

**153-157 SHERMAN AVENUE**

**NEW YORK, NY**

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# **Remedial Investigation Report**

**NYC VCP Site Number: (Not Assigned Yet)**

**OER Project Number: 15TEMP001M**

**Prepared for:**

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March 2015

# REMEDIAL INVESTIGATION REPORT

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## LIST OF ACRONYMS

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

# CERTIFICATION

I, Eric Weinstock, 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 Equity Project Charter School, (NYC VCP Site No. number not assigned yet). 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.

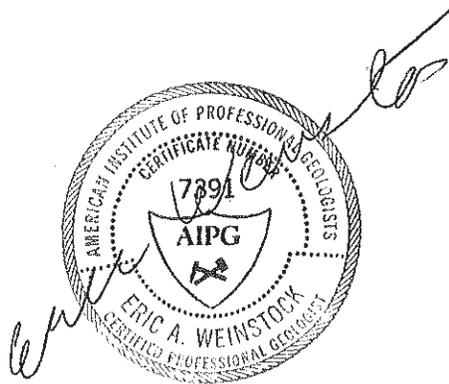
*Eric Weinstock 3/12/2015 Eric Weinstock*

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Qualified Environmental Professional

Date

Signature



# EXECUTIVE SUMMARY

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

## **Site Location and Current Usage**

The Site is located at 153-157 Sherman Avenue in the Inwood section in Manhattan, New York and is identified as Block 2221 and Lot 5 on the New York City Tax Map. Figure 2 shows the Site location. The Site is 12000-square feet and is bounded by Sherman Avenue to the north, residential buildings to the south, public facilities and institutions to the east, and commercial and offices to the west. A map of the site boundary is shown in Figure 1. Currently, the Site is vacant and doesn't contain any structures.

## **Summary of Proposed Redevelopment Plan**

The proposed future use of the Site will consist of six-story school building. Layout of the proposed site development is presented in Figure 3. The current zoning designation is R7-2. The proposed use is consistent with existing zoning for the property.

This project will result in the construction of a 62,000 square foot, 6-story middle school building to house The Equity Project Charter School (TEP). TEP serves 480 students in grades 5 through 8. The building will achieve an energy efficiency certification from the New York State Energy Research and Development Authority (NYSERDA). The building will have 16 classrooms, a commercial kitchen and cafeteria, a gym with a regulation basketball court, and several outdoor terraces. The top floor will be dedicated for the arts, with music classrooms that open up into a concert-quality performance space seating an audience of 200+. The main floor will contain a vestibule, lobby, and elevator at grade. The remainder of the ground floor will be situated four feet below grade and will contain a gymnasium, locker room, and ancillary space for restrooms, mechanical rooms, and storage.

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

The Site was used for commercial purposes since 1927. A laundry and dyeing facility was located on 155A Sherman Avenue in 1927. According to the EDR City Directory the past uses of the Site are:

### 153 Sherman Avenue

- 1927- Jeffrey Thos Fruits and Vegetables and Piston Gus Butcher.
- 1938 to 1942- Homestead Grill.
- 1973- The Club Bolero.
- 1988- El Melibel Restaurant.
- 1998 to 2000- El Mudo Shipping & Furniture.
- 2006- 153 Pharmacy Corp.

### 155A Sherman Avenue

- 1927- Bluebird Cleaners and Dyers.
- 1983 to 1998- Chan's Kitchen

### 155 Sherman Avenue

- 1938 to 1942- Rosenbaum M Partner.
- 1983- Model Wiring Corporation.
- 1988 to 1993- Taino Liquor.
- 1998- Eca Liquor Inc.
- 2000- Eca Liquor Inc. and Chan's Kitchen.
- 2006- 24 Hour Emergency Locksmith, Chan's Kitchen, and G&G Hair Extension Supply.

### 157A Sherman Avenue

- 1927- Sobel Harry Dairy.

## 157 Sherman Avenue

- 1983- Esperanza Beauty Parlor and LMS Electrical Service.
- 1988 to 1998- Citident, Sherman Medical and Dental Office, and Mahesh Pharmacy.
- 2000- Quality Health Center.
- 2006- Citident and Delmonte Ramon MD.

Currently the Site does not have any structures and is a vacant lot.

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

CA Rich performed the following scope of work:

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

### **Summary of Environmental Findings**

1. Elevation of the property ranges from 12.8 to 15.4 feet.
2. Depth to groundwater ranges from seven to nine feet at the Site.
3. Groundwater flow is generally from southeast to northwest beneath the Site.
4. Depth to bedrock varies from approximately five to 45 feet at the Site.
5. The stratigraphy of the site, from the surface down, consists of five to ten feet of historic fill underlain by five feet of sand underlain by five to 15 feet of clayey silt underlain by five to 20 feet of till. The dipping bedrock surface ranges from just below ground surface at the southern portion of the Property to 45 feet below ground surface to the north.

6. Soil/fill samples results were compared to New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use Soil Cleanup Objectives and Restricted Residential Use Soil Cleanup Objectives (SCOs) as presented in 6NYCRR Part 375-6.8. Soil samples collected during the RI detected several Volatile Organic Compounds (VOC) at trace concentrations, all below their respective Unrestricted Use Soil Cleanup Objectives (SCOs). Two Semi-Volatile Organic Compounds (SVOC) including benzo(a)anthracene (max. of 1100 µg/kg), and benzo(b)fluoranthene (max. of 1300 µg/kg) were detected above their Restricted Residential Use SCOs. PCBs were not detected in any soil samples. Three pesticides including 4,4-DDE (max. of 27.2 µg/kg), 4,4-DDD (max. of 30.2 µg/kg), and 4,4-DDT (max. of 213 µg/kg) were detected exceeding their Unrestricted Use SCOs, but below their Restricted Residential Use SCOs. Several metals including barium (max. of 390 ppm), cadmium (max. of 58 ppm), chromium (max. of 37 ppm), copper (max. of 110 ppm), lead (max. of 230 ppm), mercury (max. of 0.49 ppm), nickel (max. of 74 ppm), and zinc (max. of 320 ppm), were detected above UUSCOs. Cadmium was also detected above its Restricted Residential Use SCO.
7. Groundwater samples results were compared to New York State 6NYCRR Part 703.5 Class GA groundwater quality standards (GQS). Groundwater samples collected during the RI showed that VOCs, SVOCs, pesticides, and PCBs were all below their respective GQSs. Several metals were identified in groundwater, but only magnesium (max. of 49.3ppm), manganese (max. of 0.5278ppm), and sodium (max. of 80.5ppm) were detected above their GQSs.
8. Soil vapor samples collected during the 2015 EBC RI were compared to the compounds listed in Table 3.1 Air Guideline Values Derived by the NYSDOH located in the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion dated October 2006. Soil vapor samples collected during the RI showed moderate levels of petroleum-related VOCs and elevated levels of chlorinated VOCs. The total concentration of petroleum-related VOCs (BTEX) ranged from 460.6 µg/m<sup>3</sup> to 1052.6 µg/m<sup>3</sup>. The chlorinated VOC, trichloroethylene (TCE) was detected in all three of the soil gas samples at concentrations ranging from 94 µg/m<sup>3</sup> to 132 µg/m<sup>3</sup>. Tetrachloroethylene (PCE) was detected in all three soil gas samples at concentrations ranging from 229 µg/m<sup>3</sup> to 397 µg/m<sup>3</sup>. Carbon tetrachloride was not detected. 1,1,1-

trichloroethane (TCA) was detected at maximum concentrations of 5.67  $\mu\text{g}/\text{m}^3$ .  
Concentrations of the chlorinated PCE and TCE were above the monitoring level ranges established within the NYSDOH soil vapor guidance matrix and require mitigation. .

# REMEDIAL INVESTIGATION REPORT

## 1.0 SITE BACKGROUND

TEP Charter School Assistance, Inc. (TEP CSA) has enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a 12,000-square foot site located at 153-157 Sherman Avenue in Inwood section of Manhattan, New York. The West Side Federation for Senior and Supportive Housing (WSFSSH) serves as the developer of the project on behalf of TEP CSA. Commercial use is proposed for the property. The RI work was performed between December 3, 2014 and January 14, 2015. This RIR summarizes the nature and extent of contamination and provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy that is protective of human health and the environment consistent with the use of the property pursuant to RCNY§ 43-1407(f).

### 1.1 Site Location and Current Usage

The Site is located at 153-157 Sherman Avenue in the Inwood section in Manhattan, New York and is identified as Block 2221 and Lot 5 on the New York City Tax Map. Figure 2 shows the Site location. The Site is 12000-square feet and is bounded by Sherman Avenue to the north, residential buildings to the south, public facilities and institutions to the east, and commercial and offices to the west. A map of the site boundary is shown in Figure 1. Currently, the Site is vacant and doesn't contain any structures.

### 1.2 Proposed Redevelopment Plan

The proposed future use of the Site will consist of six-story school building. Layout of the proposed site development is presented in Figure 3. The current zoning designation is R7-2. The proposed use is consistent with existing zoning for the property.

This project will result in the construction of a 62,000 square foot, 6-story middle school building to house The Equity Project Charter School (TEP). TEP serves 480 students in grades 5 through 8. The building will achieve an energy efficiency certification from the New York State Energy Research and Development Authority (NYSERDA). The building will have 16 classrooms, a commercial kitchen and cafeteria, a gym with a regulation basketball court, and several outdoor terraces. The top floor will be dedicated for the arts, with music classrooms that

open up into a concert-quality performance space seating an audience of 200+. The main floor will contain a vestibule, lobby, and elevator at grade. The remainder of the ground floor will be situated four feet below grade and will contain a gymnasium, locker room, and ancillary space for restrooms, mechanical rooms, and storage. The building will take up the entire lot and will not contain any side yards or parking lots. A rear yard will be installed on the property above the second floor rear setback. Landscaped areas will be located on terraces above grade.

The proposed building footprint will occupy an approximate area of 75 feet by 160 feet with a proposed cellar depth of approximately four feet. As the depth of water is approximately 7 - 8.5 feet below grade it is anticipated excavation will not be below the water table. The Site is currently a vacant lot with no permanent structures, and therefore, will not require any demolition.

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

According to the OER's SPEED application the Site is bound Sherman Avenue to the north, La Iglesia De Cristoe (zoned R7-2 for public facilities and institutions) and Pentecostal Church ET (zoned R7-2 for public facilities and institutions) to the east, a five-story residential building (zoned R7-2 for multi-family walk-up buildings), and a one-story commercial building with a Laundromat and dry cleaner (zoned R7-2 for commercial and office buildings) to the west. There are no hospitals within a 500-foot radius from the Site. There is one school within a 500-foot radius from the Site located at 186 Sherman Avenue, New York, New York.

## **2.0 SITE HISTORY**

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

The Site was used for commercial purposes since 1927. A laundry and dyeing facility was located on 155A Sherman Avenue in 1927. According to the EDR City Directory the past uses of the Site are:

#### 153 Sherman Avenue

- 1927- Jeffrey Thos Fruits and Vegetables and Piston Gus Butcher.
- 1938 to 1942- Homestead Grill.
- 1973- The Club Bolero.

- 1988- El Melibel Restaurant.
- 1998 to 2000- El Mudo Shipping & Furniture.
- 2006- 153 Pharmacy Corp.

155A Sherman Avenue

- 1927- Bluebird Cleaners and Dyers.
- 1983 to 1998- Chan's Kitchen

155 Sherman Avenue

- 1938 to 1942- Rosenbaum M Partner.
- 1983- Model Wiring Corporation.
- 1988 to 1993- Taino Liquor.
- 1998- Eca Liquor Inc.
- 2000- Eca Liquor Inc. and Chan's Kitchen.
- 2006- 24 Hour Emergency Locksmith, Chan's Kitchen, and G&G Hair Extension Supply.

157A Sherman Avenue

- 1927- Sobel Harry Dairy.

157 Sherman Avenue

- 1983- Esperanza Beauty Parlor and LMS Electrical Service.
- 1988 to 1998- Citident, Sherman Medical and Dental Office, and Mahesh Pharmacy.
- 2000- Quality Health Center.
- 2006- Citident and Delmonte Ramon MD.

Currently the Site does not have any structures and is a vacant lot.

According to the New York City Department of Finance (NYCDOF) ACRIS database for the subject Property the title was transferred from Irving N. Claremon to Golnat Realty Co. on

November 15, 2002; from Golnat Realty Co. to Golnat Realty LLC on June 8, 2005; and from Golnat Realty LLC to TEP Charter School Assistance, Inc. on December 9, 2010.

## **2.2 Previous Investigations**

The following environmental reports were prepared for the Site:

A Phase I Environmental Site Assessment was performed on the Property in October 2010 by GZA GeoEnvironmental of New York. Two Recognized Environmental Conditions (RECs) were identified:

- The historic use of the Site as a cleaners and dyers is listed as occupying the building at 155 Sherman Avenue in 1927; and
- A petroleum fill port is located on the sidewalk between 153 Sherman Avenue and 155 Sherman Avenue, which is a possible indication of the presence of an UST, or an AST in the basement. According to the FDNY records, a fuel tank was sealed/removed in 1985 from 153 Sherman Avenue.

Based on this information and neighboring property uses GZA suggested a Phase II Environmental Site Assessment be conducted. The Phase II Investigation is the subject of this Report.

A Geotechnical Engineering Report was performed on the Property in June 2014 by GZA GeoEnvironmental of New York. This report was created to determine structural practices to follow during construction of the new building.

## **2.3 Site Inspection**

On December 3, 2014, Thomas Brown of CA RICH inspected the Site. At the time of the inspection the Property was a vacant lot surrounded by a chain link fence. The lot contains some debris from dumping in the rear and contains some overgrown vegetation.

## **2.4 Areas of Concern**

Based on the Phase I Environmental Site Assessment performed on the Property in October 2010 by GZA GeoEnvironmental of New York, the property inspection, and the meeting conducted with OER, the following Areas of Concern (AOC's) have been identified:

1. The historic use of the Site as a cleaners and dyers is listed as occupying the building at 155 Sherman Avenue in 1927; and
2. A petroleum fill port is located on the sidewalk between 153 Sherman Avenue and 155 Sherman Avenue, which is a possible indication of the presence of an UST, or an AST in the basement. According to the FDNY records, a fuel tank was sealed/removed in 1985 from 153 Sherman Avenue.

Phase 1 Report is presented in Appendix A.

## **3.0 PROJECT MANAGEMENT**

### **3.1 Project Organization**

The Qualified Environmental Profession (QEP) responsible for preparation of this RIR is Eric Weinstock, QEP (CPG #7391).

### **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. Appendix B includes the subject Property's Health and Safety Plan.

### **3.3 Materials Management**

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

## **4.0 REMEDIAL INVESTIGATION ACTIVITIES**

CA Rich performed the following scope of work (CA Rich and MOER concluded that a geophysical investigation was not needed in the scope of work because previous demolition activities resulted in the removal of an empty tank noted near the location of the fill port reported in the Phase I):

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

## **4.1 Geophysical Investigation**

A Geophysical Investigation was not conducted on the Property, however, a Geotechnical Engineering Report was prepared for the Site in June 2014 by GZA GeoEnvironmental of New York.

## **4.2 Borings and Monitoring Wells**

### **Drilling and Soil Logging**

On December 3, 2014, six strategically placed soil borings were installed utilizing a Geoprobe™ drilling system. The soil borings were identified as SB-1 through SB-6.

Soil borings SB-1 through SB-3 (located in an area with a shallow depth to bedrock) were installed to a depth of five feet and samples were collected from 0-2 feet and 4-5 feet. These points were then turned into soil vapor points. Soil borings SB-4 through SB-6 were installed to a depth of 20 feet or until bedrock was encountered. Samples from these borings were collected from 0-2 feet and 8-9 feet with the exception of SB-4 which samples were collected from 0-2 feet and 11 feet due to poor sample recovery in the sample from 5-10 feet. These soil borings were then turned into permanent monitoring wells to be sampled at a later date.

Boring logs were prepared by Thomas Brown of CA Rich and are attached in Appendix D. A map showing the location of soil borings and monitor wells is shown in Figure 4.

### **Groundwater Monitoring Well Construction**

On December 3, 2014, three, two-inch diameter permanent groundwater monitoring wells (MW-1 through MW-3) were installed utilizing a Geoprobe™ drilling system. The depth of the shallow groundwater ranged from seven to eight and a half feet below sidewalk grade. All monitoring well locations were in accordance with an approved October 2014 Remedial Investigation Work Plan. Monitoring well MW-1 was installed on the northeast corner of the Property along Sherman Avenue. MW-2 was installed on the northwest corner of the Property along Sherman Avenue. MW-3 was installed towards the southern end of the Property where bedrock was deep enough for the installation of an overburden monitoring well.

Monitoring wells MW-1, MW-2, and MW-3 were installed through the shallow groundwater table into the uppermost zone of saturation. The monitoring wells were installed to a depth of between 18 feet and 20 feet below grade. During drilling, soil samples were continuously collected and examined for evidence of contamination with a PID and for evidence of chemical staining. No PID readings were identified during monitoring well installation. Monitoring well construction consisted of 10-15 feet of two-inch diameter schedule 40 PVC well screen and approximately 3-5 feet of two-inch diameter schedule 40 PVC riser. Each well was finished with a bentonite seal, and a watertight j-plug. The wells were developed immediately following the installation of each well.

Groundwater monitoring logs are attached in Appendix D. Monitor well locations are shown in Figure 4.

### **Survey**

The locations and elevations of the monitoring wells were surveyed by Montrose Surveying Co., LLP in accordance with the Remedial Investigation Work Plan dated October 2014.

### **Water Level Measurement**

The depth to water was measured in each well using an electronic water level indicator. Water level data is included in Appendix D.

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

Sampling performed as part of the field investigation was conducted for all Areas of Concern and also considered other means for bias of sampling based on professional judgment, area history, discolored soil, stressed vegetation, drainage patterns, field instrument measurements, odor, or other field indicators. 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 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 selection of a final remedy.

## **Soil Sampling**

Twelve soil samples were collected for chemical analysis during this RI. Data on soil sample collection for chemical analyses, including dates of collection and sample depths, is reported in Table 1 through Table 4. Figure 6 shows the location of samples collected in this investigation with exceedances over NYCRR Part 375 Commercials Use Limits. Laboratories and analytical methods are shown below. Samples were collected utilizing Geoprobe's, direct push macro core sample sleeves. Samples were stored on ice pending shipment to Alpha Analytical Laboratories of Mahway, New Jersey. All samples were uniquely identified and all information associated with the samples were recorded utilizing standard chain-of-custody sampling protocols.

## **Groundwater Sampling**

On December 3, 2014, three, two-inch permanent groundwater monitoring wells (MW-1 through MW-3) were installed utilizing a Geoprobe™ drilling system. The depth of the shallow groundwater ranged from seven to eight and a half feet below sidewalk grade. All monitoring well locations were in accordance with an approved October 2014 Remedial Investigation Work Plan. Monitoring well MW-1 was installed on the northeast corner of the Property along Sherman Avenue. MW-2 was installed on the northwest corner of the Property along Sherman Avenue. MW-3 was installed towards the southern end of the Property where bedrock was deep enough.

Three groundwater samples were collected on December 30, 2014 for chemical analysis for this RI. Additional samples for metals analysis were collected on January 14, 2015. Groundwater sample collection data is reported in Table 6 through Table 9. Sampling logs with information on sampling of groundwater monitor wells are included in Appendix D. Figure 7 shows the location of groundwater sampling with exceedances over NY TOGS. Laboratories and analytical methods are shown below. Samples were collected utilizing a Whale™ Submersible Pump. The sampling pump and water level indicator were decontaminated before and in between each monitoring well sample collection using an Alconox detergent rinse followed by a tap water rinse to prevent cross-contamination between the monitoring wells. Samples were stored on ice pending shipment to Alpha Analytical Laboratories of Mahwah, New Jersey. All samples were uniquely identified and all information associated with the samples were recorded utilizing standard chain-of-custody sampling protocols.

## Soil Vapor Sampling

On December 3, 2014, three soil vapor points (designated SV-1 through SV-3) were installed to five feet below grade using a Geoprobe™. The soil vapor points were constructed of a stainless steel screen connected to ¼-inch poly tubing. The annular space around the screened zone was filled with clean No. 2 Morie sand. Prior to sampling, three volumes were purged from each soil vapor point. An SKC Pocket Pump™, which includes both a flow meter and a flow totalizer, was used to assure that the purge rate did not exceed 0.2 liters per minute; and that the required volume was purged from the sample point. The points were completed with temporary caps and were removed after the testing was completed.

On December 3, 2014, the soil vapor points were sampled in accordance with New York State Department of Health's (NYSDOH) prevailing Guidance for Evaluating Soil Vapor Intrusion in the State of New York dated October 2006. In addition, the soil vapor samples were chemically analyzed using the procedures and protocols described in the Sample Preparation, and Analysis Requirements of EPA Compendium Method T0-15. Prior to collecting the soil vapor samples, the sample tubing was purged using a vacuum pump set at a rate of approximately 0.2 liters per minute. A helium tracer gas was used to enrich the atmosphere around the sampling location. The tracer gas verifies that interior ambient air is not inadvertently drawn down into the soil vapor sample. Both the purge volume from the sampling tube and the helium-enriched air within the container was screened for the tracer gas using a Gowmac® Model 21-250 gas leak detector.

Following the purging and tracer gas verification steps, the soil vapor samples were collected using the SUMMA® canister set to fill at a rate of not more than 0.2 liters per minute with an approximate fill time of 2-hours. Samples were shipped to Alpha Analytical Laboratories of Mahwah, New Jersey. All samples were uniquely identified and all information associated with the samples were recorded utilizing standard chain-of-custody sampling protocols.

Soil vapor sampling locations are shown in Figure 4. Soil vapor sample collection data are reported in Table 5. Soil vapor sampling logs are included in Appendix D. Methodologies used for soil vapor assessment conform to the *NYS DOH Final Guidance on Soil Vapor Intrusion, October 2006*.

## Chemical Analysis

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

<b>Factor</b>	<b>Description</b>
Quality Assurance Officer	The chemical analytical quality assurance was directed by Bryan Vangel (Soil), Cynthia McQueen (Groundwater), and Christopher J. Anderson (Soil Vapor) of Alpha Analytical Laboratories
Chemical Analytical Laboratory	The chemical analytical laboratory used in the RI is NYS ELAP certified and was Alpha Analytical Laboratory
Chemical 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 analytical methods:</p> <ul style="list-style-type: none"> <li>• VOCs by TO-15 VOC parameters..</li> </ul>

## **Results of Chemical Analyses**

Laboratory data for soil, soil vapor, and groundwater are summarized in Table 1-9, respectively. Laboratory data deliverables for all samples evaluated in this RIR are provided in digital form in Appendix E-G.

## **5.0 ENVIRONMENTAL EVALUATION**

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

Based on the information obtained during this RI, the Site is underlain from the surface to groundwater with native tan/ brown medium grain sand with well-rounded pebbles to groundwater. The depth of the shallow groundwater ranged from seven to nine feet below grade.

#### **Stratigraphy**

The site is underlain by native tan/ brown medium grain sand with well-rounded pebbles and from grade to groundwater at the Site. Shallow bedrock was encountered on the southern end of the Site.

#### **Hydrogeology**

The depth to groundwater ranged from seven to nine feet below surface grade. The groundwater flow at the Site is assumed to be to the northwest. Water level data for all monitor wells is included in Figure 5 and Appendix D.

### **5.2 Soil Chemistry**

The soil sampling results were compared to the New York State Department of Environmental Conservation (NYSDEC) Part 375 Soil Cleanup Objectives (SCOs) for Commercial Use. The soil borings were identified as SB-1 through SB-6.

The results of the chemical analysis of soil from the six soil borings indicate the following:

Soil/fill samples results were compared to New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use Soil Cleanup Objectives and Restricted Residential Use Soil Cleanup Objectives (SCOs) as presented in 6NYCRR Part 375-6.8. Soil samples collected during the RI detected several did not show any Volatile Organic Compounds (VOC) at trace concentrations, all below their respective exceeding 6NYCRR Part 375-6.8 Track 2 Restricted Residential Unrestricted Use Soil Cleanup Objectives (SCOs). Acetone and tetrachloroethene were detected below their RRSCOs. double check analytes detected above Part 375 Commercial Use Soil Cleanup Objectives. Two Semi-Volatile Organic Compounds (SVOC) including benzo(a)anthracene (max. of 1100 µg/kg), and benzo(b)fluoranthene (max. of 1300 µg/kg) were detected above their Restricted Residential Use SCOs. PCBs were not detected in any soil samples. Three pesticides including 4,4-DDE (max. of 27.2 µg/kg), 4,4-DDD (max. of 30.2 µg/kg), and 4,4-DDT (max. of 213 µg/kg) were detected exceeding their Unrestricted Use

SCOs (UUSCO), but underbelow their Restricted Residential Use SCOs. Several metals including barium (max. of 390 ppm), cadmium (max. of 58 ppm), chromium (max. of 37 ppm), copper (max. of 110 ppm), lead (max. of 230 ppm), mercury (max. of 0.49 ppm), nickel (max. of 74 ppm), and zinc (max. of 320 ppm), were detected above UUSCOs. Cadmium was also detected above its Restricted Residential Use SCO..

There were no detections reported above Commercial Use in any of the soil borings located within the current building foundation with the exception of Cadmium. Data collected during the RI are sufficient to delineate the vertical and horizontal distribution of contaminants in soil at the Site. A summary of data for chemical analyses performed on soil samples is included in Tables 1 through 4. Figure 6 shows the location and posts the values for soil/fill that exceed the 6NYCRR Part 375-6.8 Track 2 Soil Cleanup Objectives.

### **5.3 Groundwater Chemistry**

The groundwater sample results were compared to NYSDEC Technical & Operational Guidance Series (TOGS) Ambient Water Quality Standards.

The results of the chemical analysis of groundwater from the three monitoring wells indicate the following:

Groundwater samples results were compared to New York State 6NYCRR Part 703.5 Class GA groundwater quality standards (GQS). Groundwater samples collected during the RI showed no exceedances of that VOCs, SVOCs, pesticides, and or PCBs were all below their respective GQSs. mSeveral metals were identified in groundwater, but only Three metals including etals above TOGS Standards in all three monitoring wells. The metals include Mmagnesium (max. of 49.3ppm), Mmanganese (max. of 0.5278ppm), and Ssodium (max. of 80.5ppm) were detected above their GQSsGroundwater Quality Standards, all of which are naturally occurring in the environment.

Data collected during the RI are sufficient to delineate the distribution of contaminants in groundwater at the Site. A summary of data for chemical analyses performed on groundwater samples is included in Tables 6 through 9. Figure 7 shows the location and posts the values for groundwater that exceed the New York State 6NYCRR Part 703.5 TOGS groundwater standards.

## 5.4 Soil Vapor Chemistry

According to the NYSDOH Guidance, New York State does not have any standards, criteria or guidance for soil vapor. Therefore, NYSDOH Matrices were developed for carbon tetrachloride, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, trichloroethylene, and vinyl chloride.

The results of the chemical analysis of the four soil vapor point samples indicate the following:

Soil vapor samples collected during the 2015 EBC RI were compared to the compounds listed in Table 3.1 Air Guideline Values Derived by the NYSDOH located in the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion dated October 2006. Soil vapor samples collected during the RI showed moderate levels of petroleum-related VOCs and elevated levels of chlorinated VOCs. The total concentration of petroleum-related VOCs (BTEX) ranged from 460.6  $\mu\text{g}/\text{m}^3$  to 1052.6  $\mu\text{g}/\text{m}^3$ . The chlorinated VOC, trichloroethylene (TCE) was detected in all three of the soil gas samples at concentrations ranging from 94  $\mu\text{g}/\text{m}^3$  to 132  $\mu\text{g}/\text{m}^3$ . Tetrachloroethylene (PCE) was detected in all three soil gas samples at concentrations ranging from 229  $\mu\text{g}/\text{m}^3$  to 397  $\mu\text{g}/\text{m}^3$ . Carbon tetrachloride was not detected. 1,1,1-trichloroethane (TCA) was detected at maximum concentrations of 5.67  $\mu\text{g}/\text{m}^3$ . Concentrations of the chlorinated PCE and TCE were above the monitoring level ranges established within the NYSDOH soil vapor guidance matrix and require mitigation.

Data collected during the RI are sufficient to delineate the distribution of contaminants in soil vapor at the Site. A summary table of data for chemical analyses performed on soil vapor samples is included in Table 5. Figure 8 shows the location for soil vapor samples and posts the values for soil vapor that exceeds the NYSDOH decision matrices.

## 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.

## **5.7 Recommendations**

A Remedial Action Work Plan (RAWP) should be prepared. The RAWP should address how the occurrence of VOCs in the soil vapor will be addressed.

## 6.0 Additional Information

### Construction Details for Soil Borings and Monitoring Wells

	Identification Number	Date of construction	Total Depth	Diameter	Screened interval (Elevation Range)	Construction Material (PVC, steel, etc)
Soil Borings	SB-1	12/3/14	5 feet	2-inch	Not applicable	Not applicable
	SB-2	12/3/14	5 feet	2-inch		
	SB-3	12/3/14	5 feet	2-inch		
	SB-4	12/3/14	20 feet	2-inch		
	SB-5	12/3/14	18 feet	2-inch		
	SB-6	12/3/14	20 feet	2-inch		
Monitor Wells	MW-1	12/3/14	19.67 feet	two-inch	Five to 20 ft	PVC
	MW-2	12/3/14	18.51 feet	two-inch	Three to 18 ft	PVC
	MW-3	12/3/14	15.00 feet	two-inch	Five to 15 ft	PVC

### Groundwater Level Data

Monitoring Well ID No.	Date	Water Elevation
MW-1	1/14/15	5.00 feet
MW-2	3/24/14	4.45 feet
MW-3	3/24/14	5.60 feet

### Site-Specific Standards, Criteria and Guidance

- TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations
- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (draft October 2004 or subsequent final draft)

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# FIGURES

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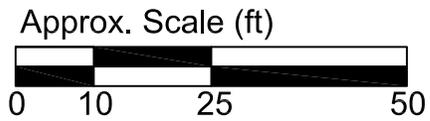
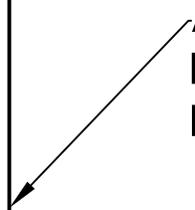
Sherman Avenue

Laundromat and  
Dry Cleaners

Religious Facility



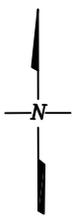
Approximate  
Property  
Boundary



**CA RICH CONSULTANTS, INC.**

Environmental Specialists Since 1982  
17 Dupont Street, Plainview, New York 11803

TITLE: <p>Site Map</p>		DATE: 1/19/2015
FIGURE: 1		SCALE: As Shown
DRAWING NO: 2014-6	153-157 Sherman Avenue New York, NY	DRAWN BY: T.R.B.
		APPR. BY: E.A.W.

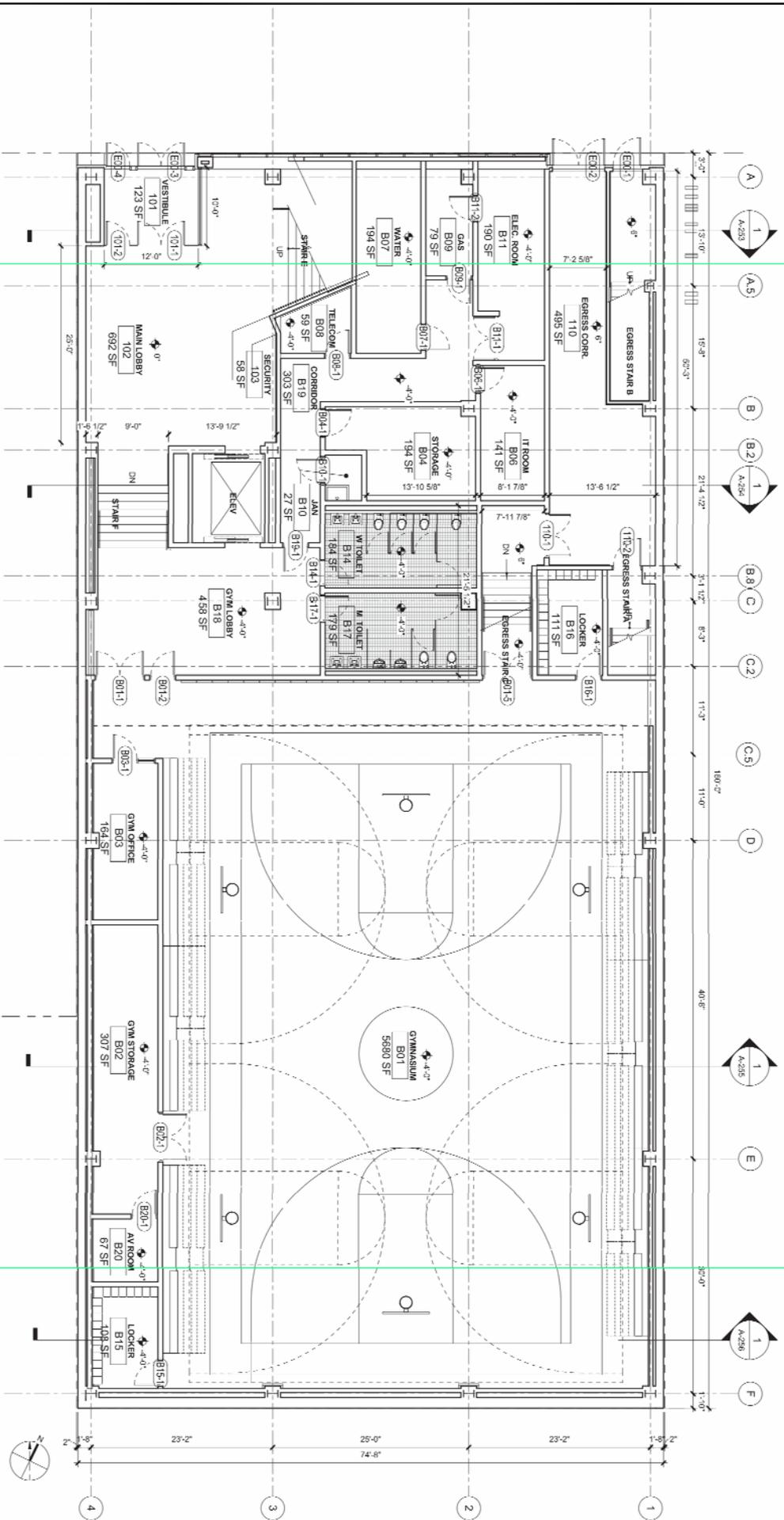


**CA RICH CONSULTANTS, INC.**

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 17 Dupont Street, Plainview, New York 11803

TITLE:		DATE:	
Site Location Map		10/2/2014	
FIGURE:		SCALE:	
2		As Shown	
DRAWING NO:		DRAWN BY:	
2014-1		T.R.B.	
153-157 Sherman Avenue New York New York		APPR. BY:	
		E.A.W.	

Source: USGS Topographic Maps Yonkers, NJ-NY (1979) &  
 Central Park, NY-NJ (1979) Original Scale 1:24,000 (1"=2,000F T.).



1 GROUND/GYM FLOOR  
 1/8" = 1'-0"

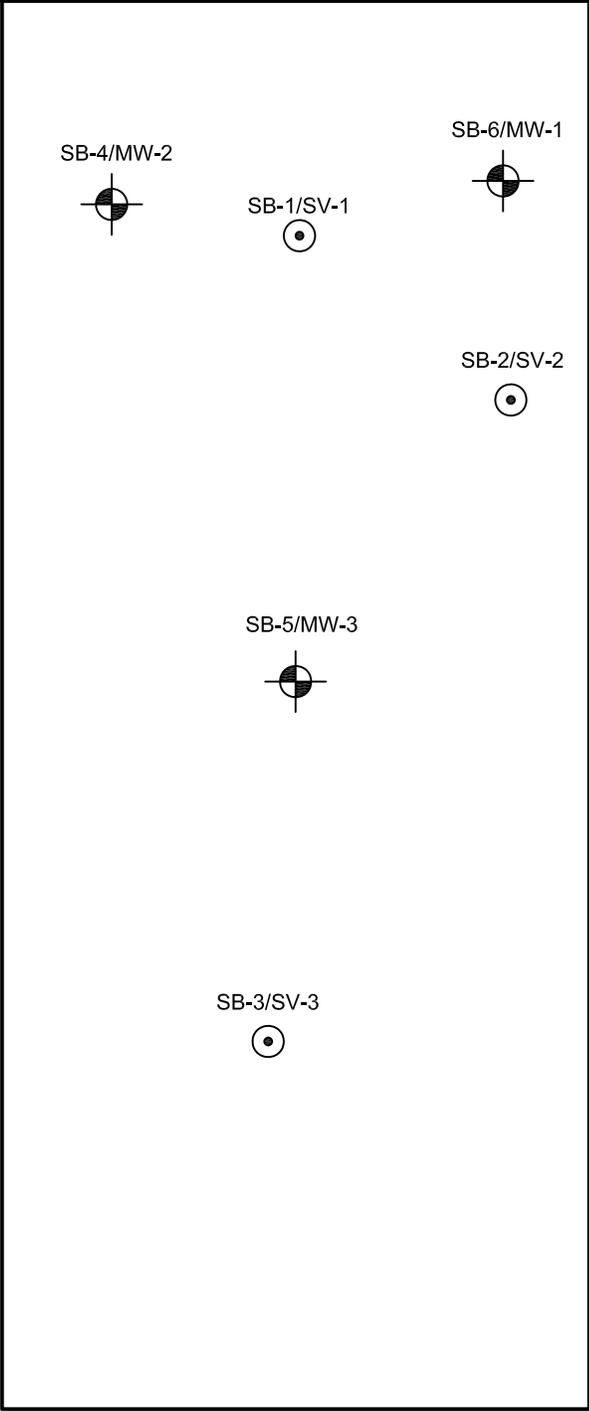
**CA RICH CONSULTANTS, INC.**

Environmental Specialists Since 1982  
 17 Dupont Street, Plainview, New York 11803

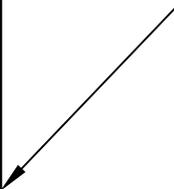
**Redevelopment Plan**

TITLE:		DATE:	
FIGURE: 3		1/23/2015	
DRAWING NO: 2014-8		SCALE: As Shown	
153-157 Sherman Avenue New York, NY		DRAWN BY: T.R.B.	
		APPR. BY: E.A.W.	

# Sherman Avenue



Approximate  
Property  
Boundary



Legend

⊙ Soil Boring and Soil Vapor Point

⊕ Soil Boring and Monitoring well

Approx. Scale (ft)



**CA RICH CONSULTANTS, INC.**

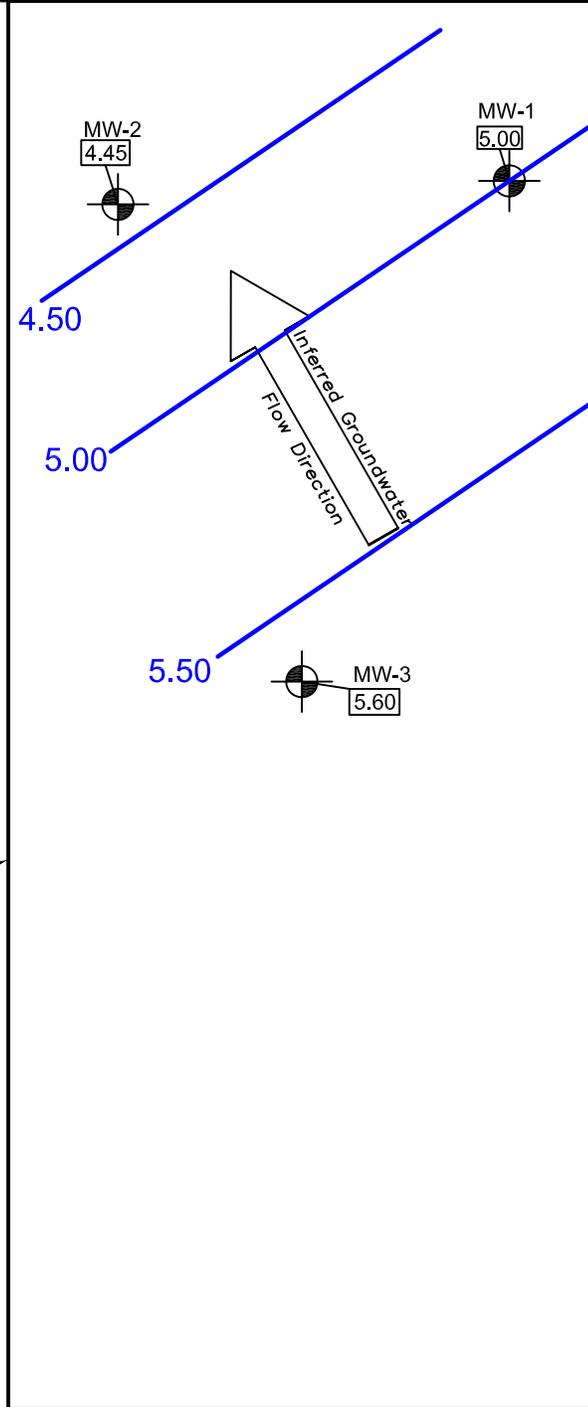
Environmental Specialists Since 1982  
17 Dupont Street, Plainview, New York 11803

TITLE: Location of Soil Boring, Wells, and Soil Vapor Samples		DATE: 12/31/2014
FIGURE: 4		SCALE: As Shown
DRAWING NO: 2014-4	153-157 Sherman Avenue New York, NY	DRAWN BY: T.R.B.
		APPR. BY: E.A.W.

# Sherman Avenue

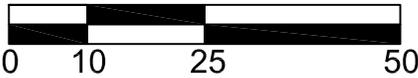


Well No.	Elevation Top of Casing (In Feet)	Depth to Water (In Feet)	Elevation of Water Table (In Feet)
1	13.17	8.17	5.00
2	13.00	8.55	4.45
3	12.98	7.38	5.60



Approximate  
Property  
Boundary

Approx. Scale (ft)



### Legend

Monitoring well

**5.50** — Groundwater Contour and Elevation

### Note:

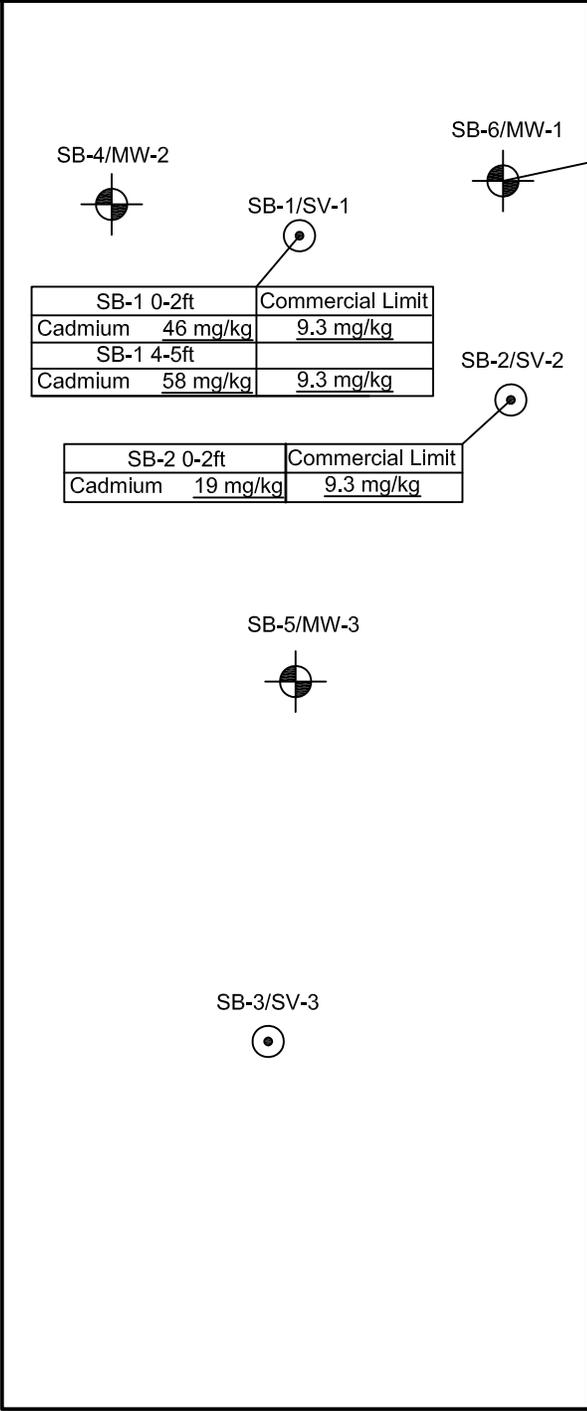
Based on survey by Montrose Surveying Co. LLP.,  
1/14/2014.

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17 Dupont Street, Plainview, New York 11803

TITLE: Groundwater Flow Map		DATE: 1/19/2015
FIGURE: 5		SCALE: As Shown
DRAWING NO: 2014-7	153-157 Sherman Avenue New York, NY	DRAWN BY: T.R.B.
		APPR. BY: E.A.W.

# Sherman Avenue



SB-1 0-2ft	Commercial Limit
Cadmium 46 mg/kg	9.3 mg/kg
SB-1 4-5ft	
Cadmium 58 mg/kg	9.3 mg/kg

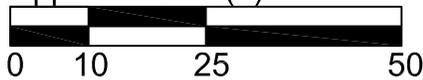
SB-2 0-2ft	Commercial Limit
Cadmium 19 mg/kg	9.3 mg/kg

SB-6 0-2ft	Commercial Limit
Cadmium 28 mg/kg	9.3 mg/kg
SB-1 8-9ft	
Cadmium 27 mg/kg	9.3 mg/kg

### Legend

- Soil Boring and Soil Vapor Point
- Soil Boring and Monitoring well

Approx. Scale (ft)



### CA RICH CONSULTANTS, INC.

Environmental Specialists Since 1982  
17 Dupont Street, Plainview, New York 11803

TITLE: Map of Soil Chemistry Exceedances		DATE: 12/31/2014
		SCALE: As Shown
FIGURE: 6	153-157 Sherman Avenue New York, NY	DRAWN BY: T.R.B.
DRAWING NO: 2014-3		APPR. BY: E.A.W.

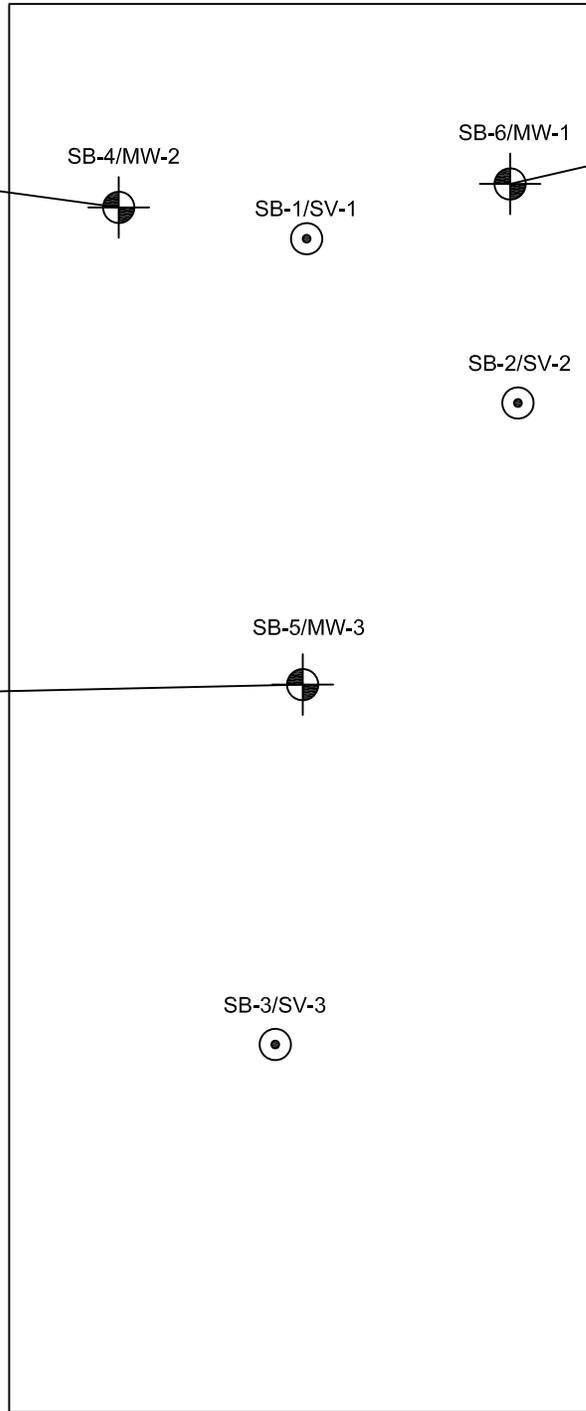
# Sherman Avenue



MW-2	
Dissolved Metals	NY TOGS
Magnesium <u>36.1 mg/l</u>	<u>35 mg/l</u>
Sodium <u>24.7 mg/l</u>	<u>20 mg/l</u>

MW-1	
Dissolved Metals	NY TOGS
Magnesium <u>44.2 mg/l</u>	<u>35 mg/l</u>
Manganese <u>0.5278 mg/l</u>	<u>0.3 mg/l</u>
Sodium <u>80.5 mg/l</u>	<u>20 mg/l</u>

MW-3	
Dissolved Metals	NY TOGS
Magnesium <u>49.3 mg/l</u>	<u>35 mg/l</u>
Sodium <u>20.7 mg/l</u>	<u>20 mg/l</u>



## Legend

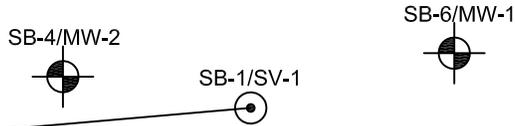
- Soil Boring and Soil Vapor Point
- Soil Boring and Monitoring well

## CA RICH CONSULTANTS, INC.

Environmental Specialists Since 1982  
17 Dupont Street, Plainview, New York 11803

TITLE: Map of Groundwater Chemistry Exceedances		DATE: 1/22/2015
FIGURE: 7		SCALE: As Shown
DRAWING NO: 2014-5	153-157 Sherman Avenue New York, NY	DRAWN BY: T.R.B.
		APPR. BY: E.A.W.

# Sherman Avenue



SV-1	NYSDOH Matrix 1/Matrix 2 Levels
Tetrachloroethene <u>229 ug/m3</u>	>100 ug/m3
Trichloroethene <u>94.6 ug/m3</u>	>50 ug/m3
1,1-Dichloroethene <u>0.821 ug/m3</u>	>100 ug/m3
Vinyl Chloride <u>8.74 ug/m3</u>	>50 ug/m3

SV-2	NYSDOH Matrix 1/Matrix 2 Levels
Tetrachloroethene <u>397 ug/m3</u>	>100 ug/m3
Trichloroethene <u>117 ug/m3</u>	>50 ug/m3
1,1-Dichloroethene <u>ND</u>	>100 ug/m3
Vinyl Chloride <u>7.44 ug/m3</u>	>50 ug/m3



SV-3	NYSDOH Matrix 1/Matrix 2 Levels
Tetrachloroethene <u>325 ug/m3</u>	>100 ug/m3
Trichloroethene <u>132 ug/m3</u>	>50 ug/m3
1,1-Dichloroethene <u>ND</u>	>100 ug/m3
Vinyl Chloride <u>ND</u>	>50 ug/m3

### Legend

Soil Boring and Soil Vapor Point

Soil Boring and Monitoring well

Approx. Scale (ft)



## CA RICH CONSULTANTS, INC.

Environmental Specialists Since 1982  
17 Dupont Street, Plainview, New York 11803

TITLE: <p style="text-align: center;">Map of Soil Vapor Chemistry Results</p>		DATE: 12/31/2014
FIGURE: 8		SCALE: As Shown
DRAWING NO: 2014-2	153-157 Sherman Avenue New York, NY	DRAWN BY: T.R.B.
		APPR. BY: E.A.W.

