

1. The elevation of the property is approximately 19 feet above sea level.
2. The depth to groundwater ranges from 9 to 9.5 ft. bg.
3. The groundwater flow is generally from east-northeast to west-southwest.
4. The depth to bedrock is ranges from approximately 25 ft. bg. in the northeast corner of the Site to approximately 50 ft. bg. in the southwest corner of the Site.
5. The stratigraphy of the site consists of 6 to 9 feet of urban fill underlain by 8 to 11 feet of brown sand with silt underlain by gray fine silt with clay.
6. The laboratory analysis of the soil/fill samples identified semi-volatile organic compounds (SVOCs), pesticides and metals in both shallow and deep soil throughout the Site at concentrations that exceed the NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs). Several SVOCs and metals were detected in the shallow and deep soil at concentrations exceeding the Restricted Residential SCOs. The presence of SVOCs, pesticides and metals in the soil at the Site are indicative of typical urban fill.
7. The laboratory analysis of the groundwater samples identified volatile organic compounds (VOCs) and dissolved metals present in the groundwater at concentrations that exceed the NYSDEC groundwater quality standards. The VOCs that were detected were only slightly above the respective standards and are not indicative of an onsite source. The dissolved metals that were detected in the groundwater are likely related to urban fill material and historic industrial operations in the neighborhood.
8. The laboratory analysis of the soil vapor samples identified several petroleum-related and chlorinated VOCs in the soil vapor below the building slabs. According to the matrices provided in the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion, the concentrations do not warrant monitoring or mitigation.

# REMEDIAL INVESTIGATION REPORT

## 1.0 SITE BACKGROUND

Fleming-Lee Shue (FLS) has conducted a RI on behalf of 550 W. 29<sup>th</sup> Street, LLC at the property located at 546, 548 and 550 West 29<sup>th</sup> Street, New York, NY (Site) to assess environmental conditions and incorporate any necessary remedial actions into development plans. The Site is a 7,500 square foot rectangular parcel located in the Chelsea section of Manhattan, New York. The RI work was performed on July 28, 29 and 30, 2014.

This RIR summarizes the nature and extent of contamination and provides sufficient information for the establishment of remedial action objectives, an evaluation of remedial action alternatives, and the 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 546, 548 and 550 West 29<sup>th</sup> Street in the Chelsea section of Manhattan, New York and is identified as Block 700 and Lot 59, 60, and 61 on the New York City Tax Map. These lots will be combined into a single tax lot as part of development. The Site location is depicted on Figure 1. The Site is 7,500-square feet and is bounded by West 29<sup>th</sup> Street to the north, a newly constructed residential building to the south and west, and a commercial warehouse to the east. A map of the site boundary with the proposed development layout is depicted in Figure 2. The Site buildings, which are all currently vacant, consist of the following: a 2-story building at 546 West 29th Street (Lot 59), a 1-story building at 548 West 29th Street (Lot 60) and a 3-story building with a cellar at 550 West 29th Street (Lot 61). The Site is registered in the NYSDEC Petroleum Bulk Storage database as Facility ID #2-611575 for one 275-gallon waste oil AST at Lot 60. This AST is no longer present at the Site. The Site is associated with closed NYSDEC Spill Case #1201778, which was assigned to Lot 60 on May 18, 2012.

### 1.2 Proposed Redevelopment Plan

The Site is proposed to be redeveloped with a 12 to 13-story mixed use commercial and residential building. The layout of the proposed site development is presented in Figure 2. The current zoning designation is C6-2/West Chelsea District, which allows for mixed commercial

and residential use. The first floor will contain retail space, a residential lobby and mechanical. The remaining floors will contain 24-25 residential condominium units. The building will be constructed with a cellar covering most of the Site that will contain mechanical equipment and residential amenities including laundry, storage and recreation space. The cellar footprint will be set back 10 feet from the eastern property boundary. The proposed excavation depth is approximately 15 feet below grade (ft. bg.) for the cellar footprint and 5 ft. bg. for the setback along the eastern property boundary. The depth-to-groundwater at the Site is approximately 9 ft. bg., so excavation below the groundwater table, with limited dewatering is anticipated. The footprint of the ground floor of the building will occupy the entire lot so there will be no grade-level open areas.

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

According to the data available in OER's SPEED application, no schools, hospitals or day care facilities are located within a 500-foot radius of the Site. The Site appears on the City of New York Department of City Planning Zoning Map 8b. According to this map, the property is designated C6-2/West Chelsea District. The surrounding zoning designations include M1-6, C6-4, R8 and M1-5. The Site is located in a mixed use commercial, residential and light industrial neighborhood. The adjacent property to the south and west is a newly constructed residential high rise building. The adjacent property to the east of the Site is a 1-story commercial warehouse currently occupied by a seafood distribution company, Gotham Seafood Corp. The adjacent property to the north across West 29th Street is a 12-story commercial storage building occupied by Manhattan Mini Storage.

## 2.0 SITE HISTORY

### 2.1 Past Uses and Ownership

According to the April 2014 Phase I prepared by IVI Assessment, Inc., the Site has been used for a mix of residential and commercial purposes since development. Lot 59 was developed between 1899 and 1911 with a residential and office building in the northern portion as well as a garage in the southern portion. Subsequent uses of Lot 59 include a coppersmith, motor freight station and taxi repair shop. Lot 60 was developed prior to 1890 with a mixed use commercial and residential building and subsequent uses include an express depot, motor freight station and auto repair facility. Lot 61 was developed prior to 1890 with a mixed commercial and residential building. Lot 61 has been historically used for waste paper storage and bailing, offices and retail.

According to New York City Automated City Register Information System (ACRIS), Lot 59 was previously owned by Dov and P Holding Corp and 546 High Line LLC. Lot 60 was previously owned by Filiberto Service Corp, Avidoc Holding Corp and 448 High Line LLC. Lot 61 was previously owned by Fallen Arches Realty Corp and Mazl Building LLC.

### 2.2 Previous Investigations

Previous environmental investigations at the Site, copies of which are provided in Appendix A, include the following:

- *Limited Phase I Environmental Inspection Report: 548 West 29<sup>th</sup> Street*, May 2012, prepared by Atlantic Environmental Solutions, Inc.
- *Ground Penetrating Radar Survey: 548 West 29<sup>th</sup> Street*, July 2012, prepared by Hydro Tech Environmental Contacting, Corp.
- *Phase I Environmental Site Assessment: 546 548 and 550 West 29<sup>th</sup> Street*, April 2014, prepared by IVI Assessment, Inc.
- *Geotechnical Report: 546 548 and 550 West 29th Street*, July 2014, prepared by Mueser Rutledge Consulting Engineers.

The Phase I Inspection report was prepared by Atlantic Environmental Solutions, Inc. for Mr. Raba Abramov and is dated May 30, 2012. The Phase I Inspection report identified two areas of concern warranting further evaluation:

1. Two manhole covers were observed at Lot 60, one of which was able to be opened during the inspection. A cylindrical empty pit indicative of a former underground hydraulic lift was discovered beneath the manhole cover, and the property owner indicated that two hydraulic lifts had previously been cleaned and removed from the Site.
2. An underground gasoline tank (UST) in the southern portion of Lot 60 was identified on the 1930 historic Sanborn map.

The Ground Penetrating Radar Survey Report was prepared by Hydro Tech Environmental Corp. for Rudy Abramoff and dated July 9, 2012. The report indicates that a ground penetrating radar survey was performed at Lot 60 of the Site and that no anomalies indicative of underground storage tanks were identified.

The Phase I report was prepared by IVI Assessment Services Inc. for Doral Bank USA and is dated April 8, 2014. This Phase I identified four recognized environmental conditions (RECs):

1. All three lots at the Site have been assigned a New York City (NYC) "E" Designation for hazardous materials, air quality and noise attenuation by the NYC Department of City Planning (E-142).
2. An underground gasoline tank (UST) in the southern portion of Lot 60 was identified on the 1930 historic Sanborn map. Database records for NYSDEC Spill #1201778 indicate that a Hydrogeologic and Forensic Report submitted by FLS for Spill #0700587, assigned to the adjacent property to the south, identified a gasoline UST vent pipe on the roof of the building at Lot 60.
3. NYSDEC Spill #1201778 was assigned to the Lot 60 of the Site on May 18, 2012 following NYSDEC review of the above-mentioned Hydrogeologic and Forensic Report and a NYSDEC site inspection. The inspection identified an abandoned manhole cover in the vicinity of the vent pipe in addition to staining on the floor around a 275-gallon waste oil AST. The database records further indicate that the Site owner provided the NYSDEC with documentation that the abandoned manhole was related to a former hydraulic lift. Subsequently, Spill #1201778 was closed in June 2012.

4. Two inactive underground hydraulic lifts were identified in the auto repair shop at Lot 60. No closure documents or analytical results for the inactive lifts were provided for review.

### **2.3 Site Inspection**

A site inspection was performed by FLS in July 2014. The inspection did not identify any areas of concern.

### **2.4 Areas of Concern**

One area of concern was identified in the previous investigations. This is the A UST was depicted in the southern portion of Lot 60 on the 1930 historic Sanborn maps. Additionally, a Hydrogeologic and Forensic Report submitted by Fleming-Lee Shue for adjacent Spill #0700587 identified a gasoline UST vent pipe on the roof of the building at Lot 60 of the Site. This area of concern is depicted on Figure 3.

### **3.0 PROJECT MANAGEMENT**

#### **3.1 Project Organization**

The Qualified Environmental Profession (QEP) responsible for preparation of this RIR is Kevin A. McGuinness and the project manager is Daniel DiRocco.

#### **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. As per the OER-approved July 2014 Remedial Investigation Work Plan (RIWP), soil cuttings were put back in the hole after taking samples. All other investigation derived waste generated during the remedial investigation (e.g. acetate liners, gloves, etc.) was collected in garbage bags and disposed of in accordance with applicable laws and regulations.

## **4.0 REMEDIAL INVESTIGATION ACTIVITIES**

FLS, on behalf of 550 West 29<sup>th</sup> Street LLC, performed the following scope of work as per the OER approved July 2014 RIWP:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Installed 6 soil borings across the entire project Site, and collected 12 soil samples for laboratory analysis from the soil borings to evaluate soil quality;
3. Installed 3 temporary groundwater monitoring wells throughout the Site, and collected 3 groundwater samples for laboratory analysis to evaluate groundwater quality;
4. Installed 4 soil vapor probes around the Site and collected 4 soil vapor samples for laboratory analysis.

### **4.1 Borings and Monitoring Wells**

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

Aquifer Drilling and Testing Inc. (ADT) of New Hyde Park, a New York State licensed driller, advanced 6 soil borings using direct-push technology. Prior to initiating any subsurface work, a “one-call” utility mark-out was done to identify nearby utilities. Soil boring locations are depicted on Figure 3. The soil samples were collected continuously to the boring termination depth with a Geoprobe macrocore sampler using disposable acetate sleeves. As per the OER-approved RIWP, all soil borings were installed to a depth of 17 feet below sidewalk grade except for SB-2 which was installed to a depth of 7 ft. bg. Each soil core was screened for organic vapors with a photo-ionization detector (PID) and evaluated for visual and olfactory indications of environmental impacts. All soil descriptions were recorded in a field log. Boring logs were prepared by a geologist and are attached in Appendix B.

#### **Groundwater Monitoring Well Construction**

The groundwater table was encountered at approximately 9 ft. bg. Three of the soil borings were converted to temporary groundwater monitoring wells, GW-1 through GW-3, to facilitate the collection of groundwater samples. These temporary monitoring wells were constructed with

1-inch diameter PVC, 15 feet of screen and 5 feet of riser. Each temporary well was inserted into the open borehole at SB-1, SB-2 and SB-3. Each temporary monitoring well was then developed using a peristaltic pump to remove sediments and fine soils from the water column. The three temporary monitoring well locations are depicted on Figure 3.

#### **4.2 Sample Collection and Laboratory Analysis**

The sampling performed as part of the RI 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. All media including soil, groundwater and soil vapor have been sampled and evaluated in the RIR. Discrete (grab) samples have been used for final delineation of the nature and extent of contamination and to determine the potential impact of contaminants on public health and the environment. 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 the selection of a final remedy.

#### **Soil Sampling**

Each soil core was screened for organic vapors using a PID and examined for staining, non-aqueous phase liquid (NAPL), discoloration, odors and debris indicative of contamination. Two soil samples per boring were collected: a shallow soil sample (from the 0-2 ft. bg. interval) and subsurface soil sample (from the 2-foot interval beneath the proposed maximum excavation depth). The soil samples to be analyzed for volatile organic compound (VOC) analysis were collected in 5-gram Encore samplers. The field staff wore phthalate-free nitrile gloves (no latex was used) and avoided sample contact with gloves. Only clean instruments were allowed to touch the sample.

A total of 12 soil samples were collected for laboratory analysis. The soil sample laboratory analytical data is summarized in Tables 1 through 4. Figure 3 shows the location of samples collected in this investigation.

## Groundwater Sampling

Three soil borings (SB-1, SB-2 and SB-3) were converted to temporary monitoring wells (GW-1, GW-2 and GW- 3). The groundwater samples were collected using dedicated polyethylene tubing and a peristaltic pump.

A total of three groundwater samples were collected for laboratory analysis. The groundwater analytical data is summarized in Tables 5 through 8. Figure 3 shows the location of groundwater samples.

## Soil Vapor Sampling

Soil vapor samples were collected from three locations identified as SG-1, SG-2 and SG-3. Stainless steel soil vapor points were installed at each location to a depth of approximately 8 ft. bg. via direct push technology. After a minimum of 24 hours from installation, a helium tracer test is performed on each soil gas sample point prior to collecting a soil vapor sample to ensure no ambient air is being drawn down below the slab. Prior to sampling up to three implant volumes (implant and tubing) of soil gas were purged from each implant. A soil gas sample was then collected in a laboratory certified 6-liter SUMMA canister over a 2 hour period (flow rate not exceeding 0.2 L/min). Additionally, one ambient indoor air sample was collected simultaneously with the soil vapor samples.

The soil vapor sample locations are depicted on Figure 3. The soil vapor analytical data is summarized in Table 9. The methodologies used for soil vapor assessment conform to the *NYS DOH Final Guidance on Soil Vapor Intrusion, October 2006*.

## Laboratory Analysis

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

Factor	Description
Quality Assurance Officer	The laboratory analytical quality assurance is directed by Daniel DiRocco.

Analytical Laboratory	The analytical laboratory used in the RI is NYS ELAP certified Accutest Laboratories of Dayton, New Jersey.
Analytical Methods	<p>Soil 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>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 and ambient air analytical methods:</p> <ul style="list-style-type: none"> <li>• VOCs by TO-15 VOC parameters.</li> </ul>

**Results of Laboratory Analyses**

Laboratory data for soil, groundwater and soil vapor are summarized in Table 1 through 9. Laboratory data deliverables for all samples are provided in digital form in Appendix C.

## **5.0 ENVIRONMENTAL EVALUATION**

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

The Site is mapped on the Weehawken, New York 7.5 Minute Topographic Map, published in 2014 by the United States Geological Survey (USGS). A review of the topographic map indicates that the Site is located approximately 15 feet above mean sea level.

#### **Stratigraphy**

Based upon information collected during this investigation, the Site is underlain by three soil strata. Soil boring logs are provided in Appendix B. The upper stratum is approximately 6 to 9 feet of urban fill material consisting of fine to coarse sand, silt and gravel with bricks, wood and asphalt. The stratum below the urban fill consists of brown compacted silty sand ranging in thickness from 8 to 11 feet. This is underlain by a layer of dark gray fine compacted silt with clay and traces of organic matter. Bedrock was not encountered during this investigation. According to the July 2014 Geotechnical Report prepared by Mueser Rutledge Consulting Engineers the depth to competent bedrock ranges from approximately 25 ft. bg. in the northeast corner of the Site to 50 ft. bg. in the southwest corner of the Site.

#### **Hydrogeology**

Groundwater was encountered during this investigation at a depth of approximately 9 ft. bg. The depth-to-water data is included in the boring logs which are attached in Appendix B. The local groundwater flow is towards the west-southwest, in the direction of the Hudson River.

### **5.2 Soil Analytical Results**

The data collected during the RI is sufficient to characterize the distribution of contaminants in soil/fill at the Site. The analytical soil results were compared to the 6NYCRR Part 375-6.8 Track 1 Unrestricted Use Soil Cleanup Objectives (UUSCOs) and Track 2 Restricted Residential Soil Cleanup Objectives (RRSCOs).

#### **Volatile Organic Compounds**

The laboratory analytical results for VOCs in soil and a comparison to the NYSDEC Part 375 UUSCOs and RRSCO are provided in Table 1. No VOCs were detected in any of the soil samples at concentrations exceeding the UUSCOs.

## **Semi-Volatile Organic Compounds**

The laboratory analytical results for SVOCs in soil and a comparison to the NYSDEC Part 375 UUSCOs and RRSCOs are provided in Table 2. Seven SVOCs consisting of polycyclic aromatic hydrocarbons were detected in two shallow soil samples and one deep sample at concentrations exceeding the UUSCOs and RRSCOs. These SVOCs include benzo(a)anthracene (maximum of 15.7 ppm), benzo(a)pyrene (maximum of 20.2 ppm), benzo(b)fluoranthene (maximum of 20.8 ppm), benzo(k)fluoranthene (maximum of 2.1 ppm), chrysene (maximum of 16.3 ppm), dibenzo(a,h)anthracene (maximum of 3.01 ppm) and indeno(1,2,3-cd)pyrene (maximum of 13.1 ppm). The greatest concentrations of SVOCs were detected in the shallow sample from Soil Boring SB-5 located in the southeast portion of the Site. The presence of SVOCs consisting of polycyclic aromatic hydrocarbons (PAH) in the soil is indicative of typical urban fill material.

## **Pesticides and PCBs**

The laboratory analytical results for pesticides and PCBs in soil and a comparison to the NYSDEC Part 375 UUSCOs and RRSCOs are provided in Table 3. One pesticide, 4,4-DDT, was detected in one of the shallow soil samples at a concentration exceeding the UUSCO, but the concentration was below the RRSCO. No PCBs were detected in any of the soil samples

## **Metals**

The laboratory analytical results for metals in soil and a comparison to the NYSDEC Part 375 UUSCOs and RRSCOs are provided in Table 4. Several metals were detected in the shallow and deep soil samples throughout the Site at concentrations exceeding the UUSCOs and RRSCOs. The metals include arsenic (maximum of 674 ppm), barium (maximum of 950 ppm), cadmium (maximum of 3.8 ppm), copper (maximum of 1,860 ppm), lead (maximum of 1,190 ppm), mercury (maximum of 3.7 ppm), selenium (maximum of 4.2 ppm), silver (maximum of 3.9 ppm) and zinc (maximum of 2,010 ppm). The metals in the soil and their concentrations are indicative of typical urban fill.

### **5.3 Groundwater Analytical Results**

The data collected during the RI is sufficient to characterize the distribution of contaminants in groundwater at the Site. The analytical results for the groundwater samples were compared to NYSDEC TOGS 1.1.1, Class GA, Ambient Water Quality Standards and Guidance Values (TOGS).

#### **Volatile Organic Compounds**

The laboratory analytical results for VOCs in groundwater and a comparison to the NYSDEC TOGS standards are provided in Table 5. Three VOCs were detected at concentrations exceeding the respective TOGS standards in the groundwater sample from Temporary Well GW-2 located along the eastern boundary of the Site. These VOCs are benzene (1.2 ppb), methyl tert-butyl ether (MTBE) (36 ppb) and vinyl chloride (2.3 ppb). Two VOCs were detected at concentrations exceeding the respective TOGS standards in the groundwater sample from Temporary Well GW-3 located in the northwest corner of the Site. These VOCs are 1,1-dichloroethene (7.8 ppb) and MTBE (16 ppb). No VOCs were detected in the groundwater sample collected from Temporary Well GW-1 at concentrations exceeding TOGS standards. Each of the VOCs detected at concentrations exceeding the respective TOGS standards, were only slightly above the respective standards. Both groundwater samples containing concentrations of VOCs in exceedance of TOGS values are from upgradient wells and no evidence of petroleum or chlorinated contamination is indicated in the soil analytical or in field screening results. Therefore, the VOCs detected in groundwater are likely attributable to an offsite source.

#### **Semi-Volatile Organic Compounds**

The laboratory analytical results for SVOCs in groundwater and a comparison to the NYSDEC TOGS standards are provided in Table 6. No SVOCs were detected in any of the groundwater samples at concentrations exceeding TOGS standards.

#### **Pesticides and PCBs**

The laboratory analytical results for pesticides and PCBs in groundwater and a comparison to the NYSDEC TOGS standards are provided in Table 7. No pesticides or PCBs were detected in any of the groundwater samples at concentrations exceeding TOGS standards.

## Metals

The laboratory analytical results for total and dissolved metals in groundwater and a comparison to the NYSDEC TOGS standards are provided in Table 7. Several dissolved metals were detected at concentrations exceeding TOGS standards in each of the groundwater samples. These metals include arsenic (maximum of 6,290 ppb), cadmium (maximum of 13.6 ppb), iron (maximum of 36,400 ppb), manganese (maximum of 20,900 ppb) and sodium (maximum of 397,000 ppb). The highest concentrations of dissolved metals were detected in the groundwater samples from Temporary Monitoring Wells GW-1 and GW-2.

### 5.4 Soil Vapor Analytical Results

A summary table of data for laboratory analyses performed on soil vapor samples is included in Table 9. No VOCs were detected in the ambient indoor air sample at concentrations exceeding the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion. No VOCs were detected in soil vapor samples at concentrations exceeding the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion. The VOC detected at highest concentration was ethanol (maximum of 279  $\mu\text{g}/\text{m}^3$ ). Tetrachloroethylene (PCE) and trichloroethylene (TCE) were detected in each of the soil vapor samples at maximum concentrations of 20  $\mu\text{g}/\text{m}^3$  and 2.7  $\mu\text{g}/\text{m}^3$ , respectively. Carbon tetrachloride was detected in the soil vapor sample collected from SG-1 at a concentration of 1.1  $\mu\text{g}/\text{m}^3$ . The VOC 1,1,1-trichloroethane (TCA) was detected in three of the four soil vapor samples at a maximum concentration of 31  $\mu\text{g}/\text{m}^3$ . The concentrations of PCE and TCE are below the monitoring ranges in matrices established in the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion.

### 5.5 Prior Activity

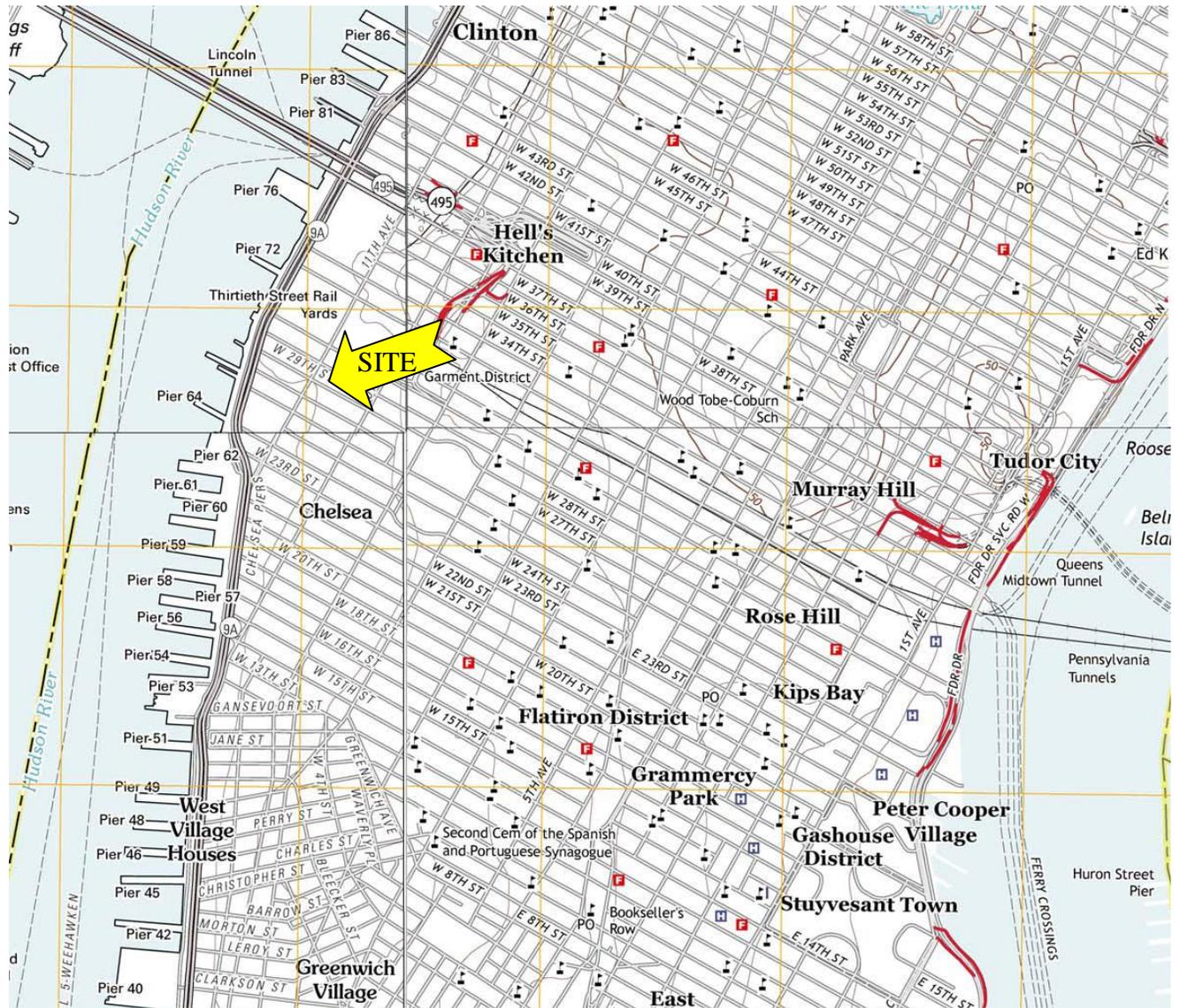
Based on an evaluation of the data and information from the RIR, disposal of significant amounts of hazardous waste is not suspected at this site.

### 5.6 Impediments to Remedial Action

There are no known impediments to remedial action at this property.

# FIGURES



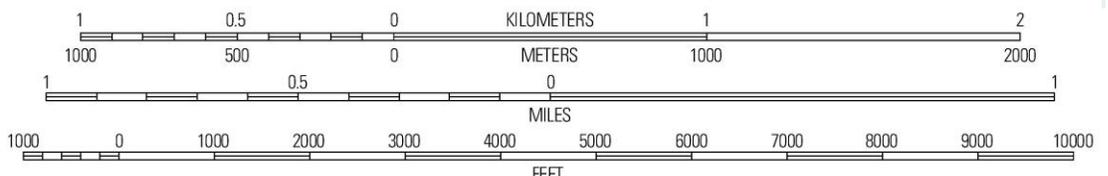


QUADRANGLE LOCATION

Paterson	Hackensack	Yonkers
Orange	<b>Weehawken</b>	Central Park
Elizabeth	Jersey City	Brooklyn

ADJOINING 7.5' QUADRANGLES

SCALE 1:24 000



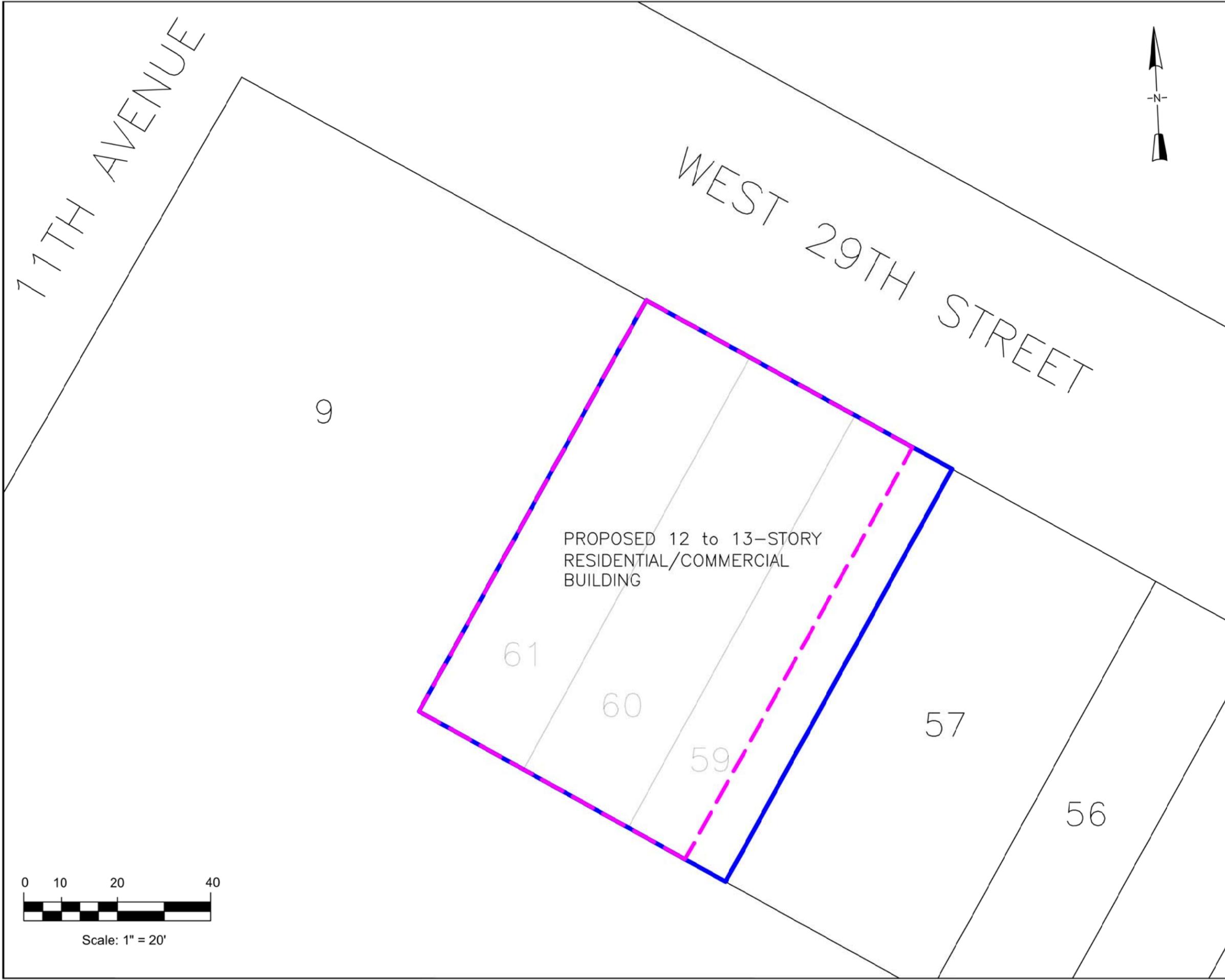
Weehawken Quadrangle, New Jersey-New York 7.5-Minute Series USGS Topographic Map. Obtained from United States Geological Survey topography compiled 2011

## FIGURE 1: SITE LOCATION



SITE: 550 West 29<sup>th</sup> Street  
New York, N.Y.

CLIENT: Tamarkin Co.



Environmental Management & Consulting

158 West 29th Street, 9th Fl.  
New York, NY 10001

550 West 29th Street  
New York, New York

**FIGURE 2**

**LAYOUT OF PROPOSED DEVELOPMENT**

Date  
**July 2014**

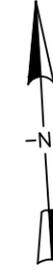
Project Number  
**10218-001-1**

**LEGEND**

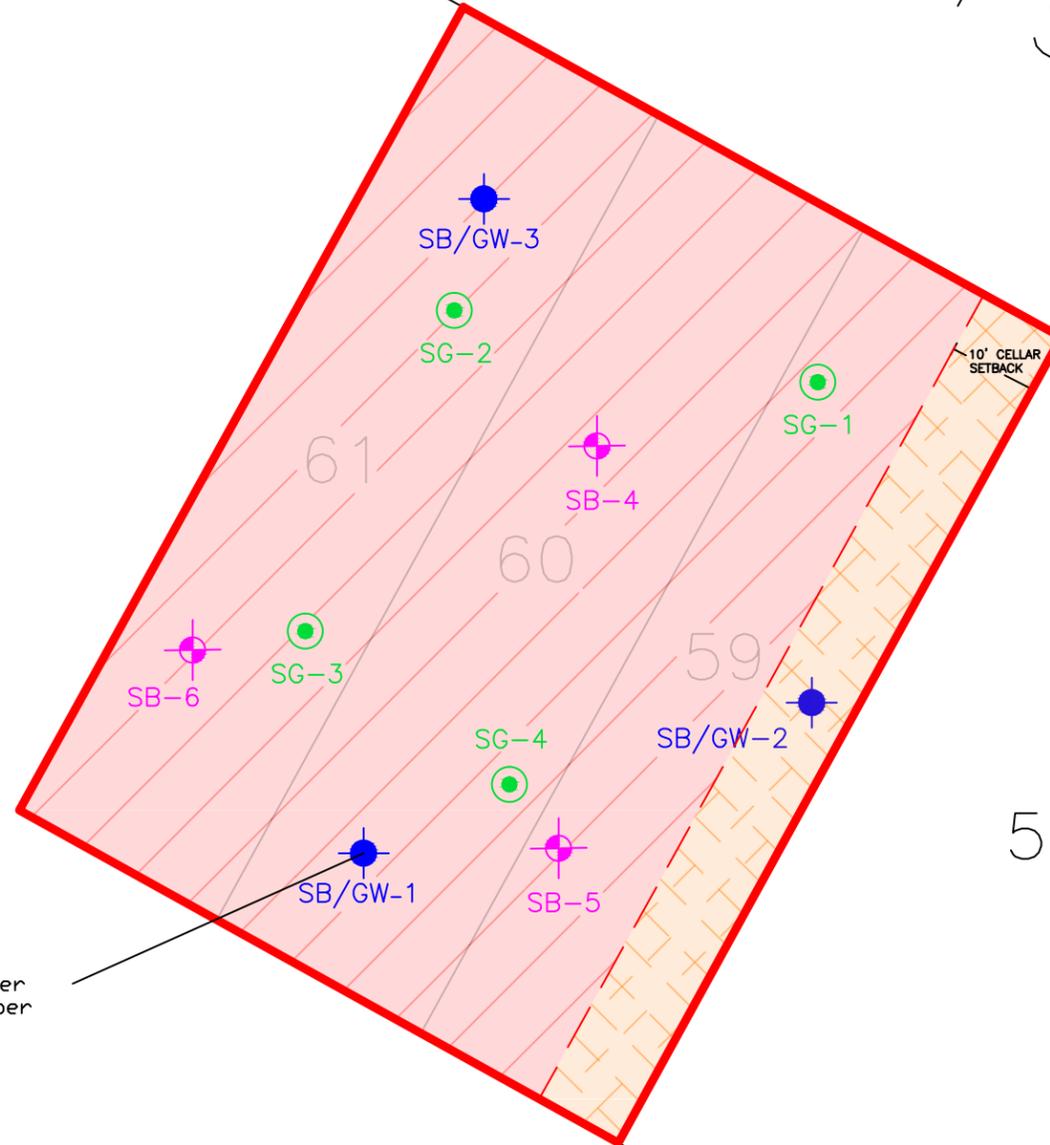
-  PROPOSED CELLAR FOOTPRINT
-  PROPOSED GROUND FLOOR FOOTPRINT/SITE BOUNDARY
-  LOT LINES

71TH AVENUE

WEST 29TH STREET



9



Location of former gasoline UST as per 1930 Sanborn



Scale: 1" = 20'



*Environmental Management & Consulting*

158 West 29th Street, 9th Fl.  
New York, NY 10001

550 West 29th Street Site  
New York, NY

### FIGURE 3

### SITE PLAN WITH SAMPLE LOCATIONS

Date  
**August 2014**

Project Number  
**10218-001-3**

### LEGEND

-  PROJECT BOUNDARY
-  SOIL GAS SAMPLING LOCATION  
SG-1
-  SOIL BORING/TEMPORARY  
MONITORING WELL SAMPLING  
LOCATION  
SB/GW-2
-  SOIL BORING SAMPLING  
LOCATION  
SB-1
-  PROPOSED EXCAVATION  
TO 15 FEET
-  PROPOSED EXCAVATION  
TO 5 FEET

# TABLES



Table 1  
 Volatile Organic Compounds in Soil  
 OER Project # 1SEHAN008M  
 550 West 29th Street, New York, NY

Client Sample ID:		NY SCO - Unrestricted Use (6 NYCRR 375-6 12/06)	NY SCO - Restricted Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06)	SB-1 (0'-2') Soil	SB-1 (15'-17') Soil	SB-2 (0'-2') Soil	SB-2 (5'-7') Soil	SB-3 (0'-2') Soil	SB-3 (15'-17') Soil	SB-4 (0'-2') Soil	SB-4 (15'-17') Soil	SB-5 (0'-2') Soil	SB-5 (15'-17') Soil	SB-6 (0'-2') Soil	SB-6 (10'-12') Soil
Lab Sample ID:				JB72780-8	JB72780-9	JB72780-3	JB72780-4	JB72780-12	JB72780-13	JB72780-14	JB72780-15	JB72780-1	JB72780-2	JB72780-10	JB72780-11
Date Sampled:				7/28/2014	7/28/2014	7/29/2014	7/29/2014	7/28/2014	7/28/2014	7/28/2014	7/28/2014	7/29/2014	7/29/2014	7/29/2014	7/28/2014
Matrix:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Acetone	mg/kg	0.05	100	<0.0013	0.0073 J	0.0195	0.0267	0.0117 J	0.0219	0.0068 J	0.0118	0.0119 J	<0.0013	0.0121 J	<0.0014
Benzene	mg/kg	0.06	4.8	<0.0016	<0.0016	0.0091 J	<0.0015	<0.0021	<0.0016	<0.0019	<0.0018	0.0043 J	<0.0015	<0.0022	<0.0016
Bromochloromethane	mg/kg	-	-	<0.00022	<0.00023	<0.00026	<0.00021	<0.00029	<0.00022	<0.00026	<0.00025	<0.00029	<0.00021	<0.00031	<0.00022
Bromodichloromethane	mg/kg	-	-	<0.00022	<0.00023	<0.00026	<0.00021	<0.00029	<0.00022	<0.00026	<0.00025	<0.00029	<0.00021	<0.00031	<0.00022
Bromoform	mg/kg	-	-	<0.000095	<0.00010	<0.00012	<0.000091	<0.00013	<0.000098	<0.00012	<0.00011	<0.00013	<0.000093	<0.00014	<0.000099
Bromomethane	mg/kg	-	-	<0.00026	<0.00028	<0.00032	<0.00025	<0.00035	<0.00027	<0.00032	<0.00030	<0.00035	<0.00025	<0.00037	<0.00027
2-Butanone (MEK)	mg/kg	0.12	100	<0.0011	<0.0011	<0.0013	<0.0010	<0.0014	<0.0011	<0.0013	<0.0013	<0.0015	<0.0011	<0.0016	<0.0011
Carbon disulfide	mg/kg	-	-	<0.00021	0.0014 J	<0.00026	<0.00020	<0.00028	<0.00022	<0.00026	<0.00024	<0.00029	<0.00021	0.0040 J	0.0079
Carbon tetrachloride	mg/kg	-	2.4	<0.00013	<0.00013	<0.00015	<0.00012	<0.00017	<0.00013	<0.00016	<0.00015	<0.00017	<0.00012	<0.00018	<0.00013
Chlorobenzene	mg/kg	1.1	100	<0.00011	<0.00012	<0.00013	<0.00010	<0.00015	<0.00011	<0.00013	<0.00013	<0.00015	<0.00011	<0.00016	<0.00011
Chloroethane	mg/kg	-	-	<0.00021	<0.00023	<0.00026	<0.00020	<0.00028	<0.00022	<0.00026	<0.00025	<0.00029	<0.00021	<0.00030	<0.00022
Chloroform	mg/kg	0.37	49	<0.000093	<0.000098	<0.00011	<0.000088	<0.00012	<0.000095	0.00023 J	<0.00011	<0.00012	<0.000090	<0.00013	0.00029 J
Chloromethane	mg/kg	-	-	<0.00027	<0.00028	<0.00033	<0.00026	<0.00036	<0.00028	<0.00033	<0.00031	<0.00036	<0.00026	<0.00038	<0.00028
Cyclohexane	mg/kg	-	-	<0.00032	<0.00033	<0.00038	<0.00030	<0.00042	<0.00033	<0.00039	<0.00036	<0.00043	<0.00031	<0.00045	<0.00033
1,2-Dibromo-3-chloropropane	mg/kg	-	-	<0.00047	<0.00049	<0.00057	<0.00045	<0.00063	<0.00048	<0.00057	<0.00054	<0.00063	<0.00046	<0.00067	<0.00049
Dibromochloromethane	mg/kg	-	-	<0.00012	<0.00013	<0.00015	<0.00012	<0.00016	<0.00012	<0.00015	<0.00014	<0.00016	<0.00012	<0.00017	<0.00013
1,2-Dibromoethane	mg/kg	-	-	<0.00014	<0.00015	<0.00017	<0.00013	<0.00019	<0.00014	<0.00017	<0.00016	<0.00019	<0.00014	<0.00020	<0.00014
1,2-Dichlorobenzene	mg/kg	1.1	100	<0.00014	<0.00015	<0.00018	<0.00014	<0.00019	<0.00015	<0.00018	<0.00017	<0.00019	<0.00014	<0.00021	<0.00015
1,3-Dichlorobenzene	mg/kg	2.4	49	<0.00014	<0.00015	<0.00017	<0.00013	<0.00019	<0.00014	<0.00017	<0.00016	<0.00019	<0.00014	<0.00020	<0.00015
1,4-Dichlorobenzene	mg/kg	1.8	13	<0.00015	<0.00016	<0.00018	<0.00014	<0.00020	<0.00015	<0.00018	<0.00017	<0.00020	<0.00014	<0.00021	<0.00015
Dichlorodifluoromethane	mg/kg	-	-	<0.00047	<0.00049	<0.00057	<0.00045	<0.00062	<0.00048	<0.00057	<0.00054	<0.00063	<0.00046	<0.00067	<0.00049
1,1-Dichloroethane	mg/kg	0.27	26	<0.00032	<0.00034	<0.00039	<0.00031	<0.00043	<0.00033	<0.00039	<0.00037	<0.00043	<0.00031	0.00091 J	<0.00033
1,2-Dichloroethane	mg/kg	0.02	3.1	<0.00010	<0.00011	<0.00013	<0.000099	<0.00014	<0.00011	<0.00013	<0.00012	<0.00014	<0.00010	<0.00015	<0.00011
1,1-Dichloroethene	mg/kg	0.33	100	<0.00022	0.00073 J	<0.00027	<0.00021	<0.00029	<0.00023	<0.00027	<0.00025	<0.00030	<0.00021	0.00064 J	<0.00023
cis-1,2-Dichloroethene	mg/kg	0.25	100	<0.00023	0.00041 J	<0.00028	<0.00022	<0.00031	<0.00024	<0.00029	<0.00027	<0.00031	<0.00023	<0.00033	<0.00024
trans-1,2-Dichloroethene	mg/kg	0.19	100	<0.00017	<0.00018	<0.00020	<0.00016	<0.00023	<0.00017	<0.00021	<0.00019	<0.00023	<0.00016	<0.00024	<0.00018
1,2-Dichloropropane	mg/kg	-	-	<0.00015	<0.00016	<0.00019	<0.00015	<0.00020	<0.00016	<0.00019	<0.00018	<0.00021	<0.00015	<0.00022	<0.00016
cis-1,3-Dichloropropene	mg/kg	-	-	<0.00011	<0.00012	<0.00014	<0.00011	<0.00015	<0.00012	<0.00014	<0.00013	<0.00015	<0.00011	<0.00016	<0.00012
trans-1,3-Dichloropropene	mg/kg	-	-	<0.00015	<0.00016	<0.00018	<0.00015	<0.00020	<0.00016	<0.00019	<0.00017	<0.00020	<0.00015	<0.00022	<0.00016
1,4-Dioxane	mg/kg	0.1	13	<0.036	<0.038	<0.044	<0.034	<0.048	<0.037	<0.044	<0.041	<0.048	<0.035	<0.051	<0.037
Ethylbenzene	mg/kg	1	41	<0.000095	<0.00010	0.00040 J	<0.000091	<0.00013	<0.000098	<0.00012	<0.00011	<0.00013	<0.000093	<0.00014	<0.000099
Freon 113	mg/kg	-	-	<0.00026	<0.00027	<0.00031	<0.00025	<0.00034	<0.00027	<0.00031	<0.00030	<0.00035	<0.00025	<0.00037	<0.00027
2-Hexanone	mg/kg	-	-	<0.00050	<0.00053	<0.00061	<0.00048	<0.00067	<0.00051	<0.00061	<0.00058	<0.00067	<0.00049	<0.00071	<0.00052
Isopropylbenzene	mg/kg	-	-	<0.00014	<0.00014	<0.00017	<0.00013	<0.00018	<0.00014	<0.00017	<0.00016	<0.00018	<0.00013	<0.00020	<0.00014
Methyl Acetate	mg/kg	-	-	<0.00044	<0.00046	<0.00053	<0.00042	<0.00058	<0.00045	<0.00053	<0.00050	<0.00059	<0.00042	<0.00062	<0.00045
Methylcyclohexane	mg/kg	-	-	<0.00012	<0.00013	0.00049 J	<0.00012	<0.00016	<0.00013	<0.00015	<0.00014	0.00032 J	<0.00012	<0.00018	<0.00013
Methyl Tert Butyl Ether	mg/kg	0.93	100	<0.00015	0.00023	<0.00018	<0.00014	<0.00020	<0.00015	0.00039 J	<0.00017	<0.00020	0.0011	<0.00021	<0.00015
4-Methyl-2-pentanone(MIBK)	mg/kg	-	-	<0.00029	<0.00030	<0.00035	<0.00028	<0.00038	<0.00030	<0.00035	<0.00033	<0.00039	<0.00028	<0.00041	<0.00030
Methylene chloride	mg/kg	0.05	100	<0.00085	<0.00090	<0.0010	<0.00081	<0.0011	<0.00088	<0.0010	<0.00098	<0.0011	<0.00083	<0.0012	<0.00089
Styrene	mg/kg	-	-	<0.00013	<0.00013	<0.00015	<0.00012	<0.00017	<0.00013	<0.00015	<0.00014	<0.00017	<0.00012	<0.00018	<0.00013
1,1,2,2-Tetrachloroethane	mg/kg	-	-	<0.00013	<0.00014	<0.00016	<0.00013	<0.00017	<0.00013	<0.00016	<0.00015	<0.00018	<0.00013	<0.00019	<0.00014
Tetrachloroethene	mg/kg	1.3	19	0.00022 J	<0.00018	<0.00021	<0.00017	<0.00023	<0.00018	<0.00021	0.00025 J	<0.00024	<0.00017	<0.00025	<0.00018
Toluene	mg/kg	0.7	100	<0.00013	<0.00014	0.00045 J	0.00017 J	<0.00018	<0.00014	0.00036 J	<0.00015	0.00089 J	<0.00013	<0.00019	<0.00014
1,2,3-Trichlorobenzene	mg/kg	-	-	<0.00014	<0.00014	<0.00017	<0.00013	<0.00018	<0.00014	<0.00017	<0.00016	<0.00018	<0.00013	<0.00019	<0.00014
1,2,4-Trichlorobenzene	mg/kg	-	-	<0.00016	<0.00017	<0.00020	<0.00015	<0.00022	<0.00017	<0.00020	<0.00019	<0.00022	<0.00016	<0.00023	<0.00017
1,1,1-Trichloroethane	mg/kg	0.68	100	<0.00012	<0.00013	<0.00014	<0.00011	<0.00016	<0.00012	<0.00015	<0.00014	<0.00016	<0.00012	<0.00017	<0.00012
1,1,2-Trichloroethane	mg/kg	-	-	<0.00016	<0.00017	<0.00019	<0.00015	<0.00021	<0.00017	<0.00020	<0.00018	<0.00022	<0.00016	<0.00023	<0.00017
Trichloroethene	mg/kg	0.47	21	<0.00018	<0.00019	<0.00021	<0.00017	<0.00023	<0.00018	<0.00021	<0.00020	<0.00024	<0.00017	<0.00025	<0.00018
Trichlorofluoromethane	mg/kg	-	-	<0.00015	<0.00016	<0.00018	<0.00014	<0.00020	<0.00015	<0.00018	<0.00017	<0.00020	<0.00015	<0.00021	<0.00015
Vinyl chloride	mg/kg	0.02	0.9	<0.00013	<0.00013	<0.00015	<0.00012	<0.00017	<0.00013	<0.00015	<0.00015	<0.00017	<0.00012	<0.00018	<0.00013
m,p-Xylene	mg/kg	0.26	100	<0.00020	<0.00021	0.00039 J	<0.00019	<0.00027	<0.00021	<0.00025	<0.00023	0.00044 J	<0.00020	<0.00029	<0.00021
o-Xylene	mg/kg	0.26	100	<0.00013	<0.00013	0.00035 J	<0.00012	<0.00017	<0.00013	<0.00015	<0.00015	<0.00017	<0.00012	<0.00018	<0.00013
Xylene (total)	mg/kg	0.26	100	<0.00013	<0.00013	0.00074 J	<0.00012	<0.00017	<0.00013	<0.00015	<0.00015	0.00044 J	<0.00012	<0.00018	<0.00013

Legend:
Hit
Exceeds Unrestricted SCO
Exceeds Restricted Residential SCO

< - Not detected above method detection limit  
 (0.00046) - Method Detection Limit  
 J - Estimated value  
 Results are reported in milligram per kilogram(mg/kg)

Table 2  
Semi-Volatile Organic Compounds in Soil  
OER Project # 15EHAN008M  
550 West 29th Street, New York, NY

Client Sample ID:		NY SCO - Unrestricted Use (6 NYCRR 375-6 12/06)	NY SCO - Restricted Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06)	SB-1 (0'-2')	SB-1 (15'-17')	SB-2 (0'-2')	SB-2 (5'-7')	SB-3 (0'-2')	SB-3 (15'-17')	SB-4 (0'-2')	SB-4 (15'-17')	SB-5 (0'-2')	SB-5 (15'-17')	SB-6 (0'-2')	SB-6 (10'-12')
Lab Sample ID:				JB72780-8	JB72780-9	JB72780-3	JB72780-4	JB72780-12	JB72780-13	JB72780-14	JB72780-15	JB72780-1	JB72780-2	JB72780-10	JB72780-11
Date Sampled:				7/28/2014	7/28/2014	7/29/2014	7/29/2014	7/28/2014	7/28/2014	7/28/2014	7/28/2014	7/29/2014	7/28/2014	7/28/2014	7/28/2014
Matrix:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
2-Chlorophenol	mg/kg	-	-	<0.036	<0.036	<0.039	<0.033	<0.032	<0.034	<0.042	<0.036	<0.039	<0.036	<0.035	<0.035
4-Chloro-3-methyl phenol	mg/kg	-	-	<0.036	<0.036	<0.039	<0.033	<0.032	<0.034	<0.042	<0.036	<0.039	<0.036	<0.035	<0.035
2,4-Dichlorophenol	mg/kg	-	-	<0.058	<0.058	<0.063	<0.054	<0.052	<0.055	<0.068	<0.058	<0.063	<0.059	<0.057	<0.057
2,4-Dimethylphenol	mg/kg	-	-	<0.060	<0.060	<0.065	<0.056	<0.054	<0.057	<0.071	<0.061	<0.065	<0.061	<0.059	<0.059
2,4-Dinitrophenol	mg/kg	-	-	<0.044	<0.044	<0.047	<0.041	<0.039	<0.041	<0.052	<0.044	<0.047	<0.044	<0.043	<0.043
4,6-Dinitro-o-cresol	mg/kg	-	-	<0.044	<0.044	<0.047	<0.041	<0.039	<0.041	<0.052	<0.044	<0.047	<0.044	<0.043	<0.043
2-Methylphenol	mg/kg	0.33	100	<0.041	<0.041	<0.044	<0.038	<0.037	<0.039	<0.048	<0.041	<0.044	<0.041	<0.040	<0.040
3&4-Methylphenol	mg/kg	-	-	<0.046	<0.046	<0.049	<0.042	<0.041	<0.043	<0.054	<0.046	0.126	<0.046	<0.045	<0.045
2-Nitrophenol	mg/kg	-	-	<0.038	<0.038	<0.041	<0.035	<0.034	<0.036	<0.045	<0.038	<0.041	<0.039	<0.037	<0.037
4-Nitrophenol	mg/kg	-	-	<0.061	<0.061	<0.066	<0.056	<0.054	<0.057	<0.071	<0.061	<0.066	<0.062	<0.059	<0.060
Pentachlorophenol	mg/kg	0.8	6.7	<0.061	<0.061	<0.066	<0.057	<0.055	<0.058	<0.072	<0.062	<0.066	<0.062	<0.060	<0.060
Phenol	mg/kg	0.33	100	<0.038	<0.038	<0.041	<0.035	<0.034	<0.036	<0.044	<0.038	0.0692 J	<0.038	<0.037	<0.037
2,3,4,6-Tetrachlorophenol	mg/kg	-	-	<0.037	<0.037	<0.040	<0.034	<0.033	<0.035	<0.044	<0.037	<0.040	<0.037	<0.036	<0.036
2,4,5-Trichlorophenol	mg/kg	-	-	<0.042	<0.042	<0.045	<0.039	<0.037	<0.039	<0.049	<0.042	<0.045	<0.042	<0.041	<0.041
2,4,6-Trichlorophenol	mg/kg	-	-	<0.034	<0.034	<0.037	<0.031	<0.030	<0.032	<0.040	<0.034	<0.037	<0.034	<0.033	<0.033
Acenaphthene	mg/kg	20	100	0.0697	<0.010	0.0432	<0.0096	<0.0093	<0.0098	<0.012	0.0165 J	0.321	<0.011	<0.010	<0.010
Acenaphthylene	mg/kg	100	100	0.0839	<0.011	0.0330 J	<0.011	<0.010	<0.011	0.0581	0.12	3.07	<0.012	<0.011	<0.011
Acetophenone	mg/kg	-	-	<0.0063	<0.0063	<0.0068	<0.0059	<0.0057	<0.0060	<0.0074	<0.0064	<0.0068	<0.0064	<0.0062	<0.0062
Anthracene	mg/kg	100	100	0.179	<0.013	0.0875	<0.012	<0.011	<0.012	0.0633	0.109	3.71	<0.013	<0.012	<0.012
Atrazine	mg/kg	-	-	<0.0071	<0.0071	<0.0077	<0.0066	<0.0063	<0.0067	<0.0083	<0.0071	<0.0077	<0.0072	<0.0069	<0.0069
Benzo(a)anthracene	mg/kg	1	1	0.63	<0.012	0.389	<0.011	0.0231 J	<0.011	0.163	0.561	15.7	0.0287 J	<0.011	<0.011
Benzo(a)pyrene	mg/kg	1	1	0.708	<0.011	0.366	<0.010	0.0255 J	<0.010	0.243	0.586	29.2	0.0273 J	<0.011	<0.011
Benzo(b)fluoranthene	mg/kg	1	1	0.8	<0.012	0.332	<0.011	0.0306 J	<0.011	0.254	0.749	29.8	0.0302 J	<0.012	<0.012
Benzo(g,h,i)perylene	mg/kg	100	100	0.516	<0.013	0.278	<0.012	0.0452	<0.013	0.477	0.479	14.1	0.0215 J	<0.013	<0.013
Benzo(k)fluoranthene	mg/kg	0.8	3.9	0.273	<0.013	0.12	<0.013	0.0150 J	<0.013	0.101	0.28	2.1	0.0155 J	<0.013	<0.013
4-Bromophenyl phenyl ether	mg/kg	-	-	<0.013	<0.013	<0.014	<0.012	<0.012	<0.012	<0.015	<0.013	<0.014	<0.013	<0.013	<0.013
Butyl benzyl phthalate	mg/kg	-	-	<0.021	<0.021	<0.023	<0.019	0.542	<0.020	<0.024	<0.021	<0.022	<0.021	<0.020	<0.020
1,1'-Biphenyl	mg/kg	-	-	<0.0042	<0.0042	<0.0045	<0.0039	<0.0037	<0.0039	<0.0049	<0.0042	0.0356 J	<0.0042	<0.0041	<0.0041
Benzaldehyde	mg/kg	-	-	<0.0083	<0.0082	<0.0089	<0.0076	<0.0074	<0.0078	<0.0097	<0.0083	<0.0084	<0.0084	<0.0081	<0.0081
2-Chloronaphthalene	mg/kg	-	-	<0.011	<0.011	<0.012	<0.010	<0.010	<0.011	<0.013	<0.011	<0.012	<0.011	<0.011	<0.011
4-Chloroaniline	mg/kg	-	-	<0.011	<0.011	<0.012	<0.011	<0.010	<0.011	<0.014	<0.012	<0.012	<0.012	<0.011	<0.011
Carbazole	mg/kg	-	-	0.0948	<0.017	<0.018	<0.015	<0.015	<0.016	0.0244 J	0.0358 J	0.627	<0.017	<0.016	<0.016
Caprolactam	mg/kg	-	-	<0.011	<0.011	<0.012	<0.010	<0.010	<0.011	<0.013	<0.011	<0.012	<0.011	<0.011	<0.011
Chrysene	mg/kg	1	3.9	0.701	<0.012	0.408	<0.011	0.0293 J	<0.011	0.199	0.676	16.3	0.0274 J	<0.012	<0.012
bis(2-Chloroethoxy)methane	mg/kg	-	-	<0.014	<0.014	<0.016	<0.013	<0.013	<0.014	<0.017	<0.015	<0.016	<0.015	<0.014	<0.014
bis(2-Chloroethyl)ether	mg/kg	-	-	<0.011	<0.011	<0.012	<0.010	<0.0097	<0.010	<0.013	<0.011	<0.012	<0.011	<0.011	<0.011
bis(2-Chloroisopropyl)ether	mg/kg	-	-	<0.011	<0.011	<0.012	<0.0099	<0.0096	<0.010	<0.013	<0.011	<0.012	<0.011	<0.010	<0.010
4-Chlorophenyl phenyl ether	mg/kg	-	-	<0.011	<0.011	<0.012	<0.010	<0.0097	<0.010	<0.013	<0.011	<0.012	<0.011	<0.011	<0.011
2,4-Dinitrotoluene	mg/kg	-	-	<0.016	<0.016	<0.017	<0.015	<0.014	<0.015	<0.018	<0.016	<0.017	<0.016	<0.015	<0.015
2,6-Dinitrotoluene	mg/kg	-	-	<0.014	<0.014	<0.015	<0.013	<0.012	<0.013	<0.016	<0.014	<0.015	<0.014	<0.013	<0.013
3,3'-Dichlorobenzidine	mg/kg	-	-	<0.0091	<0.0091	<0.0099	<0.0084	<0.0082	<0.0086	<0.011	<0.0092	<0.0099	<0.0092	<0.0089	<0.0090
Dibenzo(a,h)anthracene	mg/kg	0.33	0.33	0.0992	<0.012	0.0538	<0.011	<0.011	<0.012	0.0586	0.111	3.01	<0.012	<0.012	<0.012
Dibenzofuran	mg/kg	7	59	0.0431 J	<0.011	<0.012	<0.0099	<0.0096	<0.010	<0.013	0.0216 J	0.158	<0.011	<0.010	<0.010
Di-n-butyl phthalate	mg/kg	-	-	<0.0080	<0.0080	<0.0086	<0.0074	1.49	<0.0075	<0.0094	<0.0080	<0.0086	<0.0081	<0.0078	<0.0078
Di-n-octyl phthalate	mg/kg	-	-	<0.017	<0.017	<0.019	<0.016	<0.016	<0.017	<0.021	<0.018	<0.019	<0.018	<0.017	<0.017
Diethyl phthalate	mg/kg	-	-	<0.012	<0.012	<0.013	<0.011	<0.011	<0.012	<0.014	<0.012	0.324	<0.012	<0.012	<0.012
Dimethyl phthalate	mg/kg	-	-	<0.013	<0.013	<0.014	<0.012	<0.011	<0.012	<0.015	<0.013	<0.014	<0.013	<0.012	<0.012
bis(2-Ethylhexyl)phthalate	mg/kg	-	-	0.0367 J	0.0699 J	<0.034	<0.029	0.403	0.0491 J	0.0733 J	0.322	<0.034	<0.032	0.0438 J	0.0709 J
Fluoranthene	mg/kg	100	100	1.32	<0.016	0.547	<0.015	0.0437	<0.015	0.282	1.12	22.3	0.0505	<0.015	<0.016
Fluorene	mg/kg	30	100	0.0546	<0.012	0.0256 J	<0.011	<0.011	<0.011	<0.014	0.0326 J	0.399	<0.012	<0.012	<0.012
Hexachlorobenzene	mg/kg	0.33	1.2	<0.012	<0.012	<0.013	<0.011	<0.010	<0.011	<0.014	<0.012	<0.013	<0.012	<0.011	<0.011
Hexachlorobutadiene	mg/kg	-	-	<0.010	<0.010	<0.011	<0.0092	<0.0089	<0.0094	<0.012	<0.010	<0.011	<0.010	<0.0098	<0.0098
Hexachlorocyclopentadiene	mg/kg	-	-	<0.037	<0.037	<0.040	<0.034	<0.035	<0.035	<0.043	<0.037	<0.040	<0.037	<0.036	<0.036
Hexachloroethane	mg/kg	-	-	<0.010	<0.010	<0.011	<0.0092	<0.0089	<0.0094	<0.012	<0.010	<0.011	<0.010	<0.0098	<0.0098
Indeno(1,2,3-cd)pyrene	mg/kg	0.5	0.5	0.542	<0.012	0.216	<0.012	0.0309 J	<0.012	0.299	0.514	13.1	0.0199 J	<0.012	<0.012
Isophorone	mg/kg	-	-	<0.0097	<0.0096	<0.010	<0.0089	<0.0087	<0.0091	<0.011	<0.0097	<0.010	<0.0098	<0.0094	<0.0095
2-Methylnaphthalene	mg/kg	-	-	0.0349 J	<0.020	0.0338 J	<0.019	<0.018	<0.019	0.0476 J	<0.020	0.223	<0.020	<0.020	<0.020
2-Nitroaniline	mg/kg	-	-	<0.016	<0.016	<0.017	<0.015	<0.014	<0.015	<0.019	<0.016	<0.017	<0.016	<0.015	<0.016
3-Nitroaniline	mg/kg	-	-	<0.014	<0.014	<0.016	<0.013	<0.013	<0.014	<0.017	<0.014	<0.016	<0.015	<0.014	<0.014
4-Nitroaniline	mg/kg	-	-	<0.014	<0.014	<0.015	<0.013	<0.013	<0.013	<0.016	<0.014	<0.015	<0.014	<0.014	<0.014
Naphthalene	mg/kg	12	100	0.0467	<0.0098	0.0467	<0.0091	0.0224 J	<0.0093	0.0292 J	<0.0099	0.328	<0.0099	<0.0096	<0.0096
Nitrobenzene	mg/kg	-	15	<0.010	<0.010	<0.011	<0.0096	<0.0093	<0.0098	<0.012	<0.010	<0.011	<0.010	<0.010	<0.010
N-Nitroso-di-n-propylamine	mg/kg	-	-	<0.0088	<0.0087	<0.0095	<0.0081	<0.0078	<0.0083	<0.010	<0.0088	<0.0095	<0.0089	<0.0086	<0.0086
N-Nitrosodiphenylamine	mg/kg	-	-	<0.021	<0.021	<0.023	<0.019	<0.019	<0.020	<0.025	<0.022	<0.023	<0.022	<0.021	<0.

Table 3  
Pesticides and Polychlorinated Biphenyls in Soil  
OER Project # 15EHAN008M  
550 West 29th Street, New York, NY

Client Sample ID:		NY SCO - Unrestricted Use (6 NYCRR 375-6 12/06)	NY SCO - Restricted Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06)	SB-1 (0'-2')	SB-1 (15'-17')	SB-2 (0'-2')	SB-2 (5'-7')	SB-3 (0'-2')	SB-3 (15'-17')	SB-4 (0'-2')	SB-4 (15'-17')	SB-5 (0'-2')	SB-5 (15'-17')	SB-6 (0'-2')	SB-6 (10'-12')
Lab Sample ID:				JB72780-8	JB72780-9	JB72780-3	JB72780-4	JB72780-12	JB72780-13	JB72780-14	JB72780-15	JB72780-1	JB72780-2	JB72780-10	JB72780-11
Date Sampled:				7/28/2014	7/28/2014	7/29/2014	7/29/2014	7/28/2014	7/28/2014	7/28/2014	7/28/2014	7/29/2014	7/29/2014	7/28/2014	7/28/2014
Matrix:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
<b>Pesticides</b>															
Aldrin	mg/kg	0.005	0.097	<0.00033	<0.00033	<0.00036	<0.00033	<0.00032	<0.00035	<0.00038	<0.00036	<0.00035	<0.00032	<0.00034	<0.00033
alpha-BHC	mg/kg	0.02	0.48	<0.00021	<0.00022	<0.00023	<0.00021	<0.00021	<0.00023	<0.00025	<0.00023	<0.00023	<0.00021	<0.00022	<0.00022
beta-BHC	mg/kg	0.036	0.36	<0.00045	<0.00045	<0.00049	<0.00044	<0.00043	<0.00047	<0.00051	<0.00048	<0.00048	<0.00043	<0.00046	<0.00045
delta-BHC	mg/kg	0.04	100	<0.00035	<0.00036	<0.00039	<0.00035	<0.00034	<0.00037	<0.00041	<0.00038	<0.00038	<0.00034	<0.00036	<0.00036
gamma-BHC (Lindane)	mg/kg	0.1	1.3	<0.00035	<0.00035	<0.00038	<0.00035	<0.00034	<0.00037	<0.00040	<0.00038	<0.00037	<0.00034	<0.00036	<0.00035
alpha-Chlordane	mg/kg	0.094	4.2	<0.00027	<0.00027	<0.00029	<0.00026	<0.00025	<0.00028	<0.00030	<0.00029	<0.00028	<0.00026	<0.00027	<0.00027
gamma-Chlordane	mg/kg	-	-	<0.00050	<0.00050	<0.00054	<0.00049	<0.00047	<0.00052	<0.00057	<0.00053	<0.00053	<0.00048	<0.00051	<0.00050
Dieldrin	mg/kg	0.005	0.2	<0.00028	<0.00028	<0.00031	<0.00028	0.00089	<0.00029	<0.00032	<0.00030	<0.00030	<0.00027	<0.00029	<0.00028
4,4'-DDD	mg/kg	0.0033	13	<0.00039	<0.00040	<0.00043	<0.00039	0.0018	<0.00041	<0.00045	<0.00042	<0.00042	<0.00038	<0.00040	<0.00039
4,4'-DDE	mg/kg	0.0033	8.9	<0.00029	<0.00029	<0.00032	<0.00029	0.0019	<0.00030	<0.00033	<0.00031	<0.00031	<0.00028	<0.00030	<0.00029
4,4'-DDT	mg/kg	0.0033	7.9	<0.00035	<0.00036	<0.00039	<0.00035	0.0256	<0.00037	0.0011 <sup>c</sup>	<0.00038	<0.00038	<0.00034	<0.00036	<0.00036
Endrin	mg/kg	0.014	11	<0.00023	<0.00023	<0.00025	<0.00023	<0.00022	<0.00024	<0.00027	<0.00025	<0.00025	<0.00023	<0.00024	<0.00023
Endosulfan sulfate	mg/kg	2.4	24	<0.00031	<0.00031	<0.00034	<0.00031	<0.00030	<0.00032	<0.00035	<0.00033	<0.00033	<0.00030	<0.00031	<0.00031
Endrin aldehyde	mg/kg	-	-	<0.00038	<0.00038	<0.00041	<0.00037	<0.00036	<0.00039	<0.00043	<0.00040	0.0065	<0.00036	<0.00038	<0.00038
Endosulfan-I	mg/kg	2.4	24	<0.00027	<0.00027	<0.00030	<0.00027	<0.00026	<0.00029	<0.00031	<0.00029	<0.00029	<0.00026	<0.00028	<0.00027
Endosulfan-II	mg/kg	2.4	24	<0.00043	<0.00043	<0.00047	<0.00043	<0.00041	<0.00045	<0.00049	<0.00046	<0.00046	<0.00042	<0.00044	<0.00043
Heptachlor	mg/kg	0.042	2.1	<0.00035	<0.00035	<0.00038	<0.00035	<0.00033	<0.00037	<0.00040	<0.00038	<0.00037	<0.00034	<0.00036	<0.00035
Heptachlor epoxide	mg/kg	-	-	<0.00027	<0.00027	<0.00029	<0.00027	<0.00026	<0.00028	<0.00031	<0.00029	<0.00029	<0.00026	<0.00027	<0.00027
Methoxychlor	mg/kg	-	-	<0.00070	<0.00071	<0.00077	<0.00070	<0.00067	<0.00074	<0.00080	<0.00076	<0.00075	<0.00068	<0.00072	<0.00071
Endrin ketone	mg/kg	-	-	0.0013 <sup>c</sup>	<0.00029	<0.00032	<0.00029	<0.00028	<0.00031	<0.00033	0.0012 <sup>c</sup>	0.0127 <sup>c</sup>	<0.00028	<0.00030	<0.00029
Toxaphene	mg/kg	-	-	<0.0090	<0.0091	<0.0099	<0.0090	<0.0086	<0.0095	<0.010	<0.0097	<0.0096	<0.0088	<0.0092	<0.0091
<b>Polychlorinated Biphenyls</b>															
Aroclor 1016	mg/kg	0.1	1	<0.0093	<0.0094	<0.010	<0.0092	<0.0089	<0.0098	<0.011	<0.010	<0.0097	<0.0091	<0.0095	<0.0094
Aroclor 1221	mg/kg	0.1	1	<0.022	<0.022	<0.024	<0.021	<0.021	<0.023	<0.025	<0.023	<0.023	<0.021	<0.022	<0.022
Aroclor 1232	mg/kg	0.1	1	<0.018	<0.018	<0.020	<0.018	<0.017	<0.019	<0.021	<0.020	<0.019	<0.018	<0.019	<0.018
Aroclor 1242	mg/kg	0.1	1	<0.011	<0.012	<0.012	<0.011	<0.011	<0.012	<0.013	<0.012	<0.012	<0.011	<0.011	<0.011
Aroclor 1248	mg/kg	0.1	1	<0.011	<0.011	<0.012	<0.011	<0.010	<0.011	<0.012	<0.012	<0.011	<0.011	<0.011	<0.011
Aroclor 1254	mg/kg	0.1	1	<0.017	<0.017	<0.018	<0.017	<0.016	<0.018	<0.019	<0.018	<0.018	<0.016	<0.017	<0.017
Aroclor 1260	mg/kg	0.1	1	<0.012	<0.012	<0.013	<0.012	<0.011	<0.012	<0.013	<0.013	<0.012	<0.011	<0.012	<0.012
Aroclor 1268	mg/kg	0.1	1	<0.011	<0.011	<0.012	<0.010	<0.010	<0.011	<0.012	<0.011	<0.011	<0.010	<0.011	<0.011
Aroclor 1262	mg/kg	0.1	1	<0.011	<0.012	<0.012	<0.011	<0.011	<0.012	<0.013	<0.012	<0.012	<0.011	<0.012	<0.011

<b>Legend:</b>
Hit
Exceeds Unrestricted SCO
Exceeds Restricted Residential SCO

< - Not detected above method detection limit  
(0.00046) - Method Detection Limit  
J - Estimated value  
Results are reported in milligram per kilogram (mg/kg)

Table 4  
 Total Metals in Soil  
 OER Project # 15EHAN008M  
 550 West 29th Street, New York, NY

Client Sample ID:		NY SCO - Unrestricted Use (6 NYCRR 375-6 12/06)	NY SCO - Restricted Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06)	SB-1 (0'-2')	SB-1 (15'-17')	SB-2 (0'-2')	SB-2 (5'-7')	SB-3 (0'-2')	SB-3 (15'-17')	SB-4 (0'-2')	SB-4 (15'-17')	SB-5 (0'-2')	SB-5 (15'-17')	SB-6 (0'-2')	SB-6 (10'-12')
Lab Sample ID:				JB72780-8	JB72780-9	JB72780-3	JB72780-4	JB72780-12	JB72780-13	JB72780-14	JB72780-15	JB72780-1	JB72780-2	JB72780-10	JB72780-11
Date Sampled:				7/28/2014	7/28/2014	7/29/2014	7/29/2014	7/28/2014	7/28/2014	7/28/2014	7/28/2014	7/29/2014	7/29/2014	7/28/2014	7/28/2014
Matrix:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Aluminum	mg/kg	-	-	10600	8040	8790	6790	2860	8460	5720	6600	4740	3580	5450	6160
Antimony	mg/kg	-	-	10.1	<2.0	<2.3	<2.0	34.8	<2.4	5.6	<2.1	<2.2	<2.0	<2.1	<2.0
Arsenic	mg/kg	13	16	674	343	10.3	2.8	31	230	152	41.1	5.1	214	398	535
Barium	mg/kg	350	400	194	52.5	184	31.3	91.7	42.2	209	950	153	35.3	206	41.2
Beryllium	mg/kg	7.2	72	0.88	0.56	0.94	0.71	0.33	0.74	0.55	0.55	0.5	0.39	0.33	0.34
Cadmium	mg/kg	2.5	4.3	0.79	<0.49	<0.57	<0.50	0.97	0.74	3.8	0.9	0.67	<0.50	0.53	0.72
Calcium	mg/kg	-	-	30600	2640	44400	1240	14300	1050	2420	2260	8070	2340	15900	1740
Chromium	mg/kg	-	-	31	19.3	11.3	14.4	40.7	273	24.4	19.6	19.1	13.4	73.8	40
Cobalt	mg/kg	-	-	9.3	5.9	<5.7	5.8	<4.9	<5.9	<5.4	<5.2	<5.4	<5.0	<5.2	<5.0
Copper	mg/kg	50	270	259	23.6	21.7	11.6	163	13	464	178	150	10.5	1330	1860
Iron	mg/kg	-	-	18900	9920	9530	12400	9950	11900	41000	9230	13900	7020	6630	12300
Lead	mg/kg	63	400	1050	17.5	134	5.8	726	13.2	1190	924	476	6.1	137	103
Magnesium	mg/kg	-	-	4690	2470	19000	4060	1550	2270	1780	2230	1840	1620	3900	2540
Manganese	mg/kg	1600	2000	558	285	773	158	143	112	76.1	162	295	224	202	95
Mercury	mg/kg	0.18	0.81	3.7	<0.036	0.16	<0.038	0.34	<0.039	0.97	0.22	0.5	<0.037	0.082	<0.037
Nickel	mg/kg	30	310	23.3	15.1	12.7	16.3	10.8	11.8	13.4	15.2	18.5	8.2	10.7	19.9
Potassium	mg/kg	-	-	1840	1450	2830	1370	<990	1750	<1100	1060	<1100	1080	1450	1150
Selenium	mg/kg	3.9	180	4.2	<2.0	<2.3	<2.0	<2.0	<2.4	<2.1	<2.2	<2.0	<2.1	<2.0	<2.0
Silver	mg/kg	2	180	<0.55	<0.49	1	<0.50	1.8	<0.59	<0.54	3.9	0.54	<0.50	0.88	<0.50
Sodium	mg/kg	-	-	<1100	<980	1640	<1000	<990	<1200	<1100	<1000	<1100	1040	<1000	<1000
Thallium	mg/kg	-	-	<1.1	<0.98	<1.1	<1.0	<0.99	<1.2	<1.1	<1.0	<1.1	<1.0	<1.0	<1.0
Vanadium	mg/kg	-	-	40.1	23.5	36.4	22.2	14.9	21.3	22.9	21.6	25.1	14.8	17.8	15.2
Zinc	mg/kg	109	10000	371	23	71.2	27.9	222	1190	2010	845	328	17.7	74.5	169