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# TABLES

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**Table 3**  
**Summary of Pesticides and PCBs in Soil Samples**  
**153-157 Sherman Avenue**  
**New York, NY**

LOCATION			SB-1 0-2FT	SB-1 4-5FT	SB-2 0-2FT	SB-2 4-5FT	SB-3 0-2FT	SB-3 4-5FT	SB-4 0-2FT	SB-4 11FT	SB-5 0-2FT	SB-5 8-9FT	SB-5 8-9FT	SB-6 0-2FT	SB-6 8-9FT
SAMPLING DATE	*NY-Comm.	Units	12/3/2014	12/3/2014	12/3/2014	12/3/2014	12/3/2014	12/3/2014	12/3/2014	12/3/2014	12/3/2014	12/3/2014	12/3/2014	12/3/2014	12/3/2014
			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Pesticides															
Delta-BHC	500000	ug/kg	1.72 U	1.69 U	1.69 U	1.67 U	1.82 U	1.87 U	1.71 U	1.81 U	1.69 U	1.8 U	-	1.69 U	1.78 U
Lindane	9200	ug/kg	0.717 U	0.706 U	0.703 U	0.697 U	0.758 U	0.779 U	0.713 U	0.754 U	0.703 U	0.75 U	-	0.705 U	0.743 U
Alpha-BHC	3400	ug/kg	0.717 U	0.706 U	0.703 U	0.697 U	0.758 U	0.779 U	0.713 U	0.754 U	0.703 U	0.75 U	-	0.705 U	0.743 U
Beta-BHC	3000	ug/kg	1.72 U	1.69 U	1.69 U	1.67 U	1.82 U	1.87 U	1.71 U	1.81 U	1.69 U	1.8 U	-	1.69 U	1.78 U
Heptachlor	15000	ug/kg	0.625 J	0.847 U	0.843 U	0.837 U	0.91 U	0.935 U	0.856 U	0.905 U	0.844 U	0.9 U	-	0.846 U	1.15 U
Aldrin	680	ug/kg	1.72 U	1.69 U	1.69 U	1.67 U	1.82 U	1.87 U	1.71 U	1.81 U	1.69 U	1.8 U	-	1.69 U	1.78 U
Heptachlor epoxide	NA	ug/kg	3.23 U	3.18 U	1.03 J	1.2 J	3.41 U	3.61 P	3.21 U	3.39 U	1 J	3.38 U	-	3.17 U	3.34 U
Endrin	89000	ug/kg	0.717 U	0.706 U	0.703 U	0.697 U	0.758 U	0.779 U	0.713 U	0.754 U	0.703 U	0.75 U	-	0.705 U	0.743 U
Endrin ketone	NA	ug/kg	1.72 U	1.69 U	1.69 U	1.67 U	1.82 U	1.87 U	1.71 U	1.81 U	1.69 U	1.8 U	-	1.69 U	1.78 U
Dieldrin	1400	ug/kg	1.08 U	1.06 U	1.05 U	1.04 U	1.14 U	10.2 P	3.13	1.13 U	1.05 U	1.12 U	-	1.06 U	1.11 U
4,4'-DDE	62000	ug/kg	1.37 J	0.732 J	1.58 J	5.25 J	1.82 U	27.2 U	18	1.81 U	1.44 J	12.5 U	-	1.39 J	2.7 U
4,4'-DDD	92000	ug/kg	1.26 J	1.03 J	2.25 J	8.87 P	1.82 U	3.6	30.2	1.81 U	1.69 U	4.6 P	-	1.28 J	2.94 P
4,4'-DDT	47000	ug/kg	7.94	7.87	28.2	79.3	3.41 U	49.6 P	21.7	3.39 U	17.6	213 E	168	16.9	33.2
Endosulfan I	200000	ug/kg	1.72 U	1.69 U	1.69 U	1.67 U	1.82 U	1.87 U	1.71 U	1.81 U	1.69 U	1.8 U	-	1.69 U	1.78 U
Endosulfan II	200000	ug/kg	1.72 U	1.69 U	1.69 U	1.67 U	1.82 U	1.87 U	1.71 U	1.81 U	1.69 U	1.8 U	-	1.69 U	1.78 U
Endosulfan sulfate	200000	ug/kg	0.717 U	0.706 U	0.703 U	0.697 U	0.758 U	0.779 U	0.713 U	0.754 U	0.703 U	0.75 U	-	0.705 U	0.743 U
Methoxychlor	NA	ug/kg	3.23 U	3.18 U	3.16 U	3.14 U	3.41 U	3.5 U	3.21 U	3.39 U	3.16 U	3.38 U	-	3.17 U	3.34 U
Toxaphene	NA	ug/kg	32.3 U	31.8 U	31.6 U	31.4 U	34.1 U	35 U	32.1 U	33.9 U	31.6 U	33.8 U	-	31.7 U	33.4 U
cis-Chlordane	24000	ug/kg	1.5 J	2.21	PI	2.64	2.97 PI	2.27 U	3.15 PI	2.14 U	2.26 U	2.11 U	-	3.44 PI	3.62
trans-Chlordane	NA	ug/kg	1.98 J	3.61	2.67 PI	4.28 PI	2.27 U	2.08 J	2.14 U	2.26 U	2.11 U	2.25 U	-	3.93 PI	3.13 PI
Chlordane	NA	ug/kg	13.5 J	21.8	14.4 PI	28.2 PI	14.8 U	17.7 PI	13.9 U	14.7 U	13.7 U	14.6 U	-	24.6 PI	22.7 PI
PCBs															
Aroclor 1016	1000	ug/kg	36.4 U	35 U	36 U	36.5 U	38.4 U	38.2 U	35.2 U	36.5 U	34.4 U	37 U	-	35.9 U	38.1 U
Aroclor 1221	1000	ug/kg	36.4 U	35 U	36 U	36.5 U	38.4 U	38.2 U	35.2 U	36.5 U	34.4 U	37 U	-	35.9 U	38.1 U
Aroclor 1232	1000	ug/kg	36.4 U	35 U	36 U	36.5 U	38.4 U	38.2 U	35.2 U	36.5 U	34.4 U	37 U	-	35.9 U	38.1 U
Aroclor 1242	1000	ug/kg	36.4 U	35 U	36 U	36.5 U	38.4 U	38.2 U	35.2 U	36.5 U	34.4 U	37 U	-	35.9 U	38.1 U
Aroclor 1248	1000	ug/kg	36.4 U	35 U	36 U	36.5 U	38.4 U	38.2 U	35.2 U	36.5 U	34.4 U	37 U	-	35.9 U	38.1 U
Aroclor 1254	1000	ug/kg	36.4 U	35 U	36 U	36.5 U	38.4 U	38.2 U	35.2 U	36.5 U	34.4 U	37 U	-	35.9 U	38.1 U
Aroclor 1260	1000	ug/kg	36.4 U	35 U	7.95 J	36.5 U	38.4 U	38.2 U	35.2 U	36.5 U	34.4 U	37 U	-	35.9 U	38.1 U
Aroclor 1262	1000	ug/kg	36.4 U	35 U	36 U	36.5 U	38.4 U	38.2 U	35.2 U	36.5 U	34.4 U	37 U	-	35.9 U	38.1 U
Aroclor 1268	1000	ug/kg	36.4 U	35 U	36 U	36.5 U	38.4 U	38.2 U	35.2 U	36.5 U	34.4 U	37 U	-	35.9 U	38.1 U
PCBs, Total	NA	ug/kg	36.4 U	35 U	7.95 J	36.5 U	38.4 U	38.2 U	35.2 U	36.5 U	34.4 U	37 U	-	35.9 U	38.1 U

**Notes:**  
U - Not Detected  
J - Estimated Value  
NA - Not Available  
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument  
P - The RPD between the results for the two columns exceeds the method-specified criteria  
I - The lower value for the two columns has been reported due to obvious interference

\*6 NYCRR Part 375; Subparts 375-1 to 375-4 & 375-6;  
Table 375-6.8(a): Commercial Use Soil Cleanup Objectives

**Table 4**  
**Summary of Metals in Soil Samples**  
**153-157 Sherman Avenue**  
**New York, NY**

LOCATION SAMPLING DATE	*NY-Comm.	Units	SB-1 0-2FT 12/3/2014	SB-1 4-5FT 12/3/2014	SB-2 0-2FT 12/3/2014	SB-2 4-5FT 12/3/2014	SB-3 0-2FT 12/3/2014	SB-3 4-5FT 12/3/2014	SB-4 0-2FT 12/3/2014	SB-4 11FT 12/3/2014	SB-5 0-2FT 12/3/2014	SB-5 8-9FT 12/3/2014	SB-6 0-2FT 12/3/2014	SB-6 8-9FT 12/3/2014
			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Total Metals														
Aluminum, Total	NA	mg/kg	6000	6300	5200	5000	10000	9000	5700	7100	8000	7500	5500	6500
Antimony, Total	NA	mg/kg	4.2 U	4.3 U	4.4 U	4.4 U	4.6 U	4.5 U	4.3 U	4.5 U	4.3 U	4.6 U	4.2 U	4.5 U
Arsenic, Total	16	mg/kg	2.2	2.4	1.4	7.5	2.1	6.4	2.4	2	1.7	1.4	1.9	2.4
Barium, Total	400	mg/kg	68	74	76	97	42	390	81	72	42	29	69	77
Beryllium, Total	590	mg/kg	0.35 J	0.35 J	0.28 J	0.28 J	0.42 J	0.33 J	0.27 J	0.38 J	0.28 J	0.31 J	0.33 J	0.37 J
Cadmium, Total	9.3	mg/kg	46	58	19	0.99	0.93 U	0.48 J	1.5	0.9 U	0.69 J	0.91 U	28	27
Calcium, Total	NA	mg/kg	2600	1800	3700	12000	1500	15000	27000	22000	11000	1700	2900	8200
Chromium, Total	NA	mg/kg	46	48	30	19	17	17	17	15	13	16	37	36
Cobalt, Total	NA	mg/kg	6	5.6	6.1	6.9	6.8	5.6	7	6.8	3.5	6.7	5.8	6.3
Copper, Total	270	mg/kg	110	110	72	22	13	42	22	19	11	14	77	81
Iron, Total	NA	mg/kg	17000	19000	14000	11000	17000	17000	13000	15000	10000	14000	18000	18000
Lead, Total	1000	mg/kg	33	30	35	220	7.5	230	44	3.2 J	47	2.2 J	29	41
Magnesium, Total	NA	mg/kg	2000	2200	3400	4400	3300	10000	12000	7300	3600	3200	2400	3900
Manganese, Total	10000	mg/kg	320	290	290	280	230	230	230	370	97	290	330	330
Mercury, Total	2.8	mg/kg	0.05 J	0.16	0.17	0.13	0.16	0.49	0.13	0.08 U	0.22	0.03 J	0.13	0.13
Nickel, Total	310	mg/kg	52	48	55	63	12	18	74	14	10	14	37	47
Potassium, Total	NA	mg/kg	1300	1300	1300	1200	750	890	1400	1800	890	1400	1200	1300
Selenium, Total	1500	mg/kg	1.6 J	1.5 J	0.61 J	0.31 J	0.43 J	0.72 J	0.42 J	0.36 J	0.53 J	1.8 U	0.95 J	1 J
Silver, Total	1500	mg/kg	0.85 U	0.86 U	0.87 U	0.19 J	0.93 U	0.91 U	0.86 U	0.9 U	0.86 U	0.91 U	0.84 U	0.9 U
Sodium, Total	NA	mg/kg	190	110 J	69 J	100 J	36 J	64 J	270	120 J	97 J	46 J	65 J	110 J
Thallium, Total	NA	mg/kg	1.7 U	1.7 U	1.7 U	1.8 U	1.8 U	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U
Vanadium, Total	NA	mg/kg	22	26	22	15	19	39	17	18	16	12	20	25
Zinc, Total	10000	mg/kg	83	84	76	80	47	320	84	37	59	45	70	91

**Notes:**  
U - Not Detected  
J - Estimated Value  
NA - Not Available

- value exceeds commercial limits

\*6 NYCRR Part 375; Subparts 375-1 to 375-4 & 375-6;  
Table 375-6.8(a):Commercial Use Soil Cleanup Objectives

**Table 5**  
**Summary of Results in Soil Vapor Samples**  
**153-157 Sherman Avenue**  
**New York, NY**

LOCATION SAMPLING DATE	NYSDOH Sub-Slab Vapor		Units	SV-1	SV-2	SV-3	Q
	Matrix 1	Matrix 2		12/3/2014	12/3/2014	12/3/2014	
				Q	Q	Q	
VOCs in Air							
Dichlorodifluoromethane	NA	NA	ug/m3	1.87	1.96	2.15	U
Chloromethane	NA	NA	ug/m3	3.92	0.45	0.898	U
Freon-114	NA	NA	ug/m3	1.4	1.4	3.04	U
Vinyl chloride	>50	NA	ug/m3	8.74	7.44	1.11	U
1,3-Butadiene	NA	NA	ug/m3	47.3	2.1	57.7	U
Bromomethane	NA	NA	ug/m3	0.777	0.777	1.69	U
Chloroethane	NA	NA	ug/m3	0.528	0.528	1.15	U
Ethanol	NA	NA	ug/m3	16.6	7.31	10.3	U
Vinyl bromide	NA	NA	ug/m3	0.874	0.874	1.9	U
Acetone	NA	NA	ug/m3	83.6	82.9	110	U
Trichlorofluoromethane	NA	NA	ug/m3	1.52	4.06	2.44	U
Isopropanol	NA	NA	ug/m3	1.23	1.23	2.68	U
1,1-Dichloroethene	NA	>100	ug/m3	0.821	0.793	1.72	U
Tertiary butyl Alcohol	NA	NA	ug/m3	5.46	6.06	8	U
Methylene chloride	NA	NA	ug/m3	89.6	97.6	225	U
3-Chloropropene	NA	NA	ug/m3	0.626	0.626	1.36	U
Carbon disulfide	NA	NA	ug/m3	17.9	5.64	7.16	U
Freon-113	NA	NA	ug/m3	1.53	1.53	3.33	U
trans-1,2-Dichloroethene	NA	NA	ug/m3	4.84	0.9	1.72	U
1,1-Dichloroethane	NA	NA	ug/m3	3.64	0.809	1.76	U
Methyl tert butyl ether	NA	NA	ug/m3	0.721	0.721	1.57	U
2-Butanone	NA	NA	ug/m3	33.6	34.5	25.2	U
cis-1,2-Dichloroethene	NA	>100	ug/m3	14.5	3.22	1.72	U
Ethyl Acetate	NA	NA	ug/m3	1.8	1.8	3.93	U
Chloroform	NA	NA	ug/m3	2.92	18.5	2.12	U
Tetrahydrofuran	NA	NA	ug/m3	97	96.7	58.7	U
1,2-Dichloroethane	NA	NA	ug/m3	0.809	0.809	1.76	U
n-Hexane	NA	NA	ug/m3	59.2	27.9	59.9	U
1,1,1-Trichloroethane	NA	>100	ug/m3	1.74	5.67	2.37	U
Benzene	NA	NA	ug/m3	24.2	10.1	12.6	U
Carbon tetrachloride	>50	NA	ug/m3	1.26	1.26	2.74	U
Cyclohexane	NA	NA	ug/m3	20.6	14.3	31.7	U
1,2-Dichloropropane	NA	NA	ug/m3	0.924	0.924	2.01	U
Bromodichloromethane	NA	NA	ug/m3	1.34	1.34	2.91	U
1,4-Dioxane	NA	NA	ug/m3	0.721	0.721	1.57	U
Trichloroethene	>50	NA	ug/m3	94.6	117	132	U
2,2,4-Trimethylpentane	NA	NA	ug/m3	0.934	0.934	2.03	U
Heptane	NA	NA	ug/m3	49.2	48.4	54.5	U
cis-1,3-Dichloropropene	NA	NA	ug/m3	0.908	0.908	1.97	U
4-Methyl-2-pentanone	NA	NA	ug/m3	14.4	16.5	12.8	U
trans-1,3-Dichloropropene	NA	NA	ug/m3	0.908	0.908	1.97	U
1,1,2-Trichloroethane	NA	NA	ug/m3	1.09	1.09	2.37	U
Toluene	NA	NA	ug/m3	149	215	182	U
2-Hexanone	NA	NA	ug/m3	0.82	0.926	1.78	U
Dibromochloromethane	NA	NA	ug/m3	1.7	1.7	3.71	U
1,2-Dibromoethane	NA	NA	ug/m3	1.54	1.54	3.34	U
Tetrachloroethene	NA	>100	ug/m3	229	397	325	U
Chlorobenzene	NA	NA	ug/m3	0.921	0.921	2	U
Ethylbenzene	NA	NA	ug/m3	54.7	93	131	U
p/m-Xylene	NA	NA	ug/m3	181	312	513	U
Bromoform	NA	NA	ug/m3	2.07	2.07	4.5	U
Styrene	NA	NA	ug/m3	2.73	4.51	6.39	U
1,1,2,2-Tetrachloroethane	NA	NA	ug/m3	1.37	1.37	2.99	U
o-Xylene	NA	NA	ug/m3	51.7	93.8	214	U
4-Ethyltoluene	NA	NA	ug/m3	4.01	5.95	9.24	U
1,3,5-Trimethylbenzene	NA	NA	ug/m3	2.94	3.91	7.92	U
1,2,4-Trimethylbenzene	NA	NA	ug/m3	8.21	10.8	26.1	U
Benzyl chloride	NA	NA	ug/m3	1.04	1.04	2.25	U
1,3-Dichlorobenzene	NA	NA	ug/m3	1.2	1.2	2.62	U
1,4-Dichlorobenzene	NA	NA	ug/m3	1.2	1.2	2.62	U
1,2-Dichlorobenzene	NA	NA	ug/m3	1.2	1.2	2.62	U
1,2,4-Trichlorobenzene	NA	NA	ug/m3	1.48	1.48	3.23	U
Hexachlorobutadiene	NA	NA	ug/m3	2.13	2.13	4.64	U

**Notes:**

U - Not Detected      - value exceeds matrix 1/matrix 2 levels

NA - Not Available

**Table 6**  
**Summary of Volatile Organic Compounds in Groundwater Samples**  
**153-157 Sherman Avenue**  
**New York, NY**

LOCATION SAMPLING DATE	*NY TOGS Units	MW-1 12/30/2014		MW-2 12/30/2014		MW-3 12/30/2014		TRIP BLANK 12/30/2014	
		Qual	Qual	Qual	Qual	Qual	Qual		
VOCs									
Methylene chloride	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethane	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Chloroform	7 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Carbon tetrachloride	5 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	1 ug/l	1	U	1	U	1	U	1	U
Dibromochloromethane	50 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	1 ug/l	1.5	U	1.5	U	1.5	U	1.5	U
Tetrachloroethene	5 ug/l	0.5	U	1.6	U	2.8	U	0.5	U
Chlorobenzene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Trichlorofluoromethane	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloroethane	0.6 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Bromodichloromethane	50 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,3-Dichloropropene	0.4 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	0.4 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
1,3-Dichloropropene, Total	NA ug/l	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloropropene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Bromoform	50 ug/l	2	U	2	U	2	U	2	U
1,1,2,2-Tetrachloroethane	5 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
Benzene	1 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
Toluene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Ethylbenzene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Chloromethane	NA ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Bromomethane	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Vinyl chloride	2 ug/l	1	U	1	U	1	U	1	U
Chloroethane	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethene	5 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,2-Dichloroethene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Trichloroethene	5 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichlorobenzene	3 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,3-Dichlorobenzene	3 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dichlorobenzene	3 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Methyl tert butyl ether	10 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
p/m-Xylene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
o-Xylene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Xylenes, Total	10 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
cis-1,2-Dichloroethene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloroethene, Total	NA ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Dibromomethane	5 ug/l	5	U	5	U	5	U	5	U
1,2,3-Trichloropropane	0.04 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Acrylonitrile	5 ug/l	5	U	5	U	5	U	5	U
Styrene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Dichlorodifluoromethane	5 ug/l	5	U	5	U	5	U	5	U
Acetone	50 ug/l	5	U	5	U	5	U	5	U
Carbon disulfide	60 ug/l	5	U	5	U	5	U	5	U
2-Butanone	50 ug/l	5	U	5	U	5	U	5	U
Vinyl acetate	NA ug/l	5	U	5	U	5	U	5	U
4-Methyl-2-pentanone	NA ug/l	5	U	5	U	5	U	5	U
2-Hexanone	50 ug/l	5	U	5	U	5	U	5	U
Bromochloromethane	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
2,2-Dichloropropane	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dibromoethane	0.0006 ug/l	2	U	2	U	2	U	2	U
1,3-Dichloropropane	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,1,1,2-Tetrachloroethane	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Bromobenzene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
n-Butylbenzene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
sec-Butylbenzene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
tert-Butylbenzene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
o-Chlorotoluene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
p-Chlorotoluene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dibromo-3-chloropropane	0.04 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Hexachlorobutadiene	0.5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Isopropylbenzene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
p-Isopropyltoluene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
Naphthalene	10 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
n-Propylbenzene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,2,3-Trichlorobenzene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trichlorobenzene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,3,5-Trimethylbenzene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trimethylbenzene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dioxane	NA ug/l	250	U	250	U	250	U	250	U
p-Diethylbenzene	NA ug/l	2	U	2	U	2	U	2	U
p-Ethyltoluene	NA ug/l	2	U	2	U	2	U	2	U
1,2,4,5-Tetramethylbenzene	NA ug/l	2	U	2	U	2	U	2	U
Ethyl ether	NA ug/l	2.5	U	2.5	U	2.5	U	2.5	U
trans-1,4-Dichloro-2-butene	5 ug/l	2.5	U	2.5	U	2.5	U	2.5	U

**Notes** \*NYSDEC Technical and Operational Guidance Series (1.1.1)  
U - Not Detected Ambient water Quality Standards and Guidance Values and  
NA - Not Available Groundwater Effluent Limitations June 1998  
All concentrations are reported in micrograms per liter (ug/L) or parts per billion.

Table 7 Summary of Semi-Volatile Organic Compounds in Groundwater Samples 153-157 Sherman Avenue New York, NY							
LOCATION		MW-1		MW-2		MW-3	
SAMPLING DATE		12/30/2014		12/30/2014		12/30/2014	
	*NY TOGS	Units	Qual	Qual	Qual	Qual	Qual
SVOCs							
1,2,4-Trichlorobenzene		5 ug/l	5 U	5 U	5 U	5 U	5 U
Bis(2-chloroethyl)ether		1 ug/l	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene		3 ug/l	2 U	2 U	2 U	2 U	2 U
1,3-Dichlorobenzene		3 ug/l	2 U	2 U	2 U	2 U	2 U
1,4-Dichlorobenzene		3 ug/l	2 U	2 U	2 U	2 U	2 U
3,3'-Dichlorobenzidine		5 ug/l	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrotoluene		5 ug/l	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene		5 ug/l	5 U	5 U	5 U	5 U	5 U
4-Chlorophenyl phenyl ether		NA ug/l	2 U	2 U	2 U	2 U	2 U
4-Bromophenyl phenyl ether		NA ug/l	2 U	2 U	2 U	2 U	2 U
Bis(2-chloroisopropyl)ether		5 ug/l	2 U	2 U	2 U	2 U	2 U
Bis(2-chloroethoxy)methane		5 ug/l	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene		5 ug/l	20 U	20 U	20 U	20 U	20 U
Isophorone		50 ug/l	5 U	5 U	5 U	5 U	5 U
Nitrobenzene		0.4 ug/l	2 U	2 U	2 U	2 U	2 U
NitrosoDiPhenylAmine(NDPA)/DPA		50 ug/l	2 U	2 U	2 U	2 U	2 U
n-Nitrosodi-n-propylamine		NA ug/l	5 U	5 U	5 U	5 U	5 U
Bis(2-Ethylhexyl)phthalate		5 ug/l	1.7 J	1.6 J	1.6 J	1.6 J	1.6 J
Butyl benzyl phthalate		50 ug/l	5 U	5 U	5 U	5 U	5 U
Di-n-butylphthalate		50 ug/l	5 U	5 U	5 U	5 U	5 U
Di-n-octylphthalate		50 ug/l	5 U	5 U	5 U	5 U	5 U
Diethyl phthalate		50 ug/l	5 U	5 U	5 U	5 U	5 U
Dimethyl phthalate		50 ug/l	5 U	5 U	5 U	5 U	5 U
Biphenyl		5 ug/l	2 U	2 U	2 U	2 U	2 U
4-Chloroaniline		5 ug/l	5 U	5 U	5 U	5 U	5 U
2-Nitroaniline		5 ug/l	5 U	5 U	5 U	5 U	5 U
3-Nitroaniline		5 ug/l	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline		5 ug/l	5 U	5 U	5 U	5 U	5 U
Dibenzofuran		NA ug/l	2 U	2 U	2 U	2 U	2 U
1,2,4,5-Tetrachlorobenzene		5 ug/l	10 U	10 U	10 U	10 U	10 U
Acetophenone		NA ug/l	5 U	5 U	5 U	5 U	5 U
2,4,6-Trichlorophenol		NA ug/l	5 U	5 U	5 U	5 U	5 U
P-Chloro-M-Cresol		NA ug/l	2 U	2 U	2 U	2 U	2 U
2-Chlorophenol		NA ug/l	2 U	2 U	2 U	2 U	2 U
2,4-Dichlorophenol		1 ug/l	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol		50 ug/l	5 U	5 U	5 U	5 U	5 U
2-Nitrophenol		NA ug/l	10 U	10 U	10 U	10 U	10 U
4-Nitrophenol		NA ug/l	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol		10 ug/l	20 U	20 U	20 U	20 U	20 U
4,6-Dinitro-o-cresol		NA ug/l	10 U	10 U	10 U	10 U	10 U
Phenol		1 ug/l	5 U	5 U	5 U	5 U	5 U
2-Methylphenol		NA ug/l	5 U	5 U	5 U	5 U	5 U
3-Methylphenol/4-Methylphenol		NA ug/l	5 U	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol		NA ug/l	5 U	5 U	5 U	5 U	5 U
Benzoic Acid		NA ug/l	50 U	50 U	50 U	50 U	50 U
Benzyl Alcohol		NA ug/l	2 U	2 U	2 U	2 U	2 U
Carbazole		NA ug/l	2 U	2 U	2 U	2 U	2 U
Acenaphthene		20 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chloronaphthalene		10 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Fluoranthene		50 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene		0.5 ug/l	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Naphthalene		10 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(a)anthracene		0.002 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(a)pyrene		0 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(b)fluoranthene		0.002 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(k)fluoranthene		0.002 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chrysene		0.002 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acenaphthylene		NA ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Anthracene		50 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(ghi)perylene		NA ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Fluorene		50 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Phenanthrene		50 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibenzo(a,h)anthracene		NA ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Indeno(1,2,3-cd)Pyrene		0.002 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Pyrene		50 ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Methylnaphthalene		NA ug/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Pentachlorophenol		1 ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Hexachlorobenzene		0.04 ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Hexachloroethane		5 ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U

Notes \*NYSDEC Technical and Operational Guidance Series (1.1.1)  
U - Not Detected Ambient water Quality Standards and Guidance Values and  
J - Value is Estimated Groundwater Effluent Limitations June 1998  
NA - Not Available  
All concentrations are reported in micrograms per liter (ug/L) or parts per billion.

**Table 8**  
**Summary of Pesiticides and PCBs in Groundwater Samples**  
**153-157 Sherman Avenue**  
**New York, NY**

LOCATION		MW-1		MW-2		MW-3	
SAMPLING DATE		12/30/2014		12/30/2014		12/30/2014	
	*NY TOGS Units		Qual		Qual		Qual
<b>Pesiticides</b>							
Delta-BHC	0.04 ug/l	0.02	U	0.02	U	0.02	U
Lindane	0.05 ug/l	0.02	U	0.02	U	0.02	U
Alpha-BHC	0.01 ug/l	0.02	U	0.02	U	0.02	U
Beta-BHC	0.04 ug/l	0.02	U	0.02	U	0.02	U
Heptachlor	0.04 ug/l	0.02	U	0.02	U	0.02	U
Aldrin	0 ug/l	0.02	U	0.02	U	0.02	U
Heptachlor epoxide	0.03 ug/l	0.02	U	0.02	U	0.02	U
Endrin	0 ug/l	0.04	U	0.04	U	0.04	U
Endrin ketone	5 ug/l	0.04	U	0.04	U	0.04	U
Dieldrin	0.004 ug/l	0.04	U	0.04	U	0.04	U
4,4'-DDE	0.2 ug/l	0.04	U	0.04	U	0.04	U
4,4'-DDD	0.3 ug/l	0.04	U	0.04	U	0.04	U
4,4'-DDT	0.2 ug/l	0.04	U	0.04	U	0.04	U
Endosulfan I	NA ug/l	0.02	U	0.02	U	0.02	U
Endosulfan II	NA ug/l	0.04	U	0.04	U	0.04	U
Endosulfan sulfate	NA ug/l	0.04	U	0.04	U	0.04	U
Methoxychlor	35 ug/l	0.2	U	0.2	U	0.2	U
Toxaphene	0.06 ug/l	0.2	U	0.2	U	0.2	U
cis-Chlordane	NA ug/l	0.02	U	0.02	U	0.02	U
trans-Chlordane	NA ug/l	0.02	U	0.02	U	0.02	U
Chlordane	0.05 ug/l	0.2	U	0.2	U	0.2	U
<b>PCBs</b>							
Aroclor 1016	0.09 ug/l	0.083	U	0.083	U	0.083	U
Aroclor 1221	0.09 ug/l	0.083	U	0.083	U	0.083	U
Aroclor 1232	0.09 ug/l	0.083	U	0.083	U	0.083	U
Aroclor 1242	0.09 ug/l	0.083	U	0.083	U	0.083	U
Aroclor 1248	0.09 ug/l	0.083	U	0.083	U	0.083	U
Aroclor 1254	0.09 ug/l	0.083	U	0.083	U	0.083	U
Aroclor 1260	0.09 ug/l	0.083	U	0.083	U	0.083	U
Aroclor 1262	0.09 ug/l	0.083	U	0.083	U	0.083	U
Aroclor 1268	0.09 ug/l	0.083	U	0.083	U	0.083	U
<b>Notes</b>		*NYSDEC Technical and Operational Guidance Series (1.1.1)					
U - Not Detected		Ambient water Quality Standards and Guidance Values and					
NA - Not Available		Groundwater Effluent Limitations June 1998					
<i>All concentrations are reported in micrograms per liter (ug/L) or parts per billion.</i>							

**Table 9**  
**Summary of Metals in Groundwater Samples**  
**153-157 Sherman Avenue**  
**New York, NY**

LOCATION SAMPLING DATE	*NY TOGS Units	MW-1	Qual	MW-2	Qual	MW-3	Qual
		1/14/2015		1/14/2015		1/14/2015	
Dissolved Metals							
Aluminum, Dissolved	NA mg/l	0.00661	J	0.00627	J	0.0334	
Antimony, Dissolved	0.003 mg/l	0.00134	J	0.00065	J	0.00068	J
Arsenic, Dissolved	0.025 mg/l	0.00118		0.00090		0.00024	J
Barium, Dissolved	1 mg/l	0.08735		0.04734		0.04221	
Beryllium, Dissolved	0.003 mg/l	0.00050	U	0.00050	U	0.00050	U
Cadmium, Dissolved	0.005 mg/l	0.00159		0.00011	J	0.00015	J
Calcium, Dissolved	NA mg/l	221		108		421	
Chromium, Dissolved	0.05 mg/l	0.00056	J	0.00168		0.00158	
Cobalt, Dissolved	NA mg/l	0.06859		0.00407		0.00125	
Copper, Dissolved	0.2 mg/l	0.00649		0.00136		0.00187	
Iron, Dissolved	0.3 mg/l	0.112		0.0153	J	0.0747	
Lead, Dissolved	0.025 mg/l	0.00100	U	0.00100	U	0.00100	U
Magnesium, Dissolved	35 mg/l	44.2		36.1		49.3	
Manganese, Dissolved	0.3 mg/l	0.5278		0.1465		0.1214	
Mercury, Dissolved	0.0007 mg/l	0.00020	U	0.00010	J	0.00020	U
Nickel, Dissolved	0.1 mg/l	0.00604		0.00105		0.00292	
Potassium, Dissolved	NA mg/l	22.4		9.20		14.1	
Selenium, Dissolved	0.01 mg/l	0.00360	J	0.00120	J	0.00500	U
Silver, Dissolved	0.05 mg/l	0.0004	U	0.0004	U	0.0004	U
Sodium, Dissolved	20 mg/l	80.5		24.7		20.7	
Thallium, Dissolved	0.0005 mg/l	0.0005	U	0.0005	U	0.0005	U
Vanadium, Dissolved	NA mg/l	0.00169	J	0.00253	J	0.00500	U
Zinc, Dissolved	2 mg/l	0.00387	J	0.01000	U	0.00322	J
Total Metals							
Aluminum, Total	NA mg/l	23.6		34.2		71.7	
Antimony, Total	0.003 mg/l	0.0008	J	0.0005	J	0.0004	J
Arsenic, Total	0.025 mg/l	0.0119		0.0150		0.0181	
Barium, Total	1 mg/l	0.3125		0.4357		0.8472	
Beryllium, Total	0.003 mg/l	0.0014		0.0021		0.0041	
Cadmium, Total	0.005 mg/l	0.0160		0.0024		0.0046	
Calcium, Total	NA mg/l	291		203		688	
Chromium, Total	0.05 mg/l	0.0437		0.0685		0.1089	
Cobalt, Total	NA mg/l	0.0866		0.0435		0.0789	
Copper, Total	0.2 mg/l	0.0902		0.1056		0.2338	
Iron, Total	0.3 mg/l	35.4		52.9		130	
Lead, Total	0.025 mg/l	0.0851		0.1719		0.1210	
Magnesium, Total	35 mg/l	71.7		64.8		158	
Manganese, Total	0.3 mg/l	2.441		2.345		6.813	
Mercury, Total	0.0007 mg/l	0.00018	J	0.00044		0.00060	
Nickel, Total	0.1 mg/l	0.0753		0.0867		0.1628	
Potassium, Total	NA mg/l	27.3		16.2		26.8	
Selenium, Total	0.01 mg/l	0.007		0.009		0.011	
Silver, Total	0.05 mg/l	0.0003		0.0004		0.0003	
Sodium, Total	20 mg/l	76.4		24.3		29.8	
Thallium, Total	0.0005 mg/l	0.0003		0.0005		0.0012	
Vanadium, Total	NA mg/l	0.0491		0.0747		0.1234	
Zinc, Total	2 mg/l	0.1614		0.2516		0.3743	
<b>Notes</b>							
U - Not Detected							- Value detected above NY TOGS limit
J - Value is Estimated							
All concentrations are reported in milligrams per liter (mg/L) or parts per million.							
*NYSDEC Technical and Operational Guidance Series (1.1.1)							
Ambient water Quality Standards and Guidance Values and							
Groundwater Effluent Limitations June 1998							

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# **APPENDIX A**

## **Phase I Report**

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**PHASE I ENVIRONMENTAL  
SITE ASSESSMENT REPORT  
153 – 157 SHERMAN AVENUE  
NEW YORK, NEW YORK 10034**

**PREPARED FOR:**

West Side Federation for Senior and Supportive Housing, Inc.  
2345 Broadway  
New York, New York 10024

**PREPARED BY:**

GZA GeoEnvironmental of New York  
104 West 29<sup>th</sup> Street, 10<sup>th</sup> Floor  
New York, New York 10001

October 2010  
File No. 41.0161917.00

GZA  
GeoEnvironmental  
of New York

Engineers and  
Scientists

October 1, 2010  
File No. 41.0161917.00

John Scott R. Johnson  
West Side Federation for Senior and Supportive Housing, Inc.  
2345 Broadway  
New York, New York 10024



Subject: Phase I Environmental Site Assessment  
153 – 157 Sherman Avenue  
New York, New York

Dear Mr. Johnson:

104 West 29<sup>th</sup>  
Street, 10<sup>th</sup> Floor  
New York, NY  
10001

GZA GeoEnvironmental of New York (GZA) is pleased to provide the enclosed *Phase I Environmental Site Assessment* (ESA) for the above-referenced Site. The Phase I ESA was completed in general accordance with the guidelines described in the American Society for Testing and Materials (ASTM) *Standard Practice for Phase I Environmental Site Assessments, E1527-05*.

This report is based on our review of available historical and environmental records, visual observations of the surface of the subject and adjoining properties, and personal interviews with available persons having knowledge of the property. **Section 11.0** of the report, our findings and conclusions, as well as the executive summary should be reviewed in conjunction with the entire report.

We trust that this report satisfies your present needs. If you need any additional information, please call us at 212-594-8140.

Very truly yours,  
GZA GEOENVIRONMENTAL OF NEW YORK

A handwritten signature in blue ink, appearing to read 'Claire-Elise Orleach'.

Claire-Elise Orleach  
Project Engineer

A handwritten signature in blue ink, appearing to read 'Stephen M. Kline'.

Stephen M. Kline  
Project Manager / Environmental Professional

A handwritten signature in blue ink, appearing to read 'David M. Winslow'.

David M. Winslow  
Principal-In-Charge

A handwritten signature in blue ink, appearing to read 'Clifford Bell'.

Clifford Bell  
Consultant Reviewer

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## 1.0 INTRODUCTION

This report presents the results of a Phase I Environmental Site Assessment (ESA) conducted by GZA GeoEnvironmental of New York (GZA) for the West Side Federation for Senior and Supportive Housing, Inc. (Client, User and WSFSSH) at the property identified as 153 – 157 Sherman Avenue, New York, New York (Site). The Site is currently owned by Golnat Realty Co. The Site is improved by a one-story vacant building at each address. The Site visit as part of this environmental assessment was conducted on August 26, 2010, by GZA Project Manager Stephen Kline and GZA Staff Engineer Claire-Elise Orleach. Authorization to proceed on this project was granted in accordance with the signed proposal for services, dated August 20, 2010.

### 1.1 Project Objectives

The objectives of this Phase I ESA were:

- to render an opinion as to whether surficial or historical evidence indicates the presence or likely presence of recognized environmental conditions which have the potential to result in the presence of hazardous substances or petroleum products in the environment, as defined in the American Society for Testing and Materials (ASTM) Standard Practice E1527-05 for Phase I ESAs;
- to provide the Client a preliminary visual assessment of potential hazardous materials; and
- to assist the User in satisfying one of the requirements for qualifying for certain Landowner Liability Protections under the Comprehensive Environmental Response Compensation and Recovery Act (CERCLA).

As defined by ASTM E1527-05, the term recognized environmental condition (REC) means “the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, past release, or material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agency.”

The following omissions from the ASTM 1527-05 guidelines are noted for this report.

- Areas of the Site were not accessible due to locked doors and safety consideration (see **Section 6.0**).

- Vicinity reconnaissance limited to 0.125 mile radius due to dense urban nature of the Site. This data gap is not considered significant.
- Due to the Client's schedule constraints, not all local file review results have been completed at the time of this report (see **Section 8.3**). However, pertinent documents will be forwarded to WSHSSF upon receipt.

## 1.2 Scope of Services

GZA's assessment of the Site was completed in general accordance with ASTM E1527-05 and the proposal for services. We understand that this assessment is not funded with a federal grant awarded under the United States Environmental Protection Agency (USEPA) Brownfield Assessment and Characterization Program.

GZA's scope of services consisted of the following activities:

- a site reconnaissance to make surficial observations for evidence of recognized environmental conditions;
- a limited visual review of potentially hazardous building materials;
- an interview with the Key Site Manager, Niel Claremon, the son of the owner of the property;
- review of the Site history through selected ASTM Standard Historical Sources;
- review of federal and state regulatory agency databases identified by ASTM for the Site and selected radii around the Site;
- contact with local and state environmental regulatory agencies to inquire about environmental conditions at the Site and in its vicinity;
- a review of the information provided to GZA by Client as part of the "User responsibilities" described in ASTM 1527-05;
- a vicinity reconnaissance of properties within 0.125-miles of the Site;
- a review of adjoining properties to identify the potential use of hazardous materials; and
- the preparation of this report of our findings.

This report presents GZA's field observations, results, and opinions related to apparent environmental conditions at the Site. This report is subject to modification if subsequent

information is developed by GZA or any other party. This report is also subject to the limitations presented in **Section 13.0** and **Appendix A**.

## **2.0 SITE INFORMATION**

The following information was obtained during GZA's Site reconnaissance and from interviews with people knowledgeable about the Site. Photographs depicting Site conditions at the time of GZA's assessment are presented in **Appendix B**. Additional information on Site use and area observations and activity at the Site is contained in **Sections 6.0** and **7.0**.

### 2.1 Site Location

The Site is located in the Washington Heights section of Manhattan on the south side of Sherman Avenue between Academy Street and West 204<sup>th</sup> Street. The Site is bordered by commercial properties to the west, a church to the east, and residential properties to the south of the Site. A Site Location Plan is presented in **Figure 1**, and a map of the Site and adjacent properties is presented in **Figure 2**.

### 2.2 Site Description

The Site is comprised of three buildings located at the following addresses: 153 Sherman Avenue, 155 Sherman Avenue and 157 Sherman Avenue. A one story building with a basement is located on the northern portion of each address on the Site. The property is identified by the NYC Building Department as Borough of Manhattan Block 2221 and Lot 5. The size of the property is approximately 12,000 square feet and the buildings cover approximately 7,275 square feet of the Site. The southern portion of the Site is currently undeveloped and is covered with overgrown vegetation, several trees, solid waste and construction debris. It is surrounded by a concrete wall to the west, a chain link fence to the south and an iron gate to the east. A fire reportedly occurred in 2007 in the buildings at 153 and 155 Sherman Avenue. It damaged the majority of the roof which was subsequently removed and caused damage to the rest of the building. The building at 157 Sherman Avenue was not affected by the fire but appears to have been abandoned for several years. The buildings are located adjacent to the sidewalk. A Site Plan is presented as **Figure 3**.

### 2.3 Current Site Use

The Site is developed by three commercial properties with up to five units, which are currently vacant. Significant damage to 153 and 155 Sherman Avenue makes them unusable in their current condition. The building at 157 Sherman Avenue used to be a medical and dental clinic. The historic use of the Site is discussed in more detail in **Section 4.0**.

## 2.4 Adjoining Property Use

The adjoining properties are as follows:

<b>Direction From The Site</b>	<b>Property Use</b>
North	Sherman Avenue and residential properties across the street
West	Commercial and an alley and residential
South	Residential
East	Church

Refer to **Figure 2** for a plan of the Site and adjacent properties.

## 2.5 Area Use

The surrounding neighborhood is characterized by dense urban development primarily a combination of commercial and residential properties consisting of mostly multiple story buildings.

## 2.6 Site Utilities

The Site is currently not connected to any utilities according to the key site manager. The building has previously been heated using natural gas. The Site is served by municipal sewer and municipal water supply provided by New York City.

# **3.0 ENVIRONMENTAL SETTING**

The following subsections provide information regarding the general physiographic, hydrologic, and soil conditions in the area of the Site.

## 3.1 Regional Physiography

Based on a review of the United States Geological Survey (USGS) Topographic Map for the Central Park, New York Quadrangle dated 1976, the Site generally slopes downward to the south-southeast towards the Harlem River with an average ground surface elevation of approximately 25 feet above mean sea level (MSL) based on the National Geodetic Vertical Datum (NGVD, 1929). The Site is approximately 0.38 miles to the west of the Harlem River.

## 3.2 Regional And Site Geology

The geology of New York County (Manhattan Island) consists of a consolidated bedrock base of metamorphic rocks of pre-Cambrian age overlain by an

unconsolidated layer of upper Pleistocene deposits. Over three quarters of the island is made up of the Manhattan Schist, with the Inwood Limestone present in two small areas in northern Manhattan. The Manhattan Schist is a dark-grey to black micaceous rock composed of biotite, muscovite, quartz and feldspar. The formation contains some irregular fractures and joints, by which groundwater can move; however, the Manhattan Schist is considered a poor aquifer. The Inwood Limestone is thinly bedded marble and is considered a poor producer of groundwater.

The unconsolidated materials on Manhattan are almost entirely made up of upper Pleistocene deposits. The Pleistocene deposits are composed of till and stratified drift. The till is composed of boulders, cobbles, sand, silt, and clay sized materials. The till is less than 25 feet thick in most places, and is not a good aquifer. In the northern section of the island there are bodies of stratified drift. The stratified drift is predominantly made up of sand-sized material and gravel, but clay may also be encountered. The drift material fills in depressions in the bedrock caused by faults and weathering and may be up to 175 feet thick. The stratified drift is considered a good producer of groundwater with pumping rates of about 150 gallons per minute. Salt water intrusion is likely in the wells producing in the drift material.

Based on the review of the Bedrock Map of Manhattan, the bedrock surface is observed at greater than 36 feet above mean sea level to the West of the Site and sloping steeply downward towards the Harlem River. As discussed in **Section 6.1.16**, bedrock in the vicinity of the Site was observed at grade.

### 3.3 Regional and Site Hydrogeology

Groundwater is anticipated to generally follow the mildly sloping topography with a northwest to southeast gradient, in the direction of the Harlem River. Subsequent references to upgradient or downgradient locations in relation to the Site are relative to this anticipated southeasterly direction of groundwater flow. However, localized gradients in the vicinity of the Site may vary due to heterogeneous subsurface conditions and/or the presence of underground utilities and subway tunnels. The Site and surrounding area are serviced by the public water supply. The groundwater at, and in the vicinity of, the Site is not used as a public drinking water aquifer.

## **4.0 HISTORICAL USE INFORMATION**

The Site history was developed from ASTM Standard Historical Sources provided by Environmental Database Resources (EDR). A list of sources interviewed is included in **Section 9.0**.

ASTM indicates that “all obvious uses of the property shall be identified from the present, back to the property’s first developed use, or back to 1940, whichever is earlier.” ASTM further indicates that “data failure is not uncommon” when trying to

establish the historical use of a property. A historical summary is provided in **Section 4.1** below. Specific details obtained from ASTM historical sources are contained in subsequent sections.

#### 4.1 Site and Area History Summary

Based on review of Sanborn maps all three properties were developed with buildings between 1913 and 1935 and have remained commercial properties since this date. The Site is first listed in the city directory search results as a commercial property in 1927. The surrounding area was developed with residential and commercial properties primarily between 1913 and 1935.

#### 4.2 City Directories Review

EDR provided City Directories for the Site and neighboring properties from the following years. The addresses on the Site are identified from 1927 to 2006 as follows:

<b>Address</b>	<b>Years of Identification</b>
153 Sherman	1927, 1938, 1942, 1973, 1988, 1998, 2000, 2006
155 Sherman	1938, 1942, 1983, 1988, 1993, 1998, 2000, 2006
155A Sherman	1927, 1983, 1988, 1993, 1998
157 Sherman	1983, 1988, 1993, 1998, 2000, 2006
157A Sherman	1927

These listings are provided in **Appendix C**.

The Site at 153 Sherman is identified as varied commercial properties: in 2006 as 153 Pharmacy Corp; in 2000 and 1998 as El Mundo Shipping & Furniture; in 1988 as El Melibel Restaurant; in 1973 The Club Bolero; in 1942 and 1938 as Homestead Grill; and in 1927 as Jeffrey Thos Fruits and Vegetables and Piston Gus butcher.

The Site at 155 Sherman is identified as varied commercial properties: in 2006 as G & G Hair Extension Supply, Chan's Kitchen, and 24 Hour Emergency Locksmith; in 2000 as Eca Liquor Inc and Chan's Kitchen; in 1998 as Eca Liquor Inc; in 1993 and 1988 as Taino Liquor; in 1983 as Model Wiring Corporation; and in 1942 and 1938 as Rosenbaum M Partner. The Site is also listed at 155A Sherman in 1998, 1988 and 1983 as Chan's Kitchen and in 1927 as Bluebird Cleaners & Dyers. Historic cleaners and dyers have the potential to have used hazardous materials in its operations.

The Site at 157 Sherman is identified as varied commercial properties: in 2006 as Citident and Delmonte Ramon MD; in 2000 as Quality Health Center; in 1998, 1993 and 1988 as Citident, Sherman Medical & Dental Office and Mahesh Pharmacy; and in 1983 as Esperanza Beauty Parlor and LMS Electrical Service. The Site is also listed at 157A Sherman in 1927 as Sobel Harry Dairy.

Surrounding properties were listed as primarily residential and commercial. The property at 151 Sherman Avenue is listed in 1927 as Trefolex, a lubrication manufacturer and machine shop. This facility had the potential for the use of hazardous materials and petroleum products.

#### 4.3 Historic Topographic Map Review

Completion of a historic topographic map review was not included in the scope of this assessment. Two historical sources have been included in this report; therefore this does not represent a significant data gap.

#### 4.4 Aerial Photograph Review

Completion of an aerial photograph review was not included in the scope of this assessment. Two historical sources have been included in this report; therefore this does not represent a significant data gap.

#### 4.5 Historic Atlas Review

EDR provided Sanborn Fire Insurance Maps from 1893, 1900, 1913, 1935, 1950, 1968, 1969, 1977, 1979 through 1981, 1983, 1985, 1986, 1988, 1989, 1991, 1992, 1994 through 1996, and 2001 through 2005. These maps are provided in **Appendix D**.

##### 1893

The Site and adjacent southern, western and eastern properties are undeveloped. Sherman Avenue, West 204<sup>th</sup> Street and Academy Boulevard are visible to the east and west of the Site.

##### 1900

The Site remains undeveloped. The adjoining property to the east is now developed with one structure in the northern portion of the Site which meets the sidewalk and one structure in the southern portion of the Site. There is a small building on the property to the Site of the south. Other adjoining properties remain undeveloped.

1913

The Site and surrounding properties are similar to 1900 conditions; with the exception that residential structures are visible one block east and one block west of the property.

1935

The Site is developed with structures on the northern portion of the Site. The structures are one story buildings with a basement. Six skylights are identified on the structure at 153 Sherman. One skylight is identified on the southern portion of the building at 155 Sherman and one skylight is identified on the southern portion of the building at 157 Sherman. The buildings at 155 Sherman and 157 Sherman are respectively identified as M. Prints and S. Carpenters. All adjoining properties are now developed with structures. The adjoining property to the west is identified as a bakery. The surrounding area is now developed with structures throughout the area as identified on the Sanborn map. Only five lots are identified as being undeveloped.

1950

The Site and surrounding properties are similar to 1935 conditions; with the exception that the structures on the Site are now identified as fireproof.

1968 and 1969

The Site and surrounding properties are similar to 1935 conditions.

1977

The Site is similar to 1969 conditions. The surrounding property is similar to 1969 conditions except for the property at 161 Sherman which is now identified as a community center.

1979, 1980, 1981, 1983, 1985

The Site and surrounding properties are similar to 1977 conditions.

1986

The Site and surrounding properties are similar to 1985 conditions with the exception that the adjoining property to the east is now identified as a residential property.

1988 and 1989

The Site and surrounding properties are similar to 1986 conditions.

## 1991

The Site and surrounding properties are similar to 1986 conditions with the exception that the structure on the northern portion of the adjoining property to the east which is now identified as a public or institutional property.

## 1992, 1994, 1995 1996 and 2001 through 2005

The Site and surrounding properties are similar to 1991 conditions. Note that the most recent Sanborn map which is from 2005 does not depict the changes to the property since the fire in 2007. Only one third of the roof remains on the building at 153 Sherman and the roof for the building at 155 Sherman does not exist.

### 4.6 Environmental Lien Search

A title search was provided by the Client and is located in **Appendix E**. No environmental liens were identified in the results of the title search.

### 4.7 Title Search and History of Ownership

GZA performed a Property Transaction Record search of the Office of City Register New York City Department of Finance. The property is listed under the ownership of Golnat Realty Co. and Irving Claremon since 1974 which is the earliest record available on the search.

A title search was provided by the Client and is located in **Appendix E**.

### 4.8 Building Department Records

GZA reviewed information available at the New York City Department of Building's Information System (BIS). The record for 153 – 157 Sherman Avenue, New York, New York is identified by the NYC Building Department as Block 2221 Lot 5. It is listed within a commercial property overlay (designated C1-4). One Certificate of Occupancy was found in the NYC BIS. On June 30, 1933, a Certificate of Occupancy was issued for an existing non-fireproof building in a business district with a cellar designated as storage and boiler room and a first floor designated as a restaurant with dancing and retail stores. The certificate was issued to Louis Newman. A copy of this certificate is provided in **Appendix F**. A total of 23 NYC Department of Buildings violations have been issued of which only one have been closed. A total of eight Environmental Control Board (ECB) violations have been issued since 1998 only two of which have been closed. A total of nine complaints are listed as having been issued and resolved since 1998. Two of these were issued in 2007: one of these was for failure to maintain the property after serious damage caused by fire and the other was

for structural instability after the fire. No issues of environmental concern were identified in the NYC BIS.

## 5.0 PREVIOUS SITE INVESTIGATIONS

According to the User, there are no previous environmental reports of which the current owner is aware. The Site has been owned by the current owner since at least 1978.

## 6.0 SITE RECONNAISSANCE

The purpose of GZA's Site reconnaissance was to make surficial observations for evidence of RECs that could result in the presence of hazardous materials or petroleum in the environment. GZA Staff Engineer Claire-Elise Orleach and GZA Project Manager Stephen Kline visited the Site on August 26, 2010, accompanied by Laura Tavormina of WSFSSH. GZA accessed and reviewed reasonably ascertainable areas of the Site. Since the Site manager did not have the key to the lock of the building 155 Sherman Avenue, GZA was not able to access that portion of the Site. Observations of this section were made through the fence. Neither the Site Manager, nor GZA were able to identify the entrance to the basement at 157 Sherman. Therefore, GZA was unable to access the basement (if any) of that portion of the Site.

Observations were documented and pertinent features were photographed. Site photographs are presented in **Appendix B**. A summary of observations is presented below.

### 6.1 Exterior Observations

The Site, which consists of three one-story buildings with basements side-by-side and undeveloped land, was visually assessed for RECs. The following subsections describe the exterior portion of the Site.

#### 6.1.1 Underground Storage Tanks

A cap was observed on the sidewalk north of the Site and in between 153 Sherman and 155 Sherman. A photograph of the cap is included in **Appendix B**. This is a surficial indication of either an underground storage tank (UST) or a basement aboveground storage tanks (AST). As noted above, GZA was not able to access the basement at 155 Sherman Avenue during our Site visit.

### 6.1.2 Aboveground Storage Tanks

No evidence of ASTs was observed on the exterior portions of the Site. However, a former fill port was noted on the Site visit of Sherman Avenue and GZA was unable to access the basement of 155 Sherman Avenue during the Site visit.

### 6.1.3 Hazardous Substances or Petroleum Products Use

Various types of debris were observed throughout the undeveloped section in the southern portion of the Site. This included: plastic, sheet rock, piping, concrete, brick, paint cans, glass, and electrical parts. However, none of these are expected to result in the presence of significant hazardous materials or petroleum products.

### 6.1.4 Staining

With the exception of typical staining associated with urban settings and of residue from the fire, surficial staining was not observed on the exterior areas of the property.

### 6.1.5 Electrical Transformers/Equipment

Pieces of miscellaneous electrical debris were identified in the undeveloped portion of the Site. No evidence of electrical transformers was observed during GZA's exterior Site reconnaissance.

### 6.1.6 Sumps, Drywells, and Storm Drains

No surficial evidence of exterior drywells or sumps was observed during GZA's Site reconnaissance.

### 6.1.7 Pits, Ponds, and Lagoons

No surficial evidence of pits, ponds, or lagoons was observed during GZA's exterior Site reconnaissance.

### 6.1.8 Wells

No wells were observed at the Site.

### 6.1.9 Solid Waste

Various types of solid waste were observed throughout the undeveloped section in the southern portion of the Site. This included: plastic, sheet rock, piping, concrete, brick, paint cans, glass, and electrical parts. A pile of the waste was observed in the northwest corner of the undeveloped area. The Site is currently unoccupied and no solid waste collection occurs.

#### 6.1.10 Process Wastewater

There is no process wastewater generated at the Site.

#### 6.1.11 Septic System

The Site is currently serviced by the municipal sewer system. No evidence of a septic system was observed at the Site

#### 6.1.12 Stressed Vegetation

Stressed vegetation was observed throughout the undeveloped portion of the Site. The presence of illicit dumping of solid waste has inhibited the growth of vegetation in some areas.

#### 6.1.13 Soil/Water Sampling

No subsurface exploration or chemical analysis has been included as part of GZA's scope of services.

#### 6.1.14 Oil/Water Separators

No evidence of oil/water separators was observed.

#### 6.1.15 Surface Water Runoff

Surface water runoff is likely directed to storm drains located along Sherman Avenue or infiltrate on Site.

#### 6.1.16 Other Observations

There are no windows and the front of the building facing Sherman Avenue is boarded over.

There is difference in elevation of several feet between the Site and the adjoining property to the south which is at a lower elevation. A retaining wall is located at the border between these two properties.

There is a rock outcrop at the south east corner of the property where the land raises in grade.

### 6.2 Interior Observations

The following subsections describe the interior portion of the Site.

### 6.2.1 Construction

The Site buildings were constructed between 1913 and 1935 with a partial basement. The roof consists of flashing, a rubberized membrane. In 153 and 155 Sherman, the remains of wood structural beams were observed. Only one third of the roof at 153 Sherman remains and none of the roof remains at 155 Sherman. The interiors at 153 and 155 Sherman Avenue have ceramic tiling. The interior of 157 Sherman Avenue and the southern portion of 153 Sherman Avenue have vinyl floor tile. The walls are composed of wallboard and have been mostly destroyed in the 153 and 155 Sherman and the brick walls are exposed. The ceiling in 157 Sherman is composed of drop ceiling tiles which are approximately five feet beneath a copper ceiling.

### 6.2.2 Heating and Cooling Systems

Heat at the Site is provided by forced air powered by natural gas. A gas meter was observed in the northern portion of the basement at 153 Sherman and a pipe which appears to be natural gas piping was observed on the ceiling in the northern portion of the basement going west to east. The building at 157 Sherman uses an HVAC system that vents directly to the exterior of the building with a unit that is located on the southern portion of the roof. The HVAC system is not currently operating. The basements of 155 Sherman and 157 Sherman were not able to be accessed. The fill port of the exterior indicates that fuel oil may have been used at 155 Sherman Avenue at one time.

### 6.2.3 Current Site Use

The Site is currently owned by Golnat Realty Co. The Site building is currently unoccupied.

### 6.2.4 Chemical Use and Storage Areas

Since the buildings at 153 and 155 Sherman have been damaged by a fire, there is no evidence indicating possible location of chemical use or storage areas in these buildings.

At 157 Sherman Avenue, a room which was labeled Janitor's Closet was observed in the medical offices. Paint cans and products labeled as "Tank and Transport Cleanser Component 1" and "Tank and Transport Cleanser Component 2" from Air Techniques, Hicksville, New York, a manufacturer of dental products, were observed. A room labeled dental suite was observed in the eastern portion of the building which could potentially contain dental solvents and mercury. Piping in the room appears to indicate the removal of sink.

#### 6.2.5 Hazardous Wastes Generated and Waste Storage Areas

GZA observed waste throughout the interior of the buildings on Site spread on the ground. A pile of municipal waste was observed in the northern room of the building at 157 Sherman, which was once the reception area.

Old fluorescent light bulbs some of which appeared broken were observed in the basement of 153 Sherman hanging off the ceiling and laying on the floor.

#### 6.2.6 Stains or Corrosion

The interiors of buildings at 153 and 155 Sherman have been damaged by the fire which occurred in 2007. There is staining and corrosion of building materials throughout these two buildings.

No stains or corrosion were observed in the building at 157 Sherman; however the building has been unoccupied since 2007 and visibility was limited during the Site reconnaissance due to a lack of lighting.

#### 6.2.7 Floor Drains or Sumps

No floor drains or sumps were observed during the Site reconnaissance.

#### 6.2.8 Transformers

Old electrical equipment was observed in the basement of the building at 153 Sherman in the south east corner of the Site. This equipment should be evaluated prior to demolition for polychlorinated biphenyls (PCBs) and mercury containing components.

#### 6.2.9 Other Interior Observations

Extensive water intrusion observed may result in amplified fungal/mold growth and should be addressed if there are plans to renovate the building.

The age of the light ballasts indicate that they may contain PCBs and should be evaluated prior to future demolition and renovation activities.

#### 6.2.10 Asbestos-Containing Building Materials

Although asbestos-containing building material is a non-scope item for Phase I ESAs according to ASTM E1527-05, at the Client's request GZA's scope of services was expanded to include a limited visual assessment for exposed, friable asbestos-containing building materials (ACBM) in readily accessible areas of the Site. During the Site reconnaissance GZA focused on identifying 1) surfacing materials, 2) exposed thermal system insulation, and 3) friable miscellaneous materials, all of which are likely to contain asbestos in their composition. GZA observed several sources of

potential asbestos-containing material (ACM) in the Site buildings including: electrical panels and insulation, drywall, acoustical ceiling tiles in 157 Sherman Avenue, vinyl floor tiles and underlying mastic in the rear section of 153 Sherman Avenue and throughout 157 Sherman Avenue, roof materials and roof flashing. The window glazing and caulking in 157 Sherman is also suspect to be an ACM. We note that the roofing material in the construction demolition debris likely also contains ACM which should be evaluated before disposal. Due to the age of the building, other ACMs may also be present in the walls and above the drop ceiling not observed during the Site visit. Suspect ACM will need to be evaluated to determine if it will require special handling during planned demolition activities.

#### 6.2.11 Lead Based Paint

Lead-based paint (LBP) for residential use was banned in New York in 1960 and by the Consumer Products Safety Commission in 1978. As the building was constructed before the 1960s, it is likely that the exposed and/or underlying layers of paint may contain lead. There appeared to be multiple layers of paint on the doors, copper roof, window sills and molding.

## **7.0 VICINITY RECONNAISSANCE**

As part of GZA's Site assessment, a reconnaissance of the properties adjoining the Site, and properties within a 0.125-mile radius of the Site, was conducted from public properties. The results of GZA's vicinity reconnaissance are presented below.

### 7.1 Hazardous Materials at Adjoining Properties

Currently there is a dry cleaner at 149 Sherman Avenue, which is listed at Sion Drycleaners. This facility has or had the potential for the use of hazardous materials. There are no other adjoining properties surrounding the Site that are likely to use or store significant quantities of hazardous materials, with the exception of fuel oil for heating purposes. Refer to **Figure 2**.

### 7.2 Hazardous Materials at Vicinity Properties

The Site is located in mixed-use area occupied by commercial and residential properties. To the west of the property, there is a car audio repair shop. This facility has or had the potential for the use of hazardous materials and petroleum products.

## 8.0 REGULATORY DATABASE REVIEW

The following section is based on public information obtained from various federal, state, and local agencies that maintain environmental regulatory databases. These databases provide information about the regulatory status of a property and incidents involving the use, storage, spillage, or transportation of oil or hazardous materials. Information was gathered by GZA personnel and by a professional data search service, EDR. A discussion of the reviewed information is presented in the following sections and a copy of the database report is presented as **Appendix G**.

### 8.1 Federal Agency Databases

Federal databases were provided by EDR and reviewed by GZA. These reports and the search distances used to review these databases are presented below. The databases are considered current as of the date provided.

Database	Date Updated	ASTM Search Radius
<b>National Priorities List (NPL).</b> The NPL, or Superfund sites list, is the EPA's database of confirmed uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program.	3/31/10	1 mile
<b>Delisted NPL.</b> Sites that have been removed from the NPL list. Sites may be deleted from the NPL when no further response is warranted.	3/31/10	0.5 mile
<b>Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS).</b> The CERCLIS database is an EPA compilation of sites that the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances.	1/29/2010	0.5 mile
<b>Comprehensive Environmental Response, Compensation, and Liability Information System- No Further Remedial Action Planned (CERCLIS-NFRAP).</b> The CERCLIS-NFRAP database is an EPA compilation of sites that have been investigated and removed and archived from CERCLIS.	6/23/2010	0.5 mile
<b>Resource Conservation and Recovery Act (RCRA) Generator Database.</b> The EPA's RCRA program identifies hazardous waste generators and tracks hazardous waste from the point of generation to the point of disposal. If less than 1,000 kilograms but more than 100 kilograms of hazardous waste is generated per month, the facility is a small quantity generator. If more than 1,000 kilograms of hazardous waste or more than 1 kilogram of acute hazardous waste is generated per month, the facility is a large quantity generator.	3/25/2010	Site and adjoining properties
<b>RCRA Treatment, Storage and Disposal (TSD) Facility Database.</b> The RCRA TSD Facilities database is a compilation by EPA of reporting facilities that store, treat or dispose of hazardous waste.	2/17/2010	0.5 mile

Database	Date Updated	ASTM Search Radius
<b>RCRA Corrective Action Database (CORRACTS).</b> The RCRA CORRACTS list is the EPA's list of treatment, storage, or disposal facilities subject to corrective action under RCRA.	2/17/2010	1 mile
<b>Emergency Response Notification System (ERNS).</b> The ERNS list is a national database used to collect information on reported releases of oil and hazardous substances. The database contains information from spill reports made to federal authorities including the EPA, the U.S. Coast Guard, the National Response Center, and the Department of Transportation.	7/9/2010	Site only
<b>Federal Engineering Controls Registry.</b> A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundation, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.	12/20/2009	Site only
<b>Federal Institutional Controls Registry.</b> A listing of sites with institutional controls in place. Institutional controls include administrative measures such as groundwater use restrictions, construction restrictions, property use restriction, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of institutional controls.	12/20/2009	Site only

#### 8.1.1 NPL

A review of the NPL indicated one property located within the ASTM recommended search radius of the Site. This property is located 0.53 miles from the Site and is in the Hudson River. It is not considered a concern to the Site due to its distance from the Site.

#### 8.1.2 Delisted NPL

A review of the delisted NPL sites indicated no properties located within the ASTM recommended search radius of the Site.

#### 8.1.3 CERCLIS Database

A review of the CERCLIS database indicated no properties located within the ASTM recommended search radius of the Site.

#### 8.1.4 CERCLIS-NFRAP Database

A review of the CERCLIS-NFRAP database indicated no properties located within the ASTM recommended search radius of the Site.

### 8.1.5 RCRA Database

A review of the RCRA databases indicated six properties located within the ASTM recommended search radius of the Site. One of these is on a property, Sion Cleaners, which GZA considers to be a concern due to its proximity to the Site. The other 5 are not considered of concern to the Site due to their distance from the Site.

### 8.1.6 TSD Facility Database

A review of the RCRA TSD database indicated no properties located within the ASTM recommended search radius of the Site.

### 8.1.7 CORRACTS Database

A review of the RCRA CORRACTS database indicated no properties located within the ASTM recommended search radius of the Site.

### 8.1.8 ERNS Database

A review of the ERNS database indicated no properties located within the ASTM recommended search radius of the Site.

### 8.1.9 Federal Engineering Controls Registry

A review of the Federal Engineering Controls Registry did not identify any properties within the ASTM recommended search radii of the Site.

### 8.1.10 Federal Institutional Controls Registry

A review of the Federal Institutional Controls Registry did not identify any properties within the ASTM recommended search radius of the Site.

## 8.2 State Agency Database Review

Search results from the five state databases listed below were provided by EDR and reviewed by GZA. The results are considered current as of the date provided.

<b>Database</b>	<b>Date</b>	<b>ASTM Search Radius</b>
<b>Inactive Hazardous Waste Disposal Sites in New York State (SHWS).</b> The State Superfund Program, the cleanup program for inactive hazardous waste sites.	5/24/2010	1 mile
<b>Hazardous Substance Waste Disposal Site Inventory (HSWDS).</b> This list included known or suspected hazardous substance waste disposal sites. Sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites are also included.	5/24/2010	0.5 miles

<b>Database</b>	<b>Date</b>	<b>ASTM Search Radius</b>
<b>Spills Information (SPILLS).</b> Data collected on spills reported to the NYSDEC.	5/24/2010	0.125 miles
<b>Petroleum Bulk Storage (UST).</b> Compiled list of sites with petroleum storage capacities between 1,100 and 400,000 gallons.	6/17/2010	Site and adjoining properties
<b>Aboveground Storage Tank (AST).</b>	6/17/2010	0.25
<b>Leaking Underground Storage Tanks (LTANKS)</b> An inventory of reported leaking storage tanks incidents. The causes of the incidents are tank test failures, tank failures, or tank overfills.	5/24/2010	0.5 miles
<b>Solid Waste Facilities/Landfill Sites (SWF/LF).</b> Typically contains an inventory of solid waste disposal facilities or landfills, these may be active or inactive facilities or open dumps that failed to meet RCRA subtitle D Section 4004 criteria.	7/14/2010	0.5 mile
<b>State/Tribal Institutional Control/Engineering Control Registry</b>	5/24/2010	Site
<b>State/Tribal Brownfield Sites</b>	5/24/2010	0.5 miles
<b>State/Tribal Voluntary Cleanup Sites (VCP)</b>	5/24/2010	0.5 miles

#### 8.2.1 SHWS Database

A review of the SHWS database did not identify any properties within the ASTM recommended search radius of the Site.

#### 8.2.2 HSWDS Database

A review of the HSWDS database did not identify any properties within the ASTM recommended search radius of the Site.

#### 8.2.3 SPILLS Database

A review of the SPILLS database indicated 25 spills located within the ASTM recommended search radius of the Site. GZA does not consider any of these to be a concern to the Site due to the distance of these incidents from the Site and the fact that all of these cases have been closed by the NYSDEC.

#### 8.2.4 UST Database

A review of the UST database indicated 23 registered located within 0.25 -mile of the Site. Twenty-two of these USTs are located more than 0.1 mile from the Site and are therefore not considered a concern to the Site. An UST is located in a residential building at 66 Post Avenue 0.07 mile downgradient of the Site and is therefore not considered a concern.

#### 8.2.5 LTANK Database

A review of the LTANK database indicated 50 incidents located within ½ -mile of the Site. GZA does not consider any of these to be a concern to the Site due to the distance of these incidents from the Site and the fact that all of these cases have been closed by the NYSDEC.

#### 8.2.6 SWF/LF

A review of the SWF/LF database did not identify any properties within the ASTM recommended search radius of the Site.

#### 8.2.7 State/Tribal Institutional Control/Engineering Control Registry

A review of the State/Tribal Institutional Control/Engineering Control Registry database did not identify any properties within the ASTM recommended search radius of the Site.

#### 8.2.8 State/Tribal Voluntary Cleanup

A review of the Voluntary Cleanup Program (VCP) database indicated one incident located within ½ -mile of the Site. This property is located of 0.363 miles cross-gradient from the Site; and is therefore not considered a concern.

#### 8.2.9 State/Tribal Brownfield Site

A review of the State/Tribal Brownfield Site database did not identify any properties within the ASTM recommended search radius of the Site.

#### 8.2.10 Other Databases Reviewed

The results of the search of available records from the following databases were also reviewed: Aboveground Storage Tanks (AST), Historic Leaking USTs and ASTs, Historic USTs, Historic Spills, RCRA Non-Generators, Manifests and Dry Cleaners. The only identified records for the Site and adjoining properties are at Sion Dry Cleaners in the Manifest and Dry Cleaners databases.

### 8.3 Local Regulatory Agencies

GZA contacted the New York City Fire Department, New York City Department of Health and Mental Services and the New York State Department of Environmental Conservation to request any environmental documents associated with the Site property.

The results of the search at the City of New York Fire Department (FDNY) are located in **Appendix H**. One record was identified for this Site. A 275-gallon fuel tank was sealed/removed on March 11, 1985. This fuel oil tank is likely the same tank identified by the fill port during the Site reconnaissance.

Correspondence with the New York State Department of Environmental Conservation is located in **Appendix I**. No records were found for this Site.

GZA has not yet received responses to our requests from the New York City Health and Mental Services. Pertinent documents will be forwarded to the Client upon receipt.

## 9.0 INTERVIEWS AND REFERENCES

GZA reviewed the following sources as part of this assessment. The information provided by each is discussed and referenced in the text.

- New York City Department of Finance; Property tax assessment information; <http://nycprop.nyc.gov/nycproperty/nynav/jsp/selecttbl.jsp>.
- New York City Department of City Planning; Zoning information; [http://www.nyc.gov/html/dcp/html/zone/zh\\_zmactable.shtml](http://www.nyc.gov/html/dcp/html/zone/zh_zmactable.shtml).
- The City of New York Graduate Center; New York City Open Accessible Space Information System (OASIS); <http://www.oasis.net>.
- New York City Department of Building; Building permit and actions information; <http://www.nyc.gov/html/dob/html/bis/bis.shtml>.
- U.S. Department of the Interior Geological Survey, Central Park, NY and Yonkers, NY Quadrangle. 7.5 Minute Series (Topographic) Map, 1979.
- Rock Datum Map of Manhattan (Borough President of Manhattan Datum), 1940.
- Hydrology of the Five Boroughs of New York City – New York City Department of Design and Construction.
- Title Search, 153-157 Sherman Avenue, New York, New York – Old Republic National Title Insurance Company

## 10.0 USER RESPONSIBILITIES

GZA requested information from the User regarding title information, environmental liens, Activity and Use Limitations (AULs), and specialized knowledge or commonly known information regarding the Site and reason for significantly lower purchase price (if applicable). Under ASTM 1527-05, User responsibilities include:

- reviewing land title records and lien records for environmental liens or Activity and Use Limitations (AULs), and reporting this information to the Environmental Professional;
- communicating to the Environmental Professional any “specialized knowledge or experience of the User” regarding recognized environmental conditions (RECs) at the property;
- communicating to the Environmental Professional any “actual knowledge” of the User of any environmental liens or AULs;
- “considering the relationship of the purchase price to the fair market value” and communicating to the Environmental Professional any reason for a significantly lower purchase price; and
- Communicating any “commonly known or reasonably ascertainable” information regarding recognized environmental conditions at the property to the Environmental Professional.

The above information was provided by the User and is included in **Appendix J**.

## 11.0 FINDINGS AND CONCLUSIONS

A Phase I ESA following the general guidance of the ASTM E1527-05 has been conducted at 153 – 157 Sherman Avenue, New York, New York. The study included a site reconnaissance, a review of Site history, a review of selected local, state and federal regulatory records, a review of information provided by the User, and interviews with persons and agencies familiar with environmental conditions at the Site. No subsurface exploration or chemical testing of soil, groundwater, or hazardous building materials was conducted, and no evaluation of radon was performed.

### 11.1 Findings

The findings below are based on the work conducted as part of this assessment.

- The Site is located on the southern side of Sherman Avenue between Academy Street and West 204<sup>th</sup> Street. The Site is approximately 0.38 miles to the west of

the Harlem River.

- Ground surface elevation at the Site is approximately 25 feet above mean sea level. Based upon topographical features, groundwater flow is expected to be to the south - southeast.
- The southern portion of the Site was developed between 1913 and 1935 with three commercial buildings. These properties have been used as commercial since their construction with various occupants.
- In 2007, a fire damaged large portions of the buildings at 153 and 155 Sherman Avenue. The buildings have been unoccupied since that year.
- A fill line cap was observed on the sidewalk in between 153 Sherman and 155 Sherman indicating the likely storage of fuel oil on the Site. A search for records for the Site at the FDNY identified a record of a 275-gallon fuel tank at 153 Sherman Avenue which was sealed/removed in 1985. It is likely that the fill line cap observed is remaining from this tank. We note that the Site does not appear in the historic spills database which would date back to the time of the tank closure.
- Solid waste and construction material debris was observed throughout the exterior and interior of the property. Old fluorescent bulbs and ballasts were observed on the floor and hanging from the ceiling in the basement at 153 Sherman.
- Old electrical equipment was observed on the Site in the basement of 153 Sherman.
- Suspect ACMs were identified in GZA's preliminary visual assessment included drywall, acoustical ceiling tiles, vinyl floor tiles and underlying mastic, roofing materials and roof flashing. These materials were also found in piles of debris throughout the Site.
- Given the age of the building, it is likely that the exposed and/or underlying layers of paint may contain lead.
- A dry cleaner is located adjacent to the Site and listed in the RCRA-SQG, Manifest and Drycleaners databases.
- There are 25 SPILLS incidents within ½-mile of the Site that have been closed by NYSDEC.
- There are 50 LTANK incidents within ½-mile of the Site. Only one of the incidents remains open. The open incident reportedly had the spill contained to the tank room.

- There are 23 registered USTs within 0.25 mile of the Site. None of these are considered of concern to the Site.
- The information regarding User responsibilities was provided by the Client and is presented in **Appendix J**.

## 11.2 Conclusions and Opinions

Based on the findings presented above, it is GZA's opinion that we have performed a Phase I Environmental Site Assessment of the Site located at 153-157 Sherman Avenue, New York, New York in conformance with the scope and limitations of ASTM E1527-05. Any exceptions to, or deletions from, this practice are described in **Section 1.1** of this report.

GZA believes that the following Recognized Environmental Conditions (RECs) exist for the Site:

- The historic use of the Site as a cleaners and dyers is listed as occupying the building at 155 Sherman Avenue in 1927; and
- A petroleum fill port is located on the sidewalk between 153 Sherman Avenue and 155 Sherman Avenue, which is a possible indication of the presence of an UST, or an AST in the basement. According to the FDNY records, a fuel tank was sealed/removed in 1985 from 153 Sherman Avenue.

This assessment has revealed the following environmental concerns in connection with the Site:

- There are a number of solid waste and universal waste disposal issues, which will need to be addressed prior to development, including: construction and demolition debris, and fluorescent light bulbs and light ballasts;
- Old electrical panels in the basement of 153 Sherman may contain mercury or other hazard materials.
- A dental clinic was located in the building at 157 Sherman Avenue, which indicates the possibility of mercury and other hazardous material use;
- The property at 151 Sherman Avenue is listed in the City Directory search results in 1958 as Trefolex, a lubrication manufacturer and machine shop;
- The property at 149 Sherman Avenue, 50 feet to the west of the Site, is currently a dry cleaner called Sion Dry Cleaners;
- Suspect ACMs include the electrical panels and insulation, drywall, acoustical ceiling tiles, vinyl floor tiles and underlying mastic, roof materials and roof flashing of the Site buildings and in the piles of debris throughout the Site;

- Given the age of the building, it is likely that the exposed and/or underlying layers of paint may contain lead; and
- If the building property were to be renovated, then the extensive water intrusion which was observed may result in amplified fungal/mold growth.

It is GZA's opinion that a subsurface and vapor intrusion investigation, including the advancement of borings and soil gas implants and laboratory analysis of soil, groundwater, air samples and a building hazardous materials survey is necessary to confirm the presence or absence of hazardous materials associated with the concerns referenced above.

It is GZA's opinion that an evaluation of building materials and universal waste should be considered prior to demolition.

## 12.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

I declare, to the best of my knowledge and belief: that I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 12; that 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; and that I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312. The signature of the Environmental Professional is contained on the cover page of this report.

## 13.0 LIMITATIONS

GZA's site assessment was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and GZA observed the degree of care and skill generally exercised by other consultants under similar circumstances and conditions. GZA's findings and conclusions must be considered not as scientific certainties, but rather as our professional opinion concerning the significance of the limited data gathered during the course of the environmental site assessment. No other warranty, express or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil or other latent condition beyond that observed by GZA during its site assessment. This report is also subject to the specific limitations contained in **Appendix A**.

It should be noted that when an assessment is completed without subsurface explorations and chemical screening of soil and groundwater beneath the site, no data can be generated regarding latent subsurface conditions which may be the result of on-site or off-site sources.

This study and report have been prepared on behalf of and for the exclusive use of WSFSSH, solely for use in an environmental assessment of the Site. This report and findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor relied on by any other party in whole or in part, without the prior written consent of GZA. However, GZA acknowledges and agrees that the Report may be conveyed to the Lender associated with the proximate financing of the Site to the extent set forth in our signed professional services agreement dated August 20, 2010. Such parties' reliance upon the report shall be subject to all the Limitations, Terms and Conditions set forth in the report and in the Proposal, referred to in the report and incorporated therein. GZA's aggregate Liability to all parties who may come to rely upon the report is limited to the amount set forth in the Terms and Conditions and is not hereby expanded. Client acknowledges and agrees that reliance upon the report and the findings in the report by any other party, or for any other purpose, shall be at that party's sole risk and without any liability to GZA.



## **FIGURES**

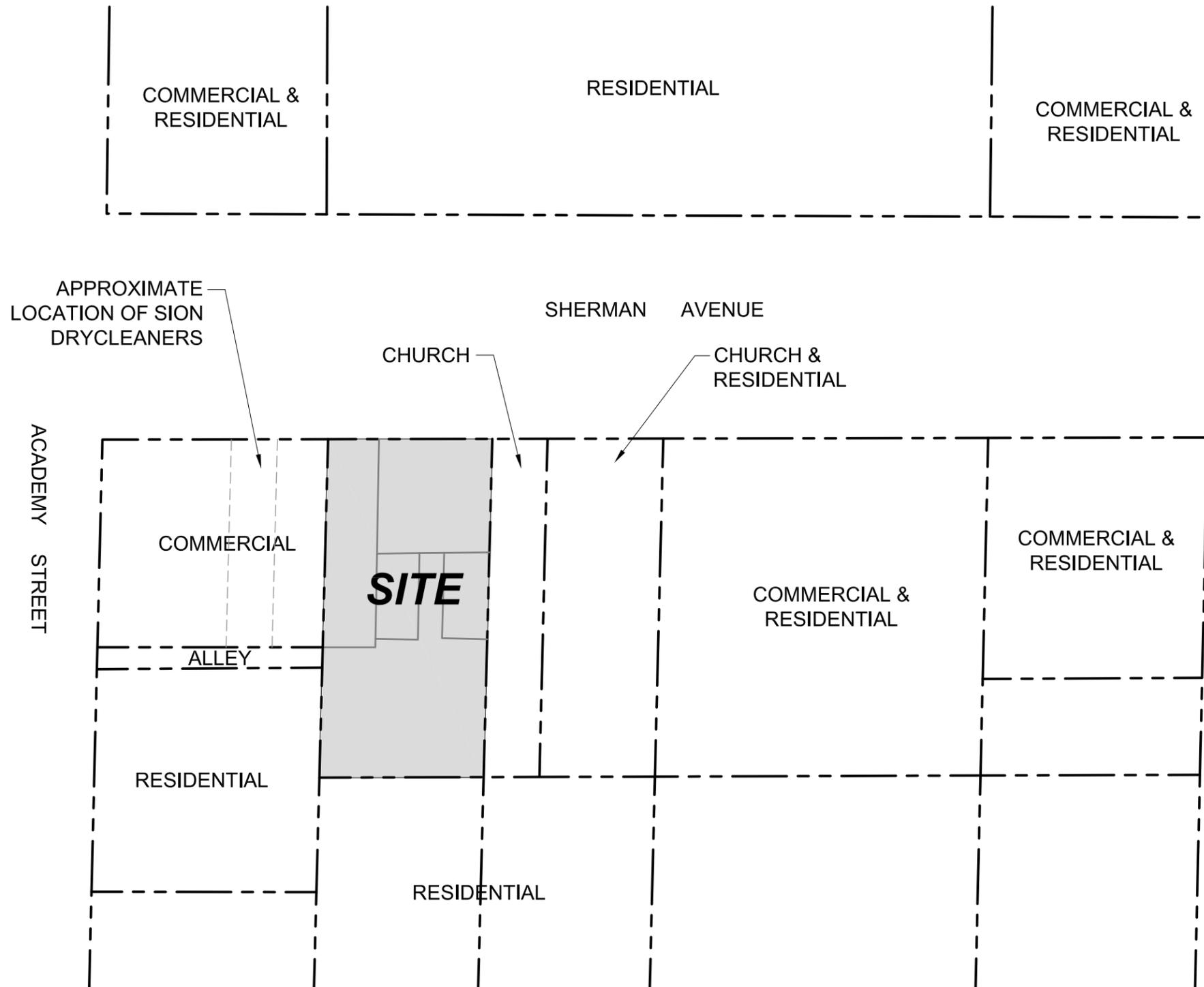


SOURCE: USGS TOPOGRAPHIC MAPS YONKERS, NJ-NY (1979) & CENTRAL PARK, NY-NJ (1979). CONTOUR INTERVAL 10 FT., ORIGINAL SCALE 1:24,000 (1"=2,000 FT.).



PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		<b>153 - 157 SHERMAN AVENUE                  (BLOCK 2221, LOT 5)                  NEW YORK, NEW YORK</b>			FIGURE	
PREPARED FOR: WEST SIDE FEDERATION FOR SENIOR AND SUPPORTIVE HOUSING, INC.		<b>PHASE I ENVIRONMENTAL SITE ASSESSMENT                  SITE LOCATION MAP</b>				<b>1</b>
PROJ MGR: SK DESIGNED BY: CO	REVIEWED BY: CO DRAWN BY: EM	CHECKED BY: SK SCALE: 1" = 2000'	DATE SEPT. 2010	PROJECT NO. 41.0161917.00	REVISION NO.	SHEET NO.

© 2010 - GZA GeoEnvironmental, Inc. GZA-J-41.0161900.00-41.0161999.00-41.0161917.00\Figures\CAD\161917001.dwg [FIG-2] September 22, 2010 - 2:34pm miguel.torres



**LEGEND:**

-  SITE LOCATION
-  BUILDING
-  TAX LOT BOUNDARY

**NOTE:**

1. THE BASE MAP WAS DEVELOPED FROM PLANS, PROVIDED BY ENVIRONMENTAL DATA RESOURCES, INC. ENTITLED "2005 CERTIFIED SANDBORN MAP", DATED: 2005, ORIGINAL, DRAWING NO.: 2853838 - 3.

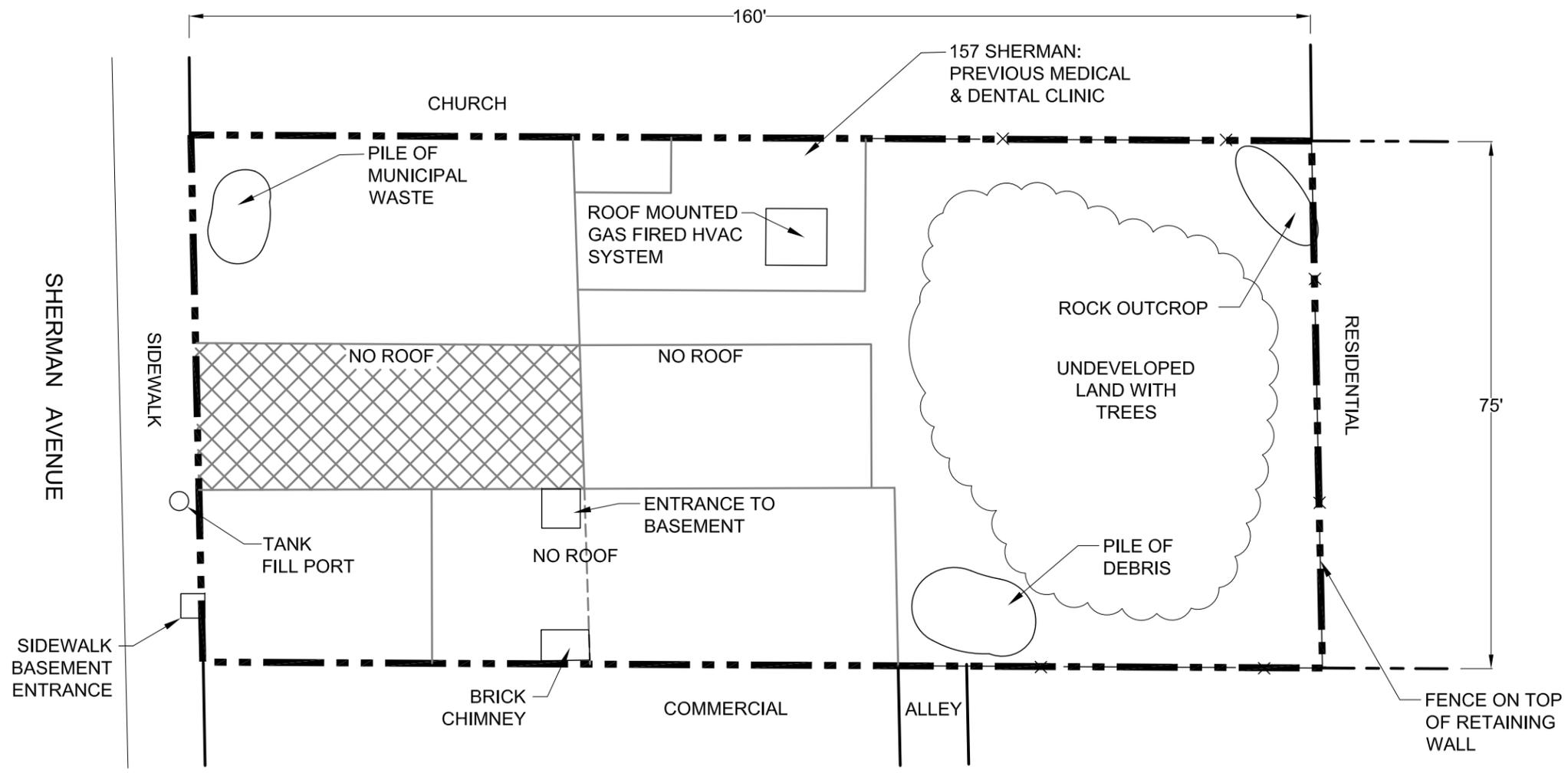
153 - 157 SHERMAN AVENUE  
(BLOCK 2221, LOT 5)  
NEW YORK, NEW YORK

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
SITE AND ADJACENT PROPERTIES PLAN**

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR MODIFIED IN WHOLE OR IN PART FOR ANY OTHER PURPOSE OR PROJECT. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING SHALL BE AT THE USER'S OR SUCH OTHER PARTIES' SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

PREPARED BY:  <b>GZA GeoEnvironmental, Inc.</b> Engineers and Scientists www.gza.com		PREPARED FOR: <b>WEST SIDE FEDERATION FOR SENIOR AND SUPPORTIVE HOUSING, INC.</b>	
PROJ MGR: SK	REVIEWED BY: CO	CHECKED BY: SK	FIGURE
DESIGNED BY: CO	DRAWN BY: EM	SCALE: 1" = 60'	<b>2</b>
DATE: SEPT. 2010	PROJECT NO. 41.0161917.00	REVISION NO.	

© 2010 - GZA GeoEnvironmental, Inc. GZA-i:\41.0161900.00-41.0161999.00\41.0161917.00\Figures\CAD\161917001.dwg [FIG-3] September 08, 2010 - 11:56am ed.morris

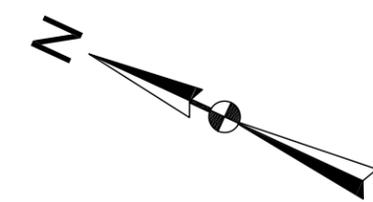


**LEGEND:**

- SITE BOUNDARY
- FENCE
- BUILDING
- TAX LOT BOUNDARY
- DID NOT ACCESS

**NOTE:**

1. THE BASE MAP WAS DEVELOPED FROM PLANS, PROVIDED BY ENVIRONMENTAL DATA RESOURCES, INC. ENTITLED "2005 CERTIFIED SANDBORN MAP", DATED: 2005, ORIGINAL, DRAWING NO.: 2853838 - 3.



**153 - 157 SHERMAN AVENUE  
(BLOCK 2221, LOT 5)  
NEW YORK, NEW YORK**

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
SITE PLAN**

PREPARED BY: <b>GZA GeoEnvironmental, Inc.</b> Engineers and Scientists <a href="http://www.gza.com">www.gza.com</a>		PREPARED FOR: <b>WEST SIDE FEDERATION FOR SENIOR AND SUPPORTIVE HOUSING, INC.</b>	
PROJ MGR: SK	REVIEWED BY: CO	CHECKED BY: SK	FIGURE
DESIGNED BY: CO	DRAWN BY: EM	SCALE: 1" = 10'	<b>3</b>
DATE: SEPT. 2010	PROJECT NO: 41.0161917.00	REVISION NO.	SHEET NO. 1-OF-1

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**APPENDIX A  
LIMITATIONS**

## PHASE I ENVIRONMENTAL SITE ASSESSMENT LIMITATIONS



### Uncertainty not Eliminated

1. No environmental site assessment can eliminate the uncertainty of the possible presence of Recognized Environmental Conditions (RECs). This report was prepared to help reduce, not to eliminate, such uncertainties. Consistent with American Society for Testing and Materials (ASTM) Guidance (ASTM 1527-05), our opinions were developed in light of the constraints imposed by time and budget.

### Limits to Observations

2. As indicated in the Report, we made observations for evidence of RECs at the Site and for conditions at adjoining properties that could result in RECs at the Site. Observations were made of the Site and of structures on the Site as indicated within the report. Where access to portions of the Site or to structures on the Site was unavailable or limited, GZA renders no opinion as to the presence of hazardous substances, hazardous wastes, or petroleum products, or to the presence of indirect evidence relating to these materials, in that portion of the Site or structure. In addition, GZA renders no opinion as to the presence of hazardous substances, hazardous wastes, or petroleum products, or to the presence of indirect evidence relating to these materials, where direct observation of the interior walls, floor, or ceiling of a structure on the Site was obstructed by objects or coverings on or over these surfaces. Our opinions are necessarily based on these limited observations. Additionally, some activities or events of potential interest, at the Site or on adjoining properties, may have been transient and not observable at the time of our visit.

### Reliance on Information from Others

3. We relied upon information made available by federal, state and local authorities, the key site manager, and others. We did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

### Additional Information

4. Additional opinions or information regarding RECs may be developed by the lender, seller, buyer, or other parties. Such additional opinions or information may not fully support the opinions provided in this report. In the event such additional opinions or information is developed, we recommend that we be retained, in a timely manner, to review this material. This will provide us the opportunity to evaluate and modify, as necessary, the opinions provided in the Report

### Compliance with Regulations and Codes

5. Our services were performed to render an opinion on the presence of RECs. Unless specifically addressed within the Report, we render no opinion on the compliance of Site conditions or activities with local, state, or Federal codes or regulations.

### Shelf Life

6. The opinions expressed in this Report are based on conditions observed during the course of our work on this Site; these conditions may change over time. ASTM Guidance (see ASTM 1527-05) states that observations and opinions are only valid for 180 days. After 180 days, an update of portions of the Report may be necessary.



**APPENDIX B  
SITE PHOTOGRAPHS**

SITE PHOTOGRAPHS

153-157 Sherman Avenue  
New York, New York

File No.: 41.0161917.00  
Photo Date: August 26, 2010



View of the Site looking south.



View of the adjoining property to the east looking south.



View of western portion of the Site (153-155 Sherman) looking south.



View of the property north of the Site.



View of eastern portion of the Site (157 Sherman) looking south.



Dry Cleaners located at 149 Sherman Ave.

SITE PHOTOGRAPHS

153-157 Sherman Avenue  
New York, New York

File No.: 41.0161917.00  
Photo Date: August 26, 2010



View of the roofs of the buildings looking west.



View of the northern portion of 155 Sherman looking down.



View of the northern portion of the roof of 157 Sherman looking south.



View of the floor tiles in the southern portion of 153 Sherman looking down.



View of the southern portion of the roof of 157 Sherman and the HVAC system looking south.



View of the exterior south face of building at 153 Sherman.

SITE PHOTOGRAPHS

153-157 Sherman Avenue  
New York, New York

File No.: 41.0161917.00  
Photo Date: August 26, 2010



Pile of debris of the north west corner of the undeveloped portion of the property.



View of the adjoining property to the south looking east.



Close up of the pile of debris of the north west corner of the undeveloped portion of the property.



South wall of the interior of 153 Sherman.



Bedrock outcropping on the southeastern edge of the Site.



View of the northern interior of 153 Sherman and the exit of the building to the street.

SITE PHOTOGRAPHS

153-157 Sherman Avenue  
New York, New York

File No.: 41.0161917.00  
Photo Date: August 26, 2010



East wall of the interior of 153 Sherman.



View of the interior of 155 Sherman from the gate looking south.



West wall of the interior of 153 Sherman.



Solid Waste Piles 3.5 feet high at the front of 155 Sherman



Possible mercury fuses in the basement of 153 Sherman.



Fill Line Cap

SITE PHOTOGRAPHS

153-157 Sherman Avenue  
New York, New York

File No.: 41.0161917.00  
Photo Date: August 26, 2010



Pile of municipal debris in the north west corner of the building at 157 Sherman.



Bathroom in the eastern portion of 157 Sherman.



Pharmaceuticals on the floor in 157 Sherman.



Floor tile in 157 Sherman



Gas heating unit in 157 Sherman.



Ceiling Tile in 157 Sherman.

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# **APPENDIX B**

## **Health and Safety Plan**

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**Health and Safety Plan for  
Phase II Environmental Site Investigation**

**153-157 Sherman Avenue  
New York, NY**

**November 2014**

**Prepared for:  
West Side Federation for Senior and Supportive Housing  
2345 Broadway  
New York, NY 10024**

**Prepared by:  
CA RICH CONSULTANTS, INC.  
17 Dupont Street  
Plainview, New York 11803-1614**

## Health & Safety Plan

### PHASE II INVESTIGATION

153-157 Sherman Avenue  
New York, NY

#### 1.0 INTRODUCTION

This Health and Safety Plan ("HASP") is developed for utilization during implementation of the Phase II Investigation (Phase II) at the above referenced site located in the New York, New York (the Site). The HASP is to be enforced by CA RICH's Project Health and Safety Manager and the on-site Health & Safety Coordinator (HSC) or his/her designee. The on-site HSC will interface with the Project Manager and is vested with the authority to make field decisions including the termination of on-site activities if an imminent health and safety hazard, condition or related concern arises. Information and protocol in the HASP is applicable to all on-site personnel who will be entering the designated work zone.

#### 2.0 POTENTIAL HAZARDS

##### 2.1 Chemical Hazards

CA RICH is currently unaware of any chemical hazards on-site. There is potential that Volatile Organic Compounds (VOCs) and Semi Volatile Organic Compounds (SVOCs) associated with historical usage of the property as a garage and manufacturing along with on-site gasoline storage tanks. In addition, heavy metals associate with construction fill material are commonly encountered when redeveloping land within the City of New York.

VOC and SVOCs are typically described as "sweet" or "aromatic" smelling and are narcotic in high concentrations. Acute exposure to significant concentrations of these chemicals can cause irritation of the skin, eyes and mucus membrane, headache, dizziness, nausea, and in high enough concentrations, loss of consciousness and death (Sax, 1984). These compounds are suspected to be carcinogenic with chronic exposure.

Physical properties and additional toxicological information for potential contaminants are included in Appendix A.

##### 2.2 Other Health & Safety Risks

Normal physical hazards associated with using drilling and excavation equipment and hand tools as well as hazards associated with adverse climatic conditions (heat & cold) or physical site-related debris represent a certain degree of risk to be assumed by on-site personnel.

Certain provisions in this Plan, specifically the use of personnel protective equipment, may tend to increase the risk of physical injury, as well as susceptibility to cold or heat stress. This is primarily due to restrictions in dexterity, hearing, sight, and normal body heat transfer inherent in the use of protective gear.

### 3.0 RISK MANAGEMENT

#### 3.1 Work / Exclusion Zones

For each proposed investigation activity a work / exclusion zone will be established. Access to this area will be limited to properly trained, properly protected personnel directly involved with investigation. Enforcement of the work / exclusion zone boundaries is the responsibility of the on-site Health & Safety Coordinator or his/her designee.

#### 3.2 Personnel Protection

Health & Safety regulatory personnel have developed different levels of personnel protection to deal with differing degrees of potential risks of exposure to chemical constituents. The levels are designated as **A**, **B**, **C**, and **D** and are ranked according to the amount of personnel protection afforded by each level. Level **A** is the highest level of protection and Level **D** is the lowest level of protection.

The different levels are primarily dependent upon the degree of respiratory protection necessary, in conjunction with appropriate protective clothing. Levels of protection mandate a degree of respiratory protection. However, flexibility exists within the lower levels (B, C, and D) concerning proper protective clothing.

The four levels of protection were developed for utilization in situations which involve suspected or known atmospheric and/or environmental hazards including airborne contamination and skin-affecting substances.

It is anticipated that all of the investigation work will be performed using Level D protection (no respiratory protection with protective clothing requirements limited to long sleeved shirts, long pants or coveralls, work gloves and steel-toe leather work boots).

Level D may be modified by the HSC to include protective clothing or equipment (Saran-coated disposable coveralls or PVC splash suits, safety glasses, hard hat with face shield, and chemically resistant boots) based upon physical hazards, skin contact concerns, and real-time monitoring.

Real-time air monitoring for total airborne organics using either an OVA or an HNU will determine if and when an upgrade from Level D to a higher level of respiratory protection is warranted. Decisions for an upgrade from Level D to higher levels of protection, mitigative actions, and/or suspension of work are the responsibility of the Project Manager and/or the designated on-site Health & Safety Coordinator.

In the event odors are detected, Level C respiratory protection will be employed. Organic vapor cartridges are capable of removing xylenes at a concentration of 1,000 ppm and trimethylbenzenes at a concentration of 250 ppm.

#### 3.2 Air Monitoring

The Health & Safety Coordinator or his/her properly trained assignee will conduct "Real Time" air monitoring for total organic vapors. 'Real-time' monitoring refers to the utilization of instrumentation, which yields immediate measurements. The utilization of real time monitoring helps determine immediate or long-term risks to on-site personnel and the general public, the appropriate level of personnel respiratory protection necessary, and actions to mitigate the recognized hazard.

### 3.2.1. Organic Vapor

#### A. Instrumentation

Real-time monitoring for total organic vapor (TOV) utilizes either a photo-ionization detector (PID) or flame ionization detector (FID). The appropriate PID is an intrinsically safe HNU Systems Model PI-101, MiniRae 3,000 or equivalent PID, which is factory calibrated to benzene and is capable of detecting petroleum-related contamination. The appropriate FID is a Foxboro model 128 Organic vapor Analyzer (OVA), which is factory calibrated to methane.

#### B. Application

Organic vapor monitoring is performed as outlined in the NYSDOH Community Air Monitoring Plan. Specifically, monitoring shall be conducted at the downwind perimeter of the work zone periodically during work activities. If TOV levels exceed 5 milligrams per meter cubed ( $\text{mg}/\text{m}^3$ ) above established pre-work background levels, work activities will be halted and monitoring will be continued under the provision of a Vapor Emission Response Plan (outlined in Section 5).

### 3.3 Worker Training

Personnel working in the contamination area must be trained, fit-tested, and medically-Certified (OSHA 29 CFR 1910. 134).

All personnel working within the work/exclusion area must confirm their participation in an ongoing health surveillance program. The program must consist of an initial "baseline" examination stipulated by OSHA (29 CFR 1910. 134). The examination is designed to screen for evidence of adverse effects of occupational exposure (particularly to toxic substances) and determine personnel fitness with respect to the use of respiratory protection.

Each worker enlisted in the medical surveillance program receives an annual examination similar to the baseline exam to evaluate irregularities or trends in his/her health with respect to potential exposure. Upon termination of employment, contract/subcontract or job completion, each worker/employee must take an 'exit examination' identical to the annual exam. All physicals will be performed by licensed physicians with medical histories to be confidentially maintained by their employer.

Prior to any work, all workers involved with the project should be aware of the potential chemical, physical and biological hazards discussed in this document, as well as the general safety practices outlined below. A safety briefing by the on-site HSC and/or assistant designee shall take place at the outset of work activities.

### 3.4 General Safety Practices

The following safety practices shall be followed by all project personnel.

1. Avoid unnecessary skin exposure to subsurface materials. Sleeved shirts tucked into long pants (or coveralls), work gloves, and steel-toe leather work boots are required unless modified gear is approved by the HSC. Remove any excess residual soil from clothes prior to leaving the site.
2. No eating, drinking, gum or tobacco chewing, or smoking allowed in designated work areas. Thoroughly wash hands prior to these activities outside the work area. Avoid sitting on the ground during breaks or while eating and drinking. Thoroughly wash all exposed body areas at the end of the workday.

3. Some symptoms of acute exposure include: dizziness, light-headedness, drowsiness, headache, and nose/eye/skin irritation. If these symptoms are experienced or strong odor is detected, leave the work area and immediately report the incident to the on-site HSC.

### **3.5 Enforcement**

Enforcement of the Site Safety Plan will be the responsibility of the HSC or his/her designee. The Coordinator or his/her designee should be on-site on a full-time basis and perform or directly oversee all aspects of Project Health & Safety operations including: air monitoring; environmental mitigation; personnel respiratory and skin protection; general safety practices; documentation; emergency procedures and protocol; and reporting and recordkeeping as described below.

### **3.6 Reporting & Recordkeeping**

Incidents involving injury, symptoms of exposure, discovery of contained (potentially hazardous) materials, or unsafe work practices and/or conditions should be immediately reported to the HSC.

A logbook must be maintained on-site to document all aspects of HASP enforcement. The log is paginated and dated with entries made on a daily basis in waterproof ink, initialed by the HSC or designee. Log entries should include date and time of instrument monitoring, instrument type, measurement method, test results, calibration and maintenance information, as well as appropriate mitigative actions responding to detections. Miscellaneous information to be logged may include weather conditions, reported complaints or symptoms, regulatory inspections, and reasons to upgrade personnel protection above the normal specification (Level D).

## **4.0 EMERGENCIES**

### **4.1 EMERGENCY RESPONSE SERVICES**

- |     |  |                       |
|-----|--|-----------------------|
| (1) | <b>HOSPITAL</b><br>Manhattanville Health Care Center<br>311 West 231 <sup>st</sup> Street<br>Bronx, New York 10463 | <b>(718) 601-8400</b> |
| (2) | <b>AMBULANCE</b>   | <b>911</b>            |
| (3) | <b>FIRE DEPARTMENT<br/>HAZARDOUS MATERIALS</b>   | <b>911</b>            |
| (4) | <b>POLICE DEPARTMENT</b>   | <b>911</b>            |
| (5) | <b>POISON CONTROL CENTER</b>   | <b>(800) 222-1222</b> |

The preceding list and associated attached map (Figure 1) illustrating the fastest route to the nearest hospital must be conspicuously posted in areas of worker congregation and adjacent to all on-site telephones (if any).

## 4.2 EMERGENCY PROCEDURES

### 4.2.1 Contact or Exposure to Suspected Hazardous Materials

In the event of a fire, chemical discharge, medical emergency, workers are instructed to immediately notify the HSC and proper emergency services (posted). Should physical contact with unknown or questionable materials occur, immediately wash the affected body areas with clean water and notify the HSC. Anyone experiencing symptoms of exposure should exit the work area, notify the HSC, and seek medical attention.

### 4.2.2 Personnel Decontamination, First Aid, and Fire Protection

The first step in the treatment of skin exposure to most chemicals is to rinse the affected area with water. For this reason, adequate amounts of potable water and soap are maintained on-site in a clearly designated and readily-accessible location. Portable emergency eyewash stations and a first aid kit must be made available and maintained in the same locations as the potable water. Fire extinguishers are also to be maintained on-site in designated locations. All on-site personnel are to be made aware of the locations of the above-mentioned on-site Health & Safety accommodations during the initial Health and Safety briefing.

### 4.2.3 Ingress/egress

Clear paths of ingress/egress to work zones and site entrances/exits must be maintained at all times. Unauthorized personnel are restricted from accessing the site.

## 5.0 VAPOR EMISSIONS RESPONSE PLAN

If the ambient air concentration of organic vapors exceeds  $5 \text{ mg/m}^3$  above background at the perimeter of the work area, activities will be halted and monitoring continued. If the organic vapor level decreases below  $5 \text{ mg/m}^3$  above background, work activities can resume. If the organic vapor levels are greater than  $5 \text{ mg/m}^3$  over background but less than 25 ppm over background at the perimeter of the work area, activities can resume provided:

- The organic vapor level 200 ft. downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below  $5 \text{ mg/m}^3$  over background.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown. When work shutdown occurs, downwind air monitoring as directed by the Safety Officer will be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section.

### Major Vapor Emission

If any organic levels greater than  $5 \text{ mg/m}^3$  over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, all work activities must be halted.

If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above  $5 \text{ mg/m}^3$  above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, then the air quality must be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If efforts to abate the emission source are unsuccessful and, if organic vapor levels are approaching 5 mg/m<sup>3</sup> above background for more than 30 minutes in the 20 Foot Zone, then the Major Vapor Emission Response Plan shall automatically be placed into effect;

However, the Major Vapor Emission Response Plan shall be immediately placed into effect if organic vapor levels are greater than 10 mg/m<sup>3</sup> above background.

### **Major Vapor Emission Response Plan**

Upon activation, the following activities will be undertaken:

1. All Emergency Response Contacts as listed in the Health & Safety Plan of the Corrective Action Plan will go into effect.
2. The local police authorities will immediately be contacted by the Safety Officer and advised of the situation.
3. Frequent air monitoring will be conducted at 30 minute intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Safety Officer.

## **6.0 HEALTH & SAFETY PLAN REFERENCES**

1. American Conference Governmental Industrial Hygienists, 1989; Threshold Limit Values and Biological Exposure Indices, 111 Pp.
2. Geoenvironmental Consultants, Inc.; 1987; Safety & Operations At Hazardous Materials Sites
3. NIOSH Guide To Chemical Hazards, 2002, US Department Of Health And Human Services, Centers For Disease Control
4. US Department Of Labor Occupational Safety & Health Administration, 1989; Hazardous Waste Operations And Emergency Response Interim Final Rule, 29 CFR Part 1910
5. Sax, N. I. Dangerous Properties Of Industrial Materials; © 1984

7.0 KEY PERSONNEL

<u>Responsibility</u>	<u>Name and Phone Number</u>	<u>Task Description</u>
Project Manager	<u>Eric Weinstoc (516) 576-8844</u>	Oversee and coordinate all technical aspects for the project
Site Safety Officer	<u>Thomas Brown (516) 576-8844</u>	Coordinate and inspect all health and safety operations from the project site
Project Manager Alternate: <u>Jason T. Cooper (516) 576-8844</u>		
Site Safety Officer Alternate: <u>Jessica Proscia (516) 576-8844</u>		
Client Representative: <u>Stephanie Green (212)-721-6032 x1014</u>		

**FIGURE**



Notes

Figure 1

Trip to:

**311 W 231st St**

Bronx, NY 10463-3804

1.68 miles / 5 minutes

Estimated Fuel Cost: **\$.42**



**153 Sherman Ave**, New York, NY 10034-460440.864679,  
-73.923127

(Address is approximate)

Download  
Free App



1. Start out going **northeast** on **Sherman Ave** toward **W 204th St**. [Map](#)

**0.3 Mi**

*0.3 Mi Total*



2. Turn **slight left** onto **10th Ave**. [Map](#)

*10th Ave is just past Isham St*

*COCO 4633 is on the corner*

**0.3 Mi**

*0.7 Mi Total*



3. Turn **slight right** onto **Broadway / US-9 N**. [Map](#)

*Broadway is just past W 216th St*

**0.5 Mi**

*1.2 Mi Total*



4. Turn **left** onto **W 230th St**. [Map](#)

*W 230th St is 0.1 miles past W 228th St*

*International Leadership Charter School is on the corner*

*If you are on US-9 N and reach Exterior St you've gone a little too far*

**0.3 Mi**

*1.6 Mi Total*



5. Turn **slight right** onto **Riverdale Ave**. [Map](#)

*Riverdale Ave is just past Tibbett Ave*

*Schools Elementary School is on the corner*

**0.10 Mi**

*1.7 Mi Total*



6. Turn **right** onto **W 231st St**. [Map](#)

*W 231st St is just past Riverdale Ave*

*If you reach W 232nd St you've gone about 0.1 miles too far*

**0.03 Mi**

*1.7 Mi Total*



7. **311 W 231ST ST** is on the **left**. [Map](#)

*If you reach Tibbett Ave you've gone a little too far*



**311 W 231st St**, Bronx, NY 10463-3804

Total Travel Estimate: **1.68 miles** - **about 5 minutes**

Estimated Fuel Cost: **\$.42**



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# **Appendix A**

## **Toxicological Information**



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## Lead

**Synonyms & Trade Names** Lead metal, Plumbum

<b>CAS No.</b> 7439-92-1	<b>RTECS No.</b> <a href="/niosh-rtecs/OF72D288.html">OF7525000 (/niosh-rtecs/OF72D288.html)</a>	<b>DOT ID &amp; Guide</b>
<b>Formula</b> Pb	<b>Conversion</b>	<b>IDLH</b> 100 mg/m <sup>3</sup> (as Pb) See: <a href="/niosh/idlh/7439921.html">7439921 (/niosh/idlh/7439921.html)</a>

**Exposure Limits**

**NIOSH REL** \*: TWA (8-hour) 0.050 mg/m<sup>3</sup> [See Appendix C \(nengapdxc.html\)](#) [\*Note: The REL also applies to other lead compounds (as Pb) -- see Appendix C.]

**OSHA PEL** \*: [1910.1025] TWA 0.050 mg/m<sup>3</sup> [See Appendix C \(nengapdxc.html\)](#) [\*Note: The PEL also applies to other lead compounds (as Pb) -- see Appendix C.]

**Measurement Methods**

**NIOSH 7082** (</niosh/docs/2003-154/pdfs/7082.pdf>), **7105** (</niosh/docs/2003-154/pdfs/7105.pdf>), **7300** (</niosh/docs/2003-154/pdfs/7300.pdf>), **7301** (</niosh/docs/2003-154/pdfs/7301.pdf>), **7303** (</niosh/docs/2003-154/pdfs/7303.pdf>), **7700** (</niosh/docs/2003-154/pdfs/7700.pdf>), **7701** (</niosh/docs/2003-154/pdfs/7701.pdf>), **7702** (</niosh/docs/2003-154/pdfs/7702.pdf>), **9100** (</niosh/docs/2003-154/pdfs/9100.pdf>), **9102** (</niosh/docs/2003-154/pdfs/9102.pdf>), **9105** (</niosh/docs/2003-154/pdfs/9105.pdf>);

**OSHA ID121**  
(<http://www.osha.gov/dts/sltc/methods/inorganic/id121/id121.html>)  
 (<http://www.cdc.gov/Other/disclaimer.html>), **ID125G**  
(<http://www.osha.gov/dts/sltc/methods/inorganic/id125g/id125g.html>)  
 (<http://www.cdc.gov/Other/disclaimer.html>), **ID206**  
(<http://www.osha.gov/dts/sltc/methods/inorganic/id206/id206.html>)  
 (<http://www.cdc.gov/Other/disclaimer.html>)

See: [NMAM \(/niosh/docs/2003-154/\)](/niosh/docs/2003-154/) or [OSHA Methods \(http://www.osha.gov/dts/sltc/methods/index.html\)](http://www.osha.gov/dts/sltc/methods/index.html)   
(<http://www.cdc.gov/Other/disclaimer.html>)

**Physical Description** A heavy, ductile, soft, gray solid.

<b>MW:</b> 207.2	<b>BP:</b> 3164°F	<b>MLT:</b> 621°F	<b>Sol:</b> Insoluble	<b>VP:</b> 0 mmHg (approx)	<b>IP:</b> NA
<b>Sp.Gr:</b> 11.34	<b>Fl.P:</b> NA	<b>UEL:</b> NA	<b>LEL:</b> NA		

Noncombustible Solid in bulk form.

**Incompatibilities & Reactivities** Strong oxidizers, hydrogen peroxide, acids



## Search the Pocket Guide

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Enter search terms separated by spaces.

## Mercury compounds [except (organo) alkyls] (as Hg)

**Synonyms & Trade Names** Mercury metal: Colloidal mercury, Metallic mercury, Quicksilver  
Synonyms of "other" Hg compounds vary depending upon the specific compound.

**CAS No.** 7439-97-6 (metal)

**RTECS No.**  
OV4550000 (metal)  
(/niosh-rtecs/OV456D7o.html)

**DOT ID & Guide** 2809 172 (<http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=172>)  
(<http://www.cdc.gov/Other/disclaimer.html>) (metal)

**Formula** Hg  
(metal)

**Conversion**

**IDLH** 10 mg/m<sup>3</sup> (as Hg)  
See: [7439976 \(/niosh/idlh/7439976.html\)](/niosh/idlh/7439976.html)

## Exposure Limits

**NIOSH REL :**

Hg Vapor: TWA 0.05 mg/m<sup>3</sup> [skin]  
Other: C 0.1 mg/m<sup>3</sup> [skin]

**OSHA PEL** † ([nengapdxg.html](http://www.nengapdxg.html)): TWA 0.1 mg/m<sup>3</sup>

**Measurement Methods**

**NIOSH 6009**  (</niosh/docs/2003-154/pdfs/6009.pdf>);

**OSHA ID140**

(<http://www.osha.gov/dts/sltc/methods/inorganic/id140/id140.html>)  
 (<http://www.cdc.gov/Other/disclaimer.html>)

See: **NMAM** (</niosh/docs/2003-154/>) or **OSHA Methods**  
(<http://www.osha.gov/dts/sltc/methods/index.html>)  
 (<http://www.cdc.gov/Other/disclaimer.html>)

**Physical Description** Metal: Silver-white, heavy, odorless liquid. [Note: "Other" Hg compounds include all inorganic & aryl Hg compounds except (organo) alkyls.]