<b>Legend:</b>
Hit
Exceeds Unrestricted SCO
Exceeds Restricted Residential SCO

< - Not detected above method detection limit  
 (0.00046) - Method Detection Limit  
 Results are reported in milligram per kilogram(mg/kg)

Table 5  
 Volatile Organic Compounds in Groundwater  
 OER Project # 15EHAN008M  
 550 West 29th Street, New York, NY

Client Sample ID:		NY TOGS Class GA GW Standards (NYSDEC 6/2004)1	GW-1	GW-2	GW-3
Lab Sample ID:			JB72780-17	JB72780-5	JB72780-16
Date Sampled:			7/28/2014	7/29/2014	7/28/2014
Matrix:			Ground Water	Ground Water	Ground Water
Acetone	ug/l	-	<2.7	<2.7	<2.7
Benzene	ug/l	1	0.25 J	1.2	0.31 J
Bromochloromethane	ug/l	5	<0.49	<0.49	<0.49
Bromodichloromethane	ug/l	-	<0.19	<0.19	<0.19
Bromoform	ug/l	-	<0.31	<0.31	<0.31
Bromomethane	ug/l	5	<0.39	<0.39	<0.39
2-Butanone (MEK)	ug/l	-	<2.3	<2.3	<2.3
Carbon disulfide	ug/l	60	<0.17	<0.17	<0.17
Carbon tetrachloride	ug/l	5	<0.22	<0.22	<0.22
Chlorobenzene	ug/l	5	<0.19	<0.19	<0.19
Chloroethane	ug/l	5	<0.65	<0.65	<0.65
Chloroform	ug/l	7	<0.20	<0.20	1.6
Chloromethane	ug/l	5	<0.24	<0.24	<0.24
Cyclohexane	ug/l	-	<0.23	0.75 J	<0.23
1,2-Dibromo-3-chloropropane	ug/l	0.04	<1.2	<1.2	<1.2
Dibromochloromethane	ug/l	-	<0.22	<0.22	<0.22
1,2-Dibromoethane	ug/l	0.0006	<0.21	<0.21	<0.21
1,2-Dichlorobenzene	ug/l	3	<0.16	<0.16	<0.16
1,3-Dichlorobenzene	ug/l	3	<0.22	<0.22	<0.22
1,4-Dichlorobenzene	ug/l	3	<0.24	<0.24	<0.24
Dichlorodifluoromethane	ug/l	5	<0.31	<0.31	<0.31
1,1-Dichloroethane	ug/l	5	0.75 J	1.5	3
1,2-Dichloroethane	ug/l	0.6	<0.30	<0.30	<0.30
1,1-Dichloroethene	ug/l	5	<0.50	3	7.8
cis-1,2-Dichloroethene	ug/l	5	<0.33	1.9	2.6
trans-1,2-Dichloroethene	ug/l	5	<0.51	0.71 J	<0.51
1,2-Dichloropropane	ug/l	1	<0.34	<0.34	<0.34
cis-1,3-Dichloropropene	ug/l	-	<0.18	<0.18	<0.18
trans-1,3-Dichloropropene	ug/l	-	<0.32	<0.32	<0.32
1,4-Dioxane	ug/l	-	<39	<39	<39
Ethylbenzene	ug/l	5	<0.31	<0.31	<0.31
Freon 113	ug/l	5	<0.50	<0.50	<0.50
2-Hexanone	ug/l	-	<2.3	<2.3	<2.3
Isopropylbenzene	ug/l	5	<0.22	<0.22	<0.22
Methyl Acetate	ug/l	-	<1.4	<1.4	<1.4
Methylcyclohexane	ug/l	-	<0.22	<0.22	<0.22
Methyl Tert Butyl Ether	ug/l	10	7.6	36	16
4-Methyl-2-pentanone(MIBK)	ug/l	-	<1.2	<1.2	<1.2
Methylene chloride	ug/l	5	<0.89	<0.89	<0.89
Styrene	ug/l	5	<0.19	<0.19	<0.19
1,1,2,2-Tetrachloroethane	ug/l	5	<0.39	<0.39	<0.39
Tetrachloroethene	ug/l	5	<0.35	<0.35	<0.35
Toluene	ug/l	5	<0.22	<0.22	0.33 J
1,2,3-Trichlorobenzene	ug/l	5	<0.27	<0.27	<0.27
1,2,4-Trichlorobenzene	ug/l	5	<0.22	<0.22	<0.22
1,1,1-Trichloroethane	ug/l	5	<0.32	<0.32	<0.32
1,1,2-Trichloroethane	ug/l	1	<0.36	<0.36	<0.36
Trichloroethene	ug/l	5	<0.25	<0.25	<0.25
Trichlorofluoromethane	ug/l	5	<0.47	<0.47	<0.47
Vinyl chloride	ug/l	2	1.6	2.3	0.71 J
m,p-Xylene	ug/l	-	<0.35	<0.35	0.84 J
o-Xylene	ug/l	5	<0.20	<0.20	0.56 J
Xylene (total)	ug/l	5	<0.20	<0.20	1.4

**Legend:**

Hit

Exceedance of TOGS

J - Estimated value

< - Not detected above method detection limit

(0.00046) - Method Detection Limit

Results are reported in microgram per liter(ug/l)

Table 6  
Semi-Volatile Organic Compounds in Groundwater  
OER Project # 15EHAN008M  
550 West 29th Street, New York, NY

Client Sample ID:		NY TOGS Class GA	GW-1	GW-2	GW-3
Lab Sample ID:		GW Standards	JB72780-17	JB72780-5	JB72780-16
Date Sampled:		(NYSDEC 6/2004)1	7/28/2014	7/29/2014	7/28/2014
Matrix:			Ground Water	Ground Water	Ground Water
2-Chlorophenol	ug/l	-	<1.3	<2.2	<1.3
4-Chloro-3-methyl phenol	ug/l	-	<1.3	<2.3	<1.3
2,4-Dichlorophenol	ug/l	1	<1.6	<2.9	<1.6
2,4-Dimethylphenol	ug/l	1	<1.8	<3.3	<1.8
2,4-Dinitrophenol	ug/l	1	<6.5	<12	<6.5
4,6-Dinitro-o-cresol	ug/l	-	<1.3	<2.4	<1.3
2-Methylphenol	ug/l	-	<1.3	<2.3	<1.3
3&4-Methylphenol	ug/l	-	<1.1	<1.9	<1.1
2-Nitrophenol	ug/l	-	<1.9	<3.3	<1.9
4-Nitrophenol	ug/l	-	<0.91	<1.6	<0.91
Pentachlorophenol	ug/l	1	<1.4	<2.4	<1.4
Phenol	ug/l	1	<0.55	<0.98	0.99 J
2,3,4,6-Tetrachlorophenol	ug/l	-	<1.4	<2.5	<1.4
2,4,5-Trichlorophenol	ug/l	-	<1.7	<3.1	<1.7
2,4,6-Trichlorophenol	ug/l	-	<1.5	<2.7	<1.5
Acenaphthene	ug/l	-	<0.30	<0.53	<0.30
Acenaphthylene	ug/l	-	<0.20	<0.36	<0.20
Acetophenone	ug/l	-	<0.36	<0.65	<0.36
Anthracene	ug/l	-	<0.19	<0.34	<0.19
Atrazine	ug/l	7.5	<0.42	<0.76	<0.42
Benzaldehyde	ug/l	-	<0.67	<1.2	<0.67
Benzo(a)anthracene	ug/l	-	<0.22	<0.39	<0.22
Benzo(a)pyrene	ug/l	-	<0.24	<0.43	<0.24
Benzo(b)fluoranthene	ug/l	-	<0.22	<0.40	<0.22
Benzo(g,h,i)perylene	ug/l	-	<0.31	<0.55	<0.31
Benzo(k)fluoranthene	ug/l	-	<0.22	<0.39	<0.22
4-Bromophenyl phenyl ether	ug/l	-	<0.25	<0.44	<0.25
Butyl benzyl phthalate	ug/l	-	<0.22	<0.40	<0.22
1,1'-Biphenyl	ug/l	5	<0.27	<0.49	<0.27
2-Chloronaphthalene	ug/l	-	<0.34	<0.61	<0.34
4-Chloroaniline	ug/l	5	<0.30	<0.54	<0.30
Carbazole	ug/l	-	<0.17	<0.30	<0.17
Caprolactam	ug/l	-	<0.41	<0.73	<0.41
Chrysene	ug/l	-	<0.16	<0.29	<0.16
bis(2-Chloroethoxy)methane	ug/l	5	<0.42	<0.75	<0.42
bis(2-Chloroethyl)ether	ug/l	1	<0.43	<0.77	<0.43
bis(2-Chloroisopropyl)ether	ug/l	5	<0.41	<0.72	<0.41
4-Chlorophenyl phenyl ether	ug/l	-	<0.38	<0.68	<0.38
2,4-Dinitrotoluene	ug/l	5	<0.32	<0.57	<0.32
2,6-Dinitrotoluene	ug/l	5	<0.26	<0.46	<0.26
3,3'-Dichlorobenzidine	ug/l	5	<0.56	<1.0	<0.56
Dibenzo(a,h)anthracene	ug/l	-	<0.28	<0.50	<0.28
Dibenzofuran	ug/l	-	<0.23	<0.41	<0.23
Di-n-butyl phthalate	ug/l	50	5.3	<1.0	3
Di-n-octyl phthalate	ug/l	-	<0.25	<0.45	<0.25
Diethyl phthalate	ug/l	-	<0.23	<0.42	<0.23
Dimethyl phthalate	ug/l	-	<0.26	<0.47	<0.26
bis(2-Ethylhexyl)phthalate	ug/l	5	1.6 JB	<0.99	2.0 B
Fluoranthene	ug/l	-	<0.16	<0.29	<0.16
Fluorene	ug/l	-	<0.27	<0.49	<0.27
Hexachlorobenzene	ug/l	0.04	<0.46	<0.82	<0.46
Hexachlorobutadiene	ug/l	0.5	<0.39	<0.69	<0.39
Hexachlorocyclopentadiene	ug/l	5	<0.48	<0.86	<0.48
Hexachloroethane	ug/l	5	<0.29	<0.51	<0.29
Indeno(1,2,3-cd)pyrene	ug/l	-	<0.40	<0.72	<0.40
Isophorone	ug/l	-	<0.34	<0.61	<0.34
2-Methylnaphthalene	ug/l	-	<0.29	<0.52	<0.29
2-Nitroaniline	ug/l	5	<0.32	<0.56	<0.32
3-Nitroaniline	ug/l	5	<0.26	<0.47	<0.26
4-Nitroaniline	ug/l	5	<0.30	<0.54	<0.30
Naphthalene	ug/l	-	<0.27	<0.47	<0.27
Nitrobenzene	ug/l	0.4	<0.52	<0.93	<0.52
N-Nitroso-di-n-propylamine	ug/l	-	<0.38	<0.67	<0.38
N-Nitrosodiphenylamine	ug/l	-	<0.21	<0.37	<0.21
Phenanthrene	ug/l	-	<0.19	<0.33	<0.19
Pyrene	ug/l	-	<0.19	<0.34	<0.19
1,2,4,5-Tetrachlorobenzene	ug/l	5	<0.44	<0.79	<0.44

<b>Legend:</b>
Hit
Exceedance of TOGS

J - Estimated value  
< - Not detected above method detection limit  
(0.00046) - Method Detection Limit  
Results are reported in microgram per liter(ug/l)

Table 7  
Pesticides and Polychlorinated Biphenyls in Groundwater  
OER Project # 15EHAN008M  
550 West 29th Street, New York, NY

Client Sample ID:		NY TOGS Class GA GW Standards (NYSDEC 6/2004) <sup>1</sup>	GW-1	GW-2	GW-3
Lab Sample ID:			JB72780-17	JB72780-5	JB72780-16
Date Sampled:			7/28/2014	7/29/2014	7/28/2014
Matrix:			Ground Water	Ground Water	Ground Water
<b>Pesticides</b>					
Aldrin	ug/l	ND	<0.0079	<0.0079	<0.0079
alpha-BHC	ug/l	0.01	<0.0023	<0.0023	<0.0023
beta-BHC	ug/l	0.04	<0.0023	<0.0023	<0.0023
delta-BHC	ug/l	0.04	<0.0019	<0.0019	<0.0019
gamma-BHC (Lindane)	ug/l	0.05	<0.0017	<0.0017	<0.0017
alpha-Chlordane	ug/l	-	<0.0029	<0.0029	<0.0029
gamma-Chlordane	ug/l	-	<0.0021	<0.0021	<0.0021
Dieldrin	ug/l	0.004	<0.0016	<0.0016	<0.0016
4,4'-DDD	ug/l	0.3	<0.0025	<0.0025	<0.0025
4,4'-DDE	ug/l	0.2	<0.0017	<0.0017	0.028
4,4'-DDT	ug/l	0.2	<0.0032	<0.0032	<0.0032
Endrin	ug/l	-	<0.0020	<0.0020	<0.0020
Endosulfan sulfate	ug/l	-	<0.0019	<0.0019	<0.0019
Endrin aldehyde	ug/l	5	<0.0037	<0.0037	<0.0037
Endrin ketone	ug/l	5	<0.0047	<0.0047	<0.0047
Endosulfan-I	ug/l	-	<0.0028	<0.0028	<0.0028
Endosulfan-II	ug/l	-	<0.0020	<0.0020	<0.0020
Heptachlor	ug/l	0.04	<0.0022	<0.0022	<0.0022
Heptachlor epoxide	ug/l	0.03	<0.0026	<0.0026	<0.0026
Methoxychlor	ug/l	35	<0.0041	<0.0041	<0.0041
Toxaphene	ug/l	0.06	<0.15	<0.15	<0.15
<b>Polychlorinated Biphenyls</b>					
Aroclor 1016	ug/l	0.09	<0.13	<0.13	<0.13
Aroclor 1221	ug/l	0.09	<0.27	<0.27	<0.27
Aroclor 1232	ug/l	0.09	<0.39	<0.39	<0.39
Aroclor 1242	ug/l	0.09	<0.086	<0.086	<0.086
Aroclor 1248	ug/l	0.09	<0.15	<0.15	<0.15
Aroclor 1254	ug/l	0.09	<0.14	<0.14	<0.14
Aroclor 1260	ug/l	0.09	<0.21	<0.21	<0.21
Aroclor 1268	ug/l	0.09	<0.13	<0.13	<0.13
Aroclor 1262	ug/l	0.09	<0.060	<0.060	<0.060

<b>Legend:</b>
Hit
Exceedance of TOGS

J - Estimated value  
 < - Not detected above method detection limit  
 (0.00046) - Method Detection Limit  
 Results are reported in microgram per liter(ug/l)

Table 8  
 Total and Dissolved Metals in Groundwater  
 OER Project # 15EHAN008M  
 550 West 29th Street, New York, NY

Client Sample ID:		NY TOGS Class GA GW Standards (NYSDEC 6/2004) <sup>1</sup>	GW-1	GW-1	GW-2	GW-2	GW-3	GW-3
Lab Sample ID:			JB72780-17	JB72780-17F	JB72780-5	JB72780-5F	JB72780-16	JB72780-16F
Date Sampled:			7/28/2014	7/28/2014	7/29/2014	7/29/2014	7/28/2014	7/28/2014
Matrix:			Ground Water	Groundwater Filtered	Ground Water	Groundwater Filtered	Ground Water	Groundwater Filtered
Aluminum	ug/l	-	553	<200	583	<200	82300 <sup>a</sup>	<200
Antimony	ug/l	3	<6.0	<6.0	<6.0	<6.0	<30 <sup>a</sup>	<6.0
Arsenic	ug/l	25	13900	6290	3460	2190	20600 <sup>a</sup>	5730
Barium	ug/l	1000	220	<200	<200	<200	1270 <sup>a</sup>	<200
Beryllium	ug/l	-	<1.0	<1.0	<1.0	<1.0	7.5 <sup>a</sup>	<1.0
Cadmium	ug/l	5	7.1 <sup>b</sup>	13.6	7	4.3	42.5 <sup>a</sup>	11.1
Calcium	ug/l	-	228000	253000	276000	310000	337000 <sup>a</sup>	260000
Chromium	ug/l	50	44.8	<10	<10	<10	243 <sup>a</sup>	<10
Cobalt	ug/l	-	<50	<50	<50	<50	<250 <sup>a</sup>	<50
Copper	ug/l	200	45.2	<10	<10	<10	562 <sup>a</sup>	<10
Iron	ug/l	300	57400	36400	10500	1050	100000 <sup>a</sup>	<100
Lead	ug/l	25	13.6 <sup>b</sup>	<6.0 <sup>b</sup>	<15 <sup>b</sup>	<15 <sup>b</sup>	765 <sup>a</sup>	<15 <sup>b</sup>
Magnesium	ug/l	-	38800	42800	78800	89800	79200 <sup>a</sup>	54000
Manganese	ug/l	300	2450	2640	16700	20900	10200 <sup>a</sup>	2480
Mercury	ug/l	0.7	<0.20	<0.20	<0.20	<0.20	2.5 <sup>a</sup>	<0.20
Nickel	ug/l	100	15.2	14.1	<10	<10	206 <sup>a</sup>	11.3
Potassium	ug/l	-	39400	42700	46200	52500	61000 <sup>a</sup>	47000
Selenium	ug/l	10	<10	<10	<50 <sup>b</sup>	<50 <sup>b</sup>	52.5 <sup>a</sup>	<10
Silver	ug/l	50	<10	<10	<10	<10	<50 <sup>a</sup>	<10
Sodium	ug/l	20000	220000	240000	362000	397000	346000 <sup>a</sup>	340000
Thallium	ug/l	-	<4.0 <sup>b</sup>	<4.0 <sup>b</sup>	<10 <sup>b</sup>	<10 <sup>b</sup>	<10 <sup>a</sup>	<10 <sup>b</sup>
Vanadium	ug/l	-	<50	<50	<50	<50	<250 <sup>a</sup>	<50
Zinc	ug/l	-	287	151	37.8	<20	681 <sup>a</sup>	<20

<b>Legend:</b>
Hit
<b>Exceedance of TOGS</b>
<sup>a</sup> Elevated sample detection limit due to difficult sample matrix.
<sup>b</sup> Elevated detection limit due to dilution required for high interfering element.

J - Estimated value  
 < - Not detected above method detection limit  
 (0.00046) - Method Detection Limit

Results are reported in microgram per liter(ug/l)

Table 9  
 Volatile Organic Compounds in Soil Vapor  
 OER Project # 15EHAN008M  
 550 West 29th Street, New York, NY

Client Sample ID:		NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion (Ambient Air)	IA-1	SG-1	SG-2	SG-3	SG-4
Lab Sample ID:			JB72970-5	JB72970-1	JB72970-2	JB72970-3	JB72970-4
Date Sampled:			7/30/2014	7/30/2014	7/30/2014	7/30/2014	7/30/2014
Matrix:			Indoor Air Comp.	Soil Vapor Comp.	Soil Vapor Comp.	Soil Vapor Comp.	Soil Vapor Comp.
<b>GC/MS Volatiles (TO-15) - ug/m3</b>							
Acetone	ug/m <sup>3</sup>	-	44.9	64.6	26.6	26.8	201
1,3-Butadiene	ug/m <sup>3</sup>	-	<0.075	<0.075	<0.075	<0.075	<0.075
Benzene	ug/m <sup>3</sup>	-	0.67	16	0.67	2.2	7.7
Bromodichloromethane	ug/m <sup>3</sup>	-	<0.19	<0.19	<0.19	4.8	<0.19
Bromoform	ug/m <sup>3</sup>	-	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	ug/m <sup>3</sup>	-	<0.13	<0.13	<0.13	<0.13	<0.13
Bromoethene	ug/m <sup>3</sup>	-	<0.15	<0.15	<0.15	<0.15	<0.15
Benzyl Chloride	ug/m <sup>3</sup>	-	<0.24	<0.24	<0.24	<0.24	<0.24
Carbon disulfide	ug/m <sup>3</sup>	-	<0.097	32.1	0.56 J	1.6	12
Chlorobenzene	ug/m <sup>3</sup>	-	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	ug/m <sup>3</sup>	-	<0.11	<0.11	<0.11	<0.11	<0.11
Chloroform	ug/m <sup>3</sup>	-	<0.12	12	0.83 J	96.7	14
Chloromethane	ug/m <sup>3</sup>	-	1.1	2.3	<0.16	0.54	<0.16
3-Chloropropene	ug/m <sup>3</sup>	-	<0.12	<0.12	<0.12	<0.12	<0.12
2-Chlorotoluene	ug/m <sup>3</sup>	-	<0.17	13	20	<0.17	24
Carbon tetrachloride	ug/m <sup>3</sup>	-	0.62 J	1.1 J	<0.16	<0.16	<0.16
Cyclohexane	ug/m <sup>3</sup>	-	1.7	27	2.2	1.1	3
1,1-Dichloroethane	ug/m <sup>3</sup>	-	<0.11	<0.11	<0.11	1.5	3.7
1,1-Dichloroethylene	ug/m <sup>3</sup>	-	<0.21	<0.21	<0.21	<0.21	0.87
1,2-Dibromoethane	ug/m <sup>3</sup>	-	<0.21	<0.21	<0.21	<0.21	<0.21
1,2-Dichloroethane	ug/m <sup>3</sup>	-	<0.093	<0.093	<0.093	<0.093	<0.093
1,2-Dichloropropane	ug/m <sup>3</sup>	-	<0.13	<0.13	<0.13	<0.13	<0.13
1,4-Dioxane	ug/m <sup>3</sup>	-	<0.43	<0.43	<0.43	<0.43	<0.43
Dichlorodifluoromethane	ug/m <sup>3</sup>	-	2.7	3.8	2.7	3.3	3.5
Dibromochloromethane	ug/m <sup>3</sup>	-	<0.32	<0.32	<0.32	<0.32	<0.32
trans-1,2-Dichloroethylene	ug/m <sup>3</sup>	-	<0.28	<0.28	<0.28	<0.28	<0.28
cis-1,2-Dichloroethylene	ug/m <sup>3</sup>	-	<0.091	<0.091	<0.091	<0.091	0.40 J
cis-1,3-Dichloropropene	ug/m <sup>3</sup>	-	<0.11	<0.11	<0.11	<0.11	<0.11
m-Dichlorobenzene	ug/m <sup>3</sup>	-	<0.20	2.9	2.5	1.6	3.2
o-Dichlorobenzene	ug/m <sup>3</sup>	-	<0.17	<0.17	<0.17	<0.17	<0.17
p-Dichlorobenzene	ug/m <sup>3</sup>	-	<0.22	1.3	1.8	1.1 J	2.6
trans-1,3-Dichloropropene	ug/m <sup>3</sup>	-	<0.11	<0.11	<0.11	<0.11	<0.11
Ethanol	ug/m <sup>3</sup>	-	43.1	118 E	103 E	168 E	279 E
Ethylbenzene	ug/m <sup>3</sup>	-	1.2	4.3	2.9	2.3	6.1
Ethyl Acetate	ug/m <sup>3</sup>	-	6.5	<0.22	8.6	9.7	8.3
4-Ethyltoluene	ug/m <sup>3</sup>	-	<0.16	1.4	1.1	0.84 J	2.4
Freon 113	ug/m <sup>3</sup>	-	<0.31	<0.31	<0.31	<0.31	0.84 J
Freon 114	ug/m <sup>3</sup>	-	<0.22	<0.22	<0.22	<0.22	<0.22
Heptane	ug/m <sup>3</sup>	-	0.61 J	55.3	0.86	1.2	3.5
Hexachlorobutadiene	ug/m <sup>3</sup>	-	<0.54	<0.54	<0.54	<0.54	<0.54
Hexane	ug/m <sup>3</sup>	-	0.81	101	<0.15	2.1	2.8
2-Hexanone	ug/m <sup>3</sup>	-	<0.26	<0.26	<0.26	<0.26	0.82
Isopropyl Alcohol	ug/m <sup>3</sup>	-	2.1	9.8	8.4	14	17
Methylene chloride	ug/m <sup>3</sup>	60	1.5	2.7	1.6	3.8	3.8
Methyl ethyl ketone	ug/m <sup>3</sup>	-	2	9.1	4.7	6.8	19
Methyl Isobutyl Ketone	ug/m <sup>3</sup>	-	0.40 J	<0.17	0.45 J	0.98	2.3
Methyl Tert Butyl Ether	ug/m <sup>3</sup>	-	<0.15	<0.15	<0.15	0.72	3.1
Methylmethacrylate	ug/m <sup>3</sup>	-	<0.15	<0.15	<0.15	<0.15	<0.15
Propylene	ug/m <sup>3</sup>	-	1.5	34.5	<0.082	<0.082	5
Styrene	ug/m <sup>3</sup>	-	<0.14	1.3	1.4	0.89	2
1,1,1-Trichloroethane	ug/m <sup>3</sup>	-	<0.13	15	<0.13	1.7	31
1,1,2,2-Tetrachloroethane	ug/m <sup>3</sup>	-	<0.27	<0.27	<0.27	<0.27	<0.27
1,1,2-Trichloroethane	ug/m <sup>3</sup>	-	<0.19	<0.19	<0.19	<0.19	<0.19
1,2,4-Trichlorobenzene	ug/m <sup>3</sup>	-	<0.45	<0.45	<0.45	<0.45	<0.45
1,2,4-Trimethylbenzene	ug/m <sup>3</sup>	-	1.5	4.9	4.5	3.7	7.9
1,3,5-Trimethylbenzene	ug/m <sup>3</sup>	-	0.54 J	1.4	1.2	0.98	2.4
2,2,4-Trimethylpentane	ug/m <sup>3</sup>	-	0.79 J	<0.12	0.43 J	0.84 J	9.8
Tertiary Butyl Alcohol	ug/m <sup>3</sup>	-	<0.13	1.9	1	1.4	1.2
Tetrachloroethylene	ug/m <sup>3</sup>	30	0.35	8.1	3.1	6.6	20
Tetrahydrofuran	ug/m <sup>3</sup>	-	<0.14	8	8	12	6.5
Toluene	ug/m <sup>3</sup>	-	4.1	34	9.4	10	32
Trichloroethylene	ug/m <sup>3</sup>	5	<0.16	2.7	1.3	1.5	2.7
Trichlorofluoromethane	ug/m <sup>3</sup>	-	1.5	4.4	1.5	2.5	2.9
Vinyl chloride	ug/m <sup>3</sup>	-	<0.079	<0.079	<0.079	<0.079	<0.079
Vinyl Acetate	ug/m <sup>3</sup>	-	<0.33	<0.33	<0.33	<0.33	<0.33
m,p-Xylene	ug/m <sup>3</sup>	-	5.6	17	12	8.7	22
o-Xylene	ug/m <sup>3</sup>	-	2	5.6	4	3.3	7.8
Xylenes (total)	ug/m <sup>3</sup>	-	7.4	22	16	12	30

<b>Legend:</b>
Hit
<b>Exceedance of NYSDOH Vapor Intrusion Guidance</b>

J - Estimated value  
 < - Not detected above method detection limit  
 (0.00046) - Method Detection Limit  
 Results are reported in micrograms per cubic meter (ug/m<sup>3</sup>)

# APPENDIX A

## Previous Environmental Reports



# PHASE I ENVIRONMENTAL SITE ASSESSMENT

546, 548 & 550 West 29<sup>th</sup> Street  
New York, New York 10001



Prepared for:  
**Doral Bank USA**  
New York, New York

April 8, 2014  
IVI Project No.: PC40309320



**IVI Assessment Services, Inc.**

---

THIS REPORT IS THE PROPERTY OF IVI AND DORAL BANK USA AND WAS PREPARED FOR A SPECIFIC USE, PURPOSE, AND RELIANCE AS DEFINED WITHIN THE AGREEMENT BETWEEN IVI AND DORAL BANK USA AND WITHIN THIS REPORT. THERE SHALL BE NO THIRD PARTY BENEFICIARIES, INTENDED OR IMPLIED, UNLESS SPECIFICALLY IDENTIFIED HEREIN.



PROPERTY CONDITION & ENVIRONMENTAL  
DUE-DILIGENCE

IVI ASSESSMENT SERVICES, INC.

55 West Red Oak Lane  
White Plains, New York 10604  
(914) 694-9600 (tel)  
(914) 694-1335 (fax)  
www.ivi-intl.com

March 31, 2014

Mr. Frederick A. McDonald, Jr., MRICS  
Vice President - Property Valuation  
Doral Bank USA  
623 5th Avenue 21st Floor  
New York, New York 10022  
(646) 313-4877 (tel)  
fmcdonald@doralbankusa.com

Re: Phase I Environmental Site Assessment  
546, 548 & 550 West 29<sup>th</sup> Street  
New York, New York 10001  
IVI Project No.: PC40309320

Dear Mr. McDonald, Jr., MRICS:

IVI Assessment Services, Inc. ("IVI") is pleased to submit this copy of our Phase I Environmental Site Assessment on the above-referenced property. This report outlines the findings of IVI's site reconnaissance, historical land use research, review of governmental records, interviews, and our Pre-Survey Questionnaire.

I declare that, to the best of my professional knowledge and belief, I meet the definition of *environmental professional* as defined in § 312.10 of 40 CFR 312 and I have the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the *subject property*. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Please contact the undersigned at **914.694.9600 (x-1919)** or by email at [richard.stytzer@ivi-intl.com](mailto:richard.stytzer@ivi-intl.com) should you have any questions.

Sincerely,

IVI Assessment Services, Inc.

Richard Stytzer  
Environmental Professional

NEW YORK • BOSTON • ATLANTA • DALLAS • LOS ANGELES  
CHICAGO • AUSTIN • DENVER • MIAMI • WASHINGTON, D.C.  
LONDON • PARIS • STOCKHOLM

**TABLE OF CONTENTS**

Cover Sheet  
Transmittal Letter

**Page**

**1.0 EXECUTIVE SUMMARY ..... 1**

**2.0 INTRODUCTION..... 5**

**3.0 SALIENT ASSIGNMENT INFORMATION ..... 10**

**4.0 SITE DESCRIPTION..... 11**

**5.0 HISTORICAL USE ..... 15**

**6.0 REGULATORY REVIEW ..... 24**

**7.0 SITE RECONNAISSANCE..... 44**

**8.0 INTERVIEWS..... 49**

**9.0 VAPOR ENCROACHMENT SCREENING ..... 53**

**10.0 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS ..... 55**

**11.0 LIMITING CONDITIONS..... 59**

**APPENDICES**

Photographs..... A

Pre-Survey Questionnaire..... B

Maps and/or Historical Aerial Photographs..... C

Computerized Environmental Report..... D

Correspondence and Supporting Documents..... E

City Directory Abstracts ..... F

Previous Reports ..... G



This report documents IVI's findings from our Phase I Environmental Site Assessment on the property located at 546, 548 and 550 West 29<sup>th</sup> Street, New York, New York (the "Subject"). The property, which is situated in an urban area characterized by light industrial and residential development, consists of a 0.17-acre parcel improved with three commercial buildings on three Lots. It is our understanding that the Subject buildings will be demolished and the site redeveloped with a condominium hi-rise building. The 546 West 29<sup>th</sup> Street Lot consists of a one-story art gallery building constructed between 1899 and 1911. Prior to the construction of this improvement, this Lot was vacant land and in 1890, this Lot was improved with a small garage and a two-story shed. Previous uses of the current 546 West 29<sup>th</sup> Street building include a garage, coppersmith shop, motor freight station, and a taxi repair facility. The 548 West 29<sup>th</sup> Street Lot consists of an approximately 87-year-old (built circa 1927) one-story, vacant, former auto repair facility. This lot was improved with a small mixed use building since at least 1890. Previous uses of the current 548 West 29<sup>th</sup> Street building include a express depot, motor freight station, and an auto repair facility. The 550 West 29<sup>th</sup> Street Lot consists of an approximately 124-year-old (built circa 1890) three-story, vacant, former office building. Previous uses of the current 550 West 29<sup>th</sup> Street building include a part of an adjacent piano factory, waste paper storing and baling facility, HVAC service, various retail stores and residential.

The purpose of this Phase I Environmental Site Assessment was to assess existing site conditions and render an opinion as to the identified or potential presence of recognized environmental conditions in connection with the property within the scope and limitations of ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-13 and the limitations identified herein. Exceptions to or deletions from the scope of work are described in Section 2.0.

This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Subject except for the following:

**New York City Little "E" Designation**

Based on our review of the New York City Department of Buildings (NYCDOB) Buildings Information System (BIS) and New York City Zoning Maps, an "E" Designation has been declared on the Subject. An "E" Designation is a New York City zoning map designation that indicates the presence of an environmental requirement pertaining to, in some cases, potential Hazardous Materials Contamination. E-Designations are established on the Zoning Map by the Department of City Planning (DCP) and City Council as a part of a zoning change/action. More specifically, the Subject's *E-142* designation is related to the Highline/West Chelsea Rezoning Project, of which the Subject is a part, and it has been placed on the Subject property effective July 23, 2005. The specific description of this designation includes "Hazardous Materials Phase I and Phase II Testing Protocol," "Window Wall Attenuation & Alternate Ventilation," "Air Quality -#2 Fuel Oil or #4 Fuel Oil or Natural Gas or HVAC."

Of importance, an “E” Designation does not indicate a contamination condition. It is solely applied as a precautionary measure and indicates that these designated sites *may* potentially have levels of contamination. This “E” Designation ensures that sampling and remediation take place where hazardous material contamination may exist. Before any new construction or change in use can take place on the property, the environmental requirements of the “E” Designation need to be satisfied. It requires that testing and sampling protocol and remediation (where appropriate) be conducted to the satisfaction of the New York City Department of Environmental Protection (NYCDEP) prior to the issuance of any permit by the New York City Department of Buildings (NYCDOB). These requirements for the “E” Designation also include a mandatory construction-related health and safety plan, which must also be approved by the NYCDEP.

Until any new construction or change in use takes place, the Owner/Operator may continue to use the property in any legal manner, as they did before the “E” Designation, for as long as they would like. Since new construction is scheduled to take place on all three contiguous lots, IVI recommends that the environmental requirements of the “E” Designation be satisfied until a “Notice of Satisfaction” has been received.

#### **Underground Storage Tanks (USTs) and NYSDEC Spill Listings**

According to historic Sanborn maps, the Subject’s 548 West 29<sup>th</sup> Street lot formerly contained a 550-gallon buried gasoline tank at the rear section of the former garage facility in at least 1930. A Ground Penetrating Radar (GPR) survey was performed by others on June 29, 2012 in order to locate this tank. Based on the typical size of a UST, the GPR was set to run at 50 scans per foot. The GPR survey was conducted within all accessible areas of the auto body shop, excluding the small office area, and was intended to determine the presence of environmental anomalies of concern. Based on their GPR survey, no anomalies indicative of underground tanks were noted. Based on this information, the actual disposition of this tank is unknown; however, based on the GPR survey, this tank may likely have been removed in the past. Furthermore, although requested, copies of post tank closure documents, along with analytical testing results, were not provided for our review. As such, this former gasoline tank represents a REC to the Subject.

In addition, the Subject was assigned Spill No. 1201778 by the New York State Department of Environmental Conservation (NYSDEC) on May 18, 2012 when a Hydrogeologic and Forensic Report submitted by Fleming Lee Shue for Spill No. 0700587, assigned to the south-adjacent property located at 282 11<sup>th</sup> Avenue, was reviewed by the NYSDEC. The report concluded that contamination in the soil and groundwater on the northern property boundary of 282 11th Avenue was coming from an off-site source. The report also identified a gasoline UST vent pipe on the roof of the Subject property. A NYSDEC representative investigated the Subject in relation to this conclusion and found a 275-gallon waste oil AST in the auto repair garage with signs of staining adjacent to the tank. An abandoned manhole cover was also noted by the

NYSDEC, which coincided with the location of a 550-gallon gasoline UST recorded on historic Sanborn maps and with the location of the vent on the roof. Due to the poor housekeeping practices observed by the NYSDEC, the stained concrete indicating historical spills, and a possible abandoned gasoline UST, the NYSDEC required further investigation to determine whether the Subject property was the source of the contamination identified on the adjacent property.

The database further stated that the owner of the Subject property provided the NYSDEC with photo documentation proving that the manhole was for a former hydraulic piston lift and not a gasoline UST. Based on these pictures and the above, the NYSDEC no longer considered the Subject a source for the adjacent site contamination and thus, Spill No. 1201778 was granted a case closed status on June 27, 2012. Spill No. 0700587 for the adjacent property remains open with the NYSDEC.

In any event, the Subject is reportedly scheduled to be completely redeveloped with the demolition of the site structures. As part of this conversation, significant excavation activities below the existing buildings are reportedly scheduled to take place. IVI recommends that care be taken during these excavation/redevelopment activities and that any encountered USTs and/or associated contamination, if any, be removed in accordance with governmental regulations. If redevelopment activities are no longer planned, a Phase II Subsurface Investigation should be performed to determine if the former UST has negatively impacted the Subject.

### **Inactive In-Ground Hydraulic Lifts**

Two inactive in-ground hydraulic lifts were located on-site within the former auto repair building at 548 West 29th Street. According to the Limited Phase I Environmental Inspection Report for 548 West 29th Street, dated May 30, 2012, prepared by Atlantic Environmental Solutions, Inc. (AESI), two manhole covers were observed by AESI. The property owner was able to remove the cover from the western manhole at that time; however, the eastern manhole could not be inspected because it was covered with cement. The western manhole was a cylindrical pit which was empty and no staining was observed by AESI personnel. AESI concluded that the placement of the two manholes are indicative of two hydraulic lifts located in the repair garage. The report stated that the property owner indicated that a previous owner had removed the hydraulic lifts and pumps. Although requested, copies of post hydraulic lift closure documents, along with analytical testing results, were not provided for our review. As such, these former in-ground hydraulic lifts represent a REC to the Subject. In any event, the Subject is reportedly scheduled to be completely redeveloped with the demolition of the site structures. As part of this conversation, significant excavation activities below the existing buildings are reportedly scheduled to take place. IVI recommends that care be taken during these excavation/redevelopment activities and that any encountered USTs, inactive hydraulic systems and/or associated contamination, if any, be removed in accordance with governmental regulations. If redevelopment activities are no longer planned, a Phase II Subsurface Investigation should be performed to determine if the in-ground hydraulic lifts have negatively impacted the Subject.

In addition, the following items of business environmental risk were identified, which warrant mention:

**Aboveground Storage Tank (AST)**

The Subject is registered as an active Petroleum Bulk Storage (PBS) site with the NYSDEC with PBS No. 2-611575 and is listed as being served with one, in-service, 270-gallon waste oil AST. The registration states that the AST was installed in January 1992 and the expiration expires on September 19, 2016. Of note, IVI did not observe this AST during our recent site reconnaissance. According to Joe DeRosa, the Subject's Real Estate Broker from NorthMarq Capital, this former AST was formerly located at the rear of the 548 West 29<sup>th</sup> Street building. Residual evidence of spillage or leakage was observed in this area during our recent site visit on the concrete. IVI recommends that the residual evidence of spillage or leakage is clean-up and disposed of off-site according to all governmental regulations. In addition, IVI recommends the current PBS certificate be properly updated to reflect the removal of the AST.

In addition, the following items of potential environmental concern were identified, which warrant mention:

**Asbestos-Containing Material (ACM)**

Based on the age of the site improvements, the potential use of ACMs exists. No friable materials were observed in the readily available areas of the Subject. In addition, non-friable wallboard assemblies, resilient floor finish assemblies, plasters, mastics, caulking and roofing materials may contain asbestos. These suspect materials were observed to be in good condition at the time of our inspection. Furthermore, it is possible that other suspect ACM exists in inaccessible locations such as behind walls, within pipe chases, above ceilings, and beneath visible flooring. Based on the anticipated demolition activities of the Subject, there is a high potential for disturbance of the suspect ACM. Since the Subject buildings are scheduled for demolition, IVI recommends a comprehensive asbestos demolition survey be conducted to determine the quantity and location of ACMs. All identified ACMs should be properly abated prior to any demolition activities to the extent required by applicable regulations. All activities involving ACM should be conducted in accordance with governmental regulations.

**Lead-Based Paint (LBP)**

Since the Subject was constructed prior to the Consumer Product Safety Commission's 1978 ban on the sale of LBP to consumers and the use of LBP in residences, there is a potential that LBP may have been applied at the Subject. Painted surfaces observed by IVI were generally in good to poor condition with some evidence of peeling and flaking. Inasmuch as the building is scheduled for demolition activities, the potential for disturbance of the suspect LBP is high. Since the Subject buildings are scheduled for demolition, all activities involving LBP should be conducted in accordance with HUD guidelines, the USEPA's Lead-Based Paint Renovation, Repair and Painting Program Rule as well as the OSHA Lead in Construction (CFR Part 1926.62) and EPA Renovate Right regulations and RCRA guidelines.

**2.1 General**

IVI was retained by Doral Bank USA (“Client” or “User”) to prepare a Phase I Environmental Site Assessment, in conformance with ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-13 on the Subject in accordance with our Agreement dated March 26, 2014.

Doral Bank USA, its employees, agents, affiliates, successors and assigns may rely upon this Report in evaluating a request for an extension of credit (the "Mortgage Loan") to be secured by the property.

This information may also be relied upon by any actual or prospective purchaser, transferee, assignee, or servicer of the Mortgage Loan or any portion thereof, any actual or prospective investor (including agent or advisor) in any securities evidencing a beneficial interest in or backed by the Mortgage Loan, any rating agency actually or prospectively rating any such securities, any indenture, trustee, and any institutional provider(s) from time to time of any liquidity facility or credit support for such financing. In addition, this Report or reference to this Report may be included or quoted in any offering circular, private placement memorandum, registration statement, or prospectus and Consultant (IVI Assessment Services, Inc.) agrees to cooperate in answering questions by any of the above parties in connection with a securitization or transaction involving the Mortgage Loan and/or such securities. This Report has no other purpose and should not be relied upon by any other person or entity.

**2.2 Purpose and Scope****2.2.1 Purpose**

The purpose of this report is to identify Recognized Environmental Conditions in connection with the property, using the methodology recommended by ASTM International in order for a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser defenses to CERCLA liability and/or to help understand potential environmental conditions that could materially impact the operation of the business associated with the Subject. Specifically, this methodology is referred to as *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* Designation: E 1527-13.

The term Recognized Environmental Conditions is defined by ASTM Standard E 1527-13 as “...the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.”

**2.2.2 Scope**

In general, the scope of this assessment consisted of reviewing readily available information and environmental data relating to the property; interviewing readily available persons knowledgeable about the site; reviewing readily available maps, aerial photographs and records maintained by federal, state, and local regulatory agencies; and conducting a site visit.

Of importance, the client is advised that federal, state, and local laws may impose environmental assessment obligations beyond the scope of this practice. Client is also notified that there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered on the Subject that are not addressed in this practice and that may pose risks of civil and/or criminal sanctions for non-compliance.

The specific scope of this assignment included the following:

**2.2.2.1** Performing a site reconnaissance to characterize on-site conditions and assess the site's location with respect to surrounding property uses and natural surface features. In addition, IVI conducted a reconnaissance of the surrounding roads and readily accessible adjacent properties to identify obvious potential environmental conditions on neighboring properties. Photographs taken as part of the site reconnaissance are provided in Appendix A.

The site visit was conducted on March 31, 2014, by Susan Juggernaut representing IVI. The site was represented by Mr. Joe DeRosa, the Subject's Real Estate Broker from NorthMarq Capital. It was raining and the temperature was approximately 35° F at the time of our site survey. IVI conducted the site reconnaissance in a systematic manner focusing initially on the exterior, which was surveyed in a grid pattern. IVI also surveyed a representative sampling of the interior spaces in a systematic manner.

**2.2.2.2** Interviewing persons familiar with the property to obtain information on present and previous on-site activities potentially resulting in the environmental degradation of the site or adjoining properties. A Pre-Survey Questionnaire to be filled out and returned to IVI by someone knowledgeable about the site was provided to Mr. DeRosa. A completed copy of the Pre-Survey Questionnaire is provided in Appendix B.

The following table presents a summary of the individuals contacted or to whom requests for documentation were made as part of this assessment:

Name	Affiliation	Telephone No.
Building Information System (BIS)	New York City Department of Buildings	(212) 312-8062
Ms. Marie Dooley	New York City Department of Environmental Protection	(718) 595-6530
Mr. Fawzy Abelsadek	New York State Department of Environmental Conservation	(718) 482-4949
Ms. Rena Bryant	New York City Health Department	(212) 788-5013
Mr. Joe DeRosa	Subject's Real Estate Broker from NorthMarq Capital	(212) 904-1619
Mr. Michael Shanabrook	Attorney	(212) 265-3088

- 2.2.2.3** If provided, reviewing of information such as previously prepared appraisals, building plans and specifications, and environmental reports.
- 2.2.2.4** Reviewing readily available historical documents, such as topographic maps, aerial photographs, city directories, Sanborn Fire Insurance Maps and atlases, to identify previous activities on and in the vicinity of the Subject. Copies of these documents are included in Appendix C.
- 2.2.2.5** Reviewing readily available environmental databases maintained by federal, state, and local agencies within the approximate minimum search distances as described within the Regulatory Review Section 6.0 of this report. A copy of the Computerized Environmental Report, provided by Environmental Data Resources, Inc. can be referenced in Appendix D.
- 2.2.2.6** Conducting a "Tier I" (non-intrusive) Vapor Encroachment Screening (VES) on the Subject in accordance with the methodology set forth in ASTM E 2600-10 "*Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*". During the VES, the Area of Concern (AOC) was minimized using the methodology taught in the ASTM Screening for Vapor Encroachment onto Property Involved in Real Estate Transactions Training Course.

**2.2.2.7** Conducting a visual survey of readily accessible common areas to identify the presence of the most obvious and common types of suspect asbestos containing materials (ACM). The basis for “suspect” determination is taken from the materials listed in Appendix G of the United States Environmental Protection Agency (USEPA) publication Managing Asbestos in Place (also known as the Green Book). All building materials listed within Appendix G of the Green Book are considered to be suspect ACMs at the Subject. This screening is not intended to be used for demolition, abatement, renovation, or repair work.

THIS LIMITED SURVEY IS NOT TO BE CONSTRUED AS A COMPREHENSIVE ASBESTOS SURVEY, WHICH OFTEN ENTAILS DESTRUCTIVE TESTING OR THE SURVEY OF AREAS BEHIND WALLS, ABOVE CEILINGS, IN TENANT SPACES AND IN OTHER TYPICALLY INACCESSIBLE AREAS. MOREOVER, IVI DOES NOT WARRANT THAT ALL ACMs AT THE SUBJECT HAVE BEEN IDENTIFIED.

**2.2.2.8** Reviewing published radon occurrence maps to determine whether the site is located in an area with a propensity for elevated radon concentrations.

**2.2.2.9** An analysis of mold and/or mold issues was beyond the scope of this report.

**2.2.2.10** Assessing the age of the Subject to determine whether it is predisposed to contain lead-based paint. During our walkthrough survey, IVI noted the condition of the paint observed. Note, a compliance audit for lead paint was not conducted. NOTWITHSTANDING, THIS SCAN FOR LEAD-BASED PAINT SHOULD NOT BE CONSTRUED AS AN IN-DEPTH LEAD-BASED PAINT SURVEY.

**2.2.2.11** Testing, if any, was designed solely to meet the requirements of the client’s scope of work, not to meet any local, State or Federal regulations and shall not be utilized as such.

2.3 Data Gaps

According to § 3.2.21 of ASTM Standard E 1527-13, a data gap is a lack of or inability to obtain information required by the ASTM Standard despite good faith efforts to gather same. Data gaps may result from incompleteness in any of the activities required by the ASTM Standard. The following data gaps occurred in connection with this report:

Data Gap	Explanation	Significance of Gap
Site History	History not conducted back to a time when the site was undeveloped land (See § 5)	Low - not likely to alter Report's conclusions due to IVI's search of standard historical sources of information such as city directory abstracts, Sanborn Fire Insurance Maps, reviews of previous investigations and interviews with knowledgeable individuals who were familiar with the property.
Site History	Site history not conducted in 5-year intervals (See § 5)	Low - not likely to alter Report's conclusions due to IVI's search of standard historical sources of information such as city directory abstracts, Sanborn Fire Insurance Maps, reviews of previous investigations and interviews with knowledgeable individuals who were familiar with the property.
User Interview	AAI User Questionnaire not returned to IVI	Low - User is neither property owner or operator.
Former Owner or Operator Interview	Unable to interview former site owner or operator due to inability to locate	Low - not likely to alter Report's conclusions
Governmental Records	FOIAs not returned (See § 8.6)	Low – based on our review of regulatory databases, historical research, and the site reconnaissance, the lack of response from the government agencies would not likely alter the Report's conclusions.

### 3.0 SALIENT ASSIGNMENT INFORMATION

546, 548 & 550 West 29th Street  
New York, New York

<b>Salient Assignment Information</b>	
<b>IVI Project No.:</b>	PC40309320
<b>Street Address:</b>	546, 548 and 550 West 29 <sup>th</sup> Street
<b>City, State and Zip:</b>	New York, New York 10001
<b>Primary Use:</b>	546 W 29 <sup>th</sup> St: Art gallery 548 W 29 <sup>th</sup> St: Vacant Auto Repair 550 W 29 <sup>th</sup> St: Vacant Office
<b>Year Built and Age of Improvements:</b>	546 West 29 <sup>th</sup> St: Between 103 and 115 Years-Old (1899-1911); 548 West 29 <sup>th</sup> St: Approximately 87 Years-Old (circa 1927 ); 550 West 29 <sup>th</sup> St: 1890; approximately 124 Years-Old (circa 1890)
<b>Site Area:</b>	0.17-Acre
<b>Number of Stories:</b>	546 West 29 <sup>th</sup> St: One including mezzanine; 548 West 29 <sup>th</sup> St: One; 550 West 29 <sup>th</sup> St: Three
<b>Number of Buildings:</b>	Three



**4.1 Property Location**

The Subject is located at 546, 548 and 550 West 29<sup>th</sup> Street in New York City, New York and is identified on local tax maps as Block 700, Lots 59, 60, and 61, respectively. Please refer to the Site Plan and maps provided within Appendix C.

**4.2 Surrounding Land Use**

The property is located in an urban setting characterized by light industrial and residential development. The following is a tabulation of surrounding property usage:

Direction	Adjacent Properties	Surrounding Properties
North	Self-Storage Facility (302 11 <sup>th</sup> Avenue) across West 29 <sup>th</sup> Street	Residential development, the High Line Park, and Hudson Yards Re-Development Project
South	Residential High Rise Building (282 11 <sup>th</sup> Avenue)	Commercial and Industrial Development
East	Commercial Warehouse (542 West 29 <sup>th</sup> Street)	Commercial and Industrial Development
West	Residential High Rise Building (282 11 <sup>th</sup> Avenue)	Consolidated Edison Service Center (281 11 <sup>th</sup> Avenue) followed by the Hudson River

Several adjacent and surrounding properties are identified on regulatory databases. Please refer to Section 6.0 Regulatory Review for further information.

**4.3 Physical Site Setting**

**4.3.1 Size and Shape of Parcel**

The property is rectangular in shape and 0.17-acre in size.

**4.3.2 Topography**

The site is essentially level and at the same approximate topographic gradient as the surrounding properties. The topography of the area is best described as level. According to the United States Geological Survey (USGS) *Weehawken, N.J.* 7.5 Minute Series topographic map, the Subject’s topographic elevation is approximately 14’ above mean sea level (msl).



**4.3.3 Surface Waters and Wetlands****Surface Waters**

There are no surface water bodies or streams on or adjacent to the Subject. The closest open surface water to the Subject is the Hudson River, which is located approximately 0.25-mile to the west.

**Wetlands**

IVI did not observe any areas suspected to be wetlands on-site.

**4.3.4 Soils, Geology and Groundwater****Soils**

The soils at the site are classified as Urban Land. Urban Land complex are those soils in which the soil's original structure and content have been so altered by human activities it has lost its original characteristics and is thus unidentifiable.

**Geology**

There are no predominant geological surface features such as rock outcroppings on the Subject. The bedrock at the site is Precambrian in age, approximately one billion years old, and consists of gneiss and schists that are a part of the Manhattan Prong, a portion of the Appalachian Piedmont. The older of the Manhattan Prong sequence found in central Manhattan is the Manhattan Schist which is overlain by the Hartland Formation, a granulite. Both units are of very high metamorphic grade having been metamorphosed at a great depth in the earth's crust and later thrust to the surface during the Appalachian mountain building episode, about 350 million years ago.

During the last glacial period, ending about 12,000 to 15,000 years ago and termed the Wisconsin, a mantling of glacial drift was deposited over the older bedrock. In places the glacial deposits are unsorted till characterized by boulder to pebble-sized rocks erratically intermixed with a clay matrix, but elsewhere the deposits are sorted and stratified sand and gravel, the result of glacial outwash.

**Groundwater**

Under natural, undisturbed conditions, shallow groundwater flow generally follows the topography of the land surface and on this basis, the topography suggests that groundwater flow across the site is in a westerly-southwesterly direction. However, localized conditions can alter flow direction and thus the presumed flow may not coincide with the actual in the Subject area.

**4.4 Site Improvements****4.4.1 Utilities**

The Subject is served with the following utilities:

Water:	New York City Department of Environmental Protection (NYCDEP)
Sanitary Sewer:	NYCDEP
Storm Sewer:	NYCDEP
Electric:	Consolidated Edison (Con Ed)
Natural Gas:	Con Ed

Potable water is provided to the Subject via underground tunnels and pipes by the City of New York, which derives it from surface reservoirs in the Croton, Catskill, and Delaware watersheds.

Sheet runoff flows topographically and discharges to the municipal stormwater management system.

**4.4.2 Building Description**

The Subject is improved with three abutting buildings which occupy the entire footprint of the site on three Lots. It is our understanding that the Subject buildings will be demolished and the site redeveloped with a condominium hi-rise building. The 546 West 29<sup>th</sup> Street Lot consists of a one-story art gallery building constructed between 1899 and 1911. The 548 West 29<sup>th</sup> Street Lot consists of an approximately 87-year-old (built circa 1927) one-story, vacant, former auto repair facility. The 550 West 29<sup>th</sup> Street Lot consists of an approximately 124-year-old (built circa 1890) three-story, vacant, former office building.

The 546 and 548 West 29<sup>th</sup> Street buildings are of concrete and wood frame construction with no below grade levels. The 550 West 29<sup>th</sup> Street is of concrete frame with a cellar. All exterior walls feature brick siding. The flat roofs are covered with smooth-surface built-up roofing systems, although the 550 West 29<sup>th</sup> Street roof has also been fitted with a rooftop patio.

Interior finishes include floor coverings of sheet vinyl, ceramic tile, and bare concrete; walls of painted gypsum board, painted plaster, and painted concrete block and ceilings typically consist of painted drywall, metal panels, and an open system that exposes the underside of the roof.

Heating for the 546 West 29<sup>th</sup> Street building is provided by a roof top unit. Heating for the 549 West 29<sup>th</sup> Street building was provided by ceiling mounted natural gas-fired units. Heating to the 550 West 29<sup>th</sup> Street building was provided by a natural gas-fired boiler located within the cellar. The Subject is without a central air conditioning system. Vertical transportation was provided in the 550 West 29<sup>th</sup> Street building by a traction passenger elevator which is no longer in service.

**4.5 Current Property Use**

The Subject is developed with an art gallery, a vacant auto repair building and a vacant office building. Based on the operations currently conducted at the Subject, significant quantities of hazardous waste are not generated. The current on-site activities are not suspected to have degraded the environmental quality of the Subject site; however, the previous site usage as an auto repair facility may have negatively affected the subsurface at the Subject.

**4.6 Environmental Permits**

The following environmental permits have been issued or are required at the Subject:

**Petroleum Bulk Storage (PBS)**

The Subject is registered as an active PBS site with the New York State Department of Environmental Conservation (NYSDEC) with PBS No. 2-611575 and is listed as being served with one, in-service, 270-gallon waste oil aboveground storage tank (AST). The registration states that the AST was installed in January 1992 and the expiration expires on September 19, 2016. Of note, IVI did not observe this AST during our recent site reconnaissance. Refer to Section 7.2 for further discussion.

**4.7 Plans and Specifications**

Neither building drawings nor specifications were provided for our review.

### 5.1 Historical Summary

Historical information was only provided as far back as 1890; as such, the uses of the Subject prior to 1890 are unknown. The building at 546 West 29<sup>th</sup> Street was built at some point between 1899 and 1911. At the time of construction, this building was an L-shape, occupying the 546 West 29<sup>th</sup> Street lot and extending west onto the 548 West 29<sup>th</sup> Street property. The building had residential and office space in the front and the rear section was a garage that contained a buried 550-gallon gasoline tank on the 1930 Sanborn map. IVI found no records indicated the installation or removal dates of the tank; however, a GPR survey performed at the 548 West 29<sup>th</sup> Street lot in 2012 found no evidence of the tank on the lot. Other previous uses of the current 546 West 29<sup>th</sup> Street building include a coppersmith shop, motor freight station, and a taxi repair facility. The 546 West 29<sup>th</sup> Street property was vacant land circa 1899, and in 1890, the property was improved with a small garage and a two-story shed.

The front section of the existing building at 548 West 29<sup>th</sup> Street was completed between 1930 and 1950. The rear portion of the 546 West 29<sup>th</sup> Street building that extended onto the abutting lot was separated from the rest of the building and by 1950 was attached to the new 548 West 29<sup>th</sup> Street building. Thereafter, the 546 and 548 West 29<sup>th</sup> Street lots were each improved with a building that occupied the entire property area and did not extend across the lot boundaries. Since 1950, the 548 West 29<sup>th</sup> Street building has been used as an express depot, motor freight station, and an auto repair facility. Prior to the construction of the existing improvements, 548 West 29<sup>th</sup> Street was improved with a small mixed-use residential and commercial building since at least 1890. This small building occupied the front portion of the lot. The rear portion was improved with a shed since at least 1890. The shed had been demolished by 1899 and by 1911, a section of the 546 West 29<sup>th</sup> Street building extended into the area formerly occupied by the shed.

The existing 550 West 29<sup>th</sup> Street building was constructed prior to 1890. Previous occupants of the building include both commercial and residential tenants. Commercial tenants included a portion of the adjacent piano factory, a waste paper storing and baling facility, HVAC service, and various retail stores.

### 5.2 Topographic Maps

IVI reviewed a historic USGS *Weehawken, N.J.* 7.5 Minute Series topographic map of the Subject area provided by EDR. The topographic map does not identify individual buildings or development on the Subject due to the concentration of structures in the highly urbanized New York area, but rather shows the area to be shaded denoting urbanized land use, and identifies only landmarks as distinct structures. Nevertheless, the topographic map does not identify any industrial complexes, landfills or wetlands on or adjacent to the subject site.

5.3 Historical Maps

Sanborn Fire Insurance Maps (Sanborn Maps)

IVI had a search conducted for Sanborn Maps, which reference the property. The findings of this review are summarized below:

Year	Subject Property	Adjacent and Surrounding Properties
1890	<p><i>546 West 29<sup>th</sup> Street:</i> The lot is shown with a one-story garage with a two-story attachment to the rear of the garage building. A two-story shed is depicted along the southwestern property boundary. The garage and the shed are separated by an open yard.</p> <p><i>548 West 29<sup>th</sup> Street:</i> The lot is shown with a building of unspecified use. A three-story shed is depicted along the southwestern property boundary and is separated from the building by an open yard.</p> <p><i>550 West 29<sup>th</sup> Street:</i> The lot is shown with a three-story store occupying the entire property area. The store appears to be a part of the northwestern adjacent piano factory.</p>	<p>A large building complex labeled “piano factory” is shown on the northwest abutting property. The southwestern abutting property is depicted as a large industrial building labeled “Planing Mill &amp; Box Factory”. A commercial retail building is shown on the southeastern abutting property, and the properties to the northeast across West 29<sup>th</sup> Street are shown as a stable and a line of four-story buildings with unspecified uses.</p> <p>Properties farther north are shown as a mixture of commercial and light industrial buildings, including a lumber yard, saw mill, and the N.Y. Central &amp; Hudson River Railroad. Properties farther south are also shown as a mixture of commercial and light industrial buildings and include a coal yard, building materials storage, contractor’s yard, machine shop, brass and bronze works and various stables, stores, and garages. Properties to the east are depicted as primarily commercial buildings with some vacant lots, while properties to the west are shown as mostly commercial and include several lumber yards.</p>
1899	<p><i>546 West 29<sup>th</sup> Street</i> is shown as vacant land. The four-story building at <i>548 West 29<sup>th</sup> Street</i> is still shown but the shed in the rear of the building appears to have been demolished. The store at <i>550 West 29<sup>th</sup> Street</i> is labeled as a vacant building.</p>	<p>The stable on the adjacent property to the northeast across West 29<sup>th</sup> Street is now labeled “lumber storage on 1<sup>st</sup> floor”.</p> <p>The remaining surrounding properties appear similar to the previous Sanborn map reviewed.</p>
1911	<p><i>546 West 29<sup>th</sup> Street</i> is shown as a two-story building that occupies the entire lot and extends into the rear of the <i>548 West 29<sup>th</sup> Street</i> property. The building is labeled as a stable with a small residence in the front section along West 29<sup>th</sup> Street.</p> <p>The two buildings depicted at <i>548 and 550 West 29<sup>th</sup> Street</i> appear to be the same as the buildings depicted in the</p>	<p>The southeastern abutting property is shown as vacant land with a wood pile in the rear of the lot. The northeastern adjacent properties across West 29<sup>th</sup> Street are shown as a line of four-story residences and a large building labeled “W. and J. Sloane Warehouse”. The warehouse is depicted with a “tank house” in the northeastern corner of the building. The southwestern abutting property is shown as</p>



Year	Subject Property	Adjacent and Surrounding Properties
	<p>previous Sanborn map. The <i>548 West 29<sup>th</sup> Street</i> building is labeled as a mixed-use residential and commercial building while the <i>550 West 29<sup>th</sup> Street</i> building is still labeled as vacant.</p>	<p>a large complex of lumber sheds labeled “Dunbar Box and Lumber Co.”</p> <p>Properties to the north, northwest and northeast are shown as commercial and light industrial and include the W. &amp; J. Garage and Store House (which is depicted with one 550-gallon gasoline tank), a farrier, contractor’s yard, bakery, furniture company, woodworking shop, and smelting and refining works. Properties to the south are shown as residential, commercial and light industrial and include an envelope company, foundry supplies storage, lumber yards, and a theatrical scenery construction facility. Properties to the east are shown as residential, commercial, and light industrial and include a dairy house, stables, confectionary factory, and wagon building and repairs.</p> <p>The remaining surrounding properties appear similar to the previous Sanborn map reviewed.</p>
1930	<p>The building at <i>546 West 29<sup>th</sup> Street</i> that extends onto <i>548 West 29<sup>th</sup> Street</i> is now labeled as a garage with office space in the front section along West 29<sup>th</sup> Street. The building is depicted as having one 550-gallon buried gasoline tank in the rear section of the garage. The remaining two Subject buildings appear similar to the previous Sanborn map reviewed.</p>	<p>The southeastern abutting property is shown as a lumber yard. The former piano factory on the northwestern abutting property is now labeled “Boston Excelsior Company”. The W. &amp; J. Sloane building on one of the northern adjacent properties appears to have expanded and now occupies all of the northern adjacent lots.</p> <p>A gasoline station with four 550-gallon buried gasoline tanks is shown to the northwest on the northeast corner of West 29<sup>th</sup> Street and 11<sup>th</sup> Avenue. Another gasoline station, this one with six 550-gallon buried gasoline tanks, is shown farther northwest on the northwest corner of West 30<sup>th</sup> Street and 11<sup>th</sup> Avenue. An auto repair and welding facility and a metal works facility are depicted north of the W. &amp; J. Sloane building. Residential, commercial and industrial buildings are shown to the southeast and include a coal yard, a garage with a 550-gallon buried gasoline tank, the Sheffield Farms Co. with a 300-gallon buried gasoline tank, and an auto repair facility. A spear box and twine manufacturer is shown to the southwest.</p> <p>The remaining surrounding properties appear similar to the previous Sanborn map reviewed.</p>

Year	Subject Property	Adjacent and Surrounding Properties
1950	<p>The small building at <i>548 West 29<sup>th</sup> Street</i> along West 29<sup>th</sup> Street appears to have been demolished. A new building is shown that incorporates the portion of the building at <i>546 West 29<sup>th</sup> Street</i> that had extending onto the <i>548</i> property. The new building at <i>548</i> occupies the entire lot and the rear portion that originally was a part of the <i>546</i> building appears to have been separated from <i>546</i>. Now each of the three Subject lots is shown with a single building that occupies its entire tax lot.</p> <p>The building at <i>546 West 29<sup>th</sup> Street</i> is labeled with offices in the front and a coppersmith facility in the rear. <i>548 West 29<sup>th</sup> Street</i> is labeled as an “Express Depot” and <i>550 West 29<sup>th</sup> Street</i> is labeled as a waste paper sorting and baling facility.</p>	<p>The northwestern abutting property is now identified as the “Atlantic Excelsior Company”. The southeastern abutting property is shown with a large private garage. The lumber facility on the southwestern abutting property appears to have been demolished and the property is now shown as mostly vacant land. A freight shed is located on a portion of the property and the shed abuts the <i>550 West 29<sup>th</sup> Street</i> Subject building and the Atlantic Excelsior Company facility.</p> <p>The gasoline station to the northwest on West 29<sup>th</sup> Street and 11<sup>th</sup> Avenue is no longer shown and the property is now depicted as partly vacant land and partly a loading dock associated with the W. &amp; J. Sloane facility. The large garage to the southeast is now shown as a milk depot. The remaining surrounding properties appear similar to the previous Sanborn map reviewed.</p>
1976	<p>The buildings at <i>546 and 548 West 29<sup>th</sup> Street</i> are both labeled as motor freight stations. The building at <i>550 West 29<sup>th</sup> Street</i> is now labeled as residential.</p>	<p>The Atlantic Excelsior Co. building on the northwestern abutting property appears to have been demolished. The property is now shown with a motor freight station attached to the freight shed on the southwestern adjacent property. The northeastern adjacent W. &amp; J. Sloane warehouse is now labeled as the “C.C. Hamilton warehouse”.</p> <p>Several large buildings associated with the Metal Purchasing Co., Inc. are shown to the north and northeast. Several buildings to the southeast appear to have been demolished and are now shown as vacant land. Remaining industrial facilities to the southeast are shown to include motor freight stations, express depots, a truck repair shop, and a metal fabricating facility. The remaining surrounding properties appear similar to the previous Sanborn map reviewed.</p>
1980	<p>The building at <i>546 West 29<sup>th</sup> Street</i> is labeled as a commercial building, and the building at <i>548 West 29<sup>th</sup> Street</i> is labeled as an auto repair facility. The building at <i>550 West 29<sup>th</sup> Street</i> is still labeled as residential.</p>	<p>The surrounding properties appear similar to the previous Sanborn map reviewed.</p>

Year	Subject Property	Adjacent and Surrounding Properties
1985	The Subject appears similar to the previous Sanborn map reviewed.	The surrounding properties appear similar to the previous Sanborn map reviewed.
1991	The Subject appears similar to the previous Sanborn map reviewed.	The garage on the southeastern abutting property is now labeled as an auto repair facility. The northeastern adjacent property appears to be the same warehouse complex, but it is no longer labeled with a specific tenant name.  The remaining surrounding properties appear similar to the previous Sanborn map reviewed.
1996	The Subject appears similar to the previous Sanborn map reviewed.	The surrounding properties appear similar to the previous Sanborn map reviewed.
2001	The Subject appears similar to the previous Sanborn map reviewed.	The surrounding properties appear similar to the previous Sanborn map reviewed.
2005	The building at 550 West 29 <sup>th</sup> Street is labeled as mixed-use residential and commercial. The remaining Subject buildings appear similar to the previous Sanborn map reviewed.	The freight shed on the southwestern abutting property is now identified as a freight shed and SUV service. The previously-vacant portion of the southwestern abutting property is now shown with a large garage.  A large motor freight station to the southeast is now labeled as a gallery.  The remaining surrounding properties appear similar to the previous Sanborn map reviewed.

**5.4 Aerial Photographs**

Inasmuch as the Subject has been sufficiently covered by other standard historic information sources, aerial photographs were not consulted as part of this assessment.

**5.5 Chain-of-Ownership**

A copy of the Subject’s Chain-of-Title has not been provided to IVI for review.

**5.6 Previous Reports**

IVI was provided with the following previous environmental reports for review:

IVI reviewed an environmental assessment on the Subject titled *Limited Phase I Environmental Inspection Report for 548 West 29<sup>th</sup> Street*, dated May 30, 2012, prepared by Atlantic Environmental Solutions, Inc. (AESI), on behalf of Mr. Raba Abramov. The information obtained was not verified for accuracy by IVI and a critique of the report was beyond the scope of this assessment. The following information was obtained through this review:



- The property at 548 West 29<sup>th</sup> Street was improved with a taxi repair shop. The Subject had previously been a mixed-use residential and commercial property from 1890 through 1930 and an auto repair shop from 1976 to the time of AESI's site reconnaissance. The eastern abutting property (546 West 29<sup>th</sup> Street) was occupied by an L-shaped building that also wrapped behind the site building to the south. This L-shaped building was used as a garage with a buried 500-gallon gasoline tank in 1930. In 1950 the eastern abutting property was occupied by a new building that was used as an express depot and, from 1976 to the present, as an auto repair facility.
- The Subject and the eastern and western abutting properties (546 and 550 West 29<sup>th</sup> Street) have all been assigned e-designations by the City of New York.
- During the site reconnaissance, AESI observed a 250-gallon waste oil aboveground storage tank (AST) in the rear of the garage. The tank was used to discard motor oil and other waste petroleum products when cars are repaired. A catch basin contained the AST and did not appear to contain oil. No staining was noted by AESI personnel. AESI did not recommend any further action to be taken regarding the AST.
- Although no evidence of an existing underground storage tank (UST) was observed by AESI, Sanborn maps indicate a 500-gallon gasoline UST in the rear of the Subject lot in 1930. The UST was located in the garage at 546 West 29<sup>th</sup> Street, and the section containing the UST was the portion of the L-shaped building that extended onto the site lot.
- Two manhole covers were observed by AESI. The property owner was able to remove the cover from the western manhole at that time; however, the eastern manhole could not be inspected because it was covered with cement. The western manhole was a cylindrical pit which was empty and no staining was observed by AESI personnel. AESI concluded that the placement of the two manholes are indicative of two hydraulic lifts located in the repair garage. The report stated that the property owner indicated that a previous owner had removed the hydraulic lifts and pumps.
- One 30-gallon drum of gear oil and lubricant was observed on site by AESI personnel. The drum was stored on movable platforms and no staining was observed beneath the drum. Slight staining from the related vehicle repair was observed, but no cracks were observed in the concrete floor that would suggest entry of the oil or petroleum product into the underlying soil. Therefore, AESI did not recommend any further action with regards to the drum.

- AESI identified two areas of concern warranting further evaluation: the two manholes and the historic UST. Although one manhole cover was removed and no hydraulic lift was observed, AESI recommended that a geophysical survey and subsurface investigation be conducted in the garage to determine whether any formerly-used hydraulic pumps/tanks remain buried. In addition, the geophysical survey and subsurface investigation should be utilized to determine whether the 500-gallon UST observed in the 1930 Sanborn map is still buried on the property.

IVI reviewed an environmental assessment on the Subject titled *Ground Penetrating Radar Survey for 548 West 29<sup>th</sup> Street*, dated July 9, 2012, prepared by Hydro Tech Environmental Corp., on behalf of Mr. Rudy Abramoff of Midtown Auto Center. The information obtained was not verified for accuracy by IVI and a critique of the report was beyond the scope of this assessment. The following information was obtained through this review:

- The Ground Penetrating Radar (GPR) survey was performed on June 29, 2012, utilizing a GSSI SIR-3000 Control Unit and a 400-megahertz shielded antenna. Based on the typical size of a suspected UST, the GPR was set to run at 50 scans per foot. The GPR survey was conducted within all accessible areas of the auto body shop, except the office area, and was intended to determine the presence of environmental anomalies of concern.
- No anomalies indicative of underground structures were identified during the survey.

## **5.7 City Directories**

IVI commissioned EDR to obtain a historical City Directory Abstract for the Subject, which provide tenant listings by address for every year covered by the directory service. EDR's City Directory Abstract included a directory review for years from 1920 through 2013. This review yielded the following information:

### **Subject Property:**

#### *546 West 29<sup>th</sup> Street*

- Residential tenants (1923-1942)
- Stevens & Normand, Inc. Coppersmiths (1947-1958)
- Fortunato Samuel Trucks (1963)
- Rubin A & Sons Corp. (1968-1973)
- Taxi sales and service (1983-2013)
- Art gallery (2006-2013)

### *548 West 29<sup>th</sup> Street*

- Residential tenants (1927-1942)
- Arbour Transportation Service (1950-1958)
- Auto repair (1983-2013)

### *550 West 29<sup>th</sup> Street*

- Residential tenants (1920-1942; 1988; 2000-2006)
- Dickerson Production Co., Inc. (1927)
- Manhattan Waste Products (1938)
- Paper stock company (1947-1973)
- Elmina Food Corp. (1983)
- HVAC service / Creative Electronics (1993)
- Perfect Parties / J&C Electric (1998)
- The Budinger Company (1998-2000)
- Art gallery (2006)
- Elemental Consulting (2008)
- Locksmith (2013)

**Surrounding Properties:** Surrounding properties have been identified with residential, commercial, and industrial listings since 1920. Commercial and industrial listings include offices, a photography studio, art galleries, steel manufacturers, auto repair facilities, a paper and twine manufacturer, machine shops, iron works, storage facilities, parking garages, freight stations, a seafood warehouse, and a furniture storage facility.

The southeastern abutting property (542 West 29<sup>th</sup> Street) was identified with auto repair facilities and machine shops from 1947 through 1978 and an auto parts store from 1988 to 1993.

IVI has no significant environmental concerns regarding the above listings with the exception of 542 West 29<sup>th</sup> Street, which is also listed on the NY Spills database. See Section 6.2 for further discussion.

Please refer to Appendix F for a copy of the City Directories.

## 5.8 Interviews

According to Michael Shanabrook, the property's Attorney, who has been involved with the property for the past seven years, the 546 West 29<sup>th</sup> Street building has been a gallery since 2007, the 548 West 29<sup>th</sup> Street building has been vacant since 2012, and the 550 West 29<sup>th</sup> Street building has been vacant since 2013. The 550 West 29<sup>th</sup> Street building was reportedly an office since at least 2006 and used as a gallery prior to that.

**5.9 Municipal Records****Tax Assessor Records**

According to the tax assessor records reviewed, the Subject consists of three separate properties identified on tax maps as Block 700, Lots 59, 60, and 61 and totals 0.17-acre. The tax assessor records indicate that the building at 546 West 29<sup>th</sup> Street was built in approximately 1930, the building at 548 West 29<sup>th</sup> Street was built in approximately 1935, and the building at 550 West 29<sup>th</sup> Street was built in approximately 1930. However, these dates do not agree with the information obtained from the Sanborn maps. For further discussion of the age of the buildings, see Sections 5.1 and 5.3.

**Building Department Records**

IVI reviewed building permits and records for the Subject at the on the NYCBIS website. The following relevant documents were reviewed:

Subject Address	Permit Number	Date	Purpose of Permit
546-548 West 29 <sup>th</sup> Street	30188	1944	Certificate of Occupancy Block 700, Lots 59-60 Two-story commercial building; garage and freight terminal on first floor, offices on second floor.
550 West 29 <sup>th</sup> Street	099107	1991	Certificate of Occupancy Block 700, Lot 61 Three-story commercial building. Cellar contains storage and boiler room, first floor used as office space, second floor used as office space and storage, and the third floor used as the caretaker's apartment and as a dance studio.
546-548 West 29 <sup>th</sup> Street	116118	1998	Certificate of Occupancy Block 700, Lots 59-60 Two-story commercial building. First floor occupied by auto repair garage. Second floor used as storage and office space.
546 West 29 <sup>th</sup> Street	120933053F	2012	Block 700, Lot 59 Two-story commercial building. First floor used for gallery and office space, second floor used as an accessory office, and a terrace is located on the roof.

**5.10 Internet Search**

IVI conducted a cursory internet search for the Subject's name and address using the Google search engine on March 31, 2014. No environmentally related information was identified on the first page of the Google search results.

A copy of regulatory database information contained within a Computerized Environmental Report (CER) provided by Environmental Data Resources, Inc. (EDR) appears in Appendix D. The CER is a listing of sites identified on select federal and state standard source environmental databases within the approximate minimum search distance specified by ASTM Standard Practice for Environmental Site Assessments E 1527-13. IVI reviewed each environmental database to determine if certain sites identified in the CER are suspected to represent a material negative environmental impact to the Subject. The following table lists the number of sites by regulatory database within the prescribed minimum search distance appearing in the CER.

Databases Reviewed	Approximate Minimum Search Distance (AMSD)	Number of Sites Within AMSD
Federal National Priorities List (NPL) Site List	One-Mile	1
Federal Delisted NPL Site List	One-Half Mile	0
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)	One-Half Mile	1
Federal CERCLIS No Further Remedial Action Planned (NFRAP) Sites	One-Half Mile	1
Federal Resource Conservation and Recovery Information System (RCRIS) Treatment, Storage, and Disposal (TSD) List	One-Half Mile	0
Federal RCRIS Generators List	On-Site and Adjoining Properties	0
Federal Corrective Action Tracking System (CORRACTS)	One-Mile	0
Federal Emergency Response Notification System (ERNS) List	On-Site	0
Federal Institutional/Engineering Control Registries	On-Site	0
New York and Tribal Lists of NPL Equivalent Hazardous Waste Sites Identified for Investigation and/or Remediation	One-Mile	1
New York and Tribal Lists of CERCLIS Equivalent Hazardous Waste Sites Identified for Investigation and/or Remediation	One-Half Mile	0
New York and Tribal Landfills or Solid Waste Facilities List	One-Half Mile	2
New York and Tribal Petroleum Bulk Storage Tank List	On-Site and Adjoining Properties	2
New York and Tribal Leaking UST/Spill List	One-Half Mile	140
New York and Tribal Institutional/Engineering Control Registries	On-Site	0
New York and Tribal Voluntary Cleanup Sites	One-Half Mile	1
New York and Tribal Brownfields Sites	One-Half Mile	6

The CER identified 20 "Orphan Sites". "Orphan Sites" are those sites that could not be mapped or "geocoded" due to inadequate address information. Please refer to the CER for a list of these "Orphan Sites". IVI attempted to locate these sites via a review of street maps, vehicular reconnaissance and/or interviews with people familiar with the area. "Orphan Sites" that were identified in this manner were analyzed in their respective regulatory database below.

A description of the databases reviewed by IVI and an analysis of sites identified within the prescribed search area are presented below.

6.1 Federal Databases

NPL

The NPL database is a listing of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or "Superfund"). A site must be on the NPL to receive money from the Trust Fund for Remedial Action.

*Analysis/Comment:* The CER identified the following NPL site within the AMSD:

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Hudson River PCBs No Street Applicable	0.23	West	Downgradient	Active

The Hudson River is a 315-mile river that flows from north to south through eastern New York. The river begins in Lake Tear of the Clouds in the Adirondack Mountains and forms the border between New York City and New Jersey at its mouth before emptying into the Upper New York Bay. According to information obtained from the USEPA and Riverkeeper websites, General Electric (GE) dumped an estimated 1.3 million pounds of PCBs into the Hudson River between 1947 and 1977. The source of the contamination was from capacitor manufacturing plants located in Fort Edwards and Hudson Falls, New York, approximately 50 miles north of Albany. The results of the dumping impacted sediments, water, and wildlife throughout the Hudson River Ecosystem down to the New York Harbor.

In 1980, Congress passed an amendment to the Clean Water Act that included the Hudson River PCB Reclamation Demonstration Project. Under this legislation, the USEPA authorized a grant that would evaluate dredging alternatives for the project. In 2002, the USEPA's Record of Decision for the Hudson River PCB's Superfund site, GE was required to construct a dredging sediment transfer/processing facility in order to perform the first phase of dredging in



accordance with design plans from a prior agreement. A 2006 Consent Decree was established between the USEPA and GE for the scheduling of the dredging, where GE was to pay \$78 million for past and future costs. The USEPA had already collected \$37 million from GE through past settlements. On May 15, 2009, after decades of debate, GE began Phase I of the long delayed clean-up of these PCBs. In December of 2010, GE began Phase II of the dredging to address additional areas that were not completed during the initial phase. Phase II is currently entering its third year. Based on this information and distance from the Subject, this NPL listing is not suspected to have impacted the Subject.

### Delisted NPL Site List

The EPA may delete a final NPL site if it determines that no further response is required to protect human health or the environment, under Section 300.425(e) of the National Contingency Plan (55 FR 8845, March 8, 1990). Sites that have been deleted from the NPL remain eligible for further Superfund-financed remedial action in the unlikely event that conditions in the future warrant such action. Partial deletions can also be conducted at NPL sites.

**Analysis/Comment:** The CER did not identify Delisted NPL sites within the AMSD.

### CERCLIS

CERCLIS is the USEPA's system for tracking potential hazardous-waste sites within the Superfund program. A site's presence on CERCLIS does not imply a level of federal activity or progress at a site, nor does it indicate that hazardous conditions necessarily exist at the location. Within one year of being entered into CERCLIS, the USEPA performs a preliminary assessment of a site. Based upon the results of the preliminary assessment, the USEPA may conduct additional investigation, which could lead to a site being listed on the NPL.

**Analysis/Comment:** The CER identified the following CERCLA site within the AMSD:

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Hudson River PCBs No Street Applicable	0.23	West	Downgradient	Active

The above tabulated site is also listed on the NPL database. For further discussion of this listing, see the NPL section above.

**CERCLIS No Further Remedial Action Planned (NFRAP) Sites**

As of February 1995, CERCLIS sites designated “No Further Remedial Action Planned” (NFRAP) have been removed from the CERCLIS list. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to warrant Federal Superfund Action or NPL consideration.

**Analysis/Comment:** The CER identified the following CERCLA NFRAP site within the AMSD:

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Manhattan General Mail Facility West 29 <sup>th</sup> and 9 <sup>th</sup> Avenue	0.30	East	Crossgradient	NFRAP

The Manhattan General Mail Facility (USEPA ID NY6180000352) was reported in July 1992 and granted a No Further Remedial Action Planned (NFRAP) status by the USEPA in September 1993. Notwithstanding, this site is located a sufficient distance from the Subject so as not to be reasonably suspect of having impacted same. As such, and also due to the site’s NFRAP status, IVI does not suspect this site of having had a significant negative environmental impact on the Subject.

**RCRIS TSD**

The RCRIS TSD contains information pertaining to those facilities that treat, store, or dispose of hazardous waste. While these facilities represent some form of hazardous waste activity, they are most significant if determined to be out of compliance or to have violations.

**Analysis/Comment:** The CER did not identify RCRIS TSD facilities within the AMSD.

**RCRIS Generators**

IVI reviewed the list of sites, which have filed notification with the USEPA in accordance with RCRA requirements. These sites include generators of hazardous waste regulated under RCRA. Under RCRA, hazardous waste generators are classified by the quantity of hazardous waste generated in a calendar month into the following categories: Large Quantity Generator (LQG), greater than 1,000 kilograms (kg); Small Quantity Generator (SQG), 100 to 1,000 kg; and Conditionally-Exempt Small Quantity Generator (CESQG), less than 100 kg. RCRA Generators, while they represent some form of hazardous waste activity, are most significant if they are determined to have Class I Violations or to be non-compliant.

*Analysis/Comment:* The CER did not identify RCRA Generators within the AMSD.

### **Corrective Action Tracking System (CORRACTS)**

CORRACTS is a list of facilities that are found to have had hazardous waste releases and require RCRA corrective action activity, which can range from site investigations to remediation.

*Analysis/Comment:* The CER did not identify CORRACTS sites within the AMSD.

### **ERNS**

The ERNS is a database of notifications of oil discharges and hazardous substance releases made to the Federal government. These notifications are used by “On-Scene Coordinators” to determine an emergency response and release prevention. When a call is made to the National Response Center or one of the 10 USEPA Regions, a report is created containing all of the release information that the caller provided. This report is transferred to an appropriate agency to evaluate the need for a response and the records are electronically transferred to the ERNS database. As such, if a reported release of oil or a hazardous substance is deemed to require a response, it should also be listed in the appropriate federal or state environmental database such as CERCLIS, state equivalent CERCLIS, or state leaking underground storage tank or spills lists.

*Analysis/Comment:* The CER did not identify the Subject on the ERNS database.

### **Federal Institutional Control/Engineering Control Registries**

These Federal registries contain listings of those sites which have either engineering and/or institutional controls in place. Engineering controls include various physical control devices such as fences, caps, building slabs, paved areas, liners and treatment methods to eliminate pathways for regulated substances to enter the environment or affect human health. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions (Activity and Use Limitations) are generally required as part of institutional controls.

*Analysis/Comment:* The CER did not identify the Subject on the Federal Institutional or Engineering Control registries.

## 6.2 New York State Department of Environmental Conservation (NYSDEC) and Tribal Databases

### Registry of Inactive Hazardous Waste Disposal Sites (IHWDS) and Tribal NPL Equivalent State Hazardous Waste Sites (SHWS)

The IHWDS and Tribal NPL Equivalent SHWS list is an inventory of toxic sites listed by New York and/or Tribal Environmental and Health Authorities. These sites are either under remediation, or are currently under evaluation for further action, if necessary.

*Analysis/Comment:* The CER identified the following IHWDS and/or Tribal NPL Equivalent Hazardous Waste site within the AMSD:

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Former Guardian Cleaners 27-35 West 24 <sup>th</sup> Street	0.90	Southeast	Crossgradient	Potential

The Former Guardian Cleaners (Site Code 231073) site is currently improved with an 11-story building with a basement. The building is utilized as office space with a restaurant on the first floor and in part of the basement. A former dry cleaner operated in the restaurant space until approximately 1990. Chlorinated volatile organic compounds (VOCs) such as tetrachloroethene (PCE), trichloroethene (TCE) and cis 1,2-dichloroethene (cis 1,2-DCE) were detected in soil samples taken in two separate sampling events. In addition, TCE and PCE were detected in both sub-slab and indoor air samples during vapor intrusion sampling. The NYSDOH guidelines recommend mitigation based on these elevated detections; however, as of the last update of the site records in January 2012, the NYSDEC and the NYSDOH had not yet made a decision as to whether the site poses a significant threat to human health and the environment. However, as this site is located a sufficient distance from the Subject so as to not be reasonably expected to impact same, and as the site has a crossgradient hydrogeologic relationship with the Subject, IVI does not suspect this site of having had a significant negative environmental impact on the Subject.

### Vapor Intrusion Legacy Site List

"Vapor intrusion" refers to the process by which volatile chemicals move from a subsurface source into the indoor air of overlying or adjacent buildings. The subsurface source can either be contaminated groundwater or contaminated soil which releases vapors into the pore spaces in the soil. Improvements in analytical techniques and knowledge gained from site investigations in New York and other states has led to an increased awareness of soil vapor as a medium of concern and of the potential for exposures from the soil vapor intrusion pathway. Based on

this additional information, the NYSDEC is currently re-evaluating pre-2003 remedial decisions on IHWDS where chlorinated hydrocarbons were released to determine the possibility of vapor intrusion at the sites. The Vapor Intrusion Legacy Site List is a database of these sites.

*Analysis/Comment:* The CER did not identify Vapor Intrusion Legacy sites within a mile of the Subject.

#### **New York and Tribal CERCLIS Equivalent Hazardous Waste Sites**

The State HWS is an inventory of dumps, landfills, and other toxic sites listed by Environmental and Health Authorities. The Tribal NPL Equivalent HWS list is an inventory of toxic sites listed by Tribal Environmental and Health Authorities. These sites are either under remediation, or are currently under evaluation for further action, if necessary.

*Analysis/Comment:* The CER did not identify New York and/or Tribal CERCLIS Equivalent Hazardous Waste sites within the AMSD.

#### **New York and/or Tribal Solid Waste Facilities (SWF) List**

The SWF list is an inventory of landfills, incinerators, transfer stations, and other sites that manage solid wastes.

*Analysis/Comment:* The CER identified the following SWF sites the AMSD.

<b>Property Name/ Address</b>	<b>Distance (Mile)</b>	<b>Direction</b>	<b>Presumed Hydrogeologic Relationship</b>	<b>Regulatory Status</b>
Red Ball Interior Demolition 625 West 29 <sup>th</sup> Street	0.09	West	Downgradient	Inactive
Con Edison- W. 28 <sup>th</sup> Street Service Center 281 11 <sup>th</sup> Avenue	0.04	West	Downgradient	Inactive

Red Ball Interior Demolition is registered as an inactive transfer station and the Con Edison W. 28<sup>th</sup> Street Service Center is registered as an inactive C&D processing-registration facility. Since both of these listings are inactive and as they are both located in a hydrogeologically downgradient position with regards to the Subject, IVI does not suspect them of having had a negative environmental impact on the Subject.

**Petroleum Bulk Storage (PBS) Tanks List and/or Tribal Registered Storage Tanks (RST) Facility List**

The PBS Tank list is an inventory of registered liquid bulk storage tanks maintained either by the county or the NYSDEC. Inclusion of a site on the PBS Tank list does not necessarily constitute environmental contamination, but instead merely indicates the presence of registered bulk storage tanks.

*Analysis/Comment:* The CER identified the following PBS Tank sites within the AMSD:

Property Name/ Address	Distance	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Midtown Center Auto Repair, Inc. 548 West 29 <sup>th</sup> Street	On-site	On-site	On-site	Active

The Subject is registered as an active PBS site with the New York State Department of Environmental Conservation (NYSDEC) with PBS No. 2-611575 and is listed as being served with one, in-service, 270-gallon waste oil aboveground storage tank (AST). The registration states that the AST was installed in January 1992 and the expiration expires on September 19, 2016. Of note, IVI did not observe this AST during our recent site reconnaissance. Refer to Section 7.2 for further discussion.

Property Name/ Address	Distance	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Avalon West Chelsea, LLC 282-298 11 <sup>th</sup> Avenue	Adjacent	South and West	Downgradient to Crossgradient	16, 550-gallon USTs closed-in- place; One, 550-gallon UST closed and removed

The above-tabulated site was registered with the NYSDEC under PBS No. 2-350281 and the site status is Unregulated. The site was served with sixteen, 550-gallon, steel, gasoline USTs, which were reportedly closed-in-place in 2011 and one, 550-gallon, steel, gasoline UST, which was reportedly closed and removed in 2012. Of importance, several spill listings were identified for this site. Please refer to the LUST and Spill Lists section below for additional information.

**New York Leaking Underground Storage Tanks (LUST) and Spill Lists**

The LUST list is an inventory of spills and leaks, both active and inactive reported to regulatory authorities. They include stationary and non-stationary source spills reported to state and federal agencies, including remediated and contaminated leaking UST sites. The Spills list is a compilation of data collected on spills and reported to the NYSDEC pursuant to either Article 12 of the Navigation Law, or 6 NYCRR Section 595.2.

**Analysis/Comment:** The CER identified 140 LUST/Spill listings within the prescribed search radius. Of these, one listing is for the Subject and thirteen are for adjacent properties. Of the remaining 126 listings, all have been i) granted a “Case Closed” status by the NYSDEC (this classification is granted to those sites that have been remediated to the satisfaction of the NYSDEC and are not suspected to pose a significant threat to human health or the environment), ii) are located at crossgradient or downgradient hydrogeologic directions with anticipated groundwater flow away from the Subject; iii) are *de minimis* in nature; and/or iv) located over one-eighth mile away from the Subject, and based on the general non-sensitivity of the urban setting of the Subject, are not considered to represent a significant environmental concern. As such, IVI does not suspect that these sites have had a significant negative environmental impact upon the Subject. The remaining listings for the Subject and adjacent properties are discussed below:

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Midtown Service Center 548 West 29 <sup>th</sup> Street	On-site	On-site	On-site	Case Closed

The Subject was assigned Spill No. 1201778 by the NYSDEC on May 18, 2012 when a Hydrogeologic and Forensic Report submitted by Fleming Lee Shue for Spill No. 0700587 assigned to the south-adjacent property located at 282 11<sup>th</sup> Avenue was reviewed by the NYSDEC. The report concluded that contamination in the soil and groundwater on the northern property boundary of 282 11<sup>th</sup> Avenue was coming from an off-site source. The report also identified a gasoline UST vent pipe on the roof of the Subject property. A NYSDEC representative investigated the Subject in relation to this conclusion and found a 275-gallon waste oil AST in the auto repair garage with signs of staining adjacent to the tank. An abandoned manhole cover was also noted by the NYSDEC, which coincided with the location of a 550-gallon gasoline UST recorded on historic Sanborn maps and with the location of the vent on the roof. Due to the poor housekeeping practices observed by the NYSDEC, the stained concrete indicating historical spills, and a possible abandoned gasoline UST, the NYSDEC required further investigation to determine whether the Subject property was the source of the contamination identified on the adjacent property.

The database further stated that the owner of the Subject property provided the NYSDEC with photo documentation proving that the manhole was for a former hydraulic piston lift and not a gasoline UST. Based on these pictures and the above, the NYSDEC no longer considered the Subject a source for the adjacent site contamination and thus, Spill No. 1201778 was granted a case closed status on June 27, 2012. Spill No. 0700587 remains open with the NYSDEC.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Commercial Building 260 11 <sup>th</sup> Avenue	0.08	Southwest	Crossgradient	Case Closed

The above tabulated spill (Spill No. 0109855) was reported in January 2002 as a result of a leaking tank spills product unto a sump pit. A temporary tank was set up and the damaged tank was pumped out. Petroleum Tank Cleaners, Inc. provided an invoice detailing the clean-up and disposal of contaminants, which included 18.89 tons of contaminated soil. The NYSDEC closed the spill in June 2005. Based on the above, IVI does not suspect this site of having a significant negative environmental impact on the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
In Field 509 West 28 <sup>th</sup> Street	0.08	East- Southeast	Crossgradient	Active

The above spill (Spill No. 1205473) was reported in August 2012 when an unknown amount of petroleum was observed in the soil. No other information was found in the CER or on the NYSDEC Spill Incidents Database. The spill is still open with the NYSDEC. However, due to the crossgradient hydrogeologic relationship of this site with the Subject, IVI does not suspect this spill of having had a significant negative environmental impact on the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Former Gas Station 327 10 <sup>th</sup> Avenue	0.13	Southeast	Crossgradient	Active

The above spill (Spill No. 0701228) was reported in April 2007. Six USTs were discovered to be filled with water, were being pumped out and there were plans for removal. In October 2007, the NYSDEC discovered that the excavation had been open for some time and rain had been washing out the gross soil contamination. A subsurface evaluation of the adjacent property (321-325 10<sup>th</sup> Avenue) discovered BTEX and MTBE in groundwater and the suspected source was the former gasoline station. Later in October 2007, IVI Environmental was contracted to conduct a subsurface investigation at the former gas station site which would include excavation of the entire property in preparation for a new high rise apartment building. This spill record has not been updated since October 2007. However, based on the distance of the site from the Subject, and based on the crossgradient hydrogeologic relationship between the site and the Subject, IVI does not suspect this site of having had a significant negative environmental impact on the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Commercial Property 319-325 10 <sup>th</sup> Avenue	0.10	East- Southeast	Crossgradient	Active

The above referenced spill (Spill No. 0700172) was reported in April 2007. The site is three separate lots that were all assigned e-designations due to contaminated soil. As such, the High Line Development Group, which was planning to build a high rise apartment building on the properties, was planning to conduct Phase I and Phase II site investigations and remediation activities under the oversight of the NYCDEP. However, funding for the project was lost in 2008 and no work was done, and so the spill remains open. Due to the crossgradient hydrogeologic relationship between the site and the Subject, IVI does not suspect this spill of having had a significant environmental impact on the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Redevelopment Property 514 West 27 <sup>th</sup> Street	0.11	South- Southeast	Crossgradient	Active

The above spill (Spill No. 1300765) was reported in April 2013 as a result of USTs on site that may have been the source of contamination. However, no additional information was available regarding this listing. Due to the crossgradient hydrogeologic relationship between the site and the Subject, IVI does not suspect this spill of having had a significant environmental impact on the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Unoccupied Night Club/Apartment House 528-530 West 28 <sup>th</sup> Street	0.06	Southeast	Crossgradient	Active

The above spill (Spill No. 1306369) was reported in September 2013. The property was going to be redeveloped as a seven-story mixed-use building and so the existing structure would be demolished and the entire site would be excavated to a depth of 15 feet below grade. During the Phase I investigation, a 20,000-gallon No. 4 fuel oil UST was discovered that had been abandoned in place in the 1940s. During the Phase II investigation, contaminated soil was found near the area of the suspected UST. A very old oil spill was discovered on the west side of the property. The Remedial Action Plan involved the removal of all soils to at least 14 feet below grade and extensive dewatering of the excavation with pretreatment before disposal to the sewer. The site cleanup is currently pending. Due to the crossgradient hydrogeologic relationship between the site and the Subject, IVI does not suspect this spill of having had a significant environmental impact on the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Mobil Oil- #17-510 Albro Opera 309 11 <sup>th</sup> Street	0.06	Northwest	Crossgradient	Active

The above spill (Spill No. 9305598) was reported in August 1993 when contaminated soil was discovered during a UST excavation. Monitoring wells were installed around the property and quarterly sampling was conducted for one year beginning in 2005. As of May 2013, 0.5 feet of product remained in one of the monitoring wells despite multiple attempts to remove it. However, due to the crossgradient hydrogeologic relationship between the site and the Subject, IVI does not suspect this spill of having had a significant environmental impact on the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Construction Site 282 11 <sup>th</sup> Avenue	Adjacent	South and West	Downgradient and Crossgradient	Case Closed

The above site is the location of multiple spills. One spill (Spill No. 1203735) was reported in July 2012 when a 55-gallon drum containing sludge was uncovered during excavation. The endpoint sample from below the drum met CP-51 unrestricted soil clean-up levels, and so the DEC concluded that the drum had not leaked petroleum. The spill was closed in March 2013. An additional spill (Spill No. 1203680) was reported in July 2012 when impacted soil was discovered in a probe sample. This spill was closed and consolidated with Spill No. 0700587, discussed above, in July 2012.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
SB-5 Avalon West Chelsea LLC Site 2 282 11 <sup>th</sup> Avenue	Adjacent	South and West	Downgradient and Crossgradient	Case Closed

The above spill (Spill No. 1203713) was reported in July 2012 due to soil contamination. This spill was closed and consolidated with Spill No. 0700587 in July 2012.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Contamination SB-3 Avalon West Chelsea LLC 282 11 <sup>th</sup> Avenue	Adjacent	South and West	Downgradient and Crossgradient	Case Closed

The above spill (Spill No. 1203712) was reported in July 2012 when soil borings confirmed contamination. The spill was closed and consolidated with Spill No. 0700587 in July 2012.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Construction Site Boring SD-4 282 11 <sup>th</sup> Avenue	Adjacent	South and West	Downgradient and Crossgradient	Case Closed

The above spill (Spill No. 1203731) was reported in July 2012 when soil borings confirmed contamination. The spill was closed and consolidated with Spill No. 0700587 in July 2012.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Avalon West 282 11 <sup>th</sup> Avenue	Adjacent	South and West	Downgradient and Crossgradient	Active

The above spill (Spill No. 0700587) was reported in April 2007 and was the result of plans to redevelop the property, which at the time was occupied by an auto body shop and parking area. According to PBS records, there were eight 550-gallon USTs on site which were temporarily out of service. A Phase II investigation discovered two tank fields- one with eight out-of-service USTs and one with three out-of-service USTs. All were 550-gallons in capacities. Several monitoring wells were installed on-site and off-site. As of February 2009, no free product was found in any of the monitoring wells. By September 2011, subsurface investigations since 2008 showed that a total of 17 tanks had been removed from all lots that make up the site. A groundwater sample from Lot 18 was contaminated with chlorinated solvents, which were suspected to originate from Evan Auto Incorporated, located at 319 10<sup>th</sup> Avenue. As of May 2012, reports showed the groundwater flow to be to the west-northwest. As of November 2012, the NYSDEC Department of Environmental Remediation (DER) approved a remedial action work plan for chemical oxidation. Sampling as of September 2013 revealed the oxidation reaction was complete, but additional post-treatment soil and groundwater sampling needed to be performed. This spill has not yet received a Case Closed status.

Although there is an open spill located on this adjacent site, it is located at a presumed crossgradient to downgradient hydrogeologic position, and as such, IVI does not suspect this site to have had a negative environmental impact on the Subject.

#### **New York and Tribal Institutional Control/Engineering Control Registries**

According to the NYSDEC website, Institutional Controls shall mean any non-physical means of enforcing a restriction on the use of real property that limits human or environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or members of the public, or prevents actions that would interfere with the effectiveness of a remedial program or with the effectiveness and/or integrity of operation, maintenance, or monitoring activities at or pertaining to a brownfield site.

Engineering Control shall mean any physical barrier or method employed to actively or passively contain, stabilize, or monitor hazardous waste or petroleum, restrict the movement of hazardous waste or petroleum to ensure the long-term effectiveness of a remedial program, or eliminate potential exposure pathways to hazardous waste or petroleum. Engineering controls include, but are not limited to, pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls, building ventilation systems, fences, access controls, provision of alternative water supplies via connection to an existing public water supply, adding treatment technologies to such water supplies, and installing filtration devices on private water supplies.

- If an IC/EC is used as a component of a site cleanup plan, the Remedial Work Plan must include: a complete description of the IC/ECs and the mechanisms that will be used to implement, maintain, monitor, and enforce such restrictions and controls, both by the applicant and by any state and local government, and an evaluation of the reliability, viability, and costs of the long-term implementation, maintenance, monitoring, and enforcement of any IC/EC.
- Financial assurance for the long-term maintenance, monitoring, and enforcement of IC/ECs may be required.
- Any EC must be used in conjunction with an IC.
- The final remediation report must include a certification that any IC/ECs are included in an environmental easement that has been duly recorded.
- An annual certification that the IC/ECs are in place and protective of public health and the environment must be submitted to the NYSDEC.
- The NYSDEC must create, update, and maintain a data base available to the public of sites using IC/ECs.
- Any proposal for a change in site use must include an evaluation of the impacts of the change on the viability, reliability, and effectiveness of any IC/ECs.

*Analysis/Comment:* The CER did not identify the Subject on the New York and Tribal Institutional or Engineering Control registries.

### **New York and Tribal Voluntary Cleanup Program Sites**

New York established its Voluntary Cleanup Program (VCP) to address the environmental, legal and financial barriers that often hinder the redevelopment and reuse of contaminated properties. New York's Voluntary Cleanup Program is a cooperative approach among the NYSDEC, lenders, developers and prospective purchasers to investigate and/or remediate contaminated sites. Under the VCP, a volunteer performs remedial activities pursuant to one or more NYSDEC approved work plans. The volunteer agrees to remediate the site to a level which is protective of public health and the environment for the present or intended use

of the property. Investigation and remediation is carried out under the oversight of the NYSDEC and the New York State Department of Health (DOH) and the volunteer pays the State's oversight costs. When the volunteer completes work, a release from liability from the NYSDEC is provided with standard reservations. Once the required remedial actions have been completed, the NYSDEC issues a letter declaring that it agrees that the volunteer has met their obligations and that, barring an event triggering a reopener, the Department does not contemplate further action will need to be taken at the site. Non-PRP volunteers also receive a release that covers natural resource damages. All of the volunteer's successors and assigns (except the site's PRPs) benefit from the release given to the volunteer. The NYSDEC's release binds only itself, and does not bind private parties harmed, does not bind the State's Attorney General, the State's Comptroller, and does not bind the USEPA.

The Release is subject to the following reservations for further investigation or remediation the NYSDEC deems necessary due to:

- Off-site migration of contamination causing significant impacts if the Volunteer is a PRP;
- Environmental conditions or information related to the Site that were unknown when the Release was issued and that indicate that site conditions under the Contemplated Use are not sufficiently protective of human health and the environment;
- Failure to comply with the VCA (e.g., not completing OM&M, not paying State costs, not maintaining use restrictions, etc.);
- Fraud committed by the Volunteer in entering into or implementing the VCA;
- A release, discharge or threat thereof after the effective date of the VCA; or
- A change of use where the new use requires a lower level of residual contamination.

**Analysis/Comment:** The CER identifies the following VCP site within the ASMD:

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
CE – East 19 <sup>th</sup> Street Station 524 East 19 <sup>th</sup> Street	0.50	Southeast	Crossgradient	VCP

The above-tabulated Brownfield site is misplotted on the database and is actually located over the ASMD on the eastern side of Manhattan. Based on the actual location of this facility, IVI does not suspect this site to have had a negative environmental impact on the Subject.



### New York and Tribal Brownfield Sites

According to the NYSDEC website, brownfields are abandoned, idled, or under-used properties where expansion or redevelopment is complicated by real or perceived environmental contamination. They typically are former industrial or commercial properties where operations may have resulted in environmental contamination. Brownfields often pose not only environmental, but legal and financial burdens on communities. The impediments to contaminated site redevelopment in New York are complex. The existing liability scheme may hold all owners of contaminated property liable for cleanup costs, regardless of when or how the property was acquired. The potential cost of cleanup, which may not be known for certain at the time of purchase, is also a deterrent to parties wishing to build, relocate, or expand businesses. Lenders have been reluctant to extend credit for the purchase and cleanup of contaminated sites, fearing future liability issues.

A Brownfield Cleanup Agreement (BCA) is required for all parties who wish to participate in the Brownfield Cleanup Program. By executing a BCA, an Applicant makes a commitment to undertake certain remedial activities under the NYSDEC's oversight.

**Analysis/Comment:** The CER identified the following Brownfield sites within a one-half mile radius of the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
West 28 <sup>th</sup> Street 514 West 28 <sup>th</sup> Street	0.12	South	Crossgradient	Active

The above-tabulated Brownfield site is contaminated with trimethylbenzenes, xylenes, metals, polycyclic aromatic hydrocarbons (PAHs), and chlorinated solvents from former laundry, metal works, manufacturing, auto repair, scrap yard, and freight storage facilities at the property. Groundwater at the site is documented to flow to the west, which is away from the Subject. As such, IVI does not suspect this site to have had a negative environmental impact on the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
West 34 <sup>th</sup> Street Development Project 555 West 34 <sup>th</sup> Street	0.26	North/ Northeast	Crossgradient	Certificate of Completion 12/19/2012

The above-tabulated Brownfield site is located over a quarter-mile from the Subject, which is a sufficient distance from the Subject so as not to be reasonably suspected of having impacted same. In addition, it is located at a presumed hydrogeologically crossgradient position to the Subject. Furthermore, this site

received a Certificate of Completion from the NYSDEC on December 19, 2012, which indicates that the contamination at the site was remediated to the satisfaction of the agency. Groundwater at the site is documented to flow to the west, which is away from the Subject. Based on the above, IVI does not suspect this site to have had a negative environmental impact on the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Hudson Mews Property – Marty Fine Parcel 403 West 37 <sup>th</sup> Street and 501-505 9 <sup>th</sup> Avenue	0.44	Northeast	Crossgradient	Active

The above-tabulated Brownfield site is located over a quarter-mile from the Subject, which is a sufficient distance from the Subject so as not to be reasonably suspected of having impacted same. Groundwater at the site is documented to flow to the northwest, which is away from the Subject. In addition, it is located at a presumed hydrogeologically crossgradient position to the Subject. Based on the above, IVI does not suspect this site to have had a negative environmental impact on the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Former Getty Service Station 239 10 <sup>th</sup> Avenue	0.26	South	Crossgradient	Active

The above-tabulated Brownfield site is located over a quarter-mile from the Subject, which is a sufficient distance from the Subject so as not to be reasonably suspected of having impacted same. Groundwater at the site is documented to flow to the southwest, which is away from the Subject. In addition, it is located at a presumed hydrogeologically crossgradient position to the Subject. Based on the above, IVI does not suspect this site to have had a negative environmental impact on the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Time Warner Cable 511 West 21 <sup>st</sup> St	0.39	South/ Southwest	Crossgradient	Active

The above-tabulated Brownfield site is located over a quarter-mile from the Subject, which is a sufficient distance from the Subject so as not to be reasonably suspected of having impacted same. Groundwater at the site is documented to flow to the southwest, which is away from the Subject. In addition, it is located at a presumed hydrogeologically crossgradient position to the Subject. Based on the above, IVI does not suspect this site to have had a negative environmental impact on the Subject.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
535 West 19 <sup>th</sup> Street Re-Development Site 535 West 19 <sup>th</sup> Street	0.49	South/ Southwest	Crossgradient	Active

The above-tabulated Brownfield site is located over a quarter-mile from the Subject, which is a sufficient distance from the Subject so as not to be reasonably suspected of having impacted same. In addition, it is located at a presumed hydrogeologically crossgradient position to the Subject. Based on the above, IVI does not suspect this site to have had a negative environmental impact on the Subject.

**New York City Building Information System**

The City Environmental Quality Review (CEQR) designation “E” on New York City Zoning Maps indicates that environmental requirements pertaining to potential hazardous material contamination or noise or air quality impacts have been established on one or more tax lots. These “E” designations function as indicators of the environmental review that must be conducted when the lots are developed in accordance with the regulations of the rezoned district.

New York City Zoning Resolution § 11-15 provides that the New York City Department of Buildings (NYCDOB) may not issue a building permit for work on a tax lot labeled with an “E” due to potential hazardous material contamination, if the building permit would allow: (1) a development; (2) an enlargement, extension or change of use involving a residential or community facility use; or (3) an enlargement that disturbs the soil. The NYCDOB identifies haz-mat "E" lots on its Building Information System ("BIS").

An “E” designation for potential hazardous material contamination may be satisfied and removed from a zoning map following receipt of a report from the NYC Office of Environmental Remediation (OER) stating that the environmental requirements for the lot have been met. These requirements may include subsurface investigations and/or remediation of contamination to the satisfaction of the OER.

**Analysis/Comments:** Based on our review of the New York City Department of Buildings (NYCDOB) Buildings Information System (BIS) and New York City Zoning Maps, an “E” Designation has been declared on the Subject. An “E” Designation is a New York City zoning map designation that indicates the presence of an environmental requirement pertaining to, in some cases, potential Hazardous Materials Contamination. E-Designations are established on the Zoning Map by the Department of City Planning (DCP) and City Council as a part of a zoning change/action. More specifically, the Subject’s *E-142* designation is related to the Highline/West Chelsea Rezoning project, of which



the Subject is a part, and it has been placed on the Subject property effective July 23, 2005. The specific description of this designation includes “Hazardous Materials Phase I and Phase II Testing Protocol,” “Window Wall Attenuation & Alternate Ventilation,” “Air Quality -#2 Fuel Oil or #4 Fuel Oil or Natural Gas or HVAC,”

Of importance, an “E” Designation does not indicate a contamination condition. It is solely applied as a precautionary measure and indicates that these designated sites *may* potentially have levels of contamination. This “E” Designation ensures that sampling and remediation take place where hazardous material contamination may exist. Before any new construction or change in use can take place on the property, the environmental requirements of the “E” Designation need to be satisfied. It requires that testing and sampling protocol and remediation (where appropriate) be conducted to the satisfaction of the New York City Department of Environmental Protection (NYCDEP) prior to the issuance of any permit by the New York City Department of Buildings (NYCDOB). These requirements for the “E” Designation also include a mandatory construction-related health and safety plan, which must also be approved by the NYCDEP.

### **6.3 EDR Proprietary Databases**

#### **EDR Manufactured Gas Plants**

This database 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 the 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 wastes. 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.

*Analysis/Comment:* The CER did not identify the Subject or any adjacent properties on the manufactured gas plant database.

#### **EDR Historic Auto Stations**

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR’s review was limited to those categories of sources that might, in EDR’s opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

***Analysis/Comment:*** The CER identified the Subject on the historical auto stations database. Specifically, the Subject was identified with Avi Auto Repair at 548 West 29<sup>th</sup> Street in 1999, 2000, 2004, 2008, 2010, and 2011 and 546 West 29<sup>th</sup> Street in 2005 and 2006. Another listing for El Hav Taxi was identified at 546 West 29<sup>th</sup> Street in 1999 and 2000. For additional information regarding the on-site auto repair, refer to Sections 4.5, 7.1 and 7.10.

In addition, the CER identified the following adjacent properties on the historical auto stations database. The southern adjacent property at 547 West 28<sup>th</sup> Street was identified with the American A1 Auto Transport, Inc. in 2003 and 2004 and the Victor Auto Service, Inc. in 2005. The southern adjacent property at 549 West 28<sup>th</sup> Street was identified as A Collision Inc. in 2002.

### **EDR Historic Cleaners**

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

***Analysis/Comment:*** The CER identified the adjacent property at 304 11<sup>th</sup> Avenue on the Historic Cleaners database. The site was identified as J & V Chinese Laundry Incorporated in 2002. Of importance, this site has since been redeveloped with a high rise residential building with cellar level and any contamination would likely have been removed at the time of construction. In addition, this site would have been located along 11<sup>th</sup> Avenue, not adjacent to the Subject and at a crossgradient position. As such, IVI does not suspect this site of having had a negative environmental impact on the Subject.

**7.1 Chemical Storage and Usage**

As the Subject only includes one occupied building, IVI identified typical cleaning and building maintenance chemicals within the storage closets of 546 West 29<sup>th</sup> Street. Of note, floor drains were not observed in the vicinity of the chemical storage area. Housekeeping was generally considered satisfactory. The chemical containers were undamaged and capped and the immediate storage area did not exhibit obvious evidence of significant spills or leakage. The chemicals, which are stored in their original containers, do not appear to represent an impact to the environmental quality of the site provided that they are used as intended, properly handled, and the regulations pertaining to their usage are followed.

**7.2 Bulk Storage Tanks****Underground Storage Tanks (USTs)**

No USTs were identified on the subject property and no common indicators of USTs such as vent pipes, fill ports, manways, pavement cuts, fuel gauges or dispensers were observed. In addition, according to Joe DeRosa, the Subject's Real Estate Broker from NorthMarq Capital, there are no USTs on-site. Furthermore, the Subject was not identified on the New York list of registered UST facilities.

According to historic Sanborn maps, the Subject's 548 West 29th Street lot formerly contained a 550-gallon buried gasoline tank at the rear section of the former garage facility. A Ground Penetrating Radar (GPR) survey was performed by others on June 29, 2012 in order to locate this tank. Based on the typical size of a UST, the GPR was set to run at 50 scans per foot. The GPR survey was conducted within all accessible areas of the auto body shop, excluding the small office area, and was intended to determine the presence of environmental anomalies of concern. Based on their GPR survey, no anomalies indicative of underground tanks were noted. Based on this information, the actual disposition of this tank is unknown; however, based on the GPR survey, this tank may likely have been removed in the past. Furthermore, although requested, copies of post tank closure documents, along with analytical testing results, were not provided for our review. As such, this former gasoline tank represents a REC to the Subject.

In addition, the Subject was assigned Spill No. 1201778 by the NYSDEC on May 18, 2012 when a Hydrogeologic and Forensic Report submitted by Fleming Lee Shue for Spill No. 0700587, assigned to the south-adjacent property located at 282 11<sup>th</sup> Avenue, was reviewed by the NYSDEC. The report concluded that contamination in the soil and groundwater on the northern property boundary of 282 11<sup>th</sup> Avenue was coming from an off-site source. The report also identified a gasoline UST vent pipe on the roof of the Subject property. A NYSDEC representative investigated the Subject in relation to this conclusion and found a

275-gallon waste oil AST in the auto repair garage with signs of staining adjacent to the tank. An abandoned manhole cover was also noted by the NYSDEC, which coincided with the location of a 550-gallon gasoline UST recorded on historic Sanborn maps and with the location of the vent on the roof. Due to the poor housekeeping practices observed by the NYSDEC, the stained concrete indicating historical spills, and a possible abandoned gasoline UST, the NYSDEC required further investigation to determine whether the Subject property was the source of the contamination identified on the adjacent property.

The database further stated that the owner of the Subject property provided the NYSDEC with photo documentation proving that the manhole was for a former hydraulic piston lift and not a gasoline UST. Based on these pictures and the above, the NYSDEC no longer considered the Subject a source for the adjacent site contamination and thus, Spill No. 1201778 was granted a case closed status on June 27, 2012. Spill No. 0700587 remains open with the NYSDEC.

### **Aboveground Storage Tanks (ASTs)**

No ASTs were observed and IVI did not identify any equipment, which should require such tanks. Moreover, according to Joe DeRosa, the Subject's Real Estate Broker from NorthMarq Capital, there are no ASTs on-site. IVI did not observe evidence of former on-site ASTs such as secondary containment structures, cradles, or concrete support pedestals.

However, the Subject is registered as an active PBS site with the New York State Department of Environmental Conservation (NYSDEC) with PBS No. 2-611575 and is listed as being served with one, in-service, 270-gallon waste oil AST. The registration states that the AST was installed in January 1992 and the expiration expires on September 19, 2016. Of note, IVI did not observe this AST during our recent site reconnaissance. According to Mr. DeRosa, this former AST was formerly located at the rear of the 548 West 29<sup>th</sup> Street building. Residual evidence of spillage or leakage was observed in this area during our recent site visit on the concrete. See Section 5.6 and 6.0 for more discussion on the AST.

## **7.3 Site Waste and Wastewater**

### **Solid Waste**

Non-hazardous solid waste is disposed of in trash bins and is removed from the Subject on a regular basis by the municipality. Potential sources of contamination, such as waste oil or automobile batteries, were not observed in the vicinity of the garbage pickup.

**Sanitary Sewage**

Sanitary sewage disposal is provided by the NYCDEP. IVI did not observe any sources of wastewater or liquid discharge into the sewer other than sanitary sewage.

**Hazardous Waste**

No hazardous waste was observed or reported to be generated on the Subject. Furthermore, IVI's review of the USEPA's database of sites regulated under RCRA did not identify the Subject as a generator of hazardous waste.

**7.4 Stained Soil, Stained Pavement, or Stressed Vegetation**

An limited area of stained concrete was observed at the rear of 548 West 29<sup>th</sup> Street vacant auto repair building within an area of the former waste oil AST. For more discussion, see Sections 5.6, 6.0 and 7.2.

**7.5 Liquid Discharges**

No visible evidence of liquid discharges, suspected to represent an environmental concern were observed during our survey.

**7.6 Pools of Liquid**

IVI did not observe significant standing surface water or pools containing liquids likely to be hazardous substances or petroleum products.

**7.7 Pits, Ponds, or Lagoons**

No pits, ponds or lagoons suspected of containing hazardous substances or petroleum products were identified on-site.

**7.8 Wells**

IVI did not identify on-site dry wells, irrigation wells, injection wells, observation wells, monitoring wells, potable water wells, recovery wells or abandoned wells.

**7.9 On-Site Fill**

Based on our observations, other than typical engineered fill used in foundation construction, it does not appear that a significant amount of fill has been imported onto the Subject.

**7.10 Drums and Containers for Storing Waste**

IVI observed four, empty 55-gallon drums within the 548 West 29<sup>th</sup> Street vacant auto repair building. The drums were located at the northeast, east and southwest areas of the building. The drums, which are not labeled, reportedly formerly contained fluids for auto repair use. The drums are stored on a concrete slab, and were observed to be in generally in good condition. Since the drums are no longer used at the site, they should be properly disposed of.

**7.11 Floor Drains and Sumps**

IVI did not identify any floor drains or sumps that were stained, emitting foul odors, or connected to an on-site sewage disposal system, or located adjacent to chemical storage areas.

**7.12 Odors**

IVI did not identify strong, pungent, or noxious odors suspected to represent an environmental concern.

**7.13 Air Emissions**

IVI did not identify processes or equipment that emit noticeable vapors or fumes.

**7.14 Polychlorinated Biphenyls (PCBs)**

Two inactive in-ground hydraulic lifts were located on-site within the former auto repair building at 548 West 29<sup>th</sup> Street. According to the *Limited Phase I Environmental Inspection Report for 548 West 29<sup>th</sup> Street*, dated May 30, 2012, prepared by Atlantic Environmental Solutions, Inc. (AESI), two manhole covers were observed by AESI. The property owner was able to remove the cover from the western manhole at that time; however, the eastern manhole could not be inspected because it was covered with cement. The western manhole was a cylindrical pit which was empty and no staining was observed by AESI personnel. AESI concluded that the placement of the two manholes are indicative of two hydraulic lifts located in the repair garage. The report stated that the property owner indicated that a previous owner had removed the hydraulic lifts and pumps. Although requested, copies of post hydraulic lift closure documents, along with analytical testing results, were not provided for our review. As such, these former in-ground hydraulic lifts represent a REC to the Subject.

No electrical transformers, capacitors or other additionally potentially PCB-containing equipment were observed on-site.

**7.15 Asbestos-Containing Material (ACM)**

Based on the age of the site improvements, the potential use of ACMs exists. No friable materials were observed in the readily available areas of the Subject. In addition, non-friable wallboard assemblies, resilient floor finish assemblies, plasters, mastics, caulking and roofing materials may contain asbestos. These suspect materials were observed to be in good condition at the time of our inspection. Furthermore, it is possible that other suspect ACM exists in inaccessible locations such as behind walls, within pipe chases, above ceilings, and beneath visible flooring. Based on the anticipated demolition activities of the Subject, there is a high potential for disturbance of the suspect ACM..

**7.16 Lead-in-Drinking Water**

Based on our conversations with utility personnel, the water at the Subject is not expected to contain elevated levels of lead.

**7.17 Radon**

Based on statistical information maintained within the New York State Department of Health (NYSDOH)'s *Short Term Basement Radon Measurements by Town*, dated October 2012, radon concentrations in Manhattan average 2.08 picocuries per liter (pCi/L), which is below the 4.0 pCi/L action level established by the USEPA, and places the Subject in Zone 2. Based solely on this information, a radon condition is not suspected to exist at the Subject.

**7.18 Lead-Based Paint (LBP)**

Since the Subject was constructed prior to the Consumer Product Safety Commission's 1978 ban on the sale of LBP to consumers and the use of LBP in residences, there is a potential that LBP may have been applied at the Subject. Painted surfaces observed by IVI were generally in good to poor condition with some evidence of peeling and flaking. Inasmuch as the building is scheduled for demolition activities, the potential for disturbance of the suspect LBP is high.

**8.1 Questionnaires**

IVI sent a Pre-Survey Questionnaire and an AAI User Questionnaire to the site contact and the User, respectively. The purpose of these questionnaires was to disclose any previous or existing hazardous waste or toxic material conditions, which may not have been apparent at the time of our site reconnaissance and to satisfy the User interview all appropriate inquiry requirements.

The completed Pre-Survey Questionnaire is attached hereto as Appendix B. The questionnaire did not identify any recognized environmental conditions in connection with the Subject. However, the User has not returned a completed AAI Questionnaire.

**8.2 User****8.2.1 Title Records**

A copy of the Subject's Chain-of-Title has not been provided to IVI for review.

**8.2.2 Environmental Clean Up Liens and Activity and Use Limitations (AULs)**

The User has not returned the AAI User Questionnaire.

**8.2.3 Specialized Knowledge**

The User has not returned the AAI User Questionnaire.

**8.2.4 Relationship of Purchase Price to Fair Market Value Due to Contamination in Connection with the Subject**

The User has not returned the AAI User Questionnaire.

**8.2.5 Common Knowledge or Reasonably Ascertainable Information**

The User has not returned the AAI User Questionnaire.

**8.2.6 Purpose for Conducting the Phase I Environmental Site Assessment**

The User has not returned the AAI User Questionnaire.

**8.2.7 Proceedings Involving the Property**

The User has not returned the AAI User Questionnaire.

**8.3 Key Site Manager****8.3.1 Historic Site Use**

According to Michael Shanabrook, the property's Attorney, who has been involved with the property for the past seven years, the 546 West 29<sup>th</sup> Street building has been a gallery since 2007, the 548 West 29<sup>th</sup> Street building has been vacant since 2012, and the 550 West 29<sup>th</sup> Street building has been vacant since 2013. The 550 West 29<sup>th</sup> Street building was reportedly an office since at least 2006 and used as a gallery prior to that.

**8.3.2 Proceedings Involving the Property**

Mr. Shanabrook and Mr. Joe DeRosa, the Subject's Real Estate Broker from NorthMarq Capitalhad, no knowledge of pending, threatened, or past litigation, administrative proceedings, or notices from governmental agencies regarding violations of environmental laws regarding hazardous substances or petroleum products.

**8.4 Occupants**

As the Subject consists of two vacant buildings and an art gallery, occupants were unavailable for interviews.

**8.5 Past Owners**

IVI was unable to locate the site's former owner.

**8.6 Local Regulatory Agency Interviews and/or File Reviews****Tax Assessor**

According to the tax assessor records reviewed, the Subject consists of three separate properties identified on tax maps as Block 700, Lots 59, 60, and 61 and totals 0.17-acre. The tax assessor records indicate that the building at 546 West 29<sup>th</sup> Street was built in approximately 1930, the building at 548 West 29<sup>th</sup> Street was built in approximately 1935, and the building at 550 West 29<sup>th</sup> Street was built in approximately 1930. However, these dates do not agree with the information obtained from the Sanborn maps. For further discussion of the age of the buildings, see Sections 5.1 and 5.3.

**Building Department**

IVI reviewed building permits and records for the Subject at the on the NYCBIS website. The following relevant documents were reviewed:

Subject Address	Permit Number	Date	Purpose of Permit
546-548 West 29 <sup>th</sup> Street	30188	1944	Certificate of Occupancy Block 700, Lots 59-60 Two-story commercial building; garage and freight terminal on first floor, offices on second floor.
550 West 29 <sup>th</sup> Street	099107	1991	Certificate of Occupancy Block 700, Lot 61 Three-story commercial building. Cellar contains storage and boiler room, first floor used as office space, second floor used as office space and storage, and the third floor used as the caretaker's apartment and as a dance studio.
546-548 West 29 <sup>th</sup> Street	116118	1998	Certificate of Occupancy Block 700, Lots 59-60 Two-story commercial building. First floor occupied by auto repair garage. Second floor used as storage and office space.
546 West 29 <sup>th</sup> Street	120933053F	2012	Block 700, Lot 59 Two-story commercial building. First floor used for gallery and office space, second floor used as an accessory office, and a terrace is located on the roof.

### Department of Planning and Zoning

Review of available zoning records maintained by the New York City Department of Buildings indicates that the Subject is currently zoned R6B, a residential district. In addition, the property is listed under areas with City Environmental Quality Declarations ('e' designation), signifying potential environmental issues. See Section 6.2 for further discussion.

### Fire Department

IVI has sent a request to the New York City Fire Department for environmental information pertaining to the Subject property. As of this writing, the Fire Department has not responded to our request. Should receipt of a response from the Fire Department change the conclusions of this report, the Client will be notified in writing by IVI.

**Health Department**

IVI has sent a request to the New York City Health Department for environmental information pertaining to the Subject property. As of this writing, the Health Department has not responded to our request. Should receipt of a response from the Health Department change the conclusions of this report, the Client will be notified in writing by IVI.

**Department of Environmental Conservation**

IVI has sent a request to the New York State Department of Environmental Conservation (NYSDEC) for environmental information pertaining to the Subject property and adjacent spill site. As of this writing, the NYSDEC has not responded to our request. Should receipt of a response from the NYSDEC change the conclusions of this report, the Client will be notified in writing by IVI.

**Department of Environmental Protection**

IVI has sent a request to the New York City Department of Environmental Protection (NYCDEP) for environmental information pertaining to the Subject property. As of this writing, the NYCDEP has not responded to our request. Should receipt of a response from the NYCDEP change the conclusions of this report, the Client will be notified in writing by IVI.

IVI conducted a “Tier I” (non-intrusive) Vapor Encroachment Screening (VES) on the Subject in accordance with the methodology set forth in ASTM E 2600-10 “*Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*”. During the VES, the Area of Concern (AOC) was minimized using the methodology taught in the ASTM Screening for Vapor Encroachment onto Property Involved in Real Estate Transactions Training Course. The purpose of the Tier I VES is to conduct an initial screen to identify, to the extent feasible, the potential for a vapor encroachment condition (VEC) in connection with the Subject with respect to chemicals of concern that may migrate as vapors into the subsurface of the Subject as a result of contaminated soil and groundwater on or near the property.

This VES utilized readily available data sources previously discussed in this Phase I ESA to include the type of soils, geology and groundwater characteristics of the Subject area (refer to Section 4.3) as well as known or potentially contaminated sites as identified on Federal, State, tribal and local databases. IVI also utilized previously discussed standard historical sources of information to identify potential historical sources of contamination on the Subject and surrounding properties which may be indicative of a VEC. This data collection and analysis was coupled with our site reconnaissance of the Subject and surrounding properties. Based upon the results of our data collection, reconnaissance and analysis, a summary of our Tier I VES findings is presented in the table below:

<b>Potential for Vapor Encroachment to Impact the Subject</b>	
<b>Area of Concern</b>	<b>Conclusion</b>
Subject Property Operations or Existing Conditions	None identified (Refer to Sections 4.0 Site Description and 7.0 Site Reconnaissance)
Historical Uses of the Subject Property	One identified (Refer to Section 5.0 Historical Use)
Adjoining Property Operations or Existing Conditions	None identified (Refer to Section 4.2 Surrounding Land Use)
Historical Uses of Adjoining Properties or Nearby Properties	Several identified (Refer to Section 5.0 Historical Use)
Regulatory Review of sites identified on Federal, State, tribal and Local Environmental Databases which were located in Approximate Minimum Search Distance (AMSD)	Several identified (Detailed within Section 6.0 Regulatory Review), but none of concern.

According to historic Sanborn maps, the Subject’s 548 West 29<sup>th</sup> Street lot formerly contained a 550-gallon buried gasoline tank at the rear section of the former garage facility. A Ground Penetrating Radar (GPR) survey was performed by others on June 29, 2012 in order to locate this tank. Based on the typical size of a UST, the GPR was set to run at 50 scans per foot. The GPR survey was conducted within all accessible areas of the auto body shop, excluding the small office area, and was intended to determine the presence of environmental anomalies of concern. Based on their GPR survey, no anomalies indicative of underground tanks were noted. Based on this information, the actual disposition of this tank is unknown; however, based on the GPR survey, this tank may likely have been removed in the past. Furthermore, although requested, copies of

## 9.0 VAPOR ENCROACHMENT SCREENING

---

546, 548 & 550 West 29th Street  
New York, New York

post tank closure documents, along with analytical testing results, were not provided for our review. As such, this former gasoline tank represents a REC to the Subject and a VEC cannot be ruled out.

In addition, several impacted properties were identified in IVI's regulatory database review. However, based upon hydrogeology, groundwater flow direction and the furthest known extents of the contamination, none of these properties are suspected of having petroleum or chemical contaminant plumes that would be identified as a VEC and as such, a VEC can be ruled out for the surrounding properties.

IVI has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E1527-13 of the property located at 546, 548 and 550 West 29<sup>th</sup> Street, New York, New York. Any exceptions to, or deletions from, the standard practice are described within Section 2.0 of this report.

This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Subject except for the following:

### **New York City Little “E” Designation**

Based on our review of the New York City Department of Buildings (NYCDOB) Buildings Information System (BIS) and New York City Zoning Maps, an “E” Designation has been declared on the Subject. An “E” Designation is a New York City zoning map designation that indicates the presence of an environmental requirement pertaining to, in some cases, potential Hazardous Materials Contamination. E-Designations are established on the Zoning Map by the Department of City Planning (DCP) and City Council as a part of a zoning change/action. More specifically, the Subject’s *E-142* designation is related to the Highline/West Chelsea Rezoning Project, of which the Subject is a part, and it has been placed on the Subject property effective July 23, 2005. The specific description of this designation includes “Hazardous Materials Phase I and Phase II Testing Protocol,” “Window Wall Attenuation & Alternate Ventilation,” “Air Quality -#2 Fuel Oil or #4 Fuel Oil or Natural Gas or HVAC,”

Of importance, an “E” Designation does not indicate a contamination condition. It is solely applied as a precautionary measure and indicates that these designated sites *may* potentially have levels of contamination. This “E” Designation ensures that sampling and remediation take place where hazardous material contamination may exist. Before any new construction or change in use can take place on the property, the environmental requirements of the “E” Designation need to be satisfied. It requires that testing and sampling protocol and remediation (where appropriate) be conducted to the satisfaction of the New York City Department of Environmental Protection (NYCDEP) prior to the issuance of any permit by the New York City Department of Buildings (NYCDOB). These requirements for the “E” Designation also include a mandatory construction-related health and safety plan, which must also be approved by the NYCDEP.

Until any new construction or change in use takes place, the Owner/Operator may continue to use the property in any legal manner, as they did before the “E” Designation, for as long as they would like. Since new construction is scheduled to take place on all three contiguous lots, IVI recommends that the environmental requirements of the “E” Designation be satisfied until a “Notice of Satisfaction” has been received.

---

**Underground Storage Tanks (USTs) and NYSDEC Spill Listings**

According to historic Sanborn maps, the Subject's 548 West 29<sup>th</sup> Street lot formerly contained a 550-gallon buried gasoline tank at the rear section of the former garage facility in at least 1930. A Ground Penetrating Radar (GPR) survey was performed by others on June 29, 2012 in order to locate this tank. Based on the typical size of a UST, the GPR was set to run at 50 scans per foot. The GPR survey was conducted within all accessible areas of the auto body shop, excluding the small office area, and was intended to determine the presence of environmental anomalies of concern. Based on their GPR survey, no anomalies indicative of underground tanks were noted. Based on this information, the actual disposition of this tank is unknown; however, based on the GPR survey, this tank may likely have been removed in the past. Furthermore, although requested, copies of post tank closure documents, along with analytical testing results, were not provided for our review. As such, this former gasoline tank represents a REC to the Subject.

In addition, the Subject was assigned Spill No. 1201778 by the New York State Department of Environmental Conservation (NYSDEC) on May 18, 2012 when a Hydrogeologic and Forensic Report submitted by Fleming Lee Shue for Spill No. 0700587, assigned to the south-adjacent property located at 282 11<sup>th</sup> Avenue, was reviewed by the NYSDEC. The report concluded that contamination in the soil and groundwater on the northern property boundary of 282 11th Avenue was coming from an off-site source. The report also identified a gasoline UST vent pipe on the roof of the Subject property. A NYSDEC representative investigated the Subject in relation to this conclusion and found a 275-gallon waste oil AST in the auto repair garage with signs of staining adjacent to the tank. An abandoned manhole cover was also noted by the NYSDEC, which coincided with the location of a 550-gallon gasoline UST recorded on historic Sanborn maps and with the location of the vent on the roof. Due to the poor housekeeping practices observed by the NYSDEC, the stained concrete indicating historical spills, and a possible abandoned gasoline UST, the NYSDEC required further investigation to determine whether the Subject property was the source of the contamination identified on the adjacent property.

The database further stated that the owner of the Subject property provided the NYSDEC with photo documentation proving that the manhole was for a former hydraulic piston lift and not a gasoline UST. Based on these pictures and the above, the NYSDEC no longer considered the Subject a source for the adjacent site contamination and thus, Spill No. 1201778 was granted a case closed status on June 27, 2012. Spill No. 0700587 for the adjacent property remains open with the NYSDEC.

In any event, the Subject is reportedly scheduled to be completely redeveloped with the demolition of the site structures. As part of this conversation, significant excavation activities below the existing buildings are reportedly scheduled to take place. IVI recommends that care be taken during these excavation/redevelopment activities and that

any encountered USTs and/or associated contamination, if any, be removed in accordance with governmental regulations. If redevelopment activities are no longer planned, a Phase II Subsurface Investigation should be performed to determine if the former UST has negatively impacted the Subject.

### **Inactive In-Ground Hydraulic Lifts**

Two inactive in-ground hydraulic lifts were located on-site within the former auto repair building at 548 West 29th Street. According to the Limited Phase I Environmental Inspection Report for 548 West 29th Street, dated May 30, 2012, prepared by Atlantic Environmental Solutions, Inc. (AESI), two manhole covers were observed by AESI. The property owner was able to remove the cover from the western manhole at that time; however, the eastern manhole could not be inspected because it was covered with cement. The western manhole was a cylindrical pit which was empty and no staining was observed by AESI personnel. AESI concluded that the placement of the two manholes are indicative of two hydraulic lifts located in the repair garage. The report stated that the property owner indicated that a previous owner had removed the hydraulic lifts and pumps. Although requested, copies of post hydraulic lift closure documents, along with analytical testing results, were not provided for our review. As such, these former in-ground hydraulic lifts represent a REC to the Subject. In any event, the Subject is reportedly scheduled to be completely redeveloped with the demolition of the site structures. As part of this conversation, significant excavation activities below the existing buildings are reportedly scheduled to take place. IVI recommends that care be taken during these excavation/redevelopment activities and that any encountered USTs, inactive hydraulic systems and/or associated contamination, if any, be removed in accordance with governmental regulations. If redevelopment activities are no longer planned, a Phase II Subsurface Investigation should be performed to determine if the in-ground hydraulic lifts have negatively impacted the Subject.

In addition, the following items of business environmental risk were identified, which warrant mention:

### **Aboveground Storage Tank (AST)**

The Subject is registered as an active Petroleum Bulk Storage (PBS) site with the NYSDEC with PBS No. 2-611575 and is listed as being served with one, in-service, 270-gallon waste oil AST. The registration states that the AST was installed in January 1992 and the expiration expires on September 19, 2016. Of note, IVI did not observe this AST during our recent site reconnaissance. According to Joe DeRosa, the Subject's Real Estate Broker from NorthMarq Capital, this former AST was formerly located at the rear of the 548 West 29<sup>th</sup> Street building. Residual evidence of spillage or leakage was observed in this area during our recent site visit on the concrete. IVI recommends that the residual evidence of spillage or leakage is clean-up and disposed of off-site according to all governmental regulations. In addition, IVI recommends the current PBS certificate be properly updated to reflect the removal of the AST.

In addition, the following items of potential environmental concern were identified, which warrant mention:

**Asbestos-Containing Material (ACM)**

Based on the age of the site improvements, the potential use of ACMs exists. No friable materials were observed in the readily available areas of the Subject. In addition, non-friable wallboard assemblies, resilient floor finish assemblies, plasters, mastics, caulking and roofing materials may contain asbestos. These suspect materials were observed to be in good condition at the time of our inspection. Furthermore, it is possible that other suspect ACM exists in inaccessible locations such as behind walls, within pipe chases, above ceilings, and beneath visible flooring. Based on the anticipated demolition activities of the Subject, there is a high potential for disturbance of the suspect ACM. Since the Subject buildings are scheduled for demolition, IVI recommends a comprehensive asbestos demolition survey be conducted to determine the quantity and location of ACMs. All identified ACMs should be properly abated prior to any demolition activities to the extent required by applicable regulations. All activities involving ACM should be conducted in accordance with governmental regulations.

**Lead-Based Paint (LBP)**

Since the Subject was constructed prior to the Consumer Product Safety Commission's 1978 ban on the sale of LBP to consumers and the use of LBP in residences, there is a potential that LBP may have been applied at the Subject. Painted surfaces observed by IVI were generally in good to poor condition with some evidence of peeling and flaking. Inasmuch as the building is scheduled for demolition activities, the potential for disturbance of the suspect LBP is high. Since the Subject buildings are scheduled for demolition, all activities involving LBP should be conducted in accordance with HUD guidelines, the USEPA's Lead-Based Paint Renovation, Repair and Painting Program Rule as well as the OSHA Lead in Construction (CFR Part 1926.62) and EPA Renovate Right regulations and RCRA guidelines.

- 11.1** This report has been prepared in compliance with the ASTM standard entitled “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process” E1527-13.
- 11.2** The observations described in this report were made under the conditions stated herein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services within the constraints imposed by the client. The work described in this report was carried out in accordance with the Terms and Conditions of the contract.
- 11.3** In preparing this report, IVI has relied on certain information provided by federal, state, and local officials and other parties referenced therein, and on information contained in the files of governmental agencies, that were readily available to IVI at the time of this assessment. Although there may have been some degree of overlap in the information provided by these various sources, IVI did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this site assessment. Observations were made of the site and of the structures on the site as indicated in this report. Where access to portions of the site or to structures on the site was unavailable or limited, IVI renders no opinion as to the presence of direct or indirect evidence relating to petroleum substances, hazardous substances, or both, in that portion of the site and structure. In addition, IVI renders no opinion as to the presence of indirect evidence relating to hazardous material or oil, where direct observation of the ground surface, interior walls, floors, ceiling or a structure is obstructed by objects or materials, including snow, covering on or over these surfaces.
- 11.4** As part of this assessment, IVI submitted requests for information via the Freedom of Information Act (FOIA) to various governmental agencies. As of the preparation of this report these requests may not have been fulfilled. The conclusions of this report are subject to change upon receipt of a response from these FOIA requests.
- 11.5** IVI does not represent that the site referred to herein contains no petroleum or hazardous or toxic substances or other conditions beyond those observed by IVI during the site walkthrough.
- 11.6** IVI has produced this document under an agreement between IVI and Doral Bank USA. All terms and conditions of that agreement are included within this document by reference. Any reliance upon this document, or upon IVI’s performance of services in preparing this document, is conditioned upon the relying party’s acceptance and acknowledgement of the limitations, qualifications, terms, conditions and indemnities set forth in that agreement, and property ownership/management disclosure limitations, if any. It is not to be relied upon by any party other than Doral Bank USA nor used for any purpose other than that specifically stated in our Agreement or within this Report’s Introduction section without IVI’s advance and express written consent. The Phase I report is only valid if completed within 180 days of an acquisition or the transaction necessitating the report.
- 11.7** **TIME LIMITATION TO ENACT CLAIM AGAINST IVI** If in the opinion of the client, or any third party claiming reliance on IVI’s report or services, that IVI was negligent or in breach of contract, such aforementioned parties shall have one year from the date of IVI’s site visit to make a claim.
- 11.8** Unless specifically identified within Section 2, Chinese drywall, indoor air quality and any other non-ASTM scope issues as identified in ASTM E1527-13, Section 13.1.5, are excluded from the scope of this assessment.



ATLANTIC ENVIRONMENTAL SOLUTIONS, INC.

May 30, 2012

Mr. Raba Abramov  
548 West 29<sup>th</sup> Street  
New York, New York 10001

**Re: *Limited Phase I Environmental Inspection Report***  
***548 West 29<sup>th</sup> Street, New York, New York***

Dear Mr. Abramov,

Please find enclosed the Limited Phase I Environmental Inspection Report prepared by Atlantic Environmental Solutions, Inc. (AESI) in connection with the referenced property located at 548 West 29<sup>th</sup> Street, New York, New York. The enclosed report was prepared in conformance with the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Standard Practice E-1527-05).

Should you have any questions regarding this inspection, please do not hesitate to contact me at (201) 876-9400. It has been our pleasure to assist you in this matter.

Sincerely,

Christine Lezette  
Project Manager

## **Environmental Inspection Report**

**Block 700, Lot 60  
548 West 29<sup>th</sup> Street  
New York, New York 10001**

### **INTRODUCTION**

Atlantic Environmental Solutions, Inc. (AESI) was retained to conduct a limited environmental inspection of the property located at 548 West 29<sup>th</sup> Street, New York, New York (“subject property”).

The objective of the limited inspection was to develop an initial summary of the actual and potential environmental liabilities associated with the subject property through visual analysis, and a review of readily available information concerning known environmental contamination at or near the site, and a limited review of past and present land use in the immediate vicinity of the property. Specifically, AESI performed the assessment to identify the presence of hazardous substances, petroleum products, or conditions that indicate an existing or past discharge of hazardous substances or petroleum products onto the surface of the property.

### **SUBJECT PROPERTY DESCRIPTION**

AESI performed an inspection of the subject property on May 25, 2012. The inspection included a visual reconnaissance of all readily accessible areas of the property. The subject property is located at 548 West 29<sup>th</sup> Street, New York, New York. The property is a one (1) story building with one (1) vehicle garage door. The building is occupied by a taxi repair shop. The building is bound to the west by a two (2) story building, to the north by 29<sup>th</sup> Street, to the east by a three (3) story building, and to the south by a construction site.

AESI conducted an evaluation of the historical use of the subject property based on a review of available Sanborn Fire Insurance Maps, Historical Topographic Maps, and Historic Aerial Photographs. (See Attachment A). On the basis of our review, the property was identified as having once operated as mixed residential and commercial property and then later as a auto repair shop. The following provides a more detailed summary:

1. Fire insurance map coverage was reviewed for the following years: 1890, 1899, 1911, 1919, 1928, 1930, 1950, 1976, 1979, 1980, 1982, 1985, 1987, 1988, 1991, 1992, 1993, 1994, 1995, 1996, 2001, 2002, 2003, 2004, and 2005. These maps showed the site as being a four (4) story mixed use residential and commercial dwelling from 1890 through 1930. During review of the Sanborn maps, AESI observed that an adjacent property bound to the south, 546 West 29<sup>th</sup> Street, had a L shape structure that wrapped behind the building at 548 West 29<sup>th</sup> Street. The property bound to the south was used as a garage and a buried 500-gallon gasoline tank was noted on the 1930 Sanborn map. The 1950 Sanborn map shows that the structure changed to a one (1) story express depot with concrete floor and from 1976 through the current operations, the structure was a auto repair. The structure at the property of 548 West 29<sup>th</sup> Street expands the entire lot as seen in the 1950 Sanborn map, and the garage at the adjacent property is no longer observed.



2. Historical Topographic Maps were reviewed for the years 1891, 1897, 1900, 1903, 1905, 1940, 1947, 1955, 1966, 1967, 1976, 1981, and 1995. These maps identified the site as being located in Manhattan, east of the Hudson River, and west of the Highline elevated railroad line. The subject property is also located south of the New York Hudson Yards.

3. Historic Aerial Photographs were reviewed for the years 1924, 1943, 1954, 1966, 1979, 1984, 1994, 1995, 1997, 2006, and 2008. These maps identified the site as being located east of the Hudson River and south of a cargo or railway center.

In addition to the site inspection, AESI conducted a review of available environmental regulatory records provided by Federal and State regulatory agencies. The objective of the background research was to obtain and/or review readily available records from standard sources that would assist in identifying recognized environmental concerns. The following sources of information were reviewed for sites located on or adjacent to the subject property:

**SITES INFORMATION/SEARCH DISTANCE FROM SITES:**

- Federal National Priority List sites / within a one-mile radius of the properties / 1 mile;
- Federal RCRA TSD facilities list / ½ mile;
- Federal RCRA CORRACTS facilities list / 1 mile;
- Federal RCRA generators list / subject properties and adjoining properties;
- Federal ERNS list / subject properties only;
- Federal CERCLIS list / ½ mile;
- Federal CERCLIS-NFRAP list / subject properties and adjoining properties;
- State lists of hazardous waste sites identified for investigation or remediation / 1 mile;
- State landfill and/or solid waste disposal site lists / ½ mile;
- State leaking UST lists / ½ mile; and,
- State registered UST lists / subject properties and adjoining properties.

There are seventy-four (74) historical leaking UST sites located within 1/2 mile of the subject property. The nearest sites are located at 524 West 29<sup>th</sup> Street (currently an art gallery), and 515 West 28<sup>th</sup> Street (currently a construction site). Both sites have closure dates filed as 3/4/2003, and 12/7/1998 respectively. Given the distance, it is unlikely to have an adverse effect on the subject property. The remaining sites are also unlikely to have an adverse effect due to their distance and/or elevation. No registered underground storage tanks (USTs) were found in the records for the subject property, however the subject property and the adjacent properties at 546 and 550 West 29<sup>th</sup> Street are registered as E-Designation sites. See Attachment B for the Environmental Database Search.

AESI also requested information regarding environmental records concerning the subject property from the New York City Department of Environmental Protection. AESI also requested environmental documents from the New York Department of Environmental Conservation (NYDEC), and the United States Environmental Protection Agency (USEPA). At the time of this writing, no information was provided indicating a discharge occurred at the property. Should AESI be presented with additional information regarding these requests which warrant additional recommendations; AESI will forward additional recommendations to your attention (See Attachment C).



## **OBSERVATIONS FROM SITE INSPECTION**

AESI conducted an inspection of the site to identify the following areas of concern; observations summarized below are based on the May 25, 2012 site inspection.

### **AREA OF ENVIRONMENTAL CONCERN**

### **AESI OBSERVATION**

#### **BULK STORAGE TANKS AND APPURTENANCES**

Aboveground Tanks And Associated Piping	<i>See 1. Below</i>
Underground Tanks and Associated Piping	<i>See 2. Below</i>
Storage Pads And Areas Including Drum/Waste Storage	<i>See 1. Below</i>
Rail Spurs Or Sidings	None Identified
Pump Stations, Sumps, Pits	<i>See 3. Below</i>
Surface Lagoons And Impoundments	None Identified
Chemical Storage Cabinets Or Closets	<i>See 4. Below</i>
Medical Waste/Bio-hazardous Waste Storage	None Identified
Transformers	None Identified

#### **DRAINAGE SYSTEMS AND AREAS**

Surface Water Bodies	None Identified
Floor Drains Or Trenches And Piping	None Identified
Process Area Sinks And Piping	None Identified
Sanitary Sewer Collection Systems	None Identified
Septic Systems, Leach Fields	None Identified
Seepage Pits, Dry Wells	None Identified
Storm Water Detention Ponds And Fire Water Ponds	None Identified
Drainage Swales And Culverts	None Identified
Roof Leaders Where Process Operations Vent To Roof	None Identified
Active or Inactive Production, Monitoring or Irrigation Wells	None Identified

#### **DISCHARGE AND DISPOSAL AREAS**

Solid Waste Generation/Disposal and Dumpsters	None Identified
Sanitary/Process Waste Generation/Discharge Points	None Identified
Underground Piping, Including Industrial Process Sewers	None Identified
Waste Piles	None Identified
Landfills Or Land farms	None Identified
Open Pipe Discharges	None Identified

#### **BUILDING INTERIOR AREAS**

Waste Treatment Areas	None Identified
Air Vents And Ducts	None Identified
Boiler Room	None Identified
Air Compressor	None Identified



1. **Aboveground Tank/ Waste Storage** - While onsite AESI observed a 250-gallon waste oil aboveground storage tank (AST) located in the rear of the garage at the subject property. The tank is used to discard motor oil and other wasted petroleum products produced when cars are repaired in the taxi repair garage. A catch basin contained the AST and did not appear to contain oil, and no staining was apparent. The waste oil tank was labeled with the identification number, contents, and quantity. No further action is recommended for this area of concern.