**MW:**  
200.6

**BP:**  
674°F

**FRZ:**  
-38°F

**Sol:**  
Insoluble

**VP:** 0.0012 mmHg

**IP:** ?

**Sp.Gr:**  
13.6  
(metal)

**Fl.P:**  
NA

**UEL:**  
NA

**LEL:** NA

Metal: Noncombustible Liquid

**Incompatibilities & Reactivities** Acetylene, ammonia, chlorine dioxide, azides, calcium (amalgam formation), sodium carbide, lithium, rubidium, copper

**Exposure Routes** inhalation, skin absorption, ingestion, skin and/or eye contact

**Symptoms** irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria

**Target Organs** Eyes, skin, respiratory system, central nervous system, kidneys

**Personal Protection/Sanitation** (See [protection codes \(protect.html\)](#))

**Skin:** Prevent skin contact

**Eyes:** No recommendation

**Wash skin:** When contaminated

**Remove:** When wet or contaminated

**Change:** Daily

**First Aid** (See [procedures \(firstaid.html\)](#))

**Eye:** Irrigate immediately

**Skin:** Soap wash promptly

**Breathing:** Respiratory support

**Swallow:** Medical attention immediately

### Respirator Recommendations

#### Mercury vapor:

#### NIOSH

##### Up to 0.5 mg/m<sup>3</sup>:

(APF = 10) Any chemical cartridge respirator with cartridge(s) providing protection against the compound of concern<sup>†</sup>

(APF = 10) Any supplied-air respirator

##### Up to 1.25 mg/m<sup>3</sup>:

(APF = 25) Any supplied-air respirator operated in a continuous-flow mode

(APF = 25) Any powered, air-purifying respirator with cartridge(s) providing protection against the compound of concern<sup>†</sup>(canister)

##### Up to 2.5 mg/m<sup>3</sup>:

(APF = 50) Any chemical cartridge respirator with a full facepiece and cartridge(s) providing protection against the compound of concern<sup>†</sup>

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern<sup>†</sup>

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode

(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and cartridge(s) providing protection against the compound of concern(canister)

(APF = 50) Any self-contained breathing apparatus with a full facepiece

(APF = 50) Any supplied-air respirator with a full facepiece

##### Up to 10 mg/m<sup>3</sup>:

(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

#### Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

#### Escape:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern

Any appropriate escape-type, self-contained breathing apparatus

#### Other mercury compounds: NIOSH/OSHA

##### Up to 1 mg/m<sup>3</sup>:

(APF = 10) Any chemical cartridge respirator with cartridge(s) providing protection against the compound of concern<sup>†</sup>

(APF = 10) Any supplied-air respirator

**Up to 2.5 mg/m<sup>3</sup>:**

(APF = 25) Any supplied-air respirator operated in a continuous-flow mode

(APF = 25) Any powered, air-purifying respirator with cartridge(s) providing protection against the compound of concern†(canister)

**Up to 5 mg/m<sup>3</sup>:**

(APF = 50) Any chemical cartridge respirator with a full facepiece and cartridge(s) providing protection against the compound of concern†

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern†

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode

(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and cartridge(s) providing protection against the compound of concern(canister)

(APF = 50) Any self-contained breathing apparatus with a full facepiece

(APF = 50) Any supplied-air respirator with a full facepiece

**Up to 10 mg/m<sup>3</sup>:**

(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

**Emergency or planned entry into unknown concentrations or IDLH conditions:**

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

**Escape:**

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection \(pgintrod.html#mustread\)](#)

See also: [INTRODUCTION \(/niosh/npg/pgintrod.html\)](#) See ICSC CARD: [0056](#)

[\(/niosh/ipcsneng/neng0056.html\)](#) See MEDICAL TESTS: [0136 \(/niosh/docs/2005-110/nmed0136.html\)](#)

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# Chromium metal

### Synonyms & Trade Names Chrome, Chromium

<b>CAS No.</b> 7440-47-3	<b>RTECS No.</b> <a href="/niosh-rtecs/GB401640.html">GB4200000 (/niosh-rtecs/GB401640.html)</a>	<b>DOT ID &amp; Guide</b>
<b>Formula</b> Cr	<b>Conversion</b>	<b>IDLH</b> 250 mg/m <sup>3</sup> (as Cr) See: <a href="/niosh/idlh/7440473.html">7440473 (/niosh/idlh/7440473.html)</a>
<b>Exposure Limits</b> <b>NIOSH REL</b> : TWA 0.5 mg/m <sup>3</sup> See <a href="#">Appendix C (nengapdx.html)</a> <b>OSHA PEL</b> *: TWA 1 mg/m <sup>3</sup> See <a href="#">Appendix C (nengapdx.html)</a> [*Note: The PEL also applies to insoluble chromium salts.]		<b>Measurement Methods</b> <b>NIOSH 7024</b> ( <a href="/niosh/docs/2003-154/pdfs/7024.pdf">/niosh/docs/2003-154/pdfs/7024.pdf</a> ), <b>7300</b> ( <a href="/niosh/docs/2003-154/pdfs/7300.pdf">/niosh/docs/2003-154/pdfs/7300.pdf</a> ), <b>7301</b> ( <a href="/niosh/docs/2003-154/pdfs/7301.pdf">/niosh/docs/2003-154/pdfs/7301.pdf</a> ), <b>7303</b> ( <a href="/niosh/docs/2003-154/pdfs/7303.pdf">/niosh/docs/2003-154/pdfs/7303.pdf</a> ), <b>9102</b> ( <a href="/niosh/docs/2003-154/pdfs/9102.pdf">/niosh/docs/2003-154/pdfs/9102.pdf</a> ) ; <b>OSHA ID121</b> <a href="http://www.osha.gov/dts/sltc/methods/inorganic/id121/id121.html">http://www.osha.gov/dts/sltc/methods/inorganic/id121/id121.html</a> ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> ), <b>ID125G</b> <a href="http://www.osha.gov/dts/sltc/methods/inorganic/id125g/id125g.html">http://www.osha.gov/dts/sltc/methods/inorganic/id125g/id125g.html</a> ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> ) See: <b>NMAM</b> ( <a href="/niosh/docs/2003-154/">/niosh/docs/2003-154/</a> ) or <b>OSHA Methods</b> <a href="http://www.osha.gov/dts/sltc/methods/index.html">http://www.osha.gov/dts/sltc/methods/index.html</a> <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a>

**Physical Description** Blue-white to steel-gray, lustrous, brittle, hard, odorless solid.

<b>MW:</b> 52.0	<b>BP:</b> 4788°F	<b>MLT:</b> 3452°F	<b>Sol:</b> Insoluble	<b>VP:</b> 0 mmHg (approx)	<b>IP:</b> NA
<b>Sp.Gr:</b> 7.14	<b>Fl.P:</b> NA	<b>UEL:</b> NA	<b>LEL:</b> NA		

Noncombustible Solid in bulk form, but finely divided dust burns rapidly if heated in a flame.

**Incompatibilities & Reactivities** Strong oxidizers (such as hydrogen peroxide), alkalis

**Exposure Routes** inhalation, ingestion, skin and/or eye contact

**Symptoms** irritation eyes, skin; lung fibrosis (histologic)

**Target Organs** Eyes, skin, respiratory system

**Personal Protection/Sanitation** (See [protection codes \(protect.html\)](#))

**Skin:** No recommendation

**Eyes:** No recommendation

**Wash skin:** No recommendation

**Remove:** No recommendation

**Change:** No recommendation

**First Aid** (See [procedures \(firstaid.html\)](#))

**Eye:** Irrigate immediately

**Skin:** Soap wash

**Breathing:** Respiratory support

**Swallow:** Medical attention immediately

### Respirator Recommendations

#### NIOSH

##### Up to 2.5 mg/m<sup>3</sup>:

(APF = 5) Any quarter-mask respirator.

[Click here \(pgintrod.html#nrp\)](#) for information on selection of N, R, or P filters.\*

##### Up to 5 mg/m<sup>3</sup>:

(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.

[Click here \(pgintrod.html#nrp\)](#) for information on selection of N, R, or P filters.\*

(APF = 10) Any supplied-air respirator\*

##### Up to 12.5 mg/m<sup>3</sup>:

(APF = 25) Any supplied-air respirator operated in a continuous-flow mode\*

(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.\*

##### Up to 25 mg/m<sup>3</sup>:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.

[Click here \(pgintrod.html#nrp\)](#) for information on selection of N, R, or P filters.

(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter\*

(APF = 50) Any self-contained breathing apparatus with a full facepiece

(APF = 50) Any supplied-air respirator with a full facepiece

##### Up to 250 mg/m<sup>3</sup>:

(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

##### Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

##### Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.

[Click here \(pgintrod.html#nrp\)](#) for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection \(pgintrod.html#mustread\)](#)

See also: [INTRODUCTION \(/niosh/npg/pgintrod.html\)](/niosh/npg/pgintrod.html) See ICSC CARD: [0029 \(/niosh/ipcsneng/neng0029.html\)](/niosh/ipcsneng/neng0029.html)

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## Chromium(III) compounds (as Cr)

**Synonyms & Trade Names** Synonyms vary depending upon the specific Chromium(III) compound. [Note: Chromium(III) compounds include soluble chromic salts.]

CAS No.	RTECS No.	DOT ID & Guide
	<b>Conversion</b>	<b>IDLH</b> 25 mg/m <sup>3</sup> [as Cr(III)] See: <a href="/niosh/idlh/cr3m3.html">cr3m3 (/niosh/idlh/cr3m3.html)</a>
<b>Exposure Limits</b> <b>NIOSH REL</b> : TWA 0.5 mg/m <sup>3</sup> See <a href="#">Appendix C (nengapdx.html)</a> <b>OSHA PEL</b> : TWA 0.5 mg/m <sup>3</sup> See <a href="#">Appendix C (nengapdx.html)</a>		<b>Measurement Methods</b> <b>NIOSH 7024</b> ( <a href="/niosh/docs/2003-154/pdfs/7024.pdf">/niosh/docs/2003-154/pdfs/7024.pdf</a> ), <b>7300</b> ( <a href="/niosh/docs/2003-154/pdfs/7300.pdf">/niosh/docs/2003-154/pdfs/7300.pdf</a> ), <b>7301</b> ( <a href="/niosh/docs/2003-154/pdfs/7301.pdf">/niosh/docs/2003-154/pdfs/7301.pdf</a> ), <b>7303</b> ( <a href="/niosh/docs/2003-154/pdfs/7303.pdf">/niosh/docs/2003-154/pdfs/7303.pdf</a> ), <b>9102</b> ( <a href="/niosh/docs/2003-154/pdfs/9102.pdf">/niosh/docs/2003-154/pdfs/9102.pdf</a> ) ; <b>OSHA ID121</b> <a href="http://www.osha.gov/dts/sltc/methods/inorganic/id121/id121.html">http://www.osha.gov/dts/sltc/methods/inorganic/id121/id121.html</a> ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> ), <b>ID125G</b> <a href="http://www.osha.gov/dts/sltc/methods/inorganic/id125g/id125g.html">http://www.osha.gov/dts/sltc/methods/inorganic/id125g/id125g.html</a> ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> ) See: <b>NMAM</b> ( <a href="/niosh/docs/2003-154/">/niosh/docs/2003-154/</a> ) or <b>OSHA Methods</b> <a href="http://www.osha.gov/dts/sltc/methods/index.html">http://www.osha.gov/dts/sltc/methods/index.html</a> <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a>

**Physical Description** Appearance and odor vary depending upon the specific compound.

Properties vary depending upon the specific compound.				

**Incompatibilities & Reactivities** Varies**Exposure Routes** inhalation, ingestion, skin and/or eye contact

**Symptoms** irritation eyes; sensitization dermatitis

**Target Organs** Eyes, skin

**Personal**

**Protection/Sanitation** (See [protection codes](#) ([protect.html](#)))

**Skin:** Prevent skin contact

**Eyes:** Prevent eye contact

**Wash skin:** When contaminated

**Remove:** When wet or contaminated

**Change:** No recommendation

**First Aid** (See [procedures \(firstaid.html\)](#))

**Eye:** Irrigate immediately

**Skin:** Water flush promptly

**Breathing:** Respiratory support

**Swallow:** Medical attention immediately

**Respirator Recommendations**

**NIOSH/OSHA**

**Up to 2.5 mg/m<sup>3</sup>:**

(APF = 5) Any quarter-mask respirator.

[Click here \(pgintrod.html#nrp\)](#) for information on selection of N, R, or P filters.\*

**Up to 5 mg/m<sup>3</sup>:**

(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.

[Click here \(pgintrod.html#nrp\)](#) for information on selection of N, R, or P filters.\*

(APF = 10) Any supplied-air respirator\*

**Up to 12.5 mg/m<sup>3</sup>:**

(APF = 25) Any supplied-air respirator operated in a continuous-flow mode\*

(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.\*

**Up to 25 mg/m<sup>3</sup>:**

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.

[Click here \(pgintrod.html#nrp\)](#) for information on selection of N, R, or P filters.

(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter\*

(APF = 50) Any self-contained breathing apparatus with a full facepiece

(APF = 50) Any supplied-air respirator with a full facepiece

**Emergency or planned entry into unknown concentrations or IDLH conditions:**

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-

contained positive-pressure breathing apparatus

**Escape:**

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.

[Click here \(pgintrod.html#nrp\)](#) for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection \(pgintrod.html#mustread\)](#)

See also: [INTRODUCTION \(/niosh/npg/pgintrod.html\)](#) See [MEDICAL TESTS: 0052 \(/niosh/docs/2005-110/nmed0052.html\)](#)

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# Benzene

**Synonyms & Trade Names** Benzol, Phenyl hydride

<b>CAS No.</b> 71-43-2	<b>RTECS No.</b> CY1400000 ( <a href="http://www.niosh-rtecs.com/CY155CCO.html">/niosh-rtecs/CY155CCO.html</a> )	<b>DOT ID &amp; Guide</b> 1114 130 ( <a href="http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=130">http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=130</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> )
<b>Formula</b> C <sub>6</sub> H <sub>6</sub>	<b>Conversion</b> 1 ppm = 3.19 mg/m <sup>3</sup>	<b>IDLH</b> Ca [500 ppm] See: <a href="http://www.niosh.gov/IDLH/71432.html">71432 (/niosh/idlh/71432.html)</a>

### Exposure Limits

**NIOSH REL** : Ca TWA 0.1 ppm ST 1 ppm See [Appendix A \(nengapdx.html\)](http://www.niosh.gov/AppendixA.html)  
**OSHA PEL** : [1910.1028] TWA 1 ppm ST 5 ppm See [Appendix F \(nengapdx.html\)](http://www.niosh.gov/AppendixF.html)

### Measurement Methods

**NIOSH 1500** ([/niosh/docs/2003-154/pdfs/1500.pdf](http://www.niosh.gov/docs/2003-154/pdfs/1500.pdf)), **1501** ([/niosh/docs/2003-154/pdfs/1501.pdf](http://www.niosh.gov/docs/2003-154/pdfs/1501.pdf)), **3700** ([/niosh/docs/2003-154/pdfs/3700.pdf](http://www.niosh.gov/docs/2003-154/pdfs/3700.pdf)), **3800** ([/niosh/docs/2003-154/pdfs/3800.pdf](http://www.niosh.gov/docs/2003-154/pdfs/3800.pdf));  
**OSHA 12**  
(<http://www.osha.gov/dts/sltc/methods/organic/org012/org012.html>)  
 (<http://www.cdc.gov/Other/disclaimer.html>), **1005**  
(<http://www.osha.gov/dts/sltc/methods/validated/1005/1005.html>)  
 (<http://www.cdc.gov/Other/disclaimer.html>)  
See: **NMAM** ([/niosh/docs/2003-154/](http://www.niosh.gov/docs/2003-154/)) or **OSHA Methods**  
(<http://www.osha.gov/dts/sltc/methods/index.html>)   
(<http://www.cdc.gov/Other/disclaimer.html>)

**Physical Description** Colorless to light-yellow liquid with an aromatic odor. [Note: A solid below 42°F.]

<b>MW:</b> 78.1	<b>BP:</b> 176°F	<b>FRZ:</b> 42°F	<b>Sol:</b> 0.07%	<b>VP:</b> 75 mmHg	<b>IP:</b> 9.24 eV
<b>Sp.Gr:</b> 0.88	<b>Fl.P:</b> 12°F	<b>UEL:</b> 7.8%	<b>LEL:</b> 1.2%		

Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.

**Incompatibilities & Reactivities** Strong oxidizers, many fluorides & perchlorates, nitric acid

**Exposure Routes** inhalation, skin absorption, ingestion, skin and/or eye contact

**Symptoms** irritation eyes, skin, nose, respiratory system; dizziness; headache, nausea, staggered gait; anorexia, lassitude (weakness, exhaustion); dermatitis; bone marrow depression; [potential occupational carcinogen]

**Target Organs** Eves. skin. respiratory system. blood. central nervous system. bone marrow

**Cancer Site** [leukemia]**Personal Protection/Sanitation** (See [protection codes \(protect.html\)](#))**Skin:** Prevent skin contact**Eyes:** Prevent eye contact**Wash skin:** When contaminated**Remove:** When wet (flammable)**Change:** No recommendation**Provide:** Eyewash, Quick drench**First Aid** (See [procedures \(firstaid.html\)](#))**Eye:** Irrigate immediately**Skin:** Soap wash immediately**Breathing:** Respiratory support**Swallow:** Medical attention immediately**Respirator Recommendations**(See [Appendix E \(nengapdx.html\)](#))**NIOSH****At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:**

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

**Escape:**

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection \(pgintrod.html#mustread\)](#)See also: [INTRODUCTION \(/niosh/npg/pgintrod.html\)](#) See ICSC CARD: [0015](#)[\(/niosh/ipcsneng/nengo015.html\)](#) See MEDICAL TESTS: [0022 \(/niosh/docs/2005-110/nmed0022.html\)](#)

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# Ethyl benzene

**Synonyms & Trade Names** Ethylbenzol, Phenylethane

<b>CAS No.</b> 100-41-4	<b>RTECS No.</b> DAO700000 (/niosh- rtecs/DAAAE60.html)	<b>DOT ID &amp; Guide</b> 1175 130 ( <a href="http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=130">http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=130</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> )
<b>Formula</b> CH <sub>3</sub> CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>	<b>Conversion</b> 1 ppm = 4.34 mg/m <sup>3</sup>	<b>IDLH</b> 800 ppm [10%LEL] See: <a href="http://www.cdc.gov/Other/disclaimer.html">100414 (/niosh/idlh/100414.html)</a>
<b>Exposure Limits</b> <b>NIOSH REL</b> : TWA 100 ppm (435 mg/m <sup>3</sup> ) ST 125 ppm (545 mg/m <sup>3</sup> ) <b>OSHA PEL</b> † ( <a href="http://www.cdc.gov/Other/disclaimer.html">nengapdxg.html</a> ): TWA 100 ppm (435 mg/m <sup>3</sup> )		<b>Measurement Methods</b> <b>NIOSH 1501</b> (/niosh/docs/2003-154/pdfs/1501.pdf); <b>OSHA 7</b> ( <a href="http://www.osha.gov/dts/sltc/methods/organic/org001/org001.html">http://www.osha.gov/dts/sltc/methods/organic/org001/org001.html</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> ), <b>1002</b> ( <a href="http://www.osha.gov/dts/sltc/methods/mdt/mdt1002/1002.html">http://www.osha.gov/dts/sltc/methods/mdt/mdt1002/1002.html</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> ) See: <b>NMAM</b> (/niosh/docs/2003-154/) or <b>OSHA Methods</b> ( <a href="http://www.osha.gov/dts/sltc/methods/index.html">http://www.osha.gov/dts/sltc/methods/index.html</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> )

**Physical Description** Colorless liquid with an aromatic odor.

<b>MW:</b> 106.2	<b>BP:</b> 277°F	<b>FRZ:</b> -139°F	<b>Sol:</b> 0.01%	<b>VP:</b> 7 mmHg	<b>IP:</b> 8.76 eV
<b>Sp.Gr:</b> 0.87	<b>Fl.P.:</b> 55°F	<b>UEL:</b> 6.7%	<b>LEL:</b> 0.8%		

Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.

**Incompatibilities & Reactivities** Strong oxidizers

**Exposure Routes** inhalation, ingestion, skin and/or eye contact

**Symptoms** irritation eyes, skin, mucous membrane; headache; dermatitis; narcosis, coma

**Target Organs** Eyes, skin, respiratory system, central nervous system

**Personal Protection/Sanitation** (See [protection codes \(protect.html\)](http://www.cdc.gov/Other/disclaimer.html))

**Skin:** Prevent skin contact

**Eyes:** Prevent eye contact

**Wash skin:** When contaminated

**Remove:** When wet (flammable)

**Change:** No recommendation

**First Aid** (See [procedures \(firstaid.html\)](http://www.cdc.gov/Other/disclaimer.html))

**Eye:** Irrigate immediately

**Skin:** Water flush promptly

**Breathing:** Respiratory support

**Swallow:** Medical attention immediately

**Respirator Recommendations****NIOSH/OSHA****Up to 800 ppm:**

(APF = 10) Any chemical cartridge respirator with organic vapor cartridge(s)\*

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)\*

(APF = 10) Any supplied-air respirator\*

(APF = 50) Any self-contained breathing apparatus with a full facepiece

**Emergency or planned entry into unknown concentrations or IDLH conditions:**

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

**Escape:**

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection \(pgintrod.html#mustread\)](#)

See also: [INTRODUCTION \(/niosh/npg/pgintrod.html\)](#) See ICSC CARD: [0268 \(/niosh/ipcsneng/nengo268.html\)](#)

See MEDICAL TESTS: [0098 \(/niosh/docs/2005-110/nmed0098.html\)](#)

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## m-Xylene

**Synonyms & Trade Names** 1,3-Dimethylbenzene; meta-Xylene; m-Xylol**CAS No.** 108-38-3**RTECS No.**  
[ZE2275000 \(/niosh-rtecs/ZE22B6B8.html\)](#)**DOT ID & Guide** 1307 130 (<http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=130>)   
(<http://www.cdc.gov/Other/disclaimer.html>)**Formula** C<sub>6</sub>H<sub>4</sub>(CH<sub>3</sub>)<sub>2</sub>**Conversion** 1 ppm =  
4.34 mg/m<sup>3</sup>**IDLH** 900 ppm  
See: [95476 \(/niosh/idlh/95476.html\)](#)**Exposure Limits****NIOSH REL** : TWA 100 ppm (435 mg/m<sup>3</sup>)  
ST 150 ppm (655 mg/m<sup>3</sup>)  
**OSHA PEL** † ([nengapdxg.html](#)): TWA 100 ppm  
(435 mg/m<sup>3</sup>)**Measurement Methods****NIOSH 1501** ([/niosh/docs/2003-154/pdfs/1501.pdf](#)),  
**3800** ([/niosh/docs/2003-154/pdfs/3800.pdf](#));  
**OSHA 1002**  
(<http://www.osha.gov/dts/sltc/methods/mdt/mdt1002/1002.html>)  
 (<http://www.cdc.gov/Other/disclaimer.html>)  
See: **NMAM** ([/niosh/docs/2003-154/](#)) or **OSHA Methods**  
(<http://www.osha.gov/dts/sltc/methods/index.html>)   
(<http://www.cdc.gov/Other/disclaimer.html>)**Physical Description** Colorless liquid with an aromatic odor.**MW:**  
106.2**BP:**  
282°F**FRZ:**  
-54°F**Sol:**  
Slight**VP:** 9 mmHg**IP:** 8.56 eV**Sp.Gr:**  
0.86**Fl.P:**  
82°F**UEL:**  
7.0%**LEL:**  
1.1%

Class IC Flammable Liquid: Fl.P. at or above 73°F and below 100°F.

**Incompatibilities & Reactivities** Strong oxidizers, strong acids**Exposure Routes** inhalation, skin absorption, ingestion, skin and/or eye contact**Symptoms** irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis**Target Organs** Eyes, skin, respiratory system, central nervous system, gastrointestinal tract, blood, liver, kidneys**Personal Protection/Sanitation** (See [protection codes \(protect.html\)](#))**Skin:** Prevent skin contact**Eyes:** Prevent eye contact**Wash skin:** When contaminated**Remove:** When wet (flammable)**First Aid** (See [procedures \(firstaid.html\)](#))**Eye:** Irrigate immediately**Skin:** Soap wash promptly**Breathing:** Respiratory support**Swallow:** Medical attention immediately

**Change:** No recommendation

### Respirator Recommendations

#### NIOSH/OSHA

##### Up to 900 ppm:

(APF = 10) Any chemical cartridge respirator with organic vapor cartridge(s)\*

(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)\*

(APF = 10) Any supplied-air respirator\*

(APF = 50) Any self-contained breathing apparatus with a full facepiece

##### Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

##### Escape:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection \(pgintrod.html#mustread\)](#)

See also: [INTRODUCTION \(/niosh/npg/pgintrod.html\)](#) See ICSC CARD: [0085 \(/niosh/ipcsneng/neng0085.html\)](#)

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# o-Xylene

**Synonyms & Trade Names** 1,2-Dimethylbenzene; ortho-Xylene; o-Xylol

<b>CAS No.</b> 95-47-6	<b>RTECS No.</b> <a href="#">ZE2450000 (/niosh-rtecs/ZE256250.html)</a>	<b>DOT ID &amp; Guide</b> 1307 130 ( <a href="http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=130">http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=130</a> )  ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> )			
<b>Formula</b> C <sub>6</sub> H <sub>4</sub> (CH <sub>3</sub> ) <sub>2</sub>	<b>Conversion</b> 1 ppm = 4.34 mg/m <sup>3</sup>	<b>IDLH</b> 900 ppm See: <a href="#">95476 (/niosh/idlh/95476.html)</a>			
<b>Exposure Limits</b> <b>NIOSH REL</b> : TWA 100 ppm (435 mg/m <sup>3</sup> ) ST 150 ppm (655 mg/m <sup>3</sup> ) <b>OSHA PEL</b> † ( <a href="#">nengapdxg.html</a> ): TWA 100 ppm (435 mg/m <sup>3</sup> )		<b>Measurement Methods</b> <b>NIOSH 1501</b> ( <a href="#">/niosh/docs/2003-154/pdfs/1501.pdf</a> ), <b>3800</b> ( <a href="#">/niosh/docs/2003-154/pdfs/3800.pdf</a> ); <b>OSHA 1002</b> ( <a href="http://www.osha.gov/dts/sltc/methods/mdt/mdt1002/1002.html">http://www.osha.gov/dts/sltc/methods/mdt/mdt1002/1002.html</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> ) See: <b>NMAM</b> ( <a href="#">/niosh/docs/2003-154/</a> ) or <b>OSHA Methods</b> ( <a href="http://www.osha.gov/dts/sltc/methods/index.html">http://www.osha.gov/dts/sltc/methods/index.html</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> )			
<b>Physical Description</b> Colorless liquid with an aromatic odor.					
<b>MW:</b> 106.2	<b>BP:</b> 292°F	<b>FRZ:</b> -13°F	<b>Sol:</b> 0.02%	<b>VP:</b> 7 mmHg	<b>IP:</b> 8.56 eV
<b>Sp.Gr:</b> 0.88	<b>Fl.P:</b> 90°F	<b>UEL:</b> 6.7%	<b>LEL:</b> 0.9%		
Class IC Flammable Liquid: Fl.P. at or above 73°F and below 100°F.					
<b>Incompatibilities &amp; Reactivities</b> Strong oxidizers, strong acids					
<b>Exposure Routes</b> inhalation, skin absorption, ingestion, skin and/or eye contact					
<b>Symptoms</b> irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis					
<b>Target Organs</b> Eyes, skin, respiratory system, central nervous system, gastrointestinal tract, blood, liver, kidneys					
<b>Personal Protection/Sanitation</b> (See <a href="#">protection codes (protect.html)</a> ) <b>Skin:</b> Prevent skin contact <b>Eyes:</b> Prevent eye contact <b>Wash skin:</b> When contaminated <b>Remove:</b> When wet (flammable)			<b>First Aid</b> (See <a href="#">procedures (firstaid.html)</a> ) <b>Eye:</b> Irrigate immediately <b>Skin:</b> Soap wash promptly <b>Breathing:</b> Respiratory support <b>Swallow:</b> Medical attention immediately		

**RECOMMENDATION:** (See Table 1)

**Change:** No recommendation

### Respirator Recommendations

#### NIOSH/OSHA

##### Up to 900 ppm:

(APF = 10) Any chemical cartridge respirator with organic vapor cartridge(s)\*

(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)\*

(APF = 10) Any supplied-air respirator\*

(APF = 50) Any self-contained breathing apparatus with a full facepiece

##### Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

##### Escape:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection \(pgintrod.html#mustread\)](#)

See also: [INTRODUCTION \(/niosh/npg/pgintrod.html\)](#) See ICSC CARD: [0084 \(/niosh/ipcsneng/neng0084.html\)](#)

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# p-Xylene

**Synonyms & Trade Names** 1,4-Dimethylbenzene; para-Xylene; p-Xylol

<b>CAS No.</b> 106-42-3	<b>RTECS No.</b> <a href="#">ZE2625000 (/niosh-rtecs/ZE280DE8.html)</a>	<b>DOT ID &amp; Guide</b> 1307 130 ( <a href="http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=130">http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=130</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> )
<b>Formula</b> C <sub>6</sub> H <sub>4</sub> (CH <sub>3</sub> ) <sub>2</sub>	<b>Conversion</b> 1 ppm = 4.41 mg/m <sup>3</sup>	<b>IDLH</b> 900 ppm See: <a href="#">95476 (/niosh/idlh/95476.html)</a>
<b>Exposure Limits</b> <b>NIOSH REL</b> : TWA 100 ppm (435 mg/m <sup>3</sup> ) ST 150 ppm (655 mg/m <sup>3</sup> ) <b>OSHA PEL</b> † ( <a href="#">nengapdxg.html</a> ): TWA 100 ppm (435 mg/m <sup>3</sup> )		<b>Measurement Methods</b> <b>NIOSH 1501</b> ( <a href="#">/niosh/docs/2003-154/pdfs/1501.pdf</a> ), <b>3800</b> ( <a href="#">/niosh/docs/2003-154/pdfs/3800.pdf</a> ); <b>OSHA 1002</b> ( <a href="http://www.osha.gov/dts/sltc/methods/mdt/mdt1002/1002.html">http://www.osha.gov/dts/sltc/methods/mdt/mdt1002/1002.html</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> ) See: <b>NMAM</b> ( <a href="#">/niosh/docs/2003-154/</a> ) or <b>OSHA Methods</b> ( <a href="http://www.osha.gov/dts/sltc/methods/index.html">http://www.osha.gov/dts/sltc/methods/index.html</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> )

**Physical Description** Colorless liquid with an aromatic odor. [Note: A solid below 56°F.]

<b>MW:</b> 106.2	<b>BP:</b> 281°F	<b>FRZ:</b> 56°F	<b>Sol:</b> 0.02%	<b>VP:</b> 9 mmHg	<b>IP:</b> 8.44 eV
<b>Sp.Gr:</b> 0.86	<b>Fl.P:</b> 81°F	<b>UEL:</b> 7.0%	<b>LEL:</b> 1.1%		

Class IC Flammable Liquid: Fl.P. at or above 73°F and below 100°F.

**Incompatibilities & Reactivities** Strong oxidizers, strong acids

**Exposure Routes** inhalation, skin absorption, ingestion, skin and/or eye contact

**Symptoms** irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis

**Target Organs** Eyes, skin, respiratory system, central nervous system, gastrointestinal tract, blood, liver, kidneys

**Personal Protection/Sanitation** (See [protection codes \(protect.html\)](#))  
**Skin:** Prevent skin contact  
**Eyes:** Prevent eye contact  
**Wash skin:** When contaminated  
**Remove:** When wet (flammable)

**First Aid** (See [procedures \(firstaid.html\)](#))  
**Eye:** Irrigate immediately  
**Skin:** Soap wash promptly  
**Breathing:** Respiratory support  
**Swallow:** Medical attention immediately

**Change:** No recommendation

### Respirator Recommendations

#### NIOSH/OSHA

##### Up to 900 ppm:

(APF = 10) Any chemical cartridge respirator with organic vapor cartridge(s)\*

(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)\*

(APF = 10) Any supplied-air respirator\*

(APF = 50) Any self-contained breathing apparatus with a full facepiece

##### Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

##### Escape:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection \(pgintrod.html#mustread\)](#)

See also: [INTRODUCTION \(/niosh/npg/pgintrod.html\)](#) See ICSC CARD: [0086 \(/niosh/ipcsneng/neng0086.html\)](#)

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# Chlorodiphenyl (54% chlorine)

**Synonyms & Trade Names** Aroclor® 1254, PCB, Polychlorinated biphenyl

<b>CAS No.</b> 11097-69-1	<b>RTECS No.</b> <a href="http://www.niosh-rtecs.com/TQ14Co80.html">TQ1360000 (/niosh-rtecs/TQ14Co80.html)</a>	<b>DOT ID &amp; Guide</b> 2315 171 <a href="http://www.wapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=171"> (http://www.wapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=171)</a> <a href="http://www.cdc.gov/Other/disclaimer.html"> (http://www.cdc.gov/Other/disclaimer.html)</a>
<b>Formula</b> C <sub>6</sub> H <sub>3</sub> Cl <sub>2</sub> C <sub>6</sub> H <sub>2</sub> Cl <sub>3</sub> (approx)	<b>Conversion</b>	<b>IDLH</b> Ca [5 mg/m <sup>3</sup> ] See: <a href="http://www.cdc.gov/Other/idlh/intridl4.html">IDLH INDEX (/idlh/intridl4.html)</a>
<b>Exposure Limits</b> <b>NIOSH REL</b> *: Ca TWA 0.001 mg/m <sup>3</sup> See <a href="http://www.niosh.gov/AppendixA/nengapdx.html">Appendix A (nengapdx.html)</a> [*Note: The REL also applies to other PCBs.] <b>OSHA PEL</b> : TWA 0.5 mg/m <sup>3</sup> [skin]		<b>Measurement Methods</b> <b>NIOSH 5503</b> <a href="http://www.niosh.gov/docs/2003-154/pdfs/5503.pdf"> (/niosh/docs/2003-154/pdfs/5503.pdf)</a> ; <b>OSHA PV2088</b> <a href="http://www.osha.gov/dts/sltc/methods/partial/t-pv2088-01-8812-ch/t-pv2088-01-8812-ch.html"> (http://www.osha.gov/dts/sltc/methods/partial/t-pv2088-01-8812-ch/t-pv2088-01-8812-ch.html)</a> <a href="http://www.cdc.gov/Other/disclaimer.html"> (http://www.cdc.gov/Other/disclaimer.html)</a> See: <a href="http://www.niosh.gov/docs/2003-154/">NMAM (/niosh/docs/2003-154/)</a> or <a href="http://www.osha.gov/dts/sltc/methods/index.html">OSHA Methods</a> <a href="http://www.osha.gov/dts/sltc/methods/index.html"> (http://www.osha.gov/dts/sltc/methods/index.html)</a> <a href="http://www.cdc.gov/Other/disclaimer.html"> (http://www.cdc.gov/Other/disclaimer.html)</a>

**Physical Description** Colorless to pale-yellow, viscous liquid or solid (below 50°F) with a mild, hydrocarbon odor.

<b>MW:</b> 326 (approx)	<b>BP:</b> 689-734°F	<b>FRZ:</b> 50°F	<b>Sol:</b> Insoluble	<b>VP:</b> 0.00006 mmHg	<b>IP:</b> ?
<b>Sp.Gr(77°F):</b> 1.38	<b>Fl.P:</b> NA	<b>UEL:</b> NA	<b>LEL:</b> NA		

Nonflammable Liquid, but exposure in a fire results in the formation of a black soot containing PCBs, polychlorinated dibenzofurans, and chlorinated dibenzo-p-dioxins.

**Incompatibilities & Reactivities** Strong oxidizers

**Exposure Routes** inhalation, skin absorption, ingestion, skin and/or eye contact

**Symptoms** irritation eyes, chloracne; liver damage; reproductive effects; [potential occupational carcinogen]

Chlorodiphenyl

**Target Organs** Skin, eyes, liver, reproductive system**Cancer Site** [in animals: tumors of the pituitary gland & liver, leukemia]**Personal Protection/Sanitation** (See protection codes (protect.html))**Skin:** Prevent skin contact**Eyes:** Prevent eye contact**Wash skin:** When contaminated**Remove:** When wet or contaminated**Change:** Daily**Provide:** Eyewash, Quick drench**First Aid** (See procedures (firstaid.html))**Eye:** Irrigate immediately**Skin:** Soap wash immediately**Breathing:** Respiratory support**Swallow:** Medical attention immediately**Respirator Recommendations****NIOSH****At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:**

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

**Escape:**

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister having an N100, R100, or P100 filter.

[Click here \(pgintrod.html#nrp\)](#) for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection \(pgintrod.html#mustread\)](#)See also: [INTRODUCTION \(/niosh/npg/pgintrod.html\)](#) See ICSC CARD: [0939](#)[\(/niosh/ipcsneng/neng0939.html\)](#) See MEDICAL TESTS: [0176 \(/niosh/docs/2005-110/nmed0176.html\)](#)

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## Tetrachloroethylene

**Synonyms & Trade Names** Perchloroethylene, Perchloroethylene, Perk, Tetrachloroethylene

<b>CAS No.</b> 127-18-4	<b>RTECS No.</b> KX3850000 ( <a href="/niosh-rtecs/KX3ABF10.html">/niosh-rtecs/KX3ABF10.html</a> )	<b>DOT ID &amp; Guide</b> 1897 160 ( <a href="http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=160">http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=160</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> )
<b>Formula</b> Cl <sub>2</sub> C=CCl <sub>2</sub>	<b>Conversion</b> 1 ppm = 6.78 mg/m <sup>3</sup>	<b>IDLH</b> Ca [150 ppm] See: <a href="/niosh/idlh/127184.html">127184 (/niosh/idlh/127184.html)</a>
<b>Exposure Limits</b> <b>NIOSH REL</b> : Ca Minimize workplace exposure concentrations. See Appendix A ( <a href="/nengapdx.html">nengapdx.html</a> ) <b>OSHA PEL</b> † ( <a href="/nengapdxg.html">nengapdxg.html</a> ): TWA 100 ppm C 200 ppm (for 5 minutes in any 3-hour period), with a maximum peak of 300 ppm		<b>Measurement Methods</b> <b>NIOSH 1003</b> ( <a href="/niosh/docs/2003-154/pdfs/1003.pdf">/niosh/docs/2003-154/pdfs/1003.pdf</a> ); <b>OSHA 1001</b> ( <a href="http://www.osha.gov/dts/sltc/methods/mdt/mdt1001/1001.html">http://www.osha.gov/dts/sltc/methods/mdt/mdt1001/1001.html</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> ) See: <b>NMAM</b> ( <a href="/niosh/docs/2003-154/">/niosh/docs/2003-154/</a> ) or <b>OSHA Methods</b> ( <a href="http://www.osha.gov/dts/sltc/methods/index.html">http://www.osha.gov/dts/sltc/methods/index.html</a> ) ( <a href="http://www.cdc.gov/Other/disclaimer.html">http://www.cdc.gov/Other/disclaimer.html</a> )

**Physical Description** Colorless liquid with a mild, chloroform-like odor.

<b>MW:</b> 165.8	<b>BP:</b> 250°F	<b>FRZ:</b> -2°F	<b>Sol:</b> 0.02%	<b>VP:</b> 14 mmHg	<b>IP:</b> 9.32 eV
<b>Sp.Gr:</b> 1.62	<b>Fl.P:</b> NA	<b>UEL:</b> NA	<b>LEL:</b> NA		

Noncombustible Liquid, but decomposes in a fire to hydrogen chloride and phosgene.

**Incompatibilities & Reactivities** Strong oxidizers; chemically-active metals such as lithium, beryllium & barium; caustic soda; sodium hydroxide; potash**Exposure Routes** inhalation, skin absorption, ingestion, skin and/or eye contact**Symptoms** irritation eyes, skin, nose, throat, respiratory system; nausea; flush face, neck; dizziness, incoordination; headache, drowsiness; skin erythema (skin redness); liver damage; [potential occupational carcinogen]**Target Organs** Eyes, skin, respiratory system, liver, kidneys, central nervous system**Cancer Site** [in animals: liver tumors]

**Personal Protection/Sanitation** (See [protection codes \(protect.html\)](#))**Skin:** Prevent skin contact**Eyes:** Prevent eye contact**Wash skin:** When contaminated**Remove:** When wet or contaminated**Change:** No recommendation**Provide:** Eyewash, Quick drench**First Aid** (See [procedures \(firstaid.html\)](#))**Eye:** Irrigate immediately**Skin:** Soap wash promptly**Breathing:** Respiratory support**Swallow:** Medical attention immediately**Respirator Recommendations****NIOSH****At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:**

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

**Escape:**

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection \(pgintrod.html#mustread\)](#)See also: [INTRODUCTION \(/niosh/npg/pgintrod.html\)](#) See ICSC CARD: [0076](#)[\(/niosh/ipcsneng/neng0076.html\)](#) See MEDICAL TESTS: [0179 \(/niosh/docs/2005-110/nmedo179.html\)](#)

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## Trichloroethylene

**Synonyms & Trade Names** Ethylene trichloride, TCE, Trichloroethene, Trilene**CAS No.** 79-01-6**RECS No.** [KX456D70](http://www.niosh-rtecs.com/KX456D70.html)  
([/niosh-rtecs/KX456D70.html](http://www.niosh-rtecs.com/KX456D70.html))**DOT ID & Guide** 1710 160 (<http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=160>)   
(<http://www.cdc.gov/Other/disclaimer.html>)**Formula** ClCH=CCl<sub>2</sub>**Conversion** 1 ppm = 5.37 mg/m<sup>3</sup>**IDLH** Ca [1000 ppm]  
See: [79016 \(/niosh/idlh/79016.html\)](http://www.niosh.gov/IDLH/79016.html)**Exposure Limits****NIOSH REL** : Ca See [Appendix A \(nengapdx.html\)](http://www.niosh.gov/AppendixA.html)  
See [Appendix C \(nengapdx.html\)](http://www.niosh.gov/AppendixC.html)**OSHA PEL** † ([nengapdx.html](http://www.niosh.gov/AppendixG.html)): TWA 100 ppm C  
200 ppm 300 ppm (5-minute maximum peak  
in any 2 hours)**Measurement Methods****NIOSH 1022** ([/niosh/docs/2003-154/pdfs/1022.pdf](http://www.niosh.gov/docs/2003-154/pdfs/1022.pdf)),  
**3800** ([/niosh/docs/2003-154/pdfs/3800.pdf](http://www.niosh.gov/docs/2003-154/pdfs/3800.pdf));**OSHA 1001**<http://www.osha-slc.gov/dts/sltc/methods/mdt/mdt1001/1001.html>  
 (<http://www.cdc.gov/Other/disclaimer.html>)See: **NMAM** ([/niosh/docs/2003-154/](http://www.niosh.gov/docs/2003-154/)) or **OSHA Methods**  
(<http://www.osha-slc.gov/dts/sltc/methods/index.html>)   
(<http://www.cdc.gov/Other/disclaimer.html>)**Physical Description** Colorless liquid (unless dyed blue) with a chloroform-like odor.**MW:**  
131.4**BP:**  
189°F**FRZ:** -99°F**Sol:** 0.1%**VP:** 58 mmHg**IP:** 9.45 eV**Sp.Gr:**  
1.46**Fl.P:** ?**UEL(77°F):**  
10.5%**LEL(77°F):**  
8%

Combustible Liquid, but burns with difficulty.

**Incompatibilities & Reactivities** Strong caustics & alkalis; chemically-active metals (such as barium, lithium, sodium, magnesium, titanium & beryllium)**Exposure Routes** inhalation, skin absorption, ingestion, skin and/or eye contact**Symptoms** irritation eyes, skin; headache, visual disturbance, lassitude (weakness, exhaustion), dizziness, tremor, drowsiness, nausea, vomiting; dermatitis; cardiac arrhythmias, paresthesia; liver injury; [potential occupational carcinogen]**Target Organs** Eyes, skin, respiratory system, heart, liver, kidneys, central nervous system**Cancer Site** [in animals: liver & kidney cancer]**Personal Protection/Sanitation** (See [protection codes \(protect.html\)](http://www.niosh.gov/protect.html))**First Aid** (See [procedures \(firstaid.html\)](http://www.niosh.gov/firstaid.html))  
**Eye:** Irrigate immediately

Control Measures

**Skin:** Prevent skin contact  
**Eyes:** Prevent eye contact  
**Wash skin:** When contaminated  
**Remove:** When wet or contaminated  
**Change:** No recommendation  
**Provide:** Eyewash, Quick drench

First Aid Measures

**Skin:** Soap wash promptly  
**Breathing:** Respiratory support  
**Swallow:** Medical attention immediately

### Respirator Recommendations

#### NIOSH

#### At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

#### Escape:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection ([pgintrod.html#mustread](#))

See also: INTRODUCTION ([/niosh/npg/pgintrod.html](#)) See ICSC CARD: 0081 ([/niosh/ipcsneng/neng0081.html](#))

See MEDICAL TESTS: 0236 ([/niosh/docs/2005-110/nmedo236.html](#))

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## Toluene

**Synonyms & Trade Names** Methyl benzene, Methyl benzol, Phenyl methane, Toluol**CAS No.** 108-88-3**RTECS No.**[XS5250000 \(/niosh-rtecs/XS501BDo.html\)](#)**DOT ID & Guide** 1294 130 (<http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=130>) [↗](#)  
(<http://www.cdc.gov/Other/disclaimer.html>)**Formula** C<sub>6</sub>H<sub>5</sub>CH<sub>3</sub>**Conversion** 1 ppm =  
3.77 mg/m<sup>3</sup>**IDLH** 500 ppm  
See: [108883 \(/niosh/idlh/108883.html\)](#)**Exposure Limits****NIOSH REL** : TWA 100 ppm (375 mg/m<sup>3</sup>)ST 150 ppm (560 mg/m<sup>3</sup>)**OSHA PEL** † ([nengapdxg.html](#)): TWA 200  
ppm C 300 ppm 500 ppm (10-minute  
maximum peak)**Measurement Methods****NIOSH 1500** [↗](#) ([/niosh/docs/2003-154/pdfs/1500.pdf](#)), **1501**[↗](#) ([/niosh/docs/2003-154/pdfs/1501.pdf](#)), **3800** [↗](#)([/niosh/docs/2003-154/pdfs/3800.pdf](#)), **4000** [↗](#)([/niosh/docs/2003-154/pdfs/4000.pdf](#));**OSHA 111**(<http://www.osha.gov/dts/sltc/methods/organic/org111/org111.html>)[↗](#) (<http://www.cdc.gov/Other/disclaimer.html>)See: **NMAM** ([/niosh/docs/2003-154/](#)) or **OSHA Methods**(<http://www.osha.gov/dts/sltc/methods/index.html>) [↗](#)(<http://www.cdc.gov/Other/disclaimer.html>)**Physical Description** Colorless liquid with a sweet, pungent, benzene-like odor.**MW:**

92.1

**BP:**

232°F

**FRZ:**

-139°F

**Sol(74°F):**

0.07%

**VP:** 21 mmHg**IP:** 8.82 eV**Sp.Gr:**

0.87

**Fl.P:**

40°F

**UEL:**

7.1%

**LEL:** 1.1%

Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.

**Incompatibilities & Reactivities** Strong oxidizers**Exposure Routes** inhalation, skin absorption, ingestion, skin and/or eye contact**Symptoms** irritation eyes, nose; lassitude (weakness, exhaustion), confusion, euphoria, dizziness, headache; dilated pupils, lacrimation (discharge of tears); anxiety, muscle fatigue, insomnia; paresthesia; dermatitis; liver, kidney damage**Target Organs** Eyes, skin, respiratory system, central nervous system, liver, kidneys**Personal Protection/Sanitation** (See  
[protection codes \(protect.html\)](#))**Skin:** Prevent skin contact**First Aid** (See [procedures \(firstaid.html\)](#))**Eye:** Irrigate immediately**Skin:** Soap wash promptly

**Eyes:** Prevent eye contact  
**Wash skin:** When contaminated  
**Remove:** When wet (flammable)  
**Change:** No recommendation

**Breathing:** Respiratory support  
**Swallow:** Medical attention immediately

### Respirator Recommendations

#### NIOSH

##### Up to 500 ppm:

(APF = 10) Any chemical cartridge respirator with organic vapor cartridge(s)\*

(APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)\*

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

(APF = 10) Any supplied-air respirator\*

(APF = 50) Any self-contained breathing apparatus with a full facepiece

##### Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

##### Escape:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection \(pgintrod.html#mustread\)](#)

See also: [INTRODUCTION \(/niosh/npg/pgintrod.html\)](#) See ICSC CARD: [0078](#)

[\(/niosh/ipcsneng/neng0078.html\)](#) See MEDICAL TESTS: [0232 \(/niosh/docs/2005-110/nmedo232.html\)](#)

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# **APPENDIX C**

## **Geotechnical Report**

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June 27, 2014  
GZA Project No. 41.0162206.00



Ms. Stephanie Green  
West Side Federation for Senior and Supportive Housing  
2345 Broadway  
New York, New York 10024

Re: Geotechnical Engineering Report  
153-157 Sherman Avenue, New York, NY

Dear Ms. Green,

104 West 29<sup>th</sup> Street  
10<sup>th</sup> Floor  
New York, NY 10001  
(212) 594-8140  
Fax (212) 279-8180  
www.gza.com

GZA GeoEnvironmental of New York (GZA) is pleased to provide the West Side Federation for Senior and Supportive Housing (WSFSSH) with the enclosed Geotechnical Engineering Report for the proposed TEP Charter School at 153-157 Sherman Avenue in New York, NY.

GZA is pleased to continue our working relationship with WSFSSH and look forward to our continued involvement as this project moves forward.

Please feel free to contact us with any questions regarding this report.

Very truly yours,

**GZA GEOENVIRONMENTAL OF NEW YORK**

A handwritten signature in blue ink, appearing to read 'And Rizk', with a long horizontal flourish extending to the right.

Andrew Rizk, P.E.  
Project Manager

A handwritten signature in blue ink, appearing to read 'Douglas S. Roy', with a circular flourish at the beginning and a horizontal line extending to the right.

Douglas S. Roy, P.E.  
Principal

A handwritten signature in blue ink, appearing to read 'Bruce W. Fairless', with a stylized, cursive script.

Bruce W. Fairless, P.E.  
Consultant/Reviewer



## **GEOTECHNICAL ENGINEERING REPORT**

**153-157 SHERMAN AVENUE  
NEW YORK, NEW YORK**

**PREPARED FOR:**

West Side Federation for Senior and Supportive Housing  
2345 Broadway  
New York, NY 10024

**PREPARED BY:**

GZA GeoEnvironmental of New York  
104 West 29<sup>th</sup> Street, 10<sup>th</sup> Floor  
New York, NY 10001

June 2014

File No. 41.0162206.00

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## **FIGURES**

FIGURE 1: SITE LOCATION

FIGURE 2: EXPLORATION LOCATION PLAN

FIGURE 3: PROFILE A-A'

FIGURE 4: PROFILE B-B'



## **APPENDICES**

APPENDIX A - LIMITATIONS

APPENDIX B - BORING LOGS

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APPENDIX E - LABORATORY TEST RESULTS



## **1 PROJECT BACKGROUND**

This report contains the results of our subsurface explorations and foundation design and construction recommendations for the proposed development at 153-157 Sherman Avenue, New York City, New York (site). The work described herein was performed in accordance with our revised proposal to West Side Federation for Senior and Supportive Housing (WSFSSH) dated May 1, 2014, executed by WSFSSH on May 2, 2014.

The objectives of our work were to evaluate subsurface conditions, perform engineering analyses of the conditions observed, and provide geotechnical engineering recommendations for design and construction of the proposed development. Our scope of work included the following:

- Coordinating and performing a subsurface exploration program which included drilling five soil borings and excavating eight test pits at the site
- Providing observation and logging of the explorations
- Performing geotechnical engineering analyses
- Developing foundation engineering design and construction recommendations
- Preparing this report summarizing our findings and recommendations

The findings and recommendations of this report are subject to the limitations presented in Appendix A and the Terms and Conditions of our executed agreement.

Elevations provided to GZA in the architectural survey by Autar Land Surveying, P.C. (Autar) dated March 24, 2014 referred to the Manhattan Borough Datum, which is 2.75 feet above Mean Sea Level at Sandy Hook as established by the U.S. Coast & Geodetic Survey. GZA has converted these elevations to the North American Vertical Datum of 1988 (NAVD88). All elevations provided in this report are referenced to the NAVD88 datum, unless otherwise noted.

## **2 PROJECT UNDERSTANDING**

Our understanding of the project is based on our discussions and correspondence with WSFSSH and Robert Silman Associates (Silman; project structural engineer).

### **2.1 Existing Conditions**

The site is located at 153-157 Sherman Avenue, New York, New York on the south side of Sherman Avenue between Academy Street and West 204th Street, as shown on Figure 1. The dimensions of the site are approximately 75 feet by 180 feet. Based on our review of the March 24, 2014 Autar survey, the existing ground surface elevations within the site range from approximately 12.8 to 15.4 (NAVD88).

The site is currently vacant and fenced along the perimeter and is bounded by the Sherman Avenue sidewalk to the north, a 1-story building to the west, a concrete block wall to the south with a rear yard and two 5-story buildings beyond the wall, and a 2-



story building to the east of the site. A 12-inch to 18-inch thick concrete block wall is attached to the 1-story building to the west, and separates the site from the rear yard of two 5-story brick residential buildings to the west of the site.

The building to the west abuts the site perimeter. We observed a cellar entrance to this building, but the lateral extent and depth of the cellar is unknown.

A two-story tall wooden deck covered by a canopy is attached to the neighboring building to the east and abuts the site perimeter. The wooden deck appears to be supported on soil at the ground surface. No evidence of footings or foundations was noted. The site was vacant during our subsurface exploration, with a slightly vegetated surface. Exposed bedrock is present at the southeast corner of the site.

Based on the Phase I Environmental Site Assessment (ESA) report prepared by GZA in October 2010, the site was previously developed with three 1-story brick buildings with cellars. Based on our previous experience at the site, we understand that the buildings were demolished within the past three years, and that the cellar floor slabs were removed.

## **2.2 Proposed Development**

Based on correspondence and discussions with WSFSSH and Silman, we understand that the proposed development consists of the construction of a new six-story school building. The building footprint will occupy approximately an area of 75 feet by 160 feet, with a proposed cellar extending to a depth of approximately 15 feet below the adjacent sidewalk elevation. Based on information received from Silman, the overall building pressure over the entire building footprint will be an average of 1,200 pounds per square foot.

## **3 SUBSURFACE EXPLORATION**

Our subsurface exploration program was performed in general accordance with our proposal. The subsurface exploration program included soil borings and test pits, and laboratory testing of selected soil samples and rock cores. The number of test borings and the depth of the borings were in accordance with the 2008 New York City Building Code (NYCBC).

### **3.1 Soil Borings**

The borings were drilled by Craig Test Boring Co., Inc. (Craig) of Mays Landing, New Jersey under subcontract to GZA and were logged by GZA field observers. Five borings, B-01 through B-05, were drilled between May 28 and May 29, 2014 to depths ranging from approximately 6.5 to 58 feet below the ground surface.

The borings were located based on tape measurements from existing site features and are shown on Figure 2. Boring logs are included in Appendix B.

The borings were advanced using wash-rotary drilling procedures with drill casing and bentonite additives used as needed to stabilize the boreholes. Standard Penetration Tests



(SPT) were performed and split spoon samples were obtained continuously in the upper 12 feet in each borehole (unless refusal was encountered) and at approximate 5-foot intervals thereafter until refusal was encountered. The split spoon sampler was driven 24 inches into the soil with blows from a 140 pound automatic hammer falling a distance of 30 inches; the number of blows required to drive the sampler for each six-inch interval was recorded in general accordance with ASTM D-1586. In some cases, the sampler was driven less than 24 inches due to resistance from soil or rock.

Soil samples collected from the spoons were described in accordance with a modified Burmister soil classification system. The Unified Soil Classification System (USCS) group symbol and the NYCBC Class of Materials were also provided for each stratum. The description of the soil samples based on visual identification and the SPT values at various depths are recorded on the boring logs.

Coring was performed in test borings B-01, B-03, and B-05 using an NQ core barrel. Recovered rock cores were described using a modified ISRM system. The rock description, the core recovery (REC) for each core run, and the Rock Quality Designations (RQD) for each core run are recorded on the test boring logs. The rock descriptions, REC values, and RQD values provide a qualitative understanding of the physical and engineering properties of the rock. Material classes were provided for rock in accordance with the NYCBC.

The test boring logs are included in Appendix B. Refer to the Log Key in Appendix B for definitions of some of the symbols and terms used in our test boring logs.

Upon completion of boring B-02, a 2-inch-diameter groundwater observation well was installed to a depth of 40 feet. The other borings were backfilled with soil cuttings and bentonite upon completion.

### **3.2 Test Pits**

Eight tests pits, TP-1 through TP-8, were excavated at the site. The test pits were excavated to depths ranging from approximately 2.5 to 12 feet by Craig, using a rubber-track mini-excavator on May 29, 2014. See Figure 2 for test pit locations.