2. **Underground Tanks** – The presence of an existing underground storage tank was not observed during the site inspection, however, during review of historical Sanborn map, a 500-gallon buried gasoline tank was noted in the rear of the lot at 548 West 29<sup>th</sup> Street in 1930. It was apparent that the tank was associated to the adjacent garage at 546 West 29<sup>th</sup> Street, as the property of 548 West 29<sup>th</sup> Street had a mixed commercial and residential dwelling and the structure of 546 West 29<sup>th</sup> Street was a L shape that connected behind 548 West 29<sup>th</sup> Street. In later Sanborn maps, the structures changes and the underground storage tank is no longer identified. The use of the subject property and adjacent property at 546 West 29<sup>th</sup> Street changes. The presence the underground storage tank is unknown. Please see findings and conclusions for recommendations.

3. **Pits** - Two (2) manhole covers were observed during the site inspection. The property owner was able to remove the cover from the western manhole as the eastern manhole was covered with cement. A cylindrical pit, approximately 10' deep by 1' diameter, was discovered beneath the removed cover. The pit was empty and no staining was observed. The observed pit and placement of the second manhole are indicative of two (2) hydraulic lifts located at the repair garage. During further discussion with the property owner, AESI was made aware that a previous property owner cleaned and removed the hydraulic lifts and pumps. Please see findings and conclusions for recommendations.

4. **Chemical Storage Area** - One (1) 30-gallon drum of gear oil/ lubricant was observed at the subject property. The drum was stored on movable platforms and no staining was observed beneath the drum. Multiple pints of motor oil were observed throughout the garage. Slight staining from the related vehicle repair was observed, but no staining or cracks were observed in the concrete floor that would suggest entry of the oil or petroleum product to soil below. No further action is recommend for this area of concern.

## FINDINGS AND CONCLUSIONS

AESI performed a limited inspection and assessment of the subject property located at 548 West 29<sup>th</sup> Street, New York, New York. Areas of concern warranting further evaluation were observed by our firm at the subject property; two (2) manholes, and a suspected underground storage tank. One (1) manhole cover was removed and no contents of a hydraulic lift was observed. Although the hydraulic lift in the one (1) manhole was not observed, AESI recommends a geophysical survey and subsurface investigation to be conducted within the garage to further determine the presence of the formerly used hydraulic pumps/tanks, and the presence of a presumable 500-gallon underground gasoline tank noted in the 1930 Sanborn map. AESI also recommends that the cover of the second manhole be removed to observe the contents of the pit.

It should be noted that this inspection did not include any invasive investigation regarding the actual quality of the soils or building materials present at or beneath the surface of the property.

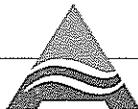


## LIMITATIONS/QUALIFICATIONS/DISCLAIMERS

This report has been prepared on behalf of, and exclusively for the use of Mr. Raba Abramov on this matter. This report and the findings contained within shall not, in whole or in part, be distributed or conveyed to any other party without the prior consent of Atlantic Environmental Solutions, Inc.

This inspection report was limited to a site inspection, a review of maps, and a review of local, state, and federal environmental databases. The information collected during the assessment was used to develop a preliminary understanding of obvious environmental concerns that may be present at the subject property and to identify indications of contamination. It was not the purpose of this study to determine the actual presence, degree, or extent of contamination, if any, on the subject property. The assessment was not intended to identify *de minimis* conditions that do not present a material risk of harm to public health or the environment that would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. In general, areas of environmental concern identified as requiring further investigation consist of those areas where a discharge is suspected to have resulted in the contamination of soil, groundwater, or surface water at concentrations above applicable State or Federal cleanup criteria. It should also be noted that although no evidence of a discharge was observed, fill material, containing concentrations of contaminants above the NYSDEC cleanup criteria, in this area of New York, is typical. The conclusions in this report do not represent any opinion regarding the presence, or absence, of contaminated fill material at the site.

The opinions included in this report are based on the information obtained during the limited environmental inspection, our experience, and the information provided by the client or other available persons familiar with the property. If additional information becomes available, we require the opportunity to review the information, reassess the potential environmental concerns, and modify our opinions, if necessary.





Main Office  
77 Arkay Drive, Suite B  
Hauppauge, New York 11788  
T (631) 462-5866 • F (631) 462-5877

NYC Office  
15 Ocean Avenue, 2<sup>nd</sup> Floor  
Brooklyn, New York 11225  
T (718) 636-0800 • F (718) 636-0900

WWW.HYDROTECHENVIRONMENTAL.COM

---

July 9<sup>th</sup>, 2012

Mr. Rudy Abramoff  
Midtown Auto Center  
548 West 29<sup>th</sup> Street  
New York, NY 10001

**Re: Ground Penetrating Radar Survey**  
**548 West 29<sup>th</sup> Street, New York NY**  
**Hydro Tech Job No. 120129**

Dear Mr. Abramoff:

As per your request, Hydro Tech Environmental, Corp. has performed a Ground Penetrating Radar (GPR) survey at the above referenced Site. The GPR survey was conducted within all accessible areas of the auto body shop and is intended to determine the presence of environmental anomalies of concern.

#### **SITE DETAILS**

The Site is located 200 feet east of the intersection of 11<sup>th</sup> Avenue and West 29<sup>th</sup> Street in Manhattan, NY. The property is a rectangular-shaped lot that is currently occupied by an auto body shop. **Figure 1** provides a Site Plan.

#### **DESCRIPTION OF FIELDWORK**

The GPR survey was performed on June 29<sup>th</sup>, 2012 utilizing a GSSI SIR-3000 Control Unit and a 400-megahertz shielded antenna. Prior to the commencement of the survey a visual inspection of the property was performed to identify specific areas where USTs could be present. No suspect areas were identified.

The GPR takes one “scan” per set unit. The number of scans per unit is based upon the estimated sizes of targets. Based upon the typical size of a UST, the GPR was set to run at 50 scans per foot. As each scan is performed, the antenna emits specific radar amplitude into the subsurface. The amplitude of the radar reflected back to the antenna is based upon the differences in the dielectric constants of the subsurface materials. The difference in amplitude obtained during each scan is then graphically displayed on the Control Unit, which is then interpreted by the GPR operator the time of the survey. Additional interpretations are then conducted in the office utilizing specialized computer software.

Mr. Abramoff  
July 9<sup>th</sup>, 2012  
Page 2

**GPR RESULTS**

No anomalies indicative of underground structures were identified during this survey.

I hope that this information has proven valuable to this phase of your project. Should you have any questions, please feel free to contact our office at your convenience.

Very Truly Yours,  
**Hydro Tech Environmental, Corp.**



Carlos Quinonez  
Operations Manager

CQ/ac  
Encl.  
cc: Hydro Tech File 120129 w/Encl.

## **EXCLUSIONS & DISCLAIMER**

The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client.

Observations were made of the subject property and/or of structures on the subject property as indicated within the report. Where access to portions of the subject property or to structures on the subject property was unavailable or limited, **Hydro Tech Environmental, Corp.** renders no opinion as to the presence of non-hazardous or hazardous materials, or to the presence of indirect evidence relating to a non hazardous or hazardous materials, in that portion of the subject property or structure. In addition, **Hydro Tech Environmental, Corp.** renders no opinion as to the presence of hazardous materials, or the presence of indirect evidence relating to hazardous materials, where direct observation of the interior walls, floors, or ceiling of a structure on a subject property was obstructed by objects or coverings on or over these surfaces.

The conclusions and recommendations contained in this report are based in part, where noted, upon various types of chemical data and are contingent upon their validity. The data have been reviewed and interpretations were made in the report. As indicated within the report, some of the data may be preliminary "screening" level data, and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, the data should be reviewed, and the conclusions and recommendations presented herein modified accordingly.

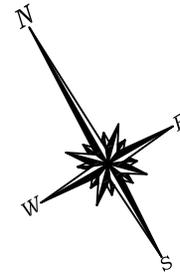
Any GPR survey described above was performed in accordance with good commercial and customary practice and generally accepted protocols within the consulting industry. **Hydro Tech Environmental, Corp.** does not accept responsibility for survey limitations due to inherent technological limitations or site specific conditions, however, made appropriate effort to identify and notify the client of such limitations and conditions. In particular, please note that the survey described above does not represent a full utility clearance survey, and does not relieve any party of applicable legal obligations to notify a utility one-call service prior to excavating or drilling.

# FIGURES

ADJACENT 9-STORY  
COMMERCIAL

W 29TH STREET

SIDEWALK



ADJACENT 3-STORY  
COMMERCIAL



**1-STORY  
BUILDING**

ADJACENT 2-STORY  
COMMERCIAL

ADJACENT  
PARKING LOT

LEGEND:

AST ABOVEGROUND STORAGE TANK

 ELECTRIC LIFT

 ABANDONED HYDRAULIC LIFT

GPR GROUND PENETRATING RADAR

 AREA COVERED BY GPR



**HYDRO TECH ENVIRONMENTAL CORP.**

MAIN OFFICE: 77 ARKAY DRIVE, SUITE G  
HAUPPAUGE, NEW YORK 11788  
T (631)462-5866 F (631)462-5877  
www.hydrotechenvironmental.com

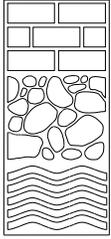
NYC OFFICE: 15 OCEAN AVENUE, 2nd Floor  
BROOKLYN, NEW YORK 11225  
T (718)636-0800 F (718)636-0900

548 West 29th Street  
New York, NY.  
HTE Job# 120129

Drawn By: C.Q.  
Reviewed By: M.R.  
Approved By: M.S.  
Date: 07/10/12  
Scale: AS NOTED

TITLE:

FIGURE 1: SITE PLAN



# Mueser Rutledge Consulting Engineers

14 Penn Plaza • 225 West 34<sup>th</sup> Street • New York, NY 10122  
Tel: (917) 339-9300 • Fax: (917) 339-9400  
[www.mrce.com](http://www.mrce.com)

Alfred H. Brand  
David M. Cacoilo  
Peter W. Deming  
Roderic A. Ellman, Jr.  
Francis J. Arland  
**Partners**

David R. Good  
Walter E. Kaeck  
**Associate Partners**

James L. Kaufman  
Hugh S. Lacy  
Joel Moskowitz  
George J. Tamaro  
Elmer A. Richards  
John W. Fowler  
**Consultants**

Domenic D'Argenzio  
Robert K. Radske  
Ketan H. Trivedi  
Hiren J. Shah  
Alice Arana  
Joel L. Volterra  
Tony D. Canale  
Jan Cermak  
Sissy Nikolaou  
Anthony DeVito  
Frederick C. Rhyner  
Sitotaw Y. Fantaye  
**Senior Associates**

Michael J. Chow  
Douglas W. Christie  
Gregg V. Piazza  
Pablo V. Lopez  
Steven R. Lowe  
Andrew R. Tognon  
James M. Tantalla  
T.C. Michael Law  
Andrew Pontecorvo  
**Associates**

Joseph N. Courtade  
**Director of Finance**

July 28, 2014

550 West 29th Street, LLC  
c/o Tamarkin Co.  
56 West 22nd Street, 5th FL  
New York, NY 10010

Attn: Ms. Lan My Do

Re: Geotechnical Report  
550 West 29<sup>th</sup> Street  
New York, New York  
MRCE File P14-244

Greetings:

In accordance with our agreement, we performed a subsurface investigation for the proposed 550 West 29<sup>th</sup> Street project in New York City. This report summarizes our subsurface investigation and provides general foundation recommendations.

## PROJECT DESCRIPTION

We understand that you are planning to construct a new building at the referenced site. The building will have 12 to 13 stories and one cellar level. The footprint of the lot is 7,500 square feet (75 feet x 100 feet). At its cellar level, the proposed building will likely have a smaller footprint of about 5,000 square feet as it will be offset from the east and/or west property lines.

Three existing buildings presently occupying the lot will be demolished to allow the new construction.

Based on the available survey data, sidewalk elevations adjacent to the site vary between about Elev. +10 and Elev. +12. All elevations in this report are in feet and refer to the 1988 North American Vertical Datum (1988 NAVD), in which Elev. 0.0 is 1.65 feet below the Borough President of Manhattan Datum and 1.1 feet above Mean Sea Level at Sandy Hook, New Jersey, 1929 (1929 NGVD).

## **EXHIBITS**

The following exhibits and appendices are attached to this report:

<u>Exhibit</u>	<u>Title</u>
Sheet No. S-1	Site Location Plan
Drawing No. B-1	Boring Location Plan
Drawing No. GS-1	Geologic Section A-A
Drawing No. GS-2	Geologic Section B-B
Drawing No. GS-R	Geotechnical Reference Standards
Drawing No. RC-1	Rock Core Classification Criteria

<u>Appendix</u>	<u>Description</u>
Appendix A	Log of Project Boring
Appendix B	Logs of Previous Borings

## **PROJECT SITE HISTORY**

The 1865 Egbert L. Viele map (Sheet No. 2) shows that the site is west of the historic Manhattan shoreline. Historic land books indicate previous row houses were present within the site (prior to the present buildings). It can be expected that some had cellar levels. Below-grade remnants of those buildings and their foundations may still be present at the site.

MTA New York City Transit No. 7 subway line extension is under construction underneath Eleventh Avenue less than 200 feet west of the site.

## **SUBSURFACE INVESTIGATION**

The NYC Building Code (Code) requires drilling two borings for the project for shallow foundations are to be used. One of those borings has to be within the building footprint. If deep foundations are used as will likely be the case on this project, the number borings should be increased by thirty percent. During recent investigations performed for the adjacent development, MRCE inspected drilling of three borings within 25 feet of the site. Hence, one additional boring was proposed to be drilled within the site to meet the Code requirements.

The project boring was made between July 8 and July 10, 2014 by Aquifer Drilling & Testing, Inc. (ADT) of New Hyde Park, NY under continuous inspection of our Resident Engineer Ms. Catherine Higbie. The boring extended to a depth of 32 feet below the ground surface. Our Resident Engineer tape-measured the as-drilled boring location shown on Drawing No. B-1. Boring elevation was estimated based on known sidewalk elevations. Drawing No. B-1 also shows locations of seven borings MRCE performed for the adjacent development.

The project boring was made using rotary drilling techniques with a skid rid. Steel casing and biodegradable drilling mud were used to stabilize the borehole. Soil samples were obtained with a two-inch outside diameter split-spoon sampler, driven 24 inches by a 140 pound hammer, free

falling 30 inches. Hammer blows were recorded for each of the four six-inch intervals of spoon penetration. The sum of the blows for the second and third six-inch intervals is defined as the Standard Penetration Test (SPT) Resistance, or N-value. The N-value is an index of the in-situ density of the material. Recovered split-spoon samples were placed in jars and brought to our in-house laboratory by the Resident Engineer for field reclassification. Individual sample descriptions are provided on the boring logs in Appendix A.

The project boring was extended into rock, with a rock core recovered using a double tube, M series, NX size core barrel which recovers rock core approximately two inches in diameter. Our Resident Engineers logged each core run, sketched the jointing patterns, measured recovery and calculated the Rock Quality Designation (RQD). Core recoveries represent the length of core recovered divided by the length of core run expressed as a percentage. RQD is the sum of the lengths of recovered core fragments four inches or longer between natural breaks divided by the length of the core run expressed as a percentage. RQD is a measure of the quality and degree of intactness of a rock mass. Recovered rock cores were delivered to our laboratory for verification of field classifications. Rock core recoveries and rock RQD values are provided on the boring logs. Field sketches of the recovered cores are attached to the boring logs in Appendix A.

MRCE borings made previously for the adjacent development were drilled with truck mounted rig and sampled using similar procedures as the project boring. Logs of the previous borings are attached in Appendix B.

A slotted standpipe piezometer was installed in the project boring to measure the depth to the groundwater table at the site. The piezometer consisted of a 2-inch inner diameter PVC pipe extending to a depth of 15 feet with 10 feet of slotted screen at the bottom surrounded by clean sand.

## **SUBSURFACE CONDITIONS**

**Site Geology** During the Pleistocene a series of glaciers crossed the region, scouring down the bedrock. Upon final retreat the ice left behind assorted layers of glacial sediments, typically consisting of glacial till, outwash sand and varved glacial lake silt and clay. As the glacial ice melted away during the Holocene, sea-level rose and low-lying areas filled in with alluvial sand, organic clay and marsh deposits. The bedrock underlying the site is mapped as the Paleozoic Hartland Formation, which is generally a gneissic schist with veins of pegmatite.

Our interpretation of the subsurface conditions encountered in the borings is illustrated on two geologic sections, presented on Drawings Nos. GS-1 and GS-2. Boring information shown on the sections includes sample number and position, sampler Standard Penetration Test resistance (SPT N value) and Unified Soil Classification system (USCS) symbol for soil samples. A summary of the soil classification system and rock core classification criteria is provided on Drawings Nos. GS-R and RC-1.

General descriptions of materials encountered in the project boring, are summarized below in order of their occurrence with depth:

***Stratum F – Miscellaneous Fill (NYC Class 7)*** The uppermost material for the boring is fill. The fill extended to a depth of 15 feet. The fill consists of loose to medium compact brown fine to coarse sand, trace gravel, trace to some silt, and brick fragments. Remnant foundations and foundation walls are likely present. The SPT N-values range from 2 blows per foot (bpf) to 19 bpf with an average of 6 bpf. Higher blow counts indicate presence of large gravel, cobbles, or brick and other obstructions within the fill. The N-values in this report are presented without any corrections.

***Stratum O – Organic Silty Clay (NYC Class 6)*** This stratum underlying the fill was not encountered in the project boring but was found borings just south of the site (see geologic sections). Where found it was typically up to 10 feet thick deposit of soft, dark gray to gray organic silty clay, with trace to some fine sand, shells, gravel and roots. This stratum represents the old Hudson River marsh and river bottom deposits.

***Stratum S – Sand (NYC Class 6)*** Natural sand is present below the fill in the project boring. Stratum S extends to a depth of at least 24 feet below the ground surface. Stratum S consists of loose brown fine to coarse sand, some silt and loose gray fine to medium sand with some clay and traces of silt. SPT N-values range from 4 bpf to 30 bpf with an average of 9 bpf.

***Stratum T – Till (NYC Class 3)*** Glacial till is present below Stratum S and extends to a depth of 25.5 feet. Stratum T consists of dense red-brown gravel with some fine to coarse sand and silt. The SPT N-value for this layer is 22 bpf and is underlain by decomposed bedrock.

***Stratum DR – Decomposed Rock (NYC Class 3)*** Decomposed rock was encountered in the project boring as a 4-foot layer. It consists of very compact, gray brown fine to medium sand, micaceous to some mica, trace silt and rock fragments. SPT N-values are typically in excess of 35 bpf.

***Stratum WR – Weathered Rock (NYC Class 1d)***. This stratum underlying Stratum DR was not encountered in the project boring but was found in some of the adjacent borings just south of the site (see geologic sections). This up to 8-ft thick layer consists weathered to highly weathered, gray gneissic schist with pink pegmatite and granite zones, broken, with weathered and iron stained joints. Stratum WR was sampled by rock coring techniques with RQD values of less than 30 percent.

***Stratum R – Bedrock (NYC Class 1c to 1a)*** The project borings cored 5 feet of rock which was consistent with rock recovered in the adjacent borings. The bedrock in the site area is hard to intermediate, slightly weathered to moderately weathered, gray gneissic schist with pink and white granite and pegmatite zones, closely jointed to massive, with iron stained and weathered joints. Typical recoveries ranged from 44 to 100 percent. Average RQD values is in excess of 50 percent.

The top of bedrock appears to deepen in the southwest direction, with top of bedrock elevations ranging from Elev. -15 in the northeast corner of the site to Elev. -40 in the southwest corner of the site.

**Groundwater** Groundwater level measured in the project piezometer during the exploration program was at about Elev. +3. Water levels measured in adjacent piezometers ranged from Elev. +0 to Elev. +1.3 over long periods of time. Hence, additional measurements will be needed to be taken.

Local variations in topography and permeability may affect groundwater levels within the area. Groundwater levels may also fluctuate as a result of precipitation, nearby construction, and water main breaks in the vicinity of the site. The building design will need to consider flood elevations in the nearby Hudson River using the most recent flood mapping. The most recent flood mapping indicates the site or a portion of it is within the 100-yr flood zone.

## **FOUNDATION RECOMMENDATIONS**

**Foundations** We understand that the proposed building foundations will be in excess of 15 feet below the existing grade to accommodate the proposed cellar. Depending on the actual depth of the cellar, the foundations will extend into natural sands underlying the fill or organic materials (into Stratum S).

The following two options shall be considered for support of the proposed mid-rise building:

- If the cellar is sufficiently deep and smaller column loads, foundation mat bearing on the natural sand deposits should be considered. The natural sands exhibit variable degrees of compaction and include zones with relatively low-blowcount materials. Hence, their bearing capacity will be limited. A foundation mat is more suitable than spread footings as it will distribute the foundation loads over larger bearing areas. For preliminary design, the foundation mat bearing pressures should be limited to 2 tons per square foot (tsf). To resist uplift forces, rock tiedowns should be employed. They should extend deep enough into the rock to engage sufficient rock mass to prevent pullout of a rock wedge.
- For shallower basements and higher column loads, driven or drilled pile foundation shall be considered with capacities of up to 120 tons. Steel H-piles and closed end steel pipe piles are typically employed. The foundation contractor should be permitted to submit alternative pile types and capacities. The contractor should be responsible for determining the actual driving resistance necessary to develop the capacity selected and this resistance should be confirmed by pile load tests. To resist uplift forces, the uplift capacity of the piles should be assessed and rock tiedowns added if needed.

Vibrations induced by hard pile driving could negatively impact adjacent structures, particularly the existing building to the east. Vibrations could be damaging not only to a structure itself but could also cause ground settlement of foundation soils underneath the structure. Lower capacity driven piles (say 80 tons) are sometimes designed so that piles do not need to be driven too hard, reducing vibrations. Additionally, pre-augering could be performed prior to driving of piles to reduce driving induced vibrations. To reduce vibration to a minimum, drilled piles or mini-caissons can be used. These can achieve higher capacities than the driven piels.

The final decision of foundations design shall be made once the depth of basement and column load calculations are finalized.

**Basement Floor Slab and Walls** We recommend that basement walls and floor slabs are designed to be fully waterproofed and to resist groundwater pressures. The basement floor slabs should be structural slabs to avoid cracking in the event of ground settlement. For evaluation of lateral earth pressures on walls, we recommend that the existing materials abutting the walls be assumed to have a friction angle of 30 degrees and total unit weight of 120 pounds per cubic foot. Permanent wall earth pressures should be based on at-rest conditions with a coefficient of at-rest pressure  $K_0 = 0.5$  and minimum sidewalk surcharge of 600 pounds per square foot.

The prevailing groundwater elevation should be assumed at Elev. +3. The basement walls and slabs should also be checked for short term loading during a flood event. The flood level elevations should be based on a flood risk evaluation. Typically, the most recent 100-year flood event should be considered in design. The present 100-year flood elevation at the site is Elev. 11.

We recommend that the basement slab and walls be fully waterproofed up to grade. Sheet membrane waterproofing may be employed. Hydrophilic water stops and possibly groutable tubes should be used for all wall and slab construction joints below the groundwater table. We recommend that a mud mat be poured over subgrade to form an appropriate surface for placing the basement slab waterproofing membrane.

**Excavation** Overburden soils around the perimeter of the excavation must be retained by a temporary excavation support. Considering the proposed cellar excavation will extend well below the groundwater level, interlocking steel sheeting extending to bedrock will likely be required for excavation support and for control of groundwater. We assume that the basement along the existing building to the east will be offset to allow installation of the sheeting. Pre-trenching will be required to remove obstructions.

It will be essential that means and methods selected for excavation and for foundation subgrade preparation do not cause disturbance of the foundation subgrade.

**Seismic Design** The design should be performed in accordance with the NYC Building Code. Because of the soft organic layer underlying the southern portion of the site, the seismic Site Class is E. Using tabulated values in the 2014 NYC Building Code, the Seismic Design Category (SDC) is C (assuming building is of Use Group I or II). Even if design accelerations are reduced using a site specific study by maximum 20 percent allowed by the Code for a given Site Class, SDC for the site will not improve. Therefore, we believe a site specific evaluation does not need to be performed for the site unless there is need to reduce design accelerations.

Based on our site specific seismic study performed for the adjacent site and review of the project boring blowcounts. Liquefaction does not need to be considered in design.

**Adjacent Structures** A precondition survey of the adjacent buildings should be done prior to construction to verify available foundation information and document existing conditions. Following the precondition surveys, the effects of proposed excavation and foundations on the adjacent structures should be reviewed. Displacement and vibration monitoring of the structures should be performed during construction.

We trust that this report provides sufficient information for foundation design and construction for the proposed structures. Please feel free to contact us if we can be of further help.

**MUESER RUTLEDGE CONSULTING ENGINEERS**

By: \_\_\_\_\_  
Jan Cermak, P.E.

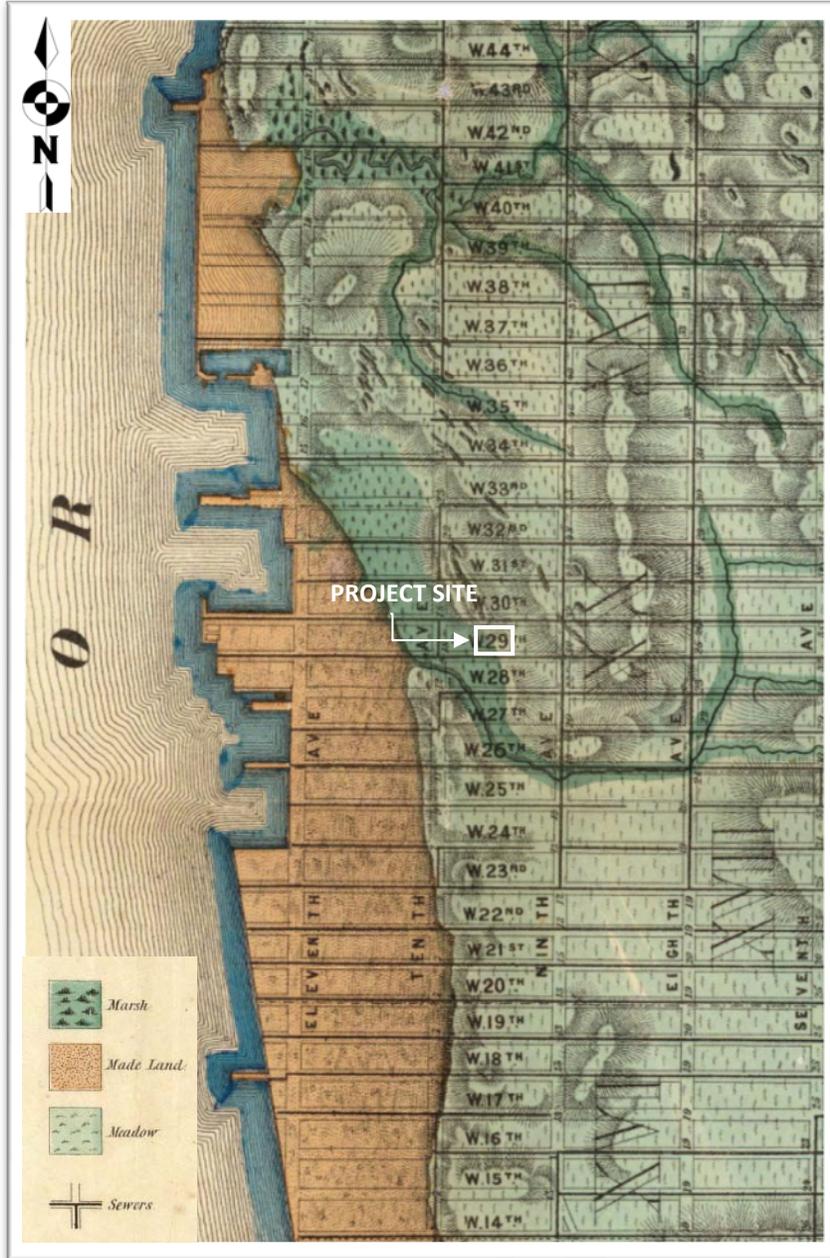
CH:JC:DRG:

## **EXHIBITS**



Reference: NYC Open Accessible Space Information System (OASIS) Mapping

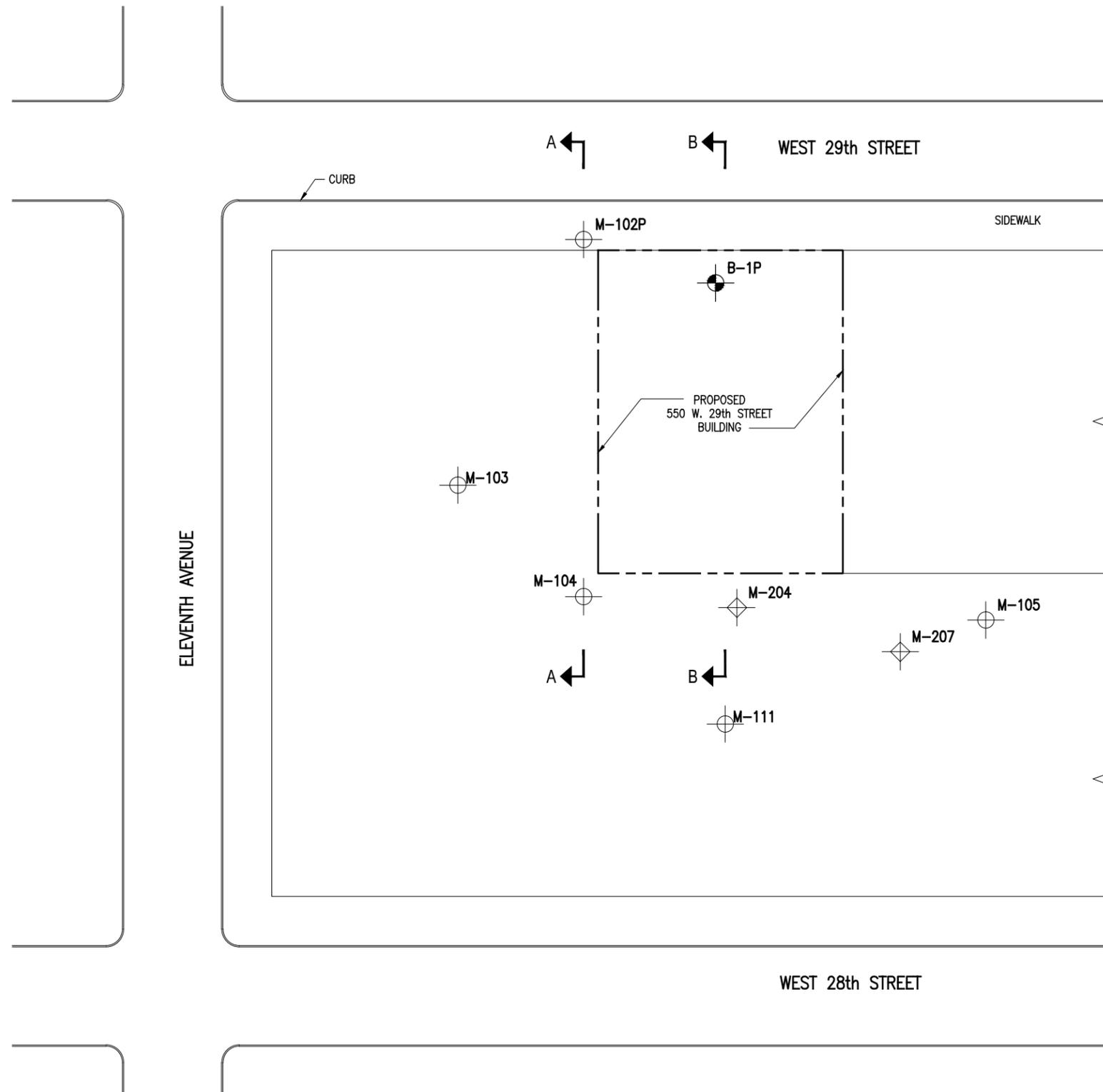
<b>550 W 29<sup>TH</sup> STREET PROJECT</b>			
NEW YORK		NEW YORK	
<b>TAMARKIN CO.</b>			
NEW YORK		NEW YORK	
<b>MUESER RUTLEDGE CONSULTING ENGINEERS</b>			
225 WEST 34 <sup>TH</sup> STREET, NEW YORK, NY 10122			
<b>SCALE</b> NTS	<b>MADE BY:</b> CH	<b>DATE:</b> 07-16-14	<b>FILE NO.</b> 12243
<b>SITE LOCATION PLAN</b>			<b>SHEET NO.</b> 1



Reference: 1865 Viele Map

<b>550 W 29<sup>TH</sup> STREET PROJECT</b>			
NEW YORK		NEW YORK	
<b>TAMARKIN CO.</b>			
NEW YORK		NEW YORK	
<b>MUESER RUTLEDGE CONSULTING ENGINEERS</b>			
225 WEST 34 <sup>TH</sup> STREET, NEW YORK, NY 10122			
SCALE NTS	MADE BY: CH	DATE: 07-28-14	FILE NO. 12243
<b>1865 VIELE MAP</b>			SHEET NO. 2

Printed by: Jan Cermak  
 Printed on: Tuesday, Jul 29, 2014 - 11:33:34 AM  
 Last saved by: joermak on Tuesday, Jul 15, 2014 - 11:32:22 AM  
 G:\DWGS\122\12243\B-1.dwg



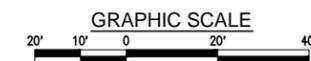
P L A N

**NOTES:**

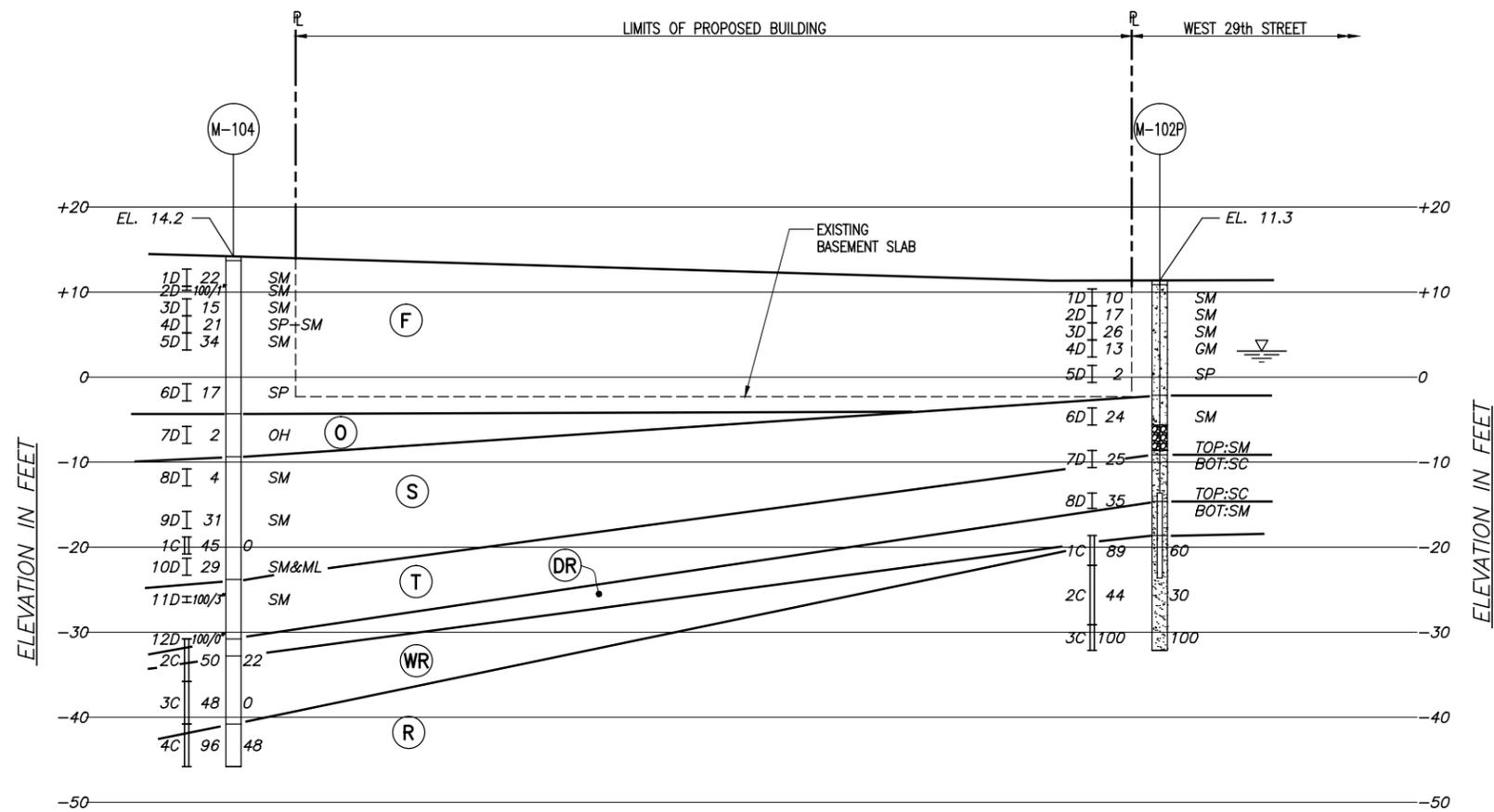
1. BASE PLAN AND ELEVATIONS BASED ON 7/4 TOPOGRAPHICAL SURVEY BY MONTROSE SURVEYING CO.
2. BORING LOCATION WAS MEASURED IN THE FIELD BY MRCE RESIDENT ENGINEER.
3. PROJECT BORING WAS MADE BETWEEN MARCH 21 AND MARCH 25, 2014, BY WARREN GEORGE INCORPORATED UNDER CONTINUOUS INSPECTION OF MRCE.
4. FOR GEOLOGIC SECTIONS A-A AND B-B, SEE DRAWINGS NOS. GS-1 AND GS-2.

**LEGEND:**

-  B-1P - PROJECT MRCE BORING
-  M-207 - 2011 MRCE BORING
-  M-102P - 2008 MRCE BORING



REV.	DATE	BY	DESCRIPTION
<b>550 W. 29th STREET</b>			
NEW YORK		NEW YORK	
<b>TAMARKIN</b>			
NEW YORK		NEW YORK	
<b>MUESER RUTLEDGE CONSULTING ENGINEERS</b>			
14 PENN PLAZA - 225 W. 34TH STREET, NY, NY 10122			
SCALE GRAPHIC	MADE BY: L.R. CHK'D BY: C.H.	DATE: 07-14-2014 DATE: 07-14-2014	FILE NUMBER <b>12243</b> DRAWING NUMBER
<b>BORING LOCATION PLAN</b>			<b>B-1</b>



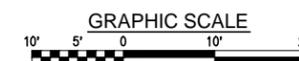
**SECTION A-A**

**NOTES:**

- FOR GENERAL NOTES, BORING LOCATIONS AND SECTION LOCATIONS SEE DRAWING NO. B-1.
- ELEVATIONS SHOWN REFER TO NORTH AMERICAN VERTICAL DATUM, 1988 (NAVD88).
- STRATIFICATIONS SHOWN ARE NECESSARY INTERPOLATIONS BETWEEN BORINGS AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
- SOIL DESCRIPTIONS AND STRATIFICATIONS SHOWN ARE BY MRCE.
- SEE DRAWING NO. GS-R FOR BORING LEGEND AND SUMMARY OF UNIFIED SOIL CLASSIFICATION SYSTEM.
- SEE DRAWING NO. RC-1 FOR ROCK CORE CLASSIFICATION CRITERIA.
- COMPLETE SOIL SAMPLE DESCRIPTIONS ARE PROVIDED ON THE BORING LOGS IN APPENDICES A AND B.

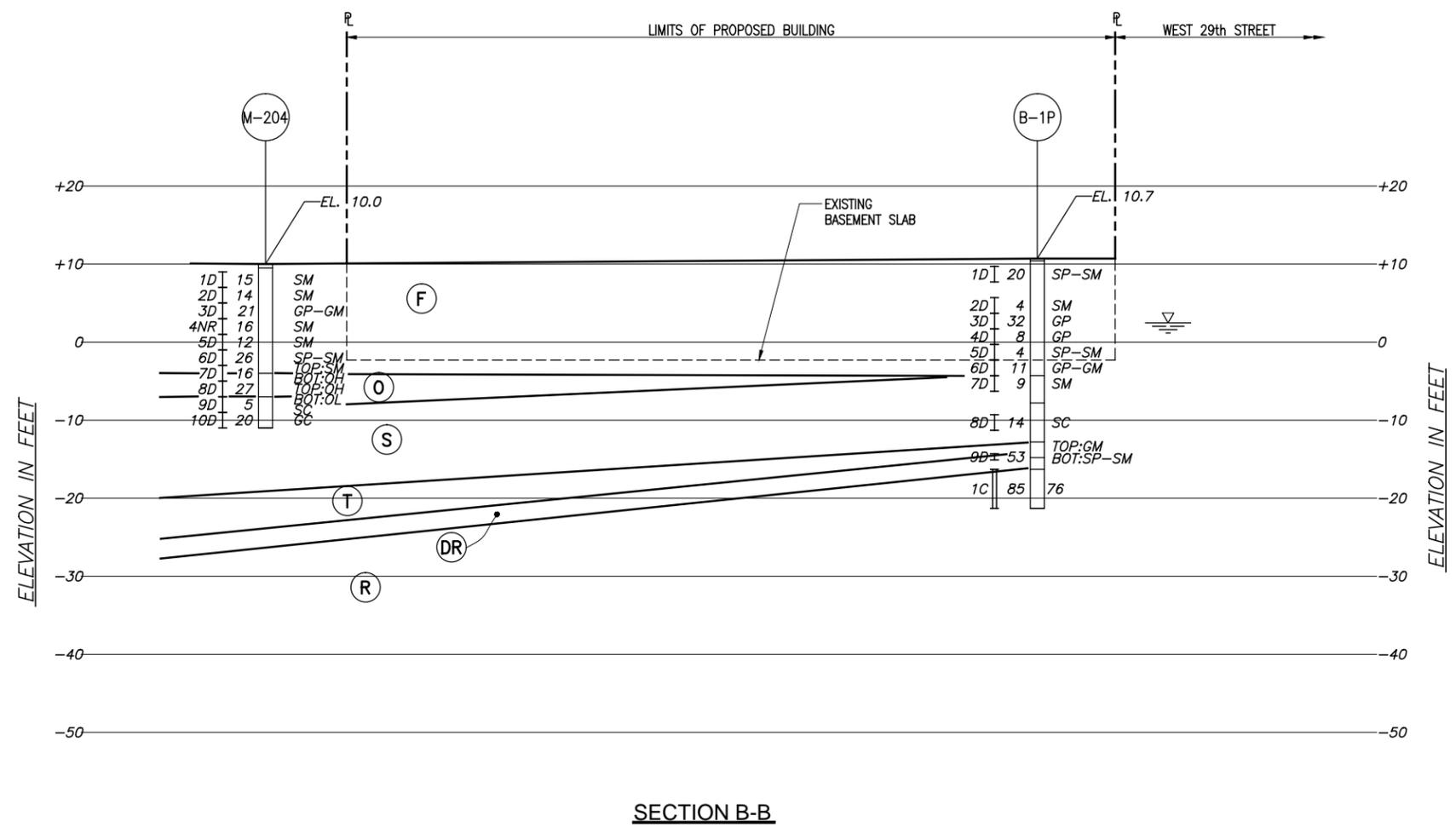
**GENERAL STRATA DESCRIPTIONS:**

- (F) FILL
- (O) ORGANIC CLAY
- (S) SAND
- (T) GLACIAL TILL
- (DR) DECOMPOSED ROCK
- (WR) WEATHERED ROCK
- (R) ROCK



REV.	DATE	BY	DESCRIPTION
550 W. 29th STREET			
NEW YORK		NEW YORK	
TAMARKIN			
NEW YORK		NEW YORK	
<b>MUESER RUTLEDGE CONSULTING ENGINEERS</b>			
14 PENN PLAZA - 225 W. 34TH STREET, NY, NY 10122			
SCALE GRAPHIC	MADE BY: L.R. CHK'D BY: C.H.	DATE: 07-14-2014 DATE: 07-14-2014	FILE NUMBER <b>12243</b>
GEOLOGIC SECTION A-A			DRAWING NUMBER <b>GS-1</b>

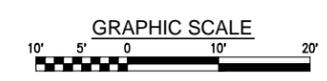
Printed by: Jan Cermak  
 Printed on: Tuesday, Jul 29, 2014 - 11:34:22 AM  
 Last saved by: koefelein on Tuesday, Jul 22, 2014 - 10:50:40 AM  
 G:\DWG\122\12243\GS-2.dwg



- NOTES:**
- FOR GENERAL NOTES, BORING LOCATIONS AND SECTION LOCATIONS SEE DRAWING NO. B-1.
  - FOR SECTION NOTES SEE DRAWING NO. GS-1.

**GENERAL STRATA DESCRIPTIONS:**

- (F) FILL
- (O) ORGANIC CLAY
- (S) SAND
- (T) GLACIAL TILL
- (DR) DECOMPOSED ROCK
- (WR) WEATHERED ROCK
- (R) ROCK



REV.	DATE	BY	DESCRIPTION
550 W. 29th STREET			
NEW YORK		NEW YORK	
TAMARKIN			
NEW YORK		NEW YORK	
<b>MUESER RUTLEDGE CONSULTING ENGINEERS</b>			
14 PENN PLAZA - 225 W. 34TH STREET, NY, NY 10122			
SCALE	MADE BY: L.R.	DATE: 07-14-2014	FILE NUMBER
GRAPHIC	CH'KD BY: C.H.	DATE: 07-14-2014	12243
GEOLOGIC SECTION B-B			DRAWING NUMBER
			GS-2

**UNIFIED SOIL CLASSIFICATION ( INCLUDING IDENTIFICATION AND DESCRIPTION )**

MAJOR DIVISIONS		GROUP SYMBOLS	TYPICAL NAMES	FIELD IDENTIFICATION PROCEDURES (EXCLUDING PARTICLES LARGER THAN 3 IN. AND BASING FRACTIONS ON ESTIMATED WEIGHTS)	
1	2	3	4	5	
<b>COARSE-GRAINED SOILS</b> MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE THE NO. 200 SIEVE SIZE IS ABOUT THE SMALLEST PARTICLE VISIBLE TO THE NAKED EYE	<b>GRAVELS</b> MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE.	CLEAN GRAVELS (LITTLE OR NO FINES)	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.	WIDE RANGE IN GRAIN SIZES AND SUBSTANTIAL AMOUNTS OF ALL INTERMEDIATE PARTICLE SIZES.
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)	GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.	PREDOMINANTLY ONE SIZE OR A RANGE OF SIZES WITH SOME INTERMEDIATE SIZES MISSING.
		CLEAN SANDS (LITTLE OR NO FINES)	GM	SILTY GRAVELS, GRAVEL-SAND-SILT-MIXTURES.	NONPLASTIC FINES OR FINES WITH LOW PLASTICITY ( FOR IDENTIFICATION PROCEDURES SEE ML BELOW )
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)	GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES.	PLASTIC FINES ( FOR IDENTIFICATION PROCEDURES SEE CL BELOW )
	<b>SANDS</b> MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE. ( FOR VISUAL CLASSIFICATION, THE 1/4 -IN. SIZE MAY BE USED AS EQUIVALENT TO THE NO. 4 SIEVE SIZE )	CLEAN SANDS (LITTLE OR NO FINES)	SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES.	WIDE RANGE IN GRAIN SIZES AND SUBSTANTIAL AMOUNTS OF ALL INTERMEDIATE PARTICLE SIZES.
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)	SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES.	PREDOMINANTLY ONE SIZE OR A RANGE OF SIZES WITH SOME INTERMEDIATE SIZES MISSING.
			SM	SILTY SANDS, SAND-SILT-MIXTURES.	NONPLASTIC FINES OR FINES WITH LOW PLASTICITY ( FOR IDENTIFICATION PROCEDURES SEE ML BELOW )
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES.	PLASTIC FINES ( FOR IDENTIFICATION PROCEDURES SEE CL BELOW )
		<b>IDENTIFICATION PROCEDURES ON FRACTION SMALLER THAN NO. 40 SIEVE SIZE</b>			
			ML	INORGANIC SILTS, SANDY SILTS, ROCK FLOUR, OR CLAYEY SILTS WITH SLIGHT PLASTICITY.	NONE TO SLIGHT
	CL	INORGANIC CLAYS, OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS.	MEDIUM TO HIGH	NONE TO VERY SLOW	MEDIUM
	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY.	SLIGHT TO MEDIUM	SLOW	SLIGHT
	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS.	SLIGHT TO MEDIUM	SLOW TO NONE	SLIGHT TO MEDIUM
	CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS.	HIGH TO VERY HIGH	NONE	HIGH
	OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS.	MEDIUM TO HIGH	NONE TO VERY SLOW	SLIGHT TO MEDIUM
HIGHLY ORGANIC SOILS		Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS.		READILY IDENTIFIED BY COLOR, ODOR, SPONGY FEEL AND FREQUENTLY BY FIBROUS TEXTURE.

BOUNDARY CLASSIFICATIONS: SOILS POSSESSING CHARACTERISTICS OF TWO GROUPS ARE DESIGNATED BY COMBINATIONS OF GROUP SYMBOLS, I.E.: SP-SC POORLY GRADED SAND WITH CLAY BINDER.

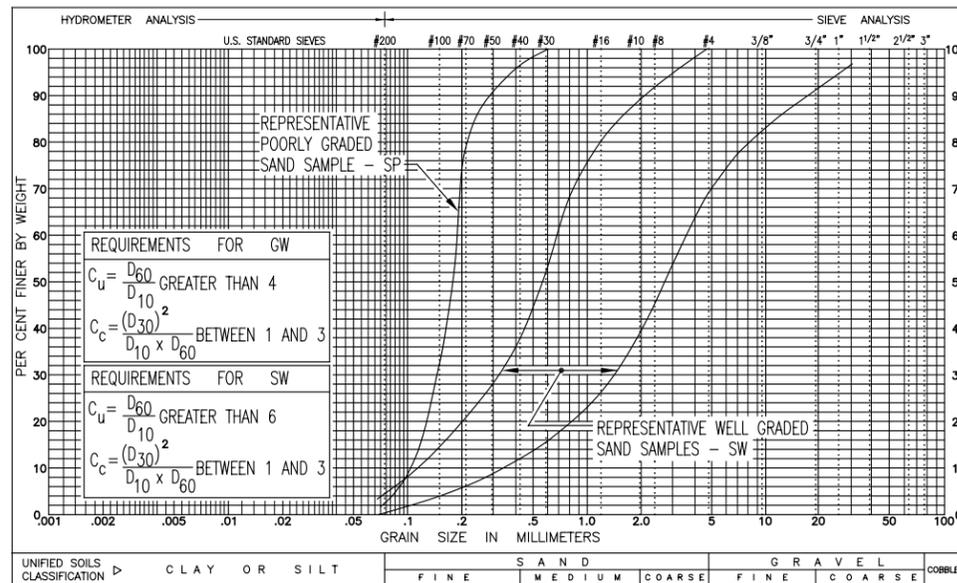
**TERMINOLOGY USED IN MRCE SOIL DESCRIPTIONS**

DEGREE OF COMPACTION FOR NON-PLASTIC SOIL		CONSISTENCY OF CLAY AND CLAYEY SILT +			DESCRIPTION OF CONSTITUENT PERCENTAGES AS USED IN SOIL SAMPLE CLASSIFICATIONS
DEGREE OF COMPACTION	BLOWS* PER FOOT	CONSISTENCY	UNCONFINED COMPRESSIVE STRENGTH (TSF)	IDENTIFICATION CHARACTERISTICS	
LOOSE	0 TO 10	SOFT	LESS THAN 0.5	EASILY REMOLDED WITH SLIGHT FINGER PRESSURE	1% TO 12% - "TRACE"
MEDIUM COMPACT	11 TO 29	MEDIUM	0.5 TO 1.0	REQUIRES SUBSTANTIAL PRESSURE FOR REMOLDING	13% TO 30% - "SOME"
COMPACT	30 TO 50	STIFF	1.0 TO 4.0	DIFFICULT TO REMOLD WITH FINGERS	31% TO 49% - ADJECTIVE FORM OF SOIL GROUP (EG. SANDY)
VERY COMPACT	GREATER THAN 50	HARD	GREATER THAN 4.0	CANNOT BE REMOLDED WITH FINGERS	EQUAL AMOUNT - "AND" (EG. SAND AND GRAVEL)

\* STANDARD PENETRATION RESISTANCE USING 140 LB. HAMMER FREE FALLING 30 INCHES TO DRIVE A 2 INCH O.D. SPLIT-SPOON SAMPLER.

+ NONPLASTIC SILTS ARE DESCRIBED USING DEGREE OF COMPACTION AS PRESENTED FOR NON-PLASTIC SOIL.

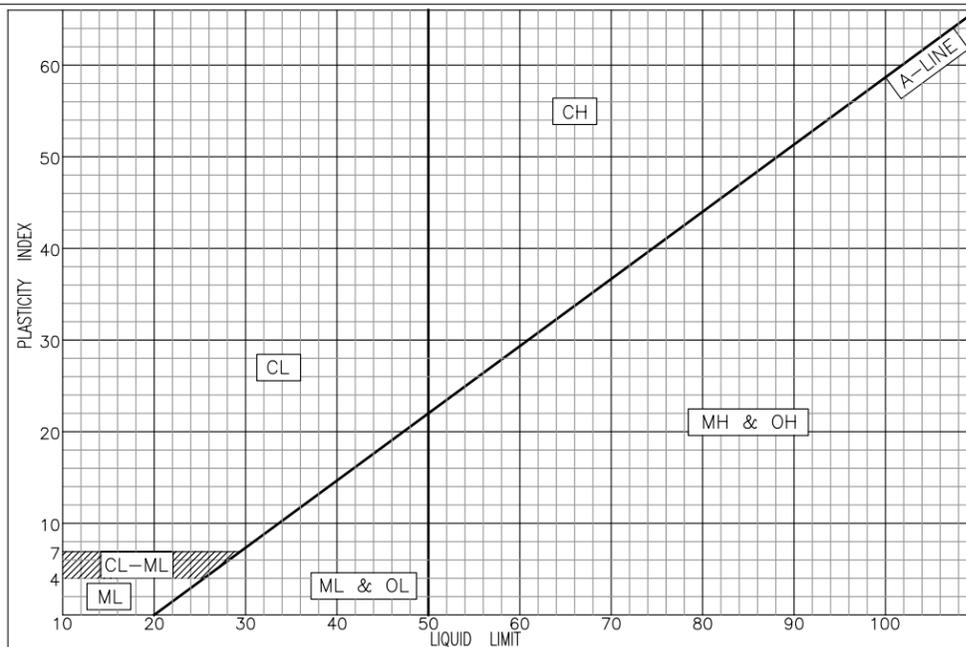
**LABORATORY CLASSIFICATION CRITERIA**



**GRAIN SIZE PLOT**

DEPENDING ON PERCENTAGE OF FINES (FRACTION SMALLER THAN NO. 200 SIEVE SIZE) COARSE GRAINED SOILS ARE CLASSIFIED AS FOLLOWS:

LESS THAN 5% GW, GP, SW, SP  
 MORE THAN 12% GM, GC, SM, SC  
 5% TO 12% BORDERLINE CASES REQUIRING USE OF DUAL SYMBOLS, I.E.: SP-SM, GP-GM.



PLASTICITY CHART FOR CLASSIFICATION OF FINE GRAINED SOILS

**BORING LEGEND**

- A - NUMBER, TYPE AND LOCATION OF BORING
- EL. - GROUND SURFACE ELEVATION AT BORING
- B - NUMBER AND TYPE OF SAMPLE
- D - DRY SAMPLE TAKEN WITH 2 INCH O.D. SPLIT SPOON
- U - UNDISTURBED SAMPLE TAKEN WITH 3 INCH O.D. FIXED PISTON TYPE SAMPLER
- UD - UNDISTURBED SAMPLE EXTRUDED IN FIELD AND PLACED IN JAR DUE TO POOR RECOVERY OR DISTURBANCE
- S - THIN TUBE SAMPLE TAKEN WITH SHELBY TUBE SAMPLER
- W - WASH SAMPLE
- NR - NO RECOVERY
- I - LENGTH OF SAMPLE ATTEMPT
- N - STANDARD PENETRATION RESISTANCE. NUMBER OF BLOWS FROM 140 LB. HAMMER FREE FALLING 30 INCHES REQUIRED TO DRIVE 2 INCH O.D. SPLIT SPOON SAMPLER ONE FOOT AFTER INITIAL PENETRATION OF 6 INCHES, UNLESS A SPECIFIC PENETRATION IS INDICATED.
- P - PRESSED OR PUSH SAMPLE
- WH - SAMPLE TAKEN UNDER WEIGHT OF HAMMER AND RODS
- WR - SAMPLE TAKEN UNDER WEIGHT OF RODS
- E - AVERAGE NATURAL WATER CONTENT OF SAMPLE, IN PERCENT OF DRY WEIGHT
- G - UNIFIED SOIL CLASSIFICATION GROUP SYMBOL OF SAMPLE
- [J] = ATTERBERG LIQUID LIMIT VALUE
- [K] = ATTERBERG PLASTIC LIMIT VALUE
- [L] - COMPRESSIVE STRENGTH IN TSF DETERMINED FROM UNCONFINED COMPRESSION TEST
- (M) - COMPRESSIVE STRENGTH IN TSF DETERMINED FROM UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST
- ☼ - GROUNDWATER LEVEL OBSERVED IN BORING
- \* - MUD LEVEL
- ☼ - GROUNDWATER LEVEL OBSERVED IN PIEZOMETER
- C - ROCK CORE NUMBER
- I - LENGTH OF CORE RUN
- F - LENGTH OF CORE RECOVERED EXPRESSED AS A PERCENT OF THE LENGTH OF CORE RUN
- R - ROCK QUALITY DESIGNATION-THE SUM OF THE LENGTHS OF PIECES OF RECOVERED CORE WHICH ARE EQUAL TO OR GREATER THAN FOUR INCHES IN LENGTH, EXPRESSED AS A PERCENTAGE OF THE TOTAL LENGTH OF CORE RUN. LENGTHS ARE MEASURED BETWEEN IN-SITU SEPARATIONS AND MECHANICAL BREAKS RESULTING FROM CORING ARE IGNORED.
- ▨ IMPERVIOUS SEAL
- ☼ SAND FILTER SURROUNDING PIEZOMETER INTAKE ELEMENT
- ☼ INTAKE ELEMENT
- COBBLE OR BOULDER

**MUESER RUTLEDGE CONSULTING ENGINEERS**  
 225 WEST 34th STREET - 14 PENN PLAZA  
 NEW YORK, NY 10122

**TABLE R-1 ROCK CORE CLASSIFICATION CRITERIA**

HARDNESS/SOUNDNESS CLASSIFICATION	TYPICAL GEOLOGIC CLASSIFICATION	IDENTIFICATION CHARACTERISTICS	GENERAL MINIMUM CORING CHARACTERISTICS				INTACT SPECIMEN TYPICAL MINIMUM COMPRESSIVE STRENGTH
			NX OR LARGER		BX OR SMALLER		
			REC	RQD	REC	RQD	
<b>HARD ROCK</b>  UNWEATHERED MAY BE JOINTED	-CRYSTALLINE IGNEOUS, OR METAMORPHIC ROCKS  -HIGHLY SILICEOUS SEDIMENTARY ROCKS	- UNWEATHERED FABRIC - RINGS WHEN STRUCK WITH BAR - SHARP AND HARD FRACTURE SURFACE WHEN BROKEN MECHANICALLY - MAY BE JOINTED, BUT JOINTS ARE GENERALLY TIGHT. JOINTS MAY BE IRON STAINED. - DOES NOT DISINTEGRATE UPON EXPOSURE - DOES NOT SLAKE IN WATER	95 OR MORE	85 OR MORE	85 OR MORE	75 OR MORE	3000
<b>MEDIUM HARD ROCK</b>  SLIGHTLY WEATHERED MAY BE CLOSELY JOINTED	AS FOR HARD ROCKS AND:  - MODERATELY SILICEOUS SEDIMENTARY ROCKS - CERTAIN CALCAREOUS ROCKS	AS FOR HARD ROCK, EXCEPT:  - FABRIC MAY BE IRON STAINED - MAY BE CLOSELY JOINTED, BUT JOINTS ARE GENERALLY TIGHT. JOINTS HAVE SLIGHT WEATHERING OR MAY BE IRON STAINED.	70	50	50	40	1500
<b>INTERMEDIATE ROCK</b>  MODERATELY WEATHERED MAY BE CLOSELY JOINTED	AS FOR MEDIUM HARD ROCKS AND:  - MOST SEDIMENTARY ROCKS OTHER THAN COMPACTION SHALES - MOST CALCAREOUS ROCKS WHICH ARE NOT POROUS	AS FOR MEDIUM HARD ROCK, EXCEPT:  - MODERATELY WEATHERED FABRIC - WEATHERED JOINTS - THUDS WHEN STRUCK BY BAR - CAN BE INDENTED WITH A STEEL NAIL - BREAKS READILY WITH HAMMER - PIECES OF WEATHERED SURFACE CAN BE BROKEN OFF BY HAND - DOES NOT DISINTEGRATE UPON EXPOSURE - UNWEATHERED PIECES DO NOT SLAKE	50	35	35	25	500
<b>WEATHERED ROCK</b>  HIGHLY WEATHERED MAY BE BROKEN	AS FOR INTERMEDIATE ROCKS AND:  - COMPACTION SEDIMENTARIES - CALCAREOUS ROCKS WITH SOIL-FILLED CAVITIES	AS FOR INTERMEDIATE ROCK, EXCEPT:  - HIGHLY WEATHERED FABRIC - CAN BE BROKEN EASILY, CRUMBLES WITH DIFFICULTY BY HAND - CAN BE SCRAPED BY KNIFE - MAY SOFTEN UPON EXPOSURE - MAY SLAKE IN WATER - STANDARD PENETRATION RESISTANCE EXCEEDS 50 BLOWS/FOOT	LESS THAN 50	LESS THAN 35	LESS THAN 35	LESS THAN 25	150
<b>DECOMPOSED ROCK</b>  (RESIDUAL SOILS)	ALL ROCK TYPES	- ROCK TEXTURE AND STRUCTURE OFTEN PRESERVED - GENERALLY SOIL-LIKE IN CONSISTENCY - CAN BE CRUMPLED BY SLIGHT HAND PRESSURE - CAN BE PEELED WITH A KNIFE - STANDARD PENETRATION RESISTANCE LESS THAN 50 BLOWS/FOOT	WHEN RECOVERED WITH SOIL SAMPLING TECHNIQUES, DESCRIBED AS FOR SOILS INCLUDING USC GROUP SYMBOLS. (WTHD ROCK) ADDED TO DESCRIPTION.				150
			GENERALLY RECOVERED WITH SOIL SAMPLING TECHNIQUES AND DESCRIBED AS FOR SOILS INCLUDING USC GROUP SYMBOLS. (DEC ROCK) ADDED TO DESCRIPTION.				

**TABLE R-2 WEATHERING AND JOINTING DEFINITIONS**

**DEGREE OF FABRIC WEATHERING**

FABRIC WEATHERING	CHARACTERISTIC
Unweathered	UnW No decomposition or discoloration rings when struck
Slightly Weathered	SIW Iron Stained Rings when struck
Moderately Weathered	MdW Deteriorated fabric Thuds when struck
Highly Weathered	HiW Friable, easily broken by hand
Decomposed	Dec Soil-like

**DEGREE OF JOINT WEATHERING**

JOINT WEATHERING	CHARACTERISTIC
Iron stained joints	FeJTS Indicates movement of water along joints
Weathered joints	WJts Joints are not tight and do not match. Joints have friable edges.

**DEGREE OF JOINTING**

JOINTING	JOINT FREQUENCY
Massive	Mssv Less than 1 joint in 4 feet
Blocky	Blky 1 joint every 2 to 4 feet
Moderately Jointed	MdJtd 1 joint every foot to 2 feet
Jointed	Jtd 1 to 2 joints per foot
Closely Jointed	ClJtd 2 to 4 joints per foot
Broken	Bkn More than 4 joints per foot

**TABLE R-3 ABBREVIATIONS FOR ROCK CORE CLASSIFICATION**

Blocky	Blky	Intermediate	Int
Broken	Bkn	Light	Lt
Brown	brn	Lignite	lign
Calcareous or Calcite	calc	Limestone	lms
Cavities	cvts	Jointed	Jtd
Chlorite	chl	Joints	Jts
Clay, Clayey	cl	Massive	Mssv
Closely Jointed	ClJtd	Medium Hard	MdHd
Coating on joint surface	coat	Mica, Micaceous	Mic
Crushed	crsh	Moderately Jointed	MdJtd
Dark	dk	Moderately Weathered	MdW
Decomposed	Dec	Pockets	pkts
Ditto	do	Quartz	qtz
Dolomite, Dolomitic	Dol	Recovery	Rec
Iron stained Joints	FeJts	Rock Quality Designation	RQD
Iron Stained	FeStn	Sand	sa
Feldspar	feld	Sandstone	ss
Foliation	Fol	Schist, Schistose	sch
Fractured	frct	Shale	sh
Fragments	fgmts	Shear zone	Sz
Gneiss, Gneissic	gns	Siliceous	sil
Gouge	gog	Silt	si
Granite, Granitic	gr	Slickensided	slks
Gray	gry	Slightly Weathered	SIW
Hard	Hd	Unweathered	UnW
Highly Weathered	HiW	Weathered	Wthd
Hornblende	Hbl	Weathered Joints	WJts
Injected	inj	Vein	Vn
Interbedded	Intrbd	Vertical Joints	VJts

Vertical joints are ignored in RQD and joint frequency evaluations, but are noted in written descriptions and on core sketches.

**NOTES:**

- ROCK CORE DESCRIPTIONS REPRESENT ONLY THE MATERIAL RECOVERED IN THE CORING OPERATIONS.
- GENERAL MINIMUM CORING CHARACTERISTICS ASSUME ROCK CORING WITH A DOUBLE TUBE SERIES "M" OR EQUIVALENT CORE BARREL USING GOOD CORING TECHNIQUES AND EQUIPMENT.
- REC - RECOVERY IS THE LENGTH OF CORE RECOVERED, EXPRESSED AS A PERCENTAGE OF THE LENGTH OF CORE RUN.
- RQD - ROCK QUALITY DESIGNATION IS THE SUM OF THE LENGTHS OF CORE PIECES FOUR INCHES OR LONGER EXPRESSED AS A PERCENTAGE OF THE TOTAL LENGTH OF CORE RUN. LENGTHS ARE MEASURED BETWEEN IN-STU SEPARATIONS; MECHANICAL BREAKS RESULTING FROM CORING AND VERTICAL JOINTS ARE IGNORED.

**TABLE R-4 ROCK CORE SKETCH KEY**

SKETCH SYMBOLS	JOINT ORIENTATION AND CONDITION
	Joint
	Healed Joint
	Broken
	Part of Core Not Recovered
	Cavities or Vugs in Core
	Clay
	Sand
	Parallel - //
	Crossing - X
	Foliation - F
	Stratification - S
	Unfoliated or Unstratified - U
	Mechanical Break - MB
	<b>SURFACE - CONDITION</b>
	Curved - C Slick - 1
	Irregular - I Smooth - 2
	Straight - S Rough - 3

**MUESER RUTLEDGE CONSULTING ENGINEERS**  
225 WEST 34th STREET - 14 PENN PLAZA  
NEW YORK, NY 10122

## **APPENDIX A**





# Mueser Rutledge Consulting Engineers

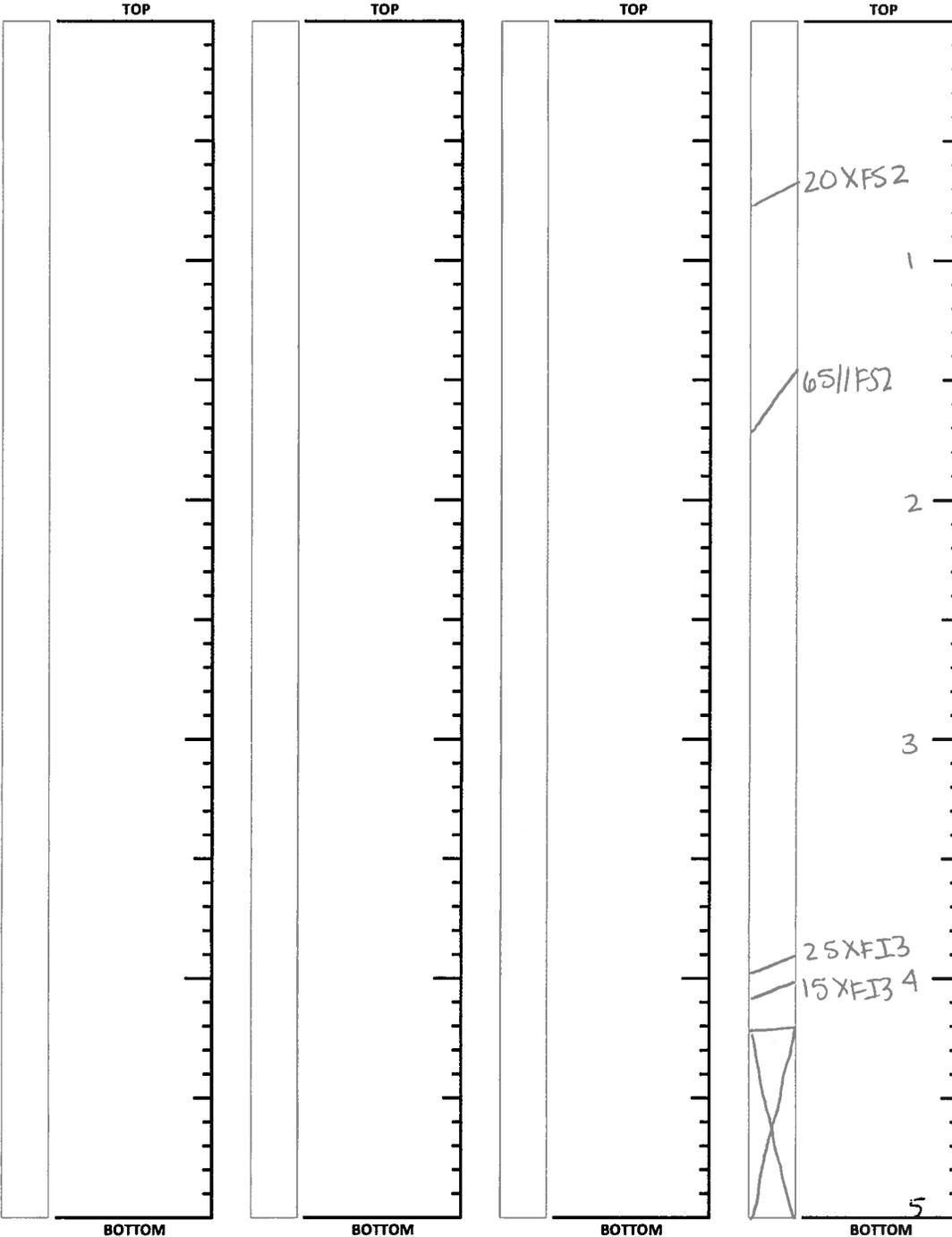
14 Penn Plaza - 225 West 34th Street  
New York, NY 10122  
T: 917 339-9300 F: 917 339-9400  
www.mrce.com

## ROCK CORE SKETCH

BORING NO. B-1P  
SHEET 2 OF 4  
FILE NO. 12243  
SURFACE ELEV. +11.3  
RES ENGR. C. HIGBIE

PROJECT: 550 W 29th St.  
LOCATION: New York, NY  
TEST/INSP. EQUIPMENT \_\_\_\_\_  
REF. CODES/STANDARDS \_\_\_\_\_

Run No.	REC/RQD						
						1C	85/76



**ROCK CORE SKETCH LEGEND**

JOINTING

- J - Joint
- MB - Mechanical Break
- ∠ - Angle w/ Horizontal
- // - Parallel
- X - Crossing
- F - Foliation
- S - Stratification
- U - Unfoliated or Unstratified

JOINT SURFACE

- C - Curved
- I - Irregular
- S - Straight

JOINT CONDITION

- 1 - Slick
- 2 - Smooth
- 3 - Rough

SKETCH SYMBOLS

- Joint
- Healed Joint
- Broken
- Part of Core Not Recovered
- Cavities or Vugs in Core
- Clay
- Sand
- Empty Space

NOTES





# Mueser Rutledge Consulting Engineers

14 Penn Plaza - 225 West 34th Street  
New York, NY 10122  
T: 917 339-9300 F: 917 339-9400  
www.mrce.com

PROJECT 550 W 29th St.  
LOCATION New York, NY  
BORING LOCATION See boring location plan

BORING NO. B-1P  
SHEET 4 OF 4  
FILE NO. 12243  
SURFACE ELEV. +11.3  
DATUM \_\_\_\_\_

TEST/INSPECTION EQUIPMENT \_\_\_\_\_  
REFERENCE CODES/STANDARDS \_\_\_\_\_

### BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED	CASING USED	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
TRUCK	DURING CORING	DIA., IN.	3	DEPTH, FT. FROM 0 TO 25
<u>SKID</u>	MECHANICAL <u>X</u>	DIA., IN.	4	DEPTH, FT. FROM 0 TO 20
BARGE	HYDRAULIC	DIA., IN.		DEPTH, FT. FROM 0 TO
OTHER	OTHER	DIA., IN.		DEPTH, FT. FROM 0 TO

TYPE AND SIZE OF:	DRILLING MUD USED	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
D-SAMPLER <u>2" OD SPLIT SPOON</u>	DIAMETER OF ROTARY BIT, IN.	<u>3-7/8</u>	
U-SAMPLER _____	TYPE OF DRILLING MUD	<u>REVERT</u>	
S-SAMPLER _____	AUGER USED	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
CORE BARREL <u>NX DOUBLE BARREL</u>	TYPE AND DIAMETER, IN.	_____	
CORE BIT <u>NX DIAMOND BIT</u>	CASING HAMMER, LBS.	<u>140</u>	AVERAGE FALL, IN. <u>30"</u>
DRILL RODS <u>NWJ</u>	SAMPLER HAMMER, LBS.	_____	AVERAGE FALL, IN. _____
	TYPE OF HAMMER	_____	

### WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	CONDITIONS OF OBSERVATION
7.9.14	1300	32 ft.	20'	5' 8"	AT COMPLETION OF BORING
7.10.14	1000			7.0'	
7.29.14	0930			8.4'	

PIEZOMETER INSTALLED  YES  NO SKETCH SHOWN ON SHEET NO. 4

STANDPIPE:	TYPE	<u>SOLID PVC</u>	ID, IN.	<u>2"</u>	LENGTH, FT.	<u>5</u>	TOP ELEV.	<u>+9</u>
INTAKE ELEMENT:	TYPE	<u>SLOTTED PVC</u>	OD, IN.	<u>2"</u>	LENGTH, FT.	<u>10</u>	TIP ELEV.	<u>-6</u>
FILTER:	MATERIAL	<u>SAND</u>	OD, IN.	<u>3.5"</u>	LENGTH, FT.	<u>27</u>	BOT. ELEV.	<u>-18</u>

### PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING	LIN. FT.	<u>25.75</u>	NO. OF 3" SHELBY TUBE SAMPLES	_____
3.5" DIA. U-SAMPLE BORING	LIN. FT.	_____	NO. OF 3" UNDISTURBED SAMPLES	_____
CORE DRILLING IN ROCK	LIN. FT.	<u>5</u>	OTHER:	_____

BORING CONTRACTOR \_\_\_\_\_  
 DRILLER MIKE B. HELPERS TOMMY H.  
 REMARKS PIEZOMETER INSTALLED  
 RESIDENT ENGINEER CATHERINE HIGBIE DATE 7.9.14

BORING NO. B-1P

# APPENDIX B

## Soil Boring Geologic Logs



**SOIL BORING #: SB-1/GW-1**

PROJECT ID:	Remedial Investigation	FLS PROJECT NO.:	10218-001-3
LOCATION:	548 West 29th Street	CLIENT:	Tamarkin
SITE LOCATION:	New York, NY	FLS FIELD SUPERVISOR:	S. Rothenberg
DRILLER:	ADT		
DRILLING METHOD:	Geoprobe direct-push 6610		
SOIL SAMPLING METHOD:	Grab		
DATE INSTALLED:	7/28/2014		
TOTAL DEPTH:	20'	DEPTH TO WATER:	9'

DEPTH (FT) BELOW SURFACE	PID READING (PPM)	Moisture/ Density	REC. (in.)	LITHOLOGIC DESCRIPTION	SAMPLE DESIGNATION
0	0	Dry loose	24"	5" Concrete/gravel	SB-1 (0-2')
				1'7" fill - brown medium to fine sand with brick and asphalt	
5	0	Dry compacted	16"	1' brown fine sand with traces of silt	
				4" dark gray coarse to fine sand with pebbles	
		Wet			
10	0	Wet	11"	11" dark gray coarse sand with pebbles	
15	0	Wet	55"	2'6" brown medium to fine sand	SB-1 (15'-17")
				2'1" dark gray and black silt with some clay and organic material	

**End of Boring 20'**  
Installed temporary monitoring well to 20'

<p><b>SOIL BORING LOG</b></p> <p>DATE: 8/20/2014 SCALE: NTS FILE NAME:</p>	<p>DRAWN BY: SR REV. BY: DD</p>		<p><b>Fleming-Lee Shue, Inc.</b> 6 East 32nd Street, 4th Floor New York, New York 10016 (212) 675-3225</p>
--	-------------------------------------	---	--

**SOIL BORING #: SB-2/GW-2**

PROJECT ID:	Remedial Investigation	FLS PROJECT NO.:	10218-001-3
LOCATION:	546 West 29th Street	CLIENT:	Tamarkin
SITE LOCATION:	New York, NY	FLS FIELD SUPERVISOR:	S. Rothenberg
DRILLER:	ADT		
DRILLING METHOD:	Geoprobe direct-push 6610		
SOIL SAMPLING METHOD:	Grab		
DATE WELL INSTALLED:	7/29/2014		
TOTAL DEPTH:	10'	DEPTH TO WATER:	9'

DEPTH (FT) BELOW SURFACE	PID READING (PPM)	Moisture/ Density	REC. (in)	LITHOLOGIC DESCRIPTION	SAMPLE DESIGNATION
0	0	Dry loose	55"	6" concrete	SB-2 (0'-2')
				2" fill - medium to coarse light brown sand with pebbles and brick	
				8" concrete	
				3'6" fill - brown and gray medium to fine sand with brick	
5	0	Dry compacted	32"	2'8" brown medium to fine sand with pebbles and some silt	SB-2 (5'-7')
		Wet			
10				End of Boring 10'	
15					

**End of Boring 20'**  
Temporary monitoring well installed to 20 ft. bg.

<p><b>SOIL BORING LOG</b></p> <p>DATE: 8/20/2014</p> <p>SCALE: NTS</p> <p>FILE NAME:</p>	<p>DRAWN BY: SR</p> <p>REV. BY: DD</p>		<p><b>Fleming-Lee Shue, Inc.</b></p> <p>6 East 32nd Street, 4th Floor</p> <p>New York, New York 10016</p> <p>(212) 675-3225</p>

**SOIL BORING #: SB-3/GW-3**

PROJECT ID:	Remedial Investigation	FLS PROJECT NO.:	10218-001-3
LOCATION:	550 West 29th Street	CLIENT:	Tamarkin
SITE LOCATION:	New York, NY	FLS FIELD SUPERVISOR:	S. Rothenberg
DRILLER:	ADT		
DRILLING METHOD:	Geoprobe direct-push 6610		
SOIL SAMPLING METHOD:	Grab		
DATE WELL INSTALLED:	7/28/2014		
TOTAL DEPTH:	20'	DEPTH TO WATER:	9'

DEPTH (FT) BELOW SURFACE	PID READING (PPM)	Moisture/ Density	REC. (in)	LITHOLOGIC DESCRIPTION	SAMPLE DESIGNATION
0	0	Dry loose	16"	5" Concrete	SB-3 (0-2')
				11" fill - medium to coarse light brown sand with pebbles and brick	
5	0	Dry compacted	25"	1'6" black and dark brown fine sand with some silt	
				7" medium to coarse gray sand	
		Wet			
10	0	Wet	30"	1'10" same as above	
				8" brown silt with some sand	
15	0	Wet	100"	2' same as above	SB-3 (15'-17')
				3" dark gray compacted silt with clay	

**End of Boring 20 ft. bg.**  
Installed temporary monitoring well to 20 ft. bg.

<p><b>SOIL BORING LOG</b></p> <p>DATE: 8/20/2014 SCALE: NTS FILE NAME:</p>	<p>DRAWN BY: SR REV. BY: DD</p>		<p><b>Fleming-Lee Shue, Inc.</b> 6 East 32nd Street, 4th Floor New York, New York 10016 (212) 675-3225</p>
--	-------------------------------------	---	--

**SOIL BORING #: SB-4**

PROJECT ID:	Remedial Investigation	FLS PROJECT NO.:	10218-001-3
LOCATION:	548 West 29th Street	CLIENT:	Tamarkin
SITE LOCATION:	New York, NY	FLS FIELD SUPERVISOR:	S. Rothenberg
DRILLER:	ADT		
DRILLING METHOD:	Geoprobe direct-push 6610		
SOIL SAMPLING METHOD:	Grab		
DATE WELL INSTALLED:	7/28/2014		
TOTAL DEPTH:	20'	DEPTH TO WATER:	9.5'

DEPTH (FT) BELOW SURFACE	PID READING (PPM)	Moisture/ Density	REC. (in.)	LITHOLOGIC DESCRIPTION	SAMPLE DESIGNATION
0	0	Dry loose	17"	5" Concrete/gravel	SB-4 (0-2')
				1' fill - brown and gray medium to coarse sand with brick and wood	
5	0	Dry loose	22"	1'4" Same as above	
				6" dark brown and gray fine sand with silt	
10	0	Wet	26"	2'4" brown medium to fine sand with pebbles	
15	0	Wet	50"	2'7" Same as above	SB-4 (15'-17")

End of Boring 20'

**SOIL BORING LOG**

DATE: 8/20/2014  
 SCALE: NTS  
 FILE NAME:

DRAWN BY: SR  
 REV. BY: DD



**Fleming-Lee Shue, Inc.**  
 6 East 32nd Street, 4th Floor  
 New York, New York 10016  
 (212) 675-3225

**SOIL BORING #: SB-5**

PROJECT ID:	Remedial Investigation	FLS PROJECT NO.:	10218-001-3
LOCATION:	546 West 29th Street	CLIENT:	Tamarkin
SITE LOCATION:	New York, NY	FLS FIELD SUPERVISOR:	S. Rothenberg
DRILLER:	ADT		
DRILLING METHOD:	Geoprobe direct-push 6610		
SOIL SAMPLING METHOD:	Grab		
DATE WELL INSTALLED:	7/29/2014		
TOTAL DEPTH:	20'	DEPTH TO WATER:	9'

DEPTH (FT) BELOW SURFACE	PID READING (PPM)	Moisture/ Density	REC. (in)	LITHOLOGIC DESCRIPTION	SAMPLE DESIGNATION
0	0	Dry loose	28"	4" concrete	SB-5 (0-2')
				2' fill - dark brown loose sand wih pebbles and brick	
				4" brown fine sand	
5	0	Dry loose	30"	2'6" brown and dark brown medium to fine sand with brick and pebbles	
10	0	Wet	18"	1'6" brown medium to coarse sand with pebbles	
15	0	Wet	56"	2'10" borwn medium to fine sand with some silt and pebbles	SB-5 (15'-17')
				1'10" dark gray compacted silt	

End of Boring 20'

**SOIL BORING LOG**

DATE: 8/20/2014  
 SCALE: NTS  
 FILE NAME:

DRAWN BY: SR  
 REV. BY: DD



**Fleming-Lee Shue, Inc.**  
 6 East 32nd Street, 4th Floor  
 New York, New York 10016  
 (212) 675-3225

**SOIL BORING #: SB-6**

PROJECT ID:	Remedial Investigation	FLS PROJECT NO.:	10218-001-3
LOCATION:	550 West 29th Street	CLIENT:	Tamarkin
SITE LOCATION:	New York, NY	FLS FIELD SUPERVISOR:	S. Rothenberg
DRILLER:	ADT		
DRILLING METHOD:	Geoprobe direct-push 420M		
SOIL SAMPLING METHOD:	Grab		
DATE WELL INSTALLED:	7/28/2014		
TOTAL DEPTH:	12' (17' below sidewalk grade)	DEPTH TO WATER:	4' (9' below sidewalk)

DEPTH (FT) BELOW SURFACE	PID READING (PPM)	Moisture/ Density	REC. (in.)	LITHOLOGIC DESCRIPTION	SAMPLE DESIGNATION
0	0	Dry loose	22	Concrete 6" 1'10" brown medium to coarse sand with brick and pebbles	SB-12 (0-2')
3	0	Dry loose Wet	12	4" brown coarse sand with pebbles 8" brown medium to fine sand with traces of silt	
6	0	Wet	24	2' brown coarse sand with pebbles	
9	0	Wet	30	2'6" coarse to fine sand with traces of silt and pebbles	SB-12 (10'-12")
12				<b>End of Boring 12'</b> <b>Note:</b> Boring installed in the building cellar. Starting grade was approximately 5 feet below sidewalk grade	

**SOIL BORING LOG**

DATE: 8/20/2014  
SCALE: NTS  
FILE NAME:

DRAWN BY: SR  
REV. BY: DD



**Fleming-Lee Shue, Inc.**  
6 East 32nd Street, 4th Floor  
New York, New York 10016  
(212) 675-3225

# APPENDIX C

## Laboratory Data Deliverables



**Technical Report for**

**Fleming-Lee Shue, Inc.**

Tamarkin, 550 West 29th Street, New York, NY

10218-001-2

Accutest Job Number: **JB72780**

Sampling Dates: **07/28/14 - 07/29/14**

**Report to:**

**Fleming-Lee Shue, Inc.**

**daniel@flemingleeshue.com**

**ATTN: Daniel DiRocco**

**Total number of pages in report: 163**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.



**Nancy Cole**  
**Laboratory Director**

**Client Service contact: Tammy McCloskey 732-329-0200**

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Case Narrative/Conformance Summary .....</b>	<b>5</b>
<b>Section 3: Summary of Hits .....</b>	<b>11</b>
<b>Section 4: Sample Results .....</b>	<b>24</b>
<b>4.1:</b> JB72780-1: SB-5 (0'-2') .....	25
<b>4.2:</b> JB72780-2: SB-5 (15'-17') .....	33
<b>4.3:</b> JB72780-3: SB-2 (0'-2') .....	41
<b>4.4:</b> JB72780-4: SB-2 (5'-7') .....	49
<b>4.5:</b> JB72780-5: GW-2 .....	57
<b>4.6:</b> JB72780-5F: GW-2 .....	65
<b>4.7:</b> JB72780-6: FB07292014 .....	66
<b>4.8:</b> JB72780-6F: FB07292014 .....	74
<b>4.9:</b> JB72780-7: TRIP BLANK .....	75
<b>4.10:</b> JB72780-8: SB-1 (0'-2') .....	77
<b>4.11:</b> JB72780-9: SB-1 (15'-17') .....	85
<b>4.12:</b> JB72780-10: SB-6 (0'-2') .....	93
<b>4.13:</b> JB72780-11: SB-6 (10'-12') .....	101
<b>4.14:</b> JB72780-12: SB-3 (0'-2') .....	109
<b>4.15:</b> JB72780-13: SB-3 (15'-17') .....	117
<b>4.16:</b> JB72780-14: SB-4 (0'-2') .....	125
<b>4.17:</b> JB72780-15: SB-4 (15'-17') .....	133
<b>4.18:</b> JB72780-16: GW-3 .....	141
<b>4.19:</b> JB72780-16F: GW-3 .....	149
<b>4.20:</b> JB72780-17: GW-1 .....	150
<b>4.21:</b> JB72780-17F: GW-1 .....	158
<b>Section 5: Misc. Forms .....</b>	<b>159</b>
<b>5.1:</b> Chain of Custody .....	160



## Sample Summary

Fleming-Lee Shue, Inc.

**Job No:** JB72780

Tamarkin, 550 West 29th Street, New York, NY

Project No: 10218-001-2

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JB72780-1	07/29/14	10:35 SR	07/29/14	SO	Soil	SB-5 (0' -2')
JB72780-2	07/29/14	10:39 SR	07/29/14	SO	Soil	SB-5 (15' -17')
JB72780-3	07/29/14	09:28 SR	07/29/14	SO	Soil	SB-2 (0' -2')
JB72780-4	07/29/14	09:32 SR	07/29/14	SO	Soil	SB-2 (5' -7')
JB72780-5	07/29/14	10:05 SR	07/29/14	AQ	Ground Water	GW-2
JB72780-5F	07/29/14	10:05 SR	07/29/14	AQ	Groundwater Filtered	GW-2
JB72780-6	07/29/14	08:15 SR	07/29/14	AQ	Field Blank Water	FB07292014
JB72780-6F	07/29/14	08:15 SR	07/29/14	AQ	Field Blank Filtered	FB07292014
JB72780-7	07/29/14	10:39 SR	07/29/14	AQ	Trip Blank Water	TRIP BLANK
JB72780-8	07/28/14	14:00 SR	07/29/14	SO	Soil	SB-1 (0' -2')
JB72780-9	07/28/14	14:10 SR	07/29/14	SO	Soil	SB-1 (15' -17')
JB72780-10	07/28/14	09:42 SR	07/29/14	SO	Soil	SB-6 (0' -2')
JB72780-11	07/28/14	10:10 SR	07/29/14	SO	Soil	SB-6 (10' -12')

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

**Sample Summary**

(continued)

Fleming-Lee Shue, Inc.

**Job No:** JB72780

Tamarkin, 550 West 29th Street, New York, NY

Project No: 10218-001-2

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JB72780-12	07/28/14	11:17 SR	07/29/14	SO	Soil	SB-3 (0'-2')
JB72780-13	07/28/14	11:47 SR	07/29/14	SO	Soil	SB-3 (15'-17')
JB72780-14	07/28/14	15:00 SR	07/29/14	SO	Soil	SB-4 (0'-2')
JB72780-15	07/28/14	15:05 SR	07/29/14	SO	Soil	SB-4 (15'-17')
JB72780-16	07/28/14	12:35 SR	07/29/14	AQ	Ground Water	GW-3
JB72780-16F	07/28/14	12:35 SR	07/29/14	AQ	Groundwater Filtered	GW-3
JB72780-17	07/28/14	15:15 SR	07/29/14	AQ	Ground Water	GW-1
JB72780-17F	07/28/14	15:15 SR	07/29/14	AQ	Groundwater Filtered	GW-1

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** Fleming-Lee Shue, Inc.

**Job No** JB72780

**Site:** Tamarkin, 550 West 29th Street, New York, NY

**Report Date** 8/12/2014 12:28:25 P

On 07/29/2014, 15 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at temperatures of 3.8 C/ 4.5 C/ 5.7 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB72780 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GCMS By Method SW846 8260C

**Matrix:** AQ

**Batch ID:** V4V422

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72821-3MS, JB72821-3MSD were used as the QC samples indicated.

**Matrix:** AQ

**Batch ID:** V4V423

- All samples were analyzed within the recommended method holding time.
- Sample(s) JB72821-1MS, JB72821-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for 1,1,1-Trichloroethane are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethane are outside control limits. Outside control limits due to matrix interference.

**Matrix:** SO

**Batch ID:** V3C5061

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72780-2MS, JB72780-1DUP were used as the QC samples indicated.
- RPD(s) for Duplicate for Methylcyclohexane are outside control limits for sample JB72780-1DUP. High RPD due to low concentration of hit

**Extractables by GCMS By Method SW846 8270D****Matrix:** AQ**Batch ID:** OP76889

- All samples were extracted within the recommended method holding time.
- Sample(s) JB72780-17MS, JB72780-17MSD were used as the QC samples indicated.
- Sample(s) JB72780-16, JB72780-17, JB72780-6 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- Matrix Spike Recovery(s) for 3,3'-Dichlorobenzidine are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for 3,3'-Dichlorobenzidine are outside control limits. Outside control limits due to matrix interference.

**Matrix:** AQ**Batch ID:** OP76943

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72806-4MS, JB72806-4MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for 4-Chloroaniline are outside of in house control limits.
- Matrix Spike Duplicate Recovery(s) for 4-Chloroaniline are outside of in house control limits.
- OP76943-BS1 for 2-Nitroaniline: High percent recoveries and no associated positive found in the QC batch.

**Matrix:** SO**Batch ID:** OP76871

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72780-1MS, JB72780-1MSD were used as the QC samples indicated.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for 2,4-Dinitrophenol, 3,3'-Dichlorobenzidine, 4,6-Dinitro-o-cresol, Acenaphthylene, Anthracene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Benzaldehyde are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Chrysene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, Pyrene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- RPD(s) for MSD for 2,4-Dinitrophenol, 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4,6-Dinitro-o-cresol, 4-Chloroaniline, 4-Nitroaniline are outside control limits for sample OP76871-MSD. Outside control limits due to matrix interference.

**Matrix:** SO**Batch ID:** OP76897

- All samples were extracted within the recommended method holding time.
- Sample(s) JB72671-4MS, JB72671-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for 2,4-Dinitrophenol, 4,6-Dinitro-o-cresol are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for 2,4-Dinitrophenol, 4,6-Dinitro-o-cresol are outside control limits. Outside control limits due to matrix interference.

## Extractables by GC By Method SW846 8081B

**Matrix:** AQ**Batch ID:** OP76884

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72780-5MS, JB72780-5MSD were used as the QC samples indicated.
- Matrix Spike Duplicate Recovery(s) for 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha-BHC, alpha-Chlordane, beta-BHC, delta-BHC, Dieldrin, Endosulfan sulfate, Endosulfan-I, Endosulfan-II, Endrin, Endrin aldehyde, Endrin ketone, gamma-BHC (Lindane), gamma-Chlordane, Heptachlor, Heptachlor epoxide, Methoxychlor are outside control limits. Probable cause due to matrix interference.
- RPD(s) for MSD for 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha-BHC, alpha-Chlordane, beta-BHC, delta-BHC, Dieldrin, Endosulfan sulfate, Endosulfan-I, Endosulfan-II, Endrin, Endrin aldehyde, Endrin ketone, gamma-BHC (Lindane), gamma-Chlordane, Heptachlor, Heptachlor epoxide, Methoxychlor are outside control limits for sample OP76884-MSD. Analytical precision exceeds in-house control limits.

**Matrix:** SO**Batch ID:** OP76908

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72780-2MS, JB72780-2MSD were used as the QC samples indicated.
- JB72780-15 for Endrin ketone: More than 40 % RPD for detected concentrations between the two GC columns.
- JB72780-14 for 4,4'-DDT: More than 40 % RPD for detected concentrations between the two GC columns.
- JB72780-8 for Endrin ketone: More than 40 % RPD for detected concentrations between the two GC columns.
- JB72780-1 for Endrin ketone: More than 40 % RPD for detected concentrations between the two GC columns.

## Extractables by GC By Method SW846 8082A

**Matrix:** AQ**Batch ID:** OP76883

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72757-1MS, JB72757-1MSD were used as the QC samples indicated.

**Matrix:** SO**Batch ID:** OP76901

- All samples were extracted within the recommended method holding time.
- Sample(s) JB72780-4MS, JB72780-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- JB72780-1 for Decachlorobiphenyl: Outside control limits due to matrix interference.
- JB72780-11 for Decachlorobiphenyl: Outside control limits due to matrix interference.
- JB72780-12 for Decachlorobiphenyl: Outside control limits due to matrix interference.

## Metals By Method EPA 200.7

**Matrix:** AQ

**Batch ID:** MP80992

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72780-17FMS, JB72780-17FMSD, JB72780-17FSDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Aluminum, Beryllium, Cadmium, Chromium, Cobalt, Copper are outside control limits for sample MP80992-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- JB72780-17F for Thallium: Elevated detection limit due to dilution required for high interfering element.
- MP80992-S1 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- MP80992-S2 for Lead: Elevated detection limit due to dilution required for high interfering element.
- MP80992-SD1 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- MP80992-S2 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- MP80992-S1 for Lead: Elevated detection limit due to dilution required for high interfering element.
- MP80992-SD1 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JB72780-17F for Lead: Elevated detection limit due to dilution required for high interfering element.
- JB72780-16 for Cobalt: Elevated sample detection limit due to difficult sample matrix.
- JB72780-5F for Lead: Elevated detection limit due to dilution required for high interfering element.
- JB72780-16 for Copper: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Iron: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Lead: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Chromium: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Magnesium: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Manganese: Elevated sample detection limit due to difficult sample matrix.
- JB72780-5F for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JB72780-16F for Lead: Elevated detection limit due to dilution required for high interfering element.
- JB72780-17 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JB72780-16F for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JB72780-16 for Nickel: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Potassium: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Selenium: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Silver: Elevated sample detection limit due to difficult sample matrix.
- JB72780-5F for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JB72780-16 for Arsenic: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Thallium: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Vanadium: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Zinc: Elevated sample detection limit due to difficult sample matrix.
- JB72780-5 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JB72780-5 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JB72780-5 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JB72780-17 for Cadmium: Elevated detection limit due to dilution required for high interfering element.
- JB72780-16 for Aluminum: Elevated sample detection limit due to difficult sample matrix.
- JB72780-17 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JB72780-16 for Antimony: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Calcium: Elevated sample detection limit due to difficult sample matrix.

Tuesday, August 12, 2014

Page 4 of 6

## Metals By Method EPA 200.7

<b>Matrix:</b> AQ	<b>Batch ID:</b> MP80992
-------------------	--------------------------

- JB72780-16 for Sodium: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Beryllium: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Cadmium: Elevated sample detection limit due to difficult sample matrix.
- JB72780-16 for Barium: Elevated sample detection limit due to difficult sample matrix.

## Metals By Method EPA 245.1

<b>Matrix:</b> AQ	<b>Batch ID:</b> MP80999
-------------------	--------------------------

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72780-5MS, JB72780-5MSD were used as the QC samples for metals.
- JB72780-16 for Mercury: Elevated sample detection limit due to difficult sample matrix.

## Metals By Method SW846 6010C

<b>Matrix:</b> SO	<b>Batch ID:</b> MP81017
-------------------	--------------------------

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72791-2MS, JB72791-2MSD, JB72791-2SDL were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Antimony, Manganese, Potassium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Antimony, Zinc are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Aluminum, Iron, Calcium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- RPD(s) for MSD for Iron are outside control limits for sample MP81017-S2. High rpd due to possible sample nonhomogeneity.
- RPD(s) for Serial Dilution for Antimony are outside control limits for sample MP81017-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP81017-MB1 for Zinc: All reported results <RL or >10x MB value.
- MP81017-SD1 for Vanadium: Serial dilution indicates possible matrix interference.
- MP81017-SD1 for Magnesium: Serial dilution indicates possible matrix interference.
- MP81017-SD1 for Iron: Serial dilution indicates possible matrix interference.
- MP81017-SD1 for Calcium: Serial dilution indicates possible matrix interference.

## Metals By Method SW846 7471B

<b>Matrix:</b> SO	<b>Batch ID:</b> MP81018
-------------------	--------------------------

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72780-1MSD, JB72780-1MS were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Mercury are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Mercury are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

## Wet Chemistry By Method SM2540 G-97

**Matrix:** SO

**Batch ID:** GN9149

- The data for SM2540 G-97 meets quality control requirements.

**Matrix:** SO

**Batch ID:** GN9152

- The data for SM2540 G-97 meets quality control requirements.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14

Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method	
JB72780-1	SB-5 (0'-2')						
		Acetone	11.9 J	12	1.8	ug/kg	SW846 8260C
		Benzene	0.43 J	1.2	0.21	ug/kg	SW846 8260C
		Methylcyclohexane	0.32 J	6.0	0.17	ug/kg	SW846 8260C
		Toluene	0.89 J	1.2	0.18	ug/kg	SW846 8260C
		m,p-Xylene	0.44 J	1.2	0.27	ug/kg	SW846 8260C
		Xylene (total)	0.44 J	1.2	0.17	ug/kg	SW846 8260C
		3&4-Methylphenol	126	78	49	ug/kg	SW846 8270D
		Phenol	69.2 J	78	41	ug/kg	SW846 8270D
		Acenaphthene	321	39	11	ug/kg	SW846 8270D
		Acenaphthylene	3070	39	12	ug/kg	SW846 8270D
		Anthracene	3710	39	14	ug/kg	SW846 8270D
		Benzo(a)anthracene	15700	390	130	ug/kg	SW846 8270D
		Benzo(a)pyrene	20200	390	120	ug/kg	SW846 8270D
		Benzo(b)fluoranthene	20800	390	130	ug/kg	SW846 8270D
		Benzo(g,h,i)perylene	14100	390	140	ug/kg	SW846 8270D
		Benzo(k)fluoranthene	2100	39	15	ug/kg	SW846 8270D
		1,1'-Biphenyl	35.6 J	78	4.5	ug/kg	SW846 8270D
		Carbazole	627	78	18	ug/kg	SW846 8270D
		Chrysene	16300	390	130	ug/kg	SW846 8270D
		Dibenzo(a,h)anthracene	3010	39	13	ug/kg	SW846 8270D
		Dibenzofuran	158	78	12	ug/kg	SW846 8270D
		Diethyl phthalate	324	78	13	ug/kg	SW846 8270D
		Fluoranthene	22300	390	170	ug/kg	SW846 8270D
		Fluorene	399	39	13	ug/kg	SW846 8270D
		Indeno(1,2,3-cd)pyrene	13100	390	130	ug/kg	SW846 8270D
		2-Methylnaphthalene	223	78	22	ug/kg	SW846 8270D
		Naphthalene	328	39	11	ug/kg	SW846 8270D
		Phenanthrene	8250	390	180	ug/kg	SW846 8270D
		Pyrene	29300	390	150	ug/kg	SW846 8270D
		Endrin aldehyde	6.5	0.76	0.40	ug/kg	SW846 8081B
		Endrin ketone <sup>a</sup>	12.7	0.76	0.31	ug/kg	SW846 8081B
		Aluminum	4740	54		mg/kg	SW846 6010C
		Arsenic	5.1	2.2		mg/kg	SW846 6010C
		Barium	153	22		mg/kg	SW846 6010C
		Beryllium	0.50	0.22		mg/kg	SW846 6010C
		Cadmium	0.67	0.54		mg/kg	SW846 6010C
		Calcium	8070	540		mg/kg	SW846 6010C
		Chromium	19.1	1.1		mg/kg	SW846 6010C
		Copper	150	2.7		mg/kg	SW846 6010C
		Iron	13900	54		mg/kg	SW846 6010C
		Lead	476	2.2		mg/kg	SW846 6010C
		Magnesium	1840	540		mg/kg	SW846 6010C
		Manganese	295	1.6		mg/kg	SW846 6010C

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14

Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
---------------	------------------	--------------------	----	-----	-------	--------

Mercury		0.50	0.036		mg/kg	SW846 7471B
Nickel		18.5	4.3		mg/kg	SW846 6010C
Silver		0.54	0.54		mg/kg	SW846 6010C
Vanadium		25.1	5.4		mg/kg	SW846 6010C
Zinc		328	2.2		mg/kg	SW846 6010C

### JB72780-2 SB-5 (15'-17')

Methyl Tert Butyl Ether		1.1	0.88	0.15	ug/kg	SW846 8260C
Benzo(a)anthracene		28.7 J	36	12	ug/kg	SW846 8270D
Benzo(a)pyrene		27.3 J	36	11	ug/kg	SW846 8270D
Benzo(b)fluoranthene		30.2 J	36	12	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		21.5 J	36	14	ug/kg	SW846 8270D
Benzo(k)fluoranthene		15.5 J	36	14	ug/kg	SW846 8270D
Chrysene		27.4 J	36	12	ug/kg	SW846 8270D
Fluoranthene		50.5	36	16	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		19.9 J	36	13	ug/kg	SW846 8270D
Phenanthrene		39.0	36	17	ug/kg	SW846 8270D
Pyrene		60.3	36	14	ug/kg	SW846 8270D
Aluminum		3580	50		mg/kg	SW846 6010C
Arsenic		214	2.0		mg/kg	SW846 6010C
Barium		35.3	20		mg/kg	SW846 6010C
Beryllium		0.39	0.20		mg/kg	SW846 6010C
Calcium		2340	500		mg/kg	SW846 6010C
Chromium		13.4	1.0		mg/kg	SW846 6010C
Copper		10.5	2.5		mg/kg	SW846 6010C
Iron		7020	50		mg/kg	SW846 6010C
Lead		6.1	2.0		mg/kg	SW846 6010C
Magnesium		1620	500		mg/kg	SW846 6010C
Manganese		224	1.5		mg/kg	SW846 6010C
Nickel		8.2	4.0		mg/kg	SW846 6010C
Potassium		1080	1000		mg/kg	SW846 6010C
Sodium		1040	1000		mg/kg	SW846 6010C
Vanadium		14.8	5.0		mg/kg	SW846 6010C
Zinc		17.7	2.0		mg/kg	SW846 6010C

### JB72780-3 SB-2 (0'-2')

Acetone		19.5	11	1.6	ug/kg	SW846 8260C
Benzene		0.91 J	1.1	0.19	ug/kg	SW846 8260C
Ethylbenzene		0.40 J	1.1	0.12	ug/kg	SW846 8260C
Methylcyclohexane		0.49 J	5.4	0.15	ug/kg	SW846 8260C
Toluene		0.45 J	1.1	0.16	ug/kg	SW846 8260C
m,p-Xylene		0.39 J	1.1	0.25	ug/kg	SW846 8260C
o-Xylene		0.35 J	1.1	0.15	ug/kg	SW846 8260C

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Xylene (total)		0.74 J	1.1	0.15	ug/kg	SW846 8260C
Acenaphthene		43.2	39	11	ug/kg	SW846 8270D
Acenaphthylene		33.0 J	39	12	ug/kg	SW846 8270D
Anthracene		87.5	39	14	ug/kg	SW846 8270D
Benzo(a)anthracene		389	39	13	ug/kg	SW846 8270D
Benzo(a)pyrene		366	39	12	ug/kg	SW846 8270D
Benzo(b)fluoranthene		332	39	13	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		278	39	14	ug/kg	SW846 8270D
Benzo(k)fluoranthene		120	39	15	ug/kg	SW846 8270D
Chrysene		408	39	13	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		53.8	39	13	ug/kg	SW846 8270D
Fluoranthene		547	39	17	ug/kg	SW846 8270D
Fluorene		25.6 J	39	13	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		216	39	13	ug/kg	SW846 8270D
2-Methylnaphthalene		33.8 J	78	22	ug/kg	SW846 8270D
Naphthalene		46.7	39	11	ug/kg	SW846 8270D
Phenanthrene		486	39	18	ug/kg	SW846 8270D
Pyrene		878	39	15	ug/kg	SW846 8270D
Aluminum		8790	57		mg/kg	SW846 6010C
Arsenic		10.3	2.3		mg/kg	SW846 6010C
Barium		184	23		mg/kg	SW846 6010C
Beryllium		0.94	0.23		mg/kg	SW846 6010C
Calcium		44400	570		mg/kg	SW846 6010C
Chromium		11.3	1.1		mg/kg	SW846 6010C
Copper		21.7	2.8		mg/kg	SW846 6010C
Iron		9530	57		mg/kg	SW846 6010C
Lead		134	2.3		mg/kg	SW846 6010C
Magnesium		19000	570		mg/kg	SW846 6010C
Manganese		773	1.7		mg/kg	SW846 6010C
Mercury		0.16	0.036		mg/kg	SW846 7471B
Nickel		12.7	4.5		mg/kg	SW846 6010C
Potassium		2830	1100		mg/kg	SW846 6010C
Silver		1.0	0.57		mg/kg	SW846 6010C
Sodium		1640	1100		mg/kg	SW846 6010C
Vanadium		36.4	5.7		mg/kg	SW846 6010C
Zinc		71.2	2.3		mg/kg	SW846 6010C

**JB72780-4 SB-2 (5'-7')**

Acetone		26.7	8.6	1.3	ug/kg	SW846 8260C
Toluene		0.17 J	0.86	0.13	ug/kg	SW846 8260C
Aluminum		6790	50		mg/kg	SW846 6010C
Arsenic		2.8	2.0		mg/kg	SW846 6010C
Barium		31.3	20		mg/kg	SW846 6010C
Beryllium		0.71	0.20		mg/kg	SW846 6010C

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

Calcium		1240	500		mg/kg	SW846 6010C
Chromium		14.4	1.0		mg/kg	SW846 6010C
Cobalt		5.8	5.0		mg/kg	SW846 6010C
Copper		11.6	2.5		mg/kg	SW846 6010C
Iron		12400	50		mg/kg	SW846 6010C
Lead		5.8	2.0		mg/kg	SW846 6010C
Magnesium		4060	500		mg/kg	SW846 6010C
Manganese		158	1.5		mg/kg	SW846 6010C
Nickel		16.3	4.0		mg/kg	SW846 6010C
Potassium		1370	1000		mg/kg	SW846 6010C
Vanadium		22.2	5.0		mg/kg	SW846 6010C
Zinc		27.9	2.0		mg/kg	SW846 6010C

**JB72780-5      GW-2**

Benzene		1.2	1.0	0.21	ug/l	SW846 8260C
Cyclohexane		0.75 J	5.0	0.23	ug/l	SW846 8260C
1,1-Dichloroethane		1.5	1.0	0.35	ug/l	SW846 8260C
1,1-Dichloroethene		3.0	1.0	0.50	ug/l	SW846 8260C
cis-1,2-Dichloroethene		1.9	1.0	0.33	ug/l	SW846 8260C
trans-1,2-Dichloroethene		0.71 J	1.0	0.51	ug/l	SW846 8260C
Methyl Tert Butyl Ether		36.0	1.0	0.19	ug/l	SW846 8260C
Vinyl chloride		2.3	1.0	0.16	ug/l	SW846 8260C
Aluminum		583	200		ug/l	EPA 200.7
Arsenic		3460	3.0		ug/l	EPA 200.7
Cadmium		7.0	3.0		ug/l	EPA 200.7
Calcium		276000	5000		ug/l	EPA 200.7
Iron		10500	100		ug/l	EPA 200.7
Magnesium		78800	5000		ug/l	EPA 200.7
Manganese		16700	75		ug/l	EPA 200.7
Potassium		46200	10000		ug/l	EPA 200.7
Sodium		362000	10000		ug/l	EPA 200.7
Zinc		37.8	20		ug/l	EPA 200.7

**JB72780-5F      GW-2**

Arsenic		2190	3.0		ug/l	EPA 200.7
Cadmium		4.3	3.0		ug/l	EPA 200.7
Calcium		310000	5000		ug/l	EPA 200.7
Iron		1050	100		ug/l	EPA 200.7
Magnesium		89800	5000		ug/l	EPA 200.7
Manganese		20900	75		ug/l	EPA 200.7
Potassium		52500	10000		ug/l	EPA 200.7
Sodium		397000	10000		ug/l	EPA 200.7

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

**JB72780-6      FB07292014**

Di-n-butyl phthalate	1.8 J	2.0	0.58	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	1.3 JB	2.0	0.55	ug/l	SW846 8270D

**JB72780-6F      FB07292014**

No hits reported in this sample.

**JB72780-7      TRIP BLANK**

No hits reported in this sample.

**JB72780-8      SB-1 (0'-2')**

Tetrachloroethene	0.22 J	4.5	0.18	ug/kg	SW846 8260C
Acenaphthene	69.7	36	10	ug/kg	SW846 8270D
Acenaphthylene	83.9	36	11	ug/kg	SW846 8270D
Anthracene	179	36	13	ug/kg	SW846 8270D
Benzo(a)anthracene	630	36	12	ug/kg	SW846 8270D
Benzo(a)pyrene	708	36	11	ug/kg	SW846 8270D
Benzo(b)fluoranthene	800	36	12	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	516	36	13	ug/kg	SW846 8270D
Benzo(k)fluoranthene	273	36	13	ug/kg	SW846 8270D
Carbazole	94.8	72	17	ug/kg	SW846 8270D
Chrysene	701	36	12	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	99.2	36	12	ug/kg	SW846 8270D
Dibenzofuran	43.1 J	72	11	ug/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate	36.7 J	72	32	ug/kg	SW846 8270D
Fluoranthene	1320	36	16	ug/kg	SW846 8270D
Fluorene	54.6	36	12	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	542	36	12	ug/kg	SW846 8270D
2-Methylnaphthalene	34.9 J	72	20	ug/kg	SW846 8270D
Naphthalene	46.7	36	9.8	ug/kg	SW846 8270D
Phenanthrene	889	36	16	ug/kg	SW846 8270D
Pyrene	1250	36	14	ug/kg	SW846 8270D
Endrin ketone <sup>a</sup>	1.3	0.72	0.29	ug/kg	SW846 8081B
Aluminum	10600	55		mg/kg	SW846 6010C
Antimony	10.1	2.2		mg/kg	SW846 6010C
Arsenic	674	2.2		mg/kg	SW846 6010C
Barium	194	22		mg/kg	SW846 6010C
Beryllium	0.88	0.22		mg/kg	SW846 6010C
Cadmium	0.79	0.55		mg/kg	SW846 6010C
Calcium	30600	550		mg/kg	SW846 6010C
Chromium	31.0	1.1		mg/kg	SW846 6010C

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14

Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
		Cobalt	9.3	5.5		mg/kg	SW846 6010C
		Copper	259	2.7		mg/kg	SW846 6010C
		Iron	18900	55		mg/kg	SW846 6010C
		Lead	1050	2.2		mg/kg	SW846 6010C
		Magnesium	4690	550		mg/kg	SW846 6010C
		Manganese	558	1.6		mg/kg	SW846 6010C
		Mercury	3.7	0.19		mg/kg	SW846 7471B
		Nickel	23.3	4.4		mg/kg	SW846 6010C
		Potassium	1840	1100		mg/kg	SW846 6010C
		Selenium	4.2	2.2		mg/kg	SW846 6010C
		Vanadium	40.1	5.5		mg/kg	SW846 6010C
		Zinc	371	2.2		mg/kg	SW846 6010C

### JB72780-9 SB-1 (15'-17')

Acetone	7.3 J	9.5	1.4	ug/kg	SW846 8260C
Carbon disulfide	1.4 J	4.7	0.22	ug/kg	SW846 8260C
1,1-Dichloroethene	0.73 J	4.7	0.23	ug/kg	SW846 8260C
cis-1,2-Dichloroethene	0.41 J	4.7	0.25	ug/kg	SW846 8260C
Methyl Tert Butyl Ether	2.3	0.95	0.16	ug/kg	SW846 8260C
bis(2-Ethylhexyl)phthalate	69.9 J	72	32	ug/kg	SW846 8270D
Aluminum	8040	49		mg/kg	SW846 6010C
Arsenic	343	2.0		mg/kg	SW846 6010C
Barium	52.5	20		mg/kg	SW846 6010C
Beryllium	0.56	0.20		mg/kg	SW846 6010C
Calcium	2640	490		mg/kg	SW846 6010C
Chromium	19.3	0.98		mg/kg	SW846 6010C
Cobalt	5.9	4.9		mg/kg	SW846 6010C
Copper	23.6	2.5		mg/kg	SW846 6010C
Iron	9920	49		mg/kg	SW846 6010C
Lead	17.5	2.0		mg/kg	SW846 6010C
Magnesium	2470	490		mg/kg	SW846 6010C
Manganese	285	1.5		mg/kg	SW846 6010C
Nickel	15.1	3.9		mg/kg	SW846 6010C
Potassium	1450	980		mg/kg	SW846 6010C
Vanadium	23.5	4.9		mg/kg	SW846 6010C
Zinc	23.0	2.0		mg/kg	SW846 6010C

### JB72780-10 SB-6 (0'-2')

Acetone	12.1 J	13	1.9	ug/kg	SW846 8260C
Carbon disulfide	0.40 J	6.4	0.30	ug/kg	SW846 8260C
1,1-Dichloroethane	0.91 J	6.4	0.46	ug/kg	SW846 8260C
1,1-Dichloroethene	0.64 J	6.4	0.31	ug/kg	SW846 8260C
bis(2-Ethylhexyl)phthalate	43.8 J	70	31	ug/kg	SW846 8270D

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Pyrene		18.4 J	35	13	ug/kg	SW846 8270D
Aluminum		5450	52		mg/kg	SW846 6010C
Arsenic		398	2.1		mg/kg	SW846 6010C
Barium		206	21		mg/kg	SW846 6010C
Beryllium		0.33	0.21		mg/kg	SW846 6010C
Cadmium		0.53	0.52		mg/kg	SW846 6010C
Calcium		15900	520		mg/kg	SW846 6010C
Chromium		73.8	1.0		mg/kg	SW846 6010C
Copper		1330	2.6		mg/kg	SW846 6010C
Iron		6630	52		mg/kg	SW846 6010C
Lead		137	2.1		mg/kg	SW846 6010C
Magnesium		3900	520		mg/kg	SW846 6010C
Manganese		202	1.5		mg/kg	SW846 6010C
Mercury		0.082	0.034		mg/kg	SW846 7471B
Nickel		10.7	4.1		mg/kg	SW846 6010C
Potassium		1450	1000		mg/kg	SW846 6010C
Silver		0.88	0.52		mg/kg	SW846 6010C
Vanadium		17.8	5.2		mg/kg	SW846 6010C
Zinc		74.5	2.1		mg/kg	SW846 6010C

**JB72780-11 SB-6 (10'-12')**

Carbon disulfide		7.9	4.7	0.22	ug/kg	SW846 8260C
Chloroform		0.29 J	4.7	0.096	ug/kg	SW846 8260C
bis(2-Ethylhexyl)phthalate		70.9 J	71	31	ug/kg	SW846 8270D
Aluminum		6160	50		mg/kg	SW846 6010C
Arsenic		535	2.0		mg/kg	SW846 6010C
Barium		41.2	20		mg/kg	SW846 6010C
Beryllium		0.34	0.20		mg/kg	SW846 6010C
Cadmium		0.72	0.50		mg/kg	SW846 6010C
Calcium		1740	500		mg/kg	SW846 6010C
Chromium		40.0	1.0		mg/kg	SW846 6010C
Copper		1860	2.5		mg/kg	SW846 6010C
Iron		12300	50		mg/kg	SW846 6010C
Lead		103	2.0		mg/kg	SW846 6010C
Magnesium		2540	500		mg/kg	SW846 6010C
Manganese		95.0	1.5		mg/kg	SW846 6010C
Nickel		19.9	4.0		mg/kg	SW846 6010C
Potassium		1150	1000		mg/kg	SW846 6010C
Vanadium		15.2	5.0		mg/kg	SW846 6010C
Zinc		169	2.0		mg/kg	SW846 6010C

**JB72780-12 SB-3 (0'-2')**

Acetone		11.7 J	12	1.8	ug/kg	SW846 8260C
---------	--	--------	----	-----	-------	-------------

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzo(a)anthracene		23.1 J	32	10	ug/kg	SW846 8270D
Benzo(a)pyrene		25.5 J	32	9.8	ug/kg	SW846 8270D
Benzo(b)fluoranthene		30.6 J	32	11	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		45.2	32	12	ug/kg	SW846 8270D
Benzo(k)fluoranthene		15.0 J	32	12	ug/kg	SW846 8270D
Butyl benzyl phthalate		542	64	19	ug/kg	SW846 8270D
Chrysene		29.3 J	32	11	ug/kg	SW846 8270D
Di-n-butyl phthalate		1490	64	7.1	ug/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		403	64	28	ug/kg	SW846 8270D
Fluoranthene		43.7	32	14	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		30.9 J	32	11	ug/kg	SW846 8270D
Naphthalene		22.4 J	32	8.8	ug/kg	SW846 8270D
Phenanthrene		34.4	32	15	ug/kg	SW846 8270D
Pyrene		43.6	32	12	ug/kg	SW846 8270D
Dieldrin		0.89	0.69	0.27	ug/kg	SW846 8081B
4,4'-DDD		1.8	0.69	0.37	ug/kg	SW846 8081B
4,4'-DDE		1.9	0.69	0.28	ug/kg	SW846 8081B
4,4'-DDT		25.6	0.69	0.34	ug/kg	SW846 8081B
Aluminum		2860	49		mg/kg	SW846 6010C
Antimony		34.8	2.0		mg/kg	SW846 6010C
Arsenic		31.0	2.0		mg/kg	SW846 6010C
Barium		91.7	20		mg/kg	SW846 6010C
Beryllium		0.33	0.20		mg/kg	SW846 6010C
Cadmium		0.97	0.49		mg/kg	SW846 6010C
Calcium		14300	490		mg/kg	SW846 6010C
Chromium		40.7	0.99		mg/kg	SW846 6010C
Copper		163	2.5		mg/kg	SW846 6010C
Iron		9950	49		mg/kg	SW846 6010C
Lead		726	2.0		mg/kg	SW846 6010C
Magnesium		1550	490		mg/kg	SW846 6010C
Manganese		143	1.5		mg/kg	SW846 6010C
Mercury		0.34	0.067		mg/kg	SW846 7471B
Nickel		10.8	4.0		mg/kg	SW846 6010C
Silver		1.8	0.49		mg/kg	SW846 6010C
Vanadium		14.9	4.9		mg/kg	SW846 6010C
Zinc		222	2.0		mg/kg	SW846 6010C

**JB72780-13 SB-3 (15'-17')**

Acetone		21.9	9.2	1.4	ug/kg	SW846 8260C
bis(2-Ethylhexyl)phthalate		49.1 J	68	30	ug/kg	SW846 8270D
Aluminum		8460	59		mg/kg	SW846 6010C
Arsenic		230	2.4		mg/kg	SW846 6010C
Barium		42.2	24		mg/kg	SW846 6010C
Beryllium		0.74	0.24		mg/kg	SW846 6010C

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
		Cadmium	0.74	0.59	mg/kg	SW846 6010C
		Calcium	1050	590	mg/kg	SW846 6010C
		Chromium	273	1.2	mg/kg	SW846 6010C
		Copper	13.0	3.0	mg/kg	SW846 6010C
		Iron	11900	59	mg/kg	SW846 6010C
		Lead	13.2	2.4	mg/kg	SW846 6010C
		Magnesium	2270	590	mg/kg	SW846 6010C
		Manganese	112	1.8	mg/kg	SW846 6010C
		Nickel	11.8	4.7	mg/kg	SW846 6010C
		Potassium	1750	1200	mg/kg	SW846 6010C
		Vanadium	21.3	5.9	mg/kg	SW846 6010C
		Zinc	1190	2.4	mg/kg	SW846 6010C

**JB72780-14 SB-4 (0'-2')**

Acetone	6.8 J	11	1.6	ug/kg	SW846 8260C
Chloroform	0.23 J	5.5	0.11	ug/kg	SW846 8260C
Methyl Tert Butyl Ether	0.39 J	1.1	0.18	ug/kg	SW846 8260C
Toluene	0.36 J	1.1	0.16	ug/kg	SW846 8260C
Acenaphthylene	58.1	42	14	ug/kg	SW846 8270D
Anthracene	63.3	42	15	ug/kg	SW846 8270D
Benzo(a)anthracene	163	42	14	ug/kg	SW846 8270D
Benzo(a)pyrene	243	42	13	ug/kg	SW846 8270D
Benzo(b)fluoranthene	254	42	14	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	477	42	16	ug/kg	SW846 8270D
Benzo(k)fluoranthene	101	42	16	ug/kg	SW846 8270D
Carbazole	24.4 J	85	20	ug/kg	SW846 8270D
Chrysene	199	42	14	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	58.6	42	14	ug/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate	73.3 J	85	37	ug/kg	SW846 8270D
Fluoranthene	282	42	19	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	299	42	15	ug/kg	SW846 8270D
2-Methylnaphthalene	47.6 J	85	24	ug/kg	SW846 8270D
Naphthalene	29.2 J	42	12	ug/kg	SW846 8270D
Phenanthrene	186	42	19	ug/kg	SW846 8270D
Pyrene	279	42	16	ug/kg	SW846 8270D
4,4'-DDT <sup>a</sup>	1.1	0.82	0.40	ug/kg	SW846 8081B
Aluminum	5720	54		mg/kg	SW846 6010C
Antimony	5.6	2.2		mg/kg	SW846 6010C
Arsenic	152	2.2		mg/kg	SW846 6010C
Barium	209	22		mg/kg	SW846 6010C
Beryllium	0.55	0.22		mg/kg	SW846 6010C
Cadmium	3.8	0.54		mg/kg	SW846 6010C
Calcium	2420	540		mg/kg	SW846 6010C
Chromium	24.4	1.1		mg/kg	SW846 6010C

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Copper		464	2.7		mg/kg	SW846 6010C
Iron		41000	54		mg/kg	SW846 6010C
Lead		1190	2.2		mg/kg	SW846 6010C
Magnesium		1780	540		mg/kg	SW846 6010C
Manganese		76.1	1.6		mg/kg	SW846 6010C
Mercury		0.97	0.083		mg/kg	SW846 7471B
Nickel		13.4	4.3		mg/kg	SW846 6010C
Vanadium		22.9	5.4		mg/kg	SW846 6010C
Zinc		2010	2.2		mg/kg	SW846 6010C

**JB72780-15 SB-4 (15'-17')**

Acetone		11.8	10	1.5	ug/kg	SW846 8260C
Tetrachloroethene		0.25 J	5.2	0.20	ug/kg	SW846 8260C
Acenaphthene		16.5 J	36	10	ug/kg	SW846 8270D
Acenaphthylene		120	36	12	ug/kg	SW846 8270D
Anthracene		109	36	13	ug/kg	SW846 8270D
Benzo(a)anthracene		561	36	12	ug/kg	SW846 8270D
Benzo(a)pyrene		586	36	11	ug/kg	SW846 8270D
Benzo(b)fluoranthene		749	36	12	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		479	36	13	ug/kg	SW846 8270D
Benzo(k)fluoranthene		280	36	14	ug/kg	SW846 8270D
Carbazole		35.8 J	72	17	ug/kg	SW846 8270D
Chrysene		676	36	12	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		111	36	12	ug/kg	SW846 8270D
Dibenzofuran		21.6 J	72	11	ug/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		322	72	32	ug/kg	SW846 8270D
Fluoranthene		1120	36	16	ug/kg	SW846 8270D
Fluorene		32.6 J	36	12	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		514	36	13	ug/kg	SW846 8270D
Phenanthrene		647	36	16	ug/kg	SW846 8270D
Pyrene		973	36	14	ug/kg	SW846 8270D
Endrin ketone <sup>a</sup>		1.2	0.77	0.31	ug/kg	SW846 8081B
Aluminum		6600	52		mg/kg	SW846 6010C
Arsenic		41.1	2.1		mg/kg	SW846 6010C
Barium		950	21		mg/kg	SW846 6010C
Beryllium		0.55	0.21		mg/kg	SW846 6010C
Cadmium		0.90	0.52		mg/kg	SW846 6010C
Calcium		2260	520		mg/kg	SW846 6010C
Chromium		19.6	1.0		mg/kg	SW846 6010C
Copper		178	2.6		mg/kg	SW846 6010C
Iron		9230	52		mg/kg	SW846 6010C
Lead		924	2.1		mg/kg	SW846 6010C
Magnesium		2230	520		mg/kg	SW846 6010C
Manganese		162	1.6		mg/kg	SW846 6010C

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Mercury		0.22	0.038		mg/kg	SW846 7471B
Nickel		15.2	4.2		mg/kg	SW846 6010C
Potassium		1060	1000		mg/kg	SW846 6010C
Silver		3.9	0.52		mg/kg	SW846 6010C
Vanadium		21.6	5.2		mg/kg	SW846 6010C
Zinc		845	2.1		mg/kg	SW846 6010C

**JB72780-16      GW-3**

Benzene		0.31 J	1.0	0.21	ug/l	SW846 8260C
Chloroform		1.6	1.0	0.20	ug/l	SW846 8260C
1,1-Dichloroethane		3.0	1.0	0.35	ug/l	SW846 8260C
1,1-Dichloroethene		7.8	1.0	0.50	ug/l	SW846 8260C
cis-1,2-Dichloroethene		2.6	1.0	0.33	ug/l	SW846 8260C
Methyl Tert Butyl Ether		16.0	1.0	0.19	ug/l	SW846 8260C
Toluene		0.33 J	1.0	0.22	ug/l	SW846 8260C
Vinyl chloride		0.71 J	1.0	0.16	ug/l	SW846 8260C
m,p-Xylene		0.84 J	1.0	0.35	ug/l	SW846 8260C
o-Xylene		0.56 J	1.0	0.20	ug/l	SW846 8260C
Xylene (total)		1.4	1.0	0.20	ug/l	SW846 8260C
Phenol		0.99 J	2.0	0.55	ug/l	SW846 8270D
Di-n-butyl phthalate		3.0	2.0	0.58	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		2.0 B	2.0	0.55	ug/l	SW846 8270D
4,4'-DDE		0.028	0.010	0.0017	ug/l	SW846 8081B
Aluminum <sup>b</sup>		82300	1000		ug/l	EPA 200.7
Arsenic <sup>b</sup>		20600	15		ug/l	EPA 200.7
Barium <sup>b</sup>		1270	1000		ug/l	EPA 200.7
Beryllium <sup>b</sup>		7.5	5.0		ug/l	EPA 200.7
Cadmium <sup>b</sup>		42.5	15		ug/l	EPA 200.7
Calcium <sup>b</sup>		337000	25000		ug/l	EPA 200.7
Chromium <sup>b</sup>		243	50		ug/l	EPA 200.7
Copper <sup>b</sup>		562	50		ug/l	EPA 200.7
Iron <sup>b</sup>		100000	500		ug/l	EPA 200.7
Lead <sup>b</sup>		765	15		ug/l	EPA 200.7
Magnesium <sup>b</sup>		79200	25000		ug/l	EPA 200.7
Manganese <sup>b</sup>		10200	75		ug/l	EPA 200.7
Mercury <sup>b</sup>		2.5	1.2		ug/l	EPA 245.1
Nickel <sup>b</sup>		206	50		ug/l	EPA 200.7
Potassium <sup>b</sup>		61000	50000		ug/l	EPA 200.7
Selenium <sup>b</sup>		52.5	50		ug/l	EPA 200.7
Sodium <sup>b</sup>		346000	50000		ug/l	EPA 200.7
Zinc <sup>b</sup>		681	100		ug/l	EPA 200.7

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

**JB72780-16F    GW-3**

Arsenic	5730	3.0			ug/l	EPA 200.7
Cadmium	11.1	3.0			ug/l	EPA 200.7
Calcium	260000	5000			ug/l	EPA 200.7
Magnesium	54000	5000			ug/l	EPA 200.7
Manganese	2480	15			ug/l	EPA 200.7
Nickel	11.3	10			ug/l	EPA 200.7
Potassium	47000	10000			ug/l	EPA 200.7
Sodium	340000	10000			ug/l	EPA 200.7

**JB72780-17    GW-1**

Benzene	0.25 J	1.0	0.21		ug/l	SW846 8260C
1,1-Dichloroethane	0.75 J	1.0	0.35		ug/l	SW846 8260C
Methyl Tert Butyl Ether	7.6	1.0	0.19		ug/l	SW846 8260C
Vinyl chloride	1.6	1.0	0.16		ug/l	SW846 8260C
Di-n-butyl phthalate	5.3	2.0	0.58		ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	1.6 JB	2.0	0.55		ug/l	SW846 8270D
Aluminum	553	200			ug/l	EPA 200.7
Arsenic	13900	6.0			ug/l	EPA 200.7
Barium	220	200			ug/l	EPA 200.7
Cadmium <sup>c</sup>	7.1	6.0			ug/l	EPA 200.7
Calcium	228000	5000			ug/l	EPA 200.7
Chromium	44.8	10			ug/l	EPA 200.7
Copper	45.2	10			ug/l	EPA 200.7
Iron	57400	100			ug/l	EPA 200.7
Lead <sup>c</sup>	13.6	6.0			ug/l	EPA 200.7
Magnesium	38800	5000			ug/l	EPA 200.7
Manganese	2450	15			ug/l	EPA 200.7
Nickel	15.2	10			ug/l	EPA 200.7
Potassium	39400	10000			ug/l	EPA 200.7
Sodium	220000	10000			ug/l	EPA 200.7
Zinc	287	20			ug/l	EPA 200.7

**JB72780-17F    GW-1**

Arsenic	6290	3.0			ug/l	EPA 200.7
Cadmium	13.6	3.0			ug/l	EPA 200.7
Calcium	253000	5000			ug/l	EPA 200.7
Iron	36400	100			ug/l	EPA 200.7
Magnesium	42800	5000			ug/l	EPA 200.7
Manganese	2640	15			ug/l	EPA 200.7
Nickel	14.1	10			ug/l	EPA 200.7
Potassium	42700	10000			ug/l	EPA 200.7

## Summary of Hits

**Job Number:** JB72780  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/28/14 thru 07/29/14

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Sodium		240000	10000		ug/l	EPA 200.7
Zinc		151	20		ug/l	EPA 200.7

- (a) More than 40 % RPD for detected concentrations between the two GC columns.
- (b) Elevated sample detection limit due to difficult sample matrix.
- (c) Elevated detection limit due to dilution required for high interfering element.

Sample Results

---

Report of Analysis

---

## Report of Analysis

<b>Client Sample ID:</b> SB-5 (0'-2')		
<b>Lab Sample ID:</b> JB72780-1		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035		<b>Percent Solids:</b> 84.4
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C112151.D	1	08/01/14	PS	07/30/14 08:10	n/a	V3C5061
Run #2							

Run #	Initial Weight
Run #1	4.9 g
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	11.9	12	1.8	ug/kg	J
71-43-2	Benzene	0.43	1.2	0.21	ug/kg	J
74-97-5	Bromochloromethane	ND	6.0	0.29	ug/kg	
75-27-4	Bromodichloromethane	ND	6.0	0.29	ug/kg	
75-25-2	Bromoform	ND	6.0	0.13	ug/kg	
74-83-9	Bromomethane	ND	6.0	0.35	ug/kg	
78-93-3	2-Butanone (MEK)	ND	12	1.5	ug/kg	
75-15-0	Carbon disulfide	ND	6.0	0.29	ug/kg	
56-23-5	Carbon tetrachloride	ND	6.0	0.17	ug/kg	
108-90-7	Chlorobenzene	ND	6.0	0.15	ug/kg	
75-00-3	Chloroethane	ND	6.0	0.29	ug/kg	
67-66-3	Chloroform	ND	6.0	0.12	ug/kg	
74-87-3	Chloromethane	ND	6.0	0.36	ug/kg	
110-82-7	Cyclohexane	ND	6.0	0.43	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	12	0.63	ug/kg	
124-48-1	Dibromochloromethane	ND	6.0	0.16	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.2	0.19	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	6.0	0.19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	6.0	0.19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	6.0	0.20	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.0	0.63	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6.0	0.43	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.14	ug/kg	
75-35-4	1,1-Dichloroethene	ND	6.0	0.30	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	6.0	0.31	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	6.0	0.23	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.0	0.21	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.0	0.15	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.0	0.20	ug/kg	
123-91-1	1,4-Dioxane	ND	150	48	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.13	ug/kg	
76-13-1	Freon 113	ND	6.0	0.35	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-5 (0'-2')	
<b>Lab Sample ID:</b> JB72780-1	<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035	<b>Percent Solids:</b> 84.4
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	6.0	0.67	ug/kg	
98-82-8	Isopropylbenzene	ND	6.0	0.18	ug/kg	
79-20-9	Methyl Acetate	ND	6.0	0.59	ug/kg	
108-87-2	Methylcyclohexane	0.32	6.0	0.17	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.2	0.20	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.0	0.39	ug/kg	
75-09-2	Methylene chloride	ND	6.0	1.1	ug/kg	
100-42-5	Styrene	ND	6.0	0.17	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.0	0.18	ug/kg	
127-18-4	Tetrachloroethene	ND	6.0	0.24	ug/kg	
108-88-3	Toluene	0.89	1.2	0.18	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	6.0	0.18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.0	0.22	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.0	0.16	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	6.0	0.22	ug/kg	
79-01-6	Trichloroethene	ND	6.0	0.24	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.0	0.20	ug/kg	
75-01-4	Vinyl chloride	ND	6.0	0.17	ug/kg	
	m,p-Xylene	0.44	1.2	0.27	ug/kg	J
95-47-6	o-Xylene	ND	1.2	0.17	ug/kg	
1330-20-7	Xylene (total)	0.44	1.2	0.17	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		59-130%
17060-07-0	1,2-Dichloroethane-D4	108%		65-123%
2037-26-5	Toluene-D8	107%		77-125%
460-00-4	4-Bromofluorobenzene	112%		71-132%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-5 (0' -2')		
<b>Lab Sample ID:</b> JB72780-1		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C		<b>Percent Solids:</b> 84.4
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P87728.D	1	08/01/14	SW	07/31/14	OP76871	EP3740
Run #2	P87762.D	10	08/04/14	EA	07/31/14	OP76871	EP3742

Run #	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2	30.5 g	1.0 ml

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	78	39	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	39	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	63	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	65	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	780	47	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	780	47	ug/kg	
95-48-7	2-Methylphenol	ND	78	44	ug/kg	
	3&4-Methylphenol	126	78	49	ug/kg	
88-75-5	2-Nitrophenol	ND	190	41	ug/kg	
100-02-7	4-Nitrophenol	ND	390	66	ug/kg	
87-86-5	Pentachlorophenol	ND	390	66	ug/kg	
108-95-2	Phenol	69.2	78	41	ug/kg	J
58-90-2	2,3,4,6-Tetrachlorophenol	ND	190	40	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	45	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	37	ug/kg	
83-32-9	Acenaphthene	321	39	11	ug/kg	
208-96-8	Acenaphthylene	3070	39	12	ug/kg	
98-86-2	Acetophenone	ND	190	6.8	ug/kg	
120-12-7	Anthracene	3710	39	14	ug/kg	
1912-24-9	Atrazine	ND	78	7.7	ug/kg	
56-55-3	Benzo(a)anthracene	15700 <sup>a</sup>	390	130	ug/kg	
50-32-8	Benzo(a)pyrene	20200 <sup>a</sup>	390	120	ug/kg	
205-99-2	Benzo(b)fluoranthene	20800 <sup>a</sup>	390	130	ug/kg	
191-24-2	Benzo(g,h,i)perylene	14100 <sup>a</sup>	390	140	ug/kg	
207-08-9	Benzo(k)fluoranthene	2100	39	15	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	78	14	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	78	22	ug/kg	
92-52-4	1,1'-Biphenyl	35.6	78	4.5	ug/kg	J
100-52-7	Benzaldehyde	ND	190	8.9	ug/kg	
91-58-7	2-Chloronaphthalene	ND	78	12	ug/kg	
106-47-8	4-Chloroaniline	ND	190	12	ug/kg	
86-74-8	Carbazole	627	78	18	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SB-5 (0'-2')	<b>Date Sampled:</b>	07/29/14
<b>Lab Sample ID:</b>	JB72780-1	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	84.4
<b>Method:</b>	SW846 8270D SW846 3550C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	78	12	ug/kg	
218-01-9	Chrysene	16300 <sup>a</sup>	390	130	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	78	16	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	78	12	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	78	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	78	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	39	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	39	15	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	78	9.9	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	3010	39	13	ug/kg	
132-64-9	Dibenzofuran	158	78	12	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	78	8.6	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	78	19	ug/kg	
84-66-2	Diethyl phthalate	324	78	13	ug/kg	
131-11-3	Dimethyl phthalate	ND	78	14	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	78	34	ug/kg	
206-44-0	Fluoranthene	22300 <sup>a</sup>	390	170	ug/kg	
86-73-7	Fluorene	399	39	13	ug/kg	
118-74-1	Hexachlorobenzene	ND	78	13	ug/kg	
87-68-3	Hexachlorobutadiene	ND	39	11	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	390	40	ug/kg	
67-72-1	Hexachloroethane	ND	190	11	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	13100 <sup>a</sup>	390	130	ug/kg	
78-59-1	Isophorone	ND	78	10	ug/kg	
91-57-6	2-Methylnaphthalene	223	78	22	ug/kg	
88-74-4	2-Nitroaniline	ND	190	17	ug/kg	
99-09-2	3-Nitroaniline	ND	190	16	ug/kg	
100-01-6	4-Nitroaniline	ND	190	15	ug/kg	
91-20-3	Naphthalene	328	39	11	ug/kg	
98-95-3	Nitrobenzene	ND	78	11	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	78	9.5	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	23	ug/kg	
85-01-8	Phenanthrene	8250 <sup>a</sup>	390	180	ug/kg	
129-00-0	Pyrene	29300 <sup>a</sup>	390	150	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	190	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	73%	84%	13-110%
4165-62-2	Phenol-d5	79%	86%	15-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-5 (0' -2') <b>Lab Sample ID:</b> JB72780-1 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8270D SW846 3550C <b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	<b>Date Sampled:</b> 07/29/14 <b>Date Received:</b> 07/29/14 <b>Percent Solids:</b> 84.4
---	--

**ABN TCL List (SOM0 1.1)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	84%	90%	20-123%
4165-60-0	Nitrobenzene-d5	79%	96%	10-110%
321-60-8	2-Fluorobiphenyl	76%	95%	17-110%
1718-51-0	Terphenyl-d14	83%	97%	30-124%

(a) Result is from Run# 2

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.1  
4

## Report of Analysis

<b>Client Sample ID:</b> SB-5 (0'-2')		
<b>Lab Sample ID:</b> JB72780-1		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8081B SW846 3546		<b>Percent Solids:</b> 84.4
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G14182.D	1	08/03/14	JN	08/01/14	OP76908	G6G405
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.76	0.35	ug/kg	
319-84-6	alpha-BHC	ND	0.76	0.23	ug/kg	
319-85-7	beta-BHC	ND	0.76	0.48	ug/kg	
319-86-8	delta-BHC	ND	0.76	0.38	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.76	0.37	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.76	0.28	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.76	0.53	ug/kg	
60-57-1	Dieldrin	ND	0.76	0.30	ug/kg	
72-54-8	4,4'-DDD	ND	0.76	0.42	ug/kg	
72-55-9	4,4'-DDE	ND	0.76	0.31	ug/kg	
50-29-3	4,4'-DDT	ND	0.76	0.38	ug/kg	
72-20-8	Endrin	ND	0.76	0.25	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.76	0.33	ug/kg	
7421-93-4	Endrin aldehyde	6.5	0.76	0.40	ug/kg	
959-98-8	Endosulfan-I	ND	0.76	0.29	ug/kg	
33213-65-9	Endosulfan-II	ND	0.76	0.46	ug/kg	
76-44-8	Heptachlor	ND	0.76	0.37	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.76	0.29	ug/kg	
72-43-5	Methoxychlor	ND	1.5	0.75	ug/kg	
53494-70-5	Endrin ketone <sup>a</sup>	12.7	0.76	0.31	ug/kg	
8001-35-2	Toxaphene	ND	19	9.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	67%		10-129%
877-09-8	Tetrachloro-m-xylene	61%		10-129%
2051-24-3	Decachlorobiphenyl	143%		10-144%
2051-24-3	Decachlorobiphenyl	67%		10-144%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-5 (0' -2')	
<b>Lab Sample ID:</b> JB72780-1	<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3546	<b>Percent Solids:</b> 84.4
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G29954.D	1	08/06/14	RK	08/01/14	OP76901	G5G772
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.8 g	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	37	9.7	ug/kg	
11104-28-2	Aroclor 1221	ND	37	23	ug/kg	
11141-16-5	Aroclor 1232	ND	37	19	ug/kg	
53469-21-9	Aroclor 1242	ND	37	12	ug/kg	
12672-29-6	Aroclor 1248	ND	37	11	ug/kg	
11097-69-1	Aroclor 1254	ND	37	18	ug/kg	
11096-82-5	Aroclor 1260	ND	37	12	ug/kg	
11100-14-4	Aroclor 1268	ND	37	11	ug/kg	
37324-23-5	Aroclor 1262	ND	37	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	42%		14-139%
877-09-8	Tetrachloro-m-xylene	53%		14-139%
2051-24-3	Decachlorobiphenyl	46%		10-155%
2051-24-3	Decachlorobiphenyl	306% <sup>a</sup>		10-155%

(a) Outside control limits due to matrix interference.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-5 (0' -2')	<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-1	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 84.4
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	4740	54	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Antimony	< 2.2	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Arsenic	5.1	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Barium	153	22	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Beryllium	0.50	0.22	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cadmium	0.67	0.54	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Calcium	8070	540	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Chromium	19.1	1.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cobalt	< 5.4	5.4	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Copper	150	2.7	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Iron	13900	54	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Lead	476	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Magnesium	1840	540	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Manganese	295	1.6	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Mercury	0.50	0.036	mg/kg	1	08/01/14	08/01/14 SB	SW846 7471B <sup>1</sup>	SW846 7471B <sup>4</sup>
Nickel	18.5	4.3	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Potassium	< 1100	1100	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Selenium	< 2.2	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Silver	0.54	0.54	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Sodium	< 1100	1100	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Thallium	< 1.1	1.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Vanadium	25.1	5.4	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Zinc	328	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>

(1) Instrument QC Batch: MA34589

(2) Instrument QC Batch: MA34592

(3) Prep QC Batch: MP81017

(4) Prep QC Batch: MP81018

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> SB-5 (15'-17')		
<b>Lab Sample ID:</b> JB72780-2		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035		<b>Percent Solids:</b> 89.2
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C112152.D	1	08/01/14	PS	07/30/14 08:10	n/a	V3C5061
Run #2							

Run #1	Initial Weight
Run #1	6.4 g
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	8.8	1.3	ug/kg	
71-43-2	Benzene	ND	0.88	0.15	ug/kg	
74-97-5	Bromochloromethane	ND	4.4	0.21	ug/kg	
75-27-4	Bromodichloromethane	ND	4.4	0.21	ug/kg	
75-25-2	Bromoform	ND	4.4	0.093	ug/kg	
74-83-9	Bromomethane	ND	4.4	0.25	ug/kg	
78-93-3	2-Butanone (MEK)	ND	8.8	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	4.4	0.21	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.4	0.12	ug/kg	
108-90-7	Chlorobenzene	ND	4.4	0.11	ug/kg	
75-00-3	Chloroethane	ND	4.4	0.21	ug/kg	
67-66-3	Chloroform	ND	4.4	0.090	ug/kg	
74-87-3	Chloromethane	ND	4.4	0.26	ug/kg	
110-82-7	Cyclohexane	ND	4.4	0.31	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	8.8	0.46	ug/kg	
124-48-1	Dibromochloromethane	ND	4.4	0.12	ug/kg	
106-93-4	1,2-Dibromoethane	ND	0.88	0.14	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	4.4	0.14	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	4.4	0.14	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	4.4	0.14	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.4	0.46	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.4	0.31	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.88	0.10	ug/kg	
75-35-4	1,1-Dichloroethene	ND	4.4	0.21	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	4.4	0.23	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	4.4	0.16	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.4	0.15	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.4	0.11	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.4	0.15	ug/kg	
123-91-1	1,4-Dioxane	ND	110	35	ug/kg	
100-41-4	Ethylbenzene	ND	0.88	0.093	ug/kg	
76-13-1	Freon 113	ND	4.4	0.25	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-5 (15'-17')	
<b>Lab Sample ID:</b> JB72780-2	<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035	<b>Percent Solids:</b> 89.2
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	4.4	0.49	ug/kg	
98-82-8	Isopropylbenzene	ND	4.4	0.13	ug/kg	
79-20-9	Methyl Acetate	ND	4.4	0.42	ug/kg	
108-87-2	Methylcyclohexane	ND	4.4	0.12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	1.1	0.88	0.15	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	4.4	0.28	ug/kg	
75-09-2	Methylene chloride	ND	4.4	0.83	ug/kg	
100-42-5	Styrene	ND	4.4	0.12	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.4	0.13	ug/kg	
127-18-4	Tetrachloroethene	ND	4.4	0.17	ug/kg	
108-88-3	Toluene	ND	0.88	0.13	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.4	0.13	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.4	0.16	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.4	0.12	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.4	0.16	ug/kg	
79-01-6	Trichloroethene	ND	4.4	0.17	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.4	0.15	ug/kg	
75-01-4	Vinyl chloride	ND	4.4	0.12	ug/kg	
	m,p-Xylene	ND	0.88	0.20	ug/kg	
95-47-6	o-Xylene	ND	0.88	0.12	ug/kg	
1330-20-7	Xylene (total)	ND	0.88	0.12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		59-130%
17060-07-0	1,2-Dichloroethane-D4	105%		65-123%
2037-26-5	Toluene-D8	107%		77-125%
460-00-4	4-Bromofluorobenzene	108%		71-132%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-5 (15'-17')		
<b>Lab Sample ID:</b> JB72780-2		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C		<b>Percent Solids:</b> 89.2
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P87761.D	1	08/04/14	EA	07/31/14	OP76871	EP3742
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.8 g	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	73	36	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	36	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	59	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	61	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	730	44	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	730	44	ug/kg	
95-48-7	2-Methylphenol	ND	73	41	ug/kg	
	3&4-Methylphenol	ND	73	46	ug/kg	
88-75-5	2-Nitrophenol	ND	180	39	ug/kg	
100-02-7	4-Nitrophenol	ND	360	62	ug/kg	
87-86-5	Pentachlorophenol	ND	360	62	ug/kg	
108-95-2	Phenol	ND	73	38	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	180	37	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	42	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	34	ug/kg	
83-32-9	Acenaphthene	ND	36	11	ug/kg	
208-96-8	Acenaphthylene	ND	36	12	ug/kg	
98-86-2	Acetophenone	ND	180	6.4	ug/kg	
120-12-7	Anthracene	ND	36	13	ug/kg	
1912-24-9	Atrazine	ND	73	7.2	ug/kg	
56-55-3	Benzo(a)anthracene	28.7	36	12	ug/kg	J
50-32-8	Benzo(a)pyrene	27.3	36	11	ug/kg	J
205-99-2	Benzo(b)fluoranthene	30.2	36	12	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	21.5	36	14	ug/kg	J
207-08-9	Benzo(k)fluoranthene	15.5	36	14	ug/kg	J
101-55-3	4-Bromophenyl phenyl ether	ND	73	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	73	21	ug/kg	
92-52-4	1,1'-Biphenyl	ND	73	4.2	ug/kg	
100-52-7	Benzaldehyde	ND	180	8.4	ug/kg	
91-58-7	2-Chloronaphthalene	ND	73	11	ug/kg	
106-47-8	4-Chloroaniline	ND	180	12	ug/kg	
86-74-8	Carbazole	ND	73	17	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SB-5 (15'-17')	<b>Date Sampled:</b>	07/29/14
<b>Lab Sample ID:</b>	JB72780-2	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	89.2
<b>Method:</b>	SW846 8270D SW846 3550C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	73	11	ug/kg	
218-01-9	Chrysene	27.4	36	12	ug/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	73	15	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	73	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	73	11	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	73	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	36	16	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	36	14	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	73	9.2	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	36	12	ug/kg	
132-64-9	Dibenzofuran	ND	73	11	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	73	8.1	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	73	18	ug/kg	
84-66-2	Diethyl phthalate	ND	73	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	73	13	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	73	32	ug/kg	
206-44-0	Fluoranthene	50.5	36	16	ug/kg	
86-73-7	Fluorene	ND	36	12	ug/kg	
118-74-1	Hexachlorobenzene	ND	73	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	36	10	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	360	37	ug/kg	
67-72-1	Hexachloroethane	ND	180	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	19.9	36	13	ug/kg	J
78-59-1	Isophorone	ND	73	9.8	ug/kg	
91-57-6	2-Methylnaphthalene	ND	73	20	ug/kg	
88-74-4	2-Nitroaniline	ND	180	16	ug/kg	
99-09-2	3-Nitroaniline	ND	180	15	ug/kg	
100-01-6	4-Nitroaniline	ND	180	14	ug/kg	
91-20-3	Naphthalene	ND	36	9.9	ug/kg	
98-95-3	Nitrobenzene	ND	73	11	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	73	8.9	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	22	ug/kg	
85-01-8	Phenanthrene	39.0	36	17	ug/kg	
129-00-0	Pyrene	60.3	36	14	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	180	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	52%		13-110%
4165-62-2	Phenol-d5	68%		15-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