Four test pits were excavated along the site perimeter to observe the foundations of selected abutting structures. Two test pits (TP-1 and TP-3) were excavated adjacent to the 1-story building to the west of the site. One test pit (TP-5) was excavated adjacent to the block wall located to the west of the site. One test pit (TP-2) was excavated adjacent to the 2-story building to the east of the site, which was not photographed due to observed instability of the excavation sidewalls. Four test pits (TP-4, TP-6, TP-7, and TP-8) were excavated in the site to observe rock and groundwater depths. The test pit excavations were logged and photographed by a GZA field observer. Upon completion, the test pits were backfilled with excavated soil and tamped with the excavator bucket. The test pit locations and depths were tape-measured from existing site features. Test pit sketches and selected test pit photographs are provided in Appendices C and D, respectively.



### 3.3 Laboratory Testing

Selected soil samples and rock cores from the test borings were sent to Thielsch Engineering of Cranston, Rhode Island for moisture content testing (ASTM D-2216), grain size distribution testing (ASTM D-422), Atterberg limit testing (ASTM D-4318), unconfined compression testing on rock (ASTM D2938), soil resistivity (ASTM G57), pH measurement (EPA Method SW-846, 9045D), sulfate content measurement (SW-846, 9038) and chloride content measurement (SW-846, 9250). Laboratory test results are included in Appendix E.

## 4 SUBSURFACE INFORMATION

This section presents a geologic overview of the site area and subsurface conditions encountered in the borings.

### Geologic Overview

The bedrock geology in the site vicinity generally consists of Manhattan Schist and Inwood Limestone. The Manhattan Schist is a dark-grey to black micaceous rock generally composed of biotite, muscovite, quartz and feldspar with irregular fractures and joints. The Inwood Limestone is generally composed of thinly bedded marble.

The soils overlying the bedrock in the site vicinity are almost entirely made up of glacial till and stratified drift deposits. The till is composed of boulders, cobbles, sand, silt, and clay materials. The stratified drift is predominantly made up of sand-sized material and gravel, but silt/clay may also be encountered.

### Generalized Subsurface Conditions

The surface cover in the lot was generally comprised of exposed topsoil and fill material with slight vegetative growth including weeds and grass, with debris including concrete, brick, and wood present in some areas.

The following is our interpreted summary of the information obtained from our subsurface explorations. Refer to the boring logs in Appendix B and the test pit sketches and photographs in Appendices C and D for additional information. Refer to Figure 2 for the boring and test pit locations, and Figures 3 and 4 for the interpretive subsurface profiles A-A' and B-B'.

Fill (NYCBC Class 7): The fill generally consisted of brown, gray-brown, fine to coarse sand, trace to some silt, little to some gravel with varying amounts of brick, concrete, and wood fragments. The fill was generally observed to range in thickness from approximately 1.5 feet at B-05 near the southwest corner of the site and 10 feet at B-02 near the northeast corner of the site. The fill was loose to medium dense in consistency, as evidenced by measured SPT N-values ranging from 2 to 27. The fill stratum may contain miscellaneous debris such as concrete, brick, glass, and other typical urban fill material. Remnants of foundations from previous buildings at the site and other boulder-sized material may also be present. Roots were observed in several test pits within the fill stratum.

Grain size distribution testing of two samples from this stratum resulted in fines contents of 12.8% and 17.4%.

Sand (NYCBC Class 3b): Below the fill, a natural sand layer was encountered. Recovered soil samples consisted of brown, gray-brown, fine to medium sand with trace to and silt, trace to little gravel, and occasional cobbles, was found to extend from a depth of 6 to 15 feet, with observed thicknesses ranging between 2 feet and 7.5 feet. The sand stratum was loose to medium dense as evidenced by measured SPT N-values ranging from 7 to 18, with an average of approximately 11, and is generally classified as NYCBC Class 3b material. The Unified Soil Classification System (USCS) group symbols for this stratum are generally SP, SP-SM and SM.

This stratum was not encountered in B-05. At test pit locations TP-3 and TP-5, this stratum was observed below the fill layer.

Grain size distribution testing of two samples obtained from this stratum resulted in fines contents of 17.4% and 47.4%.

Clayey Silt (NYCBC Class 6): Below the sand stratum in borings B-01 through B-04, a clayey silt layer was observed. This stratum was not encountered in boring B-05. This layer was described as medium stiff to stiff, brown clayey silt with up to 20 percent fine sand. This stratum was encountered between depths of 11.5 to 27 feet, with an observed thickness ranging between 2 feet and 15 feet. Measured SPT N-values ranged from 2 to 9. The soil in this stratum is classified generally as NYCBC Class 6 material. The USCS group symbol for this stratum is generally ML.

Atterberg limit testing on five samples indicated liquid limits ranging between 22% and 30% and plastic limits ranging between 21% and 23%, with plasticity indices ranging between zero and 9%. Measured moisture contents on these five samples ranged from 24.9% to 29.6%.

Glacial Till (NYCBC Class 3a/3b): Below the clayey silt layer in borings B-01 through B-4, a till layer having an observed thickness ranging from 5 feet to 19 feet was encountered. This stratum was not encountered in B-05. Recovered soil samples were generally brown or gray-brown, fine to coarse Sand, trace to some silt, little to and gravel. Based on observations of the drill rig performance while advancing borings B-01 and B-02, this stratum contains cobbles and boulders. This stratum was found to be medium dense to very dense as evidenced by SPT N-values ranging from 24 to refusal (greater than 100) with an average SPT N-value of 63 blows/foot, and is generally classified as NYCBC Class 3a or 3b material.

This stratum was encountered between depths of 15 and 48 feet. Grain size distribution testing of four samples obtained from this stratum indicated fines content ranging from 10.1% and 20.4%.

Medium Hard Rock (NYCBC Class 1b): Medium hard rock was encountered in each boring and in five test pits (TP-4 through TP-8). This stratum was encountered at the ground surface at TP-8 at the southeast corner of the site and at depths of 48 feet





and 45 feet in borings B-01 and B-02, respectively, near the northern perimeter of the site. Rock cores were obtained from borings B-01, B-03, and B-05.

The recovered rock cores and rock observed at TP-8 consisted primarily of fine to coarse grained, light gray/bluish gray marble, with occasional intermixing of mica schist. The recovered cores were generally fresh to slightly weathered and medium hard to hard, with close to moderately close joints/fractures. The NYCBC class for this stratum is generally 1b.

The measured core recoveries (noted as REC on the boring logs) ranged between 90% and 100%. The measured rock quality designations (noted as RQD on the boring logs) ranged between 76% and 100%.

The measured unconfined compressive strengths of two selected rock core samples were 11,440 and 5,089 pounds per square inch (psi).

Groundwater Observations: Groundwater was measured at a depth of 9 feet in the observation well installed at B-02. Groundwater was observed in TP-5 at a depth of approximately 11 feet. Groundwater may be present at the interface between soil and rock at shallower depths than the depth at which it was observed in B-02 or TP-5. It should be noted that fluctuations in groundwater levels will occur due to variations in seasonal influences, precipitation amounts, utility leakage, and other factors different from those existing at the time the observations were made.

#### **Additional Test Pit Observations**

Test pit observations that are not noted above as a part of the generalized subsurface conditions are summarized below. Refer to Appendices C and D for additional test pit information.

- The adjacent building wall along the west side of the site is supported on a stone block foundation wall having a height ranging between 2 and 5 feet, resting on an irregular stone footing, having a height of 1 to 2 feet. The soil beneath the footing appears to consist of brown, fine to coarse sand, little gravel, trace silt with fragments of cobbles, boulders and rock (fill) at test pit TP-1 and native soils described as brown fine sand, little to some silt at test pit TP-3. The bottom of the footing extends to an approximate depth of 8 to 9 feet below ground surface. The adjacent building footing was not observed to extend into the site in the test pits.
- Based on test pit TP-5, the concrete block wall along the west side of the site, south of the adjacent building, extends to a depth of approximately 4 feet below the adjacent ground surface, and rests on an approximate 8-inch tall concrete strip footing. The soil beneath the footing appears to consist of native soils described as brown, fine sand, little to some silt.

## 5 GEOTECHNICAL RECOMMENDATIONS

### 5.1 Key Geotechnical Issues

According to discussions with Silman, the proposed building will be constructed with a finished cellar floor at a depth of approximately 15 feet. Based on our understanding of subsurface conditions and the proposed development, we have identified the following key geotechnical issues for design and construction of the proposed building:

- Excavation to depths of 17 to 19 feet will be required to construct a structural mat foundation, which will result in removal of significant quantities of soil and bedrock. The north portion of the structural mat slab will be supported on deep foundations, and the south portion will be supported on the medium hard rock.
- Foundation excavations will extend up to 13 feet below the design groundwater elevation. Significant dewatering efforts will be necessary to facilitate foundation construction. Furthermore, waterproofing design and construction will be critical. Groundwater flow from on top of the rock and within the rock will require control during construction. The proposed structural mat and wall design will need to consider the hydrostatic pressure exerted by the groundwater.
- Temporary support of excavation for soil and rock faces exposed during excavation will be required. Underpinning of neighboring structures along the west portion of the Site, including the one story building located at 151 Sherman Ave and existing concrete block wall. This underpinning will require access agreements with the adjacent building Owners.
- Up to approximately 18 feet of rock excavation is anticipated in the south portion of the site to reach the planned foundation subgrade elevation. This must be performed in a manner that will not have detrimental effects on nearby structures, utilities, and streets.

### 5.2 Foundation Recommendations

Based on the subsurface conditions encountered during the subsurface exploration program, it is recommended that the proposed structure be supported on a structural mat foundation, with the south portion of the mat slab being supported directly on the medium hard rock, and the north portion being supported on deep foundations consisting of driven H-piles bearing on the medium hard rock. Shallow foundations are not recommended in the northern portion of the site due to the potential for excessive settlement due to the compressibility of the clayey silt stratum discussed above. A structural mat is appropriate for the overall combination of foundation types.

Foundations must be designed in accordance with the 2008 NYCBC utilizing the design soil parameters defined below and providing that the subgrade preparation and pile installation are in accordance with our recommendations in this report.





New foundations should be designed and constructed at a level such that they do not impose additional loads on the existing foundations or walls of buildings or subsurface utilities adjacent to the site.

In general, support of excavation (SOE) will be required along the north side, east side and part of the west side of the site, until the bedrock rises high enough. The pile layout will also need to consider the presence of SOE. New foundations along the east perimeter of the site adjacent to the two story structure for a length of approximately 40 feet will need to be offset at least 3 feet from the property line to allow for installation of SOE. Alternatively, SOE could be installed along the property line, if the neighbors will allow you to remove and replace the wooden deck attached to their building.

All footings should bear at a minimum of 3.5 feet below the lowest adjacent ground surface to comply with NYCBC frost penetration requirements.

The structural mat should be constructed directly on Medium Hard Rock or a concrete “mud mat” over the excavated rock surface throughout the non-pile supported portion of the mat. The recommended allowable bearing pressure on the Medium Hard Rock is 40 tons per square foot (tsf). The rock surface shall be cleared of all soil, debris, and loose rock and other material not meeting the requirements of Medium Hard Rock provided in the NYCBC.

For the portion of the mat supported on the piles, piles should be end bearing at pile refusal on the bedrock. H-piles should be fitted with a driving shoe and driven to refusal. A preliminary analysis has been performed for an ASTM A-572 Grade 50 HP 12x74 pile driven to the medium hard rock. Based on this analysis, the allowable compressive axial capacity would be governed by its structural capacity of 110 tons. The Contractor should implement necessary measures to reduce the risk of damage to the pile during driving, and to reduce vibrations affecting nearby structures. A minimum pile length of 10 feet is required for the pile-supported portion of the structural mat. If the distance from the bottom of mat foundation to bedrock is 10 feet or less, the mat foundation should be stepped down so that it bears on the medium hard rock.

Prior to driving piles, the piling contractor should be required to submit a predictive dynamic pile analysis (WEAP analysis) for each pile type, soil condition, and/or proposed piling hammer in order to determine the driving resistance required to achieve an ultimate capacity equal to or greater than the design capacity multiplied by the safety factor. The WEAP analysis must show that the pile will not be overstressed at any point during driving. That analysis should be reviewed by GZA, prior to installation of piles.

Static axial load testing of the HP 12x74 pile driven to medium hard rock with a 110-ton capacity is not required. We recommend that at least 10 percent of production piles should be dynamically tested utilizing a Pile Driving Analyzer (PDA) in accordance with ASTM Method D4945. The PDA testing program should be performed during initial drive, for each pile hammer utilized, or after major maintenance of the pile hammer. The piles to be dynamically tested should be distributed throughout the site to be representative of the locations where proposed production piles will be installed.



The allowable lateral load capacity of the recommended pile was estimated to be 4.5 tons for no pile head fixity and 9 tons for a fixed pile head along the weaker axis of the H-pile. This estimated lateral capacity is one-half the load that produces a gross lateral movement of 1 inch at the top of the pile, which is assumed to be directly below the bottom of the proposed structural mat.

It should be noted that piles in groups will behave differently under lateral loading than single piles as their zones of stress influence will “shadow” each other when grouped. Recommendations for grouped piles cannot be provided until a pile layout has been developed.

At locations where the effective pile length (that is, distance between bottom of pile cap and bedrock) is less than 10 feet, additional piles may need to be installed to provide adequate lateral capacity.

Lateral pile capacity greater than 1 ton, if necessary, will need to be substantiated in the field by at least one lateral load test performed in accordance with the NYCBC and ASTM D3966.

### 5.2.1 Soil Parameters

In their unimproved states, it is recommended that the following properties of subsurface materials be used for design purposes

Stratum (NYCBC Classification)	Total Unit Weight (pcf)*	Friction Angle (deg)
Fill (7)	120	28
Sand (3b,6)	120	32
Clayey Silt (6)	110	NA
Glacial Till (3a/3b)	130	36
Medium Hard Rock (1b)	170	NA

\*pcf = pounds per cubic foot

### 5.2.2 Slab Modeling Recommendations

Mat slabs should be designed for hydrostatic pressures considering a design groundwater level at El. 8, and in accordance with the NYCBC (2008).

The mat slab should be designed assuming a modulus of subgrade reaction of 2,200 pounds per cubic inch (pci) for the portions resting directly on the rock. For the mat slab portion supported entirely on piles (assuming no load transfer to the soil), we recommend utilizing a varied pile spring constant based on pile length of 1,250 kip/inch for 30 foot long piles, 1,900 kip/inch for 20 foot long piles, and 3,800 kip/inch for 10-foot long piles.



### **5.2.3 Uplift Forces and Rock Anchors**

Each foot of submersion of the 12,000 square foot building footprint beneath the groundwater table, adds approximately 375 tons of buoyancy force on the building. Assuming a submersion of 6 feet below the groundwater table (from 9 feet below grade to 15 feet below grade), a total uplift force of 2,250 tons is added onto the bottom of the proposed buildings. It is expected that the weight of the building will resist these forces. The uplift capacity of the recommended pile with a length of 20 feet below the structural mat is estimated to be 12 tons, including a Factor of Safety of 2.5. The actual uplift capacity of each pile will depend on the pile length and spacing between piles.

Besides buoyancy forces, there will be other forms of uplift forces, such as wind loads and seismic loads. Vertical rock anchors may be required to resist uplift forces. The rock anchors should be designed for an allowable grout-to-rock bond strength of 150 psi, spaced a minimum of 5 feet center to center. The rock anchors should be provided with double corrosion protection and proof tested upon installation.

### **5.2.4 Lateral Earth and Water Pressures**

Foundation walls with unbalanced loading should be designed to resist lateral earth pressures due to soil and rock weight, neighboring foundation loads, and other surcharges. At a minimum, to calculate earth pressures above groundwater level, an equivalent fluid pressure of 60 pcf should be used for the design of all permanent (rigid, fixed) walls and 40 pcf for temporary (flexible, cantilever) walls where exposed to soil. Below the water table, lateral pressures should be comprised of 30 pcf of soil pressure plus hydrostatic forces. Walls should also be designed to resist seismic loads as required by the NYCBC.

Cellar walls should also be designed to accommodate hydrostatic pressure, using a groundwater design elevation of 8 feet.

The recommended lateral earth pressure exerted by the rock mass along the east, south, and west faces of the planned excavation is estimated to be approximately 1,500 pounds per square foot (psf) based on a preliminary analysis of the wedge stability of the rock. An additional uniform horizontal pressure should be used where surcharges are anticipated due to, for example, pedestrian or vehicular traffic along Sherman Avenue and foundations loads from nearby buildings, including, but not limited to, those buildings having addresses of 143-151 Sherman Avenue, 579-591 Academy Street, 159-161 Sherman Avenue, and the building located approximately 10 feet to the south of the property, with frontage along Post Avenue. Such additional uniform horizontal pressure should be equal to one-half of the anticipated vertical surcharge load and as defined in the NYCBC.

A temporary rock support system must be designed by the Contractor to provide the required horizontal support for stabilization of potentially unstable rock wedges during construction. Also, a permanent rock support system consisting of rock bolts to reduce lateral pressure may be required. The structural design of the planned cellar walls in the

rear half of the Site must account for the lateral earth pressure from the potential rock wedges acting together with the horizontal surcharge pressure, as noted above.

### 5.2.5 Settlement

For foundations designed and constructed in accordance with the recommendations presented in this report, the expected settlement is less than ½ in. Most of the settlement is expected to occur during the initial loading of the foundation during construction. Differential settlement across the structural mat, between the pile-supported and rock-supported sections, should be less than half of the amount noted.



### 5.2.6 Groundwater Control and Waterproofing

We understand that the proposed finished cellar will extend up to 9 feet below the design groundwater elevation, and even deeper at locations of proposed elevator shafts. Therefore, we recommend that the cellar walls and mat slabs/foundations be designed to be watertight with full waterproofing. Full waterproofing systems should consist of provision of water stops at all foundation joints, waterproofing membranes on all below grade walls and slabs, and drainage boards on foundations walls extending to the ground surface. We recommend using Grace Construction Products materials (or equal) such as Preprufe waterproofing membranes intended for “blind-side” concrete placement for walls and slabs. Preprufe 300R (or equivalent) under slabs and Preprufe 160R (or equivalent) on walls would be used. On the exterior walls, Hydroduct 200 (or equivalent) drainage boards should be installed. We note drainage boards are not required, but provide an even surface onto which waterproofing may be neatly and properly installed. All waterproofing products should be installed per manufacture specifications and connection details and installed waterproofing should be protected from any damage during construction.

A 2-inch-thick lean concrete or ‘mud-mat’ may be placed above the medium hard rock to protect the subgrade and provide a level surface for installation of waterproofing.

Additionally, we recommend that a gravity drain or sump pit be included within the cellar in order to evacuate any water that may enter the building during periods of high precipitation or due to unforeseen circumstances such as water main breaks, fire suppression system activation, etc.

### 5.2.7 Seismic Assessment

Based on the type and relative density of the soils encountered in the borings and in accordance with the NYCBC, we recommend Seismic Site Class of D for calculation of seismic loading and the corresponding response spectrum as described in Section 1615.1.4 of the NYCBC. At this site classification, the maximum considered earthquake spectral response accelerations for short and long periods should be taken as  $SMS = 0.551g$  and  $SM1 = 0.170g$ .

Using data collected from boring B-01 and B-02 locations, we assessed the susceptibility of the in-situ material to liquefaction during a seismic event in accordance with the



empirical requirements of the NYCBC, by plotting the measured SPT N-values with depth as required in Section 1813.1. The data indicate that isolated zones of site soils are within the ‘probable’ zone of liquefaction. We performed a more detailed liquefaction analysis using the methodology set forth by Youd et al. (2001) considering the SPT N-values, overburden stress, hammer energy, measured fines content from laboratory test results, and anticipated earthquake magnitude. The results of our analysis indicate that liquefaction of the site soils is unlikely. Rock is not subject to liquefaction during a seismic event.

### **5.2.8 Corrosivity Analysis**

GZA analyzed soil samples collected from borings B-02, B-03, and B-04 from depths of ranging between 6 and 17 feet below existing grade for corrosivity.

#### Sulfate:

The sulfate content in soil ranged from 77 to 410 parts per million (ppm) or 0.0077 to 0.041 percent by weight. Table 4.3.1 of the ACI Building Code 318/318R lists the requirements for concrete exposed to sulfate containing solutions. According to the ACI Table, the soil samples tested have a negligible sulfate exposure.

#### Chloride

Chlorides are generally corrosive to both concrete and steel, as they participate directly in the electrochemical reactions that take place during the corrosion process. Chlorides typically attack metals and also have the ability to migrate through porous concrete and attack the steel reinforcement. This can cause corrosion and swelling of the steel reinforcement which can lead to cracks in the concrete and therefore accelerated corrosion activity. According to DM-5 (U.S. Department of the Navy, 1974), concentrations of chloride greater than 500 ppm can be “extremely corrosive” to carbon steel and cast iron. The chloride content in the soil samples ranged from 36 to 40 ppm, suggesting low risk of chloride attack.

#### pH

Soils usually have a pH range of 5 to 8, and values in this range are not considered to be the dominant variable affecting corrosion rates. More acidic soils (pH less than 5), however, represent a serious corrosion/degradation risk to common construction materials such as steel and concrete. The soil samples tested had a pH ranging from 7.20 to 8.22. In general, the test results indicate that pH is not of significant concern affecting corrosion potential.

#### Electrical Resistivity

Based on the samples tested, the electrical resistivity of the soil as received from the field was found to be 2498, 450, and 2545 ohm-cm. According to DM-5 (U.S. Department of the Navy, 1974), resistivity values less than 2,000 ohm-cm can cause severe corrosion to cast iron and carbon steel. Two of the three samples indicated resistivity values greater than 2,000 ohms-cm, which does not raise a concern. The low value of 450 ohm-cm was

observed in a sample collected from depths of 6 to 10 feet in the fill material. Because this fill material will be removed, this low value is not a concern.

## 6 CONSTRUCTION CONSIDERATIONS



### 6.1 Excavations/Subgrade Preparation

The proposed development consists of excavation to approximately 17 to 19 feet below grade to accommodate the proposed structural mat foundation. This includes rock excavation in the south portion of the site; the amount of rock removal that will be required can be estimated using Figures 3 and 4, although the actual stratigraphy will be different from what was depicted based on interpolation of widely spaced boring data.

Following installation of temporary support of excavation and underpinning, general excavation to remove the existing fill and to achieve bottom of foundation subgrade may commence. Existing utilities that are encountered should be removed within the limits of the proposed building footprint and capped outside the footprint.

For excavations along property lines, temporary earth support would be required to maintain a vertical face. A 2-inch-thick lean concrete (concrete with  $f'c < 2,000$  psi) or 'mud-mat' may be placed prior to installation of structural mat, as discussed previously.

Rock excavation may entail mechanical excavation by chipping with hydraulic hoe-ram/breakers, chemical/mechanical splitting, and/or controlled blasting. The method of excavation is typically a function of the Contractor's ability, preference, and cost analysis and perceived risk to adjacent structures.

Mechanical chipping will impart a significant amount of low frequency vibrations into the ground which will be transmitted to neighboring structures. The imparted energy will be attenuated with increasing distance. However, neighboring structures are abutting the site. The vibration threshold of human perception is much lower than that of potential cosmetic and/or structural damage, leading to the potential for complaints. Low frequency vibrations from mechanical chipping may cause cosmetic damage to adjacent structures.

Chemical or mechanical rock splitting are typically expensive options. They require extensive rock drilling for placement of the expansive chemicals or insertion of mechanical splitters, but cause significantly less vibration.

Controlled blasting is often less problematic to neighboring buildings with regards to vibrations, when performed properly and with small charges, due to the high frequency of the blast. However, controlled blasting often encounters resistance by the local community. There is also the risk of cosmetic and structural damage from blast-induced vibrations on adjacent structures, particularly for frequencies less than 20 Hertz.

The discussion in this report is provided for reference only rather than a recommendation, should the Contractor opt to perform controlled blasting or chemical splitting. Where blasting or chemical splitting is used, line drilling and channel drilling may be used in



order to reduce rock damage and overbreak outside of the planned excavation limits and may also reduce the propagation of vibrations to adjacent structures and utilities. Line drilling, which consists of drilled holes with a maximum center-to-center spacing of two times the hole diameter should be provided along all excavation perimeters. Channel drilling, which consists of drilled holes with a maximum center-to-center spacing equal to the hole diameter and effectively creates a channel or slot in the rock, should be performed along the eastern and western part of the site along the foundations of the existing buildings. Line drilling and channel drilling should be performed in lifts no greater than 8 feet.

The Contractor's proposal for the project should provide their planned excavation methodology. If controlled blasting is proposed, they should disclose their relative experience in close-in blasting and provide a conceptual blasting plan with their bid submission, to be reviewed by GZA prior to Contractor selection. Upon selection of the Contractor, a detailed test and production blasting plan should be prepared and the Contractor should be prepared to attend meetings with the fire department and any other agencies having jurisdiction, including community and/or neighborhood meetings.

Blasting should be limited to two-thirds of the depth of the channel or line drilling. Blasting should not be performed within 30 feet of any structure or utility until channel or line drilling is completed, as noted above. Properly placed blasting mats are crucial given the site constraints and should be utilized to protect against fly rock.

Excavation methods should be planned to reduce disturbance to the foundation subgrade. The final 2 to 5 feet of rock excavation, depending on the blasting method should be performed by mechanical or chemical methods. Any disturbed or loose rock fragments must be removed from the final subgrade; any rock surfaces that do not "ring" when struck with a metal hammer or bar or can be readily removed by a ½-yd backhoe must be removed.

## **6.2 Reuse of Existing Material**

The existing material may be re-used outside the foundation footprint as backfill provided that appropriate crushing, screening, and processing is performed in order to meet the requirements for Granular Fill as described in Table 1.

## **6.3 Temporary Excavations and Support of Excavation**

According to preliminary discussions, the cellar of the proposed development will extend to approximately 15 feet below grade, and, therefore, we anticipate excavation at the Site to extend up to a depth of 17 to 19 feet below grade to construct the foundations. Additional deeper excavations may also be required for construction of elevator shafts. Temporary lateral earth support systems will be required to protect the adjacent roadways and sidewalks that must remain in service, as well as utilities and structures.

Temporary SOE consisting of properly braced drilled H-piles or pipe lagged between with timber boards, or utilizing soil mixing technology, will be appropriate along



Sherman Avenue sidewalk, and approximately 70 to 80 feet of the north half of the site, adjacent to the neighboring building at 159 Sherman Avenue. The H-piles should be placed in temporarily cased, pre-drilled holes and backfilled with lean concrete or flowable fill below bottom of excavation. Above bottom excavation, the H-piles can be backfilled with flow fill, sand or peastone. Driven (or vibrated) sheetpiles would be difficult to install through the fill in into the dense natural soils due to the possibility of encountering obstructions and the density of the natural soils. For temporary excavation support use of tiebacks or inclined braces (rakers) and heel block can be used for lateral bracing of the excavation support. The tieback option will need to consider existing utilities beneath sidewalk and neighboring properties, and require construction easements with the abutting property owners. The temporary earth support system should be designed by a Professional Engineer, licensed in the State of New York and experienced in design of earth support systems, and reviewed by GZA before construction.

Where site constraints allow, sloped excavations should not be steeper than 1.5H:1V (and may need to be flatter) and should not intercept the 1H:1V foundation influence lines of adjacent structural foundation. Where excavations intercept neighboring foundation influence lines, underpinning or adequately stiff structural earth support systems would need to be considered.

The Owner and the Contractor should make themselves aware of and become familiar with applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) Excavation and Trench Safety Standards. Construction site safety generally is the sole responsibility of the Contractor, who shall also be solely responsible for the means, methods, and sequencing of construction operations. We are providing this information solely as a service to our Client. Under no circumstances should the information provided below be interpreted to mean that GZA is assuming responsibility for construction site safety or the Contractor's activities; such responsibility is not being implied and should not be inferred.

The Contractor should be aware that slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal safety regulations, e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations. Such regulations are strictly enforced and, if they are not followed, the Owner, Contractor, and/or earthwork and utility subcontractors could be liable for substantial penalties. Per OSHA requirements, if any excavation is extended to a depth of more than 20 feet, it will be necessary to have the side slopes and shoring designed by a Professional Engineer.

As a safety measure, it is recommended that all vehicles and soil piles be kept a minimum lateral distance from the crest of slopes equal to no less than the slope height. Exposed slope faces should also be protected against the elements.

The exposed rock faces along the site perimeters will require support. This support will be required sequentially as the excavation progresses in depth and unfavorable joints or blocks are identified. The rock must be temporarily supported and/or reinforced with



systematic temporary rock bolting designed by the Contractor's engineer; the systematic bolting should be reviewed by GZA before construction. The design and temporary bolting pattern is expected to include polyester-resin encapsulated bolts spaced in a staggered pattern and installed horizontally. The exposed rock in the rear half of the site may require permanent, double-corrosion protected bolts installed in a systematic pattern similar to the temporary bolts to reduce lateral pressure on below-grade cellar walls. If requested, GZA can design these permanent rock bolts once the below-ground portion of the building design is further defined.

Special permission and easements from the adjacent property owner(s) will be required before installing these rock bolts.

#### **6.4 Underpinning of Adjacent Structures**

Based on the test pit excavations performed during the geotechnical site investigation and our understanding of the neighboring buildings cellars, underpinning the 151 Sherman Avenue building located to the west of the proposed excavation will be required for the proposed construction. The existing 12 to 18-inch thick block wall can either be underpinned or removed. We anticipate underpinning of up to 10 feet will be required (6 to 7 feet for the one story building and up to 10 feet of the existing block wall). The purpose of the underpinning is to transfer foundation loads to a suitable bearing stratum below the depth of adjacent proposed foundations. If the existing block wall is removed, a temporary SOE should be installed along the west of the property as discussed above in section 6.3.

The contract documents should require the contractor to perform additional test pits and probes as needed to confirm the existing foundation conditions of the adjacent buildings.

Conventional pit underpinning may not be feasible for this Site. Underpinning pits and piers would need to extend from the bottom of the existing foundations to at least 1 foot below any proposed excavations. Due to variation of subsurface soils at the Site, extending neighboring footings one foot below the depth of the maximum proposed excavation can result in foundations being extended to unsuitable bearing material (that is, the clayey silt stratum located below the sand stratum) which may cause undesired settlements for adjacent structures. Also, depth to groundwater makes conventional pit underpinning more unfeasible. As such, other underpinning alternatives, such as ground improvement, helical piles or jacked piles will need to be considered for the adjacent structures.

Where required, all underpinning should be completed before the general elevation of the site excavation is advanced below the foundations of existing structures. Underpinning adjacent structures should be executed by a qualified contractor with a proven successful record of work. The contractor's design engineer will be required to provide design calculations, a written and illustrated description of the intended methods, and an estimate of existing building loads and bearing capacity calculations showing an adequate

factor of safety. The submittal should be prepared and stamped by a registered State of New York Professional Engineer, and reviewed by GZA before construction.

It should be noted that portions of the adjacent neighboring foundations may be supported on bedrock.

Underpinning of neighboring building foundations will require access agreements with the respective property owners prior to start of any underpinning work at site. Based on our experience with similar types of underpinning projects, we anticipate settlement of neighboring buildings of about 1 inch can occur during underpinning and construction.



### **6.5 Temporary Groundwater Control**

The final subgrades will be below the water table and construction dewatering will be required. The Contractor should be prepared to evacuate the groundwater which enters the Site from the soil layers and from fractures in the rock in order to allow construction to proceed. The Contractor can consider dewatering or grouting the soil/rock interface around the site perimeter in order to reduce the water flow into the excavation; additional grouting may be utilized during excavation within seams and joints to further reduce the water flow. Precautions will be needed if dewatering and grouting are utilized to limit the risk of heave or settlement of adjacent structures and grout intrusion into adjacent basements and utilities.

Construction dewatering will be required to maintain dry excavations to facilitate foundation construction. Such dewatering may be accomplished through the use of sumps or localized well points. Dewatering will also be required to remove precipitation that collects in the excavation.

Given the proximity to the water table, the Contractor should consider providing a working mat to protect the subgrade, such as gravel or concrete mud mat. Preparation of subgrades when within close proximity of the groundwater should be performed carefully, and as described above, to prevent unnecessary disturbance. Dewatering should be carefully performed so as to not cause any damage or settlement to the neighboring buildings, structures, or utilities.

Temporary groundwater discharge permits will be required from NYCDEP for any dewatering operations. The project environmental consultant should provide input regarding the quality of the groundwater in and around the site and if treatment of the groundwater should be planned prior to discharge. GZA can provide this service in the future, if needed.

### **6.6 Assessment and Monitoring of Adjacent Structures**

The pre-construction conditions of the adjacent structures should be documented prior to the start of any demolition or construction work at the project site. This includes photographing and measuring all existing conditions and defects within a 100-foot radius of proposed work in order to provide a quantifiable baseline record prior to construction.



Instrumentation consisting of crack gages, vibration monitors and/or survey points should be installed at applicable locations, and baseline values recorded. Deflection readings should be taken twice daily during active underpinning and on regular intervals until the new construction exceeds the height of the existing structures. This work must be performed by the Owner or Owner's Representative, not the Contractor.

Controlled blasting or mechanical excavation, SOE installation, and pile driving operations will create vibrations that will be felt by neighboring structures. Vibration monitoring should be performed continuously when excavating and driving piles within 100 feet of neighboring structures. Where vibrations in excess of 1.0 inch per second (ips) at a frequency below 50 Hertz (Hz) or in excess of 2.0 ips above 50 Hz are measured at or within the structure, the work (excavation and pile driving) operations should be revised. Project specific vibration limits should be evaluated upon the selection of Contractor's means and methods. The ability to predict the amount of vibration, settlement, and damage that will be caused by pile driving, chipping, blasting, etc. and that can be tolerated by the adjacent structure is beyond the scope of this report, but should be evaluated prior to instituting the monitoring program.

### **6.7 Quality Assurance and Control**

We recommend that GZA be retained to observe earthwork, subgrade preparation, temporary support of excavation/underpinning, rock excavation and support, and pile driving. This includes the review of plans prior to bidding and site visits at the time of construction. Such work is intended to reduce unexpected circumstances throughout the bidding and construction process and to expedite resolution should unanticipated conditions be encountered. Site visits are intended to allow an evaluation of actual conditions exposed during construction, document and observe that the contractor's plans are implemented as designed and accepted by the design team and in accordance with the contract documents. This includes observing that the appropriate bearing stratum has been reached and that the subgrade has been properly prepared for foundation construction, and that support of excavation and underpinning is being constructed in accordance with the contract documents. NYCBC Special Inspections that will be required for work discussed in this report include:

- Soils - Site Preparation [BC 1704.7.1]
- Underpinning [BC 1704.9.1]
- Excavation – Sheeting, Shoring, and Bracing [BC 1704.19 and BC3304.4.1]
- Structural Safety – Structural Stability [BC 1704.19]
- Pile Foundations & Drilled Pier Installation [BC 1704.8]

Special Inspections must be performed by an independent agency hired by the Owner.

## **7 RECOMMENDED ADDITIONAL SERVICES**

Based on our familiarity with the proposed construction and the subsurface conditions at the project site, we recommend GZA perform the following services:

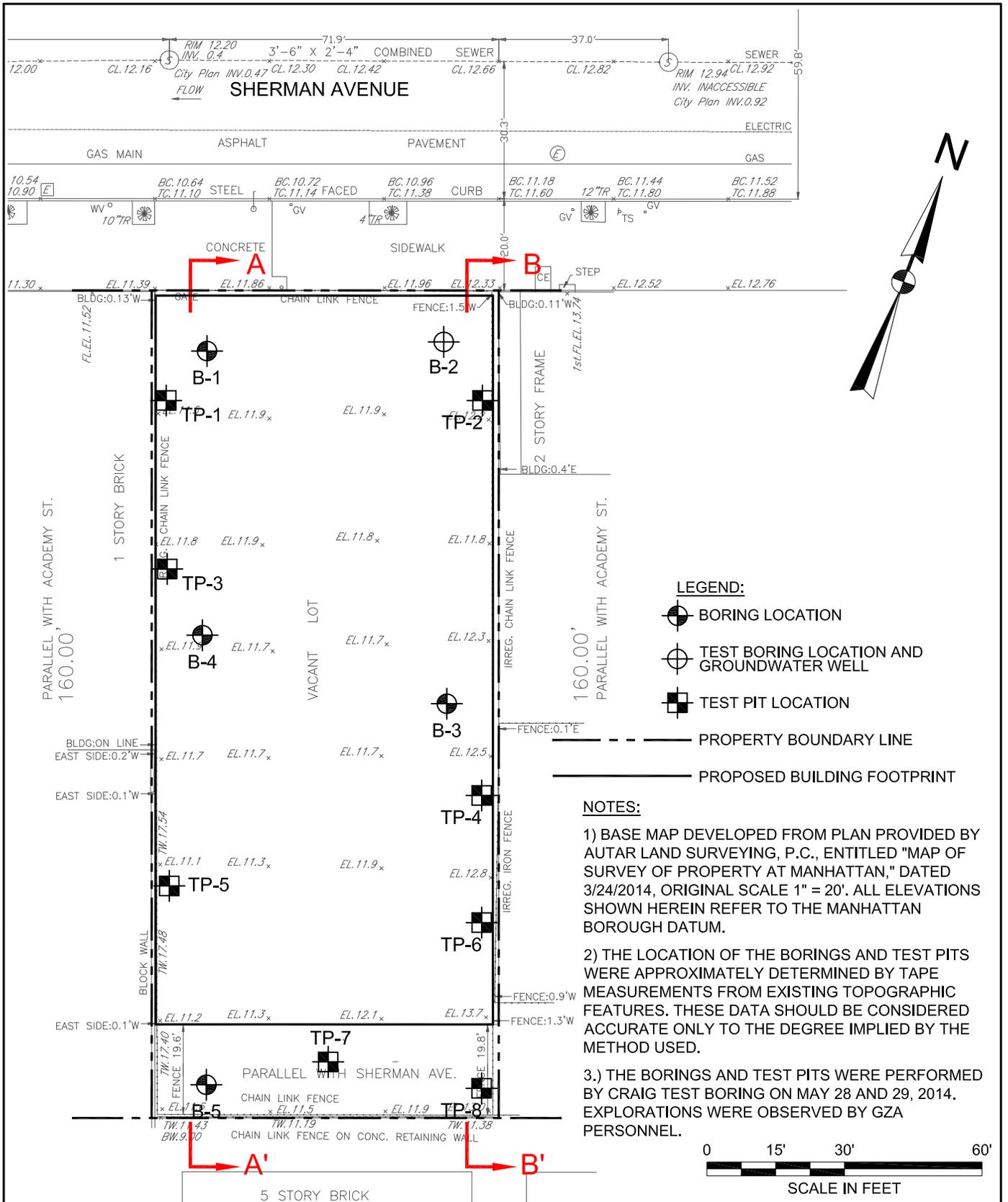


- Support of excavation design
- Underpinning design
- Rock support design
- Review of foundation-related and excavation-related structural drawings
- Preparation of pile specifications
- Attendance at project meetings upon request
- Review of Contractor submittals related to foundations
- Special inspection of pile installations and rock subgrades
- Special inspection of underpinning and SOE installation
- Pre-construction survey
- Monitoring of adjacent buildings
- NYCDEP Dewatering Permit applications

## **8 LIMITATIONS**

This report is subject to the limitations as described in Appendix A.

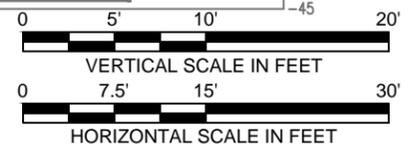
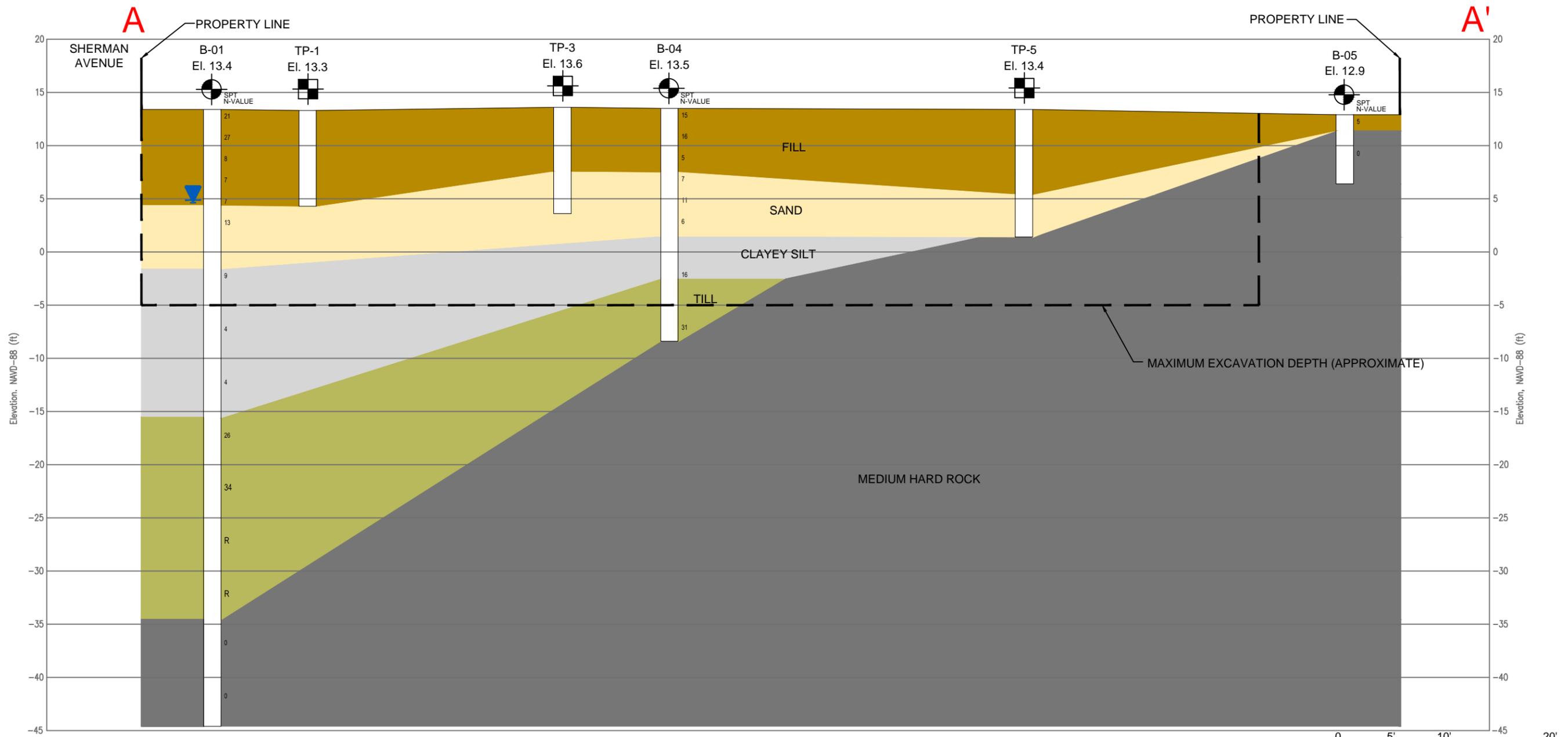
© 2014 - GZA GeoEnvironmental, Inc. GZA-U:\162200\162200\162200\162200\Figures\CAD\162206.00\F2.dwg [Figure 2] June 30, 2014 - 9:05am miguel.torres



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153-157 SHERMAN AVENUE NEW YORK, NEW YORK		<b>GZA</b> GeoEnvironmental of New York Engineers and Scientists 104 WEST 29TH STREET, 10TH FLOOR NEW YORK, NEW YORK 10001		PREPARED FOR: <b>WEST SIDE FEDERATION FOR SENIOR AND SUPPORTIVE HOUSING</b>	
<b>SUBSURFACE EXPLORATION PLAN</b>		PROJ MGR: AR DESIGNED BY: MY DATE: JUNE 2014	REVIEWED BY: AR DRAWN BY: EM PROJECT NO. 41.0162206.00	CHECKED BY: EM SCALE: 1" = 30' REVISION NO.	<b>FIGURE 2</b> SHEET NO.

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- LEGEND:**
- NYCBC CLASSIFICATION:**
- (7) FILL
  - (3b) SAND
  - (6) CLAYEY SILT
  - (3a/3b) TILL
  - (1b) MEDIUM HARD ROCK
  - GROUNDWATER TABLE

- BORING LOCATION
- TEST PIT LOCATION
- SPT STANDARD PENETRATION TEST (ASTM D1586)
- N-VALUE CUMULATIVE NUMBER OF BLOWS FOR THE MIDDLE TWO 6-INCH INTERVALS (BLOW/FT)
- R REFUSAL

**NOTE:**

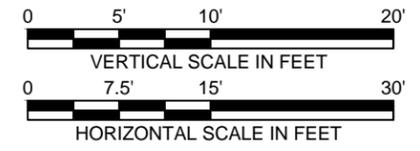
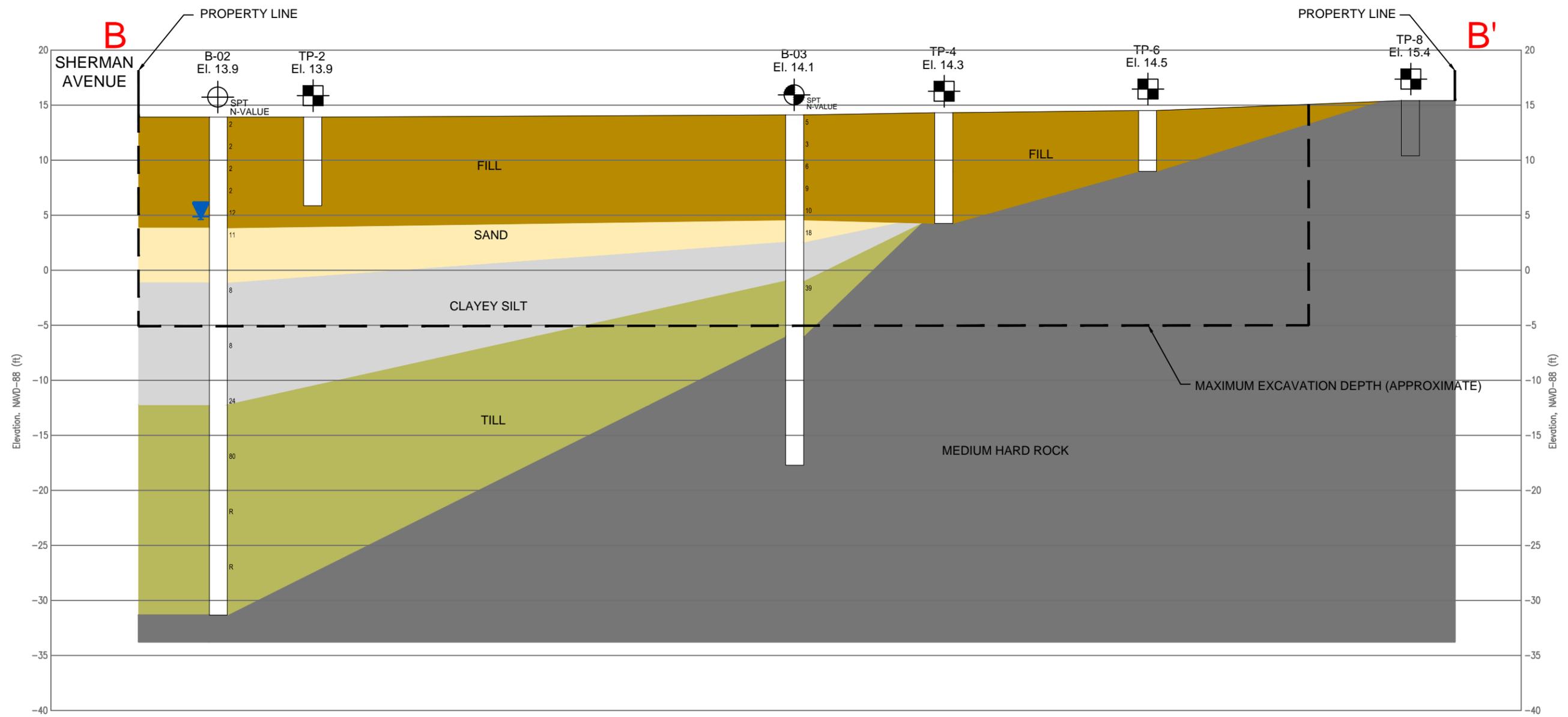
1.) THE BOUNDARIES BETWEEN STRATA ARE APPROXIMATED AND IDEALIZED AND HAVE BEEN DEVELOPED BY INTERPOLATIONS OF WIDELY SPACED EXPLORATIONS. ACTUAL TRANSITIONS WILL BE MORE ERRATIC AND WILL VARY FROM THOSE SHOWN.

2.) THE BORINGS AND TEST PITS WERE PERFORMED BY CRAIG TEST BORING ON MAY 28 AND 29, 2014. EXPLORATIONS WERE OBSERVED BY GZA PERSONNEL.

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153-157 SHERMAN AVENUE NEW YORK, NEW YORK			
SUBSURFACE PROFILE A - A'			
PREPARED BY:	GZA GeoEnvironmental of New York Engineers and Scientists 104 WEST 29TH STREET, 10TH FLOOR NEW YORK, NEW YORK 10001	PREPARED FOR:	WEST SIDE FEDERATION FOR SENIOR AND SUPPORTIVE HOUSING
PROJ MGR: AR	REVIEWED BY: AR	CHECKED BY: EM	<b>FIGURE 3</b> SHEET NO.
DESIGNED BY: MY	DRAWN BY: EM	SCALE: AS SHOWN	
DATE: JUNE 2014	PROJECT NO. 41.0162206.00	REVISION NO.	

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**LEGEND:**

**NYCBC CLASSIFICATION:**

- (7) FILL
- (3b) SAND
- (6) CLAYEY SILT
- (3a/3b) TILL
- (1b) MEDIUM HARD ROCK
- GROUNDWATER TABLE

- BORING LOCATION
- TEST BORING LOCATION AND GROUNDWATER WELL
- TEST PIT LOCATION
- SPT STANDARD PENETRATION TEST (ASTM D1586)
- N-VALUE CUMULATIVE NUMBER OF BLOWS FOR THE MIDDLE TWO 6-INCH INTERVALS (BLOW/FT)
- R REFUSAL

**NOTE:**

- 1.) THE BOUNDARIES BETWEEN STRATA ARE APPROXIMATED AND IDEALIZED AND HAVE BEEN DEVELOPED BY INTERPOLATIONS OF WIDELY SPACED EXPLORATIONS. ACTUAL TRANSITIONS WILL BE MORE ERRATIC AND WILL VARY FROM THOSE SHOWN.
- 2.) THE BORINGS AND TEST PITS WERE PERFORMED BY CRAIG TEST BORING ON MAY 28 AND 29, 2014. EXPLORATIONS WERE OBSERVED BY GZA PERSONNEL.

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

153-157 SHERMAN AVENUE NEW YORK, NEW YORK			
SUBSURFACE PROFILE B - B'			
PREPARED BY: GZA GeoEnvironmental of New York Engineers and Scientists 104 WEST 29TH STREET, 10TH FLOOR NEW YORK, NEW YORK 10001	PREPARED FOR: WEST SIDE FEDERATION FOR SENIOR AND SUPPORTIVE HOUSING		
PROJ MGR: AR	REVIEWED BY: AR	CHECKED BY: EM	FIGURE <b>4</b> SHEET NO.
DESIGNED BY: MY	DRAWN BY: EM	SCALE: AS SHOWN	
DATE: JUNE 2014	PROJECT NO. 41.0162206.00	REVISION NO.	

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# **APPENDIX D**

## **Soil Boring Geologic Logs**

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# CA RICH Consultants, Inc.

Environmental Specialists

17 Dupont Street, Plainview, NY 11803

## FIELD BORING LOG

BOREHOLE NO.: **SB-1/SV-1**

TOTAL DEPTH: **5 ft**

### PROJECT INFORMATION

PROJECT: **153-157 Sherman Avenue**  
 SITE LOCATION: **New York, NY**  
 JOB NO.: **14-WSFSSH-1B**  
 LOGGED BY: **Thomas Brown**  
 PROJECT MANAGER: **Eric Weinstock**  
 DATES DRILLED: **12/3/14**

### DRILLING INFORMATION

DRILLING CO.: **AB Environmental**  
 DRILLER: **John and Tim**  
 RIG TYPE: **Geoprobe**  
 METHOD OF DRILLING: **Direct Push**  
 SAMPLING METHODS: **Soil Sleeves**  
 HAMMER WT./DROP: **NA**

Water level in well

DEPTH	SOIL TYPE	SOIL DESCRIPTION	SAMPLE NUMBER	Blows per ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0		Brown medium sand.					<p>Bentonite Seal</p> <p>Poly Tubing</p> <p>No. 2 Sand</p>
			SB-1 0-2ft	0.0			
				Push			
5			SB-1 4-5ft	0.0			

NOTES:

# CA RICH Consultants, Inc.

Environmental Specialists

17 Dupont Street, Plainview, NY 11803

## FIELD BORING LOG

BOREHOLE NO.: **SB-2/SV-2**

TOTAL DEPTH: **5 ft**

### PROJECT INFORMATION

PROJECT: **153-157 Sherman Avenue**  
 SITE LOCATION: **New York, NY**  
 JOB NO.: **14-WSFSSH-1B**  
 LOGGED BY: **Thomas Brown**  
 PROJECT MANAGER: **Eric Weinstock**  
 DATES DRILLED: **12/3/14**

### DRILLING INFORMATION

DRILLING CO.: **AB Environmental**  
 DRILLER: **John and Tim**  
 RIG TYPE: **Geoprobe**  
 METHOD OF DRILLING: **Direct Push**  
 SAMPLING METHODS: **Soil Sleeves**  
 HAMMER WT./DROP: **NA**

Water level in well

DEPTH	SOIL TYPE	SOIL DESCRIPTION	SAMPLE NUMBER	Blows per ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0		Brown medium sand with some pebbles.					Bentonite Seal
			SB-2 0-2ft	0.0			Poly Tubing
				Push			
5			SB-2 4-5ft	0.0			No. 2 Sand

NOTES:

# CA RICH Consultants, Inc.

Environmental Specialists

17 Dupont Street, Plainview, NY 11803

## FIELD BORING LOG

BOREHOLE NO.: **SB-3/SV-3**

TOTAL DEPTH: **5 ft**

### PROJECT INFORMATION

PROJECT: **153-157 Sherman Avenue**  
 SITE LOCATION: **New York, NY**  
 JOB NO.: **14-WSFSSH-1B**  
 LOGGED BY: **Thomas Brown**  
 PROJECT MANAGER: **Eric Weinstock**  
 DATES DRILLED: **12/3/14**

### DRILLING INFORMATION

DRILLING CO.: **AB Environmental**  
 DRILLER: **John and Tim**  
 RIG TYPE: **Geoprobe**  
 METHOD OF DRILLING: **Direct Push**  
 SAMPLING METHODS: **Soil Sleeves**  
 HAMMER WT./DROP: **NA**

Water level in well

DEPTH	SOIL TYPE	SOIL DESCRIPTION	SAMPLE NUMBER	Blows per ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0		Tan silty sand.					
			SB-3 0-2ft	0.0			
				Push			
			SB-3 4-5ft	0.0			
5							

NOTES:

# CA RICH Consultants, Inc.

Environmental Specialists

17 Dupont Street, Plainview, NY 11803

## FIELD BORING LOG

BOREHOLE NO.: **SB-4/MW-2**

TOTAL DEPTH: **20 ft**

### PROJECT INFORMATION

PROJECT: **153-157 Sherman Avenue**  
 SITE LOCATION: **New York, NY**  
 JOB NO.: **14-WFSSH-1B**  
 LOGGED BY: **Thomas Brown**  
 PROJECT MANAGER: **Eric Weinstock**  
 DATES DRILLED: **12/3/14**

### DRILLING INFORMATION

DRILLING CO.: **AB Environmental**  
 DRILLER: **John and Tim**  
 RIG TYPE: **Geoprobe**  
 METHOD OF DRILLING: **Direct Push**  
 SAMPLING METHODS: **Soil Sleeves**  
 HAMMER WT./DROP: **NA**

▼ Water level in well

DEPTH (Feet)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE NUMBER	Blows per ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION	
0	Brown medium sand with pebbles.	Brown medium sand with pebbles.	SB-4 0-2ft	Push	0.4		Cover	
5								Poor sample recovery.
10	Rock debris.	Rock debris.	SB-4 11ft	Push	0.0		20 Slot Screen	
	Tan fine sand.	Tan fine sand.						No. 2 Sand
	Gray/red clay.	Gray/red clay.						
15	Gray/red clay.	Gray/red clay.		Push				
20								

NOTES:

# CA RICH Consultants, Inc.

Environmental Specialists

17 Dupont Street, Plainview, NY 11803

## FIELD BORING LOG

BOREHOLE NO.: **SB-5/MW-3**

TOTAL DEPTH: **18 ft**

### PROJECT INFORMATION

PROJECT: **153-157 Sherman Avenue**  
 SITE LOCATION: **New York, NY**  
 JOB NO.: **14-WSFSSH-1B**  
 LOGGED BY: **Thomas Brown**  
 PROJECT MANAGER: **Eric Weinstock**  
 DATES DRILLED: **12/3/14**

### DRILLING INFORMATION

DRILLING CO.: **AB Environmental**  
 DRILLER: **John and Tim**  
 RIG TYPE: **Geoprobe**  
 METHOD OF DRILLING: **Direct Push**  
 SAMPLING METHODS: **Soil Sleeves**  
 HAMMER WT./DROP: **NA**

▼ Water level in well

DEPTH (Feet)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE NUMBER	Blows per ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0	Brown medium sand with fill.		SB-5 0-2ft	Push	0.0		Cover Surface seal
5							
5	Brown silty sand.		SB-5 8-9ft	Push	0.0		Sch. 40 PVC Pipe Bentonite Seal
10							
10	Brown silty clay.			Push			20 Slot Screen No. 2 Sand
15							
15	Brown silty clay.			Push			
20							
20	Bedrock.						