**Report of Analysis**

<b>Client Sample ID:</b> SB-5 (15'-17')	
<b>Lab Sample ID:</b> JB72780-2	<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C	<b>Percent Solids:</b> 89.2
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

**ABN TCL List (SOM0 1.1)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	38%		20-123%
4165-60-0	Nitrobenzene-d5	85%		10-110%
321-60-8	2-Fluorobiphenyl	74%		17-110%
1718-51-0	Terphenyl-d14	88%		30-124%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-5 (15'-17')		
<b>Lab Sample ID:</b> JB72780-2		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8081B SW846 3546		<b>Percent Solids:</b> 89.2
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G14183.D	1	08/03/14	JN	08/01/14	OP76908	G6G405
Run #2							

Run #	Initial Weight	Final Volume
Run #1	16.1 g	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.70	0.32	ug/kg	
319-84-6	alpha-BHC	ND	0.70	0.21	ug/kg	
319-85-7	beta-BHC	ND	0.70	0.43	ug/kg	
319-86-8	delta-BHC	ND	0.70	0.34	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.70	0.34	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.70	0.26	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.70	0.48	ug/kg	
60-57-1	Dieldrin	ND	0.70	0.27	ug/kg	
72-54-8	4,4'-DDD	ND	0.70	0.38	ug/kg	
72-55-9	4,4'-DDE	ND	0.70	0.28	ug/kg	
50-29-3	4,4'-DDT	ND	0.70	0.34	ug/kg	
72-20-8	Endrin	ND	0.70	0.23	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.70	0.30	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.70	0.36	ug/kg	
959-98-8	Endosulfan-I	ND	0.70	0.26	ug/kg	
33213-65-9	Endosulfan-II	ND	0.70	0.42	ug/kg	
76-44-8	Heptachlor	ND	0.70	0.34	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.70	0.26	ug/kg	
72-43-5	Methoxychlor	ND	1.4	0.68	ug/kg	
53494-70-5	Endrin ketone	ND	0.70	0.28	ug/kg	
8001-35-2	Toxaphene	ND	17	8.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	71%		10-129%
877-09-8	Tetrachloro-m-xylene	71%		10-129%
2051-24-3	Decachlorobiphenyl	43%		10-144%
2051-24-3	Decachlorobiphenyl	53%		10-144%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-5 (15'-17')		
<b>Lab Sample ID:</b> JB72780-2		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3546		<b>Percent Solids:</b> 89.2
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G29955.D	1	08/06/14	RK	08/01/14	OP76901	G5G772
Run #2							

Run #	Initial Weight	Final Volume
Run #1	16.1 g	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	35	9.1	ug/kg	
11104-28-2	Aroclor 1221	ND	35	21	ug/kg	
11141-16-5	Aroclor 1232	ND	35	18	ug/kg	
53469-21-9	Aroclor 1242	ND	35	11	ug/kg	
12672-29-6	Aroclor 1248	ND	35	11	ug/kg	
11097-69-1	Aroclor 1254	ND	35	16	ug/kg	
11096-82-5	Aroclor 1260	ND	35	11	ug/kg	
11100-14-4	Aroclor 1268	ND	35	10	ug/kg	
37324-23-5	Aroclor 1262	ND	35	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	59%		14-139%
877-09-8	Tetrachloro-m-xylene	67%		14-139%
2051-24-3	Decachlorobiphenyl	36%		10-155%
2051-24-3	Decachlorobiphenyl	66%		10-155%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: SB-5 (15'-17')

Lab Sample ID: JB72780-2

Matrix: SO - Soil

Date Sampled: 07/29/14

Date Received: 07/29/14

Percent Solids: 89.2

Project: Tamarkin, 550 West 29th Street, New York, NY

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	3580	50	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Antimony	< 2.0	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Arsenic	214	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Barium	35.3	20	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Beryllium	0.39	0.20	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cadmium	< 0.50	0.50	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Calcium	2340	500	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Chromium	13.4	1.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cobalt	< 5.0	5.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Copper	10.5	2.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Iron	7020	50	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Lead	6.1	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Magnesium	1620	500	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Manganese	224	1.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Mercury	< 0.037	0.037	mg/kg	1	08/01/14	08/01/14 SB	SW846 7471B <sup>1</sup>	SW846 7471B <sup>4</sup>
Nickel	8.2	4.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Potassium	1080	1000	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Selenium	< 2.0	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Silver	< 0.50	0.50	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Sodium	1040	1000	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Thallium	< 1.0	1.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Vanadium	14.8	5.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Zinc	17.7	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>

(1) Instrument QC Batch: MA34589

(2) Instrument QC Batch: MA34592

(3) Prep QC Batch: MP81017

(4) Prep QC Batch: MP81018

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> SB-2 (0'-2')		
<b>Lab Sample ID:</b> JB72780-3		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035		<b>Percent Solids:</b> 83.5
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C112153.D	1	08/01/14	PS	07/30/14 08:10	n/a	V3C5061
Run #2							

Run #1	Initial Weight
Run #1	5.5 g
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	19.5	11	1.6	ug/kg	
71-43-2	Benzene	0.91	1.1	0.19	ug/kg	J
74-97-5	Bromochloromethane	ND	5.4	0.26	ug/kg	
75-27-4	Bromodichloromethane	ND	5.4	0.26	ug/kg	
75-25-2	Bromoform	ND	5.4	0.12	ug/kg	
74-83-9	Bromomethane	ND	5.4	0.32	ug/kg	
78-93-3	2-Butanone (MEK)	ND	11	1.3	ug/kg	
75-15-0	Carbon disulfide	ND	5.4	0.26	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.4	0.15	ug/kg	
108-90-7	Chlorobenzene	ND	5.4	0.13	ug/kg	
75-00-3	Chloroethane	ND	5.4	0.26	ug/kg	
67-66-3	Chloroform	ND	5.4	0.11	ug/kg	
74-87-3	Chloromethane	ND	5.4	0.33	ug/kg	
110-82-7	Cyclohexane	ND	5.4	0.38	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	11	0.57	ug/kg	
124-48-1	Dibromochloromethane	ND	5.4	0.15	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.1	0.17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.4	0.18	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.4	0.17	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.4	0.18	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.4	0.57	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.4	0.39	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.1	0.13	ug/kg	
75-35-4	1,1-Dichloroethene	ND	5.4	0.27	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	5.4	0.28	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	5.4	0.20	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.4	0.19	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.4	0.14	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.4	0.18	ug/kg	
123-91-1	1,4-Dioxane	ND	140	44	ug/kg	
100-41-4	Ethylbenzene	0.40	1.1	0.12	ug/kg	J
76-13-1	Freon 113	ND	5.4	0.31	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-2 (0'-2')	
<b>Lab Sample ID:</b> JB72780-3	<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035	<b>Percent Solids:</b> 83.5
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.4	0.61	ug/kg	
98-82-8	Isopropylbenzene	ND	5.4	0.17	ug/kg	
79-20-9	Methyl Acetate	ND	5.4	0.53	ug/kg	
108-87-2	Methylcyclohexane	0.49	5.4	0.15	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.1	0.18	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.4	0.35	ug/kg	
75-09-2	Methylene chloride	ND	5.4	1.0	ug/kg	
100-42-5	Styrene	ND	5.4	0.15	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.4	0.16	ug/kg	
127-18-4	Tetrachloroethene	ND	5.4	0.21	ug/kg	
108-88-3	Toluene	0.45	1.1	0.16	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.4	0.17	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.4	0.20	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.4	0.14	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.4	0.19	ug/kg	
79-01-6	Trichloroethene	ND	5.4	0.21	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.4	0.18	ug/kg	
75-01-4	Vinyl chloride	ND	5.4	0.15	ug/kg	
	m,p-Xylene	0.39	1.1	0.25	ug/kg	J
95-47-6	o-Xylene	0.35	1.1	0.15	ug/kg	J
1330-20-7	Xylene (total)	0.74	1.1	0.15	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		59-130%
17060-07-0	1,2-Dichloroethane-D4	105%		65-123%
2037-26-5	Toluene-D8	108%		77-125%
460-00-4	4-Bromofluorobenzene	109%		71-132%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-2 (0' -2')		<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-3		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 83.5
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P87730.D	1	08/01/14	SW	07/31/14	OP76871	EP3740
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.8 g	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	78	39	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	190	39	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	63	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	190	65	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	780	47	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	780	47	ug/kg	
95-48-7	2-Methylphenol	ND	78	44	ug/kg	
	3&4-Methylphenol	ND	78	49	ug/kg	
88-75-5	2-Nitrophenol	ND	190	41	ug/kg	
100-02-7	4-Nitrophenol	ND	390	66	ug/kg	
87-86-5	Pentachlorophenol	ND	390	66	ug/kg	
108-95-2	Phenol	ND	78	41	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	190	40	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	190	45	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	190	37	ug/kg	
83-32-9	Acenaphthene	43.2	39	11	ug/kg	
208-96-8	Acenaphthylene	33.0	39	12	ug/kg	J
98-86-2	Acetophenone	ND	190	6.8	ug/kg	
120-12-7	Anthracene	87.5	39	14	ug/kg	
1912-24-9	Atrazine	ND	78	7.7	ug/kg	
56-55-3	Benzo(a)anthracene	389	39	13	ug/kg	
50-32-8	Benzo(a)pyrene	366	39	12	ug/kg	
205-99-2	Benzo(b)fluoranthene	332	39	13	ug/kg	
191-24-2	Benzo(g,h,i)perylene	278	39	14	ug/kg	
207-08-9	Benzo(k)fluoranthene	120	39	15	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	78	14	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	78	23	ug/kg	
92-52-4	1,1'-Biphenyl	ND	78	4.5	ug/kg	
100-52-7	Benzaldehyde	ND	190	8.9	ug/kg	
91-58-7	2-Chloronaphthalene	ND	78	12	ug/kg	
106-47-8	4-Chloroaniline	ND	190	12	ug/kg	
86-74-8	Carbazole	ND	78	18	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SB-2 (0'-2')	<b>Date Sampled:</b>	07/29/14
<b>Lab Sample ID:</b>	JB72780-3	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	83.5
<b>Method:</b>	SW846 8270D SW846 3550C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	78	12	ug/kg	
218-01-9	Chrysene	408	39	13	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	78	16	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	78	12	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	78	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	78	12	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	39	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	39	15	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	78	9.9	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	53.8	39	13	ug/kg	
132-64-9	Dibenzofuran	ND	78	12	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	78	8.6	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	78	19	ug/kg	
84-66-2	Diethyl phthalate	ND	78	13	ug/kg	
131-11-3	Dimethyl phthalate	ND	78	14	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	78	34	ug/kg	
206-44-0	Fluoranthene	547	39	17	ug/kg	
86-73-7	Fluorene	25.6	39	13	ug/kg	J
118-74-1	Hexachlorobenzene	ND	78	13	ug/kg	
87-68-3	Hexachlorobutadiene	ND	39	11	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	390	40	ug/kg	
67-72-1	Hexachloroethane	ND	190	11	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	216	39	13	ug/kg	
78-59-1	Isophorone	ND	78	10	ug/kg	
91-57-6	2-Methylnaphthalene	33.8	78	22	ug/kg	J
88-74-4	2-Nitroaniline	ND	190	17	ug/kg	
99-09-2	3-Nitroaniline	ND	190	16	ug/kg	
100-01-6	4-Nitroaniline	ND	190	15	ug/kg	
91-20-3	Naphthalene	46.7	39	11	ug/kg	
98-95-3	Nitrobenzene	ND	78	11	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	78	9.5	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	23	ug/kg	
85-01-8	Phenanthrene	486	39	18	ug/kg	
129-00-0	Pyrene	878	39	15	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	190	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	71%		13-110%
4165-62-2	Phenol-d5	76%		15-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-2 (0' -2') <b>Lab Sample ID:</b> JB72780-3 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8270D SW846 3550C <b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	<b>Date Sampled:</b> 07/29/14 <b>Date Received:</b> 07/29/14 <b>Percent Solids:</b> 83.5
---	--

**ABN TCL List (SOM0 1.1)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	82%		20-123%
4165-60-0	Nitrobenzene-d5	72%		10-110%
321-60-8	2-Fluorobiphenyl	73%		17-110%
1718-51-0	Terphenyl-d14	81%		30-124%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.3  
4

## Report of Analysis

<b>Client Sample ID:</b> SB-2 (0'-2')		<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-3		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 83.5
<b>Method:</b> SW846 8081B SW846 3546		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G14184.D	1	08/03/14	JN	08/01/14	OP76908	G6G405
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.3 g	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.78	0.36	ug/kg	
319-84-6	alpha-BHC	ND	0.78	0.23	ug/kg	
319-85-7	beta-BHC	ND	0.78	0.49	ug/kg	
319-86-8	delta-BHC	ND	0.78	0.39	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.78	0.38	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.78	0.29	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.78	0.54	ug/kg	
60-57-1	Dieldrin	ND	0.78	0.31	ug/kg	
72-54-8	4,4'-DDD	ND	0.78	0.43	ug/kg	
72-55-9	4,4'-DDE	ND	0.78	0.32	ug/kg	
50-29-3	4,4'-DDT	ND	0.78	0.39	ug/kg	
72-20-8	Endrin	ND	0.78	0.25	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.78	0.34	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.78	0.41	ug/kg	
959-98-8	Endosulfan-I	ND	0.78	0.30	ug/kg	
33213-65-9	Endosulfan-II	ND	0.78	0.47	ug/kg	
76-44-8	Heptachlor	ND	0.78	0.38	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.78	0.29	ug/kg	
72-43-5	Methoxychlor	ND	1.6	0.77	ug/kg	
53494-70-5	Endrin ketone	ND	0.78	0.32	ug/kg	
8001-35-2	Toxaphene	ND	20	9.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	68%		10-129%
877-09-8	Tetrachloro-m-xylene	64%		10-129%
2051-24-3	Decachlorobiphenyl	39%		10-144%
2051-24-3	Decachlorobiphenyl	46%		10-144%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-2 (0' -2')		
<b>Lab Sample ID:</b> JB72780-3		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3546		<b>Percent Solids:</b> 83.5
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G29956.D	1	08/06/14	RK	08/01/14	OP76901	G5G772
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	39	10	ug/kg	
11104-28-2	Aroclor 1221	ND	39	24	ug/kg	
11141-16-5	Aroclor 1232	ND	39	20	ug/kg	
53469-21-9	Aroclor 1242	ND	39	12	ug/kg	
12672-29-6	Aroclor 1248	ND	39	12	ug/kg	
11097-69-1	Aroclor 1254	ND	39	18	ug/kg	
11096-82-5	Aroclor 1260	ND	39	13	ug/kg	
11100-14-4	Aroclor 1268	ND	39	12	ug/kg	
37324-23-5	Aroclor 1262	ND	39	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	63%		14-139%
877-09-8	Tetrachloro-m-xylene	74%		14-139%
2051-24-3	Decachlorobiphenyl	38%		10-155%
2051-24-3	Decachlorobiphenyl	60%		10-155%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

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

Lab Sample ID: JB72780-3

Matrix: SO - Soil

Date Sampled: 07/29/14

Date Received: 07/29/14

Percent Solids: 83.5

Project: Tamarkin, 550 West 29th Street, New York, NY

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	8790	57	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Antimony	< 2.3	2.3	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Arsenic	10.3	2.3	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Barium	184	23	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Beryllium	0.94	0.23	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cadmium	< 0.57	0.57	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Calcium	44400	570	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Chromium	11.3	1.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cobalt	< 5.7	5.7	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Copper	21.7	2.8	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Iron	9530	57	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Lead	134	2.3	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Magnesium	19000	570	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Manganese	773	1.7	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Mercury	0.16	0.036	mg/kg	1	08/01/14	08/01/14 SB	SW846 7471B <sup>1</sup>	SW846 7471B <sup>4</sup>
Nickel	12.7	4.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Potassium	2830	1100	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Selenium	< 2.3	2.3	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Silver	1.0	0.57	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Sodium	1640	1100	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Thallium	< 1.1	1.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Vanadium	36.4	5.7	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Zinc	71.2	2.3	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>

(1) Instrument QC Batch: MA34589

(2) Instrument QC Batch: MA34592

(3) Prep QC Batch: MP81017

(4) Prep QC Batch: MP81018

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> SB-2 (5' -7')		
<b>Lab Sample ID:</b> JB72780-4		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035		<b>Percent Solids:</b> 86.9
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C112154.D	1	08/01/14	PS	07/30/14 08:10	n/a	V3C5061
Run #2							

Run #1	Initial Weight
Run #1	6.7 g
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	26.7	8.6	1.3	ug/kg	
71-43-2	Benzene	ND	0.86	0.15	ug/kg	
74-97-5	Bromochloromethane	ND	4.3	0.21	ug/kg	
75-27-4	Bromodichloromethane	ND	4.3	0.21	ug/kg	
75-25-2	Bromoform	ND	4.3	0.091	ug/kg	
74-83-9	Bromomethane	ND	4.3	0.25	ug/kg	
78-93-3	2-Butanone (MEK)	ND	8.6	1.0	ug/kg	
75-15-0	Carbon disulfide	ND	4.3	0.20	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.3	0.12	ug/kg	
108-90-7	Chlorobenzene	ND	4.3	0.10	ug/kg	
75-00-3	Chloroethane	ND	4.3	0.20	ug/kg	
67-66-3	Chloroform	ND	4.3	0.088	ug/kg	
74-87-3	Chloromethane	ND	4.3	0.26	ug/kg	
110-82-7	Cyclohexane	ND	4.3	0.30	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	8.6	0.45	ug/kg	
124-48-1	Dibromochloromethane	ND	4.3	0.12	ug/kg	
106-93-4	1,2-Dibromoethane	ND	0.86	0.13	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	4.3	0.14	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	4.3	0.13	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	4.3	0.14	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.3	0.45	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.3	0.31	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.86	0.099	ug/kg	
75-35-4	1,1-Dichloroethene	ND	4.3	0.21	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	4.3	0.22	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	4.3	0.16	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.3	0.15	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.3	0.11	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.3	0.15	ug/kg	
123-91-1	1,4-Dioxane	ND	110	34	ug/kg	
100-41-4	Ethylbenzene	ND	0.86	0.091	ug/kg	
76-13-1	Freon 113	ND	4.3	0.25	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-2 (5' -7')	
<b>Lab Sample ID:</b> JB72780-4	<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035	<b>Percent Solids:</b> 86.9
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	4.3	0.48	ug/kg	
98-82-8	Isopropylbenzene	ND	4.3	0.13	ug/kg	
79-20-9	Methyl Acetate	ND	4.3	0.42	ug/kg	
108-87-2	Methylcyclohexane	ND	4.3	0.12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.86	0.14	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	4.3	0.28	ug/kg	
75-09-2	Methylene chloride	ND	4.3	0.81	ug/kg	
100-42-5	Styrene	ND	4.3	0.12	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.3	0.13	ug/kg	
127-18-4	Tetrachloroethene	ND	4.3	0.17	ug/kg	
108-88-3	Toluene	0.17	0.86	0.13	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	4.3	0.13	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.3	0.15	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.3	0.11	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.3	0.15	ug/kg	
79-01-6	Trichloroethene	ND	4.3	0.17	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.3	0.14	ug/kg	
75-01-4	Vinyl chloride	ND	4.3	0.12	ug/kg	
	m,p-Xylene	ND	0.86	0.19	ug/kg	
95-47-6	o-Xylene	ND	0.86	0.12	ug/kg	
1330-20-7	Xylene (total)	ND	0.86	0.12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		59-130%
17060-07-0	1,2-Dichloroethane-D4	104%		65-123%
2037-26-5	Toluene-D8	107%		77-125%
460-00-4	4-Bromofluorobenzene	108%		71-132%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-2 (5' -7')		<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-4		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 86.9
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P87731.D	1	08/01/14	SW	07/31/14	OP76871	EP3740
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	34.6 g	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	67	33	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	33	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	54	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	56	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	670	41	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	670	41	ug/kg	
95-48-7	2-Methylphenol	ND	67	38	ug/kg	
	3&4-Methylphenol	ND	67	42	ug/kg	
88-75-5	2-Nitrophenol	ND	170	35	ug/kg	
100-02-7	4-Nitrophenol	ND	330	56	ug/kg	
87-86-5	Pentachlorophenol	ND	330	57	ug/kg	
108-95-2	Phenol	ND	67	35	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	34	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	39	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	31	ug/kg	
83-32-9	Acenaphthene	ND	33	9.6	ug/kg	
208-96-8	Acenaphthylene	ND	33	11	ug/kg	
98-86-2	Acetophenone	ND	170	5.9	ug/kg	
120-12-7	Anthracene	ND	33	12	ug/kg	
1912-24-9	Atrazine	ND	67	6.6	ug/kg	
56-55-3	Benzo(a)anthracene	ND	33	11	ug/kg	
50-32-8	Benzo(a)pyrene	ND	33	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	33	11	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	33	12	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	33	13	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	67	12	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	67	19	ug/kg	
92-52-4	1,1'-Biphenyl	ND	67	3.9	ug/kg	
100-52-7	Benzaldehyde	ND	170	7.6	ug/kg	
91-58-7	2-Chloronaphthalene	ND	67	10	ug/kg	
106-47-8	4-Chloroaniline	ND	170	11	ug/kg	
86-74-8	Carbazole	ND	67	15	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SB-2 (5' -7')	<b>Date Sampled:</b>	07/29/14
<b>Lab Sample ID:</b>	JB72780-4	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	86.9
<b>Method:</b>	SW846 8270D SW846 3550C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	67	10	ug/kg	
218-01-9	Chrysene	ND	33	11	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	67	13	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	67	10	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	67	9.9	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	67	10	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	33	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	33	13	ug/kg	
91-94-1	3,3' -Dichlorobenzidine	ND	67	8.4	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	33	11	ug/kg	
132-64-9	Dibenzofuran	ND	67	9.9	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	67	7.4	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	67	16	ug/kg	
84-66-2	Diethyl phthalate	ND	67	11	ug/kg	
131-11-3	Dimethyl phthalate	ND	67	12	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	67	29	ug/kg	
206-44-0	Fluoranthene	ND	33	15	ug/kg	
86-73-7	Fluorene	ND	33	11	ug/kg	
118-74-1	Hexachlorobenzene	ND	67	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	33	9.2	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	330	34	ug/kg	
67-72-1	Hexachloroethane	ND	170	9.2	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	33	12	ug/kg	
78-59-1	Isophorone	ND	67	8.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	67	19	ug/kg	
88-74-4	2-Nitroaniline	ND	170	15	ug/kg	
99-09-2	3-Nitroaniline	ND	170	13	ug/kg	
100-01-6	4-Nitroaniline	ND	170	13	ug/kg	
91-20-3	Naphthalene	ND	33	9.1	ug/kg	
98-95-3	Nitrobenzene	ND	67	9.6	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	67	8.1	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	20	ug/kg	
85-01-8	Phenanthrene	ND	33	15	ug/kg	
129-00-0	Pyrene	ND	33	13	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	77%		13-110%
4165-62-2	Phenol-d5	84%		15-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

**Report of Analysis**

<b>Client Sample ID:</b> SB-2 (5' -7')	
<b>Lab Sample ID:</b> JB72780-4	<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C	<b>Percent Solids:</b> 86.9
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

**ABN TCL List (SOM0 1.1)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	86%		20-123%
4165-60-0	Nitrobenzene-d5	79%		10-110%
321-60-8	2-Fluorobiphenyl	80%		17-110%
1718-51-0	Terphenyl-d14	91%		30-124%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-2 (5' -7')	
<b>Lab Sample ID:</b> JB72780-4	<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8081B SW846 3546	<b>Percent Solids:</b> 86.9
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G14185.D	1	08/03/14	JN	08/01/14	OP76908	G6G405
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	16.2 g	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.71	0.33	ug/kg	
319-84-6	alpha-BHC	ND	0.71	0.21	ug/kg	
319-85-7	beta-BHC	ND	0.71	0.44	ug/kg	
319-86-8	delta-BHC	ND	0.71	0.35	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.71	0.35	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.71	0.26	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.71	0.49	ug/kg	
60-57-1	Dieldrin	ND	0.71	0.28	ug/kg	
72-54-8	4,4' -DDD	ND	0.71	0.39	ug/kg	
72-55-9	4,4' -DDE	ND	0.71	0.29	ug/kg	
50-29-3	4,4' -DDT	ND	0.71	0.35	ug/kg	
72-20-8	Endrin	ND	0.71	0.23	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.71	0.31	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.71	0.37	ug/kg	
959-98-8	Endosulfan-I	ND	0.71	0.27	ug/kg	
33213-65-9	Endosulfan-II	ND	0.71	0.43	ug/kg	
76-44-8	Heptachlor	ND	0.71	0.35	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.71	0.27	ug/kg	
72-43-5	Methoxychlor	ND	1.4	0.70	ug/kg	
53494-70-5	Endrin ketone	ND	0.71	0.29	ug/kg	
8001-35-2	Toxaphene	ND	18	9.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		10-129%
877-09-8	Tetrachloro-m-xylene	77%		10-129%
2051-24-3	Decachlorobiphenyl	59%		10-144%
2051-24-3	Decachlorobiphenyl	57%		10-144%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-2 (5' -7')		
<b>Lab Sample ID:</b> JB72780-4		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3546		<b>Percent Solids:</b> 86.9
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G29957.D	1	08/06/14	RK	08/01/14	OP76901	G5G772
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	16.2 g	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	36	9.2	ug/kg	
11104-28-2	Aroclor 1221	ND	36	21	ug/kg	
11141-16-5	Aroclor 1232	ND	36	18	ug/kg	
53469-21-9	Aroclor 1242	ND	36	11	ug/kg	
12672-29-6	Aroclor 1248	ND	36	11	ug/kg	
11097-69-1	Aroclor 1254	ND	36	17	ug/kg	
11096-82-5	Aroclor 1260	ND	36	12	ug/kg	
11100-14-4	Aroclor 1268	ND	36	10	ug/kg	
37324-23-5	Aroclor 1262	ND	36	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	82%		14-139%
877-09-8	Tetrachloro-m-xylene	86%		14-139%
2051-24-3	Decachlorobiphenyl	49%		10-155%
2051-24-3	Decachlorobiphenyl	86%		10-155%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: SB-2 (5'-7')

Lab Sample ID: JB72780-4

Matrix: SO - Soil

Date Sampled: 07/29/14

Date Received: 07/29/14

Percent Solids: 86.9

Project: Tamarkin, 550 West 29th Street, New York, NY

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	6790	50	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Antimony	< 2.0	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Arsenic	2.8	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Barium	31.3	20	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Beryllium	0.71	0.20	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cadmium	< 0.50	0.50	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Calcium	1240	500	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Chromium	14.4	1.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cobalt	5.8	5.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Copper	11.6	2.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Iron	12400	50	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Lead	5.8	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Magnesium	4060	500	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Manganese	158	1.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Mercury	< 0.038	0.038	mg/kg	1	08/01/14	08/01/14 SB	SW846 7471B <sup>1</sup>	SW846 7471B <sup>4</sup>
Nickel	16.3	4.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Potassium	1370	1000	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Selenium	< 2.0	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Silver	< 0.50	0.50	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Sodium	< 1000	1000	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Thallium	< 1.0	1.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Vanadium	22.2	5.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Zinc	27.9	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>

(1) Instrument QC Batch: MA34589

(2) Instrument QC Batch: MA34592

(3) Prep QC Batch: MP81017

(4) Prep QC Batch: MP81018

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> GW-2		<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-5		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4V10182.D	1	08/06/14	BM	n/a	n/a	V4V422
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.7	ug/l	
71-43-2	Benzene	1.2	1.0	0.21	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.19	ug/l	
75-25-2	Bromoform	ND	4.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.3	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.17	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.65	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.24	ug/l	
110-82-7	Cyclohexane	0.75	5.0	0.23	ug/l	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.31	ug/l	
75-34-3	1,1-Dichloroethane	1.5	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	3.0	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.9	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	0.71	1.0	0.51	ug/l	J
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.18	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	39	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.31	ug/l	
76-13-1	Freon 113	ND	5.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-2	
<b>Lab Sample ID:</b> JB72780-5	<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C	<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.4	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	36.0	1.0	0.19	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.89	ug/l	
100-42-5	Styrene	ND	5.0	0.19	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.27	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.47	ug/l	
75-01-4	Vinyl chloride	2.3	1.0	0.16	ug/l	
	m,p-Xylene	ND	1.0	0.35	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		79-120%
17060-07-0	1,2-Dichloroethane-D4	98%		72-123%
2037-26-5	Toluene-D8	99%		78-119%
460-00-4	4-Bromofluorobenzene	98%		74-119%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-2		<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-5		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8270D SW846 3510C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M65674.D	1	08/04/14	HK	08/03/14	OP76943	E2M2794
Run #2							

Run #	Initial Volume	Final Volume
Run #1	560 ml	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	8.9	2.2	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	8.9	2.3	ug/l	
120-83-2	2,4-Dichlorophenol	ND	3.6	2.9	ug/l	
105-67-9	2,4-Dimethylphenol	ND	8.9	3.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	36	12	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	36	2.4	ug/l	
95-48-7	2-Methylphenol	ND	3.6	2.3	ug/l	
	3&4-Methylphenol	ND	3.6	1.9	ug/l	
88-75-5	2-Nitrophenol	ND	8.9	3.3	ug/l	
100-02-7	4-Nitrophenol	ND	18	1.6	ug/l	
87-86-5	Pentachlorophenol	ND	18	2.4	ug/l	
108-95-2	Phenol	ND	3.6	0.98	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	8.9	2.5	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	8.9	3.1	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	8.9	2.7	ug/l	
83-32-9	Acenaphthene	ND	1.8	0.53	ug/l	
208-96-8	Acenaphthylene	ND	1.8	0.36	ug/l	
98-86-2	Acetophenone	ND	3.6	0.65	ug/l	
120-12-7	Anthracene	ND	1.8	0.34	ug/l	
1912-24-9	Atrazine	ND	3.6	0.76	ug/l	
100-52-7	Benzaldehyde	ND	8.9	1.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.8	0.39	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.8	0.43	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.8	0.40	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.8	0.55	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.8	0.39	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	3.6	0.44	ug/l	
85-68-7	Butyl benzyl phthalate	ND	3.6	0.40	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.8	0.49	ug/l	
91-58-7	2-Chloronaphthalene	ND	3.6	0.61	ug/l	
106-47-8	4-Chloroaniline	ND	8.9	0.54	ug/l	
86-74-8	Carbazole	ND	1.8	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	GW-2	<b>Date Sampled:</b>	07/29/14
<b>Lab Sample ID:</b>	JB72780-5	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8270D SW846 3510C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	3.6	0.73	ug/l	
218-01-9	Chrysene	ND	1.8	0.29	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	3.6	0.75	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	3.6	0.77	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	3.6	0.72	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	3.6	0.68	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.8	0.57	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.8	0.46	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	3.6	1.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.8	0.50	ug/l	
132-64-9	Dibenzofuran	ND	8.9	0.41	ug/l	
84-74-2	Di-n-butyl phthalate	ND	3.6	1.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	3.6	0.45	ug/l	
84-66-2	Diethyl phthalate	ND	3.6	0.42	ug/l	
131-11-3	Dimethyl phthalate	ND	3.6	0.47	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	3.6	0.99	ug/l	
206-44-0	Fluoranthene	ND	1.8	0.29	ug/l	
86-73-7	Fluorene	ND	1.8	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	1.8	0.82	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.8	0.69	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	18	0.86	ug/l	
67-72-1	Hexachloroethane	ND	3.6	0.51	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.8	0.72	ug/l	
78-59-1	Isophorone	ND	3.6	0.61	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.8	0.52	ug/l	
88-74-4	2-Nitroaniline	ND	8.9	0.56	ug/l	
99-09-2	3-Nitroaniline	ND	8.9	0.47	ug/l	
100-01-6	4-Nitroaniline	ND	8.9	0.54	ug/l	
91-20-3	Naphthalene	ND	1.8	0.47	ug/l	
98-95-3	Nitrobenzene	ND	3.6	0.93	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	3.6	0.67	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	8.9	0.37	ug/l	
85-01-8	Phenanthrene	ND	1.8	0.33	ug/l	
129-00-0	Pyrene	ND	1.8	0.34	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	3.6	0.79	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	63%		10-110%
4165-62-2	Phenol-d5	43%		10-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

**Report of Analysis**

<b>Client Sample ID:</b> GW-2	<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-5	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8270D SW846 3510C	
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

**ABN TCL List (SOM0 1.1)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	103%		29-139%
4165-60-0	Nitrobenzene-d5	91%		28-131%
321-60-8	2-Fluorobiphenyl	83%		30-121%
1718-51-0	Terphenyl-d14	83%		16-147%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-2		<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-5		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8081B SW846 3510C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G104131.D	1	08/01/14	YD	07/31/14	OP76884	G1G3399
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.010	0.0079	ug/l	
319-84-6	alpha-BHC	ND	0.010	0.0023	ug/l	
319-85-7	beta-BHC	ND	0.010	0.0023	ug/l	
319-86-8	delta-BHC	ND	0.010	0.0019	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.010	0.0017	ug/l	
5103-71-9	alpha-Chlordane	ND	0.010	0.0029	ug/l	
5103-74-2	gamma-Chlordane	ND	0.010	0.0021	ug/l	
60-57-1	Dieldrin	ND	0.010	0.0016	ug/l	
72-54-8	4,4'-DDD	ND	0.010	0.0025	ug/l	
72-55-9	4,4'-DDE	ND	0.010	0.0017	ug/l	
50-29-3	4,4'-DDT	ND	0.010	0.0032	ug/l	
72-20-8	Endrin	ND	0.010	0.0020	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.010	0.0019	ug/l	
7421-93-4	Endrin aldehyde	ND	0.010	0.0037	ug/l	
53494-70-5	Endrin ketone	ND	0.010	0.0047	ug/l	
959-98-8	Endosulfan-I	ND	0.010	0.0028	ug/l	
33213-65-9	Endosulfan-II	ND	0.010	0.0020	ug/l	
76-44-8	Heptachlor	ND	0.010	0.0022	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.010	0.0026	ug/l	
72-43-5	Methoxychlor	ND	0.020	0.0041	ug/l	
8001-35-2	Toxaphene	ND	0.25	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	82%		26-132%
877-09-8	Tetrachloro-m-xylene	78%		26-132%
2051-24-3	Decachlorobiphenyl	44%		10-118%
2051-24-3	Decachlorobiphenyl	44%		10-118%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-2		
<b>Lab Sample ID:</b> JB72780-5		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G99542.D	1	08/01/14	RK	07/31/14	OP76883	G2G3073
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	0.27	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	0.39	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	0.086	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	0.15	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	0.14	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	0.21	ug/l	
11100-14-4	Aroclor 1268	ND	0.50	0.13	ug/l	
37324-23-5	Aroclor 1262	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	64%		20-130%
877-09-8	Tetrachloro-m-xylene	66%		20-130%
2051-24-3	Decachlorobiphenyl	50%		10-122%
2051-24-3	Decachlorobiphenyl	46%		10-122%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-2	<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-5	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	583	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Antimony	< 6.0	6.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Arsenic	3460	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Barium	< 200	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Beryllium	< 1.0	1.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Cadmium	7.0	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Calcium	276000	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Chromium	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Cobalt	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Copper	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Iron	10500	100	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Lead <sup>a</sup>	< 15	15	ug/l	5	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Magnesium	78800	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Manganese	16700	75	ug/l	5	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Mercury	< 0.20	0.20	ug/l	1	07/31/14	07/31/14 JW	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>4</sup>
Nickel	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Potassium	46200	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Selenium <sup>a</sup>	< 50	50	ug/l	5	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Silver	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Sodium	362000	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Thallium <sup>a</sup>	< 10	10	ug/l	5	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Vanadium	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Zinc	37.8	20	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>

(1) Instrument QC Batch: MA34587

(2) Instrument QC Batch: MA34594

(3) Prep QC Batch: MP80992

(4) Prep QC Batch: MP80999

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> GW-2	<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-5F	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 200	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Antimony	< 6.0	6.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Arsenic	2190	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Barium	< 200	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Beryllium	< 1.0	1.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Cadmium	4.3	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Calcium	310000	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Chromium	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Cobalt	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Copper	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Iron	1050	100	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Lead <sup>a</sup>	< 15	15	ug/l	5	07/31/14	08/04/14 ND	EPA 200.7 <sup>3</sup>	EPA 200.7 <sup>4</sup>
Magnesium	89800	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Manganese	20900	75	ug/l	5	07/31/14	08/04/14 ND	EPA 200.7 <sup>3</sup>	EPA 200.7 <sup>4</sup>
Mercury	< 0.20	0.20	ug/l	1	07/31/14	07/31/14 JW	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>5</sup>
Nickel	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Potassium	52500	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Selenium <sup>a</sup>	< 50	50	ug/l	5	07/31/14	08/04/14 ND	EPA 200.7 <sup>3</sup>	EPA 200.7 <sup>4</sup>
Silver	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Sodium	397000	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Thallium <sup>a</sup>	< 10	10	ug/l	5	07/31/14	08/04/14 ND	EPA 200.7 <sup>3</sup>	EPA 200.7 <sup>4</sup>
Vanadium	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Zinc	< 20	20	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>

(1) Instrument QC Batch: MA34587

(2) Instrument QC Batch: MA34594

(3) Instrument QC Batch: MA34599

(4) Prep QC Batch: MP80992

(5) Prep QC Batch: MP80999

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> FB07292014		
<b>Lab Sample ID:</b> JB72780-6		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> AQ - Field Blank Water		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C		<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4V10180.D	1	08/06/14	BM	n/a	n/a	V4V422
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.7	ug/l	
71-43-2	Benzene	ND	1.0	0.21	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.19	ug/l	
75-25-2	Bromoform	ND	4.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.3	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.17	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.65	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.24	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.31	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.18	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	39	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.31	ug/l	
76-13-1	Freon 113	ND	5.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> FB07292014	<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-6	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Field Blank Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260C	
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.4	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.19	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.89	ug/l	
100-42-5	Styrene	ND	5.0	0.19	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.27	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.47	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.16	ug/l	
	m,p-Xylene	ND	1.0	0.35	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		79-120%
17060-07-0	1,2-Dichloroethane-D4	100%		72-123%
2037-26-5	Toluene-D8	100%		78-119%
460-00-4	4-Bromofluorobenzene	98%		74-119%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> FB07292014		
<b>Lab Sample ID:</b> JB72780-6		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> AQ - Field Blank Water		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M107108.D	1	08/08/14	SP	08/01/14	OP76889	EM4383
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	1.3	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.3	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.6	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.8	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	6.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	20	1.3	ug/l	
95-48-7	2-Methylphenol	ND	2.0	1.3	ug/l	
	3&4-Methylphenol	ND	2.0	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.9	ug/l	
100-02-7	4-Nitrophenol	ND	10	0.91	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.4	ug/l	
108-95-2	Phenol	ND	2.0	0.55	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	1.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.7	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.5	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
98-86-2	Acetophenone	ND	2.0	0.36	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
1912-24-9	Atrazine	ND	2.0	0.42	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.67	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.25	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.22	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.27	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.30	ug/l	
86-74-8	Carbazole	ND	1.0	0.17	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> FB07292014	
<b>Lab Sample ID:</b> JB72780-6	<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> AQ - Field Blank Water	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.41	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.42	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.43	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.41	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.38	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.32	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.26	ug/l	
91-94-1	3,3' -Dichlorobenzidine	ND	2.0	0.56	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.23	ug/l	
84-74-2	Di-n-butyl phthalate	1.8	2.0	0.58	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	2.0	0.25	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.26	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.3	2.0	0.55	ug/l	JB
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.46	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.39	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.48	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.29	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
78-59-1	Isophorone	ND	2.0	0.34	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.29	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.32	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.26	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.30	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.52	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.38	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.21	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.44	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		10-110%
4165-62-2	Phenol-d5	28%		10-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> FB07292014	
<b>Lab Sample ID:</b> JB72780-6	<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> AQ - Field Blank Water	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

### ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	99%		29-139%
4165-60-0	Nitrobenzene-d5	73%		28-131%
321-60-8	2-Fluorobiphenyl	73%		30-121%
1718-51-0	Terphenyl-d14	95%		16-147%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.7  
 4

## Report of Analysis

<b>Client Sample ID:</b> FB07292014		
<b>Lab Sample ID:</b> JB72780-6		<b>Date Sampled:</b> 07/29/14
<b>Matrix:</b> AQ - Field Blank Water		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8081B SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G104132.D	1	08/01/14	YD	07/31/14	OP76884	G1G3399
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.010	0.0079	ug/l	
319-84-6	alpha-BHC	ND	0.010	0.0023	ug/l	
319-85-7	beta-BHC	ND	0.010	0.0023	ug/l	
319-86-8	delta-BHC	ND	0.010	0.0019	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.010	0.0017	ug/l	
5103-71-9	alpha-Chlordane	ND	0.010	0.0029	ug/l	
5103-74-2	gamma-Chlordane	ND	0.010	0.0021	ug/l	
60-57-1	Dieldrin	ND	0.010	0.0016	ug/l	
72-54-8	4,4'-DDD	ND	0.010	0.0025	ug/l	
72-55-9	4,4'-DDE	ND	0.010	0.0017	ug/l	
50-29-3	4,4'-DDT	ND	0.010	0.0032	ug/l	
72-20-8	Endrin	ND	0.010	0.0020	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.010	0.0019	ug/l	
7421-93-4	Endrin aldehyde	ND	0.010	0.0037	ug/l	
53494-70-5	Endrin ketone	ND	0.010	0.0047	ug/l	
959-98-8	Endosulfan-I	ND	0.010	0.0028	ug/l	
33213-65-9	Endosulfan-II	ND	0.010	0.0020	ug/l	
76-44-8	Heptachlor	ND	0.010	0.0022	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.010	0.0026	ug/l	
72-43-5	Methoxychlor	ND	0.020	0.0041	ug/l	
8001-35-2	Toxaphene	ND	0.25	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	86%		26-132%
877-09-8	Tetrachloro-m-xylene	80%		26-132%
2051-24-3	Decachlorobiphenyl	44%		10-118%
2051-24-3	Decachlorobiphenyl	42%		10-118%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> FB07292014	<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-6	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Field Blank Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8082A SW846 3510C	
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G99543.D	1	08/01/14	RK	07/31/14	OP76883	G2G3073
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

### PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	0.27	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	0.39	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	0.086	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	0.15	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	0.14	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	0.21	ug/l	
11100-14-4	Aroclor 1268	ND	0.50	0.13	ug/l	
37324-23-5	Aroclor 1262	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		20-130%
877-09-8	Tetrachloro-m-xylene	91%		20-130%
2051-24-3	Decachlorobiphenyl	61%		10-122%
2051-24-3	Decachlorobiphenyl	52%		10-122%

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

4.7  
4

## Report of Analysis

<b>Client Sample ID:</b> FB07292014		<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-6		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Field Blank Water		<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 200	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Antimony	< 6.0	6.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Arsenic	< 3.0	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Barium	< 200	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Beryllium	< 1.0	1.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Cadmium	< 3.0	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Calcium	< 5000	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Chromium	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Cobalt	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Copper	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Iron	< 100	100	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Lead	< 3.0	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Magnesium	< 5000	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Manganese	< 15	15	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Mercury	< 0.20	0.20	ug/l	1	07/31/14	07/31/14 JW	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>4</sup>
Nickel	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Potassium	< 10000	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Selenium	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Silver	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Sodium	< 10000	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Thallium	< 2.0	2.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Vanadium	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Zinc	< 20	20	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>

(1) Instrument QC Batch: MA34587

(2) Instrument QC Batch: MA34594

(3) Prep QC Batch: MP80992

(4) Prep QC Batch: MP80999

RL = Reporting Limit

4.7  
4

## Report of Analysis

<b>Client Sample ID:</b> FB07292014		<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-6F		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Field Blank Filtered		<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 200	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Antimony	< 6.0	6.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Arsenic	< 3.0	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Barium	< 200	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Beryllium	< 1.0	1.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Cadmium	< 3.0	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Calcium	< 5000	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Chromium	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Cobalt	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Copper	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Iron	< 100	100	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Lead	< 3.0	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Magnesium	< 5000	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Manganese	< 15	15	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Mercury	< 0.20	0.20	ug/l	1	07/31/14	07/31/14 JW	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>4</sup>
Nickel	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Potassium	< 10000	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Selenium	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Silver	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Sodium	< 10000	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Thallium	< 2.0	2.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Vanadium	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Zinc	< 20	20	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>

(1) Instrument QC Batch: MA34587

(2) Instrument QC Batch: MA34594

(3) Prep QC Batch: MP80992

(4) Prep QC Batch: MP80999

RL = Reporting Limit

4.8  
4

## Report of Analysis

<b>Client Sample ID:</b> TRIP BLANK		<b>Date Sampled:</b> 07/29/14
<b>Lab Sample ID:</b> JB72780-7		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Trip Blank Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4V10181.D	1	08/06/14	BM	n/a	n/a	V4V422
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.7	ug/l	
71-43-2	Benzene	ND	1.0	0.21	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.19	ug/l	
75-25-2	Bromoform	ND	4.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.3	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.17	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.65	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.24	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.31	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.18	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	39	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.31	ug/l	
76-13-1	Freon 113	ND	5.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	TRIP BLANK	<b>Date Sampled:</b>	07/29/14
<b>Lab Sample ID:</b>	JB72780-7	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	AQ - Trip Blank Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.4	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.19	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.89	ug/l	
100-42-5	Styrene	ND	5.0	0.19	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.27	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.47	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.16	ug/l	
	m,p-Xylene	ND	1.0	0.35	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		79-120%
17060-07-0	1,2-Dichloroethane-D4	100%		72-123%
2037-26-5	Toluene-D8	101%		78-119%
460-00-4	4-Bromofluorobenzene	96%		74-119%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-1 (0'-2')		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-8		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 88.2
<b>Method:</b> SW846 8260C SW846 5035		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C112159.D	1	08/01/14	PS	07/30/14 08:10	n/a	V3C5061
Run #2							

Run #1	Initial Weight
Run #1	6.3 g
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	9.0	1.3	ug/kg	
71-43-2	Benzene	ND	0.90	0.16	ug/kg	
74-97-5	Bromochloromethane	ND	4.5	0.22	ug/kg	
75-27-4	Bromodichloromethane	ND	4.5	0.22	ug/kg	
75-25-2	Bromoform	ND	4.5	0.095	ug/kg	
74-83-9	Bromomethane	ND	4.5	0.26	ug/kg	
78-93-3	2-Butanone (MEK)	ND	9.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	4.5	0.21	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.5	0.13	ug/kg	
108-90-7	Chlorobenzene	ND	4.5	0.11	ug/kg	
75-00-3	Chloroethane	ND	4.5	0.21	ug/kg	
67-66-3	Chloroform	ND	4.5	0.093	ug/kg	
74-87-3	Chloromethane	ND	4.5	0.27	ug/kg	
110-82-7	Cyclohexane	ND	4.5	0.32	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	9.0	0.47	ug/kg	
124-48-1	Dibromochloromethane	ND	4.5	0.12	ug/kg	
106-93-4	1,2-Dibromoethane	ND	0.90	0.14	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	4.5	0.14	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	4.5	0.14	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	4.5	0.15	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.5	0.47	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.5	0.32	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.90	0.10	ug/kg	
75-35-4	1,1-Dichloroethene	ND	4.5	0.22	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	4.5	0.23	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	4.5	0.17	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.5	0.15	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.5	0.11	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.5	0.15	ug/kg	
123-91-1	1,4-Dioxane	ND	110	36	ug/kg	
100-41-4	Ethylbenzene	ND	0.90	0.095	ug/kg	
76-13-1	Freon 113	ND	4.5	0.26	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-1 (0'-2')	
<b>Lab Sample ID:</b> JB72780-8	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035	<b>Percent Solids:</b> 88.2
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	4.5	0.50	ug/kg	
98-82-8	Isopropylbenzene	ND	4.5	0.14	ug/kg	
79-20-9	Methyl Acetate	ND	4.5	0.44	ug/kg	
108-87-2	Methylcyclohexane	ND	4.5	0.12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.90	0.15	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	4.5	0.29	ug/kg	
75-09-2	Methylene chloride	ND	4.5	0.85	ug/kg	
100-42-5	Styrene	ND	4.5	0.13	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.5	0.13	ug/kg	
127-18-4	Tetrachloroethene	0.22	4.5	0.18	ug/kg	J
108-88-3	Toluene	ND	0.90	0.13	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.5	0.14	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.5	0.16	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.5	0.12	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.5	0.16	ug/kg	
79-01-6	Trichloroethene	ND	4.5	0.18	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.5	0.15	ug/kg	
75-01-4	Vinyl chloride	ND	4.5	0.13	ug/kg	
	m,p-Xylene	ND	0.90	0.20	ug/kg	
95-47-6	o-Xylene	ND	0.90	0.13	ug/kg	
1330-20-7	Xylene (total)	ND	0.90	0.13	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		59-130%
17060-07-0	1,2-Dichloroethane-D4	103%		65-123%
2037-26-5	Toluene-D8	107%		77-125%
460-00-4	4-Bromofluorobenzene	108%		71-132%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-1 (0'-2')		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-8		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 88.2
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P87732.D	1	08/01/14	SW	07/31/14	OP76871	EP3740
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	31.6 g	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	72	36	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	36	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	58	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	60	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	720	44	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	720	44	ug/kg	
95-48-7	2-Methylphenol	ND	72	41	ug/kg	
	3&4-Methylphenol	ND	72	46	ug/kg	
88-75-5	2-Nitrophenol	ND	180	38	ug/kg	
100-02-7	4-Nitrophenol	ND	360	61	ug/kg	
87-86-5	Pentachlorophenol	ND	360	61	ug/kg	
108-95-2	Phenol	ND	72	38	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	180	37	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	42	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	34	ug/kg	
83-32-9	Acenaphthene	69.7	36	10	ug/kg	
208-96-8	Acenaphthylene	83.9	36	11	ug/kg	
98-86-2	Acetophenone	ND	180	6.3	ug/kg	
120-12-7	Anthracene	179	36	13	ug/kg	
1912-24-9	Atrazine	ND	72	7.1	ug/kg	
56-55-3	Benzo(a)anthracene	630	36	12	ug/kg	
50-32-8	Benzo(a)pyrene	708	36	11	ug/kg	
205-99-2	Benzo(b)fluoranthene	800	36	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	516	36	13	ug/kg	
207-08-9	Benzo(k)fluoranthene	273	36	13	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	72	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	72	21	ug/kg	
92-52-4	1,1'-Biphenyl	ND	72	4.2	ug/kg	
100-52-7	Benzaldehyde	ND	180	8.3	ug/kg	
91-58-7	2-Chloronaphthalene	ND	72	11	ug/kg	
106-47-8	4-Chloroaniline	ND	180	11	ug/kg	
86-74-8	Carbazole	94.8	72	17	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SB-1 (0'-2')	<b>Date Sampled:</b>	07/28/14
<b>Lab Sample ID:</b>	JB72780-8	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	88.2
<b>Method:</b>	SW846 8270D SW846 3550C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	72	11	ug/kg	
218-01-9	Chrysene	701	36	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	72	14	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	72	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	72	11	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	72	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	36	16	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	36	14	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	72	9.1	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	99.2	36	12	ug/kg	
132-64-9	Dibenzofuran	43.1	72	11	ug/kg	J
84-74-2	Di-n-butyl phthalate	ND	72	8.0	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	72	17	ug/kg	
84-66-2	Diethyl phthalate	ND	72	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	72	13	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	36.7	72	32	ug/kg	J
206-44-0	Fluoranthene	1320	36	16	ug/kg	
86-73-7	Fluorene	54.6	36	12	ug/kg	
118-74-1	Hexachlorobenzene	ND	72	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	36	10	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	360	37	ug/kg	
67-72-1	Hexachloroethane	ND	180	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	542	36	12	ug/kg	
78-59-1	Isophorone	ND	72	9.7	ug/kg	
91-57-6	2-Methylnaphthalene	34.9	72	20	ug/kg	J
88-74-4	2-Nitroaniline	ND	180	16	ug/kg	
99-09-2	3-Nitroaniline	ND	180	14	ug/kg	
100-01-6	4-Nitroaniline	ND	180	14	ug/kg	
91-20-3	Naphthalene	46.7	36	9.8	ug/kg	
98-95-3	Nitrobenzene	ND	72	10	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	72	8.8	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	21	ug/kg	
85-01-8	Phenanthrene	889	36	16	ug/kg	
129-00-0	Pyrene	1250	36	14	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	180	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	78%		13-110%
4165-62-2	Phenol-d5	83%		15-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

**Report of Analysis**

<b>Client Sample ID:</b> SB-1 (0' -2')	
<b>Lab Sample ID:</b> JB72780-8	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C	<b>Percent Solids:</b> 88.2
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

**ABN TCL List (SOM0 1.1)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	95%		20-123%
4165-60-0	Nitrobenzene-d5	74%		10-110%
321-60-8	2-Fluorobiphenyl	78%		17-110%
1718-51-0	Terphenyl-d14	90%		30-124%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-1 (0'-2')		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-8		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 88.2
<b>Method:</b> SW846 8081B SW846 3546		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G14186.D	1	08/03/14	JN	08/01/14	OP76908	G6G405
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.8 g	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.72	0.33	ug/kg	
319-84-6	alpha-BHC	ND	0.72	0.21	ug/kg	
319-85-7	beta-BHC	ND	0.72	0.45	ug/kg	
319-86-8	delta-BHC	ND	0.72	0.35	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.72	0.35	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.72	0.27	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.72	0.50	ug/kg	
60-57-1	Dieldrin	ND	0.72	0.28	ug/kg	
72-54-8	4,4'-DDD	ND	0.72	0.39	ug/kg	
72-55-9	4,4'-DDE	ND	0.72	0.29	ug/kg	
50-29-3	4,4'-DDT	ND	0.72	0.35	ug/kg	
72-20-8	Endrin	ND	0.72	0.23	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.72	0.31	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.72	0.38	ug/kg	
959-98-8	Endosulfan-I	ND	0.72	0.27	ug/kg	
33213-65-9	Endosulfan-II	ND	0.72	0.43	ug/kg	
76-44-8	Heptachlor	ND	0.72	0.35	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.72	0.27	ug/kg	
72-43-5	Methoxychlor	ND	1.4	0.70	ug/kg	
53494-70-5	Endrin ketone <sup>a</sup>	1.3	0.72	0.29	ug/kg	
8001-35-2	Toxaphene	ND	18	9.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	72%		10-129%
877-09-8	Tetrachloro-m-xylene	68%		10-129%
2051-24-3	Decachlorobiphenyl	55%		10-144%
2051-24-3	Decachlorobiphenyl	49%		10-144%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-1 (0' -2')		
<b>Lab Sample ID:</b> JB72780-8		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3546		<b>Percent Solids:</b> 88.2
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G29964.D	1	08/06/14	RK	08/01/14	OP76901	G5G772
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.8 g	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	36	9.3	ug/kg	
11104-28-2	Aroclor 1221	ND	36	22	ug/kg	
11141-16-5	Aroclor 1232	ND	36	18	ug/kg	
53469-21-9	Aroclor 1242	ND	36	11	ug/kg	
12672-29-6	Aroclor 1248	ND	36	11	ug/kg	
11097-69-1	Aroclor 1254	ND	36	17	ug/kg	
11096-82-5	Aroclor 1260	ND	36	12	ug/kg	
11100-14-4	Aroclor 1268	ND	36	11	ug/kg	
37324-23-5	Aroclor 1262	ND	36	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	79%		14-139%
877-09-8	Tetrachloro-m-xylene	83%		14-139%
2051-24-3	Decachlorobiphenyl	71%		10-155%
2051-24-3	Decachlorobiphenyl	89%		10-155%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: SB-1 (0'-2')

Lab Sample ID: JB72780-8

Matrix: SO - Soil

Date Sampled: 07/28/14

Date Received: 07/29/14

Percent Solids: 88.2

Project: Tamarkin, 550 West 29th Street, New York, NY

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	10600	55	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Antimony	10.1	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Arsenic	674	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Barium	194	22	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Beryllium	0.88	0.22	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Cadmium	0.79	0.55	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Calcium	30600	550	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Chromium	31.0	1.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Cobalt	9.3	5.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Copper	259	2.7	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Iron	18900	55	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Lead	1050	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Magnesium	4690	550	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Manganese	558	1.6	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Mercury	3.7	0.19	mg/kg	5	08/04/14	08/04/14 JW	SW846 7471B <sup>2</sup>	SW846 7471B <sup>4</sup>
Nickel	23.3	4.4	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Potassium	1840	1100	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Selenium	4.2	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Silver	< 0.55	0.55	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Sodium	< 1100	1100	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Thallium	< 1.1	1.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Vanadium	40.1	5.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Zinc	371	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>

(1) Instrument QC Batch: MA34592

(2) Instrument QC Batch: MA34598

(3) Prep QC Batch: MP81017

(4) Prep QC Batch: MP81018

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> SB-1 (15'-17')		
<b>Lab Sample ID:</b> JB72780-9		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035		<b>Percent Solids:</b> 88.0
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C112160.D	1	08/01/14	PS	07/30/14 08:10	n/a	V3C5061
Run #2							

Run #1	Initial Weight
Run #1	6.0 g
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	7.3	9.5	1.4	ug/kg	J
71-43-2	Benzene	ND	0.95	0.16	ug/kg	
74-97-5	Bromochloromethane	ND	4.7	0.23	ug/kg	
75-27-4	Bromodichloromethane	ND	4.7	0.23	ug/kg	
75-25-2	Bromoform	ND	4.7	0.10	ug/kg	
74-83-9	Bromomethane	ND	4.7	0.28	ug/kg	
78-93-3	2-Butanone (MEK)	ND	9.5	1.1	ug/kg	
75-15-0	Carbon disulfide	1.4	4.7	0.22	ug/kg	J
56-23-5	Carbon tetrachloride	ND	4.7	0.13	ug/kg	
108-90-7	Chlorobenzene	ND	4.7	0.12	ug/kg	
75-00-3	Chloroethane	ND	4.7	0.23	ug/kg	
67-66-3	Chloroform	ND	4.7	0.098	ug/kg	
74-87-3	Chloromethane	ND	4.7	0.28	ug/kg	
110-82-7	Cyclohexane	ND	4.7	0.33	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	9.5	0.49	ug/kg	
124-48-1	Dibromochloromethane	ND	4.7	0.13	ug/kg	
106-93-4	1,2-Dibromoethane	ND	0.95	0.15	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	4.7	0.15	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	4.7	0.15	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	4.7	0.16	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.7	0.49	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.7	0.34	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.95	0.11	ug/kg	
75-35-4	1,1-Dichloroethene	0.73	4.7	0.23	ug/kg	J
156-59-2	cis-1,2-Dichloroethene	0.41	4.7	0.25	ug/kg	J
156-60-5	trans-1,2-Dichloroethene	ND	4.7	0.18	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.7	0.16	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.7	0.12	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.7	0.16	ug/kg	
123-91-1	1,4-Dioxane	ND	120	38	ug/kg	
100-41-4	Ethylbenzene	ND	0.95	0.10	ug/kg	
76-13-1	Freon 113	ND	4.7	0.27	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-1 (15'-17')	
<b>Lab Sample ID:</b> JB72780-9	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035	<b>Percent Solids:</b> 88.0
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	4.7	0.53	ug/kg	
98-82-8	Isopropylbenzene	ND	4.7	0.14	ug/kg	
79-20-9	Methyl Acetate	ND	4.7	0.46	ug/kg	
108-87-2	Methylcyclohexane	ND	4.7	0.13	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	2.3	0.95	0.16	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	4.7	0.30	ug/kg	
75-09-2	Methylene chloride	ND	4.7	0.90	ug/kg	
100-42-5	Styrene	ND	4.7	0.13	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.7	0.14	ug/kg	
127-18-4	Tetrachloroethene	ND	4.7	0.18	ug/kg	
108-88-3	Toluene	ND	0.95	0.14	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.7	0.14	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.7	0.17	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.7	0.13	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.7	0.17	ug/kg	
79-01-6	Trichloroethene	ND	4.7	0.19	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.7	0.16	ug/kg	
75-01-4	Vinyl chloride	ND	4.7	0.13	ug/kg	
	m,p-Xylene	ND	0.95	0.21	ug/kg	
95-47-6	o-Xylene	ND	0.95	0.13	ug/kg	
1330-20-7	Xylene (total)	ND	0.95	0.13	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		59-130%
17060-07-0	1,2-Dichloroethane-D4	103%		65-123%
2037-26-5	Toluene-D8	106%		77-125%
460-00-4	4-Bromofluorobenzene	108%		71-132%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-1 (15'-17')		
<b>Lab Sample ID:</b> JB72780-9		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C		<b>Percent Solids:</b> 88.0
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P87733.D	1	08/01/14	SW	07/31/14	OP76871	EP3740
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	31.7 g	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	72	36	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	36	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	58	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	60	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	720	44	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	720	44	ug/kg	
95-48-7	2-Methylphenol	ND	72	41	ug/kg	
	3&4-Methylphenol	ND	72	46	ug/kg	
88-75-5	2-Nitrophenol	ND	180	38	ug/kg	
100-02-7	4-Nitrophenol	ND	360	61	ug/kg	
87-86-5	Pentachlorophenol	ND	360	61	ug/kg	
108-95-2	Phenol	ND	72	38	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	180	37	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	42	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	34	ug/kg	
83-32-9	Acenaphthene	ND	36	10	ug/kg	
208-96-8	Acenaphthylene	ND	36	11	ug/kg	
98-86-2	Acetophenone	ND	180	6.3	ug/kg	
120-12-7	Anthracene	ND	36	13	ug/kg	
1912-24-9	Atrazine	ND	72	7.1	ug/kg	
56-55-3	Benzo(a)anthracene	ND	36	12	ug/kg	
50-32-8	Benzo(a)pyrene	ND	36	11	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	36	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	36	13	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	36	13	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	72	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	72	21	ug/kg	
92-52-4	1,1'-Biphenyl	ND	72	4.2	ug/kg	
100-52-7	Benzaldehyde	ND	180	8.2	ug/kg	
91-58-7	2-Chloronaphthalene	ND	72	11	ug/kg	
106-47-8	4-Chloroaniline	ND	180	11	ug/kg	
86-74-8	Carbazole	ND	72	17	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SB-1 (15'-17')	<b>Date Sampled:</b>	07/28/14
<b>Lab Sample ID:</b>	JB72780-9	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	88.0
<b>Method:</b>	SW846 8270D SW846 3550C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	72	11	ug/kg	
218-01-9	Chrysene	ND	36	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	72	14	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	72	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	72	11	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	72	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	36	16	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	36	14	ug/kg	
91-94-1	3,3' -Dichlorobenzidine	ND	72	9.1	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	36	12	ug/kg	
132-64-9	Dibenzofuran	ND	72	11	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	72	8.0	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	72	17	ug/kg	
84-66-2	Diethyl phthalate	ND	72	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	72	13	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	69.9	72	32	ug/kg	J
206-44-0	Fluoranthene	ND	36	16	ug/kg	
86-73-7	Fluorene	ND	36	12	ug/kg	
118-74-1	Hexachlorobenzene	ND	72	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	36	10	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	360	37	ug/kg	
67-72-1	Hexachloroethane	ND	180	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	36	12	ug/kg	
78-59-1	Isophorone	ND	72	9.6	ug/kg	
91-57-6	2-Methylnaphthalene	ND	72	20	ug/kg	
88-74-4	2-Nitroaniline	ND	180	16	ug/kg	
99-09-2	3-Nitroaniline	ND	180	14	ug/kg	
100-01-6	4-Nitroaniline	ND	180	14	ug/kg	
91-20-3	Naphthalene	ND	36	9.8	ug/kg	
98-95-3	Nitrobenzene	ND	72	10	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	72	8.7	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	21	ug/kg	
85-01-8	Phenanthrene	ND	36	16	ug/kg	
129-00-0	Pyrene	ND	36	14	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	180	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	75%		13-110%
4165-62-2	Phenol-d5	79%		15-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-1 (15'-17')	
<b>Lab Sample ID:</b> JB72780-9	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C	<b>Percent Solids:</b> 88.0
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	98%		20-123%
4165-60-0	Nitrobenzene-d5	76%		10-110%
321-60-8	2-Fluorobiphenyl	74%		17-110%
1718-51-0	Terphenyl-d14	87%		30-124%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-1 (15'-17')		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-9		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 88.0
<b>Method:</b> SW846 8081B SW846 3546		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G14187.D	1	08/03/14	JN	08/01/14	OP76908	G6G405
Run #2							

Run #	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.72	0.33	ug/kg	
319-84-6	alpha-BHC	ND	0.72	0.22	ug/kg	
319-85-7	beta-BHC	ND	0.72	0.45	ug/kg	
319-86-8	delta-BHC	ND	0.72	0.36	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.72	0.35	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.72	0.27	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.72	0.50	ug/kg	
60-57-1	Dieldrin	ND	0.72	0.28	ug/kg	
72-54-8	4,4'-DDD	ND	0.72	0.40	ug/kg	
72-55-9	4,4'-DDE	ND	0.72	0.29	ug/kg	
50-29-3	4,4'-DDT	ND	0.72	0.36	ug/kg	
72-20-8	Endrin	ND	0.72	0.23	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.72	0.31	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.72	0.38	ug/kg	
959-98-8	Endosulfan-I	ND	0.72	0.27	ug/kg	
33213-65-9	Endosulfan-II	ND	0.72	0.43	ug/kg	
76-44-8	Heptachlor	ND	0.72	0.35	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.72	0.27	ug/kg	
72-43-5	Methoxychlor	ND	1.4	0.71	ug/kg	
53494-70-5	Endrin ketone	ND	0.72	0.29	ug/kg	
8001-35-2	Toxaphene	ND	18	9.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	50%		10-129%
877-09-8	Tetrachloro-m-xylene	48%		10-129%
2051-24-3	Decachlorobiphenyl	42%		10-144%
2051-24-3	Decachlorobiphenyl	38%		10-144%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-1 (15'-17')		
<b>Lab Sample ID:</b> JB72780-9		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3546		<b>Percent Solids:</b> 88.0
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G29965.D	1	08/06/14	RK	08/01/14	OP76901	G5G772
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	36	9.4	ug/kg	
11104-28-2	Aroclor 1221	ND	36	22	ug/kg	
11141-16-5	Aroclor 1232	ND	36	18	ug/kg	
53469-21-9	Aroclor 1242	ND	36	12	ug/kg	
12672-29-6	Aroclor 1248	ND	36	11	ug/kg	
11097-69-1	Aroclor 1254	ND	36	17	ug/kg	
11096-82-5	Aroclor 1260	ND	36	12	ug/kg	
11100-14-4	Aroclor 1268	ND	36	11	ug/kg	
37324-23-5	Aroclor 1262	ND	36	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	51%		14-139%
877-09-8	Tetrachloro-m-xylene	46%		14-139%
2051-24-3	Decachlorobiphenyl	46%		10-155%
2051-24-3	Decachlorobiphenyl	45%		10-155%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

**Client Sample ID:** SB-1 (15'-17')**Lab Sample ID:** JB72780-9**Matrix:** SO - Soil**Date Sampled:** 07/28/14**Date Received:** 07/29/14**Percent Solids:** 88.0**Project:** Tamarkin, 550 West 29th Street, New York, NY

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	8040	49	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Antimony	< 2.0	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Arsenic	343	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Barium	52.5	20	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Beryllium	0.56	0.20	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cadmium	< 0.49	0.49	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Calcium	2640	490	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Chromium	19.3	0.98	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cobalt	5.9	4.9	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Copper	23.6	2.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Iron	9920	49	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Lead	17.5	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Magnesium	2470	490	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Manganese	285	1.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Mercury	< 0.036	0.036	mg/kg	1	08/01/14	08/01/14 SB	SW846 7471B <sup>1</sup>	SW846 7471B <sup>4</sup>
Nickel	15.1	3.9	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Potassium	1450	980	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Selenium	< 2.0	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Silver	< 0.49	0.49	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Sodium	< 980	980	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Thallium	< 0.98	0.98	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Vanadium	23.5	4.9	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Zinc	23.0	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>

(1) Instrument QC Batch: MA34589

(2) Instrument QC Batch: MA34592

(3) Prep QC Batch: MP81017

(4) Prep QC Batch: MP81018

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> SB-6 (0'-2')		
<b>Lab Sample ID:</b> JB72780-10		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035		<b>Percent Solids:</b> 88.7
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	3C112161.D	1	08/01/14	PS	07/30/14 08:10	n/a	V3C5061

Run #1	Initial Weight
Run #2	4.4 g

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	12.1	13	1.9	ug/kg	J
71-43-2	Benzene	ND	1.3	0.22	ug/kg	
74-97-5	Bromochloromethane	ND	6.4	0.31	ug/kg	
75-27-4	Bromodichloromethane	ND	6.4	0.31	ug/kg	
75-25-2	Bromoform	ND	6.4	0.14	ug/kg	
74-83-9	Bromomethane	ND	6.4	0.37	ug/kg	
78-93-3	2-Butanone (MEK)	ND	13	1.6	ug/kg	
75-15-0	Carbon disulfide	0.40	6.4	0.30	ug/kg	J
56-23-5	Carbon tetrachloride	ND	6.4	0.18	ug/kg	
108-90-7	Chlorobenzene	ND	6.4	0.16	ug/kg	
75-00-3	Chloroethane	ND	6.4	0.30	ug/kg	
67-66-3	Chloroform	ND	6.4	0.13	ug/kg	
74-87-3	Chloromethane	ND	6.4	0.38	ug/kg	
110-82-7	Cyclohexane	ND	6.4	0.45	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	13	0.67	ug/kg	
124-48-1	Dibromochloromethane	ND	6.4	0.17	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.3	0.20	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	6.4	0.21	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	6.4	0.20	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	6.4	0.21	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.4	0.67	ug/kg	
75-34-3	1,1-Dichloroethane	0.91	6.4	0.46	ug/kg	J
107-06-2	1,2-Dichloroethane	ND	1.3	0.15	ug/kg	
75-35-4	1,1-Dichloroethene	0.64	6.4	0.31	ug/kg	J
156-59-2	cis-1,2-Dichloroethene	ND	6.4	0.33	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	6.4	0.24	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.4	0.22	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.4	0.16	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.4	0.22	ug/kg	
123-91-1	1,4-Dioxane	ND	160	51	ug/kg	
100-41-4	Ethylbenzene	ND	1.3	0.14	ug/kg	
76-13-1	Freon 113	ND	6.4	0.37	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-6 (0' -2')	
<b>Lab Sample ID:</b> JB72780-10	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035	<b>Percent Solids:</b> 88.7
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	6.4	0.71	ug/kg	
98-82-8	Isopropylbenzene	ND	6.4	0.20	ug/kg	
79-20-9	Methyl Acetate	ND	6.4	0.62	ug/kg	
108-87-2	Methylcyclohexane	ND	6.4	0.18	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.3	0.21	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.4	0.41	ug/kg	
75-09-2	Methylene chloride	ND	6.4	1.2	ug/kg	
100-42-5	Styrene	ND	6.4	0.18	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.4	0.19	ug/kg	
127-18-4	Tetrachloroethene	ND	6.4	0.25	ug/kg	
108-88-3	Toluene	ND	1.3	0.19	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.4	0.19	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.4	0.23	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.4	0.17	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	6.4	0.23	ug/kg	
79-01-6	Trichloroethene	ND	6.4	0.25	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.4	0.21	ug/kg	
75-01-4	Vinyl chloride	ND	6.4	0.18	ug/kg	
	m,p-Xylene	ND	1.3	0.29	ug/kg	
95-47-6	o-Xylene	ND	1.3	0.18	ug/kg	
1330-20-7	Xylene (total)	ND	1.3	0.18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		59-130%
17060-07-0	1,2-Dichloroethane-D4	105%		65-123%
2037-26-5	Toluene-D8	108%		77-125%
460-00-4	4-Bromofluorobenzene	110%		71-132%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-6 (0' -2')		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-10		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 88.7
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P87734.D	1	08/01/14	SW	07/31/14	OP76871	EP3740
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	32.1 g	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	70	35	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	35	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	57	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	59	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	700	43	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	700	43	ug/kg	
95-48-7	2-Methylphenol	ND	70	40	ug/kg	
	3&4-Methylphenol	ND	70	45	ug/kg	
88-75-5	2-Nitrophenol	ND	180	37	ug/kg	
100-02-7	4-Nitrophenol	ND	350	59	ug/kg	
87-86-5	Pentachlorophenol	ND	350	60	ug/kg	
108-95-2	Phenol	ND	70	37	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	180	36	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	41	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	33	ug/kg	
83-32-9	Acenaphthene	ND	35	10	ug/kg	
208-96-8	Acenaphthylene	ND	35	11	ug/kg	
98-86-2	Acetophenone	ND	180	6.2	ug/kg	
120-12-7	Anthracene	ND	35	12	ug/kg	
1912-24-9	Atrazine	ND	70	6.9	ug/kg	
56-55-3	Benzo(a)anthracene	ND	35	11	ug/kg	
50-32-8	Benzo(a)pyrene	ND	35	11	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	35	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	35	13	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	35	13	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	70	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	70	20	ug/kg	
92-52-4	1,1'-Biphenyl	ND	70	4.1	ug/kg	
100-52-7	Benzaldehyde	ND	180	8.1	ug/kg	
91-58-7	2-Chloronaphthalene	ND	70	11	ug/kg	
106-47-8	4-Chloroaniline	ND	180	11	ug/kg	
86-74-8	Carbazole	ND	70	16	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SB-6 (0'-2')	<b>Date Sampled:</b>	07/28/14
<b>Lab Sample ID:</b>	JB72780-10	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	88.7
<b>Method:</b>	SW846 8270D SW846 3550C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	70	11	ug/kg	
218-01-9	Chrysene	ND	35	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	70	14	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	70	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	70	10	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	70	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	35	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	35	13	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	70	8.9	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	35	12	ug/kg	
132-64-9	Dibenzofuran	ND	70	10	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	70	7.8	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	70	17	ug/kg	
84-66-2	Diethyl phthalate	ND	70	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	70	12	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	43.8	70	31	ug/kg	J
206-44-0	Fluoranthene	ND	35	15	ug/kg	
86-73-7	Fluorene	ND	35	12	ug/kg	
118-74-1	Hexachlorobenzene	ND	70	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	35	9.8	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	350	36	ug/kg	
67-72-1	Hexachloroethane	ND	180	9.8	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	35	12	ug/kg	
78-59-1	Isophorone	ND	70	9.4	ug/kg	
91-57-6	2-Methylnaphthalene	ND	70	20	ug/kg	
88-74-4	2-Nitroaniline	ND	180	15	ug/kg	
99-09-2	3-Nitroaniline	ND	180	14	ug/kg	
100-01-6	4-Nitroaniline	ND	180	14	ug/kg	
91-20-3	Naphthalene	ND	35	9.6	ug/kg	
98-95-3	Nitrobenzene	ND	70	10	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	70	8.6	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	21	ug/kg	
85-01-8	Phenanthrene	ND	35	16	ug/kg	
129-00-0	Pyrene	18.4	35	13	ug/kg	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	180	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	58%		13-110%
4165-62-2	Phenol-d5	80%		15-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-6 (0' -2')	
<b>Lab Sample ID:</b> JB72780-10	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C	<b>Percent Solids:</b> 88.7
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	50%		20-123%
4165-60-0	Nitrobenzene-d5	85%		10-110%
321-60-8	2-Fluorobiphenyl	83%		17-110%
1718-51-0	Terphenyl-d14	95%		30-124%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-6 (0' -2')		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-10		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 88.7
<b>Method:</b> SW846 8081B SW846 3546		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G14188.D	1	08/03/14	JN	08/01/14	OP76908	G6G405
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.4 g	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.73	0.34	ug/kg	
319-84-6	alpha-BHC	ND	0.73	0.22	ug/kg	
319-85-7	beta-BHC	ND	0.73	0.46	ug/kg	
319-86-8	delta-BHC	ND	0.73	0.36	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.73	0.36	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.73	0.27	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.73	0.51	ug/kg	
60-57-1	Dieldrin	ND	0.73	0.29	ug/kg	
72-54-8	4,4' -DDD	ND	0.73	0.40	ug/kg	
72-55-9	4,4' -DDE	ND	0.73	0.30	ug/kg	
50-29-3	4,4' -DDT	ND	0.73	0.36	ug/kg	
72-20-8	Endrin	ND	0.73	0.24	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.73	0.31	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.73	0.38	ug/kg	
959-98-8	Endosulfan-I	ND	0.73	0.28	ug/kg	
33213-65-9	Endosulfan-II	ND	0.73	0.44	ug/kg	
76-44-8	Heptachlor	ND	0.73	0.36	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.73	0.27	ug/kg	
72-43-5	Methoxychlor	ND	1.5	0.72	ug/kg	
53494-70-5	Endrin ketone	ND	0.73	0.30	ug/kg	
8001-35-2	Toxaphene	ND	18	9.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	74%		10-129%
877-09-8	Tetrachloro-m-xylene	70%		10-129%
2051-24-3	Decachlorobiphenyl	59%		10-144%
2051-24-3	Decachlorobiphenyl	55%		10-144%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-6 (0' -2')		
<b>Lab Sample ID:</b> JB72780-10		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3546		<b>Percent Solids:</b> 88.7
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G29966.D	1	08/06/14	RK	08/01/14	OP76901	G5G772
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.4 g	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	37	9.5	ug/kg	
11104-28-2	Aroclor 1221	ND	37	22	ug/kg	
11141-16-5	Aroclor 1232	ND	37	19	ug/kg	
53469-21-9	Aroclor 1242	ND	37	12	ug/kg	
12672-29-6	Aroclor 1248	ND	37	11	ug/kg	
11097-69-1	Aroclor 1254	ND	37	17	ug/kg	
11096-82-5	Aroclor 1260	ND	37	12	ug/kg	
11100-14-4	Aroclor 1268	ND	37	11	ug/kg	
37324-23-5	Aroclor 1262	ND	37	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	83%		14-139%
877-09-8	Tetrachloro-m-xylene	86%		14-139%
2051-24-3	Decachlorobiphenyl	61%		10-155%
2051-24-3	Decachlorobiphenyl	72%		10-155%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: SB-6 (0' -2')