NOTES:

# CA RICH Consultants, Inc.

Environmental Specialists

17 Dupont Street, Plainview, NY 11803

## FIELD BORING LOG

BOREHOLE NO.: **SB-6/MW-1**

TOTAL DEPTH: **20 ft**

### PROJECT INFORMATION

PROJECT: **153-157 Sherman Avenue**  
 SITE LOCATION: **New York, NY**  
 JOB NO.: **14-WSFSSH-1B**  
 LOGGED BY: **Thomas Brown**  
 PROJECT MANAGER: **Eric Weinstock**  
 DATES DRILLED: **12/3/14**

### DRILLING INFORMATION

DRILLING CO.: **AB Environmental**  
 DRILLER: **John and Tim**  
 RIG TYPE: **Geoprobe**  
 METHOD OF DRILLING: **Direct Push**  
 SAMPLING METHODS: **Soil Sleeves**  
 HAMMER WT./DROP: **NA**

▼ Water level in well

DEPTH (Feet)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE NUMBER	Blows per ft.	PID ppm	BORING COMPLETION	WELL DESCRIPTION
0	Brown medium sand and fill.	Brown medium sand and fill.	SB-6 0-2ft	Push	0.0		Cover
5			SB-6 8-9ft				Push
10				Push	0.0		
15							Push
20						No. 2 Sand	
							20 Slot Screen

NOTES:

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# **APPENDIX E**

**Laboratory Data Deliverables for Soil Analytical Data**

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## ANALYTICAL REPORT

Lab Number:	L1429082
Client:	CA RICH CONSULTANTS, INC. 17 Dupont St Plainview, NY 11803
ATTN:	Thomas Brown
Phone:	(516) 576-8844
Project Name:	WSFSSH
Project Number:	WSFSSH
Report Date:	12/11/14

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



Project Name: WSFSSH

Project Number: WSFSSH

Lab Number: L1429082

Report Date: 12/11/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1429082-01	SB-1 0-2FT	SOIL	153-157 SHERMAN AVE., NY, NY	12/03/14 07:00	12/04/14
L1429082-02	SB-1 4-5FT	SOIL	153-157 SHERMAN AVE., NY, NY	12/03/14 14:00	12/04/14
L1429082-03	SB-2 0-2FT	SOIL	153-157 SHERMAN AVE., NY, NY	12/03/14 07:30	12/04/14
L1429082-04	SB-2 4-5FT	SOIL	153-157 SHERMAN AVE., NY, NY	12/03/14 13:40	12/04/14
L1429082-05	SB-3 0-2FT	SOIL	153-157 SHERMAN AVE., NY, NY	12/03/14 10:00	12/04/14
L1429082-06	SB-3 4-5FT	SOIL	153-157 SHERMAN AVE., NY, NY	12/03/14 13:50	12/04/14
L1429082-07	SB-4 0-2FT	SOIL	153-157 SHERMAN AVE., NY, NY	12/03/14 07:55	12/04/14
L1429082-08	SB-4 11FT	SOIL	153-157 SHERMAN AVE., NY, NY	12/03/14 08:05	12/04/14
L1429082-09	SB-5 0-2FT	SOIL	153-157 SHERMAN AVE., NY, NY	12/03/14 10:40	12/04/14
L1429082-10	SB-5 8-9FT	SOIL	153-157 SHERMAN AVE., NY, NY	12/03/14 10:50	12/04/14
L1429082-11	SB-6 0-2FT	SOIL	153-157 SHERMAN AVE., NY, NY	12/03/14 12:30	12/04/14
L1429082-12	SB-6 8-9FT	SOIL	153-157 SHERMAN AVE., NY, NY	12/03/14 12:40	12/04/14

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEX data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

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**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

### Case Narrative (continued)

#### Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Metals

L1429082-01 through -12 have elevated detection limits for all elements, with the exception of mercury, due to the dilutions required by matrix interferences encountered during analysis.

The WG746137-1 Method Blank, associated with L1429082-01 through -12, has a concentration above the reporting limit for iron. Since the associated sample concentrations are greater than 10x the blank concentration for this analyte, no qualification of the results was performed.

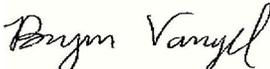
The WG746137-4 MS recoveries for aluminum (345%), cadmium (0%), copper (0%), iron (0%), and manganese (23%), performed on L1429082-01, do not apply because the sample concentrations are greater than four times the spike amounts added.

The WG746137-4 MS recoveries, performed on L1429082-01, are outside the acceptance criteria for calcium (0%), chromium (34%), lead (68%), nickel (69%), and zinc (62%). A post digestion spike was performed and was within acceptance criteria.

The WG746221-4 MS recovery, performed on L1429082-01, is outside the acceptance criteria for mercury (200%). A post digestion spike was performed and was within acceptance criteria.

The WG746137-3 Laboratory Duplicate RPDs, performed on L1429082-01, are outside the acceptance criteria for calcium (31%) and iron (26%). The elevated RPDs have been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Bryan Vangel

Title: Technical Director/Representative

Date: 12/11/14

# ORGANICS

# VOLATILES

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-01  
 Client ID: SB-1 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 09:58  
 Analyst: BN  
 Percent Solids: 90%

Date Collected: 12/03/14 07:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	9.5	1.0	1
1,1-Dichloroethane	ND		ug/kg	1.4	0.08	1
Chloroform	ND		ug/kg	1.4	0.35	1
Carbon tetrachloride	ND		ug/kg	0.95	0.20	1
1,2-Dichloropropane	ND		ug/kg	3.3	0.22	1
Dibromochloromethane	ND		ug/kg	0.95	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.4	0.29	1
Tetrachloroethene	ND		ug/kg	0.95	0.13	1
Chlorobenzene	ND		ug/kg	0.95	0.33	1
Trichlorofluoromethane	ND		ug/kg	4.8	0.37	1
1,2-Dichloroethane	ND		ug/kg	0.95	0.11	1
1,1,1-Trichloroethane	ND		ug/kg	0.95	0.10	1
Bromodichloromethane	ND		ug/kg	0.95	0.16	1
trans-1,3-Dichloropropene	ND		ug/kg	0.95	0.12	1
cis-1,3-Dichloropropene	ND		ug/kg	0.95	0.11	1
1,3-Dichloropropene, Total	ND		ug/kg	0.95	0.11	1
1,1-Dichloropropene	ND		ug/kg	4.8	0.13	1
Bromoform	ND		ug/kg	3.8	0.22	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.95	0.10	1
Benzene	ND		ug/kg	0.95	0.11	1
Toluene	ND		ug/kg	1.4	0.18	1
Ethylbenzene	ND		ug/kg	0.95	0.12	1
Chloromethane	ND		ug/kg	4.8	0.28	1
Bromomethane	ND		ug/kg	1.9	0.32	1
Vinyl chloride	ND		ug/kg	1.9	0.11	1
Chloroethane	ND		ug/kg	1.9	0.30	1
1,1-Dichloroethene	ND		ug/kg	0.95	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.20	1
Trichloroethene	ND		ug/kg	0.95	0.12	1
1,2-Dichlorobenzene	ND		ug/kg	4.8	0.15	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-01

Date Collected: 12/03/14 07:00

Client ID: SB-1 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	4.8	0.13	1
1,4-Dichlorobenzene	ND		ug/kg	4.8	0.13	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.08	1
p/m-Xylene	ND		ug/kg	1.9	0.19	1
o-Xylene	ND		ug/kg	1.9	0.16	1
Xylene (Total)	ND		ug/kg	1.9	0.16	1
cis-1,2-Dichloroethene	ND		ug/kg	0.95	0.14	1
1,2-Dichloroethene (total)	ND		ug/kg	0.95	0.14	1
Dibromomethane	ND		ug/kg	9.5	0.16	1
Styrene	ND		ug/kg	1.9	0.38	1
Dichlorodifluoromethane	ND		ug/kg	9.5	0.18	1
Acetone	ND		ug/kg	9.5	0.99	1
Carbon disulfide	ND		ug/kg	9.5	1.0	1
2-Butanone	ND		ug/kg	9.5	0.26	1
Vinyl acetate	ND		ug/kg	9.5	0.13	1
4-Methyl-2-pentanone	ND		ug/kg	9.5	0.23	1
1,2,3-Trichloropropane	ND		ug/kg	9.5	0.16	1
2-Hexanone	ND		ug/kg	9.5	0.64	1
Bromochloromethane	ND		ug/kg	4.8	0.26	1
2,2-Dichloropropane	ND		ug/kg	4.8	0.22	1
1,2-Dibromoethane	ND		ug/kg	3.8	0.17	1
1,3-Dichloropropane	ND		ug/kg	4.8	0.14	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.95	0.30	1
Bromobenzene	ND		ug/kg	4.8	0.20	1
n-Butylbenzene	ND		ug/kg	0.95	0.11	1
sec-Butylbenzene	ND		ug/kg	0.95	0.12	1
tert-Butylbenzene	ND		ug/kg	4.8	0.13	1
o-Chlorotoluene	ND		ug/kg	4.8	0.15	1
p-Chlorotoluene	ND		ug/kg	4.8	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.8	0.38	1
Hexachlorobutadiene	ND		ug/kg	4.8	0.22	1
Isopropylbenzene	ND		ug/kg	0.95	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.95	0.12	1
Naphthalene	ND		ug/kg	4.8	0.13	1
Acrylonitrile	ND		ug/kg	9.5	0.49	1
n-Propylbenzene	ND		ug/kg	0.95	0.10	1
1,2,3-Trichlorobenzene	ND		ug/kg	4.8	0.14	1
1,2,4-Trichlorobenzene	ND		ug/kg	4.8	0.17	1
1,3,5-Trimethylbenzene	ND		ug/kg	4.8	0.14	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-01

Date Collected: 12/03/14 07:00

Client ID: SB-1 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	4.8	0.13	1
1,4-Dioxane	ND		ug/kg	95	14.	1
1,4-Diethylbenzene	ND		ug/kg	3.8	0.15	1
4-Ethyltoluene	ND		ug/kg	3.8	0.12	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.8	0.12	1
Ethyl ether	ND		ug/kg	4.8	0.25	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.8	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	95		70-130

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-02  
 Client ID: SB-1 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 10:24  
 Analyst: BN  
 Percent Solids: 91%

Date Collected: 12/03/14 14:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	9.5	1.0	1
1,1-Dichloroethane	ND		ug/kg	1.4	0.08	1
Chloroform	ND		ug/kg	1.4	0.35	1
Carbon tetrachloride	ND		ug/kg	0.95	0.20	1
1,2-Dichloropropane	ND		ug/kg	3.3	0.22	1
Dibromochloromethane	ND		ug/kg	0.95	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.4	0.29	1
Tetrachloroethene	ND		ug/kg	0.95	0.13	1
Chlorobenzene	ND		ug/kg	0.95	0.33	1
Trichlorofluoromethane	ND		ug/kg	4.7	0.37	1
1,2-Dichloroethane	ND		ug/kg	0.95	0.11	1
1,1,1-Trichloroethane	ND		ug/kg	0.95	0.10	1
Bromodichloromethane	ND		ug/kg	0.95	0.16	1
trans-1,3-Dichloropropene	ND		ug/kg	0.95	0.11	1
cis-1,3-Dichloropropene	ND		ug/kg	0.95	0.11	1
1,3-Dichloropropene, Total	ND		ug/kg	0.95	0.11	1
1,1-Dichloropropene	ND		ug/kg	4.7	0.13	1
Bromoform	ND		ug/kg	3.8	0.22	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.95	0.10	1
Benzene	ND		ug/kg	0.95	0.11	1
Toluene	ND		ug/kg	1.4	0.18	1
Ethylbenzene	ND		ug/kg	0.95	0.12	1
Chloromethane	ND		ug/kg	4.7	0.28	1
Bromomethane	ND		ug/kg	1.9	0.32	1
Vinyl chloride	ND		ug/kg	1.9	0.11	1
Chloroethane	ND		ug/kg	1.9	0.30	1
1,1-Dichloroethene	ND		ug/kg	0.95	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.20	1
Trichloroethene	ND		ug/kg	0.95	0.12	1
1,2-Dichlorobenzene	ND		ug/kg	4.7	0.14	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-02

Date Collected: 12/03/14 14:00

Client ID: SB-1 4-5FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	4.7	0.13	1
1,4-Dichlorobenzene	ND		ug/kg	4.7	0.13	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.08	1
p/m-Xylene	ND		ug/kg	1.9	0.19	1
o-Xylene	ND		ug/kg	1.9	0.16	1
Xylene (Total)	ND		ug/kg	1.9	0.16	1
cis-1,2-Dichloroethene	ND		ug/kg	0.95	0.14	1
1,2-Dichloroethene (total)	ND		ug/kg	0.95	0.14	1
Dibromomethane	ND		ug/kg	9.5	0.15	1
Styrene	ND		ug/kg	1.9	0.38	1
Dichlorodifluoromethane	ND		ug/kg	9.5	0.18	1
Acetone	ND		ug/kg	9.5	0.98	1
Carbon disulfide	ND		ug/kg	9.5	1.0	1
2-Butanone	ND		ug/kg	9.5	0.26	1
Vinyl acetate	ND		ug/kg	9.5	0.12	1
4-Methyl-2-pentanone	ND		ug/kg	9.5	0.23	1
1,2,3-Trichloropropane	ND		ug/kg	9.5	0.15	1
2-Hexanone	ND		ug/kg	9.5	0.63	1
Bromochloromethane	ND		ug/kg	4.7	0.26	1
2,2-Dichloropropane	ND		ug/kg	4.7	0.21	1
1,2-Dibromoethane	ND		ug/kg	3.8	0.16	1
1,3-Dichloropropane	ND		ug/kg	4.7	0.14	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.95	0.30	1
Bromobenzene	ND		ug/kg	4.7	0.20	1
n-Butylbenzene	ND		ug/kg	0.95	0.11	1
sec-Butylbenzene	ND		ug/kg	0.95	0.12	1
tert-Butylbenzene	ND		ug/kg	4.7	0.13	1
o-Chlorotoluene	ND		ug/kg	4.7	0.15	1
p-Chlorotoluene	ND		ug/kg	4.7	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.7	0.38	1
Hexachlorobutadiene	ND		ug/kg	4.7	0.22	1
Isopropylbenzene	ND		ug/kg	0.95	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.95	0.12	1
Naphthalene	ND		ug/kg	4.7	0.13	1
Acrylonitrile	ND		ug/kg	9.5	0.49	1
n-Propylbenzene	ND		ug/kg	0.95	0.10	1
1,2,3-Trichlorobenzene	ND		ug/kg	4.7	0.14	1
1,2,4-Trichlorobenzene	ND		ug/kg	4.7	0.17	1
1,3,5-Trimethylbenzene	ND		ug/kg	4.7	0.14	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-02

Date Collected: 12/03/14 14:00

Client ID: SB-1 4-5FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	4.7	0.13	1
1,4-Dioxane	ND		ug/kg	95	14.	1
1,4-Diethylbenzene	ND		ug/kg	3.8	0.15	1
4-Ethyltoluene	ND		ug/kg	3.8	0.12	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.8	0.12	1
Ethyl ether	ND		ug/kg	4.7	0.25	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.7	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	96		70-130

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-03  
 Client ID: SB-2 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 10:50  
 Analyst: BN  
 Percent Solids: 91%

Date Collected: 12/03/14 07:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	10	1.1	1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09	1
Chloroform	ND		ug/kg	1.5	0.38	1
Carbon tetrachloride	ND		ug/kg	1.0	0.21	1
1,2-Dichloropropane	ND		ug/kg	3.6	0.23	1
Dibromochloromethane	ND		ug/kg	1.0	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.31	1
Tetrachloroethene	ND		ug/kg	1.0	0.14	1
Chlorobenzene	ND		ug/kg	1.0	0.35	1
Trichlorofluoromethane	ND		ug/kg	5.1	0.40	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.12	1
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11	1
Bromodichloromethane	ND		ug/kg	1.0	0.18	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12	1
1,1-Dichloropropene	ND		ug/kg	5.1	0.14	1
Bromoform	ND		ug/kg	4.1	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10	1
Benzene	ND		ug/kg	1.0	0.12	1
Toluene	ND		ug/kg	1.5	0.20	1
Ethylbenzene	ND		ug/kg	1.0	0.13	1
Chloromethane	ND		ug/kg	5.1	0.30	1
Bromomethane	ND		ug/kg	2.0	0.34	1
Vinyl chloride	ND		ug/kg	2.0	0.12	1
Chloroethane	ND		ug/kg	2.0	0.32	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.27	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.22	1
Trichloroethene	ND		ug/kg	1.0	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	5.1	0.16	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-03

Date Collected: 12/03/14 07:30

Client ID: SB-2 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.1	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	5.1	0.14	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.09	1
p/m-Xylene	ND		ug/kg	2.0	0.20	1
o-Xylene	ND		ug/kg	2.0	0.18	1
Xylene (Total)	ND		ug/kg	2.0	0.18	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14	1
1,2-Dichloroethene (total)	ND		ug/kg	1.0	0.14	1
Dibromomethane	ND		ug/kg	10	0.17	1
Styrene	ND		ug/kg	2.0	0.41	1
Dichlorodifluoromethane	ND		ug/kg	10	0.19	1
Acetone	ND		ug/kg	10	1.0	1
Carbon disulfide	ND		ug/kg	10	1.1	1
2-Butanone	ND		ug/kg	10	0.28	1
Vinyl acetate	ND		ug/kg	10	0.13	1
4-Methyl-2-pentanone	ND		ug/kg	10	0.25	1
1,2,3-Trichloropropane	ND		ug/kg	10	0.16	1
2-Hexanone	ND		ug/kg	10	0.68	1
Bromochloromethane	ND		ug/kg	5.1	0.28	1
2,2-Dichloropropane	ND		ug/kg	5.1	0.23	1
1,2-Dibromoethane	ND		ug/kg	4.1	0.18	1
1,3-Dichloropropane	ND		ug/kg	5.1	0.15	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32	1
Bromobenzene	ND		ug/kg	5.1	0.21	1
n-Butylbenzene	ND		ug/kg	1.0	0.12	1
sec-Butylbenzene	ND		ug/kg	1.0	0.12	1
tert-Butylbenzene	ND		ug/kg	5.1	0.14	1
o-Chlorotoluene	ND		ug/kg	5.1	0.16	1
p-Chlorotoluene	ND		ug/kg	5.1	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.1	0.40	1
Hexachlorobutadiene	ND		ug/kg	5.1	0.23	1
Isopropylbenzene	ND		ug/kg	1.0	0.10	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.13	1
Naphthalene	ND		ug/kg	5.1	0.14	1
Acrylonitrile	ND		ug/kg	10	0.52	1
n-Propylbenzene	ND		ug/kg	1.0	0.11	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.1	0.15	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.1	0.18	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.1	0.15	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-03

Date Collected: 12/03/14 07:30

Client ID: SB-2 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.1	0.14	1
1,4-Dioxane	ND		ug/kg	100	15.	1
1,4-Diethylbenzene	ND		ug/kg	4.1	0.16	1
4-Ethyltoluene	ND		ug/kg	4.1	0.13	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.1	0.13	1
Ethyl ether	ND		ug/kg	5.1	0.26	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.1	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	96		70-130

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-04  
 Client ID: SB-2 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 11:16  
 Analyst: BN  
 Percent Solids: 91%

Date Collected: 12/03/14 13:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	10	1.1	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.09	1
Chloroform	ND		ug/kg	1.6	0.38	1
Carbon tetrachloride	ND		ug/kg	1.0	0.22	1
1,2-Dichloropropane	ND		ug/kg	3.6	0.24	1
Dibromochloromethane	ND		ug/kg	1.0	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	0.32	1
Tetrachloroethene	ND		ug/kg	1.0	0.14	1
Chlorobenzene	ND		ug/kg	1.0	0.36	1
Trichlorofluoromethane	ND		ug/kg	5.2	0.40	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.12	1
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.12	1
Bromodichloromethane	ND		ug/kg	1.0	0.18	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12	1
1,1-Dichloropropene	ND		ug/kg	5.2	0.15	1
Bromoform	ND		ug/kg	4.2	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10	1
Benzene	ND		ug/kg	1.0	0.12	1
Toluene	ND		ug/kg	1.6	0.20	1
Ethylbenzene	ND		ug/kg	1.0	0.13	1
Chloromethane	ND		ug/kg	5.2	0.31	1
Bromomethane	ND		ug/kg	2.1	0.35	1
Vinyl chloride	ND		ug/kg	2.1	0.12	1
Chloroethane	ND		ug/kg	2.1	0.33	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.27	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.22	1
Trichloroethene	ND		ug/kg	1.0	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	5.2	0.16	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-04

Date Collected: 12/03/14 13:40

Client ID: SB-2 4-5FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.2	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	5.2	0.14	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.09	1
p/m-Xylene	ND		ug/kg	2.1	0.20	1
o-Xylene	ND		ug/kg	2.1	0.18	1
Xylene (Total)	ND		ug/kg	2.1	0.18	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.15	1
1,2-Dichloroethene (total)	ND		ug/kg	1.0	0.15	1
Dibromomethane	ND		ug/kg	10	0.17	1
Styrene	ND		ug/kg	2.1	0.42	1
Dichlorodifluoromethane	ND		ug/kg	10	0.20	1
Acetone	ND		ug/kg	10	1.1	1
Carbon disulfide	ND		ug/kg	10	1.1	1
2-Butanone	ND		ug/kg	10	0.28	1
Vinyl acetate	ND		ug/kg	10	0.14	1
4-Methyl-2-pentanone	ND		ug/kg	10	0.25	1
1,2,3-Trichloropropane	ND		ug/kg	10	0.17	1
2-Hexanone	ND		ug/kg	10	0.69	1
Bromochloromethane	ND		ug/kg	5.2	0.29	1
2,2-Dichloropropane	ND		ug/kg	5.2	0.24	1
1,2-Dibromoethane	ND		ug/kg	4.2	0.18	1
1,3-Dichloropropane	ND		ug/kg	5.2	0.15	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.33	1
Bromobenzene	ND		ug/kg	5.2	0.22	1
n-Butylbenzene	ND		ug/kg	1.0	0.12	1
sec-Butylbenzene	ND		ug/kg	1.0	0.13	1
tert-Butylbenzene	ND		ug/kg	5.2	0.14	1
o-Chlorotoluene	ND		ug/kg	5.2	0.17	1
p-Chlorotoluene	ND		ug/kg	5.2	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.2	0.41	1
Hexachlorobutadiene	ND		ug/kg	5.2	0.24	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.13	1
Naphthalene	ND		ug/kg	5.2	0.14	1
Acrylonitrile	ND		ug/kg	10	0.54	1
n-Propylbenzene	ND		ug/kg	1.0	0.11	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.2	0.15	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.2	0.19	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.2	0.15	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-04

Date Collected: 12/03/14 13:40

Client ID: SB-2 4-5FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.2	0.15	1
1,4-Dioxane	ND		ug/kg	100	15.	1
1,4-Diethylbenzene	ND		ug/kg	4.2	0.17	1
4-Ethyltoluene	ND		ug/kg	4.2	0.13	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.2	0.14	1
Ethyl ether	ND		ug/kg	5.2	0.27	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.2	0.41	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	96		70-130

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-05  
 Client ID: SB-3 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 11:43  
 Analyst: BN  
 Percent Solids: 84%

Date Collected: 12/03/14 10:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	10	1.1	1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09	1
Chloroform	ND		ug/kg	1.5	0.38	1
Carbon tetrachloride	ND		ug/kg	1.0	0.22	1
1,2-Dichloropropane	ND		ug/kg	3.6	0.24	1
Dibromochloromethane	ND		ug/kg	1.0	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.31	1
Tetrachloroethene	ND		ug/kg	1.0	0.14	1
Chlorobenzene	ND		ug/kg	1.0	0.36	1
Trichlorofluoromethane	ND		ug/kg	5.2	0.40	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.12	1
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11	1
Bromodichloromethane	ND		ug/kg	1.0	0.18	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12	1
1,1-Dichloropropene	ND		ug/kg	5.2	0.14	1
Bromoform	ND		ug/kg	4.1	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10	1
Benzene	ND		ug/kg	1.0	0.12	1
Toluene	ND		ug/kg	1.5	0.20	1
Ethylbenzene	ND		ug/kg	1.0	0.13	1
Chloromethane	ND		ug/kg	5.2	0.30	1
Bromomethane	ND		ug/kg	2.1	0.35	1
Vinyl chloride	ND		ug/kg	2.1	0.12	1
Chloroethane	ND		ug/kg	2.1	0.32	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.27	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.22	1
Trichloroethene	ND		ug/kg	1.0	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	5.2	0.16	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-05

Date Collected: 12/03/14 10:00

Client ID: SB-3 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.2	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	5.2	0.14	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.09	1
p/m-Xylene	ND		ug/kg	2.1	0.20	1
o-Xylene	ND		ug/kg	2.1	0.18	1
Xylene (Total)	ND		ug/kg	2.1	0.18	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.15	1
1,2-Dichloroethene (total)	ND		ug/kg	1.0	0.15	1
Dibromomethane	ND		ug/kg	10	0.17	1
Styrene	ND		ug/kg	2.1	0.41	1
Dichlorodifluoromethane	ND		ug/kg	10	0.20	1
Acetone	ND		ug/kg	10	1.1	1
Carbon disulfide	ND		ug/kg	10	1.1	1
2-Butanone	ND		ug/kg	10	0.28	1
Vinyl acetate	ND		ug/kg	10	0.14	1
4-Methyl-2-pentanone	ND		ug/kg	10	0.25	1
1,2,3-Trichloropropane	ND		ug/kg	10	0.17	1
2-Hexanone	ND		ug/kg	10	0.69	1
Bromochloromethane	ND		ug/kg	5.2	0.28	1
2,2-Dichloropropane	ND		ug/kg	5.2	0.23	1
1,2-Dibromoethane	ND		ug/kg	4.1	0.18	1
1,3-Dichloropropane	ND		ug/kg	5.2	0.15	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.33	1
Bromobenzene	ND		ug/kg	5.2	0.21	1
n-Butylbenzene	ND		ug/kg	1.0	0.12	1
sec-Butylbenzene	ND		ug/kg	1.0	0.12	1
tert-Butylbenzene	ND		ug/kg	5.2	0.14	1
o-Chlorotoluene	ND		ug/kg	5.2	0.16	1
p-Chlorotoluene	ND		ug/kg	5.2	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.2	0.41	1
Hexachlorobutadiene	ND		ug/kg	5.2	0.24	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.13	1
Naphthalene	ND		ug/kg	5.2	0.14	1
Acrylonitrile	ND		ug/kg	10	0.53	1
n-Propylbenzene	ND		ug/kg	1.0	0.11	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.2	0.15	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.2	0.19	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.2	0.15	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-05

Date Collected: 12/03/14 10:00

Client ID: SB-3 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.2	0.14	1
1,4-Dioxane	ND		ug/kg	100	15.	1
1,4-Diethylbenzene	ND		ug/kg	4.1	0.16	1
4-Ethyltoluene	ND		ug/kg	4.1	0.13	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.1	0.13	1
Ethyl ether	ND		ug/kg	5.2	0.27	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.2	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	98		70-130

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-06  
 Client ID: SB-3 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 12:09  
 Analyst: BN  
 Percent Solids: 82%

Date Collected: 12/03/14 13:50  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	11	1.2	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.09	1
Chloroform	ND		ug/kg	1.6	0.39	1
Carbon tetrachloride	ND		ug/kg	1.1	0.22	1
1,2-Dichloropropane	ND		ug/kg	3.7	0.24	1
Dibromochloromethane	ND		ug/kg	1.1	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	0.32	1
Tetrachloroethene	ND		ug/kg	1.1	0.15	1
Chlorobenzene	ND		ug/kg	1.1	0.37	1
Trichlorofluoromethane	ND		ug/kg	5.3	0.41	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.12	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	0.12	1
Bromodichloromethane	ND		ug/kg	1.1	0.18	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.13	1
cis-1,3-Dichloropropene	ND		ug/kg	1.1	0.12	1
1,3-Dichloropropene, Total	ND		ug/kg	1.1	0.12	1
1,1-Dichloropropene	ND		ug/kg	5.3	0.15	1
Bromoform	ND		ug/kg	4.2	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.1	0.11	1
Benzene	ND		ug/kg	1.1	0.12	1
Toluene	ND		ug/kg	1.6	0.21	1
Ethylbenzene	ND		ug/kg	1.1	0.14	1
Chloromethane	ND		ug/kg	5.3	0.31	1
Bromomethane	ND		ug/kg	2.1	0.36	1
Vinyl chloride	ND		ug/kg	2.1	0.12	1
Chloroethane	ND		ug/kg	2.1	0.34	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.28	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.22	1
Trichloroethene	ND		ug/kg	1.1	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	5.3	0.16	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-06

Date Collected: 12/03/14 13:50

Client ID: SB-3 4-5FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.3	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	5.3	0.15	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.09	1
p/m-Xylene	ND		ug/kg	2.1	0.21	1
o-Xylene	ND		ug/kg	2.1	0.18	1
Xylene (Total)	ND		ug/kg	2.1	0.18	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.15	1
1,2-Dichloroethene (total)	ND		ug/kg	1.1	0.15	1
Dibromomethane	ND		ug/kg	11	0.17	1
Styrene	ND		ug/kg	2.1	0.43	1
Dichlorodifluoromethane	ND		ug/kg	11	0.20	1
Acetone	ND		ug/kg	11	1.1	1
Carbon disulfide	ND		ug/kg	11	1.2	1
2-Butanone	ND		ug/kg	11	0.29	1
Vinyl acetate	ND		ug/kg	11	0.14	1
4-Methyl-2-pentanone	ND		ug/kg	11	0.26	1
1,2,3-Trichloropropane	ND		ug/kg	11	0.17	1
2-Hexanone	ND		ug/kg	11	0.71	1
Bromochloromethane	ND		ug/kg	5.3	0.29	1
2,2-Dichloropropane	ND		ug/kg	5.3	0.24	1
1,2-Dibromoethane	ND		ug/kg	4.2	0.18	1
1,3-Dichloropropane	ND		ug/kg	5.3	0.15	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.1	0.34	1
Bromobenzene	ND		ug/kg	5.3	0.22	1
n-Butylbenzene	ND		ug/kg	1.1	0.12	1
sec-Butylbenzene	ND		ug/kg	1.1	0.13	1
tert-Butylbenzene	ND		ug/kg	5.3	0.14	1
o-Chlorotoluene	ND		ug/kg	5.3	0.17	1
p-Chlorotoluene	ND		ug/kg	5.3	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.3	0.42	1
Hexachlorobutadiene	ND		ug/kg	5.3	0.24	1
Isopropylbenzene	ND		ug/kg	1.1	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.13	1
Naphthalene	ND		ug/kg	5.3	0.15	1
Acrylonitrile	ND		ug/kg	11	0.55	1
n-Propylbenzene	ND		ug/kg	1.1	0.12	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.3	0.16	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.3	0.19	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.3	0.15	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-06

Date Collected: 12/03/14 13:50

Client ID: SB-3 4-5FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.3	0.15	1
1,4-Dioxane	ND		ug/kg	110	15.	1
1,4-Diethylbenzene	ND		ug/kg	4.2	0.17	1
4-Ethyltoluene	ND		ug/kg	4.2	0.13	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.2	0.14	1
Ethyl ether	ND		ug/kg	5.3	0.28	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.3	0.42	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	98		70-130

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-07  
 Client ID: SB-4 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 12:35  
 Analyst: BN  
 Percent Solids: 90%

Date Collected: 12/03/14 07:55  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	10	1.2	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.09	1
Chloroform	ND		ug/kg	1.6	0.39	1
Carbon tetrachloride	ND		ug/kg	1.0	0.22	1
1,2-Dichloropropane	ND		ug/kg	3.6	0.24	1
Dibromochloromethane	ND		ug/kg	1.0	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	0.32	1
Tetrachloroethene	ND		ug/kg	1.0	0.15	1
Chlorobenzene	ND		ug/kg	1.0	0.36	1
Trichlorofluoromethane	ND		ug/kg	5.2	0.40	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.12	1
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.12	1
Bromodichloromethane	ND		ug/kg	1.0	0.18	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.13	1
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12	1
1,1-Dichloropropene	ND		ug/kg	5.2	0.15	1
Bromoform	ND		ug/kg	4.2	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10	1
Benzene	ND		ug/kg	1.0	0.12	1
Toluene	ND		ug/kg	1.6	0.20	1
Ethylbenzene	ND		ug/kg	1.0	0.13	1
Chloromethane	ND		ug/kg	5.2	0.31	1
Bromomethane	ND		ug/kg	2.1	0.35	1
Vinyl chloride	ND		ug/kg	2.1	0.12	1
Chloroethane	ND		ug/kg	2.1	0.33	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.27	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.22	1
Trichloroethene	ND		ug/kg	1.0	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	5.2	0.16	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-07

Date Collected: 12/03/14 07:55

Client ID: SB-4 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.2	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	5.2	0.14	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.09	1
p/m-Xylene	ND		ug/kg	2.1	0.21	1
o-Xylene	ND		ug/kg	2.1	0.18	1
Xylene (Total)	ND		ug/kg	2.1	0.18	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.15	1
1,2-Dichloroethene (total)	ND		ug/kg	1.0	0.15	1
Dibromomethane	ND		ug/kg	10	0.17	1
Styrene	ND		ug/kg	2.1	0.42	1
Dichlorodifluoromethane	ND		ug/kg	10	0.20	1
Acetone	ND		ug/kg	10	1.1	1
Carbon disulfide	ND		ug/kg	10	1.2	1
2-Butanone	ND		ug/kg	10	0.28	1
Vinyl acetate	ND		ug/kg	10	0.14	1
4-Methyl-2-pentanone	ND		ug/kg	10	0.25	1
1,2,3-Trichloropropane	ND		ug/kg	10	0.17	1
2-Hexanone	ND		ug/kg	10	0.70	1
Bromochloromethane	ND		ug/kg	5.2	0.29	1
2,2-Dichloropropane	ND		ug/kg	5.2	0.24	1
1,2-Dibromoethane	ND		ug/kg	4.2	0.18	1
1,3-Dichloropropane	ND		ug/kg	5.2	0.15	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.33	1
Bromobenzene	ND		ug/kg	5.2	0.22	1
n-Butylbenzene	ND		ug/kg	1.0	0.12	1
sec-Butylbenzene	ND		ug/kg	1.0	0.13	1
tert-Butylbenzene	ND		ug/kg	5.2	0.14	1
o-Chlorotoluene	ND		ug/kg	5.2	0.17	1
p-Chlorotoluene	ND		ug/kg	5.2	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.2	0.41	1
Hexachlorobutadiene	ND		ug/kg	5.2	0.24	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.13	1
Naphthalene	ND		ug/kg	5.2	0.14	1
Acrylonitrile	ND		ug/kg	10	0.54	1
n-Propylbenzene	ND		ug/kg	1.0	0.11	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.2	0.15	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.2	0.19	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.2	0.15	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-07

Date Collected: 12/03/14 07:55

Client ID: SB-4 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.2	0.15	1
1,4-Dioxane	ND		ug/kg	100	15.	1
1,4-Diethylbenzene	ND		ug/kg	4.2	0.17	1
4-Ethyltoluene	ND		ug/kg	4.2	0.13	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.2	0.14	1
Ethyl ether	ND		ug/kg	5.2	0.27	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.2	0.41	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	98		70-130

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-08  
 Client ID: SB-4 11FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 13:01  
 Analyst: BN  
 Percent Solids: 86%

Date Collected: 12/03/14 08:05  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	9.5	1.0	1
1,1-Dichloroethane	ND		ug/kg	1.4	0.08	1
Chloroform	ND		ug/kg	1.4	0.35	1
Carbon tetrachloride	ND		ug/kg	0.95	0.20	1
1,2-Dichloropropane	ND		ug/kg	3.3	0.22	1
Dibromochloromethane	ND		ug/kg	0.95	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.4	0.29	1
Tetrachloroethene	1.0		ug/kg	0.95	0.13	1
Chlorobenzene	ND		ug/kg	0.95	0.33	1
Trichlorofluoromethane	ND		ug/kg	4.7	0.37	1
1,2-Dichloroethane	ND		ug/kg	0.95	0.11	1
1,1,1-Trichloroethane	ND		ug/kg	0.95	0.10	1
Bromodichloromethane	ND		ug/kg	0.95	0.16	1
trans-1,3-Dichloropropene	ND		ug/kg	0.95	0.11	1
cis-1,3-Dichloropropene	ND		ug/kg	0.95	0.11	1
1,3-Dichloropropene, Total	ND		ug/kg	0.95	0.11	1
1,1-Dichloropropene	ND		ug/kg	4.7	0.13	1
Bromoform	ND		ug/kg	3.8	0.22	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.95	0.10	1
Benzene	ND		ug/kg	0.95	0.11	1
Toluene	ND		ug/kg	1.4	0.18	1
Ethylbenzene	ND		ug/kg	0.95	0.12	1
Chloromethane	ND		ug/kg	4.7	0.28	1
Bromomethane	ND		ug/kg	1.9	0.32	1
Vinyl chloride	ND		ug/kg	1.9	0.11	1
Chloroethane	ND		ug/kg	1.9	0.30	1
1,1-Dichloroethene	ND		ug/kg	0.95	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.20	1
Trichloroethene	ND		ug/kg	0.95	0.12	1
1,2-Dichlorobenzene	ND		ug/kg	4.7	0.14	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-08

Date Collected: 12/03/14 08:05

Client ID: SB-4 11FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	4.7	0.13	1
1,4-Dichlorobenzene	ND		ug/kg	4.7	0.13	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.08	1
p/m-Xylene	ND		ug/kg	1.9	0.19	1
o-Xylene	ND		ug/kg	1.9	0.16	1
Xylene (Total)	ND		ug/kg	1.9	0.16	1
cis-1,2-Dichloroethene	ND		ug/kg	0.95	0.14	1
1,2-Dichloroethene (total)	ND		ug/kg	0.95	0.14	1
Dibromomethane	ND		ug/kg	9.5	0.16	1
Styrene	ND		ug/kg	1.9	0.38	1
Dichlorodifluoromethane	ND		ug/kg	9.5	0.18	1
Acetone	2.0	J	ug/kg	9.5	0.98	1
Carbon disulfide	ND		ug/kg	9.5	1.0	1
2-Butanone	ND		ug/kg	9.5	0.26	1
Vinyl acetate	ND		ug/kg	9.5	0.12	1
4-Methyl-2-pentanone	ND		ug/kg	9.5	0.23	1
1,2,3-Trichloropropane	ND		ug/kg	9.5	0.15	1
2-Hexanone	ND		ug/kg	9.5	0.63	1
Bromochloromethane	ND		ug/kg	4.7	0.26	1
2,2-Dichloropropane	ND		ug/kg	4.7	0.21	1
1,2-Dibromoethane	ND		ug/kg	3.8	0.16	1
1,3-Dichloropropane	ND		ug/kg	4.7	0.14	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.95	0.30	1
Bromobenzene	ND		ug/kg	4.7	0.20	1
n-Butylbenzene	ND		ug/kg	0.95	0.11	1
sec-Butylbenzene	ND		ug/kg	0.95	0.12	1
tert-Butylbenzene	ND		ug/kg	4.7	0.13	1
o-Chlorotoluene	ND		ug/kg	4.7	0.15	1
p-Chlorotoluene	ND		ug/kg	4.7	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.7	0.38	1
Hexachlorobutadiene	ND		ug/kg	4.7	0.22	1
Isopropylbenzene	ND		ug/kg	0.95	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.95	0.12	1
Naphthalene	ND		ug/kg	4.7	0.13	1
Acrylonitrile	ND		ug/kg	9.5	0.49	1
n-Propylbenzene	ND		ug/kg	0.95	0.10	1
1,2,3-Trichlorobenzene	ND		ug/kg	4.7	0.14	1
1,2,4-Trichlorobenzene	ND		ug/kg	4.7	0.17	1
1,3,5-Trimethylbenzene	ND		ug/kg	4.7	0.14	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-08

Date Collected: 12/03/14 08:05

Client ID: SB-4 11FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	4.7	0.13	1
1,4-Dioxane	ND		ug/kg	95	14.	1
1,4-Diethylbenzene	ND		ug/kg	3.8	0.15	1
4-Ethyltoluene	ND		ug/kg	3.8	0.12	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.8	0.12	1
Ethyl ether	ND		ug/kg	4.7	0.25	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.7	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	97		70-130

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-09  
 Client ID: SB-5 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 13:27  
 Analyst: BN  
 Percent Solids: 93%

Date Collected: 12/03/14 10:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	9.5	1.0	1
1,1-Dichloroethane	ND		ug/kg	1.4	0.08	1
Chloroform	ND		ug/kg	1.4	0.35	1
Carbon tetrachloride	ND		ug/kg	0.95	0.20	1
1,2-Dichloropropane	ND		ug/kg	3.3	0.22	1
Dibromochloromethane	ND		ug/kg	0.95	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.4	0.29	1
Tetrachloroethene	0.93	J	ug/kg	0.95	0.13	1
Chlorobenzene	ND		ug/kg	0.95	0.33	1
Trichlorofluoromethane	ND		ug/kg	4.7	0.37	1
1,2-Dichloroethane	ND		ug/kg	0.95	0.11	1
1,1,1-Trichloroethane	ND		ug/kg	0.95	0.10	1
Bromodichloromethane	ND		ug/kg	0.95	0.16	1
trans-1,3-Dichloropropene	ND		ug/kg	0.95	0.11	1
cis-1,3-Dichloropropene	ND		ug/kg	0.95	0.11	1
1,3-Dichloropropene, Total	ND		ug/kg	0.95	0.11	1
1,1-Dichloropropene	ND		ug/kg	4.7	0.13	1
Bromoform	ND		ug/kg	3.8	0.22	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.95	0.10	1
Benzene	ND		ug/kg	0.95	0.11	1
Toluene	ND		ug/kg	1.4	0.18	1
Ethylbenzene	ND		ug/kg	0.95	0.12	1
Chloromethane	ND		ug/kg	4.7	0.28	1
Bromomethane	ND		ug/kg	1.9	0.32	1
Vinyl chloride	ND		ug/kg	1.9	0.11	1
Chloroethane	ND		ug/kg	1.9	0.30	1
1,1-Dichloroethene	ND		ug/kg	0.95	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.20	1
Trichloroethene	ND		ug/kg	0.95	0.12	1
1,2-Dichlorobenzene	ND		ug/kg	4.7	0.14	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-09

Date Collected: 12/03/14 10:40

Client ID: SB-5 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	4.7	0.13	1
1,4-Dichlorobenzene	ND		ug/kg	4.7	0.13	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.08	1
p/m-Xylene	ND		ug/kg	1.9	0.19	1
o-Xylene	ND		ug/kg	1.9	0.16	1
Xylene (Total)	ND		ug/kg	1.9	0.16	1
cis-1,2-Dichloroethene	ND		ug/kg	0.95	0.14	1
1,2-Dichloroethene (total)	ND		ug/kg	0.95	0.14	1
Dibromomethane	ND		ug/kg	9.5	0.15	1
Styrene	ND		ug/kg	1.9	0.38	1
Dichlorodifluoromethane	ND		ug/kg	9.5	0.18	1
Acetone	ND		ug/kg	9.5	0.98	1
Carbon disulfide	ND		ug/kg	9.5	1.0	1
2-Butanone	ND		ug/kg	9.5	0.26	1
Vinyl acetate	ND		ug/kg	9.5	0.12	1
4-Methyl-2-pentanone	ND		ug/kg	9.5	0.23	1
1,2,3-Trichloropropane	ND		ug/kg	9.5	0.15	1
2-Hexanone	ND		ug/kg	9.5	0.63	1
Bromochloromethane	ND		ug/kg	4.7	0.26	1
2,2-Dichloropropane	ND		ug/kg	4.7	0.21	1
1,2-Dibromoethane	ND		ug/kg	3.8	0.16	1
1,3-Dichloropropane	ND		ug/kg	4.7	0.14	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.95	0.30	1
Bromobenzene	ND		ug/kg	4.7	0.20	1
n-Butylbenzene	ND		ug/kg	0.95	0.11	1
sec-Butylbenzene	ND		ug/kg	0.95	0.12	1
tert-Butylbenzene	ND		ug/kg	4.7	0.13	1
o-Chlorotoluene	ND		ug/kg	4.7	0.15	1
p-Chlorotoluene	ND		ug/kg	4.7	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.7	0.37	1
Hexachlorobutadiene	ND		ug/kg	4.7	0.22	1
Isopropylbenzene	ND		ug/kg	0.95	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.95	0.12	1
Naphthalene	ND		ug/kg	4.7	0.13	1
Acrylonitrile	ND		ug/kg	9.5	0.49	1
n-Propylbenzene	ND		ug/kg	0.95	0.10	1
1,2,3-Trichlorobenzene	ND		ug/kg	4.7	0.14	1
1,2,4-Trichlorobenzene	ND		ug/kg	4.7	0.17	1
1,3,5-Trimethylbenzene	ND		ug/kg	4.7	0.14	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-09

Date Collected: 12/03/14 10:40

Client ID: SB-5 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	4.7	0.13	1
1,4-Dioxane	ND		ug/kg	95	14.	1
1,4-Diethylbenzene	ND		ug/kg	3.8	0.15	1
4-Ethyltoluene	ND		ug/kg	3.8	0.12	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.8	0.12	1
Ethyl ether	ND		ug/kg	4.7	0.25	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.7	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	99		70-130

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-10  
 Client ID: SB-5 8-9FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 13:53  
 Analyst: BN  
 Percent Solids: 85%

Date Collected: 12/03/14 10:50  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	11	1.2	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.09	1
Chloroform	ND		ug/kg	1.6	0.40	1
Carbon tetrachloride	ND		ug/kg	1.1	0.22	1
1,2-Dichloropropane	ND		ug/kg	3.8	0.24	1
Dibromochloromethane	ND		ug/kg	1.1	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	0.33	1
Tetrachloroethene	ND		ug/kg	1.1	0.15	1
Chlorobenzene	ND		ug/kg	1.1	0.37	1
Trichlorofluoromethane	ND		ug/kg	5.4	0.42	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.12	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	0.12	1
Bromodichloromethane	ND		ug/kg	1.1	0.19	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.13	1
cis-1,3-Dichloropropene	ND		ug/kg	1.1	0.13	1
1,3-Dichloropropene, Total	ND		ug/kg	1.1	0.13	1
1,1-Dichloropropene	ND		ug/kg	5.4	0.15	1
Bromoform	ND		ug/kg	4.3	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.1	0.11	1
Benzene	ND		ug/kg	1.1	0.13	1
Toluene	ND		ug/kg	1.6	0.21	1
Ethylbenzene	ND		ug/kg	1.1	0.14	1
Chloromethane	ND		ug/kg	5.4	0.32	1
Bromomethane	ND		ug/kg	2.2	0.36	1
Vinyl chloride	ND		ug/kg	2.2	0.13	1
Chloroethane	ND		ug/kg	2.2	0.34	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.28	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.23	1
Trichloroethene	ND		ug/kg	1.1	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	5.4	0.16	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-10

Date Collected: 12/03/14 10:50

Client ID: SB-5 8-9FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.4	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	5.4	0.15	1
Methyl tert butyl ether	ND		ug/kg	2.2	0.09	1
p/m-Xylene	ND		ug/kg	2.2	0.21	1
o-Xylene	ND		ug/kg	2.2	0.18	1
Xylene (Total)	ND		ug/kg	2.2	0.18	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.15	1
1,2-Dichloroethene (total)	ND		ug/kg	1.1	0.15	1
Dibromomethane	ND		ug/kg	11	0.18	1
Styrene	ND		ug/kg	2.2	0.43	1
Dichlorodifluoromethane	ND		ug/kg	11	0.20	1
Acetone	2.4	J	ug/kg	11	1.1	1
Carbon disulfide	ND		ug/kg	11	1.2	1
2-Butanone	ND		ug/kg	11	0.29	1
Vinyl acetate	ND		ug/kg	11	0.14	1
4-Methyl-2-pentanone	ND		ug/kg	11	0.26	1
1,2,3-Trichloropropane	ND		ug/kg	11	0.17	1
2-Hexanone	ND		ug/kg	11	0.72	1
Bromochloromethane	ND		ug/kg	5.4	0.30	1
2,2-Dichloropropane	ND		ug/kg	5.4	0.24	1
1,2-Dibromoethane	ND		ug/kg	4.3	0.19	1
1,3-Dichloropropane	ND		ug/kg	5.4	0.16	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.1	0.34	1
Bromobenzene	ND		ug/kg	5.4	0.22	1
n-Butylbenzene	ND		ug/kg	1.1	0.12	1
sec-Butylbenzene	ND		ug/kg	1.1	0.13	1
tert-Butylbenzene	ND		ug/kg	5.4	0.14	1
o-Chlorotoluene	ND		ug/kg	5.4	0.17	1
p-Chlorotoluene	ND		ug/kg	5.4	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.4	0.43	1
Hexachlorobutadiene	ND		ug/kg	5.4	0.24	1
Isopropylbenzene	ND		ug/kg	1.1	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.13	1
Naphthalene	ND		ug/kg	5.4	0.15	1
Acrylonitrile	ND		ug/kg	11	0.55	1
n-Propylbenzene	ND		ug/kg	1.1	0.12	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.4	0.16	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.4	0.20	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.4	0.15	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-10

Date Collected: 12/03/14 10:50

Client ID: SB-5 8-9FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.4	0.15	1
1,4-Dioxane	ND		ug/kg	110	16.	1
1,4-Diethylbenzene	ND		ug/kg	4.3	0.17	1
4-Ethyltoluene	ND		ug/kg	4.3	0.13	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.3	0.14	1
Ethyl ether	ND		ug/kg	5.4	0.28	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.4	0.42	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	99		70-130

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-11  
 Client ID: SB-6 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 14:19  
 Analyst: BN  
 Percent Solids: 91%

Date Collected: 12/03/14 12:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	9.9	1.1	1
1,1-Dichloroethane	ND		ug/kg	1.5	0.08	1
Chloroform	ND		ug/kg	1.5	0.36	1
Carbon tetrachloride	ND		ug/kg	0.99	0.21	1
1,2-Dichloropropane	ND		ug/kg	3.4	0.22	1
Dibromochloromethane	ND		ug/kg	0.99	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30	1
Tetrachloroethene	ND		ug/kg	0.99	0.14	1
Chlorobenzene	ND		ug/kg	0.99	0.34	1
Trichlorofluoromethane	ND		ug/kg	4.9	0.38	1
1,2-Dichloroethane	ND		ug/kg	0.99	0.11	1
1,1,1-Trichloroethane	ND		ug/kg	0.99	0.11	1
Bromodichloromethane	ND		ug/kg	0.99	0.17	1
trans-1,3-Dichloropropene	ND		ug/kg	0.99	0.12	1
cis-1,3-Dichloropropene	ND		ug/kg	0.99	0.12	1
1,3-Dichloropropene, Total	ND		ug/kg	0.99	0.12	1
1,1-Dichloropropene	ND		ug/kg	4.9	0.14	1
Bromoform	ND		ug/kg	3.9	0.23	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.99	0.10	1
Benzene	ND		ug/kg	0.99	0.12	1
Toluene	ND		ug/kg	1.5	0.19	1
Ethylbenzene	ND		ug/kg	0.99	0.12	1
Chloromethane	ND		ug/kg	4.9	0.29	1
Bromomethane	ND		ug/kg	2.0	0.33	1
Vinyl chloride	ND		ug/kg	2.0	0.12	1
Chloroethane	ND		ug/kg	2.0	0.31	1
1,1-Dichloroethene	ND		ug/kg	0.99	0.26	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21	1
Trichloroethene	ND		ug/kg	0.99	0.12	1
1,2-Dichlorobenzene	ND		ug/kg	4.9	0.15	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-11

Date Collected: 12/03/14 12:30

Client ID: SB-6 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	4.9	0.13	1
1,4-Dichlorobenzene	ND		ug/kg	4.9	0.14	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.08	1
p/m-Xylene	ND		ug/kg	2.0	0.20	1
o-Xylene	ND		ug/kg	2.0	0.17	1
Xylene (Total)	ND		ug/kg	2.0	0.17	1
cis-1,2-Dichloroethene	ND		ug/kg	0.99	0.14	1
1,2-Dichloroethene (total)	ND		ug/kg	0.99	0.14	1
Dibromomethane	ND		ug/kg	9.9	0.16	1
Styrene	ND		ug/kg	2.0	0.40	1
Dichlorodifluoromethane	ND		ug/kg	9.9	0.19	1
Acetone	36		ug/kg	9.9	1.0	1
Carbon disulfide	ND		ug/kg	9.9	1.1	1
2-Butanone	4.7	J	ug/kg	9.9	0.27	1
Vinyl acetate	ND		ug/kg	9.9	0.13	1
4-Methyl-2-pentanone	ND		ug/kg	9.9	0.24	1
1,2,3-Trichloropropane	ND		ug/kg	9.9	0.16	1
2-Hexanone	ND		ug/kg	9.9	0.66	1
Bromochloromethane	ND		ug/kg	4.9	0.27	1
2,2-Dichloropropane	ND		ug/kg	4.9	0.22	1
1,2-Dibromoethane	ND		ug/kg	3.9	0.17	1
1,3-Dichloropropane	ND		ug/kg	4.9	0.14	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.99	0.31	1
Bromobenzene	ND		ug/kg	4.9	0.20	1
n-Butylbenzene	ND		ug/kg	0.99	0.11	1
sec-Butylbenzene	ND		ug/kg	0.99	0.12	1
tert-Butylbenzene	ND		ug/kg	4.9	0.13	1
o-Chlorotoluene	ND		ug/kg	4.9	0.16	1
p-Chlorotoluene	ND		ug/kg	4.9	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.9	0.39	1
Hexachlorobutadiene	ND		ug/kg	4.9	0.22	1
Isopropylbenzene	ND		ug/kg	0.99	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.99	0.12	1
Naphthalene	ND		ug/kg	4.9	0.14	1
Acrylonitrile	ND		ug/kg	9.9	0.51	1
n-Propylbenzene	ND		ug/kg	0.99	0.11	1
1,2,3-Trichlorobenzene	ND		ug/kg	4.9	0.14	1
1,2,4-Trichlorobenzene	ND		ug/kg	4.9	0.18	1
1,3,5-Trimethylbenzene	ND		ug/kg	4.9	0.14	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-11

Date Collected: 12/03/14 12:30

Client ID: SB-6 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	4.9	0.14	1
1,4-Dioxane	ND		ug/kg	99	14.	1
1,4-Diethylbenzene	ND		ug/kg	3.9	0.16	1
4-Ethyltoluene	ND		ug/kg	3.9	0.12	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.9	0.13	1
Ethyl ether	ND		ug/kg	4.9	0.26	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.9	0.39	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-12  
 Client ID: SB-6 8-9FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 14:46  
 Analyst: BN  
 Percent Solids: 86%