Lab Sample ID: JB72780-10

Matrix: SO - Soil

Date Sampled: 07/28/14

Date Received: 07/29/14

Percent Solids: 88.7

Project: Tamarkin, 550 West 29th Street, New York, NY

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	5450	52	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Antimony	< 2.1	2.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Arsenic	398	2.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Barium	206	21	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Beryllium	0.33	0.21	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cadmium	0.53	0.52	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Calcium	15900	520	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Chromium	73.8	1.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cobalt	< 5.2	5.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Copper	1330	2.6	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Iron	6630	52	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Lead	137	2.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Magnesium	3900	520	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Manganese	202	1.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Mercury	0.082	0.034	mg/kg	1	08/01/14	08/01/14 SB	SW846 7471B <sup>1</sup>	SW846 7471B <sup>4</sup>
Nickel	10.7	4.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Potassium	1450	1000	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Selenium	< 2.1	2.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Silver	0.88	0.52	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Sodium	< 1000	1000	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Thallium	< 1.0	1.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Vanadium	17.8	5.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Zinc	74.5	2.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>

(1) Instrument QC Batch: MA34589

(2) Instrument QC Batch: MA34592

(3) Prep QC Batch: MP81017

(4) Prep QC Batch: MP81018

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> SB-6 (10'-12')		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-11		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 87.8
<b>Method:</b> SW846 8260C SW846 5035		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	3C112162.D	1	08/01/14	PS	07/30/14 08:10	n/a	V3C5061

Run #1	Initial Weight
Run #2	6.1 g

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	9.3	1.4	ug/kg	
71-43-2	Benzene	ND	0.93	0.16	ug/kg	
74-97-5	Bromochloromethane	ND	4.7	0.22	ug/kg	
75-27-4	Bromodichloromethane	ND	4.7	0.22	ug/kg	
75-25-2	Bromoform	ND	4.7	0.099	ug/kg	
74-83-9	Bromomethane	ND	4.7	0.27	ug/kg	
78-93-3	2-Butanone (MEK)	ND	9.3	1.1	ug/kg	
75-15-0	Carbon disulfide	7.9	4.7	0.22	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.7	0.13	ug/kg	
108-90-7	Chlorobenzene	ND	4.7	0.11	ug/kg	
75-00-3	Chloroethane	ND	4.7	0.22	ug/kg	
67-66-3	Chloroform	0.29	4.7	0.096	ug/kg	J
74-87-3	Chloromethane	ND	4.7	0.28	ug/kg	
110-82-7	Cyclohexane	ND	4.7	0.33	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	9.3	0.49	ug/kg	
124-48-1	Dibromochloromethane	ND	4.7	0.13	ug/kg	
106-93-4	1,2-Dibromoethane	ND	0.93	0.14	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	4.7	0.15	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	4.7	0.15	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	4.7	0.15	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.7	0.49	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.7	0.33	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.93	0.11	ug/kg	
75-35-4	1,1-Dichloroethene	ND	4.7	0.23	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	4.7	0.24	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	4.7	0.18	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.7	0.16	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.7	0.12	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.7	0.16	ug/kg	
123-91-1	1,4-Dioxane	ND	120	37	ug/kg	
100-41-4	Ethylbenzene	ND	0.93	0.099	ug/kg	
76-13-1	Freon 113	ND	4.7	0.27	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-6 (10'-12')	
<b>Lab Sample ID:</b> JB72780-11	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035	<b>Percent Solids:</b> 87.8
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	4.7	0.52	ug/kg	
98-82-8	Isopropylbenzene	ND	4.7	0.14	ug/kg	
79-20-9	Methyl Acetate	ND	4.7	0.45	ug/kg	
108-87-2	Methylcyclohexane	ND	4.7	0.13	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.93	0.15	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	4.7	0.30	ug/kg	
75-09-2	Methylene chloride	ND	4.7	0.89	ug/kg	
100-42-5	Styrene	ND	4.7	0.13	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.7	0.14	ug/kg	
127-18-4	Tetrachloroethene	ND	4.7	0.18	ug/kg	
108-88-3	Toluene	ND	0.93	0.14	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.7	0.14	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.7	0.17	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.7	0.12	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.7	0.17	ug/kg	
79-01-6	Trichloroethene	ND	4.7	0.18	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.7	0.15	ug/kg	
75-01-4	Vinyl chloride	ND	4.7	0.13	ug/kg	
	m,p-Xylene	ND	0.93	0.21	ug/kg	
95-47-6	o-Xylene	ND	0.93	0.13	ug/kg	
1330-20-7	Xylene (total)	ND	0.93	0.13	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		59-130%
17060-07-0	1,2-Dichloroethane-D4	106%		65-123%
2037-26-5	Toluene-D8	107%		77-125%
460-00-4	4-Bromofluorobenzene	109%		71-132%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-6 (10'-12')		
<b>Lab Sample ID:</b> JB72780-11		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C		<b>Percent Solids:</b> 87.8
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P87765.D	1	08/04/14	EA	08/01/14	OP76897	EP3742
Run #2							

Run #	Initial Weight	Final Volume
Run #1	32.3 g	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	71	35	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	35	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	57	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	59	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	710	43	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	710	43	ug/kg	
95-48-7	2-Methylphenol	ND	71	40	ug/kg	
	3&4-Methylphenol	ND	71	45	ug/kg	
88-75-5	2-Nitrophenol	ND	180	37	ug/kg	
100-02-7	4-Nitrophenol	ND	350	60	ug/kg	
87-86-5	Pentachlorophenol	ND	350	60	ug/kg	
108-95-2	Phenol	ND	71	37	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	180	36	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	41	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	33	ug/kg	
83-32-9	Acenaphthene	ND	35	10	ug/kg	
208-96-8	Acenaphthylene	ND	35	11	ug/kg	
98-86-2	Acetophenone	ND	180	6.2	ug/kg	
120-12-7	Anthracene	ND	35	12	ug/kg	
1912-24-9	Atrazine	ND	71	6.9	ug/kg	
56-55-3	Benzo(a)anthracene	ND	35	11	ug/kg	
50-32-8	Benzo(a)pyrene	ND	35	11	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	35	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	35	13	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	35	13	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	71	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	71	20	ug/kg	
92-52-4	1,1'-Biphenyl	ND	71	4.1	ug/kg	
100-52-7	Benzaldehyde	ND	180	8.1	ug/kg	
91-58-7	2-Chloronaphthalene	ND	71	11	ug/kg	
106-47-8	4-Chloroaniline	ND	180	11	ug/kg	
86-74-8	Carbazole	ND	71	16	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SB-6 (10'-12')	<b>Date Sampled:</b>	07/28/14
<b>Lab Sample ID:</b>	JB72780-11	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.8
<b>Method:</b>	SW846 8270D SW846 3550C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	71	11	ug/kg	
218-01-9	Chrysene	ND	35	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	71	14	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	71	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	71	10	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	71	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	35	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	35	13	ug/kg	
91-94-1	3,3' -Dichlorobenzidine	ND	71	9.0	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	35	12	ug/kg	
132-64-9	Dibenzofuran	ND	71	10	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	71	7.8	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	71	17	ug/kg	
84-66-2	Diethyl phthalate	ND	71	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	71	12	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	70.9	71	31	ug/kg	J
206-44-0	Fluoranthene	ND	35	16	ug/kg	
86-73-7	Fluorene	ND	35	12	ug/kg	
118-74-1	Hexachlorobenzene	ND	71	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	35	9.8	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	350	36	ug/kg	
67-72-1	Hexachloroethane	ND	180	9.8	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	35	12	ug/kg	
78-59-1	Isophorone	ND	71	9.5	ug/kg	
91-57-6	2-Methylnaphthalene	ND	71	20	ug/kg	
88-74-4	2-Nitroaniline	ND	180	16	ug/kg	
99-09-2	3-Nitroaniline	ND	180	14	ug/kg	
100-01-6	4-Nitroaniline	ND	180	14	ug/kg	
91-20-3	Naphthalene	ND	35	9.6	ug/kg	
98-95-3	Nitrobenzene	ND	71	10	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	71	8.6	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	21	ug/kg	
85-01-8	Phenanthrene	ND	35	16	ug/kg	
129-00-0	Pyrene	ND	35	14	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	180	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		13-110%
4165-62-2	Phenol-d5	79%		15-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-6 (10'-12') <b>Lab Sample ID:</b> JB72780-11 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8270D SW846 3550C <b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	<b>Date Sampled:</b> 07/28/14 <b>Date Received:</b> 07/29/14 <b>Percent Solids:</b> 87.8
---	--

### ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	86%		20-123%
4165-60-0	Nitrobenzene-d5	88%		10-110%
321-60-8	2-Fluorobiphenyl	84%		17-110%
1718-51-0	Terphenyl-d14	93%		30-124%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-6 (10'-12')		
<b>Lab Sample ID:</b> JB72780-11		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8081B SW846 3546		<b>Percent Solids:</b> 87.8
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G14189.D	1	08/03/14	JN	08/01/14	OP76908	G6G405
Run #2							

Run #	Initial Weight	Final Volume
Run #1	15.8 g	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.72	0.33	ug/kg	
319-84-6	alpha-BHC	ND	0.72	0.22	ug/kg	
319-85-7	beta-BHC	ND	0.72	0.45	ug/kg	
319-86-8	delta-BHC	ND	0.72	0.36	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.72	0.35	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.72	0.27	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.72	0.50	ug/kg	
60-57-1	Dieldrin	ND	0.72	0.28	ug/kg	
72-54-8	4,4'-DDD	ND	0.72	0.39	ug/kg	
72-55-9	4,4'-DDE	ND	0.72	0.29	ug/kg	
50-29-3	4,4'-DDT	ND	0.72	0.36	ug/kg	
72-20-8	Endrin	ND	0.72	0.23	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.72	0.31	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.72	0.38	ug/kg	
959-98-8	Endosulfan-I	ND	0.72	0.27	ug/kg	
33213-65-9	Endosulfan-II	ND	0.72	0.43	ug/kg	
76-44-8	Heptachlor	ND	0.72	0.35	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.72	0.27	ug/kg	
72-43-5	Methoxychlor	ND	1.4	0.71	ug/kg	
53494-70-5	Endrin ketone	ND	0.72	0.29	ug/kg	
8001-35-2	Toxaphene	ND	18	9.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	88%		10-129%
877-09-8	Tetrachloro-m-xylene	84%		10-129%
2051-24-3	Decachlorobiphenyl	86%		10-144%
2051-24-3	Decachlorobiphenyl	117%		10-144%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-6 (10'-12')		
<b>Lab Sample ID:</b> JB72780-11		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3546		<b>Percent Solids:</b> 87.8
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G29967.D	1	08/06/14	RK	08/01/14	OP76901	G5G772
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.8 g	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	36	9.4	ug/kg	
11104-28-2	Aroclor 1221	ND	36	22	ug/kg	
11141-16-5	Aroclor 1232	ND	36	18	ug/kg	
53469-21-9	Aroclor 1242	ND	36	11	ug/kg	
12672-29-6	Aroclor 1248	ND	36	11	ug/kg	
11097-69-1	Aroclor 1254	ND	36	17	ug/kg	
11096-82-5	Aroclor 1260	ND	36	12	ug/kg	
11100-14-4	Aroclor 1268	ND	36	11	ug/kg	
37324-23-5	Aroclor 1262	ND	36	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	100%		14-139%
877-09-8	Tetrachloro-m-xylene	102%		14-139%
2051-24-3	Decachlorobiphenyl	93%		10-155%
2051-24-3	Decachlorobiphenyl	795% <sup>a</sup>		10-155%

(a) Outside control limits due to matrix interference.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: SB-6 (10'-12')

Lab Sample ID: JB72780-11

Matrix: SO - Soil

Date Sampled: 07/28/14

Date Received: 07/29/14

Percent Solids: 87.8

Project: Tamarkin, 550 West 29th Street, New York, NY

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	6160	50	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Antimony	< 2.0	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Arsenic	535	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Barium	41.2	20	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Beryllium	0.34	0.20	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cadmium	0.72	0.50	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Calcium	1740	500	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Chromium	40.0	1.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cobalt	< 5.0	5.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Copper	1860	2.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Iron	12300	50	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Lead	103	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Magnesium	2540	500	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Manganese	95.0	1.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Mercury	< 0.037	0.037	mg/kg	1	08/01/14	08/01/14 SB	SW846 7471B <sup>1</sup>	SW846 7471B <sup>4</sup>
Nickel	19.9	4.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Potassium	1150	1000	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Selenium	< 2.0	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Silver	< 0.50	0.50	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Sodium	< 1000	1000	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Thallium	< 1.0	1.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Vanadium	15.2	5.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Zinc	169	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>

(1) Instrument QC Batch: MA34589

(2) Instrument QC Batch: MA34592

(3) Prep QC Batch: MP81017

(4) Prep QC Batch: MP81018

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> SB-3 (0'-2')		
<b>Lab Sample ID:</b> JB72780-12		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035		<b>Percent Solids:</b> 92.8
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C112163.D	1	08/01/14	PS	07/30/14 08:10	n/a	V3C5061
Run #2							

Run #1	Initial Weight
Run #1	4.5 g
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	11.7	12	1.8	ug/kg	J
71-43-2	Benzene	ND	1.2	0.21	ug/kg	
74-97-5	Bromochloromethane	ND	6.0	0.29	ug/kg	
75-27-4	Bromodichloromethane	ND	6.0	0.29	ug/kg	
75-25-2	Bromoform	ND	6.0	0.13	ug/kg	
74-83-9	Bromomethane	ND	6.0	0.35	ug/kg	
78-93-3	2-Butanone (MEK)	ND	12	1.4	ug/kg	
75-15-0	Carbon disulfide	ND	6.0	0.28	ug/kg	
56-23-5	Carbon tetrachloride	ND	6.0	0.17	ug/kg	
108-90-7	Chlorobenzene	ND	6.0	0.15	ug/kg	
75-00-3	Chloroethane	ND	6.0	0.28	ug/kg	
67-66-3	Chloroform	ND	6.0	0.12	ug/kg	
74-87-3	Chloromethane	ND	6.0	0.36	ug/kg	
110-82-7	Cyclohexane	ND	6.0	0.42	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	12	0.63	ug/kg	
124-48-1	Dibromochloromethane	ND	6.0	0.16	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.2	0.19	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	6.0	0.19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	6.0	0.19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	6.0	0.20	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	6.0	0.62	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6.0	0.43	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.14	ug/kg	
75-35-4	1,1-Dichloroethene	ND	6.0	0.29	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	6.0	0.31	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	6.0	0.23	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.0	0.20	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.0	0.15	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.0	0.20	ug/kg	
123-91-1	1,4-Dioxane	ND	150	48	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.13	ug/kg	
76-13-1	Freon 113	ND	6.0	0.34	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-3 (0'-2')	
<b>Lab Sample ID:</b> JB72780-12	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035	<b>Percent Solids:</b> 92.8
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	6.0	0.67	ug/kg	
98-82-8	Isopropylbenzene	ND	6.0	0.18	ug/kg	
79-20-9	Methyl Acetate	ND	6.0	0.58	ug/kg	
108-87-2	Methylcyclohexane	ND	6.0	0.16	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.2	0.20	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.0	0.38	ug/kg	
75-09-2	Methylene chloride	ND	6.0	1.1	ug/kg	
100-42-5	Styrene	ND	6.0	0.17	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.0	0.17	ug/kg	
127-18-4	Tetrachloroethene	ND	6.0	0.23	ug/kg	
108-88-3	Toluene	ND	1.2	0.18	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.0	0.18	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.0	0.22	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.0	0.16	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	6.0	0.21	ug/kg	
79-01-6	Trichloroethene	ND	6.0	0.23	ug/kg	
75-69-4	Trichlorofluoromethane	ND	6.0	0.20	ug/kg	
75-01-4	Vinyl chloride	ND	6.0	0.17	ug/kg	
	m,p-Xylene	ND	1.2	0.27	ug/kg	
95-47-6	o-Xylene	ND	1.2	0.17	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		59-130%
17060-07-0	1,2-Dichloroethane-D4	105%		65-123%
2037-26-5	Toluene-D8	107%		77-125%
460-00-4	4-Bromofluorobenzene	108%		71-132%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-3 (0'-2')		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-12		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 92.8
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P87848.D	1	08/07/14	FM	08/01/14	OP76897	EP3746
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	33.5 g	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	64	32	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	160	32	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	160	52	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	160	54	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	640	39	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	640	39	ug/kg	
95-48-7	2-Methylphenol	ND	64	37	ug/kg	
	3&4-Methylphenol	ND	64	41	ug/kg	
88-75-5	2-Nitrophenol	ND	160	34	ug/kg	
100-02-7	4-Nitrophenol	ND	320	54	ug/kg	
87-86-5	Pentachlorophenol	ND	320	55	ug/kg	
108-95-2	Phenol	ND	64	34	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	160	33	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	160	37	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	160	30	ug/kg	
83-32-9	Acenaphthene	ND	32	9.3	ug/kg	
208-96-8	Acenaphthylene	ND	32	10	ug/kg	
98-86-2	Acetophenone	ND	160	5.7	ug/kg	
120-12-7	Anthracene	ND	32	11	ug/kg	
1912-24-9	Atrazine	ND	64	6.3	ug/kg	
56-55-3	Benzo(a)anthracene	23.1	32	10	ug/kg	J
50-32-8	Benzo(a)pyrene	25.5	32	9.8	ug/kg	J
205-99-2	Benzo(b)fluoranthene	30.6	32	11	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	45.2	32	12	ug/kg	
207-08-9	Benzo(k)fluoranthene	15.0	32	12	ug/kg	J
101-55-3	4-Bromophenyl phenyl ether	ND	64	12	ug/kg	
85-68-7	Butyl benzyl phthalate	542	64	19	ug/kg	
92-52-4	1,1'-Biphenyl	ND	64	3.7	ug/kg	
100-52-7	Benzaldehyde	ND	160	7.4	ug/kg	
91-58-7	2-Chloronaphthalene	ND	64	10	ug/kg	
106-47-8	4-Chloroaniline	ND	160	10	ug/kg	
86-74-8	Carbazole	ND	64	15	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SB-3 (0'-2')	<b>Date Sampled:</b>	07/28/14
<b>Lab Sample ID:</b>	JB72780-12	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	92.8
<b>Method:</b>	SW846 8270D SW846 3550C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	64	10	ug/kg	
218-01-9	Chrysene	29.3	32	11	ug/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	64	13	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	64	9.7	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	64	9.6	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	64	9.7	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	32	14	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	32	12	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	64	8.2	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	32	11	ug/kg	
132-64-9	Dibenzofuran	ND	64	9.6	ug/kg	
84-74-2	Di-n-butyl phthalate	1490	64	7.1	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	64	16	ug/kg	
84-66-2	Diethyl phthalate	ND	64	11	ug/kg	
131-11-3	Dimethyl phthalate	ND	64	11	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	403	64	28	ug/kg	
206-44-0	Fluoranthene	43.7	32	14	ug/kg	
86-73-7	Fluorene	ND	32	11	ug/kg	
118-74-1	Hexachlorobenzene	ND	64	10	ug/kg	
87-68-3	Hexachlorobutadiene	ND	32	8.9	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	320	33	ug/kg	
67-72-1	Hexachloroethane	ND	160	8.9	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	30.9	32	11	ug/kg	J
78-59-1	Isophorone	ND	64	8.7	ug/kg	
91-57-6	2-Methylnaphthalene	ND	64	18	ug/kg	
88-74-4	2-Nitroaniline	ND	160	14	ug/kg	
99-09-2	3-Nitroaniline	ND	160	13	ug/kg	
100-01-6	4-Nitroaniline	ND	160	13	ug/kg	
91-20-3	Naphthalene	22.4	32	8.8	ug/kg	J
98-95-3	Nitrobenzene	ND	64	9.3	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	64	7.8	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	160	19	ug/kg	
85-01-8	Phenanthrene	34.4	32	15	ug/kg	
129-00-0	Pyrene	43.6	32	12	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	160	9.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	74%		13-110%
4165-62-2	Phenol-d5	79%		15-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

**Report of Analysis**

<b>Client Sample ID:</b> SB-3 (0' -2')	
<b>Lab Sample ID:</b> JB72780-12	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C	<b>Percent Solids:</b> 92.8
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

**ABN TCL List (SOM0 1.1)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	60%		20-123%
4165-60-0	Nitrobenzene-d5	92%		10-110%
321-60-8	2-Fluorobiphenyl	86%		17-110%
1718-51-0	Terphenyl-d14	84%		30-124%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-3 (0'-2')		
<b>Lab Sample ID:</b> JB72780-12		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8081B SW846 3546		<b>Percent Solids:</b> 92.8
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G14190.D	1	08/03/14	JN	08/01/14	OP76908	G6G405
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.69	0.32	ug/kg	
319-84-6	alpha-BHC	ND	0.69	0.21	ug/kg	
319-85-7	beta-BHC	ND	0.69	0.43	ug/kg	
319-86-8	delta-BHC	ND	0.69	0.34	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.69	0.34	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.69	0.25	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.69	0.47	ug/kg	
60-57-1	Dieldrin	0.89	0.69	0.27	ug/kg	
72-54-8	4,4'-DDD	1.8	0.69	0.37	ug/kg	
72-55-9	4,4'-DDE	1.9	0.69	0.28	ug/kg	
50-29-3	4,4'-DDT	25.6	0.69	0.34	ug/kg	
72-20-8	Endrin	ND	0.69	0.22	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.69	0.30	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.69	0.36	ug/kg	
959-98-8	Endosulfan-I	ND	0.69	0.26	ug/kg	
33213-65-9	Endosulfan-II	ND	0.69	0.41	ug/kg	
76-44-8	Heptachlor	ND	0.69	0.33	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.69	0.26	ug/kg	
72-43-5	Methoxychlor	ND	1.4	0.67	ug/kg	
53494-70-5	Endrin ketone	ND	0.69	0.28	ug/kg	
8001-35-2	Toxaphene	ND	17	8.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	56%		10-129%
877-09-8	Tetrachloro-m-xylene	53%		10-129%
2051-24-3	Decachlorobiphenyl	117%		10-144%
2051-24-3	Decachlorobiphenyl	128%		10-144%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-3 (0' -2')		
<b>Lab Sample ID:</b> JB72780-12		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3546		<b>Percent Solids:</b> 92.8
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G29968.D	1	08/07/14	RK	08/01/14	OP76901	G5G772
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	34	8.9	ug/kg	
11104-28-2	Aroclor 1221	ND	34	21	ug/kg	
11141-16-5	Aroclor 1232	ND	34	17	ug/kg	
53469-21-9	Aroclor 1242	ND	34	11	ug/kg	
12672-29-6	Aroclor 1248	ND	34	10	ug/kg	
11097-69-1	Aroclor 1254	ND	34	16	ug/kg	
11096-82-5	Aroclor 1260	ND	34	11	ug/kg	
11100-14-4	Aroclor 1268	ND	34	10	ug/kg	
37324-23-5	Aroclor 1262	ND	34	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	66%		14-139%
877-09-8	Tetrachloro-m-xylene	67%		14-139%
2051-24-3	Decachlorobiphenyl	133%		10-155%
2051-24-3	Decachlorobiphenyl	161% <sup>a</sup>		10-155%

(a) Outside control limits due to matrix interference.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-3 (0'-2')	<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-12	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 92.8
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	2860	49	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Antimony	34.8	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Arsenic	31.0	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Barium	91.7	20	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Beryllium	0.33	0.20	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Cadmium	0.97	0.49	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Calcium	14300	490	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Chromium	40.7	0.99	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Cobalt	< 4.9	4.9	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Copper	163	2.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Iron	9950	49	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Lead	726	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Magnesium	1550	490	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Manganese	143	1.5	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Mercury	0.34	0.067	mg/kg	2	08/04/14	08/04/14 JW	SW846 7471B <sup>2</sup>	SW846 7471B <sup>4</sup>
Nickel	10.8	4.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Potassium	< 990	990	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Selenium	< 2.0	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Silver	1.8	0.49	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Sodium	< 990	990	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Thallium	< 0.99	0.99	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Vanadium	14.9	4.9	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Zinc	222	2.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>

(1) Instrument QC Batch: MA34592

(2) Instrument QC Batch: MA34598

(3) Prep QC Batch: MP81017

(4) Prep QC Batch: MP81018

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> SB-3 (15'-17')		
<b>Lab Sample ID:</b> JB72780-13		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035		<b>Percent Solids:</b> 84.5
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C112164.D	1	08/01/14	PS	07/30/14 08:10	n/a	V3C5061
Run #2							

Run #	Initial Weight
Run #1	6.4 g
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	21.9	9.2	1.4	ug/kg	
71-43-2	Benzene	ND	0.92	0.16	ug/kg	
74-97-5	Bromochloromethane	ND	4.6	0.22	ug/kg	
75-27-4	Bromodichloromethane	ND	4.6	0.22	ug/kg	
75-25-2	Bromoform	ND	4.6	0.098	ug/kg	
74-83-9	Bromomethane	ND	4.6	0.27	ug/kg	
78-93-3	2-Butanone (MEK)	ND	9.2	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	4.6	0.22	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.6	0.13	ug/kg	
108-90-7	Chlorobenzene	ND	4.6	0.11	ug/kg	
75-00-3	Chloroethane	ND	4.6	0.22	ug/kg	
67-66-3	Chloroform	ND	4.6	0.095	ug/kg	
74-87-3	Chloromethane	ND	4.6	0.28	ug/kg	
110-82-7	Cyclohexane	ND	4.6	0.33	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	9.2	0.48	ug/kg	
124-48-1	Dibromochloromethane	ND	4.6	0.12	ug/kg	
106-93-4	1,2-Dibromoethane	ND	0.92	0.14	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	4.6	0.15	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	4.6	0.14	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	4.6	0.15	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.6	0.48	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.6	0.33	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.92	0.11	ug/kg	
75-35-4	1,1-Dichloroethene	ND	4.6	0.23	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	4.6	0.24	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	4.6	0.17	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.6	0.16	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.6	0.12	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.6	0.16	ug/kg	
123-91-1	1,4-Dioxane	ND	120	37	ug/kg	
100-41-4	Ethylbenzene	ND	0.92	0.098	ug/kg	
76-13-1	Freon 113	ND	4.6	0.27	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-3 (15'-17')	
<b>Lab Sample ID:</b> JB72780-13	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035	<b>Percent Solids:</b> 84.5
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	4.6	0.51	ug/kg	
98-82-8	Isopropylbenzene	ND	4.6	0.14	ug/kg	
79-20-9	Methyl Acetate	ND	4.6	0.45	ug/kg	
108-87-2	Methylcyclohexane	ND	4.6	0.13	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.92	0.15	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	4.6	0.30	ug/kg	
75-09-2	Methylene chloride	ND	4.6	0.88	ug/kg	
100-42-5	Styrene	ND	4.6	0.13	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.6	0.13	ug/kg	
127-18-4	Tetrachloroethene	ND	4.6	0.18	ug/kg	
108-88-3	Toluene	ND	0.92	0.14	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.6	0.14	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.6	0.17	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.6	0.12	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.6	0.17	ug/kg	
79-01-6	Trichloroethene	ND	4.6	0.18	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.6	0.15	ug/kg	
75-01-4	Vinyl chloride	ND	4.6	0.13	ug/kg	
	m,p-Xylene	ND	0.92	0.21	ug/kg	
95-47-6	o-Xylene	ND	0.92	0.13	ug/kg	
1330-20-7	Xylene (total)	ND	0.92	0.13	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		59-130%
17060-07-0	1,2-Dichloroethane-D4	104%		65-123%
2037-26-5	Toluene-D8	107%		77-125%
460-00-4	4-Bromofluorobenzene	107%		71-132%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-3 (15'-17')		
<b>Lab Sample ID:</b> JB72780-13		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C		<b>Percent Solids:</b> 84.5
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P87766.D	1	08/04/14	EA	08/01/14	OP76897	EP3742
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	34.9 g	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	68	34	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	34	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	55	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	57	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	680	41	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	680	41	ug/kg	
95-48-7	2-Methylphenol	ND	68	39	ug/kg	
	3&4-Methylphenol	ND	68	43	ug/kg	
88-75-5	2-Nitrophenol	ND	170	36	ug/kg	
100-02-7	4-Nitrophenol	ND	340	57	ug/kg	
87-86-5	Pentachlorophenol	ND	340	58	ug/kg	
108-95-2	Phenol	ND	68	36	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	35	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	39	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	32	ug/kg	
83-32-9	Acenaphthene	ND	34	9.8	ug/kg	
208-96-8	Acenaphthylene	ND	34	11	ug/kg	
98-86-2	Acetophenone	ND	170	6.0	ug/kg	
120-12-7	Anthracene	ND	34	12	ug/kg	
1912-24-9	Atrazine	ND	68	6.7	ug/kg	
56-55-3	Benzo(a)anthracene	ND	34	11	ug/kg	
50-32-8	Benzo(a)pyrene	ND	34	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	34	11	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	34	13	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	34	13	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	68	12	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	68	20	ug/kg	
92-52-4	1,1'-Biphenyl	ND	68	3.9	ug/kg	
100-52-7	Benzaldehyde	ND	170	7.8	ug/kg	
91-58-7	2-Chloronaphthalene	ND	68	11	ug/kg	
106-47-8	4-Chloroaniline	ND	170	11	ug/kg	
86-74-8	Carbazole	ND	68	16	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SB-3 (15'-17')	<b>Date Sampled:</b>	07/28/14
<b>Lab Sample ID:</b>	JB72780-13	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	84.5
<b>Method:</b>	SW846 8270D SW846 3550C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	68	11	ug/kg	
218-01-9	Chrysene	ND	34	11	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	68	14	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	68	10	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	68	10	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	68	10	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	34	15	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	34	13	ug/kg	
91-94-1	3,3' -Dichlorobenzidine	ND	68	8.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	34	12	ug/kg	
132-64-9	Dibenzofuran	ND	68	10	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	68	7.5	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	68	17	ug/kg	
84-66-2	Diethyl phthalate	ND	68	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	68	12	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	49.1	68	30	ug/kg	J
206-44-0	Fluoranthene	ND	34	15	ug/kg	
86-73-7	Fluorene	ND	34	11	ug/kg	
118-74-1	Hexachlorobenzene	ND	68	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	34	9.4	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	340	35	ug/kg	
67-72-1	Hexachloroethane	ND	170	9.4	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	34	12	ug/kg	
78-59-1	Isophorone	ND	68	9.1	ug/kg	
91-57-6	2-Methylnaphthalene	ND	68	19	ug/kg	
88-74-4	2-Nitroaniline	ND	170	15	ug/kg	
99-09-2	3-Nitroaniline	ND	170	14	ug/kg	
100-01-6	4-Nitroaniline	ND	170	13	ug/kg	
91-20-3	Naphthalene	ND	34	9.3	ug/kg	
98-95-3	Nitrobenzene	ND	68	9.8	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	68	8.3	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	20	ug/kg	
85-01-8	Phenanthrene	ND	34	15	ug/kg	
129-00-0	Pyrene	ND	34	13	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	86%		13-110%
4165-62-2	Phenol-d5	88%		15-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

**Report of Analysis**

<b>Client Sample ID:</b> SB-3 (15'-17')	
<b>Lab Sample ID:</b> JB72780-13	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C	<b>Percent Solids:</b> 84.5
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

**ABN TCL List (SOM0 1.1)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	95%		20-123%
4165-60-0	Nitrobenzene-d5	96%		10-110%
321-60-8	2-Fluorobiphenyl	90%		17-110%
1718-51-0	Terphenyl-d14	102%		30-124%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-3 (15'-17')		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-13		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 84.5
<b>Method:</b> SW846 8081B SW846 3546		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G14191.D	1	08/03/14	JN	08/01/14	OP76908	G6G405
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.75	0.35	ug/kg	
319-84-6	alpha-BHC	ND	0.75	0.23	ug/kg	
319-85-7	beta-BHC	ND	0.75	0.47	ug/kg	
319-86-8	delta-BHC	ND	0.75	0.37	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.75	0.37	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.75	0.28	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.75	0.52	ug/kg	
60-57-1	Dieldrin	ND	0.75	0.29	ug/kg	
72-54-8	4,4'-DDD	ND	0.75	0.41	ug/kg	
72-55-9	4,4'-DDE	ND	0.75	0.30	ug/kg	
50-29-3	4,4'-DDT	ND	0.75	0.37	ug/kg	
72-20-8	Endrin	ND	0.75	0.24	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.75	0.32	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.75	0.39	ug/kg	
959-98-8	Endosulfan-I	ND	0.75	0.29	ug/kg	
33213-65-9	Endosulfan-II	ND	0.75	0.45	ug/kg	
76-44-8	Heptachlor	ND	0.75	0.37	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.75	0.28	ug/kg	
72-43-5	Methoxychlor	ND	1.5	0.74	ug/kg	
53494-70-5	Endrin ketone	ND	0.75	0.31	ug/kg	
8001-35-2	Toxaphene	ND	19	9.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	63%		10-129%
877-09-8	Tetrachloro-m-xylene	60%		10-129%
2051-24-3	Decachlorobiphenyl	52%		10-144%
2051-24-3	Decachlorobiphenyl	48%		10-144%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-3 (15'-17')		
<b>Lab Sample ID:</b> JB72780-13		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3546		<b>Percent Solids:</b> 84.5
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G29973.D	1	08/07/14	RK	08/01/14	OP76901	G5G772
Run #2							

Run #	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	38	9.8	ug/kg	
11104-28-2	Aroclor 1221	ND	38	23	ug/kg	
11141-16-5	Aroclor 1232	ND	38	19	ug/kg	
53469-21-9	Aroclor 1242	ND	38	12	ug/kg	
12672-29-6	Aroclor 1248	ND	38	11	ug/kg	
11097-69-1	Aroclor 1254	ND	38	18	ug/kg	
11096-82-5	Aroclor 1260	ND	38	12	ug/kg	
11100-14-4	Aroclor 1268	ND	38	11	ug/kg	
37324-23-5	Aroclor 1262	ND	38	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	76%		14-139%
877-09-8	Tetrachloro-m-xylene	74%		14-139%
2051-24-3	Decachlorobiphenyl	61%		10-155%
2051-24-3	Decachlorobiphenyl	56%		10-155%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: SB-3 (15'-17')

Lab Sample ID: JB72780-13

Matrix: SO - Soil

Date Sampled: 07/28/14

Date Received: 07/29/14

Percent Solids: 84.5

Project: Tamarkin, 550 West 29th Street, New York, NY

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	8460	59	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Antimony	< 2.4	2.4	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Arsenic	230	2.4	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Barium	42.2	24	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Beryllium	0.74	0.24	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cadmium	0.74	0.59	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Calcium	1050	590	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Chromium	273	1.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cobalt	< 5.9	5.9	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Copper	13.0	3.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Iron	11900	59	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Lead	13.2	2.4	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Magnesium	2270	590	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Manganese	112	1.8	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Mercury	< 0.039	0.039	mg/kg	1	08/01/14	08/01/14 SB	SW846 7471B <sup>1</sup>	SW846 7471B <sup>4</sup>
Nickel	11.8	4.7	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Potassium	1750	1200	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Selenium	< 2.4	2.4	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Silver	< 0.59	0.59	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Sodium	< 1200	1200	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Thallium	< 1.2	1.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Vanadium	21.3	5.9	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Zinc	1190	2.4	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>

(1) Instrument QC Batch: MA34589

(2) Instrument QC Batch: MA34592

(3) Prep QC Batch: MP81017

(4) Prep QC Batch: MP81018

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (0' -2')		
<b>Lab Sample ID:</b> JB72780-14		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035		<b>Percent Solids:</b> 78.6
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C112165.D	1	08/01/14	PS	07/30/14 08:10	n/a	V3C5061
Run #2							

Run #1	Initial Weight
Run #1	5.8 g
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	6.8	11	1.6	ug/kg	J
71-43-2	Benzene	ND	1.1	0.19	ug/kg	
74-97-5	Bromochloromethane	ND	5.5	0.26	ug/kg	
75-27-4	Bromodichloromethane	ND	5.5	0.26	ug/kg	
75-25-2	Bromoform	ND	5.5	0.12	ug/kg	
74-83-9	Bromomethane	ND	5.5	0.32	ug/kg	
78-93-3	2-Butanone (MEK)	ND	11	1.3	ug/kg	
75-15-0	Carbon disulfide	ND	5.5	0.26	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.5	0.16	ug/kg	
108-90-7	Chlorobenzene	ND	5.5	0.13	ug/kg	
75-00-3	Chloroethane	ND	5.5	0.26	ug/kg	
67-66-3	Chloroform	0.23	5.5	0.11	ug/kg	J
74-87-3	Chloromethane	ND	5.5	0.33	ug/kg	
110-82-7	Cyclohexane	ND	5.5	0.39	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	11	0.57	ug/kg	
124-48-1	Dibromochloromethane	ND	5.5	0.15	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.1	0.17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.5	0.18	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.5	0.17	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.5	0.18	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.5	0.57	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.5	0.39	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.1	0.13	ug/kg	
75-35-4	1,1-Dichloroethene	ND	5.5	0.27	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	5.5	0.29	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	5.5	0.21	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.5	0.19	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.5	0.14	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.5	0.19	ug/kg	
123-91-1	1,4-Dioxane	ND	140	44	ug/kg	
100-41-4	Ethylbenzene	ND	1.1	0.12	ug/kg	
76-13-1	Freon 113	ND	5.5	0.31	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (0'-2')	
<b>Lab Sample ID:</b> JB72780-14	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035	<b>Percent Solids:</b> 78.6
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.5	0.61	ug/kg	
98-82-8	Isopropylbenzene	ND	5.5	0.17	ug/kg	
79-20-9	Methyl Acetate	ND	5.5	0.53	ug/kg	
108-87-2	Methylcyclohexane	ND	5.5	0.15	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.39	1.1	0.18	ug/kg	J
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.5	0.35	ug/kg	
75-09-2	Methylene chloride	ND	5.5	1.0	ug/kg	
100-42-5	Styrene	ND	5.5	0.15	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.5	0.16	ug/kg	
127-18-4	Tetrachloroethene	ND	5.5	0.21	ug/kg	
108-88-3	Toluene	0.36	1.1	0.16	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.5	0.17	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.5	0.20	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.5	0.15	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.5	0.20	ug/kg	
79-01-6	Trichloroethene	ND	5.5	0.21	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.5	0.18	ug/kg	
75-01-4	Vinyl chloride	ND	5.5	0.15	ug/kg	
	m,p-Xylene	ND	1.1	0.25	ug/kg	
95-47-6	o-Xylene	ND	1.1	0.15	ug/kg	
1330-20-7	Xylene (total)	ND	1.1	0.15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		59-130%
17060-07-0	1,2-Dichloroethane-D4	106%		65-123%
2037-26-5	Toluene-D8	106%		77-125%
460-00-4	4-Bromofluorobenzene	112%		71-132%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (0'-2')		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-14		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 78.6
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P87773.D	1	08/04/14	EA	08/01/14	OP76897	EP3742
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	85	42	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	210	42	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	210	68	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	210	71	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	850	52	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	850	52	ug/kg	
95-48-7	2-Methylphenol	ND	85	48	ug/kg	
	3&4-Methylphenol	ND	85	54	ug/kg	
88-75-5	2-Nitrophenol	ND	210	45	ug/kg	
100-02-7	4-Nitrophenol	ND	420	71	ug/kg	
87-86-5	Pentachlorophenol	ND	420	72	ug/kg	
108-95-2	Phenol	ND	85	44	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	210	44	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	210	49	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	210	40	ug/kg	
83-32-9	Acenaphthene	ND	42	12	ug/kg	
208-96-8	Acenaphthylene	58.1	42	14	ug/kg	
98-86-2	Acetophenone	ND	210	7.4	ug/kg	
120-12-7	Anthracene	63.3	42	15	ug/kg	
1912-24-9	Atrazine	ND	85	8.3	ug/kg	
56-55-3	Benzo(a)anthracene	163	42	14	ug/kg	
50-32-8	Benzo(a)pyrene	243	42	13	ug/kg	
205-99-2	Benzo(b)fluoranthene	254	42	14	ug/kg	
191-24-2	Benzo(g,h,i)perylene	477	42	16	ug/kg	
207-08-9	Benzo(k)fluoranthene	101	42	16	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	85	15	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	85	24	ug/kg	
92-52-4	1,1'-Biphenyl	ND	85	4.9	ug/kg	
100-52-7	Benzaldehyde	ND	210	9.7	ug/kg	
91-58-7	2-Chloronaphthalene	ND	85	13	ug/kg	
106-47-8	4-Chloroaniline	ND	210	14	ug/kg	
86-74-8	Carbazole	24.4	85	20	ug/kg	J

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SB-4 (0'-2')	<b>Date Sampled:</b>	07/28/14
<b>Lab Sample ID:</b>	JB72780-14	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	78.6
<b>Method:</b>	SW846 8270D SW846 3550C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	85	13	ug/kg	
218-01-9	Chrysene	199	42	14	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	85	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	85	13	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	85	13	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	85	13	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	42	18	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	42	16	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	85	11	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	58.6	42	14	ug/kg	
132-64-9	Dibenzofuran	ND	85	13	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	85	9.4	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	85	21	ug/kg	
84-66-2	Diethyl phthalate	ND	85	14	ug/kg	
131-11-3	Dimethyl phthalate	ND	85	15	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	73.3	85	37	ug/kg	J
206-44-0	Fluoranthene	282	42	19	ug/kg	
86-73-7	Fluorene	ND	42	14	ug/kg	
118-74-1	Hexachlorobenzene	ND	85	14	ug/kg	
87-68-3	Hexachlorobutadiene	ND	42	12	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	420	43	ug/kg	
67-72-1	Hexachloroethane	ND	210	12	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	299	42	15	ug/kg	
78-59-1	Isophorone	ND	85	11	ug/kg	
91-57-6	2-Methylnaphthalene	47.6	85	24	ug/kg	J
88-74-4	2-Nitroaniline	ND	210	19	ug/kg	
99-09-2	3-Nitroaniline	ND	210	17	ug/kg	
100-01-6	4-Nitroaniline	ND	210	16	ug/kg	
91-20-3	Naphthalene	29.2	42	12	ug/kg	J
98-95-3	Nitrobenzene	ND	85	12	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	85	10	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	210	25	ug/kg	
85-01-8	Phenanthrene	186	42	19	ug/kg	
129-00-0	Pyrene	279	42	16	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	210	13	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	81%		13-110%
4165-62-2	Phenol-d5	83%		15-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (0' -2') <b>Lab Sample ID:</b> JB72780-14 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8270D SW846 3550C <b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	<b>Date Sampled:</b> 07/28/14 <b>Date Received:</b> 07/29/14 <b>Percent Solids:</b> 78.6
--	--

**ABN TCL List (SOM0 1.1)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	91%		20-123%
4165-60-0	Nitrobenzene-d5	91%		10-110%
321-60-8	2-Fluorobiphenyl	92%		17-110%
1718-51-0	Terphenyl-d14	85%		30-124%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.16  
4

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (0'-2')		
<b>Lab Sample ID:</b> JB72780-14		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8081B SW846 3546		<b>Percent Solids:</b> 78.6
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G14192.D	1	08/03/14	JN	08/01/14	OP76908	G6G405
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.82	0.38	ug/kg	
319-84-6	alpha-BHC	ND	0.82	0.25	ug/kg	
319-85-7	beta-BHC	ND	0.82	0.51	ug/kg	
319-86-8	delta-BHC	ND	0.82	0.41	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.82	0.40	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.82	0.30	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.82	0.57	ug/kg	
60-57-1	Dieldrin	ND	0.82	0.32	ug/kg	
72-54-8	4,4'-DDD	ND	0.82	0.45	ug/kg	
72-55-9	4,4'-DDE	ND	0.82	0.33	ug/kg	
50-29-3	4,4'-DDT <sup>a</sup>	1.1	0.82	0.40	ug/kg	
72-20-8	Endrin	ND	0.82	0.27	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.82	0.35	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.82	0.43	ug/kg	
959-98-8	Endosulfan-I	ND	0.82	0.31	ug/kg	
33213-65-9	Endosulfan-II	ND	0.82	0.49	ug/kg	
76-44-8	Heptachlor	ND	0.82	0.40	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.82	0.31	ug/kg	
72-43-5	Methoxychlor	ND	1.6	0.80	ug/kg	
53494-70-5	Endrin ketone	ND	0.82	0.33	ug/kg	
8001-35-2	Toxaphene	ND	21	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	54%		10-129%
877-09-8	Tetrachloro-m-xylene	44%		10-129%
2051-24-3	Decachlorobiphenyl	42%		10-144%
2051-24-3	Decachlorobiphenyl	41%		10-144%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (0' -2')	
<b>Lab Sample ID:</b> JB72780-14	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3546	<b>Percent Solids:</b> 78.6
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G29974.D	1	08/07/14	RK	08/01/14	OP76901	G5G772
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	41	11	ug/kg	
11104-28-2	Aroclor 1221	ND	41	25	ug/kg	
11141-16-5	Aroclor 1232	ND	41	21	ug/kg	
53469-21-9	Aroclor 1242	ND	41	13	ug/kg	
12672-29-6	Aroclor 1248	ND	41	12	ug/kg	
11097-69-1	Aroclor 1254	ND	41	19	ug/kg	
11096-82-5	Aroclor 1260	ND	41	13	ug/kg	
11100-14-4	Aroclor 1268	ND	41	12	ug/kg	
37324-23-5	Aroclor 1262	ND	41	13	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	42%		14-139%
877-09-8	Tetrachloro-m-xylene	62%		14-139%
2051-24-3	Decachlorobiphenyl	65%		10-155%
2051-24-3	Decachlorobiphenyl	86%		10-155%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (0' -2')	<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-14	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 78.6
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	5720	54	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Antimony	5.6	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Arsenic	152	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Barium	209	22	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Beryllium	0.55	0.22	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Cadmium	3.8	0.54	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Calcium	2420	540	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Chromium	24.4	1.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Cobalt	< 5.4	5.4	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Copper	464	2.7	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Iron	41000	54	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Lead	1190	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Magnesium	1780	540	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Manganese	76.1	1.6	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Mercury	0.97	0.083	mg/kg	2	08/04/14	08/04/14 JW	SW846 7471B <sup>2</sup>	SW846 7471B <sup>4</sup>
Nickel	13.4	4.3	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Potassium	< 1100	1100	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Selenium	< 2.2	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Silver	< 0.54	0.54	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Sodium	< 1100	1100	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Thallium	< 1.1	1.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Vanadium	22.9	5.4	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>
Zinc	2010	2.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>1</sup>	SW846 3050B <sup>3</sup>

(1) Instrument QC Batch: MA34592

(2) Instrument QC Batch: MA34598

(3) Prep QC Batch: MP81017

(4) Prep QC Batch: MP81018

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (15'-17')		
<b>Lab Sample ID:</b> JB72780-15		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035		<b>Percent Solids:</b> 82.0
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C112166.D	1	08/01/14	PS	07/30/14 08:10	n/a	V3C5061
Run #2							

Run #	Initial Weight
Run #1	5.9 g
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	11.8	10	1.5	ug/kg	
71-43-2	Benzene	ND	1.0	0.18	ug/kg	
74-97-5	Bromochloromethane	ND	5.2	0.25	ug/kg	
75-27-4	Bromodichloromethane	ND	5.2	0.25	ug/kg	
75-25-2	Bromoform	ND	5.2	0.11	ug/kg	
74-83-9	Bromomethane	ND	5.2	0.30	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	1.3	ug/kg	
75-15-0	Carbon disulfide	ND	5.2	0.24	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.2	0.15	ug/kg	
108-90-7	Chlorobenzene	ND	5.2	0.13	ug/kg	
75-00-3	Chloroethane	ND	5.2	0.25	ug/kg	
67-66-3	Chloroform	ND	5.2	0.11	ug/kg	
74-87-3	Chloromethane	ND	5.2	0.31	ug/kg	
110-82-7	Cyclohexane	ND	5.2	0.36	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	0.54	ug/kg	
124-48-1	Dibromochloromethane	ND	5.2	0.14	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.0	0.16	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.2	0.17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.2	0.16	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.2	0.17	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.2	0.54	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.2	0.37	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.12	ug/kg	
75-35-4	1,1-Dichloroethene	ND	5.2	0.25	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	5.2	0.27	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	5.2	0.19	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.2	0.18	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.2	0.13	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.2	0.17	ug/kg	
123-91-1	1,4-Dioxane	ND	130	41	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.11	ug/kg	
76-13-1	Freon 113	ND	5.2	0.30	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (15'-17')	
<b>Lab Sample ID:</b> JB72780-15	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8260C SW846 5035	<b>Percent Solids:</b> 82.0
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.2	0.58	ug/kg	
98-82-8	Isopropylbenzene	ND	5.2	0.16	ug/kg	
79-20-9	Methyl Acetate	ND	5.2	0.50	ug/kg	
108-87-2	Methylcyclohexane	ND	5.2	0.14	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.17	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.2	0.33	ug/kg	
75-09-2	Methylene chloride	ND	5.2	0.98	ug/kg	
100-42-5	Styrene	ND	5.2	0.14	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.2	0.15	ug/kg	
127-18-4	Tetrachloroethene	0.25	5.2	0.20	ug/kg	J
108-88-3	Toluene	ND	1.0	0.15	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.2	0.16	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.2	0.19	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.2	0.14	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.2	0.18	ug/kg	
79-01-6	Trichloroethene	ND	5.2	0.20	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.2	0.17	ug/kg	
75-01-4	Vinyl chloride	ND	5.2	0.15	ug/kg	
	m,p-Xylene	ND	1.0	0.23	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.15	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.15	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		59-130%
17060-07-0	1,2-Dichloroethane-D4	104%		65-123%
2037-26-5	Toluene-D8	107%		77-125%
460-00-4	4-Bromofluorobenzene	109%		71-132%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (15'-17')		
<b>Lab Sample ID:</b> JB72780-15		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C		<b>Percent Solids:</b> 82.0
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M107075.D	1	08/07/14	SP	08/01/14	OP76897	EM4382
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	33.7 g	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	72	36	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	180	36	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	180	58	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	180	61	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	720	44	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	720	44	ug/kg	
95-48-7	2-Methylphenol	ND	72	41	ug/kg	
	3&4-Methylphenol	ND	72	46	ug/kg	
88-75-5	2-Nitrophenol	ND	180	38	ug/kg	
100-02-7	4-Nitrophenol	ND	360	61	ug/kg	
87-86-5	Pentachlorophenol	ND	360	62	ug/kg	
108-95-2	Phenol	ND	72	38	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	180	37	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	42	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	34	ug/kg	
83-32-9	Acenaphthene	16.5	36	10	ug/kg	J
208-96-8	Acenaphthylene	120	36	12	ug/kg	
98-86-2	Acetophenone	ND	180	6.4	ug/kg	
120-12-7	Anthracene	109	36	13	ug/kg	
1912-24-9	Atrazine	ND	72	7.1	ug/kg	
56-55-3	Benzo(a)anthracene	561	36	12	ug/kg	
50-32-8	Benzo(a)pyrene	586	36	11	ug/kg	
205-99-2	Benzo(b)fluoranthene	749	36	12	ug/kg	
191-24-2	Benzo(g,h,i)perylene	479	36	13	ug/kg	
207-08-9	Benzo(k)fluoranthene	280	36	14	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	72	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	72	21	ug/kg	
92-52-4	1,1'-Biphenyl	ND	72	4.2	ug/kg	
100-52-7	Benzaldehyde	ND	180	8.3	ug/kg	
91-58-7	2-Chloronaphthalene	ND	72	11	ug/kg	
106-47-8	4-Chloroaniline	ND	180	12	ug/kg	
86-74-8	Carbazole	35.8	72	17	ug/kg	J

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SB-4 (15'-17')	<b>Date Sampled:</b>	07/28/14
<b>Lab Sample ID:</b>	JB72780-15	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	82.0
<b>Method:</b>	SW846 8270D SW846 3550C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	72	11	ug/kg	
218-01-9	Chrysene	676	36	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	72	15	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	72	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	72	11	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	72	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	36	16	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	36	14	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	72	9.2	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	111	36	12	ug/kg	
132-64-9	Dibenzofuran	21.6	72	11	ug/kg	J
84-74-2	Di-n-butyl phthalate	ND	72	8.0	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	72	18	ug/kg	
84-66-2	Diethyl phthalate	ND	72	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	72	13	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	322	72	32	ug/kg	
206-44-0	Fluoranthene	1120	36	16	ug/kg	
86-73-7	Fluorene	32.6	36	12	ug/kg	J
118-74-1	Hexachlorobenzene	ND	72	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	36	10	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	360	37	ug/kg	
67-72-1	Hexachloroethane	ND	180	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	514	36	13	ug/kg	
78-59-1	Isophorone	ND	72	9.7	ug/kg	
91-57-6	2-Methylnaphthalene	ND	72	20	ug/kg	
88-74-4	2-Nitroaniline	ND	180	16	ug/kg	
99-09-2	3-Nitroaniline	ND	180	14	ug/kg	
100-01-6	4-Nitroaniline	ND	180	14	ug/kg	
91-20-3	Naphthalene	ND	36	9.9	ug/kg	
98-95-3	Nitrobenzene	ND	72	10	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	72	8.8	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	22	ug/kg	
85-01-8	Phenanthrene	647	36	16	ug/kg	
129-00-0	Pyrene	973	36	14	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	180	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	86%		13-110%
4165-62-2	Phenol-d5	83%		15-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (15'-17')	
<b>Lab Sample ID:</b> JB72780-15	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3550C	<b>Percent Solids:</b> 82.0
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	118%		20-123%
4165-60-0	Nitrobenzene-d5	85%		10-110%
321-60-8	2-Fluorobiphenyl	98%		17-110%
1718-51-0	Terphenyl-d14	106%		30-124%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (15'-17')		
<b>Lab Sample ID:</b> JB72780-15		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8081B SW846 3546		<b>Percent Solids:</b> 82.0
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6G14193.D	1	08/03/14	JN	08/01/14	OP76908	G6G405
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.8 g	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.77	0.36	ug/kg	
319-84-6	alpha-BHC	ND	0.77	0.23	ug/kg	
319-85-7	beta-BHC	ND	0.77	0.48	ug/kg	
319-86-8	delta-BHC	ND	0.77	0.38	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.77	0.38	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.77	0.29	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.77	0.53	ug/kg	
60-57-1	Dieldrin	ND	0.77	0.30	ug/kg	
72-54-8	4,4'-DDD	ND	0.77	0.42	ug/kg	
72-55-9	4,4'-DDE	ND	0.77	0.31	ug/kg	
50-29-3	4,4'-DDT	ND	0.77	0.38	ug/kg	
72-20-8	Endrin	ND	0.77	0.25	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.77	0.33	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.77	0.40	ug/kg	
959-98-8	Endosulfan-I	ND	0.77	0.29	ug/kg	
33213-65-9	Endosulfan-II	ND	0.77	0.46	ug/kg	
76-44-8	Heptachlor	ND	0.77	0.38	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.77	0.29	ug/kg	
72-43-5	Methoxychlor	ND	1.5	0.76	ug/kg	
53494-70-5	Endrin ketone <sup>a</sup>	1.2	0.77	0.31	ug/kg	
8001-35-2	Toxaphene	ND	19	9.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	41%		10-129%
877-09-8	Tetrachloro-m-xylene	46%		10-129%
2051-24-3	Decachlorobiphenyl	44%		10-144%
2051-24-3	Decachlorobiphenyl	42%		10-144%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (15'-17')		
<b>Lab Sample ID:</b> JB72780-15		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3546		<b>Percent Solids:</b> 82.0
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G29975.D	1	08/07/14	RK	08/01/14	OP76901	G5G772
Run #2							

Run #	Initial Weight	Final Volume
Run #1	15.8 g	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	39	10	ug/kg	
11104-28-2	Aroclor 1221	ND	39	23	ug/kg	
11141-16-5	Aroclor 1232	ND	39	20	ug/kg	
53469-21-9	Aroclor 1242	ND	39	12	ug/kg	
12672-29-6	Aroclor 1248	ND	39	12	ug/kg	
11097-69-1	Aroclor 1254	ND	39	18	ug/kg	
11096-82-5	Aroclor 1260	ND	39	13	ug/kg	
11100-14-4	Aroclor 1268	ND	39	11	ug/kg	
37324-23-5	Aroclor 1262	ND	39	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	34%		14-139%
877-09-8	Tetrachloro-m-xylene	46%		14-139%
2051-24-3	Decachlorobiphenyl	35%		10-155%
2051-24-3	Decachlorobiphenyl	89%		10-155%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SB-4 (15'-17')	<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-15	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 82.0
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	6600	52	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Antimony	< 2.1	2.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Arsenic	41.1	2.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Barium	950	21	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Beryllium	0.55	0.21	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cadmium	0.90	0.52	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Calcium	2260	520	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Chromium	19.6	1.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Cobalt	< 5.2	5.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Copper	178	2.6	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Iron	9230	52	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Lead	924	2.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Magnesium	2230	520	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Manganese	162	1.6	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Mercury	0.22	0.038	mg/kg	1	08/01/14	08/01/14 SB	SW846 7471B <sup>1</sup>	SW846 7471B <sup>4</sup>
Nickel	15.2	4.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Potassium	1060	1000	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Selenium	< 2.1	2.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Silver	3.9	0.52	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Sodium	< 1000	1000	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Thallium	< 1.0	1.0	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Vanadium	21.6	5.2	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>
Zinc	845	2.1	mg/kg	1	08/01/14	08/01/14 KK	SW846 6010C <sup>2</sup>	SW846 3050B <sup>3</sup>

(1) Instrument QC Batch: MA34589

(2) Instrument QC Batch: MA34592

(3) Prep QC Batch: MP81017

(4) Prep QC Batch: MP81018

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> GW-3		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-16		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4V10183.D	1	08/06/14	BM	n/a	n/a	V4V422
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.7	ug/l	
71-43-2	Benzene	0.31	1.0	0.21	ug/l	J
74-97-5	Bromochloromethane	ND	5.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.19	ug/l	
75-25-2	Bromoform	ND	4.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.3	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.17	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.65	ug/l	
67-66-3	Chloroform	1.6	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.24	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.31	ug/l	
75-34-3	1,1-Dichloroethane	3.0	1.0	0.35	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	7.8	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.6	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.18	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	39	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.31	ug/l	
76-13-1	Freon 113	ND	5.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-3		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-16		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.4	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	16.0	1.0	0.19	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.89	ug/l	
100-42-5	Styrene	ND	5.0	0.19	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	0.33	1.0	0.22	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.27	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.47	ug/l	
75-01-4	Vinyl chloride	0.71	1.0	0.16	ug/l	J
	m,p-Xylene	0.84	1.0	0.35	ug/l	J
95-47-6	o-Xylene	0.56	1.0	0.20	ug/l	J
1330-20-7	Xylene (total)	1.4	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		79-120%
17060-07-0	1,2-Dichloroethane-D4	99%		72-123%
2037-26-5	Toluene-D8	102%		78-119%
460-00-4	4-Bromofluorobenzene	99%		74-119%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-3		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-16		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8270D SW846 3510C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M107109.D	1	08/08/14	SP	08/01/14	OP76889	EM4383
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	1.3	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.3	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.6	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.8	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	6.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	20	1.3	ug/l	
95-48-7	2-Methylphenol	ND	2.0	1.3	ug/l	
	3&4-Methylphenol	ND	2.0	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.9	ug/l	
100-02-7	4-Nitrophenol	ND	10	0.91	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.4	ug/l	
108-95-2	Phenol	0.99	2.0	0.55	ug/l	J
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	1.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.7	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.5	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
98-86-2	Acetophenone	ND	2.0	0.36	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
1912-24-9	Atrazine	ND	2.0	0.42	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.67	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.25	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.22	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.27	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.30	ug/l	
86-74-8	Carbazole	ND	1.0	0.17	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	GW-3	<b>Date Sampled:</b>	07/28/14
<b>Lab Sample ID:</b>	JB72780-16	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8270D SW846 3510C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.41	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.42	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.43	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.41	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.38	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.32	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.26	ug/l	
91-94-1	3,3' -Dichlorobenzidine	ND	2.0	0.56	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.23	ug/l	
84-74-2	Di-n-butyl phthalate	3.0	2.0	0.58	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.25	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.26	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	2.0	2.0	0.55	ug/l	B
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.46	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.39	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.48	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.29	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
78-59-1	Isophorone	ND	2.0	0.34	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.29	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.32	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.26	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.30	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.52	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.38	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.21	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.44	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		10-110%
4165-62-2	Phenol-d5	33%		10-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-3		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-16		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8270D SW846 3510C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

4.18  
4

**ABN TCL List (SOM0 1.1)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	113%		29-139%
4165-60-0	Nitrobenzene-d5	74%		28-131%
321-60-8	2-Fluorobiphenyl	71%		30-121%
1718-51-0	Terphenyl-d14	90%		16-147%

---

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-3		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-16		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8081B SW846 3510C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G104148.D	1	08/01/14	YD	07/31/14	OP76884	G1G3399
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.010	0.0079	ug/l	
319-84-6	alpha-BHC	ND	0.010	0.0023	ug/l	
319-85-7	beta-BHC	ND	0.010	0.0023	ug/l	
319-86-8	delta-BHC	ND	0.010	0.0019	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.010	0.0017	ug/l	
5103-71-9	alpha-Chlordane	ND	0.010	0.0029	ug/l	
5103-74-2	gamma-Chlordane	ND	0.010	0.0021	ug/l	
60-57-1	Dieldrin	ND	0.010	0.0016	ug/l	
72-54-8	4,4'-DDD	ND	0.010	0.0025	ug/l	
72-55-9	4,4'-DDE	0.028	0.010	0.0017	ug/l	
50-29-3	4,4'-DDT	ND	0.010	0.0032	ug/l	
72-20-8	Endrin	ND	0.010	0.0020	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.010	0.0019	ug/l	
7421-93-4	Endrin aldehyde	ND	0.010	0.0037	ug/l	
53494-70-5	Endrin ketone	ND	0.010	0.0047	ug/l	
959-98-8	Endosulfan-I	ND	0.010	0.0028	ug/l	
33213-65-9	Endosulfan-II	ND	0.010	0.0020	ug/l	
76-44-8	Heptachlor	ND	0.010	0.0022	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.010	0.0026	ug/l	
72-43-5	Methoxychlor	ND	0.020	0.0041	ug/l	
8001-35-2	Toxaphene	ND	0.25	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	64%		26-132%
877-09-8	Tetrachloro-m-xylene	63%		26-132%
2051-24-3	Decachlorobiphenyl	31%		10-118%
2051-24-3	Decachlorobiphenyl	40%		10-118%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-3		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-16		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8082A SW846 3510C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G99589.D	1	08/03/14	RK	07/31/14	OP76883	G2G3075
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

**PCB List**

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	0.27	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	0.39	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	0.086	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	0.15	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	0.14	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	0.21	ug/l	
11100-14-4	Aroclor 1268	ND	0.50	0.13	ug/l	
37324-23-5	Aroclor 1262	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		20-130%
877-09-8	Tetrachloro-m-xylene	78%		20-130%
2051-24-3	Decachlorobiphenyl	44%		10-122%
2051-24-3	Decachlorobiphenyl	44%		10-122%

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

4.18  
4

## Report of Analysis

<b>Client Sample ID:</b> GW-3	<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-16	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum <sup>a</sup>	82300	1000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Antimony <sup>a</sup>	< 30	30	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Arsenic <sup>a</sup>	20600	15	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Barium <sup>a</sup>	1270	1000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Beryllium <sup>a</sup>	7.5	5.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Cadmium <sup>a</sup>	42.5	15	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Calcium <sup>a</sup>	337000	25000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Chromium <sup>a</sup>	243	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Cobalt <sup>a</sup>	< 250	250	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Copper <sup>a</sup>	562	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Iron <sup>a</sup>	100000	500	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Lead <sup>a</sup>	765	15	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Magnesium <sup>a</sup>	79200	25000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Manganese <sup>a</sup>	10200	75	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Mercury <sup>a</sup>	2.5	1.2	ug/l	1	07/31/14	07/31/14 JW	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>4</sup>
Nickel <sup>a</sup>	206	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Potassium <sup>a</sup>	61000	50000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Selenium <sup>a</sup>	52.5	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Silver <sup>a</sup>	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Sodium <sup>a</sup>	346000	50000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Thallium <sup>a</sup>	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Vanadium <sup>a</sup>	< 250	250	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Zinc <sup>a</sup>	681	100	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>

(1) Instrument QC Batch: MA34587

(2) Instrument QC Batch: MA34594

(3) Prep QC Batch: MP80992

(4) Prep QC Batch: MP80999

(a) Elevated sample detection limit due to difficult sample matrix.