Date Collected: 12/03/14 12:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by 8260/5035 - Westborough Lab</b>						
Methylene chloride	ND		ug/kg	10	1.1	1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09	1
Chloroform	ND		ug/kg	1.5	0.38	1
Carbon tetrachloride	ND		ug/kg	1.0	0.21	1
1,2-Dichloropropane	ND		ug/kg	3.6	0.23	1
Dibromochloromethane	ND		ug/kg	1.0	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.31	1
Tetrachloroethene	0.86	J	ug/kg	1.0	0.14	1
Chlorobenzene	ND		ug/kg	1.0	0.35	1
Trichlorofluoromethane	ND		ug/kg	5.1	0.39	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.12	1
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11	1
Bromodichloromethane	ND		ug/kg	1.0	0.18	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12	1
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12	1
1,1-Dichloropropene	ND		ug/kg	5.1	0.14	1
Bromoform	ND		ug/kg	4.1	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10	1
Benzene	ND		ug/kg	1.0	0.12	1
Toluene	ND		ug/kg	1.5	0.20	1
Ethylbenzene	ND		ug/kg	1.0	0.13	1
Chloromethane	ND		ug/kg	5.1	0.30	1
Bromomethane	ND		ug/kg	2.0	0.34	1
Vinyl chloride	ND		ug/kg	2.0	0.12	1
Chloroethane	ND		ug/kg	2.0	0.32	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.27	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.22	1
Trichloroethene	ND		ug/kg	1.0	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	5.1	0.16	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-12

Date Collected: 12/03/14 12:40

Client ID: SB-6 8-9FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	5.1	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	5.1	0.14	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.09	1
p/m-Xylene	ND		ug/kg	2.0	0.20	1
o-Xylene	ND		ug/kg	2.0	0.17	1
Xylene (Total)	ND		ug/kg	2.0	0.17	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14	1
1,2-Dichloroethene (total)	ND		ug/kg	1.0	0.14	1
Dibromomethane	ND		ug/kg	10	0.17	1
Styrene	ND		ug/kg	2.0	0.41	1
Dichlorodifluoromethane	ND		ug/kg	10	0.19	1
Acetone	ND		ug/kg	10	1.0	1
Carbon disulfide	ND		ug/kg	10	1.1	1
2-Butanone	ND		ug/kg	10	0.28	1
Vinyl acetate	ND		ug/kg	10	0.13	1
4-Methyl-2-pentanone	ND		ug/kg	10	0.25	1
1,2,3-Trichloropropane	ND		ug/kg	10	0.16	1
2-Hexanone	ND		ug/kg	10	0.68	1
Bromochloromethane	ND		ug/kg	5.1	0.28	1
2,2-Dichloropropane	ND		ug/kg	5.1	0.23	1
1,2-Dibromoethane	ND		ug/kg	4.1	0.18	1
1,3-Dichloropropane	ND		ug/kg	5.1	0.15	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32	1
Bromobenzene	ND		ug/kg	5.1	0.21	1
n-Butylbenzene	ND		ug/kg	1.0	0.12	1
sec-Butylbenzene	ND		ug/kg	1.0	0.12	1
tert-Butylbenzene	ND		ug/kg	5.1	0.14	1
o-Chlorotoluene	ND		ug/kg	5.1	0.16	1
p-Chlorotoluene	ND		ug/kg	5.1	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.1	0.40	1
Hexachlorobutadiene	ND		ug/kg	5.1	0.23	1
Isopropylbenzene	ND		ug/kg	1.0	0.10	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.13	1
Naphthalene	ND		ug/kg	5.1	0.14	1
Acrylonitrile	ND		ug/kg	10	0.52	1
n-Propylbenzene	ND		ug/kg	1.0	0.11	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.1	0.15	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.1	0.18	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.1	0.14	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-12

Date Collected: 12/03/14 12:40

Client ID: SB-6 8-9FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	5.1	0.14	1
1,4-Dioxane	ND		ug/kg	100	15.	1
1,4-Diethylbenzene	ND		ug/kg	4.1	0.16	1
4-Ethyltoluene	ND		ug/kg	4.1	0.13	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.1	0.13	1
Ethyl ether	ND		ug/kg	5.1	0.26	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.1	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	99		70-130

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 09:06  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-12 Batch: WG746911-3					
Methylene chloride	ND		ug/kg	10	1.1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.15
2-Chloroethylvinyl ether	ND		ug/kg	20	0.62
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.39
1,2-Dichloroethane	ND		ug/kg	1.0	0.11
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.17
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12
1,1-Dichloropropene	ND		ug/kg	5.0	0.14
Bromoform	ND		ug/kg	4.0	0.24
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.19
Ethylbenzene	ND		ug/kg	1.0	0.13
Chloromethane	ND		ug/kg	5.0	0.29
Bromomethane	0.36	J	ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.12
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.26
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 12/09/14 09:06  
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-12 Batch: WG746911-3					
Trichloroethene	ND		ug/kg	1.0	0.12
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.15
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.14
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.14
Methyl tert butyl ether	ND		ug/kg	2.0	0.08
p/m-Xylene	ND		ug/kg	2.0	0.20
o-Xylene	ND		ug/kg	2.0	0.17
Xylene (Total)	ND		ug/kg	2.0	0.17
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14
1,2-Dichloroethene (total)	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.40
Dichlorodifluoromethane	ND		ug/kg	10	0.19
Acetone	ND		ug/kg	10	1.0
Carbon disulfide	ND		ug/kg	10	1.1
2-Butanone	ND		ug/kg	10	0.27
Vinyl acetate	ND		ug/kg	10	0.13
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.16
2-Hexanone	ND		ug/kg	10	0.67
Bromochloromethane	ND		ug/kg	5.0	0.28
2,2-Dichloropropane	ND		ug/kg	5.0	0.23
1,2-Dibromoethane	ND		ug/kg	4.0	0.17
1,3-Dichloropropane	ND		ug/kg	5.0	0.14
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
n-Butylbenzene	ND		ug/kg	1.0	0.11
sec-Butylbenzene	ND		ug/kg	1.0	0.12
tert-Butylbenzene	ND		ug/kg	5.0	0.14

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 12/09/14 09:06  
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-12 Batch: WG746911-3					
o-Chlorotoluene	ND		ug/kg	5.0	0.16
p-Chlorotoluene	ND		ug/kg	5.0	0.13
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.40
Hexachlorobutadiene	ND		ug/kg	5.0	0.23
Isopropylbenzene	ND		ug/kg	1.0	0.10
p-Isopropyltoluene	ND		ug/kg	1.0	0.12
Naphthalene	ND		ug/kg	5.0	0.14
Acrylonitrile	ND		ug/kg	10	0.51
Isopropyl Ether	ND		ug/kg	4.0	0.14
tert-Butyl Alcohol	ND		ug/kg	60	2.9
n-Propylbenzene	ND		ug/kg	1.0	0.11
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.15
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.18
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.14
Methyl Acetate	ND		ug/kg	20	0.27
Ethyl Acetate	ND		ug/kg	20	0.92
Acrolein	ND		ug/kg	25	8.1
Cyclohexane	ND		ug/kg	20	0.15
1,4-Dioxane	ND		ug/kg	100	14.
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	20	0.27
1,4-Diethylbenzene	ND		ug/kg	4.0	0.16
4-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Tetrahydrofuran	ND		ug/kg	20	1.0
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.39
Methyl cyclohexane	ND		ug/kg	4.0	0.15
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.0	0.12

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 12/09/14 09:06  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-12 Batch: WG746911-3					
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.0	0.10

Tentatively Identified Compounds

No Tentatively Identified Compounds      ND      ug/kg

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	91		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-12 Batch: WG746911-1 WG746911-2								
Methylene chloride	102		95		70-130	7		30
1,1-Dichloroethane	104		103		70-130	1		30
Chloroform	102		101		70-130	1		30
Carbon tetrachloride	110		108		70-130	2		30
1,2-Dichloropropane	99		100		70-130	1		30
Dibromochloromethane	101		102		70-130	1		30
2-Chloroethylvinyl ether	78		83		70-130	6		30
1,1,2-Trichloroethane	101		103		70-130	2		30
Tetrachloroethene	114		111		70-130	3		30
Chlorobenzene	106		106		70-130	0		30
Trichlorofluoromethane	115		108		70-139	6		30
1,2-Dichloroethane	97		99		70-130	2		30
1,1,1-Trichloroethane	108		106		70-130	2		30
Bromodichloromethane	99		100		70-130	1		30
trans-1,3-Dichloropropene	100		100		70-130	0		30
cis-1,3-Dichloropropene	99		100		70-130	1		30
1,1-Dichloropropene	111		109		70-130	2		30
Bromoform	84		82		70-130	2		30
1,1,2,2-Tetrachloroethane	96		95		70-130	1		30
Benzene	102		103		70-130	1		30
Toluene	108		106		70-130	2		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-12 Batch: WG746911-1 WG746911-2								
Ethylbenzene	110		110		70-130	0		30
Chloromethane	87		81		52-130	7		30
Bromomethane	99		92		57-147	7		30
Vinyl chloride	96		88		67-130	9		30
Chloroethane	109		97		50-151	12		30
1,1-Dichloroethene	107		103		65-135	4		30
trans-1,2-Dichloroethene	104		101		70-130	3		30
Trichloroethene	105		106		70-130	1		30
1,2-Dichlorobenzene	105		104		70-130	1		30
1,3-Dichlorobenzene	110		108		70-130	2		30
1,4-Dichlorobenzene	107		105		70-130	2		30
Methyl tert butyl ether	103		103		66-130	0		30
p/m-Xylene	112		113		70-130	1		30
o-Xylene	112		112		70-130	0		30
cis-1,2-Dichloroethene	100		100		70-130	0		30
Dibromomethane	96		97		70-130	1		30
Styrene	111		111		70-130	0		30
Dichlorodifluoromethane	78		73		30-146	7		30
Acetone	97		89		54-140	9		30
Carbon disulfide	88		84		59-130	5		30
2-Butanone	93		95		70-130	2		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-12 Batch: WG746911-1 WG746911-2								
Vinyl acetate	77		78		70-130	1		30
4-Methyl-2-pentanone	75		80		70-130	6		30
1,2,3-Trichloropropane	99		99		68-130	0		30
2-Hexanone	79		79		70-130	0		30
Bromochloromethane	101		99		70-130	2		30
2,2-Dichloropropane	108		106		70-130	2		30
1,2-Dibromoethane	101		100		70-130	1		30
1,3-Dichloropropane	101		102		69-130	1		30
1,1,1,2-Tetrachloroethane	105		104		70-130	1		30
Bromobenzene	104		103		70-130	1		30
n-Butylbenzene	126		123		70-130	2		30
sec-Butylbenzene	118		116		70-130	2		30
tert-Butylbenzene	115		113		70-130	2		30
o-Chlorotoluene	109		107		70-130	2		30
p-Chlorotoluene	112		111		70-130	1		30
1,2-Dibromo-3-chloropropane	81		80		68-130	1		30
Hexachlorobutadiene	115		114		67-130	1		30
Isopropylbenzene	113		110		70-130	3		30
p-Isopropyltoluene	119		117		70-130	2		30
Naphthalene	97		99		70-130	2		30
Acrylonitrile	94		92		70-130	2		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-12 Batch: WG746911-1 WG746911-2								
Isopropyl Ether	98		98		66-130	0		30
tert-Butyl Alcohol	98		96		70-130	2		30
n-Propylbenzene	115		112		70-130	3		30
1,2,3-Trichlorobenzene	105		106		70-130	1		30
1,2,4-Trichlorobenzene	114		112		70-130	2		30
1,3,5-Trimethylbenzene	113		110		70-130	3		30
1,2,4-Trimethylbenzene	115		113		70-130	2		30
Methyl Acetate	104		104		51-146	0		30
Ethyl Acetate	94		96		70-130	2		30
Acrolein	48	Q	45	Q	70-130	6		30
Cyclohexane	120		119		59-142	1		30
1,4-Dioxane	96		97		65-136	1		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	111		104		50-139	7		30
1,4-Diethylbenzene	118		115		70-130	3		30
4-Ethyltoluene	115		112		70-130	3		30
1,2,4,5-Tetramethylbenzene	103		100		70-130	3		30
Tetrahydrofuran	95		87		66-130	9		30
Ethyl ether	116		114		67-130	2		30
trans-1,4-Dichloro-2-butene	95		96		70-130	1		30
Methyl cyclohexane	122		121		70-130	1		30
Ethyl-Tert-Butyl-Ether	98		99		70-130	1		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-12 Batch: WG746911-1 WG746911-2								
Tertiary-Amyl Methyl Ether	96		98		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98		97		70-130
Toluene-d8	102		102		70-130
4-Bromofluorobenzene	100		98		70-130
Dibromofluoromethane	100		99		70-130

# SEMIVOLATILES

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-01  
 Client ID: SB-1 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 12/09/14 15:15  
 Analyst: RC  
 Percent Solids: 90%

Date Collected: 12/03/14 07:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
Acenaphthene	160		ug/kg	150	38.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	60.	1
Hexachlorobenzene	ND		ug/kg	110	34.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	51.	1
2-Chloronaphthalene	ND		ug/kg	180	60.	1
1,2-Dichlorobenzene	ND		ug/kg	180	60.	1
1,3-Dichlorobenzene	ND		ug/kg	180	58.	1
1,4-Dichlorobenzene	ND		ug/kg	180	56.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	49.	1
2,4-Dinitrotoluene	ND		ug/kg	180	39.	1
2,6-Dinitrotoluene	ND		ug/kg	180	47.	1
Fluoranthene	3200		ug/kg	110	34.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	56.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	42.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	64.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	55.	1
Hexachlorobutadiene	ND		ug/kg	180	52.	1
Hexachlorocyclopentadiene	ND		ug/kg	520	120	1
Hexachloroethane	ND		ug/kg	150	33.	1
Isophorone	ND		ug/kg	160	49.	1
Naphthalene	190		ug/kg	180	61.	1
Nitrobenzene	ND		ug/kg	160	44.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	150	38.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	54.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	48.	1
Butyl benzyl phthalate	ND		ug/kg	180	36.	1
Di-n-butylphthalate	ND		ug/kg	180	35.	1
Di-n-octylphthalate	ND		ug/kg	180	45.	1
Diethyl phthalate	ND		ug/kg	180	39.	1
Dimethyl phthalate	ND		ug/kg	180	46.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-01

Date Collected: 12/03/14 07:00

Client ID: SB-1 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	1100		ug/kg	110	36.	1
Benzo(a)pyrene	980		ug/kg	150	45.	1
Benzo(b)fluoranthene	1300		ug/kg	110	37.	1
Benzo(k)fluoranthene	470		ug/kg	110	35.	1
Chrysene	1100		ug/kg	110	36.	1
Acenaphthylene	140	J	ug/kg	150	34.	1
Anthracene	480		ug/kg	110	30.	1
Benzo(ghi)perylene	640		ug/kg	150	38.	1
Fluorene	160	J	ug/kg	180	52.	1
Phenanthrene	3400		ug/kg	110	36.	1
Dibenzo(a,h)anthracene	150		ug/kg	110	35.	1
Indeno(1,2,3-cd)Pyrene	710		ug/kg	150	41.	1
Pyrene	2500		ug/kg	110	36.	1
Biphenyl	ND		ug/kg	420	60.	1
4-Chloroaniline	ND		ug/kg	180	48.	1
2-Nitroaniline	ND		ug/kg	180	52.	1
3-Nitroaniline	ND		ug/kg	180	50.	1
4-Nitroaniline	ND		ug/kg	180	49.	1
Dibenzofuran	280		ug/kg	180	61.	1
2-Methylnaphthalene	100	J	ug/kg	220	58.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	57.	1
Acetophenone	ND		ug/kg	180	57.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
P-Chloro-M-Cresol	ND		ug/kg	180	53.	1
2-Chlorophenol	ND		ug/kg	180	55.	1
2,4-Dichlorophenol	ND		ug/kg	160	59.	1
2,4-Dimethylphenol	ND		ug/kg	180	54.	1
2-Nitrophenol	ND		ug/kg	400	57.	1
4-Nitrophenol	ND		ug/kg	260	59.	1
2,4-Dinitrophenol	ND		ug/kg	880	250	1
4,6-Dinitro-o-cresol	ND		ug/kg	480	67.	1
Pentachlorophenol	ND		ug/kg	150	39.	1
Phenol	ND		ug/kg	180	54.	1
2-Methylphenol	ND		ug/kg	180	59.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	60.	1
2,4,5-Trichlorophenol	ND		ug/kg	180	59.	1
Benzoic Acid	ND		ug/kg	590	180	1
Benzyl Alcohol	ND		ug/kg	180	56.	1
Carbazole	280		ug/kg	180	39.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-01

Date Collected: 12/03/14 07:00

Client ID: SB-1 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		25-120
Phenol-d6	66		10-120
Nitrobenzene-d5	64		23-120
2-Fluorobiphenyl	67		30-120
2,4,6-Tribromophenol	71		0-136
4-Terphenyl-d14	65		18-120

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-02  
 Client ID: SB-1 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 12/09/14 15:41  
 Analyst: RC  
 Percent Solids: 91%

Date Collected: 12/03/14 14:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
Acenaphthene	ND		ug/kg	140	38.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	60.	1
Hexachlorobenzene	ND		ug/kg	110	34.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	51.	1
2-Chloronaphthalene	ND		ug/kg	180	59.	1
1,2-Dichlorobenzene	ND		ug/kg	180	60.	1
1,3-Dichlorobenzene	ND		ug/kg	180	57.	1
1,4-Dichlorobenzene	ND		ug/kg	180	55.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	48.	1
2,4-Dinitrotoluene	ND		ug/kg	180	39.	1
2,6-Dinitrotoluene	ND		ug/kg	180	47.	1
Fluoranthene	170		ug/kg	110	33.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	55.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	42.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	64.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	55.	1
Hexachlorobutadiene	ND		ug/kg	180	51.	1
Hexachlorocyclopentadiene	ND		ug/kg	520	120	1
Hexachloroethane	ND		ug/kg	140	33.	1
Isophorone	ND		ug/kg	160	48.	1
Naphthalene	ND		ug/kg	180	60.	1
Nitrobenzene	ND		ug/kg	160	43.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	140	38.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	54.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	48.	1
Butyl benzyl phthalate	ND		ug/kg	180	36.	1
Di-n-butylphthalate	ND		ug/kg	180	35.	1
Di-n-octylphthalate	ND		ug/kg	180	45.	1
Diethyl phthalate	ND		ug/kg	180	38.	1
Dimethyl phthalate	ND		ug/kg	180	46.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-02

Date Collected: 12/03/14 14:00

Client ID: SB-1 4-5FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	91	J	ug/kg	110	36.	1
Benzo(a)pyrene	85	J	ug/kg	140	45.	1
Benzo(b)fluoranthene	110		ug/kg	110	37.	1
Benzo(k)fluoranthene	40	J	ug/kg	110	35.	1
Chrysene	100	J	ug/kg	110	36.	1
Acenaphthylene	ND		ug/kg	140	34.	1
Anthracene	ND		ug/kg	110	30.	1
Benzo(ghi)perylene	64	J	ug/kg	140	38.	1
Fluorene	ND		ug/kg	180	52.	1
Phenanthrene	94	J	ug/kg	110	36.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	35.	1
Indeno(1,2,3-cd)Pyrene	66	J	ug/kg	140	40.	1
Pyrene	160		ug/kg	110	35.	1
Biphenyl	ND		ug/kg	420	60.	1
4-Chloroaniline	ND		ug/kg	180	48.	1
2-Nitroaniline	ND		ug/kg	180	51.	1
3-Nitroaniline	ND		ug/kg	180	50.	1
4-Nitroaniline	ND		ug/kg	180	49.	1
Dibenzofuran	ND		ug/kg	180	61.	1
2-Methylnaphthalene	ND		ug/kg	220	58.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	56.	1
Acetophenone	ND		ug/kg	180	56.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
P-Chloro-M-Cresol	ND		ug/kg	180	53.	1
2-Chlorophenol	ND		ug/kg	180	55.	1
2,4-Dichlorophenol	ND		ug/kg	160	59.	1
2,4-Dimethylphenol	ND		ug/kg	180	54.	1
2-Nitrophenol	ND		ug/kg	390	57.	1
4-Nitrophenol	ND		ug/kg	260	59.	1
2,4-Dinitrophenol	ND		ug/kg	880	250	1
4,6-Dinitro-o-cresol	ND		ug/kg	470	67.	1
Pentachlorophenol	ND		ug/kg	140	39.	1
Phenol	ND		ug/kg	180	54.	1
2-Methylphenol	ND		ug/kg	180	59.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	60.	1
2,4,5-Trichlorophenol	ND		ug/kg	180	59.	1
Benzoic Acid	ND		ug/kg	590	180	1
Benzyl Alcohol	ND		ug/kg	180	56.	1
Carbazole	ND		ug/kg	180	39.	1

**Project Name:** WSFSSH**Lab Number:** L1429082**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429082-02

Date Collected: 12/03/14 14:00

Client ID: SB-1 4-5FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	75		25-120
Phenol-d6	85		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	87		30-120
2,4,6-Tribromophenol	93		0-136
4-Terphenyl-d14	92		18-120

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-03  
 Client ID: SB-2 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 12/09/14 16:07  
 Analyst: RC  
 Percent Solids: 91%

Date Collected: 12/03/14 07:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
Acenaphthene	50	J	ug/kg	140	37.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	59.	1
Hexachlorobenzene	ND		ug/kg	110	33.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	50.	1
2-Chloronaphthalene	ND		ug/kg	180	58.	1
1,2-Dichlorobenzene	ND		ug/kg	180	59.	1
1,3-Dichlorobenzene	ND		ug/kg	180	57.	1
1,4-Dichlorobenzene	ND		ug/kg	180	55.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	48.	1
2,4-Dinitrotoluene	ND		ug/kg	180	39.	1
2,6-Dinitrotoluene	ND		ug/kg	180	46.	1
Fluoranthene	630		ug/kg	110	33.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	55.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	41.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	63.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	54.	1
Hexachlorobutadiene	ND		ug/kg	180	51.	1
Hexachlorocyclopentadiene	ND		ug/kg	520	120	1
Hexachloroethane	ND		ug/kg	140	33.	1
Isophorone	ND		ug/kg	160	48.	1
Naphthalene	ND		ug/kg	180	60.	1
Nitrobenzene	ND		ug/kg	160	43.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	140	38.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	54.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	47.	1
Butyl benzyl phthalate	37	J	ug/kg	180	35.	1
Di-n-butylphthalate	ND		ug/kg	180	35.	1
Di-n-octylphthalate	ND		ug/kg	180	44.	1
Diethyl phthalate	ND		ug/kg	180	38.	1
Dimethyl phthalate	ND		ug/kg	180	46.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-03

Date Collected: 12/03/14 07:30

Client ID: SB-2 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	270		ug/kg	110	35.	1
Benzo(a)pyrene	230		ug/kg	140	44.	1
Benzo(b)fluoranthene	290		ug/kg	110	36.	1
Benzo(k)fluoranthene	110		ug/kg	110	34.	1
Chrysene	260		ug/kg	110	35.	1
Acenaphthylene	ND		ug/kg	140	34.	1
Anthracene	110		ug/kg	110	30.	1
Benzo(ghi)perylene	160		ug/kg	140	37.	1
Fluorene	ND		ug/kg	180	52.	1
Phenanthrene	530		ug/kg	110	35.	1
Dibenzo(a,h)anthracene	39	J	ug/kg	110	35.	1
Indeno(1,2,3-cd)Pyrene	160		ug/kg	140	40.	1
Pyrene	540		ug/kg	110	35.	1
Biphenyl	ND		ug/kg	410	59.	1
4-Chloroaniline	ND		ug/kg	180	47.	1
2-Nitroaniline	ND		ug/kg	180	51.	1
3-Nitroaniline	ND		ug/kg	180	50.	1
4-Nitroaniline	ND		ug/kg	180	48.	1
Dibenzofuran	ND		ug/kg	180	60.	1
2-Methylnaphthalene	ND		ug/kg	220	57.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	56.	1
Acetophenone	ND		ug/kg	180	56.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
P-Chloro-M-Cresol	ND		ug/kg	180	52.	1
2-Chlorophenol	ND		ug/kg	180	54.	1
2,4-Dichlorophenol	ND		ug/kg	160	58.	1
2,4-Dimethylphenol	ND		ug/kg	180	54.	1
2-Nitrophenol	ND		ug/kg	390	56.	1
4-Nitrophenol	ND		ug/kg	250	58.	1
2,4-Dinitrophenol	ND		ug/kg	860	240	1
4,6-Dinitro-o-cresol	ND		ug/kg	470	66.	1
Pentachlorophenol	ND		ug/kg	140	38.	1
Phenol	ND		ug/kg	180	53.	1
2-Methylphenol	ND		ug/kg	180	58.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	59.	1
2,4,5-Trichlorophenol	ND		ug/kg	180	58.	1
Benzoic Acid	ND		ug/kg	580	180	1
Benzyl Alcohol	ND		ug/kg	180	55.	1
Carbazole	62	J	ug/kg	180	39.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-03

Date Collected: 12/03/14 07:30

Client ID: SB-2 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		25-120
Phenol-d6	76		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	74		30-120
2,4,6-Tribromophenol	79		0-136
4-Terphenyl-d14	75		18-120

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-04  
 Client ID: SB-2 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 12/09/14 16:33  
 Analyst: RC  
 Percent Solids: 91%

Date Collected: 12/03/14 13:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
Acenaphthene	ND		ug/kg	150	38.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	60.	1
Hexachlorobenzene	ND		ug/kg	110	34.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	51.	1
2-Chloronaphthalene	ND		ug/kg	180	60.	1
1,2-Dichlorobenzene	ND		ug/kg	180	60.	1
1,3-Dichlorobenzene	ND		ug/kg	180	58.	1
1,4-Dichlorobenzene	ND		ug/kg	180	56.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	49.	1
2,4-Dinitrotoluene	ND		ug/kg	180	39.	1
2,6-Dinitrotoluene	ND		ug/kg	180	47.	1
Fluoranthene	250		ug/kg	110	34.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	56.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	42.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	64.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	55.	1
Hexachlorobutadiene	ND		ug/kg	180	52.	1
Hexachlorocyclopentadiene	ND		ug/kg	520	120	1
Hexachloroethane	ND		ug/kg	150	33.	1
Isophorone	ND		ug/kg	160	49.	1
Naphthalene	ND		ug/kg	180	61.	1
Nitrobenzene	ND		ug/kg	160	44.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	150	38.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	54.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	48.	1
Butyl benzyl phthalate	ND		ug/kg	180	36.	1
Di-n-butylphthalate	ND		ug/kg	180	35.	1
Di-n-octylphthalate	ND		ug/kg	180	45.	1
Diethyl phthalate	ND		ug/kg	180	39.	1
Dimethyl phthalate	ND		ug/kg	180	46.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-04

Date Collected: 12/03/14 13:40

Client ID: SB-2 4-5FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	130		ug/kg	110	36.	1
Benzo(a)pyrene	120	J	ug/kg	150	45.	1
Benzo(b)fluoranthene	150		ug/kg	110	37.	1
Benzo(k)fluoranthene	59	J	ug/kg	110	35.	1
Chrysene	130		ug/kg	110	36.	1
Acenaphthylene	ND		ug/kg	150	34.	1
Anthracene	32	J	ug/kg	110	30.	1
Benzo(ghi)perylene	93	J	ug/kg	150	38.	1
Fluorene	ND		ug/kg	180	52.	1
Phenanthrene	150		ug/kg	110	36.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	35.	1
Indeno(1,2,3-cd)Pyrene	94	J	ug/kg	150	41.	1
Pyrene	220		ug/kg	110	36.	1
Biphenyl	ND		ug/kg	420	60.	1
4-Chloroaniline	ND		ug/kg	180	48.	1
2-Nitroaniline	ND		ug/kg	180	52.	1
3-Nitroaniline	ND		ug/kg	180	50.	1
4-Nitroaniline	ND		ug/kg	180	49.	1
Dibenzofuran	ND		ug/kg	180	61.	1
2-Methylnaphthalene	ND		ug/kg	220	58.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	57.	1
Acetophenone	ND		ug/kg	180	57.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
P-Chloro-M-Cresol	ND		ug/kg	180	53.	1
2-Chlorophenol	ND		ug/kg	180	55.	1
2,4-Dichlorophenol	ND		ug/kg	160	59.	1
2,4-Dimethylphenol	ND		ug/kg	180	54.	1
2-Nitrophenol	ND		ug/kg	400	57.	1
4-Nitrophenol	ND		ug/kg	260	59.	1
2,4-Dinitrophenol	ND		ug/kg	880	250	1
4,6-Dinitro-o-cresol	ND		ug/kg	480	67.	1
Pentachlorophenol	ND		ug/kg	150	39.	1
Phenol	ND		ug/kg	180	54.	1
2-Methylphenol	ND		ug/kg	180	59.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	60.	1
2,4,5-Trichlorophenol	ND		ug/kg	180	59.	1
Benzoic Acid	ND		ug/kg	590	180	1
Benzyl Alcohol	ND		ug/kg	180	56.	1
Carbazole	ND		ug/kg	180	39.	1

**Project Name:** WSFSSH**Lab Number:** L1429082**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429082-04

Date Collected: 12/03/14 13:40

Client ID: SB-2 4-5FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		25-120
Phenol-d6	75		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	72		30-120
2,4,6-Tribromophenol	77		0-136
4-Terphenyl-d14	72		18-120

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-05  
 Client ID: SB-3 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 12/09/14 17:01  
 Analyst: RC  
 Percent Solids: 84%

Date Collected: 12/03/14 10:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
Acenaphthene	ND		ug/kg	160	41.	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	65.	1
Hexachlorobenzene	ND		ug/kg	120	37.	1
Bis(2-chloroethyl)ether	ND		ug/kg	180	56.	1
2-Chloronaphthalene	ND		ug/kg	200	65.	1
1,2-Dichlorobenzene	ND		ug/kg	200	65.	1
1,3-Dichlorobenzene	ND		ug/kg	200	63.	1
1,4-Dichlorobenzene	ND		ug/kg	200	60.	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	53.	1
2,4-Dinitrotoluene	ND		ug/kg	200	43.	1
2,6-Dinitrotoluene	ND		ug/kg	200	51.	1
Fluoranthene	61	J	ug/kg	120	36.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	200	60.	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	46.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	240	70.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	60.	1
Hexachlorobutadiene	ND		ug/kg	200	56.	1
Hexachlorocyclopentadiene	ND		ug/kg	570	130	1
Hexachloroethane	ND		ug/kg	160	36.	1
Isophorone	ND		ug/kg	180	53.	1
Naphthalene	ND		ug/kg	200	66.	1
Nitrobenzene	ND		ug/kg	180	47.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	160	42.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	200	59.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	200	52.	1
Butyl benzyl phthalate	ND		ug/kg	200	39.	1
Di-n-butylphthalate	ND		ug/kg	200	38.	1
Di-n-octylphthalate	ND		ug/kg	200	49.	1
Diethyl phthalate	ND		ug/kg	200	42.	1
Dimethyl phthalate	ND		ug/kg	200	50.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-05

Date Collected: 12/03/14 10:00

Client ID: SB-3 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	ND		ug/kg	120	39.	1
Benzo(a)pyrene	ND		ug/kg	160	49.	1
Benzo(b)fluoranthene	ND		ug/kg	120	40.	1
Benzo(k)fluoranthene	ND		ug/kg	120	38.	1
Chrysene	ND		ug/kg	120	39.	1
Acenaphthylene	ND		ug/kg	160	37.	1
Anthracene	ND		ug/kg	120	33.	1
Benzo(ghi)perylene	ND		ug/kg	160	41.	1
Fluorene	ND		ug/kg	200	57.	1
Phenanthrene	61	J	ug/kg	120	39.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	38.	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	160	44.	1
Pyrene	56	J	ug/kg	120	39.	1
Biphenyl	ND		ug/kg	450	66.	1
4-Chloroaniline	ND		ug/kg	200	52.	1
2-Nitroaniline	ND		ug/kg	200	56.	1
3-Nitroaniline	ND		ug/kg	200	55.	1
4-Nitroaniline	ND		ug/kg	200	54.	1
Dibenzofuran	ND		ug/kg	200	66.	1
2-Methylnaphthalene	ND		ug/kg	240	63.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	200	62.	1
Acetophenone	ND		ug/kg	200	62.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	37.	1
P-Chloro-M-Cresol	ND		ug/kg	200	58.	1
2-Chlorophenol	ND		ug/kg	200	60.	1
2,4-Dichlorophenol	ND		ug/kg	180	64.	1
2,4-Dimethylphenol	ND		ug/kg	200	59.	1
2-Nitrophenol	ND		ug/kg	430	62.	1
4-Nitrophenol	ND		ug/kg	280	64.	1
2,4-Dinitrophenol	ND		ug/kg	950	270	1
4,6-Dinitro-o-cresol	ND		ug/kg	520	73.	1
Pentachlorophenol	ND		ug/kg	160	42.	1
Phenol	ND		ug/kg	200	59.	1
2-Methylphenol	ND		ug/kg	200	64.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	290	65.	1
2,4,5-Trichlorophenol	ND		ug/kg	200	64.	1
Benzoic Acid	ND		ug/kg	640	200	1
Benzyl Alcohol	ND		ug/kg	200	61.	1
Carbazole	ND		ug/kg	200	43.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-05

Date Collected: 12/03/14 10:00

Client ID: SB-3 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		25-120
Phenol-d6	74		10-120
Nitrobenzene-d5	70		23-120
2-Fluorobiphenyl	72		30-120
2,4,6-Tribromophenol	95		0-136
4-Terphenyl-d14	83		18-120

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-06  
 Client ID: SB-3 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 12/09/14 22:41  
 Analyst: RC  
 Percent Solids: 82%

Date Collected: 12/03/14 13:50  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
Acenaphthene	ND		ug/kg	160	40.	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	64.	1
Hexachlorobenzene	ND		ug/kg	120	37.	1
Bis(2-chloroethyl)ether	ND		ug/kg	180	55.	1
2-Chloronaphthalene	ND		ug/kg	200	64.	1
1,2-Dichlorobenzene	ND		ug/kg	200	64.	1
1,3-Dichlorobenzene	ND		ug/kg	200	62.	1
1,4-Dichlorobenzene	ND		ug/kg	200	60.	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	52.	1
2,4-Dinitrotoluene	ND		ug/kg	200	42.	1
2,6-Dinitrotoluene	ND		ug/kg	200	50.	1
Fluoranthene	220		ug/kg	120	36.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	200	60.	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	45.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	240	69.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	60.	1
Hexachlorobutadiene	ND		ug/kg	200	55.	1
Hexachlorocyclopentadiene	ND		ug/kg	560	130	1
Hexachloroethane	ND		ug/kg	160	36.	1
Isophorone	ND		ug/kg	180	52.	1
Naphthalene	ND		ug/kg	200	65.	1
Nitrobenzene	ND		ug/kg	180	47.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	160	41.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	200	58.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	200	52.	1
Butyl benzyl phthalate	ND		ug/kg	200	38.	1
Di-n-butylphthalate	ND		ug/kg	200	38.	1
Di-n-octylphthalate	ND		ug/kg	200	48.	1
Diethyl phthalate	ND		ug/kg	200	42.	1
Dimethyl phthalate	ND		ug/kg	200	50.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-06

Date Collected: 12/03/14 13:50

Client ID: SB-3 4-5FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	100	J	ug/kg	120	38.	1
Benzo(a)pyrene	94	J	ug/kg	160	48.	1
Benzo(b)fluoranthene	120		ug/kg	120	40.	1
Benzo(k)fluoranthene	44	J	ug/kg	120	38.	1
Chrysene	110	J	ug/kg	120	39.	1
Acenaphthylene	ND		ug/kg	160	37.	1
Anthracene	ND		ug/kg	120	33.	1
Benzo(ghi)perylene	65	J	ug/kg	160	41.	1
Fluorene	ND		ug/kg	200	56.	1
Phenanthrene	160		ug/kg	120	38.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	38.	1
Indeno(1,2,3-cd)Pyrene	69	J	ug/kg	160	44.	1
Pyrene	180		ug/kg	120	38.	1
Biphenyl	ND		ug/kg	450	65.	1
4-Chloroaniline	ND		ug/kg	200	52.	1
2-Nitroaniline	ND		ug/kg	200	55.	1
3-Nitroaniline	ND		ug/kg	200	54.	1
4-Nitroaniline	ND		ug/kg	200	53.	1
Dibenzofuran	ND		ug/kg	200	66.	1
2-Methylnaphthalene	ND		ug/kg	240	63.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	200	61.	1
Acetophenone	ND		ug/kg	200	61.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	37.	1
P-Chloro-M-Cresol	ND		ug/kg	200	57.	1
2-Chlorophenol	ND		ug/kg	200	59.	1
2,4-Dichlorophenol	ND		ug/kg	180	64.	1
2,4-Dimethylphenol	ND		ug/kg	200	58.	1
2-Nitrophenol	ND		ug/kg	420	61.	1
4-Nitrophenol	ND		ug/kg	280	64.	1
2,4-Dinitrophenol	ND		ug/kg	940	270	1
4,6-Dinitro-o-cresol	ND		ug/kg	510	72.	1
Pentachlorophenol	ND		ug/kg	160	42.	1
Phenol	ND		ug/kg	200	58.	1
2-Methylphenol	ND		ug/kg	200	63.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	64.	1
2,4,5-Trichlorophenol	ND		ug/kg	200	64.	1
Benzoic Acid	ND		ug/kg	640	200	1
Benzyl Alcohol	ND		ug/kg	200	60.	1
Carbazole	ND		ug/kg	200	42.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-06

Date Collected: 12/03/14 13:50

Client ID: SB-3 4-5FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	75		25-120
Phenol-d6	79		10-120
Nitrobenzene-d5	76		23-120
2-Fluorobiphenyl	78		30-120
2,4,6-Tribromophenol	90		0-136
4-Terphenyl-d14	75		18-120

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-07  
 Client ID: SB-4 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 12/09/14 23:06  
 Analyst: RC  
 Percent Solids: 90%

Date Collected: 12/03/14 07:55  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
Acenaphthene	ND		ug/kg	140	37.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	59.	1
Hexachlorobenzene	ND		ug/kg	110	34.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	51.	1
2-Chloronaphthalene	ND		ug/kg	180	59.	1
1,2-Dichlorobenzene	ND		ug/kg	180	59.	1
1,3-Dichlorobenzene	ND		ug/kg	180	57.	1
1,4-Dichlorobenzene	ND		ug/kg	180	55.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	48.	1
2,4-Dinitrotoluene	ND		ug/kg	180	39.	1
2,6-Dinitrotoluene	ND		ug/kg	180	46.	1
Fluoranthene	590		ug/kg	110	33.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	55.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	42.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	64.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	55.	1
Hexachlorobutadiene	ND		ug/kg	180	51.	1
Hexachlorocyclopentadiene	ND		ug/kg	520	120	1
Hexachloroethane	ND		ug/kg	140	33.	1
Isophorone	ND		ug/kg	160	48.	1
Naphthalene	ND		ug/kg	180	60.	1
Nitrobenzene	ND		ug/kg	160	43.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	140	38.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	54.	1
Bis(2-Ethylhexyl)phthalate	550		ug/kg	180	47.	1
Butyl benzyl phthalate	88	J	ug/kg	180	35.	1
Di-n-butylphthalate	ND		ug/kg	180	35.	1
Di-n-octylphthalate	ND		ug/kg	180	44.	1
Diethyl phthalate	ND		ug/kg	180	38.	1
Dimethyl phthalate	ND		ug/kg	180	46.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-07

Date Collected: 12/03/14 07:55

Client ID: SB-4 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	280		ug/kg	110	35.	1
Benzo(a)pyrene	260		ug/kg	140	44.	1
Benzo(b)fluoranthene	340		ug/kg	110	36.	1
Benzo(k)fluoranthene	130		ug/kg	110	34.	1
Chrysene	310		ug/kg	110	36.	1
Acenaphthylene	ND		ug/kg	140	34.	1
Anthracene	68	J	ug/kg	110	30.	1
Benzo(ghi)perylene	190		ug/kg	140	38.	1
Fluorene	ND		ug/kg	180	52.	1
Phenanthrene	380		ug/kg	110	35.	1
Dibenzo(a,h)anthracene	45	J	ug/kg	110	35.	1
Indeno(1,2,3-cd)Pyrene	190		ug/kg	140	40.	1
Pyrene	570		ug/kg	110	35.	1
Biphenyl	ND		ug/kg	410	60.	1
4-Chloroaniline	ND		ug/kg	180	48.	1
2-Nitroaniline	ND		ug/kg	180	51.	1
3-Nitroaniline	ND		ug/kg	180	50.	1
4-Nitroaniline	ND		ug/kg	180	49.	1
Dibenzofuran	ND		ug/kg	180	60.	1
2-Methylnaphthalene	ND		ug/kg	220	58.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	56.	1
Acetophenone	ND		ug/kg	180	56.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
P-Chloro-M-Cresol	ND		ug/kg	180	52.	1
2-Chlorophenol	ND		ug/kg	180	55.	1
2,4-Dichlorophenol	ND		ug/kg	160	59.	1
2,4-Dimethylphenol	ND		ug/kg	180	54.	1
2-Nitrophenol	ND		ug/kg	390	56.	1
4-Nitrophenol	ND		ug/kg	250	59.	1
2,4-Dinitrophenol	ND		ug/kg	870	250	1
4,6-Dinitro-o-cresol	ND		ug/kg	470	66.	1
Pentachlorophenol	ND		ug/kg	140	39.	1
Phenol	ND		ug/kg	180	54.	1
2-Methylphenol	ND		ug/kg	180	58.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	59.	1
2,4,5-Trichlorophenol	ND		ug/kg	180	59.	1
Benzoic Acid	ND		ug/kg	590	180	1
Benzyl Alcohol	ND		ug/kg	180	56.	1
Carbazole	46	J	ug/kg	180	39.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-07

Date Collected: 12/03/14 07:55

Client ID: SB-4 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		25-120
Phenol-d6	81		10-120
Nitrobenzene-d5	80		23-120
2-Fluorobiphenyl	81		30-120
2,4,6-Tribromophenol	81		0-136
4-Terphenyl-d14	77		18-120

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-08  
 Client ID: SB-4 11FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 12/09/14 23:33  
 Analyst: RC  
 Percent Solids: 86%

Date Collected: 12/03/14 08:05  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
Acenaphthene	ND		ug/kg	150	39.	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	62.	1
Hexachlorobenzene	ND		ug/kg	110	35.	1
Bis(2-chloroethyl)ether	ND		ug/kg	170	53.	1
2-Chloronaphthalene	ND		ug/kg	190	62.	1
1,2-Dichlorobenzene	ND		ug/kg	190	62.	1
1,3-Dichlorobenzene	ND		ug/kg	190	60.	1
1,4-Dichlorobenzene	ND		ug/kg	190	57.	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	50.	1
2,4-Dinitrotoluene	ND		ug/kg	190	41.	1
2,6-Dinitrotoluene	ND		ug/kg	190	48.	1
Fluoranthene	ND		ug/kg	110	35.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	190	58.	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	43.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	230	66.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	57.	1
Hexachlorobutadiene	ND		ug/kg	190	53.	1
Hexachlorocyclopentadiene	ND		ug/kg	540	120	1
Hexachloroethane	ND		ug/kg	150	34.	1
Isophorone	ND		ug/kg	170	50.	1
Naphthalene	ND		ug/kg	190	63.	1
Nitrobenzene	ND		ug/kg	170	45.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	150	40.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	190	56.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	190	50.	1
Butyl benzyl phthalate	ND		ug/kg	190	37.	1
Di-n-butylphthalate	ND		ug/kg	190	36.	1
Di-n-octylphthalate	ND		ug/kg	190	46.	1
Diethyl phthalate	ND		ug/kg	190	40.	1
Dimethyl phthalate	ND		ug/kg	190	48.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-08

Date Collected: 12/03/14 08:05

Client ID: SB-4 11FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	ND		ug/kg	110	37.	1
Benzo(a)pyrene	ND		ug/kg	150	46.	1
Benzo(b)fluoranthene	ND		ug/kg	110	38.	1
Benzo(k)fluoranthene	ND		ug/kg	110	36.	1
Chrysene	ND		ug/kg	110	37.	1
Acenaphthylene	ND		ug/kg	150	35.	1
Anthracene	ND		ug/kg	110	31.	1
Benzo(ghi)perylene	ND		ug/kg	150	39.	1
Fluorene	ND		ug/kg	190	54.	1
Phenanthrene	ND		ug/kg	110	37.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	37.	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	150	42.	1
Pyrene	ND		ug/kg	110	37.	1
Biphenyl	ND		ug/kg	430	62.	1
4-Chloroaniline	ND		ug/kg	190	50.	1
2-Nitroaniline	ND		ug/kg	190	53.	1
3-Nitroaniline	ND		ug/kg	190	52.	1
4-Nitroaniline	ND		ug/kg	190	51.	1
Dibenzofuran	ND		ug/kg	190	63.	1
2-Methylnaphthalene	ND		ug/kg	230	60.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	190	58.	1
Acetophenone	ND		ug/kg	190	59.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	36.	1
P-Chloro-M-Cresol	ND		ug/kg	190	55.	1
2-Chlorophenol	ND		ug/kg	190	57.	1
2,4-Dichlorophenol	ND		ug/kg	170	61.	1
2,4-Dimethylphenol	ND		ug/kg	190	56.	1
2-Nitrophenol	ND		ug/kg	410	59.	1
4-Nitrophenol	ND		ug/kg	260	61.	1
2,4-Dinitrophenol	ND		ug/kg	910	260	1
4,6-Dinitro-o-cresol	ND		ug/kg	490	69.	1
Pentachlorophenol	ND		ug/kg	150	40.	1
Phenol	ND		ug/kg	190	56.	1
2-Methylphenol	ND		ug/kg	190	61.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	270	62.	1
2,4,5-Trichlorophenol	ND		ug/kg	190	61.	1
Benzoic Acid	ND		ug/kg	610	190	1
Benzyl Alcohol	ND		ug/kg	190	58.	1
Carbazole	ND		ug/kg	190	41.	1

**Project Name:** WSFSSH**Lab Number:** L1429082**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429082-08

Date Collected: 12/03/14 08:05

Client ID: SB-4 11FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		25-120
Phenol-d6	72		10-120
Nitrobenzene-d5	68		23-120
2-Fluorobiphenyl	68		30-120
2,4,6-Tribromophenol	76		0-136
4-Terphenyl-d14	67		18-120

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-09  
 Client ID: SB-5 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 12/10/14 00:00  
 Analyst: RC  
 Percent Solids: 93%

Date Collected: 12/03/14 10:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
Acenaphthene	48	J	ug/kg	140	36.	1
1,2,4-Trichlorobenzene	ND		ug/kg	170	57.	1
Hexachlorobenzene	ND		ug/kg	100	32.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	49.	1
2-Chloronaphthalene	ND		ug/kg	170	57.	1
1,2-Dichlorobenzene	ND		ug/kg	170	57.	1
1,3-Dichlorobenzene	ND		ug/kg	170	55.	1
1,4-Dichlorobenzene	ND		ug/kg	170	53.	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	46.	1
2,4-Dinitrotoluene	ND		ug/kg	170	38.	1
2,6-Dinitrotoluene	ND		ug/kg	170	45.	1
Fluoranthene	1400		ug/kg	100	32.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	170	53.	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	40.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	62.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	53.	1
Hexachlorobutadiene	ND		ug/kg	170	49.	1
Hexachlorocyclopentadiene	ND		ug/kg	500	110	1
Hexachloroethane	ND		ug/kg	140	32.	1
Isophorone	ND		ug/kg	160	46.	1
Naphthalene	ND		ug/kg	170	58.	1
Nitrobenzene	ND		ug/kg	160	42.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	140	37.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	170	52.	1
Bis(2-Ethylhexyl)phthalate	100	J	ug/kg	170	46.	1
Butyl benzyl phthalate	65	J	ug/kg	170	34.	1
Di-n-butylphthalate	ND		ug/kg	170	34.	1
Di-n-octylphthalate	ND		ug/kg	170	43.	1
Diethyl phthalate	ND		ug/kg	170	37.	1
Dimethyl phthalate	ND		ug/kg	170	44.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-09

Date Collected: 12/03/14 10:40

Client ID: SB-5 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	640		ug/kg	100	34.	1
Benzo(a)pyrene	700		ug/kg	140	43.	1
Benzo(b)fluoranthene	980		ug/kg	100	35.	1
Benzo(k)fluoranthene	340		ug/kg	100	33.	1
Chrysene	680		ug/kg	100	34.	1
Acenaphthylene	120	J	ug/kg	140	33.	1
Anthracene	210		ug/kg	100	29.	1
Benzo(ghi)perylene	550		ug/kg	140	36.	1
Fluorene	77	J	ug/kg	170	50.	1
Phenanthrene	890		ug/kg	100	34.	1
Dibenzo(a,h)anthracene	120		ug/kg	100	34.	1
Indeno(1,2,3-cd)Pyrene	580		ug/kg	140	39.	1
Pyrene	1200		ug/kg	100	34.	1
Biphenyl	ND		ug/kg	400	58.	1
4-Chloroaniline	ND		ug/kg	170	46.	1
2-Nitroaniline	ND		ug/kg	170	49.	1
3-Nitroaniline	ND		ug/kg	170	48.	1
4-Nitroaniline	ND		ug/kg	170	47.	1
Dibenzofuran	ND		ug/kg	170	58.	1
2-Methylnaphthalene	ND		ug/kg	210	56.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	170	54.	1
Acetophenone	ND		ug/kg	170	54.	1
2,4,6-Trichlorophenol	ND		ug/kg	100	33.	1
P-Chloro-M-Cresol	ND		ug/kg	170	51.	1
2-Chlorophenol	ND		ug/kg	170	53.	1
2,4-Dichlorophenol	ND		ug/kg	160	57.	1
2,4-Dimethylphenol	ND		ug/kg	170	52.	1
2-Nitrophenol	ND		ug/kg	380	54.	1
4-Nitrophenol	ND		ug/kg	240	57.	1
2,4-Dinitrophenol	ND		ug/kg	840	240	1
4,6-Dinitro-o-cresol	ND		ug/kg	450	64.	1
Pentachlorophenol	ND		ug/kg	140	37.	1
Phenol	ND		ug/kg	170	52.	1
2-Methylphenol	ND		ug/kg	170	56.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	57.	1
2,4,5-Trichlorophenol	ND		ug/kg	170	57.	1
Benzoic Acid	ND		ug/kg	570	180	1
Benzyl Alcohol	ND		ug/kg	170	54.	1
Carbazole	120	J	ug/kg	170	38.	1

**Project Name:** WSFSSH**Lab Number:** L1429082**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429082-09

Date Collected: 12/03/14 10:40

Client ID: SB-5 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		25-120
Phenol-d6	74		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	75		30-120
2,4,6-Tribromophenol	77		0-136
4-Terphenyl-d14	77		18-120

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-10  
 Client ID: SB-5 8-9FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 12/10/14 00:27  
 Analyst: RC  
 Percent Solids: 85%

Date Collected: 12/03/14 10:50  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
Acenaphthene	ND		ug/kg	160	40.	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	64.	1
Hexachlorobenzene	ND		ug/kg	120	36.	1
Bis(2-chloroethyl)ether	ND		ug/kg	180	55.	1
2-Chloronaphthalene	ND		ug/kg	200	64.	1
1,2-Dichlorobenzene	ND		ug/kg	200	64.	1
1,3-Dichlorobenzene	ND		ug/kg	200	62.	1
1,4-Dichlorobenzene	ND		ug/kg	200	59.	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	52.	1
2,4-Dinitrotoluene	ND		ug/kg	200	42.	1
2,6-Dinitrotoluene	ND		ug/kg	200	50.	1
Fluoranthene	ND		ug/kg	120	36.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	200	59.	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	45.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	230	69.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	59.	1
Hexachlorobutadiene	ND		ug/kg	200	55.	1
Hexachlorocyclopentadiene	ND		ug/kg	560	120	1
Hexachloroethane	ND		ug/kg	160	35.	1
Isophorone	ND		ug/kg	180	52.	1
Naphthalene	ND		ug/kg	200	65.	1
Nitrobenzene	ND		ug/kg	180	46.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	160	41.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	200	58.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	200	51.	1
Butyl benzyl phthalate	ND		ug/kg	200	38.	1
Di-n-butylphthalate	ND		ug/kg	200	38.	1
Di-n-octylphthalate	ND		ug/kg	200	48.	1
Diethyl phthalate	ND		ug/kg	200	41.	1
Dimethyl phthalate	ND		ug/kg	200	50.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-10

Date Collected: 12/03/14 10:50

Client ID: SB-5 8-9FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	ND		ug/kg	120	38.	1
Benzo(a)pyrene	ND		ug/kg	160	48.	1
Benzo(b)fluoranthene	ND		ug/kg	120	39.	1
Benzo(k)fluoranthene	ND		ug/kg	120	37.	1
Chrysene	ND		ug/kg	120	38.	1
Acenaphthylene	ND		ug/kg	160	36.	1
Anthracene	ND		ug/kg	120	32.	1
Benzo(ghi)perylene	ND		ug/kg	160	40.	1
Fluorene	ND		ug/kg	200	56.	1
Phenanthrene	ND		ug/kg	120	38.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	38.	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	160	43.	1
Pyrene	ND		ug/kg	120	38.	1
Biphenyl	ND		ug/kg	440	64.	1
4-Chloroaniline	ND		ug/kg	200	52.	1
2-Nitroaniline	ND		ug/kg	200	55.	1
3-Nitroaniline	ND		ug/kg	200	54.	1
4-Nitroaniline	ND		ug/kg	200	53.	1
Dibenzofuran	ND		ug/kg	200	65.	1
2-Methylnaphthalene	ND		ug/kg	230	62.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	200	60.	1
Acetophenone	ND		ug/kg	200	60.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	37.	1
P-Chloro-M-Cresol	ND		ug/kg	200	56.	1
2-Chlorophenol	ND		ug/kg	200	59.	1
2,4-Dichlorophenol	ND		ug/kg	180	63.	1
2,4-Dimethylphenol	ND		ug/kg	200	58.	1
2-Nitrophenol	ND		ug/kg	420	61.	1
4-Nitrophenol	ND		ug/kg	270	63.	1
2,4-Dinitrophenol	ND		ug/kg	940	270	1
4,6-Dinitro-o-cresol	ND		ug/kg	510	71.	1
Pentachlorophenol	ND		ug/kg	160	42.	1
Phenol	ND		ug/kg	200	58.	1
2-Methylphenol	ND		ug/kg	200	63.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	64.	1
2,4,5-Trichlorophenol	ND		ug/kg	200	63.	1
Benzoic Acid	ND		ug/kg	630	200	1
Benzyl Alcohol	ND		ug/kg	200	60.	1
Carbazole	ND		ug/kg	200	42.	1

**Project Name:** WSFSSH**Lab Number:** L1429082**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429082-10

Date Collected: 12/03/14 10:50

Client ID: SB-5 8-9FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		25-120
Phenol-d6	88		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	88		30-120
2,4,6-Tribromophenol	105		0-136
4-Terphenyl-d14	97		18-120

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-11  
 Client ID: SB-6 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 12/10/14 00:54  
 Analyst: RC  
 Percent Solids: 91%

Date Collected: 12/03/14 12:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
Acenaphthene	38	J	ug/kg	150	38.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	60.	1
Hexachlorobenzene	ND		ug/kg	110	34.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	52.	1
2-Chloronaphthalene	ND		ug/kg	180	60.	1
1,2-Dichlorobenzene	ND		ug/kg	180	60.	1
1,3-Dichlorobenzene	ND		ug/kg	180	58.	1
1,4-Dichlorobenzene	ND		ug/kg	180	56.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	49.	1
2,4-Dinitrotoluene	ND		ug/kg	180	40.	1
2,6-Dinitrotoluene	ND		ug/kg	180	47.	1
Fluoranthene	520		ug/kg	110	34.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	56.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	42.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	65.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	56.	1
Hexachlorobutadiene	ND		ug/kg	180	52.	1
Hexachlorocyclopentadiene	ND		ug/kg	530	120	1
Hexachloroethane	ND		ug/kg	150	33.	1
Isophorone	ND		ug/kg	160	49.	1
Naphthalene	ND		ug/kg	180	61.	1
Nitrobenzene	ND		ug/kg	160	44.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	150	39.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	55.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	48.	1
Butyl benzyl phthalate	67	J	ug/kg	180	36.	1
Di-n-butylphthalate	ND		ug/kg	180	36.	1
Di-n-octylphthalate	ND		ug/kg	180	45.	1
Diethyl phthalate	ND		ug/kg	180	39.	1
Dimethyl phthalate	ND		ug/kg	180	47.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-11

Date Collected: 12/03/14 12:30

Client ID: SB-6 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	250		ug/kg	110	36.	1
Benzo(a)pyrene	210		ug/kg	150	45.	1
Benzo(b)fluoranthene	270		ug/kg	110	37.	1
Benzo(k)fluoranthene	100	J	ug/kg	110	35.	1
Chrysene	250		ug/kg	110	36.	1
Acenaphthylene	ND		ug/kg	150	34.	1
Anthracene	100	J	ug/kg	110	31.	1
Benzo(ghi)perylene	140	J	ug/kg	150	38.	1
Fluorene	ND		ug/kg	180	53.	1
Phenanthrene	460		ug/kg	110	36.	1
Dibenzo(a,h)anthracene	36	J	ug/kg	110	36.	1
Indeno(1,2,3-cd)Pyrene	150		ug/kg	150	41.	1
Pyrene	460		ug/kg	110	36.	1
Biphenyl	ND		ug/kg	420	61.	1
4-Chloroaniline	ND		ug/kg	180	48.	1
2-Nitroaniline	ND		ug/kg	180	52.	1
3-Nitroaniline	ND		ug/kg	180	51.	1
4-Nitroaniline	ND		ug/kg	180	50.	1
Dibenzofuran	ND		ug/kg	180	61.	1
2-Methylnaphthalene	ND		ug/kg	220	59.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	57.	1
Acetophenone	ND		ug/kg	180	57.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	35.	1
P-Chloro-M-Cresol	ND		ug/kg	180	53.	1
2-Chlorophenol	ND		ug/kg	180	56.	1
2,4-Dichlorophenol	ND		ug/kg	160	60.	1
2,4-Dimethylphenol	ND		ug/kg	180	55.	1
2-Nitrophenol	ND		ug/kg	400	57.	1
4-Nitrophenol	ND		ug/kg	260	60.	1
2,4-Dinitrophenol	ND		ug/kg	880	250	1
4,6-Dinitro-o-cresol	ND		ug/kg	480	67.	1
Pentachlorophenol	ND		ug/kg	150	39.	1
Phenol	ND		ug/kg	180	54.	1
2-Methylphenol	ND		ug/kg	180	59.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	60.	1
2,4,5-Trichlorophenol	ND		ug/kg	180	60.	1
Benzoic Acid	ND		ug/kg	600	190	1
Benzyl Alcohol	ND		ug/kg	180	57.	1
Carbazole	63	J	ug/kg	180	40.	1

**Project Name:** WSFSSH**Lab Number:** L1429082**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429082-11

Date Collected: 12/03/14 12:30

Client ID: SB-6 0-2FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	70		25-120
Phenol-d6	75		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	77		30-120
2,4,6-Tribromophenol	85		0-136
4-Terphenyl-d14	83		18-120

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-12  
 Client ID: SB-6 8-9FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 12/10/14 01:22  
 Analyst: RC  
 Percent Solids: 86%

Date Collected: 12/03/14 12:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
Acenaphthene	ND		ug/kg	150	39.	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	62.	1
Hexachlorobenzene	ND		ug/kg	110	35.	1
Bis(2-chloroethyl)ether	ND		ug/kg	170	53.	1
2-Chloronaphthalene	ND		ug/kg	190	62.	1
1,2-Dichlorobenzene	ND		ug/kg	190	62.	1
1,3-Dichlorobenzene	ND		ug/kg	190	60.	1
1,4-Dichlorobenzene	ND		ug/kg	190	58.	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	50.	1
2,4-Dinitrotoluene	ND		ug/kg	190	41.	1
2,6-Dinitrotoluene	ND		ug/kg	190	48.	1
Fluoranthene	540		ug/kg	110	35.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	190	58.	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	44.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	230	67.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	57.	1
Hexachlorobutadiene	ND		ug/kg	190	53.	1
Hexachlorocyclopentadiene	ND		ug/kg	540	120	1
Hexachloroethane	ND		ug/kg	150	34.	1
Isophorone	ND		ug/kg	170	50.	1
Naphthalene	ND		ug/kg	190	63.	1
Nitrobenzene	ND		ug/kg	170	45.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	150	40.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	190	56.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	190	50.	1
Butyl benzyl phthalate	70	J	ug/kg	190	37.	1
Di-n-butylphthalate	ND		ug/kg	190	36.	1
Di-n-octylphthalate	ND		ug/kg	190	46.	1
Diethyl phthalate	ND		ug/kg	190	40.	1
Dimethyl phthalate	ND		ug/kg	190	48.	1

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-12

Date Collected: 12/03/14 12:40

Client ID: SB-6 8-9FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)anthracene	280		ug/kg	110	37.	1
Benzo(a)pyrene	230		ug/kg	150	46.	1
Benzo(b)fluoranthene	280		ug/kg	110	38.	1
Benzo(k)fluoranthene	110		ug/kg	110	36.	1
Chrysene	270		ug/kg	110	37.	1
Acenaphthylene	ND		ug/kg	150	35.	1
Anthracene	78	J	ug/kg	110	31.	1
Benzo(ghi)perylene	140	J	ug/kg	150	39.	1
Fluorene	ND		ug/kg	190	54.	1
Phenanthrene	320		ug/kg	110	37.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	37.	1
Indeno(1,2,3-cd)Pyrene	150		ug/kg	150	42.	1
Pyrene	500		ug/kg	110	37.	1
Biphenyl	ND		ug/kg	430	62.	1
4-Chloroaniline	ND		ug/kg	190	50.	1
2-Nitroaniline	ND		ug/kg	190	53.	1
3-Nitroaniline	ND		ug/kg	190	52.	1
4-Nitroaniline	ND		ug/kg	190	51.	1
Dibenzofuran	ND		ug/kg	190	63.	1
2-Methylnaphthalene	ND		ug/kg	230	60.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	190	59.	1
Acetophenone	ND		ug/kg	190	59.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	36.	1
P-Chloro-M-Cresol	ND		ug/kg	190	55.	1
2-Chlorophenol	ND		ug/kg	190	57.	1
2,4-Dichlorophenol	ND		ug/kg	170	61.	1
2,4-Dimethylphenol	ND		ug/kg	190	56.	1
2-Nitrophenol	ND		ug/kg	410	59.	1
4-Nitrophenol	ND		ug/kg	260	61.	1
2,4-Dinitrophenol	ND		ug/kg	910	260	1
4,6-Dinitro-o-cresol	ND		ug/kg	490	69.	1
Pentachlorophenol	ND		ug/kg	150	40.	1
Phenol	ND		ug/kg	190	56.	1
2-Methylphenol	ND		ug/kg	190	61.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	270	62.	1
2,4,5-Trichlorophenol	ND		ug/kg	190	61.	1
Benzoic Acid	ND		ug/kg	610	190	1
Benzyl Alcohol	ND		ug/kg	190	58.	1
Carbazole	ND		ug/kg	190	41.	1

**Project Name:** WSFSSH**Lab Number:** L1429082**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429082-12

Date Collected: 12/03/14 12:40

Client ID: SB-6 8-9FT

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		25-120
Phenol-d6	85		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	86		30-120
2,4,6-Tribromophenol	82		0-136
4-Terphenyl-d14	89		18-120

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D  
 Analytical Date: 12/09/14 12:10  
 Analyst: RC

Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-12 Batch: WG746370-1					
Acenaphthene	ND		ug/kg	130	34.
1,2,4-Trichlorobenzene	ND		ug/kg	160	54.
Hexachlorobenzene	ND		ug/kg	98	30.
Bis(2-chloroethyl)ether	ND		ug/kg	150	46.
2-Chloronaphthalene	ND		ug/kg	160	53.
1,2-Dichlorobenzene	ND		ug/kg	160	54.
1,3-Dichlorobenzene	ND		ug/kg	160	52.
1,4-Dichlorobenzene	ND		ug/kg	160	50.
3,3'-Dichlorobenzidine	ND		ug/kg	160	44.
2,4-Dinitrotoluene	ND		ug/kg	160	35.
2,6-Dinitrotoluene	ND		ug/kg	160	42.
Fluoranthene	ND		ug/kg	98	30.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	50.
4-Bromophenyl phenyl ether	ND		ug/kg	160	38.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	58.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	50.
Hexachlorobutadiene	ND		ug/kg	160	46.
Hexachlorocyclopentadiene	ND		ug/kg	470	100
Hexachloroethane	ND		ug/kg	130	30.
Isophorone	ND		ug/kg	150	44.
Naphthalene	ND		ug/kg	160	54.
Nitrobenzene	ND		ug/kg	150	39.
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	130	34.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	49.
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	160	43.
Butyl benzyl phthalate	ND		ug/kg	160	32.
Di-n-butylphthalate	ND		ug/kg	160	32.
Di-n-octylphthalate	ND		ug/kg	160	40.
Diethyl phthalate	ND		ug/kg	160	35.