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> GW-3	<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-16F	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 200	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Antimony	< 6.0	6.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Arsenic	5730	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Barium	< 200	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Beryllium	< 1.0	1.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Cadmium	11.1	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Calcium	260000	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Chromium	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Cobalt	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Copper	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Iron	< 100	100	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Lead <sup>a</sup>	< 15	15	ug/l	5	07/31/14	08/04/14 ND	EPA 200.7 <sup>3</sup>	EPA 200.7 <sup>4</sup>
Magnesium	54000	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Manganese	2480	15	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Mercury	< 0.20	0.20	ug/l	1	07/31/14	07/31/14 JW	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>5</sup>
Nickel	11.3	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Potassium	47000	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Selenium	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Silver	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Sodium	340000	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Thallium <sup>a</sup>	< 10	10	ug/l	5	07/31/14	08/04/14 ND	EPA 200.7 <sup>3</sup>	EPA 200.7 <sup>4</sup>
Vanadium	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Zinc	< 20	20	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>

(1) Instrument QC Batch: MA34587

(2) Instrument QC Batch: MA34594

(3) Instrument QC Batch: MA34599

(4) Prep QC Batch: MP80992

(5) Prep QC Batch: MP80999

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> GW-1		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-17		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4V10206.D	1	08/06/14	BM	n/a	n/a	V4V423
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.7	ug/l	
71-43-2	Benzene	0.25	1.0	0.21	ug/l	J
74-97-5	Bromochloromethane	ND	5.0	0.49	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.19	ug/l	
75-25-2	Bromoform	ND	4.0	0.31	ug/l	
74-83-9	Bromomethane	ND	2.0	0.39	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.3	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.17	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.22	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.19	ug/l	
75-00-3	Chloroethane	ND	1.0	0.65	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
74-87-3	Chloromethane	ND	1.0	0.24	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.16	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.31	ug/l	
75-34-3	1,1-Dichloroethane	0.75	1.0	0.35	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.33	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.18	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.32	ug/l	
123-91-1	1,4-Dioxane	ND	130	39	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.31	ug/l	
76-13-1	Freon 113	ND	5.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-1		<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-17		<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260C		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

## VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.4	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	7.6	1.0	0.19	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.89	ug/l	
100-42-5	Styrene	ND	5.0	0.19	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.27	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.22	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.32	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.36	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	0.47	ug/l	
75-01-4	Vinyl chloride	1.6	1.0	0.16	ug/l	
	m,p-Xylene	ND	1.0	0.35	ug/l	
95-47-6	o-Xylene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		79-120%
17060-07-0	1,2-Dichloroethane-D4	92%		72-123%
2037-26-5	Toluene-D8	99%		78-119%
460-00-4	4-Bromofluorobenzene	97%		74-119%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-1		
<b>Lab Sample ID:</b> JB72780-17		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M107110.D	1	08/08/14	SP	08/01/14	OP76889	EM4383
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	1.3	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	1.3	ug/l	
120-83-2	2,4-Dichlorophenol	ND	2.0	1.6	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.8	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	6.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	20	1.3	ug/l	
95-48-7	2-Methylphenol	ND	2.0	1.3	ug/l	
	3&4-Methylphenol	ND	2.0	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	1.9	ug/l	
100-02-7	4-Nitrophenol	ND	10	0.91	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.4	ug/l	
108-95-2	Phenol	ND	2.0	0.55	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	1.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.7	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	1.5	ug/l	
83-32-9	Acenaphthene	ND	1.0	0.30	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.20	ug/l	
98-86-2	Acetophenone	ND	2.0	0.36	ug/l	
120-12-7	Anthracene	ND	1.0	0.19	ug/l	
1912-24-9	Atrazine	ND	2.0	0.42	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.67	ug/l	
56-55-3	Benzo(a)anthracene	ND	1.0	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	1.0	0.24	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	1.0	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	1.0	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	1.0	0.22	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.25	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.22	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.27	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.30	ug/l	
86-74-8	Carbazole	ND	1.0	0.17	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	GW-1	<b>Date Sampled:</b>	07/28/14
<b>Lab Sample ID:</b>	JB72780-17	<b>Date Received:</b>	07/29/14
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8270D SW846 3510C		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## ABN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	2.0	0.41	ug/l	
218-01-9	Chrysene	ND	1.0	0.16	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.42	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.43	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.41	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.38	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	1.0	0.32	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	1.0	0.26	ug/l	
91-94-1	3,3' -Dichlorobenzidine	ND	2.0	0.56	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	1.0	0.28	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.23	ug/l	
84-74-2	Di-n-butyl phthalate	5.3	2.0	0.58	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.25	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.26	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.6	2.0	0.55	ug/l	JB
206-44-0	Fluoranthene	ND	1.0	0.16	ug/l	
86-73-7	Fluorene	ND	1.0	0.27	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	0.46	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.39	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.48	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.29	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1.0	0.40	ug/l	
78-59-1	Isophorone	ND	2.0	0.34	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.29	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.32	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.26	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.30	ug/l	
91-20-3	Naphthalene	ND	1.0	0.27	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.52	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.38	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.21	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.19	ug/l	
129-00-0	Pyrene	ND	1.0	0.19	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.44	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		10-110%
4165-62-2	Phenol-d5	33%		10-110%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-1	
<b>Lab Sample ID:</b> JB72780-17	<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8270D SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## ABN TCL List (SOM0 1.1)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	124%		29-139%
4165-60-0	Nitrobenzene-d5	75%		28-131%
321-60-8	2-Fluorobiphenyl	77%		30-121%
1718-51-0	Terphenyl-d14	92%		16-147%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-1		
<b>Lab Sample ID:</b> JB72780-17		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8081B SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G104134.D	1	08/01/14	YD	07/31/14	OP76884	G1G3399
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

## Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.010	0.0079	ug/l	
319-84-6	alpha-BHC	ND	0.010	0.0023	ug/l	
319-85-7	beta-BHC	ND	0.010	0.0023	ug/l	
319-86-8	delta-BHC	ND	0.010	0.0019	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.010	0.0017	ug/l	
5103-71-9	alpha-Chlordane	ND	0.010	0.0029	ug/l	
5103-74-2	gamma-Chlordane	ND	0.010	0.0021	ug/l	
60-57-1	Dieldrin	ND	0.010	0.0016	ug/l	
72-54-8	4,4'-DDD	ND	0.010	0.0025	ug/l	
72-55-9	4,4'-DDE	ND	0.010	0.0017	ug/l	
50-29-3	4,4'-DDT	ND	0.010	0.0032	ug/l	
72-20-8	Endrin	ND	0.010	0.0020	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.010	0.0019	ug/l	
7421-93-4	Endrin aldehyde	ND	0.010	0.0037	ug/l	
53494-70-5	Endrin ketone	ND	0.010	0.0047	ug/l	
959-98-8	Endosulfan-I	ND	0.010	0.0028	ug/l	
33213-65-9	Endosulfan-II	ND	0.010	0.0020	ug/l	
76-44-8	Heptachlor	ND	0.010	0.0022	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.010	0.0026	ug/l	
72-43-5	Methoxychlor	ND	0.020	0.0041	ug/l	
8001-35-2	Toxaphene	ND	0.25	0.15	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	69%		26-132%
877-09-8	Tetrachloro-m-xylene	63%		26-132%
2051-24-3	Decachlorobiphenyl	42%		10-118%
2051-24-3	Decachlorobiphenyl	41%		10-118%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-1		
<b>Lab Sample ID:</b> JB72780-17		<b>Date Sampled:</b> 07/28/14
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 07/29/14
<b>Method:</b> SW846 8082A SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G99545.D	1	08/01/14	RK	07/31/14	OP76883	G2G3073
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

## PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	0.13	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	0.27	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	0.39	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	0.086	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	0.15	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	0.14	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	0.21	ug/l	
11100-14-4	Aroclor 1268	ND	0.50	0.13	ug/l	
37324-23-5	Aroclor 1262	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	66%		20-130%
877-09-8	Tetrachloro-m-xylene	64%		20-130%
2051-24-3	Decachlorobiphenyl	46%		10-122%
2051-24-3	Decachlorobiphenyl	45%		10-122%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> GW-1	<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-17	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	553	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Antimony	< 6.0	6.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Arsenic	13900	6.0	ug/l	2	07/31/14	08/04/14 ND	EPA 200.7 <sup>3</sup>	EPA 200.7 <sup>4</sup>
Barium	220	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Beryllium	< 1.0	1.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Cadmium <sup>a</sup>	7.1	6.0	ug/l	2	07/31/14	08/04/14 ND	EPA 200.7 <sup>3</sup>	EPA 200.7 <sup>4</sup>
Calcium	228000	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Chromium	44.8	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Cobalt	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Copper	45.2	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Iron	57400	100	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Lead <sup>a</sup>	13.6	6.0	ug/l	2	07/31/14	08/04/14 ND	EPA 200.7 <sup>3</sup>	EPA 200.7 <sup>4</sup>
Magnesium	38800	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Manganese	2450	15	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Mercury	< 0.20	0.20	ug/l	1	07/31/14	07/31/14 JW	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>5</sup>
Nickel	15.2	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Potassium	39400	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Selenium	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Silver	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Sodium	220000	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Thallium <sup>a</sup>	< 4.0	4.0	ug/l	2	07/31/14	08/04/14 ND	EPA 200.7 <sup>3</sup>	EPA 200.7 <sup>4</sup>
Vanadium	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>
Zinc	287	20	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>4</sup>

(1) Instrument QC Batch: MA34587

(2) Instrument QC Batch: MA34594

(3) Instrument QC Batch: MA34599

(4) Prep QC Batch: MP80992

(5) Prep QC Batch: MP80999

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> GW-1	<b>Date Sampled:</b> 07/28/14
<b>Lab Sample ID:</b> JB72780-17F	<b>Date Received:</b> 07/29/14
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY	

## Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 200	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Antimony	< 6.0	6.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Arsenic	6290	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Barium	< 200	200	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Beryllium	< 1.0	1.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Cadmium	13.6	3.0	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Calcium	253000	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Chromium	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Cobalt	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Copper	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Iron	36400	100	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Lead <sup>a</sup>	< 6.0	6.0	ug/l	2	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Magnesium	42800	5000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Manganese	2640	15	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Mercury	< 0.20	0.20	ug/l	1	07/31/14	07/31/14 JW	EPA 245.1 <sup>1</sup>	EPA 245.1 <sup>4</sup>
Nickel	14.1	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Potassium	42700	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Selenium	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Silver	< 10	10	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Sodium	240000	10000	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Thallium <sup>a</sup>	< 4.0	4.0	ug/l	2	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Vanadium	< 50	50	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>
Zinc	151	20	ug/l	1	07/31/14	08/01/14 VC	EPA 200.7 <sup>2</sup>	EPA 200.7 <sup>3</sup>

(1) Instrument QC Batch: MA34587

(2) Instrument QC Batch: MA34594

(3) Prep QC Batch: MP80992

(4) Prep QC Batch: MP80999

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

## Misc. Forms

---

5

### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody

SLL  
C/W  
FB  
W/B

F

2235 Route 130, Dayton, NJ 08810  
TEL: 732-329-0200 FAX: 732-329-3499/3480  
www.accutest.com

FED-EX Tracking #  
Accutest Quote #  
Bottle Order Control #  
Accutest Job # **JB72780**

Client / Reporting Information		Project Information		Requested Analysis ( see TEST CODE sheet)										Matrix Codes	
Company Name <b>Fleming Lee Shire</b>		Project Name <b>Tumatum 550 West 29th</b>		<p>VOCs 8260 SVOCs 8270 Pesticides/PCBs Metals Metals/Filtered (Lab Filter)</p>										<p>DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank</p>	
Street Address <b>148 West 29th St, 9th Fl</b>		Street <b>550 West 29th St</b>													
City <b>New York NY 10001</b>		City <b>New York NY</b>													
Project Contact <b>Dan DiRocco daniel@flemingleeshire.com</b>		Project # <b>10218-001-2</b>													
Phone # <b>212-675-3225 212-675-3224</b>		Client Purchase Order #													
Sampler(s) Name(s) <b>Sasha Rothberg 212-675-3225</b>		Project Manager <b>Dan DiRocco</b>													
MEOH/DI Vial #		Attention													
Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HN03	H2SO4	PHONE	DI Water	MEDH	ENCORE	LAB USE ONLY
1	SB-5(0-2)	7/29/14	10:35	SR	SO	4									E24
2	SB-5(0-2)		10:39	SR	SO	4									A12
3	SB-2(0-2)		9:28	SR	SO	4									C42
4	SB-2(5-7)		4:32	SR	SO	4									V79
5F	GW-2		10:05	SR	GW	9	3	1	5						
6P	FB072920M		8:15	SR	FB	8	2	1	5						D22
7	Trip Blank	7/22/14	6:00	TB	TB	2	2								P100 1402 4038

Turnaround Time ( Business days)	Approved By (Accutest PM) / Date:	<input type="checkbox"/> Commercial "A" ( Level 1 ) <input type="checkbox"/> Commercial "B" ( Level 2 ) <input type="checkbox"/> FULL T1 ( Level 3+4 ) <input type="checkbox"/> NJ Reduced <input type="checkbox"/> Commercial "C" <small>Commercial "A" = Results Only Commercial "B" = Results + QC Summary NJ Reduced = Results + QC Summary + Partial Raw data</small>	<input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input type="checkbox"/> Other	Comments / Special Instructions
----------------------------------	-----------------------------------	---	---	---------------------------------

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: <b>1</b> <i>[Signature]</i>	Date Time: <b>7/29/14 12:40</b>	Received By: <b>1</b>	Relinquished By: <b>2</b>	Date Time: <b>7/29/14 16:55</b>	Received By: <b>2</b>
Relinquished by Sampler: <b>3</b>	Date Time:	Received By: <b>3</b> <i>[Signature]</i>	Relinquished By: <b>4</b> <i>[Signature]</i>	Date Time:	Received By: <b>4</b> <i>[Signature]</i>
Relinquished by: <b>5</b>	Date Time:	Received By: <b>5</b> <i>[Signature]</i>	Custody Seal # <b>None</b>	<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Preserved where applicable <input checked="" type="checkbox"/> YB <input type="checkbox"/> NB

1A  
= 3 entries  
Cooler Temp: 4.5C  
Site # 38Crr

5.1  
5





# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JB72780 Client: \_\_\_\_\_ Project: \_\_\_\_\_  
 Date / Time Received: 7/29/2014 Delivery Method: \_\_\_\_\_ Airbill #'s: \_\_\_\_\_

Cooler Temps (Initial/Adjusted): #1: (4.5/4.5); #2: (5.7/5.7); #3: (3.8/3.8); 0

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:	_____		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	3		

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
4. VOCs headspace free:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	Intact		

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

Accutest Laboratories  
V: 732.329.0200

2235 US Highway 130  
F: 732.329.3499

Dayton, New Jersey  
www.accutest.com

5.1  
5



**Job Change Order:** JB72780

<b>Requested Date:</b>	7/31/2014	<b>Received Date:</b>	7/29/2014
<b>Account Name:</b>	Fleming-Lee Shue, Inc.	<b>Due Date:</b>	8/12/2014
<b>Project Description:</b>	Tamorton, 550 West 29th Street, New York, NY	<b>Deliverable:</b>	NYASPB
<b>CSR:</b>	sasham	<b>TAT (Days):</b>	14

**Sample #:** JB72780-ALL  
**Dept:**

**Change:**  
Please revise project desc to "Tamarikin, 550 West 29th Street, New York, NY".

**JB72780: Chain of Custody**  
**Page 4 of 4**

**Above Changes Per:** Sasha M. Rothenberg **Date/Time:** 7/31/2014 3:17:08 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.



08/12/14

Technical Report for

Fleming-Lee Shue, Inc.

Tamarkin, 550 West 29th Street, New York, NY

10218-001-2

Accutest Job Number: JB72970

Sampling Date: 07/30/14

Report to:

Fleming-Lee Shue, Inc.

daniel@flemingleeshue.com

ATTN: Daniel DiRocco

Total number of pages in report: **28**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole  
Laboratory Director

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV, DoD ELAP (L-A-B L2248)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Case Narrative/Conformance Summary .....</b>	<b>4</b>
<b>Section 3: Summary of Hits .....</b>	<b>5</b>
<b>Section 4: Sample Results .....</b>	<b>13</b>
<b>4.1: JB72970-1: SG-1 .....</b>	14
<b>4.2: JB72970-2: SG-2 .....</b>	16
<b>4.3: JB72970-3: SG-3 .....</b>	18
<b>4.4: JB72970-4: SG-4 .....</b>	20
<b>4.5: JB72970-5: IA-1 .....</b>	23
<b>Section 5: Misc. Forms .....</b>	<b>25</b>
<b>5.1: Chain of Custody .....</b>	26
<b>5.2: Summa Canister and Flow Controller Log .....</b>	28

1

2

3

4

5



## Sample Summary

Fleming-Lee Shue, Inc.

**Job No:** JB72970

Tamarkin, 550 West 29th Street, New York, NY  
 Project No: 10218-001-2

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JB72970-1	07/30/14	11:47 SR	07/31/14	AIR	Soil Vapor Comp.	SG-1
JB72970-2	07/30/14	11:45 SR	07/31/14	AIR	Soil Vapor Comp.	SG-2
JB72970-3	07/30/14	11:42 SR	07/31/14	AIR	Soil Vapor Comp.	SG-3
JB72970-4	07/30/14	11:44 SR	07/31/14	AIR	Soil Vapor Comp.	SG-4
JB72970-5	07/30/14	11:48 SR	07/31/14	AIR	Indoor Air Comp.	IA-1



## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** Fleming-Lee Shue, Inc.

**Job No** JB72970

**Site:** Tamarkin, 550 West 29th Street, New York, NY

**Report Date** 8/11/2014 2:25:27 PM

On 07/31/2014, 5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories . Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB72970 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report’s Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GCMS By Method TO-15

**Matrix:** AIR **Batch ID:** V5W241

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72809-3DUP were used as the QC samples indicated.
- Sample(s) JB72970-1, JB72970-2 have compounds reported with “E” qualifiers indicating estimated value exceeding calibration range.
- V5W241-BSD for Propylene: Outside in house control limits.

**Matrix:** AIR **Batch ID:** V5W242

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB72984-10DUP were used as the QC samples indicated.
- Sample(s) JB72970-4 have compounds reported with “E” qualifiers indicating estimated value exceeding calibration range.

**Matrix:** AIR **Batch ID:** V5W243

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB73341-3DUP were used as the QC samples indicated.
- Sample(s) JB72970-3 have compounds reported with “E” qualifiers indicating estimated value exceeding calibration range.
- RPD(s) for Duplicate for Chloromethane are outside control limits for sample JB73341-3DUP. High RPD due to low concentration of hit

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest’s Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

## Summary of Hits

**Job Number:** JB72970  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/30/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>JB72970-1</b>	<b>SG-1</b>					
Acetone		27.2	0.20	0.11	ppbv	TO-15
Benzene		5.0	0.20	0.025	ppbv	TO-15
Carbon disulfide		10.3	0.20	0.031	ppbv	TO-15
Chloroform		2.4	0.20	0.024	ppbv	TO-15
Chloromethane		1.1	0.20	0.079	ppbv	TO-15
2-Chlorotoluene		2.5	0.20	0.032	ppbv	TO-15
Carbon tetrachloride		0.17 J	0.20	0.025	ppbv	TO-15
Cyclohexane		7.7	0.20	0.027	ppbv	TO-15
Dichlorodifluoromethane		0.76	0.20	0.030	ppbv	TO-15
m-Dichlorobenzene		0.48	0.20	0.033	ppbv	TO-15
p-Dichlorobenzene		0.21	0.20	0.037	ppbv	TO-15
Ethanol		62.5 E	0.50	0.17	ppbv	TO-15
Ethylbenzene		1.0	0.20	0.035	ppbv	TO-15
4-Ethyltoluene		0.28	0.20	0.032	ppbv	TO-15
Heptane		13.5	0.20	0.021	ppbv	TO-15
Hexane		28.7	0.20	0.042	ppbv	TO-15
Isopropyl Alcohol		4.0	0.20	0.066	ppbv	TO-15
Methylene chloride		0.78	0.20	0.13	ppbv	TO-15
Methyl ethyl ketone		3.1	0.20	0.040	ppbv	TO-15
Propylene		20.1	0.50	0.048	ppbv	TO-15
Styrene		0.31	0.20	0.033	ppbv	TO-15
1,1,1-Trichloroethane		2.7	0.20	0.024	ppbv	TO-15
1,2,4-Trimethylbenzene		1.0	0.20	0.029	ppbv	TO-15
1,3,5-Trimethylbenzene		0.29	0.20	0.029	ppbv	TO-15
Tertiary Butyl Alcohol		0.62	0.20	0.044	ppbv	TO-15
Tetrachloroethylene		1.2	0.040	0.037	ppbv	TO-15
Tetrahydrofuran		2.7	0.20	0.049	ppbv	TO-15
Toluene		9.0	0.20	0.030	ppbv	TO-15
Trichloroethylene		0.50	0.040	0.030	ppbv	TO-15
Trichlorofluoromethane		0.78	0.20	0.029	ppbv	TO-15
m,p-Xylene		3.8	0.20	0.069	ppbv	TO-15
o-Xylene		1.3	0.20	0.034	ppbv	TO-15
Xylenes (total)		5.0	0.20	0.034	ppbv	TO-15
Acetone		64.6	0.48	0.26	ug/m3	TO-15
Benzene		16	0.64	0.080	ug/m3	TO-15
Carbon disulfide		32.1	0.62	0.097	ug/m3	TO-15
Chloroform		12	0.98	0.12	ug/m3	TO-15
Chloromethane		2.3	0.41	0.16	ug/m3	TO-15
2-Chlorotoluene		13	1.0	0.17	ug/m3	TO-15
Carbon tetrachloride		1.1 J	1.3	0.16	ug/m3	TO-15
Cyclohexane		27	0.69	0.093	ug/m3	TO-15
Dichlorodifluoromethane		3.8	0.99	0.15	ug/m3	TO-15
m-Dichlorobenzene		2.9	1.2	0.20	ug/m3	TO-15

## Summary of Hits

**Job Number:** JB72970  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/30/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
p-Dichlorobenzene		1.3	1.2	0.22	ug/m3	TO-15
Ethanol		118 E	0.94	0.32	ug/m3	TO-15
Ethylbenzene		4.3	0.87	0.15	ug/m3	TO-15
4-Ethyltoluene		1.4	0.98	0.16	ug/m3	TO-15
Heptane		55.3	0.82	0.086	ug/m3	TO-15
Hexane		101	0.70	0.15	ug/m3	TO-15
Isopropyl Alcohol		9.8	0.49	0.16	ug/m3	TO-15
Methylene chloride		2.7	0.69	0.45	ug/m3	TO-15
Methyl ethyl ketone		9.1	0.59	0.12	ug/m3	TO-15
Propylene		34.5	0.86	0.082	ug/m3	TO-15
Styrene		1.3	0.85	0.14	ug/m3	TO-15
1,1,1-Trichloroethane		15	1.1	0.13	ug/m3	TO-15
1,2,4-Trimethylbenzene		4.9	0.98	0.14	ug/m3	TO-15
1,3,5-Trimethylbenzene		1.4	0.98	0.14	ug/m3	TO-15
Tertiary Butyl Alcohol		1.9	0.61	0.13	ug/m3	TO-15
Tetrachloroethylene		8.1	0.27	0.25	ug/m3	TO-15
Tetrahydrofuran		8.0	0.59	0.14	ug/m3	TO-15
Toluene		34	0.75	0.11	ug/m3	TO-15
Trichloroethylene		2.7	0.21	0.16	ug/m3	TO-15
Trichlorofluoromethane		4.4	1.1	0.16	ug/m3	TO-15
m,p-Xylene		17	0.87	0.30	ug/m3	TO-15
o-Xylene		5.6	0.87	0.15	ug/m3	TO-15
Xylenes (total)		22	0.87	0.15	ug/m3	TO-15

### JB72970-2 SG-2

Acetone		11.2	0.20	0.11	ppbv	TO-15
Benzene		0.21	0.20	0.025	ppbv	TO-15
Carbon disulfide		0.18 J	0.20	0.031	ppbv	TO-15
Chloroform		0.17 J	0.20	0.024	ppbv	TO-15
2-Chlorotoluene		3.8	0.20	0.032	ppbv	TO-15
Cyclohexane		0.64	0.20	0.027	ppbv	TO-15
Dichlorodifluoromethane		0.54	0.20	0.030	ppbv	TO-15
m-Dichlorobenzene		0.42	0.20	0.033	ppbv	TO-15
p-Dichlorobenzene		0.30	0.20	0.037	ppbv	TO-15
Ethanol		54.6 E	0.50	0.17	ppbv	TO-15
Ethylbenzene		0.66	0.20	0.035	ppbv	TO-15
Ethyl Acetate		2.4	0.20	0.061	ppbv	TO-15
4-Ethyltoluene		0.22	0.20	0.032	ppbv	TO-15
Heptane		0.21	0.20	0.021	ppbv	TO-15
Isopropyl Alcohol		3.4	0.20	0.066	ppbv	TO-15
Methylene chloride		0.47	0.20	0.13	ppbv	TO-15
Methyl ethyl ketone		1.6	0.20	0.040	ppbv	TO-15
Methyl Isobutyl Ketone		0.11 J	0.20	0.042	ppbv	TO-15
Styrene		0.33	0.20	0.033	ppbv	TO-15

## Summary of Hits

**Job Number:** JB72970  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/30/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
1,2,4-Trimethylbenzene		0.91	0.20	0.029	ppbv	TO-15
1,3,5-Trimethylbenzene		0.24	0.20	0.029	ppbv	TO-15
2,2,4-Trimethylpentane		0.093 J	0.20	0.025	ppbv	TO-15
Tertiary Butyl Alcohol		0.34	0.20	0.044	ppbv	TO-15
Tetrachloroethylene		0.45	0.040	0.037	ppbv	TO-15
Tetrahydrofuran		2.7	0.20	0.049	ppbv	TO-15
Toluene		2.5	0.20	0.030	ppbv	TO-15
Trichloroethylene		0.25	0.040	0.030	ppbv	TO-15
Trichlorofluoromethane		0.27	0.20	0.029	ppbv	TO-15
m,p-Xylene		2.7	0.20	0.069	ppbv	TO-15
o-Xylene		0.92	0.20	0.034	ppbv	TO-15
Xylenes (total)		3.6	0.20	0.034	ppbv	TO-15
Acetone		26.6	0.48	0.26	ug/m3	TO-15
Benzene		0.67	0.64	0.080	ug/m3	TO-15
Carbon disulfide		0.56 J	0.62	0.097	ug/m3	TO-15
Chloroform		0.83 J	0.98	0.12	ug/m3	TO-15
2-Chlorotoluene		20	1.0	0.17	ug/m3	TO-15
Cyclohexane		2.2	0.69	0.093	ug/m3	TO-15
Dichlorodifluoromethane		2.7	0.99	0.15	ug/m3	TO-15
m-Dichlorobenzene		2.5	1.2	0.20	ug/m3	TO-15
p-Dichlorobenzene		1.8	1.2	0.22	ug/m3	TO-15
Ethanol		103 E	0.94	0.32	ug/m3	TO-15
Ethylbenzene		2.9	0.87	0.15	ug/m3	TO-15
Ethyl Acetate		8.6	0.72	0.22	ug/m3	TO-15
4-Ethyltoluene		1.1	0.98	0.16	ug/m3	TO-15
Heptane		0.86	0.82	0.086	ug/m3	TO-15
Isopropyl Alcohol		8.4	0.49	0.16	ug/m3	TO-15
Methylene chloride		1.6	0.69	0.45	ug/m3	TO-15
Methyl ethyl ketone		4.7	0.59	0.12	ug/m3	TO-15
Methyl Isobutyl Ketone		0.45 J	0.82	0.17	ug/m3	TO-15
Styrene		1.4	0.85	0.14	ug/m3	TO-15
1,2,4-Trimethylbenzene		4.5	0.98	0.14	ug/m3	TO-15
1,3,5-Trimethylbenzene		1.2	0.98	0.14	ug/m3	TO-15
2,2,4-Trimethylpentane		0.43 J	0.93	0.12	ug/m3	TO-15
Tertiary Butyl Alcohol		1.0	0.61	0.13	ug/m3	TO-15
Tetrachloroethylene		3.1	0.27	0.25	ug/m3	TO-15
Tetrahydrofuran		8.0	0.59	0.14	ug/m3	TO-15
Toluene		9.4	0.75	0.11	ug/m3	TO-15
Trichloroethylene		1.3	0.21	0.16	ug/m3	TO-15
Trichlorofluoromethane		1.5	1.1	0.16	ug/m3	TO-15
m,p-Xylene		12	0.87	0.30	ug/m3	TO-15
o-Xylene		4.0	0.87	0.15	ug/m3	TO-15
Xylenes (total)		16	0.87	0.15	ug/m3	TO-15

## Summary of Hits

**Job Number:** JB72970  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/30/14

Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method	
<b>JB72970-3</b>	<b>SG-3</b>						
		Acetone	11.3	0.20	0.11	ppbv	TO-15
		Benzene	0.70	0.20	0.025	ppbv	TO-15
		Bromodichloromethane	0.72	0.20	0.029	ppbv	TO-15
		Carbon disulfide	0.51	0.20	0.031	ppbv	TO-15
		Chloroform	19.8	0.20	0.024	ppbv	TO-15
		Chloromethane	0.26	0.20	0.079	ppbv	TO-15
		Cyclohexane	0.31	0.20	0.027	ppbv	TO-15
		1,1-Dichloroethane	0.36	0.20	0.027	ppbv	TO-15
		Dichlorodifluoromethane	0.67	0.20	0.030	ppbv	TO-15
		m-Dichlorobenzene	0.26	0.20	0.033	ppbv	TO-15
		p-Dichlorobenzene	0.19 J	0.20	0.037	ppbv	TO-15
		Ethanol	88.9 E	0.50	0.17	ppbv	TO-15
		Ethylbenzene	0.53	0.20	0.035	ppbv	TO-15
		Ethyl Acetate	2.7	0.20	0.061	ppbv	TO-15
		4-Ethyltoluene	0.17 J	0.20	0.032	ppbv	TO-15
		Heptane	0.29	0.20	0.021	ppbv	TO-15
		Hexane	0.61	0.20	0.042	ppbv	TO-15
		Isopropyl Alcohol	5.5	0.20	0.066	ppbv	TO-15
		Methylene chloride	1.1	0.20	0.13	ppbv	TO-15
		Methyl ethyl ketone	2.3	0.20	0.040	ppbv	TO-15
		Methyl Isobutyl Ketone	0.24	0.20	0.042	ppbv	TO-15
		Methyl Tert Butyl Ether	0.20	0.20	0.041	ppbv	TO-15
		Styrene	0.21	0.20	0.033	ppbv	TO-15
		1,1,1-Trichloroethane	0.31	0.20	0.024	ppbv	TO-15
		1,2,4-Trimethylbenzene	0.75	0.20	0.029	ppbv	TO-15
		1,3,5-Trimethylbenzene	0.20	0.20	0.029	ppbv	TO-15
		2,2,4-Trimethylpentane	0.18 J	0.20	0.025	ppbv	TO-15
		Tertiary Butyl Alcohol	0.46	0.20	0.044	ppbv	TO-15
		Tetrachloroethylene	0.97	0.040	0.037	ppbv	TO-15
		Tetrahydrofuran	4.1	0.20	0.049	ppbv	TO-15
		Toluene	2.7	0.20	0.030	ppbv	TO-15
		Trichloroethylene	0.27	0.040	0.030	ppbv	TO-15
		Trichlorofluoromethane	0.45	0.20	0.029	ppbv	TO-15
		m,p-Xylene	2.0	0.20	0.069	ppbv	TO-15
		o-Xylene	0.76	0.20	0.034	ppbv	TO-15
		Xylenes (total)	2.8	0.20	0.034	ppbv	TO-15
		Acetone	26.8	0.48	0.26	ug/m3	TO-15
		Benzene	2.2	0.64	0.080	ug/m3	TO-15
		Bromodichloromethane	4.8	1.3	0.19	ug/m3	TO-15
		Carbon disulfide	1.6	0.62	0.097	ug/m3	TO-15
		Chloroform	96.7	0.98	0.12	ug/m3	TO-15
		Chloromethane	0.54	0.41	0.16	ug/m3	TO-15
		Cyclohexane	1.1	0.69	0.093	ug/m3	TO-15

## Summary of Hits

**Job Number:** JB72970  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/30/14

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
		1.5	0.81	0.11	ug/m3	TO-15
		3.3	0.99	0.15	ug/m3	TO-15
		1.6	1.2	0.20	ug/m3	TO-15
		1.1 J	1.2	0.22	ug/m3	TO-15
		168 E	0.94	0.32	ug/m3	TO-15
		2.3	0.87	0.15	ug/m3	TO-15
		9.7	0.72	0.22	ug/m3	TO-15
		0.84 J	0.98	0.16	ug/m3	TO-15
		1.2	0.82	0.086	ug/m3	TO-15
		2.1	0.70	0.15	ug/m3	TO-15
		14	0.49	0.16	ug/m3	TO-15
		3.8	0.69	0.45	ug/m3	TO-15
		6.8	0.59	0.12	ug/m3	TO-15
		0.98	0.82	0.17	ug/m3	TO-15
		0.72	0.72	0.15	ug/m3	TO-15
		0.89	0.85	0.14	ug/m3	TO-15
		1.7	1.1	0.13	ug/m3	TO-15
		3.7	0.98	0.14	ug/m3	TO-15
		0.98	0.98	0.14	ug/m3	TO-15
		0.84 J	0.93	0.12	ug/m3	TO-15
		1.4	0.61	0.13	ug/m3	TO-15
		6.6	0.27	0.25	ug/m3	TO-15
		12	0.59	0.14	ug/m3	TO-15
		10	0.75	0.11	ug/m3	TO-15
		1.5	0.21	0.16	ug/m3	TO-15
		2.5	1.1	0.16	ug/m3	TO-15
		8.7	0.87	0.30	ug/m3	TO-15
		3.3	0.87	0.15	ug/m3	TO-15
		12	0.87	0.15	ug/m3	TO-15

### JB72970-4 SG-4

		84.6	0.80	0.43	ppbv	TO-15
		2.4	0.20	0.025	ppbv	TO-15
		3.8	0.20	0.031	ppbv	TO-15
		2.9	0.20	0.024	ppbv	TO-15
		4.7	0.20	0.032	ppbv	TO-15
		0.87	0.20	0.027	ppbv	TO-15
		0.91	0.20	0.027	ppbv	TO-15
		0.22	0.20	0.052	ppbv	TO-15
		0.70	0.20	0.030	ppbv	TO-15
		0.10 J	0.20	0.023	ppbv	TO-15
		0.53	0.20	0.033	ppbv	TO-15
		0.44	0.20	0.037	ppbv	TO-15
		148 E	2.0	0.66	ppbv	TO-15

## Summary of Hits

**Job Number:** JB72970  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/30/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Ethylbenzene		1.4	0.20	0.035	ppbv	TO-15
Ethyl Acetate		2.3	0.20	0.061	ppbv	TO-15
4-Ethyltoluene		0.48	0.20	0.032	ppbv	TO-15
Freon 113		0.11 J	0.20	0.040	ppbv	TO-15
Heptane		0.85	0.20	0.021	ppbv	TO-15
Hexane		0.79	0.20	0.042	ppbv	TO-15
2-Hexanone		0.20	0.20	0.064	ppbv	TO-15
Isopropyl Alcohol		7.1	0.20	0.066	ppbv	TO-15
Methylene chloride		1.1	0.20	0.13	ppbv	TO-15
Methyl ethyl ketone		6.6	0.20	0.040	ppbv	TO-15
Methyl Isobutyl Ketone		0.57	0.20	0.042	ppbv	TO-15
Methyl Tert Butyl Ether		0.86	0.20	0.041	ppbv	TO-15
Propylene		2.9	0.50	0.048	ppbv	TO-15
Styrene		0.46	0.20	0.033	ppbv	TO-15
1,1,1-Trichloroethane		5.6	0.20	0.024	ppbv	TO-15
1,2,4-Trimethylbenzene		1.6	0.20	0.029	ppbv	TO-15
1,3,5-Trimethylbenzene		0.49	0.20	0.029	ppbv	TO-15
2,2,4-Trimethylpentane		2.1	0.20	0.025	ppbv	TO-15
Tertiary Butyl Alcohol		0.41	0.20	0.044	ppbv	TO-15
Tetrachloroethylene		2.9	0.040	0.037	ppbv	TO-15
Tetrahydrofuran		2.2	0.20	0.049	ppbv	TO-15
Toluene		8.6	0.20	0.030	ppbv	TO-15
Trichloroethylene		0.51	0.040	0.030	ppbv	TO-15
Trichlorofluoromethane		0.52	0.20	0.029	ppbv	TO-15
m,p-Xylene		5.1	0.20	0.069	ppbv	TO-15
o-Xylene		1.8	0.20	0.034	ppbv	TO-15
Xylenes (total)		6.9	0.20	0.034	ppbv	TO-15
Acetone		201	1.9	1.0	ug/m3	TO-15
Benzene		7.7	0.64	0.080	ug/m3	TO-15
Carbon disulfide		12	0.62	0.097	ug/m3	TO-15
Chloroform		14	0.98	0.12	ug/m3	TO-15
2-Chlorotoluene		24	1.0	0.17	ug/m3	TO-15
Cyclohexane		3.0	0.69	0.093	ug/m3	TO-15
1,1-Dichloroethane		3.7	0.81	0.11	ug/m3	TO-15
1,1-Dichloroethylene		0.87	0.79	0.21	ug/m3	TO-15
Dichlorodifluoromethane		3.5	0.99	0.15	ug/m3	TO-15
cis-1,2-Dichloroethylene		0.40 J	0.79	0.091	ug/m3	TO-15
m-Dichlorobenzene		3.2	1.2	0.20	ug/m3	TO-15
p-Dichlorobenzene		2.6	1.2	0.22	ug/m3	TO-15
Ethanol		279 E	3.8	1.2	ug/m3	TO-15
Ethylbenzene		6.1	0.87	0.15	ug/m3	TO-15
Ethyl Acetate		8.3	0.72	0.22	ug/m3	TO-15
4-Ethyltoluene		2.4	0.98	0.16	ug/m3	TO-15
Freon 113		0.84 J	1.5	0.31	ug/m3	TO-15
Heptane		3.5	0.82	0.086	ug/m3	TO-15

## Summary of Hits

**Job Number:** JB72970  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/30/14

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Hexane		2.8	0.70	0.15	ug/m3	TO-15
2-Hexanone		0.82	0.82	0.26	ug/m3	TO-15
Isopropyl Alcohol		17	0.49	0.16	ug/m3	TO-15
Methylene chloride		3.8	0.69	0.45	ug/m3	TO-15
Methyl ethyl ketone		19	0.59	0.12	ug/m3	TO-15
Methyl Isobutyl Ketone		2.3	0.82	0.17	ug/m3	TO-15
Methyl Tert Butyl Ether		3.1	0.72	0.15	ug/m3	TO-15
Propylene		5.0	0.86	0.082	ug/m3	TO-15
Styrene		2.0	0.85	0.14	ug/m3	TO-15
1,1,1-Trichloroethane		31	1.1	0.13	ug/m3	TO-15
1,2,4-Trimethylbenzene		7.9	0.98	0.14	ug/m3	TO-15
1,3,5-Trimethylbenzene		2.4	0.98	0.14	ug/m3	TO-15
2,2,4-Trimethylpentane		9.8	0.93	0.12	ug/m3	TO-15
Tertiary Butyl Alcohol		1.2	0.61	0.13	ug/m3	TO-15
Tetrachloroethylene		20	0.27	0.25	ug/m3	TO-15
Tetrahydrofuran		6.5	0.59	0.14	ug/m3	TO-15
Toluene		32	0.75	0.11	ug/m3	TO-15
Trichloroethylene		2.7	0.21	0.16	ug/m3	TO-15
Trichlorofluoromethane		2.9	1.1	0.16	ug/m3	TO-15
m,p-Xylene		22	0.87	0.30	ug/m3	TO-15
o-Xylene		7.8	0.87	0.15	ug/m3	TO-15
Xylenes (total)		30	0.87	0.15	ug/m3	TO-15

### JB72970-5 IA-1

Acetone	18.9	0.20	0.11	ppbv	TO-15
Benzene	0.21	0.20	0.025	ppbv	TO-15
Chloromethane	0.53	0.20	0.079	ppbv	TO-15
Carbon tetrachloride	0.098 J	0.20	0.025	ppbv	TO-15
Cyclohexane	0.49	0.20	0.027	ppbv	TO-15
Dichlorodifluoromethane	0.55	0.20	0.030	ppbv	TO-15
Ethanol	22.9	0.50	0.17	ppbv	TO-15
Ethylbenzene	0.27	0.20	0.035	ppbv	TO-15
Ethyl Acetate	1.8	0.20	0.061	ppbv	TO-15
Heptane	0.15 J	0.20	0.021	ppbv	TO-15
Hexane	0.23	0.20	0.042	ppbv	TO-15
Isopropyl Alcohol	0.86	0.20	0.066	ppbv	TO-15
Methylene chloride	0.42	0.20	0.13	ppbv	TO-15
Methyl ethyl ketone	0.69	0.20	0.040	ppbv	TO-15
Methyl Isobutyl Ketone	0.097 J	0.20	0.042	ppbv	TO-15
Propylene	0.89	0.50	0.048	ppbv	TO-15
1,2,4-Trimethylbenzene	0.31	0.20	0.029	ppbv	TO-15
1,3,5-Trimethylbenzene	0.11 J	0.20	0.029	ppbv	TO-15
2,2,4-Trimethylpentane	0.17 J	0.20	0.025	ppbv	TO-15
Tetrachloroethylene	0.051	0.040	0.037	ppbv	TO-15

## Summary of Hits

**Job Number:** JB72970  
**Account:** Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Collected:** 07/30/14

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Toluene		1.1	0.20	0.030	ppbv	TO-15
Trichlorofluoromethane		0.27	0.20	0.029	ppbv	TO-15
m,p-Xylene		1.3	0.20	0.069	ppbv	TO-15
o-Xylene		0.47	0.20	0.034	ppbv	TO-15
Xylenes (total)		1.7	0.20	0.034	ppbv	TO-15
Acetone		44.9	0.48	0.26	ug/m3	TO-15
Benzene		0.67	0.64	0.080	ug/m3	TO-15
Chloromethane		1.1	0.41	0.16	ug/m3	TO-15
Carbon tetrachloride		0.62 J	1.3	0.16	ug/m3	TO-15
Cyclohexane		1.7	0.69	0.093	ug/m3	TO-15
Dichlorodifluoromethane		2.7	0.99	0.15	ug/m3	TO-15
Ethanol		43.1	0.94	0.32	ug/m3	TO-15
Ethylbenzene		1.2	0.87	0.15	ug/m3	TO-15
Ethyl Acetate		6.5	0.72	0.22	ug/m3	TO-15
Heptane		0.61 J	0.82	0.086	ug/m3	TO-15
Hexane		0.81	0.70	0.15	ug/m3	TO-15
Isopropyl Alcohol		2.1	0.49	0.16	ug/m3	TO-15
Methylene chloride		1.5	0.69	0.45	ug/m3	TO-15
Methyl ethyl ketone		2.0	0.59	0.12	ug/m3	TO-15
Methyl Isobutyl Ketone		0.40 J	0.82	0.17	ug/m3	TO-15
Propylene		1.5	0.86	0.082	ug/m3	TO-15
1,2,4-Trimethylbenzene		1.5	0.98	0.14	ug/m3	TO-15
1,3,5-Trimethylbenzene		0.54 J	0.98	0.14	ug/m3	TO-15
2,2,4-Trimethylpentane		0.79 J	0.93	0.12	ug/m3	TO-15
Tetrachloroethylene		0.35	0.27	0.25	ug/m3	TO-15
Toluene		4.1	0.75	0.11	ug/m3	TO-15
Trichlorofluoromethane		1.5	1.1	0.16	ug/m3	TO-15
m,p-Xylene		5.6	0.87	0.30	ug/m3	TO-15
o-Xylene		2.0	0.87	0.15	ug/m3	TO-15
Xylenes (total)		7.4	0.87	0.15	ug/m3	TO-15



Sample Results

---

Report of Analysis

---

## Report of Analysis

<b>Client Sample ID:</b> SG-1		
<b>Lab Sample ID:</b> JB72970-1		<b>Date Sampled:</b> 07/30/14
<b>Matrix:</b> AIR - Soil Vapor Comp. Summa ID: A318		<b>Date Received:</b> 07/31/14
<b>Method:</b> TO-15		<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	5W6326.D	1.48	08/07/14	ML	n/a	n/a	V5W241

Run #1	Initial Volume
Run #2	592 ml

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	27.2	0.20	0.11	ppbv		64.6	0.48	0.26	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.034	ppbv		ND	0.44	0.075	ug/m3
71-43-2	78.11	Benzene	5.0	0.20	0.025	ppbv		16	0.64	0.080	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.029	ppbv		ND	1.3	0.19	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.035	ppbv		ND	2.1	0.36	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.033	ppbv		ND	0.78	0.13	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.035	ppbv		ND	0.87	0.15	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	0.047	ppbv		ND	1.0	0.24	ug/m3
75-15-0	76.14	Carbon disulfide	10.3	0.20	0.031	ppbv		32.1	0.62	0.097	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.034	ppbv		ND	0.92	0.16	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.042	ppbv		ND	0.53	0.11	ug/m3
67-66-3	119.4	Chloroform	2.4	0.20	0.024	ppbv		12	0.98	0.12	ug/m3
74-87-3	50.49	Chloromethane	1.1	0.20	0.079	ppbv		2.3	0.41	0.16	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.037	ppbv		ND	0.63	0.12	ug/m3
95-49-8	126.6	2-Chlorotoluene	2.5	0.20	0.032	ppbv		13	1.0	0.17	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.17	0.20	0.025	ppbv	J	1.1	1.3	0.16	ug/m3
110-82-7	84.16	Cyclohexane	7.7	0.20	0.027	ppbv		27	0.69	0.093	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.027	ppbv		ND	0.81	0.11	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.052	ppbv		ND	0.79	0.21	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	0.21	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.023	ppbv		ND	0.81	0.093	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.029	ppbv		ND	0.92	0.13	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.76	0.20	0.030	ppbv		3.8	0.99	0.15	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.038	ppbv		ND	1.7	0.32	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.070	ppbv		ND	0.79	0.28	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.023	ppbv		ND	0.79	0.091	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.025	ppbv		ND	0.91	0.11	ug/m3
541-73-1	147	m-Dichlorobenzene	0.48	0.20	0.033	ppbv		2.9	1.2	0.20	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	0.17	ug/m3
106-46-7	147	p-Dichlorobenzene	0.21	0.20	0.037	ppbv		1.3	1.2	0.22	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.025	ppbv		ND	0.91	0.11	ug/m3

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SG-1		<b>Date Sampled:</b> 07/30/14
<b>Lab Sample ID:</b> JB72970-1		<b>Date Received:</b> 07/31/14
<b>Matrix:</b> AIR - Soil Vapor Comp. Summa ID: A318		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

4.1  
4

**VOA TO15 List**

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	62.5	0.50	0.17	ppbv	E	118	0.94	0.32	ug/m3
100-41-4	106.2	Ethylbenzene	1.0	0.20	0.035	ppbv		4.3	0.87	0.15	ug/m3
141-78-6	88	Ethyl Acetate	ND	0.20	0.061	ppbv		ND	0.72	0.22	ug/m3
622-96-8	120.2	4-Ethyltoluene	0.28	0.20	0.032	ppbv		1.4	0.98	0.16	ug/m3
76-13-1	187.4	Freon 113	ND	0.20	0.040	ppbv		ND	1.5	0.31	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.031	ppbv		ND	1.4	0.22	ug/m3
142-82-5	100.2	Heptane	13.5	0.20	0.021	ppbv		55.3	0.82	0.086	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.051	ppbv		ND	2.1	0.54	ug/m3
110-54-3	86.17	Hexane	28.7	0.20	0.042	ppbv		101	0.70	0.15	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.064	ppbv		ND	0.82	0.26	ug/m3
67-63-0	60.1	Isopropyl Alcohol	4.0	0.20	0.066	ppbv		9.8	0.49	0.16	ug/m3
75-09-2	84.94	Methylene chloride	0.78	0.20	0.13	ppbv		2.7	0.69	0.45	ug/m3
78-93-3	72.11	Methyl ethyl ketone	3.1	0.20	0.040	ppbv		9.1	0.59	0.12	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.042	ppbv		ND	0.82	0.17	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.041	ppbv		ND	0.72	0.15	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.036	ppbv		ND	0.82	0.15	ug/m3
115-07-1	42	Propylene	20.1	0.50	0.048	ppbv		34.5	0.86	0.082	ug/m3
100-42-5	104.1	Styrene	0.31	0.20	0.033	ppbv		1.3	0.85	0.14	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	2.7	0.20	0.024	ppbv		15	1.1	0.13	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.040	ppbv		ND	1.4	0.27	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.035	ppbv		ND	1.1	0.19	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.061	ppbv		ND	1.5	0.45	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	1.0	0.20	0.029	ppbv		4.9	0.98	0.14	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.29	0.20	0.029	ppbv		1.4	0.98	0.14	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	0.025	ppbv		ND	0.93	0.12	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.62	0.20	0.044	ppbv		1.9	0.61	0.13	ug/m3
127-18-4	165.8	Tetrachloroethylene	1.2	0.040	0.037	ppbv		8.1	0.27	0.25	ug/m3
109-99-9	72.11	Tetrahydrofuran	2.7	0.20	0.049	ppbv		8.0	0.59	0.14	ug/m3
108-88-3	92.14	Toluene	9.0	0.20	0.030	ppbv		34	0.75	0.11	ug/m3
79-01-6	131.4	Trichloroethylene	0.50	0.040	0.030	ppbv		2.7	0.21	0.16	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.78	0.20	0.029	ppbv		4.4	1.1	0.16	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.031	ppbv		ND	0.51	0.079	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.095	ppbv		ND	0.70	0.33	ug/m3
	106.2	m,p-Xylene	3.8	0.20	0.069	ppbv		17	0.87	0.30	ug/m3
95-47-6	106.2	o-Xylene	1.3	0.20	0.034	ppbv		5.6	0.87	0.15	ug/m3
1330-20-7	106.2	Xylenes (total)	5.0	0.20	0.034	ppbv		22	0.87	0.15	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	124%		65-128%

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SG-2		<b>Date Sampled:</b> 07/30/14
<b>Lab Sample ID:</b> JB72970-2		<b>Date Received:</b> 07/31/14
<b>Matrix:</b> AIR - Soil Vapor Comp. Summa ID: A672		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	5W6327.D	1.48	08/07/14	ML	n/a	n/a	V5W241

Run #1	Initial Volume
Run #2	592 ml

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	11.2	0.20	0.11	ppbv		26.6	0.48	0.26	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.034	ppbv		ND	0.44	0.075	ug/m3
71-43-2	78.11	Benzene	0.21	0.20	0.025	ppbv		0.67	0.64	0.080	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.029	ppbv		ND	1.3	0.19	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.035	ppbv		ND	2.1	0.36	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.033	ppbv		ND	0.78	0.13	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.035	ppbv		ND	0.87	0.15	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	0.047	ppbv		ND	1.0	0.24	ug/m3
75-15-0	76.14	Carbon disulfide	0.18	0.20	0.031	ppbv	J	0.56	0.62	0.097	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.034	ppbv		ND	0.92	0.16	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.042	ppbv		ND	0.53	0.11	ug/m3
67-66-3	119.4	Chloroform	0.17	0.20	0.024	ppbv	J	0.83	0.98	0.12	ug/m3
74-87-3	50.49	Chloromethane	ND	0.20	0.079	ppbv		ND	0.41	0.16	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.037	ppbv		ND	0.63	0.12	ug/m3
95-49-8	126.6	2-Chlorotoluene	3.8	0.20	0.032	ppbv		20	1.0	0.17	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.025	ppbv		ND	1.3	0.16	ug/m3
110-82-7	84.16	Cyclohexane	0.64	0.20	0.027	ppbv		2.2	0.69	0.093	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.027	ppbv		ND	0.81	0.11	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.052	ppbv		ND	0.79	0.21	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	0.21	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.023	ppbv		ND	0.81	0.093	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.029	ppbv		ND	0.92	0.13	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.54	0.20	0.030	ppbv		2.7	0.99	0.15	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.038	ppbv		ND	1.7	0.32	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.070	ppbv		ND	0.79	0.28	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.023	ppbv		ND	0.79	0.091	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.025	ppbv		ND	0.91	0.11	ug/m3
541-73-1	147	m-Dichlorobenzene	0.42	0.20	0.033	ppbv		2.5	1.2	0.20	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	0.17	ug/m3
106-46-7	147	p-Dichlorobenzene	0.30	0.20	0.037	ppbv		1.8	1.2	0.22	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.025	ppbv		ND	0.91	0.11	ug/m3

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SG-2		<b>Date Sampled:</b> 07/30/14
<b>Lab Sample ID:</b> JB72970-2		<b>Date Received:</b> 07/31/14
<b>Matrix:</b> AIR - Soil Vapor Comp. Summa ID: A672		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	54.6	0.50	0.17	ppbv	E	103	0.94	0.32	ug/m3
100-41-4	106.2	Ethylbenzene	0.66	0.20	0.035	ppbv		2.9	0.87	0.15	ug/m3
141-78-6	88	Ethyl Acetate	2.4	0.20	0.061	ppbv		8.6	0.72	0.22	ug/m3
622-96-8	120.2	4-Ethyltoluene	0.22	0.20	0.032	ppbv		1.1	0.98	0.16	ug/m3
76-13-1	187.4	Freon 113	ND	0.20	0.040	ppbv		ND	1.5	0.31	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.031	ppbv		ND	1.4	0.22	ug/m3
142-82-5	100.2	Heptane	0.21	0.20	0.021	ppbv		0.86	0.82	0.086	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.051	ppbv		ND	2.1	0.54	ug/m3
110-54-3	86.17	Hexane	ND	0.20	0.042	ppbv		ND	0.70	0.15	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.064	ppbv		ND	0.82	0.26	ug/m3
67-63-0	60.1	Isopropyl Alcohol	3.4	0.20	0.066	ppbv		8.4	0.49	0.16	ug/m3
75-09-2	84.94	Methylene chloride	0.47	0.20	0.13	ppbv		1.6	0.69	0.45	ug/m3
78-93-3	72.11	Methyl ethyl ketone	1.6	0.20	0.040	ppbv		4.7	0.59	0.12	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	0.11	0.20	0.042	ppbv	J	0.45	0.82	0.17	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.041	ppbv		ND	0.72	0.15	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.036	ppbv		ND	0.82	0.15	ug/m3
115-07-1	42	Propylene	ND	0.50	0.048	ppbv		ND	0.86	0.082	ug/m3
100-42-5	104.1	Styrene	0.33	0.20	0.033	ppbv		1.4	0.85	0.14	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.024	ppbv		ND	1.1	0.13	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.040	ppbv		ND	1.4	0.27	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.035	ppbv		ND	1.1	0.19	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.061	ppbv		ND	1.5	0.45	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.91	0.20	0.029	ppbv		4.5	0.98	0.14	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.24	0.20	0.029	ppbv		1.2	0.98	0.14	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.093	0.20	0.025	ppbv	J	0.43	0.93	0.12	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.34	0.20	0.044	ppbv		1.0	0.61	0.13	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.45	0.040	0.037	ppbv		3.1	0.27	0.25	ug/m3
109-99-9	72.11	Tetrahydrofuran	2.7	0.20	0.049	ppbv		8.0	0.59	0.14	ug/m3
108-88-3	92.14	Toluene	2.5	0.20	0.030	ppbv		9.4	0.75	0.11	ug/m3
79-01-6	131.4	Trichloroethylene	0.25	0.040	0.030	ppbv		1.3	0.21	0.16	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.27	0.20	0.029	ppbv		1.5	1.1	0.16	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.031	ppbv		ND	0.51	0.079	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.095	ppbv		ND	0.70	0.33	ug/m3
	106.2	m,p-Xylene	2.7	0.20	0.069	ppbv		12	0.87	0.30	ug/m3
95-47-6	106.2	o-Xylene	0.92	0.20	0.034	ppbv		4.0	0.87	0.15	ug/m3
1330-20-7	106.2	Xylenes (total)	3.6	0.20	0.034	ppbv		16	0.87	0.15	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	116%		65-128%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SG-3		
<b>Lab Sample ID:</b> JB72970-3		<b>Date Sampled:</b> 07/30/14
<b>Matrix:</b> AIR - Soil Vapor Comp. Summa ID: A228		<b>Date Received:</b> 07/31/14
<b>Method:</b> TO-15		<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5W6370.D	1	08/08/14	ML	n/a	n/a	V5W243
Run #2							

Run #1	Initial Volume
Run #1	400 ml
Run #2	

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	11.3	0.20	0.11	ppbv		26.8	0.48	0.26	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.034	ppbv		ND	0.44	0.075	ug/m3
71-43-2	78.11	Benzene	0.70	0.20	0.025	ppbv		2.2	0.64	0.080	ug/m3
75-27-4	163.8	Bromodichloromethane	0.72	0.20	0.029	ppbv		4.8	1.3	0.19	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.035	ppbv		ND	2.1	0.36	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.033	ppbv		ND	0.78	0.13	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.035	ppbv		ND	0.87	0.15	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	0.047	ppbv		ND	1.0	0.24	ug/m3
75-15-0	76.14	Carbon disulfide	0.51	0.20	0.031	ppbv		1.6	0.62	0.097	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.034	ppbv		ND	0.92	0.16	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.042	ppbv		ND	0.53	0.11	ug/m3
67-66-3	119.4	Chloroform	19.8	0.20	0.024	ppbv		96.7	0.98	0.12	ug/m3
74-87-3	50.49	Chloromethane	0.26	0.20	0.079	ppbv		0.54	0.41	0.16	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.037	ppbv		ND	0.63	0.12	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	0.032	ppbv		ND	1.0	0.17	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.025	ppbv		ND	1.3	0.16	ug/m3
110-82-7	84.16	Cyclohexane	0.31	0.20	0.027	ppbv		1.1	0.69	0.093	ug/m3
75-34-3	98.96	1,1-Dichloroethane	0.36	0.20	0.027	ppbv		1.5	0.81	0.11	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.052	ppbv		ND	0.79	0.21	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	0.21	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.023	ppbv		ND	0.81	0.093	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.029	ppbv		ND	0.92	0.13	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.67	0.20	0.030	ppbv		3.3	0.99	0.15	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.038	ppbv		ND	1.7	0.32	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.070	ppbv		ND	0.79	0.28	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.023	ppbv		ND	0.79	0.091	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.025	ppbv		ND	0.91	0.11	ug/m3
541-73-1	147	m-Dichlorobenzene	0.26	0.20	0.033	ppbv		1.6	1.2	0.20	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	0.17	ug/m3
106-46-7	147	p-Dichlorobenzene	0.19	0.20	0.037	ppbv	J	1.1	1.2	0.22	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.025	ppbv		ND	0.91	0.11	ug/m3

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SG-3		<b>Date Sampled:</b> 07/30/14
<b>Lab Sample ID:</b> JB72970-3		<b>Date Received:</b> 07/31/14
<b>Matrix:</b> AIR - Soil Vapor Comp. Summa ID: A228		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	88.9	0.50	0.17	ppbv	E	168	0.94	0.32	ug/m3
100-41-4	106.2	Ethylbenzene	0.53	0.20	0.035	ppbv		2.3	0.87	0.15	ug/m3
141-78-6	88	Ethyl Acetate	2.7	0.20	0.061	ppbv		9.7	0.72	0.22	ug/m3
622-96-8	120.2	4-Ethyltoluene	0.17	0.20	0.032	ppbv	J	0.84	0.98	0.16	ug/m3
76-13-1	187.4	Freon 113	ND	0.20	0.040	ppbv		ND	1.5	0.31	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.031	ppbv		ND	1.4	0.22	ug/m3
142-82-5	100.2	Heptane	0.29	0.20	0.021	ppbv		1.2	0.82	0.086	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.051	ppbv		ND	2.1	0.54	ug/m3
110-54-3	86.17	Hexane	0.61	0.20	0.042	ppbv		2.1	0.70	0.15	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.064	ppbv		ND	0.82	0.26	ug/m3
67-63-0	60.1	Isopropyl Alcohol	5.5	0.20	0.066	ppbv		14	0.49	0.16	ug/m3
75-09-2	84.94	Methylene chloride	1.1	0.20	0.13	ppbv		3.8	0.69	0.45	ug/m3
78-93-3	72.11	Methyl ethyl ketone	2.3	0.20	0.040	ppbv		6.8	0.59	0.12	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	0.24	0.20	0.042	ppbv		0.98	0.82	0.17	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	0.20	0.20	0.041	ppbv		0.72	0.72	0.15	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.036	ppbv		ND	0.82	0.15	ug/m3
115-07-1	42	Propylene	ND	0.50	0.048	ppbv		ND	0.86	0.082	ug/m3
100-42-5	104.1	Styrene	0.21	0.20	0.033	ppbv		0.89	0.85	0.14	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	0.31	0.20	0.024	ppbv		1.7	1.1	0.13	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.040	ppbv		ND	1.4	0.27	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.035	ppbv		ND	1.1	0.19	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.061	ppbv		ND	1.5	0.45	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.75	0.20	0.029	ppbv		3.7	0.98	0.14	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.20	0.20	0.029	ppbv		0.98	0.98	0.14	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.18	0.20	0.025	ppbv	J	0.84	0.93	0.12	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.46	0.20	0.044	ppbv		1.4	0.61	0.13	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.97	0.040	0.037	ppbv		6.6	0.27	0.25	ug/m3
109-99-9	72.11	Tetrahydrofuran	4.1	0.20	0.049	ppbv		12	0.59	0.14	ug/m3
108-88-3	92.14	Toluene	2.7	0.20	0.030	ppbv		10	0.75	0.11	ug/m3
79-01-6	131.4	Trichloroethylene	0.27	0.040	0.030	ppbv		1.5	0.21	0.16	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.45	0.20	0.029	ppbv		2.5	1.1	0.16	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.031	ppbv		ND	0.51	0.079	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.095	ppbv		ND	0.70	0.33	ug/m3
	106.2	m,p-Xylene	2.0	0.20	0.069	ppbv		8.7	0.87	0.30	ug/m3
95-47-6	106.2	o-Xylene	0.76	0.20	0.034	ppbv		3.3	0.87	0.15	ug/m3
1330-20-7	106.2	Xylenes (total)	2.8	0.20	0.034	ppbv		12	0.87	0.15	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	125%		65-128%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SG-4		<b>Date Sampled:</b> 07/30/14
<b>Lab Sample ID:</b> JB72970-4		<b>Date Received:</b> 07/31/14
<b>Matrix:</b> AIR - Soil Vapor Comp. Summa ID: A858		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5W6329.D	1	08/07/14	ML	n/a	n/a	V5W241
Run #2	5W6345.D	1	08/07/14	ML	n/a	n/a	V5W242

Run #	Initial Volume
Run #1	400 ml
Run #2	100 ml

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	84.6 <sup>a</sup>	0.80	0.43	ppbv		201 <sup>a</sup>	1.9	1.0	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.034	ppbv		ND	0.44	0.075	ug/m3
71-43-2	78.11	Benzene	2.4	0.20	0.025	ppbv		7.7	0.64	0.080	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.029	ppbv		ND	1.3	0.19	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.035	ppbv		ND	2.1	0.36	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.033	ppbv		ND	0.78	0.13	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.035	ppbv		ND	0.87	0.15	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	0.047	ppbv		ND	1.0	0.24	ug/m3
75-15-0	76.14	Carbon disulfide	3.8	0.20	0.031	ppbv		12	0.62	0.097	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.034	ppbv		ND	0.92	0.16	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.042	ppbv		ND	0.53	0.11	ug/m3
67-66-3	119.4	Chloroform	2.9	0.20	0.024	ppbv		14	0.98	0.12	ug/m3
74-87-3	50.49	Chloromethane	ND	0.20	0.079	ppbv		ND	0.41	0.16	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.037	ppbv		ND	0.63	0.12	ug/m3
95-49-8	126.6	2-Chlorotoluene	4.7	0.20	0.032	ppbv		24	1.0	0.17	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.025	ppbv		ND	1.3	0.16	ug/m3
110-82-7	84.16	Cyclohexane	0.87	0.20	0.027	ppbv		3.0	0.69	0.093	ug/m3
75-34-3	98.96	1,1-Dichloroethane	0.91	0.20	0.027	ppbv		3.7	0.81	0.11	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	0.22	0.20	0.052	ppbv		0.87	0.79	0.21	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	0.21	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.023	ppbv		ND	0.81	0.093	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.029	ppbv		ND	0.92	0.13	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.70	0.20	0.030	ppbv		3.5	0.99	0.15	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.038	ppbv		ND	1.7	0.32	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.070	ppbv		ND	0.79	0.28	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	0.10	0.20	0.023	ppbv	J	0.40	0.79	0.091	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.025	ppbv		ND	0.91	0.11	ug/m3
541-73-1	147	m-Dichlorobenzene	0.53	0.20	0.033	ppbv		3.2	1.2	0.20	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	0.17	ug/m3
106-46-7	147	p-Dichlorobenzene	0.44	0.20	0.037	ppbv		2.6	1.2	0.22	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.025	ppbv		ND	0.91	0.11	ug/m3

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	SG-4	<b>Date Sampled:</b>	07/30/14
<b>Lab Sample ID:</b>	JB72970-4	<b>Date Received:</b>	07/31/14
<b>Matrix:</b>	AIR - Soil Vapor Comp. Summa ID: A858	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	Tamarkin, 550 West 29th Street, New York, NY		

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	148 <sup>a</sup>	2.0	0.66	ppbv	E	279 <sup>a</sup>	3.8	1.2	ug/m3
100-41-4	106.2	Ethylbenzene	1.4	0.20	0.035	ppbv		6.1	0.87	0.15	ug/m3
141-78-6	88	Ethyl Acetate	2.3	0.20	0.061	ppbv		8.3	0.72	0.22	ug/m3
622-96-8	120.2	4-Ethyltoluene	0.48	0.20	0.032	ppbv		2.4	0.98	0.16	ug/m3
76-13-1	187.4	Freon 113	0.11	0.20	0.040	ppbv	J	0.84	1.5	0.31	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.031	ppbv		ND	1.4	0.22	ug/m3
142-82-5	100.2	Heptane	0.85	0.20	0.021	ppbv		3.5	0.82	0.086	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.051	ppbv		ND	2.1	0.54	ug/m3
110-54-3	86.17	Hexane	0.79	0.20	0.042	ppbv		2.8	0.70	0.15	ug/m3
591-78-6	100	2-Hexanone	0.20	0.20	0.064	ppbv		0.82	0.82	0.26	ug/m3
67-63-0	60.1	Isopropyl Alcohol	7.1	0.20	0.066	ppbv		17	0.49	0.16	ug/m3
75-09-2	84.94	Methylene chloride	1.1	0.20	0.13	ppbv		3.8	0.69	0.45	ug/m3
78-93-3	72.11	Methyl ethyl ketone	6.6	0.20	0.040	ppbv		19	0.59	0.12	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	0.57	0.20	0.042	ppbv		2.3	0.82	0.17	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	0.86	0.20	0.041	ppbv		3.1	0.72	0.15	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.036	ppbv		ND	0.82	0.15	ug/m3
115-07-1	42	Propylene	2.9	0.50	0.048	ppbv		5.0	0.86	0.082	ug/m3
100-42-5	104.1	Styrene	0.46	0.20	0.033	ppbv		2.0	0.85	0.14	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	5.6	0.20	0.024	ppbv		31	1.1	0.13	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.040	ppbv		ND	1.4	0.27	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.035	ppbv		ND	1.1	0.19	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.061	ppbv		ND	1.5	0.45	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	1.6	0.20	0.029	ppbv		7.9	0.98	0.14	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.49	0.20	0.029	ppbv		2.4	0.98	0.14	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	2.1	0.20	0.025	ppbv		9.8	0.93	0.12	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.41	0.20	0.044	ppbv		1.2	0.61	0.13	ug/m3
127-18-4	165.8	Tetrachloroethylene	2.9	0.040	0.037	ppbv		20	0.27	0.25	ug/m3
109-99-9	72.11	Tetrahydrofuran	2.2	0.20	0.049	ppbv		6.5	0.59	0.14	ug/m3
108-88-3	92.14	Toluene	8.6	0.20	0.030	ppbv		32	0.75	0.11	ug/m3
79-01-6	131.4	Trichloroethylene	0.51	0.040	0.030	ppbv		2.7	0.21	0.16	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.52	0.20	0.029	ppbv		2.9	1.1	0.16	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.031	ppbv		ND	0.51	0.079	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.095	ppbv		ND	0.70	0.33	ug/m3
	106.2	m,p-Xylene	5.1	0.20	0.069	ppbv		22	0.87	0.30	ug/m3
95-47-6	106.2	o-Xylene	1.8	0.20	0.034	ppbv		7.8	0.87	0.15	ug/m3
1330-20-7	106.2	Xylenes (total)	6.9	0.20	0.034	ppbv		30	0.87	0.15	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	126%	106%	65-128%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> SG-4		<b>Date Sampled:</b> 07/30/14
<b>Lab Sample ID:</b> JB72970-4		<b>Date Received:</b> 07/31/14
<b>Matrix:</b> AIR - Soil Vapor Comp. Summa ID: A858		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

4.4  
4

**VOA TO15 List**

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
---------	----	----------	--------	----	-----	-------	---	--------	----	-----	-------

(a) Result is from Run# 2

---

ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> IA-1		
<b>Lab Sample ID:</b> JB72970-5		<b>Date Sampled:</b> 07/30/14
<b>Matrix:</b> AIR - Indoor Air Comp. Summa ID: A900		<b>Date Received:</b> 07/31/14
<b>Method:</b> TO-15		<b>Percent Solids:</b> n/a
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5W6330.D	1	08/07/14	ML	n/a	n/a	V5W241
Run #2							

Run #1	Initial Volume
Run #1	400 ml
Run #2	

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	18.9	0.20	0.11	ppbv		44.9	0.48	0.26	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.034	ppbv		ND	0.44	0.075	ug/m3
71-43-2	78.11	Benzene	0.21	0.20	0.025	ppbv		0.67	0.64	0.080	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.029	ppbv		ND	1.3	0.19	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.035	ppbv		ND	2.1	0.36	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.033	ppbv		ND	0.78	0.13	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.035	ppbv		ND	0.87	0.15	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	0.047	ppbv		ND	1.0	0.24	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.031	ppbv		ND	0.62	0.097	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.034	ppbv		ND	0.92	0.16	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.042	ppbv		ND	0.53	0.11	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.024	ppbv		ND	0.98	0.12	ug/m3
74-87-3	50.49	Chloromethane	0.53	0.20	0.079	ppbv		1.1	0.41	0.16	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.037	ppbv		ND	0.63	0.12	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	0.032	ppbv		ND	1.0	0.17	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.098	0.20	0.025	ppbv	J	0.62	1.3	0.16	ug/m3
110-82-7	84.16	Cyclohexane	0.49	0.20	0.027	ppbv		1.7	0.69	0.093	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.027	ppbv		ND	0.81	0.11	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.052	ppbv		ND	0.79	0.21	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	0.027	ppbv		ND	1.5	0.21	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.023	ppbv		ND	0.81	0.093	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.029	ppbv		ND	0.92	0.13	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	0.43	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.55	0.20	0.030	ppbv		2.7	0.99	0.15	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.038	ppbv		ND	1.7	0.32	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.070	ppbv		ND	0.79	0.28	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.023	ppbv		ND	0.79	0.091	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.025	ppbv		ND	0.91	0.11	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.033	ppbv		ND	1.2	0.20	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.029	ppbv		ND	1.2	0.17	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.037	ppbv		ND	1.2	0.22	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.025	ppbv		ND	0.91	0.11	ug/m3

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> IA-1		<b>Date Sampled:</b> 07/30/14
<b>Lab Sample ID:</b> JB72970-5		<b>Date Received:</b> 07/31/14
<b>Matrix:</b> AIR - Indoor Air Comp. Summa ID: A900		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> Tamarkin, 550 West 29th Street, New York, NY		

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	22.9	0.50	0.17	ppbv		43.1	0.94	0.32	ug/m3
100-41-4	106.2	Ethylbenzene	0.27	0.20	0.035	ppbv		1.2	0.87	0.15	ug/m3
141-78-6	88	Ethyl Acetate	1.8	0.20	0.061	ppbv		6.5	0.72	0.22	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	0.032	ppbv		ND	0.98	0.16	ug/m3
76-13-1	187.4	Freon 113	ND	0.20	0.040	ppbv		ND	1.5	0.31	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.031	ppbv		ND	1.4	0.22	ug/m3
142-82-5	100.2	Heptane	0.15	0.20	0.021	ppbv	J	0.61	0.82	0.086	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.051	ppbv		ND	2.1	0.54	ug/m3
110-54-3	86.17	Hexane	0.23	0.20	0.042	ppbv		0.81	0.70	0.15	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.064	ppbv		ND	0.82	0.26	ug/m3
67-63-0	60.1	Isopropyl Alcohol	0.86	0.20	0.066	ppbv		2.1	0.49	0.16	ug/m3
75-09-2	84.94	Methylene chloride	0.42	0.20	0.13	ppbv		1.5	0.69	0.45	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.69	0.20	0.040	ppbv		2.0	0.59	0.12	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	0.097	0.20	0.042	ppbv	J	0.40	0.82	0.17	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.041	ppbv		ND	0.72	0.15	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.036	ppbv		ND	0.82	0.15	ug/m3
115-07-1	42	Propylene	0.89	0.50	0.048	ppbv		1.5	0.86	0.082	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.033	ppbv		ND	0.85	0.14	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.024	ppbv		ND	1.1	0.13	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.040	ppbv		ND	1.4	0.27	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.035	ppbv		ND	1.1	0.19	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	0.061	ppbv		ND	1.5	0.45	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.31	0.20	0.029	ppbv		1.5	0.98	0.14	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	0.11	0.20	0.029	ppbv	J	0.54	0.98	0.14	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.17	0.20	0.025	ppbv	J	0.79	0.93	0.12	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.044	ppbv		ND	0.61	0.13	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.051	0.040	0.037	ppbv		0.35	0.27	0.25	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.049	ppbv		ND	0.59	0.14	ug/m3
108-88-3	92.14	Toluene	1.1	0.20	0.030	ppbv		4.1	0.75	0.11	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.040	0.030	ppbv		ND	0.21	0.16	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.27	0.20	0.029	ppbv		1.5	1.1	0.16	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.031	ppbv		ND	0.51	0.079	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.095	ppbv		ND	0.70	0.33	ug/m3
	106.2	m,p-Xylene	1.3	0.20	0.069	ppbv		5.6	0.87	0.30	ug/m3
95-47-6	106.2	o-Xylene	0.47	0.20	0.034	ppbv		2.0	0.87	0.15	ug/m3
1330-20-7	106.2	Xylenes (total)	1.7	0.20	0.034	ppbv		7.4	0.87	0.15	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	117%		65-128%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Misc. Forms

---

5

## Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody
- Summa Canister and Flow Controller Log

# CHAIN OF CUSTODY

Priority

Tracking # 20408629

Bottle Order Control # MP-7/11/2014-5  
Lab Job # JB72970

PAGE 1 OF 1

**ACCUTEST**  
LABORATORIES

## Air Sampling Field Data Sheet

Client / Reporting Information						Weather Parameters						Requested Analysis				
Company Name <b>Fleming Lee Shme</b>			Project Name <b>Tamarck 550 W. 29th</b>			Temperature (Fahrenheit)			Start: <b>70°F</b>			Maximum: <b>76°</b>		Standard TO-15 Reporting List		
Address <b>158 West 29th St</b>			Street <b>550 West 29th St</b>			Stop: <b>76°F</b>			Minimum: <b>70°</b>							
City <b>New York</b>			City <b>New York</b>			State <b>NY</b>			Atmospheric Pressure (inches of Hg)							
State <b>NY</b>			State <b>NY</b>			Zip <b>10001</b>			Start: <b>30</b>			Maximum:				
Project Contact <b>Don Di Rocco</b>			Project # <b>10218-001-2</b>			Client Purchase Order #			Stop: <b>30</b>			Minimum:				
E-mail <b>dave@flemingleeshme.com</b>			Project # <b>10218-001-2</b>			Client Purchase Order #			Other weather comment:							
Phone # <b>212-675-3225</b>			Fax # <b>(212) 675-3224</b>													
Sampler(s) Name(s)																
Lab Sample #	Field ID / Point of Collection	Air Type				Start Sampling Information					Stop Sampling Information					
		Indoor(I) Soil Vap(SV) Ambient(A)	Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	
1	SG-1	SV	A318	6L	FC676	7/30/14	9:47	29	70°	SR	7/30/14	11:47	8	72°	SR	X
2	SG-2	SV	A672	6L	FC632		9:45	28	70°	SR		11:45	7	72°	SR	X
3	SG-3	SV	A228	6L	FC487		9:42	30	69°	SR		11:42	8	70°	SR	X
4	SG-4	SV	A858	6L	FC477		9:44	29	69°	SR		11:44	7	71°	SR	X
5	IA-1	IA	A900	6L	FC624		9:48	30	70°	SR		11:48	9	72°	SR	X
Turnaround Time (Business days)																
Standard - 15 Days		<input checked="" type="checkbox"/>		Approved By: _____		Date: _____		Data Deliverable Information						Comments / Remarks		
10 Day		<input type="checkbox"/>						All NJDEP TO-15 is mandatory Full T1						SUMMA		
5 Day		<input type="checkbox"/>						Comm A								
3 Day		<input type="checkbox"/>						Comm B								
2 Day		<input type="checkbox"/>						Reduced T2								
1 Day		<input type="checkbox"/>						Full T1								
Other		<input type="checkbox"/>						Other:								
Sample Custody must be documented below each time samples change possession, including courier delivery.																
Relinquished by Laboratory: 1 MP		Date Time: 7/22		Received By: 1 Smith		Relinquished By: 1 Smith		Date Time: 7/30/14 11:47		Received By: 2 Smith		Relinquished By: 2 Smith		Date Time: 7/30/14 11:47		
Relinquished by: 3 Smith		Date Time: 7/31/14 14:20		Received By: 3 Smith		Relinquished By: 3 Smith		Date Time: 7/31/14 14:20		Received By: 4 Smith		Relinquished By: 4 Smith		Date Time: 7/31/14 14:20		
Relinquished by: 5		Date Time:		Received By: 5		Relinquished By: 5		Date Time:		Received By: 5		Relinquished By: 5		Date Time:		
														Custody Seal # 766, 764 INTACT		

43 on

5.1  
5

**JB72970: Chain of Custody**

**Page 1 of 2**

## Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** JB72970      **Client:** \_\_\_\_\_      **Project:** \_\_\_\_\_  
**Date / Time Received:** 7/31/2014      **Delivery Method:** \_\_\_\_\_      **Airbill #'s:** \_\_\_\_\_

**Cooler Temps (Initial/Adjusted):**

<u>Cooler Security</u>	<u>Y or N</u>		<u>Y or N</u>	
1. Custody Seals Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/> <input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y or N</u>	
1. Temp criteria achieved:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Cooler temp verification:	_____	
3. Cooler media:	_____	
4. No. Coolers:	0	

<u>Quality Control Preservation</u>	<u>Y or N</u>			<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Trip Blank listed on COC:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. Samples preserved properly:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Sample Integrity - Documentation</u>	<u>Y or N</u>	
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y or N</u>	
1. Sample recvd within HT:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Condition of sample:	Intact	

<u>Sample Integrity - Instructions</u>	<u>Y or N</u>		<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

5.1  
5

# Summa Canister and Flow Controller Log

**Job Number:** JB72970  
**Account:** FLSNYYNY Fleming-Lee Shue, Inc.  
**Project:** Tamarkin, 550 West 29th Street, New York, NY  
**Received:** 07/31/14

SUMMA CANISTERS													
Shipping						Receiving							
Summa ID	Vac L	Date " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
A318	6	29.4	07/22/14	ML	CP7108	3W41930.D	JB72970-1	07/31/14	ML	8		1.2	1.48
A672	6	29.4	07/22/14	ML	CP7108	3W41930.D	JB72970-2	07/31/14	ML	8		1.2	1.48
A228	6	29.4	07/22/14	ML	CP7108	3W41930.D	JB72970-3	07/31/14	ML	6			1
A858	6	29.4	07/22/14	ML	CP7108	3W41930.D	JB72970-4	07/31/14	ML	7			1
A900	6	29.4	07/22/14	ML	CP7108	3W41930.D	JB72970-5	07/31/14	ML	6.5			1

FLOW CONTROLLERS / OTHER									
Shipping					Receiving				
Flow Ctrl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Equipment Type	
FC477	07/22/14	ML	37.5	2	07/31/14	ML	38.2	Flow Controller	
FC487	07/22/14	ML	37.5	2	07/31/14	ML	37.3	Flow Controller	
FC624	07/22/14	ML	37.5	2	07/31/14	ML	39.9	Flow Controller	
FC632	07/22/14	ML	37.5	2	07/31/14	ML	39	Flow Controller	
FC676	07/22/14	ML	37.5	2	07/31/14	ML	38.8	Flow Controller	

**Accutest Bottle Order(s):**  
 MP-7/21/2014-5

**Prep Date**      **Room Temp(F)**      **Bar Pres "Hg**  
 07/22/14          70                                  29.92