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8270D  
 Analytical Date: 12/09/14 12:10  
 Analyst: RC

Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-12 Batch: WG746370-1					
Dimethyl phthalate	ND		ug/kg	160	42.
Benzo(a)anthracene	ND		ug/kg	98	32.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	98	33.
Benzo(k)fluoranthene	ND		ug/kg	98	31.
Chrysene	ND		ug/kg	98	32.
Acenaphthylene	ND		ug/kg	130	31.
Anthracene	ND		ug/kg	98	27.
Benzo(ghi)perylene	ND		ug/kg	130	34.
Fluorene	ND		ug/kg	160	47.
Phenanthrene	ND		ug/kg	98	32.
Dibenzo(a,h)anthracene	ND		ug/kg	98	32.
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	130	36.
Pyrene	ND		ug/kg	98	32.
Biphenyl	ND		ug/kg	370	54.
4-Chloroaniline	ND		ug/kg	160	43.
2-Nitroaniline	ND		ug/kg	160	46.
3-Nitroaniline	ND		ug/kg	160	45.
4-Nitroaniline	ND		ug/kg	160	44.
Dibenzofuran	ND		ug/kg	160	55.
2-Methylnaphthalene	ND		ug/kg	200	52.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	51.
Acetophenone	ND		ug/kg	160	51.
2,4,6-Trichlorophenol	ND		ug/kg	98	31.
P-Chloro-M-Cresol	ND		ug/kg	160	48.
2-Chlorophenol	ND		ug/kg	160	49.
2,4-Dichlorophenol	ND		ug/kg	150	53.
2,4-Dimethylphenol	ND		ug/kg	160	49.
2-Nitrophenol	ND		ug/kg	350	51.

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8270D  
 Analytical Date: 12/09/14 12:10  
 Analyst: RC

Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 01:58

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-12 Batch: WG746370-1					
4-Nitrophenol	ND		ug/kg	230	53.
2,4-Dinitrophenol	ND		ug/kg	790	220
4,6-Dinitro-o-cresol	ND		ug/kg	430	60.
Pentachlorophenol	ND		ug/kg	130	35.
Phenol	ND		ug/kg	160	48.
2-Methylphenol	ND		ug/kg	160	53.
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	54.
2,4,5-Trichlorophenol	ND		ug/kg	160	53.
Benzoic Acid	ND		ug/kg	530	160
Benzyl Alcohol	ND		ug/kg	160	50.
Carbazole	ND		ug/kg	160	35.

**Tentatively Identified Compounds**

No Tentatively Identified Compounds      ND      ug/kg

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		25-120
Phenol-d6	65		10-120
Nitrobenzene-d5	58		23-120
2-Fluorobiphenyl	65		30-120
2,4,6-Tribromophenol	81		0-136
4-Terphenyl-d14	94		18-120

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-12 Batch: WG746370-2 WG746370-3								
Acenaphthene	78		80		31-137	3		50
1,2,4-Trichlorobenzene	72		75		38-107	4		50
Hexachlorobenzene	85		86		40-140	1		50
Bis(2-chloroethyl)ether	69		72		40-140	4		50
2-Chloronaphthalene	79		79		40-140	0		50
1,2-Dichlorobenzene	64		70		40-140	9		50
1,3-Dichlorobenzene	62		68		40-140	9		50
1,4-Dichlorobenzene	62		68		28-104	9		50
3,3'-Dichlorobenzidine	64		68		40-140	6		50
2,4-Dinitrotoluene	89		92	Q	28-89	3		50
2,6-Dinitrotoluene	90		93		40-140	3		50
Fluoranthene	90		92		40-140	2		50
4-Chlorophenyl phenyl ether	84		86		40-140	2		50
4-Bromophenyl phenyl ether	87		90		40-140	3		50
Bis(2-chloroisopropyl)ether	72		75		40-140	4		50
Bis(2-chloroethoxy)methane	79		79		40-117	0		50
Hexachlorobutadiene	68		72		40-140	6		50
Hexachlorocyclopentadiene	73		69		40-140	6		50
Hexachloroethane	60		66		40-140	10		50
Isophorone	81		81		40-140	0		50
Naphthalene	69		72		40-140	4		50

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-12 Batch: WG746370-2 WG746370-3								
Nitrobenzene	70		73		40-140	4		50
NitrosoDiPhenylAmine(NDPA)/DPA	93		95			2		50
n-Nitrosodi-n-propylamine	84		85		32-121	1		50
Bis(2-Ethylhexyl)phthalate	98		99		40-140	1		50
Butyl benzyl phthalate	92		93		40-140	1		50
Di-n-butylphthalate	92		93		40-140	1		50
Di-n-octylphthalate	100		100		40-140	0		50
Diethyl phthalate	89		90		40-140	1		50
Dimethyl phthalate	84		89		40-140	6		50
Benzo(a)anthracene	89		91		40-140	2		50
Benzo(a)pyrene	94		94		40-140	0		50
Benzo(b)fluoranthene	88		89		40-140	1		50
Benzo(k)fluoranthene	91		94		40-140	3		50
Chrysene	88		90		40-140	2		50
Acenaphthylene	82		81		40-140	1		50
Anthracene	87		89		40-140	2		50
Benzo(ghi)perylene	90		92		40-140	2		50
Fluorene	84		86		40-140	2		50
Phenanthrene	85		89		40-140	5		50
Dibenzo(a,h)anthracene	90		94		40-140	4		50
Indeno(1,2,3-cd)Pyrene	90		92		40-140	2		50

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-12 Batch: WG746370-2 WG746370-3								
Pyrene	87		89		35-142	2		50
Biphenyl	83		84			1		50
4-Chloroaniline	93		94		40-140	1		50
2-Nitroaniline	94		98		47-134	4		50
3-Nitroaniline	75		74		26-129	1		50
4-Nitroaniline	94		95		41-125	1		50
Dibenzofuran	84		86		40-140	2		50
2-Methylnaphthalene	81		82		40-140	1		50
1,2,4,5-Tetrachlorobenzene	78		80		40-117	3		50
Acetophenone	82		85		14-144	4		50
2,4,6-Trichlorophenol	96		97		30-130	1		50
P-Chloro-M-Cresol	96		99		26-103	3		50
2-Chlorophenol	80		83		25-102	4		50
2,4-Dichlorophenol	89		91		30-130	2		50
2,4-Dimethylphenol	92		86		30-130	7		50
2-Nitrophenol	88		90		30-130	2		50
4-Nitrophenol	104		108		11-114	4		50
2,4-Dinitrophenol	35		35		4-130	0		50
4,6-Dinitro-o-cresol	89		89		10-130	0		50
Pentachlorophenol	98		92		17-109	6		50
Phenol	80		82		26-90	2		50

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-12 Batch: WG746370-2 WG746370-3								
2-Methylphenol	87		87		30-130.	0		50
3-Methylphenol/4-Methylphenol	90		91		30-130	1		50
2,4,5-Trichlorophenol	97		99		30-130	2		50
Benzoic Acid	10		10			1		50
Benzyl Alcohol	84		85		40-140	1		50
Carbazole	93		96		54-128	3		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	73		79		25-120
Phenol-d6	82		84		10-120
Nitrobenzene-d5	76		78		23-120
2-Fluorobiphenyl	83		83		30-120
2,4,6-Tribromophenol	101		105		0-136
4-Terphenyl-d14	92		92		18-120

# PCBS

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-01  
 Client ID: SB-1 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 15:19  
 Analyst: JW  
 Percent Solids: 90%

Date Collected: 12/03/14 07:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	36.4	2.87	1	A
Aroclor 1221	ND		ug/kg	36.4	3.35	1	A
Aroclor 1232	ND		ug/kg	36.4	4.26	1	A
Aroclor 1242	ND		ug/kg	36.4	4.45	1	A
Aroclor 1248	ND		ug/kg	36.4	3.07	1	A
Aroclor 1254	ND		ug/kg	36.4	2.99	1	A
Aroclor 1260	ND		ug/kg	36.4	2.77	1	A
Aroclor 1262	ND		ug/kg	36.4	1.80	1	A
Aroclor 1268	ND		ug/kg	36.4	5.28	1	A
PCBs, Total	ND		ug/kg	36.4	1.80	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	70		30-150	B

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-02  
 Client ID: SB-1 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 15:31  
 Analyst: JW  
 Percent Solids: 91%

Date Collected: 12/03/14 14:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/kg	35.0	2.76	1	A
Aroclor 1221	ND		ug/kg	35.0	3.23	1	A
Aroclor 1232	ND		ug/kg	35.0	4.10	1	A
Aroclor 1242	ND		ug/kg	35.0	4.28	1	A
Aroclor 1248	ND		ug/kg	35.0	2.95	1	A
Aroclor 1254	ND		ug/kg	35.0	2.88	1	A
Aroclor 1260	ND		ug/kg	35.0	2.67	1	A
Aroclor 1262	ND		ug/kg	35.0	1.74	1	A
Aroclor 1268	ND		ug/kg	35.0	5.07	1	A
PCBs, Total	ND		ug/kg	35.0	1.74	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	72		30-150	B

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-03  
 Client ID: SB-2 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 15:44  
 Analyst: JW  
 Percent Solids: 91%

Date Collected: 12/03/14 07:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/kg	36.0	2.84	1	A
Aroclor 1221	ND		ug/kg	36.0	3.32	1	A
Aroclor 1232	ND		ug/kg	36.0	4.22	1	A
Aroclor 1242	ND		ug/kg	36.0	4.40	1	A
Aroclor 1248	ND		ug/kg	36.0	3.04	1	A
Aroclor 1254	ND		ug/kg	36.0	2.96	1	A
Aroclor 1260	7.95	J	ug/kg	36.0	2.74	1	A
Aroclor 1262	ND		ug/kg	36.0	1.78	1	A
Aroclor 1268	ND		ug/kg	36.0	5.22	1	A
PCBs, Total	7.95	J	ug/kg	36.0	1.78	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	69		30-150	B

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-04  
 Client ID: SB-2 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 15:57  
 Analyst: JW  
 Percent Solids: 91%

Date Collected: 12/03/14 13:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/kg	36.5	2.88	1	A
Aroclor 1221	ND		ug/kg	36.5	3.36	1	A
Aroclor 1232	ND		ug/kg	36.5	4.28	1	A
Aroclor 1242	ND		ug/kg	36.5	4.47	1	A
Aroclor 1248	ND		ug/kg	36.5	3.08	1	A
Aroclor 1254	ND		ug/kg	36.5	3.00	1	A
Aroclor 1260	ND		ug/kg	36.5	2.78	1	A
Aroclor 1262	ND		ug/kg	36.5	1.81	1	A
Aroclor 1268	ND		ug/kg	36.5	5.29	1	A
PCBs, Total	ND		ug/kg	36.5	1.81	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	69		30-150	B

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-05  
 Client ID: SB-3 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 16:09  
 Analyst: JW  
 Percent Solids: 84%

Date Collected: 12/03/14 10:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	38.4	3.04	1	A
Aroclor 1221	ND		ug/kg	38.4	3.54	1	A
Aroclor 1232	ND		ug/kg	38.4	4.50	1	A
Aroclor 1242	ND		ug/kg	38.4	4.70	1	A
Aroclor 1248	ND		ug/kg	38.4	3.24	1	A
Aroclor 1254	ND		ug/kg	38.4	3.16	1	A
Aroclor 1260	ND		ug/kg	38.4	2.93	1	A
Aroclor 1262	ND		ug/kg	38.4	1.91	1	A
Aroclor 1268	ND		ug/kg	38.4	5.57	1	A
PCBs, Total	ND		ug/kg	38.4	1.91	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	70		30-150	B

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-06  
 Client ID: SB-3 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 16:22  
 Analyst: JW  
 Percent Solids: 82%

Date Collected: 12/03/14 13:50  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/kg	38.2	3.02	1	A
Aroclor 1221	ND		ug/kg	38.2	3.52	1	A
Aroclor 1232	ND		ug/kg	38.2	4.48	1	A
Aroclor 1242	ND		ug/kg	38.2	4.68	1	A
Aroclor 1248	ND		ug/kg	38.2	3.23	1	A
Aroclor 1254	ND		ug/kg	38.2	3.14	1	A
Aroclor 1260	ND		ug/kg	38.2	2.91	1	A
Aroclor 1262	ND		ug/kg	38.2	1.90	1	A
Aroclor 1268	ND		ug/kg	38.2	5.54	1	A
PCBs, Total	ND		ug/kg	38.2	1.90	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
Decachlorobiphenyl	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	64		30-150	B

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-07  
 Client ID: SB-4 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 16:35  
 Analyst: JW  
 Percent Solids: 90%

Date Collected: 12/03/14 07:55  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/kg	35.2	2.78	1	A
Aroclor 1221	ND		ug/kg	35.2	3.25	1	A
Aroclor 1232	ND		ug/kg	35.2	4.13	1	A
Aroclor 1242	ND		ug/kg	35.2	4.31	1	A
Aroclor 1248	ND		ug/kg	35.2	2.97	1	A
Aroclor 1254	ND		ug/kg	35.2	2.90	1	A
Aroclor 1260	ND		ug/kg	35.2	2.68	1	A
Aroclor 1262	ND		ug/kg	35.2	1.75	1	A
Aroclor 1268	ND		ug/kg	35.2	5.11	1	A
PCBs, Total	ND		ug/kg	35.2	1.75	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	73		30-150	B

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-08  
 Client ID: SB-4 11FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 16:47  
 Analyst: JW  
 Percent Solids: 86%

Date Collected: 12/03/14 08:05  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	36.5	2.89	1	A
Aroclor 1221	ND		ug/kg	36.5	3.37	1	A
Aroclor 1232	ND		ug/kg	36.5	4.28	1	A
Aroclor 1242	ND		ug/kg	36.5	4.47	1	A
Aroclor 1248	ND		ug/kg	36.5	3.08	1	A
Aroclor 1254	ND		ug/kg	36.5	3.00	1	A
Aroclor 1260	ND		ug/kg	36.5	2.78	1	A
Aroclor 1262	ND		ug/kg	36.5	1.81	1	A
Aroclor 1268	ND		ug/kg	36.5	5.30	1	A
PCBs, Total	ND		ug/kg	36.5	1.81	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	73		30-150	B
Decachlorobiphenyl	65		30-150	B

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-09  
 Client ID: SB-5 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 17:00  
 Analyst: JW  
 Percent Solids: 93%

Date Collected: 12/03/14 10:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/kg	34.4	2.72	1	A
Aroclor 1221	ND		ug/kg	34.4	3.17	1	A
Aroclor 1232	ND		ug/kg	34.4	4.03	1	A
Aroclor 1242	ND		ug/kg	34.4	4.21	1	A
Aroclor 1248	ND		ug/kg	34.4	2.90	1	A
Aroclor 1254	ND		ug/kg	34.4	2.83	1	A
Aroclor 1260	ND		ug/kg	34.4	2.62	1	A
Aroclor 1262	ND		ug/kg	34.4	1.71	1	A
Aroclor 1268	ND		ug/kg	34.4	4.99	1	A
PCBs, Total	ND		ug/kg	34.4	1.71	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	70		30-150	B

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-10  
 Client ID: SB-5 8-9FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 17:13  
 Analyst: JW  
 Percent Solids: 85%

Date Collected: 12/03/14 10:50  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.0	2.92	1	A
Aroclor 1221	ND		ug/kg	37.0	3.41	1	A
Aroclor 1232	ND		ug/kg	37.0	4.34	1	A
Aroclor 1242	ND		ug/kg	37.0	4.53	1	A
Aroclor 1248	ND		ug/kg	37.0	3.12	1	A
Aroclor 1254	ND		ug/kg	37.0	3.04	1	A
Aroclor 1260	ND		ug/kg	37.0	2.82	1	A
Aroclor 1262	ND		ug/kg	37.0	1.84	1	A
Aroclor 1268	ND		ug/kg	37.0	5.37	1	A
PCBs, Total	ND		ug/kg	37.0	1.84	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	74		30-150	B

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-11  
 Client ID: SB-6 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 17:25  
 Analyst: JW  
 Percent Solids: 91%

Date Collected: 12/03/14 12:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	35.9	2.84	1	A
Aroclor 1221	ND		ug/kg	35.9	3.31	1	A
Aroclor 1232	ND		ug/kg	35.9	4.21	1	A
Aroclor 1242	ND		ug/kg	35.9	4.39	1	A
Aroclor 1248	ND		ug/kg	35.9	3.03	1	A
Aroclor 1254	ND		ug/kg	35.9	2.95	1	A
Aroclor 1260	ND		ug/kg	35.9	2.74	1	A
Aroclor 1262	ND		ug/kg	35.9	1.78	1	A
Aroclor 1268	ND		ug/kg	35.9	5.20	1	A
PCBs, Total	ND		ug/kg	35.9	1.78	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	70		30-150	B

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-12  
 Client ID: SB-6 8-9FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 17:38  
 Analyst: JW  
 Percent Solids: 86%

Date Collected: 12/03/14 12:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	38.1	3.01	1	A
Aroclor 1221	ND		ug/kg	38.1	3.51	1	A
Aroclor 1232	ND		ug/kg	38.1	4.47	1	A
Aroclor 1242	ND		ug/kg	38.1	4.66	1	A
Aroclor 1248	ND		ug/kg	38.1	3.22	1	A
Aroclor 1254	ND		ug/kg	38.1	3.13	1	A
Aroclor 1260	ND		ug/kg	38.1	2.90	1	A
Aroclor 1262	ND		ug/kg	38.1	1.89	1	A
Aroclor 1268	ND		ug/kg	38.1	5.53	1	A
PCBs, Total	ND		ug/kg	38.1	1.89	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	73		30-150	B
Decachlorobiphenyl	71		30-150	B

**Project Name:** WSFSSH

**Lab Number:** L1429082

**Project Number:** WSFSSH

**Report Date:** 12/11/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8082A  
 Analytical Date: 12/09/14 18:54  
 Analyst: JW

Extraction Method: EPA 3546  
 Extraction Date: 12/07/14 09:25  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 12/08/14  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 12/08/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-12 Batch: WG746387-1						
Aroclor 1016	ND		ug/kg	32.7	2.58	A
Aroclor 1221	ND		ug/kg	32.7	3.02	A
Aroclor 1232	ND		ug/kg	32.7	3.83	A
Aroclor 1242	ND		ug/kg	32.7	4.00	A
Aroclor 1248	ND		ug/kg	32.7	2.76	A
Aroclor 1254	ND		ug/kg	32.7	2.69	A
Aroclor 1260	ND		ug/kg	32.7	2.49	A
Aroclor 1262	ND		ug/kg	32.7	1.62	A
Aroclor 1268	ND		ug/kg	32.7	4.74	A
PCBs, Total	ND		ug/kg	32.7	1.62	A

Surrogate	%Recovery	Qualifier	Acceptance	Column
			Criteria	
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	68		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	68		30-150	B



### Lab Control Sample Analysis Batch Quality Control

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-12 Batch: WG746387-2 WG746387-3									
Aroclor 1016	71		65		40-140	9		50	A
Aroclor 1260	69		64		40-140	8		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		65		30-150	A
Decachlorobiphenyl	68		67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		71		30-150	B
Decachlorobiphenyl	70		67		30-150	B

# PESTICIDES

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-01  
 Client ID: SB-1 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 13:34  
 Analyst: GP  
 Percent Solids: 90%

Date Collected: 12/03/14 07:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.72	0.337	1	A
Lindane	ND		ug/kg	0.717	0.321	1	A
Alpha-BHC	ND		ug/kg	0.717	0.204	1	A
Beta-BHC	ND		ug/kg	1.72	0.653	1	A
Heptachlor	0.625	J	ug/kg	0.861	0.386	1	B
Aldrin	ND		ug/kg	1.72	0.606	1	A
Heptachlor epoxide	ND		ug/kg	3.23	0.968	1	A
Endrin	ND		ug/kg	0.717	0.294	1	A
Endrin ketone	ND		ug/kg	1.72	0.443	1	A
Dieldrin	ND		ug/kg	1.08	0.538	1	A
4,4'-DDE	1.37	J	ug/kg	1.72	0.398	1	B
4,4'-DDD	1.26	J	ug/kg	1.72	0.614	1	B
4,4'-DDT	7.94		ug/kg	3.23	1.38	1	A
Endosulfan I	ND		ug/kg	1.72	0.407	1	A
Endosulfan II	ND		ug/kg	1.72	0.575	1	A
Endosulfan sulfate	ND		ug/kg	0.717	0.341	1	A
Methoxychlor	ND		ug/kg	3.23	1.00	1	A
Toxaphene	ND		ug/kg	32.3	9.04	1	A
cis-Chlordane	1.50	JPI	ug/kg	2.15	0.600	1	B
trans-Chlordane	1.98	JPI	ug/kg	2.15	0.568	1	A
Chlordane	13.5	JPI	ug/kg	14.0	5.70	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	57		30-150	B
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	51		30-150	A

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-02  
 Client ID: SB-1 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 13:49  
 Analyst: GP  
 Percent Solids: 91%

Date Collected: 12/03/14 14:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.69	0.332	1	A
Lindane	ND		ug/kg	0.706	0.315	1	A
Alpha-BHC	ND		ug/kg	0.706	0.200	1	A
Beta-BHC	ND		ug/kg	1.69	0.642	1	A
Heptachlor	ND		ug/kg	0.847	0.380	1	A
Aldrin	ND		ug/kg	1.69	0.596	1	A
Heptachlor epoxide	ND		ug/kg	3.18	0.953	1	A
Endrin	ND		ug/kg	0.706	0.289	1	A
Endrin ketone	ND		ug/kg	1.69	0.436	1	A
Dieldrin	ND		ug/kg	1.06	0.529	1	A
4,4'-DDE	0.732	J	ug/kg	1.69	0.392	1	A
4,4'-DDD	1.03	J	ug/kg	1.69	0.604	1	B
4,4'-DDT	7.87		ug/kg	3.18	1.36	1	A
Endosulfan I	ND		ug/kg	1.69	0.400	1	A
Endosulfan II	ND		ug/kg	1.69	0.566	1	A
Endosulfan sulfate	ND		ug/kg	0.706	0.336	1	A
Methoxychlor	ND		ug/kg	3.18	0.988	1	A
Toxaphene	ND		ug/kg	31.8	8.89	1	A
cis-Chlordane	2.21	PI	ug/kg	2.12	0.590	1	B
trans-Chlordane	3.61		ug/kg	2.12	0.559	1	B
Chlordane	21.8		ug/kg	13.8	5.61	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	B
Decachlorobiphenyl	70		30-150	B
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	63		30-150	A

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-03  
 Client ID: SB-2 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 14:04  
 Analyst: GP  
 Percent Solids: 91%

Date Collected: 12/03/14 07:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.69	0.330	1	A
Lindane	ND		ug/kg	0.703	0.314	1	A
Alpha-BHC	ND		ug/kg	0.703	0.200	1	A
Beta-BHC	ND		ug/kg	1.69	0.640	1	A
Heptachlor	ND		ug/kg	0.843	0.378	1	A
Aldrin	ND		ug/kg	1.69	0.594	1	A
Heptachlor epoxide	1.03	J	ug/kg	3.16	0.949	1	A
Endrin	ND		ug/kg	0.703	0.288	1	A
Endrin ketone	ND		ug/kg	1.69	0.434	1	A
Dieldrin	ND		ug/kg	1.05	0.527	1	A
4,4'-DDE	1.58	J	ug/kg	1.69	0.390	1	B
4,4'-DDD	2.25		ug/kg	1.69	0.602	1	B
4,4'-DDT	28.2		ug/kg	3.16	1.36	1	A
Endosulfan I	ND		ug/kg	1.69	0.398	1	A
Endosulfan II	ND		ug/kg	1.69	0.564	1	A
Endosulfan sulfate	ND		ug/kg	0.703	0.334	1	A
Methoxychlor	ND		ug/kg	3.16	0.984	1	A
Toxaphene	ND		ug/kg	31.6	8.86	1	A
cis-Chlordane	2.64		ug/kg	2.11	0.588	1	B
trans-Chlordane	2.67	PI	ug/kg	2.11	0.557	1	A
Chlordane	14.4	PI	ug/kg	13.7	5.59	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	75		30-150	B
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	67		30-150	A

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-04  
 Client ID: SB-2 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 14:20  
 Analyst: GP  
 Percent Solids: 91%

Date Collected: 12/03/14 13:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.67	0.328	1	A
Lindane	ND		ug/kg	0.697	0.312	1	A
Alpha-BHC	ND		ug/kg	0.697	0.198	1	A
Beta-BHC	ND		ug/kg	1.67	0.634	1	A
Heptachlor	ND		ug/kg	0.837	0.375	1	A
Aldrin	ND		ug/kg	1.67	0.589	1	A
Heptachlor epoxide	1.20	J	ug/kg	3.14	0.941	1	A
Endrin	ND		ug/kg	0.697	0.286	1	A
Endrin ketone	ND		ug/kg	1.67	0.431	1	A
Dieldrin	ND		ug/kg	1.04	0.523	1	A
4,4'-DDE	5.25		ug/kg	1.67	0.387	1	A
4,4'-DDD	8.87	P	ug/kg	1.67	0.597	1	B
4,4'-DDT	79.3		ug/kg	3.14	1.34	1	B
Endosulfan I	ND		ug/kg	1.67	0.395	1	A
Endosulfan II	ND		ug/kg	1.67	0.559	1	A
Endosulfan sulfate	ND		ug/kg	0.697	0.332	1	A
Methoxychlor	ND		ug/kg	3.14	0.976	1	A
Toxaphene	ND		ug/kg	31.4	8.78	1	A
cis-Chlordane	2.97	PI	ug/kg	2.09	0.583	1	B
trans-Chlordane	4.28	PI	ug/kg	2.09	0.552	1	A
Chlordane	28.2	PI	ug/kg	13.6	5.54	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	95		30-150	B
Decachlorobiphenyl	902	Q	30-150	B
2,4,5,6-Tetrachloro-m-xylene	93		30-150	A
Decachlorobiphenyl	87		30-150	A

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-05  
 Client ID: SB-3 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 14:35  
 Analyst: GP  
 Percent Solids: 84%

Date Collected: 12/03/14 10:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.82	0.356	1	A
Lindane	ND		ug/kg	0.758	0.339	1	A
Alpha-BHC	ND		ug/kg	0.758	0.215	1	A
Beta-BHC	ND		ug/kg	1.82	0.690	1	A
Heptachlor	ND		ug/kg	0.910	0.408	1	A
Aldrin	ND		ug/kg	1.82	0.640	1	A
Heptachlor epoxide	ND		ug/kg	3.41	1.02	1	A
Endrin	ND		ug/kg	0.758	0.311	1	A
Endrin ketone	ND		ug/kg	1.82	0.468	1	A
Dieldrin	ND		ug/kg	1.14	0.568	1	A
4,4'-DDE	ND		ug/kg	1.82	0.421	1	A
4,4'-DDD	ND		ug/kg	1.82	0.649	1	A
4,4'-DDT	ND		ug/kg	3.41	1.46	1	A
Endosulfan I	ND		ug/kg	1.82	0.430	1	A
Endosulfan II	ND		ug/kg	1.82	0.608	1	A
Endosulfan sulfate	ND		ug/kg	0.758	0.361	1	A
Methoxychlor	ND		ug/kg	3.41	1.06	1	A
Toxaphene	ND		ug/kg	34.1	9.55	1	A
cis-Chlordane	ND		ug/kg	2.27	0.634	1	A
trans-Chlordane	ND		ug/kg	2.27	0.600	1	A
Chlordane	ND		ug/kg	14.8	6.03	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	70		30-150	B
2,4,5,6-Tetrachloro-m-xylene	74		30-150	A
Decachlorobiphenyl	67		30-150	A

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-06  
 Client ID: SB-3 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 14:50  
 Analyst: GP  
 Percent Solids: 82%

Date Collected: 12/03/14 13:50  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.87	0.366	1	A
Lindane	ND		ug/kg	0.779	0.348	1	A
Alpha-BHC	ND		ug/kg	0.779	0.221	1	A
Beta-BHC	ND		ug/kg	1.87	0.709	1	A
Heptachlor	ND		ug/kg	0.935	0.419	1	A
Aldrin	ND		ug/kg	1.87	0.658	1	A
Heptachlor epoxide	3.61	P	ug/kg	3.50	1.05	1	B
Endrin	ND		ug/kg	0.779	0.319	1	A
Endrin ketone	ND		ug/kg	1.87	0.481	1	A
Dieldrin	10.2	P	ug/kg	1.17	0.584	1	A
4,4'-DDE	27.2		ug/kg	1.87	0.432	1	A
4,4'-DDD	3.60		ug/kg	1.87	0.667	1	B
4,4'-DDT	49.6	P	ug/kg	3.50	1.50	1	B
Endosulfan I	ND		ug/kg	1.87	0.442	1	A
Endosulfan II	ND		ug/kg	1.87	0.625	1	A
Endosulfan sulfate	ND		ug/kg	0.779	0.371	1	A
Methoxychlor	ND		ug/kg	3.50	1.09	1	A
Toxaphene	ND		ug/kg	35.0	9.81	1	A
cis-Chlordane	3.15	PI	ug/kg	2.34	0.651	1	B
trans-Chlordane	2.08	JPI	ug/kg	2.34	0.617	1	A
Chlordane	17.7	PI	ug/kg	15.2	6.19	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	B
Decachlorobiphenyl	82		30-150	B
2,4,5,6-Tetrachloro-m-xylene	76		30-150	A
Decachlorobiphenyl	67		30-150	A

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-07  
 Client ID: SB-4 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 15:06  
 Analyst: GP  
 Percent Solids: 90%

Date Collected: 12/03/14 07:55  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.71	0.335	1	A
Lindane	ND		ug/kg	0.713	0.319	1	A
Alpha-BHC	ND		ug/kg	0.713	0.202	1	A
Beta-BHC	ND		ug/kg	1.71	0.649	1	A
Heptachlor	ND		ug/kg	0.856	0.384	1	A
Aldrin	ND		ug/kg	1.71	0.603	1	A
Heptachlor epoxide	ND		ug/kg	3.21	0.963	1	A
Endrin	ND		ug/kg	0.713	0.292	1	A
Endrin ketone	ND		ug/kg	1.71	0.441	1	A
Dieldrin	3.13		ug/kg	1.07	0.535	1	B
4,4'-DDE	18.0		ug/kg	1.71	0.396	1	B
4,4'-DDD	30.2		ug/kg	1.71	0.610	1	B
4,4'-DDT	21.7		ug/kg	3.21	1.38	1	B
Endosulfan I	ND		ug/kg	1.71	0.404	1	A
Endosulfan II	ND		ug/kg	1.71	0.572	1	A
Endosulfan sulfate	ND		ug/kg	0.713	0.339	1	A
Methoxychlor	ND		ug/kg	3.21	0.998	1	A
Toxaphene	ND		ug/kg	32.1	8.99	1	A
cis-Chlordane	ND		ug/kg	2.14	0.596	1	A
trans-Chlordane	ND		ug/kg	2.14	0.565	1	A
Chlordane	ND		ug/kg	13.9	5.67	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	B
Decachlorobiphenyl	93		30-150	B
2,4,5,6-Tetrachloro-m-xylene	103		30-150	A
Decachlorobiphenyl	76		30-150	A

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-08  
 Client ID: SB-4 11FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 15:22  
 Analyst: GP  
 Percent Solids: 86%

Date Collected: 12/03/14 08:05  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.81	0.354	1	A
Lindane	ND		ug/kg	0.754	0.337	1	A
Alpha-BHC	ND		ug/kg	0.754	0.214	1	A
Beta-BHC	ND		ug/kg	1.81	0.686	1	A
Heptachlor	ND		ug/kg	0.905	0.406	1	A
Aldrin	ND		ug/kg	1.81	0.637	1	A
Heptachlor epoxide	ND		ug/kg	3.39	1.02	1	A
Endrin	ND		ug/kg	0.754	0.309	1	A
Endrin ketone	ND		ug/kg	1.81	0.466	1	A
Dieldrin	ND		ug/kg	1.13	0.566	1	A
4,4'-DDE	ND		ug/kg	1.81	0.418	1	A
4,4'-DDD	ND		ug/kg	1.81	0.645	1	A
4,4'-DDT	ND		ug/kg	3.39	1.46	1	A
Endosulfan I	ND		ug/kg	1.81	0.428	1	A
Endosulfan II	ND		ug/kg	1.81	0.605	1	A
Endosulfan sulfate	ND		ug/kg	0.754	0.359	1	A
Methoxychlor	ND		ug/kg	3.39	1.06	1	A
Toxaphene	ND		ug/kg	33.9	9.50	1	A
cis-Chlordane	ND		ug/kg	2.26	0.630	1	A
trans-Chlordane	ND		ug/kg	2.26	0.597	1	A
Chlordane	ND		ug/kg	14.7	5.99	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	B
Decachlorobiphenyl	77		30-150	B
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	66		30-150	A

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-09  
 Client ID: SB-5 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 15:39  
 Analyst: GP  
 Percent Solids: 93%

Date Collected: 12/03/14 10:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.69	0.330	1	A
Lindane	ND		ug/kg	0.703	0.314	1	A
Alpha-BHC	ND		ug/kg	0.703	0.200	1	A
Beta-BHC	ND		ug/kg	1.69	0.640	1	A
Heptachlor	ND		ug/kg	0.844	0.378	1	A
Aldrin	ND		ug/kg	1.69	0.594	1	A
Heptachlor epoxide	1.00	J	ug/kg	3.16	0.949	1	A
Endrin	ND		ug/kg	0.703	0.288	1	A
Endrin ketone	ND		ug/kg	1.69	0.434	1	A
Dieldrin	ND		ug/kg	1.05	0.527	1	A
4,4'-DDE	1.44	J	ug/kg	1.69	0.390	1	A
4,4'-DDD	ND		ug/kg	1.69	0.602	1	A
4,4'-DDT	17.6		ug/kg	3.16	1.36	1	B
Endosulfan I	ND		ug/kg	1.69	0.399	1	A
Endosulfan II	ND		ug/kg	1.69	0.564	1	A
Endosulfan sulfate	ND		ug/kg	0.703	0.335	1	A
Methoxychlor	ND		ug/kg	3.16	0.984	1	A
Toxaphene	ND		ug/kg	31.6	8.86	1	A
cis-Chlordane	ND		ug/kg	2.11	0.588	1	A
trans-Chlordane	ND		ug/kg	2.11	0.557	1	A
Chlordane	ND		ug/kg	13.7	5.59	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86		30-150	B
Decachlorobiphenyl	45		30-150	B
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	78		30-150	A

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-10  
 Client ID: SB-5 8-9FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 15:54  
 Analyst: GP  
 Percent Solids: 85%

Date Collected: 12/03/14 10:50  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.80	0.353	1	A
Lindane	ND		ug/kg	0.750	0.335	1	A
Alpha-BHC	ND		ug/kg	0.750	0.213	1	A
Beta-BHC	ND		ug/kg	1.80	0.683	1	A
Heptachlor	ND		ug/kg	0.900	0.404	1	A
Aldrin	ND		ug/kg	1.80	0.634	1	A
Heptachlor epoxide	ND		ug/kg	3.38	1.01	1	A
Endrin	ND		ug/kg	0.750	0.308	1	A
Endrin ketone	ND		ug/kg	1.80	0.464	1	A
Dieldrin	ND		ug/kg	1.12	0.563	1	A
4,4'-DDE	12.5		ug/kg	1.80	0.416	1	B
4,4'-DDD	4.60	P	ug/kg	1.80	0.642	1	B
4,4'-DDT	213	E	ug/kg	3.38	1.45	1	B
Endosulfan I	ND		ug/kg	1.80	0.425	1	A
Endosulfan II	ND		ug/kg	1.80	0.602	1	A
Endosulfan sulfate	ND		ug/kg	0.750	0.357	1	A
Methoxychlor	ND		ug/kg	3.38	1.05	1	A
Toxaphene	ND		ug/kg	33.8	9.46	1	A
cis-Chlordane	ND		ug/kg	2.25	0.627	1	A
trans-Chlordane	ND		ug/kg	2.25	0.594	1	A
Chlordane	ND		ug/kg	14.6	5.96	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	94		30-150	B
Decachlorobiphenyl	105		30-150	B
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	85		30-150	A

**Project Name:** WSFSSH**Lab Number:** L1429082**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

**Lab ID:** L1429082-10      D  
**Client ID:** SB-5 8-9FT  
**Sample Location:** 153-157 SHERMAN AVE., NY, NY  
**Matrix:** Soil  
**Analytical Method:** 1,8081B  
**Analytical Date:** 12/10/14 15:34  
**Analyst:** GP  
**Percent Solids:** 85%

**Date Collected:** 12/03/14 10:50  
**Date Received:** 12/04/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 12/06/14 11:28  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
4,4'-DDT	168		ug/kg	16.9	7.24	5	B

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-11  
 Client ID: SB-6 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 16:10  
 Analyst: GP  
 Percent Solids: 91%

Date Collected: 12/03/14 12:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.69	0.331	1	A
Lindane	ND		ug/kg	0.705	0.315	1	A
Alpha-BHC	ND		ug/kg	0.705	0.200	1	A
Beta-BHC	ND		ug/kg	1.69	0.641	1	A
Heptachlor	ND		ug/kg	0.846	0.379	1	A
Aldrin	ND		ug/kg	1.69	0.595	1	A
Heptachlor epoxide	ND		ug/kg	3.17	0.951	1	A
Endrin	ND		ug/kg	0.705	0.289	1	A
Endrin ketone	ND		ug/kg	1.69	0.436	1	A
Dieldrin	ND		ug/kg	1.06	0.528	1	A
4,4'-DDE	1.39	J	ug/kg	1.69	0.391	1	A
4,4'-DDD	1.28	J	ug/kg	1.69	0.603	1	B
4,4'-DDT	16.9		ug/kg	3.17	1.36	1	B
Endosulfan I	ND		ug/kg	1.69	0.400	1	A
Endosulfan II	ND		ug/kg	1.69	0.565	1	A
Endosulfan sulfate	ND		ug/kg	0.705	0.335	1	A
Methoxychlor	ND		ug/kg	3.17	0.986	1	A
Toxaphene	ND		ug/kg	31.7	8.88	1	A
cis-Chlordane	3.44	PI	ug/kg	2.11	0.589	1	B
trans-Chlordane	3.93	PI	ug/kg	2.11	0.558	1	A
Chlordane	24.6	PI	ug/kg	13.7	5.60	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	89		30-150	B
Decachlorobiphenyl	90		30-150	B
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	68		30-150	A

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-12  
 Client ID: SB-6 8-9FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 16:25  
 Analyst: GP  
 Percent Solids: 86%

Date Collected: 12/03/14 12:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.78	0.349	1	A
Lindane	ND		ug/kg	0.743	0.332	1	A
Alpha-BHC	ND		ug/kg	0.743	0.211	1	A
Beta-BHC	ND		ug/kg	1.78	0.676	1	A
Heptachlor	1.15		ug/kg	0.892	0.400	1	B
Aldrin	ND		ug/kg	1.78	0.628	1	A
Heptachlor epoxide	ND		ug/kg	3.34	1.00	1	A
Endrin	ND		ug/kg	0.743	0.305	1	A
Endrin ketone	ND		ug/kg	1.78	0.459	1	A
Dieldrin	ND		ug/kg	1.11	0.557	1	A
4,4'-DDE	2.70		ug/kg	1.78	0.412	1	A
4,4'-DDD	2.94	P	ug/kg	1.78	0.636	1	B
4,4'-DDT	33.2		ug/kg	3.34	1.43	1	B
Endosulfan I	ND		ug/kg	1.78	0.421	1	A
Endosulfan II	ND		ug/kg	1.78	0.596	1	A
Endosulfan sulfate	ND		ug/kg	0.743	0.354	1	A
Methoxychlor	ND		ug/kg	3.34	1.04	1	A
Toxaphene	ND		ug/kg	33.4	9.36	1	A
cis-Chlordane	3.62		ug/kg	2.23	0.621	1	A
trans-Chlordane	3.13	PI	ug/kg	2.23	0.589	1	A
Chlordane	22.7	PI	ug/kg	14.5	5.91	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		30-150	B
Decachlorobiphenyl	79		30-150	B
2,4,5,6-Tetrachloro-m-xylene	93		30-150	A
Decachlorobiphenyl	72		30-150	A

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8081B  
 Analytical Date: 12/08/14 12:47  
 Analyst: GP

Extraction Method: EPA 3546  
 Extraction Date: 12/06/14 11:28  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 12/07/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-12 Batch: WG746270-1						
Delta-BHC	ND		ug/kg	1.52	0.298	A
Lindane	ND		ug/kg	0.633	0.283	A
Alpha-BHC	ND		ug/kg	0.633	0.180	A
Beta-BHC	ND		ug/kg	1.52	0.576	A
Heptachlor	ND		ug/kg	0.760	0.341	A
Aldrin	ND		ug/kg	1.52	0.535	A
Heptachlor epoxide	ND		ug/kg	2.85	0.855	A
Endrin	ND		ug/kg	0.633	0.260	A
Endrin ketone	ND		ug/kg	1.52	0.391	A
Dieldrin	ND		ug/kg	0.950	0.475	A
4,4'-DDE	ND		ug/kg	1.52	0.351	A
4,4'-DDD	ND		ug/kg	1.52	0.542	A
4,4'-DDT	ND		ug/kg	2.85	1.22	A
Endosulfan I	ND		ug/kg	1.52	0.359	A
Endosulfan II	ND		ug/kg	1.52	0.508	A
Endosulfan sulfate	ND		ug/kg	0.633	0.301	A
Methoxychlor	ND		ug/kg	2.85	0.887	A
Toxaphene	ND		ug/kg	28.5	7.98	A
cis-Chlordane	ND		ug/kg	1.90	0.529	A
trans-Chlordane	ND		ug/kg	1.90	0.502	A
Chlordane	ND		ug/kg	12.3	5.03	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	98		30-150	B
Decachlorobiphenyl	88		30-150	B
2,4,5,6-Tetrachloro-m-xylene	93		30-150	A
Decachlorobiphenyl	78		30-150	A



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-12 Batch: WG746270-2 WG746270-3									
Delta-BHC	69		80		30-150	15		30	A
Lindane	79		89		30-150	12		30	A
Alpha-BHC	90		101		30-150	12		30	A
Beta-BHC	99		108		30-150	9		30	A
Heptachlor	78		90		30-150	14		30	A
Aldrin	80		91		30-150	13		30	A
Heptachlor epoxide	75		86		30-150	14		30	A
Endrin	90		107		30-150	17		30	A
Endrin ketone	74		88		30-150	17		30	A
Dieldrin	82		93		30-150	13		30	A
4,4'-DDE	79		87		30-150	10		30	A
4,4'-DDD	79		91		30-150	14		30	A
4,4'-DDT	82		97		30-150	17		30	A
Endosulfan I	75		86		30-150	14		30	A
Endosulfan II	73		84		30-150	14		30	A
Endosulfan sulfate	76		91		30-150	18		30	A
Methoxychlor	88		101		30-150	14		30	A
cis-Chlordane	76		94		30-150	21		30	A
trans-Chlordane	80		95		30-150	17		30	A

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-12 Batch: WG746270-2 WG746270-3

<u>Surrogate</u>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria	<i>Column</i>
2,4,5,6-Tetrachloro-m-xylene	82		90		30-150	B
Decachlorobiphenyl	78		85		30-150	B
2,4,5,6-Tetrachloro-m-xylene	77		84		30-150	A
Decachlorobiphenyl	72		70		30-150	A

## METALS

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-01  
 Client ID: SB-1 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Percent Solids: 90%

Date Collected: 12/03/14 07:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	6000		mg/kg	8.5	1.7	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Antimony, Total	ND		mg/kg	4.2	0.68	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Arsenic, Total	2.2		mg/kg	0.85	0.17	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Barium, Total	68		mg/kg	0.85	0.25	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Beryllium, Total	0.35	J	mg/kg	0.42	0.09	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Cadmium, Total	46		mg/kg	0.85	0.06	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Calcium, Total	2600		mg/kg	8.5	2.5	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Chromium, Total	46		mg/kg	0.85	0.17	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Cobalt, Total	6.0		mg/kg	1.7	0.42	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Copper, Total	110		mg/kg	0.85	0.17	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Iron, Total	17000		mg/kg	4.2	1.7	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Lead, Total	33		mg/kg	4.2	0.17	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Magnesium, Total	2000		mg/kg	8.5	0.85	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Manganese, Total	320		mg/kg	0.85	0.17	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Mercury, Total	0.05	J	mg/kg	0.08	0.02	1	12/06/14 15:10	12/08/14 11:34	EPA 7471B	1,7471B	MC
Nickel, Total	52		mg/kg	2.1	0.34	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Potassium, Total	1300		mg/kg	210	34.	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Selenium, Total	1.6	J	mg/kg	1.7	0.25	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Silver, Total	ND		mg/kg	0.85	0.17	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Sodium, Total	190		mg/kg	170	25.	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Thallium, Total	ND		mg/kg	1.7	0.34	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Vanadium, Total	22		mg/kg	0.85	0.09	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH
Zinc, Total	83		mg/kg	4.2	0.59	2	12/05/14 20:15	12/10/14 16:09	EPA 3050B	1,6010C	JH



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-02  
 Client ID: SB-1 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Percent Solids: 91%

Date Collected: 12/03/14 14:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	6300		mg/kg	8.6	1.7	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Antimony, Total	ND		mg/kg	4.3	0.68	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Arsenic, Total	2.4		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Barium, Total	74		mg/kg	0.86	0.26	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Beryllium, Total	0.35	J	mg/kg	0.43	0.09	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Cadmium, Total	58		mg/kg	0.86	0.06	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Calcium, Total	1800		mg/kg	8.6	2.6	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Chromium, Total	48		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Cobalt, Total	5.6		mg/kg	1.7	0.43	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Copper, Total	110		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Iron, Total	19000		mg/kg	4.3	1.7	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Lead, Total	30		mg/kg	4.3	0.17	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Magnesium, Total	2200		mg/kg	8.6	0.86	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Manganese, Total	290		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Mercury, Total	0.16		mg/kg	0.08	0.02	1	12/06/14 15:10	12/08/14 11:41	EPA 7471B	1,7471B	MC
Nickel, Total	48		mg/kg	2.1	0.34	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Potassium, Total	1300		mg/kg	210	34.	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Selenium, Total	1.5	J	mg/kg	1.7	0.26	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Silver, Total	ND		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Sodium, Total	110	J	mg/kg	170	26.	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Thallium, Total	ND		mg/kg	1.7	0.34	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Vanadium, Total	26		mg/kg	0.86	0.09	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH
Zinc, Total	84		mg/kg	4.3	0.60	2	12/05/14 20:15	12/10/14 16:49	EPA 3050B	1,6010C	JH



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-03  
 Client ID: SB-2 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Percent Solids: 91%

Date Collected: 12/03/14 07:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	5200		mg/kg	8.7	1.7	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Antimony, Total	ND		mg/kg	4.4	0.70	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Arsenic, Total	1.4		mg/kg	0.87	0.17	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Barium, Total	76		mg/kg	0.87	0.26	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Beryllium, Total	0.28	J	mg/kg	0.44	0.09	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Cadmium, Total	19		mg/kg	0.87	0.06	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Calcium, Total	3700		mg/kg	8.7	2.6	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Chromium, Total	30		mg/kg	0.87	0.17	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Cobalt, Total	6.1		mg/kg	1.7	0.44	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Copper, Total	72		mg/kg	0.87	0.17	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Iron, Total	14000		mg/kg	4.4	1.7	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Lead, Total	35		mg/kg	4.4	0.17	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Magnesium, Total	3400		mg/kg	8.7	0.87	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Manganese, Total	290		mg/kg	0.87	0.17	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Mercury, Total	0.17		mg/kg	0.07	0.02	1	12/06/14 15:10	12/08/14 11:43	EPA 7471B	1,7471B	MC
Nickel, Total	55		mg/kg	2.2	0.35	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Potassium, Total	1300		mg/kg	220	35.	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Selenium, Total	0.61	J	mg/kg	1.7	0.26	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Silver, Total	ND		mg/kg	0.87	0.17	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Sodium, Total	69	J	mg/kg	170	26.	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Thallium, Total	ND		mg/kg	1.7	0.35	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Vanadium, Total	22		mg/kg	0.87	0.09	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH
Zinc, Total	76		mg/kg	4.4	0.61	2	12/05/14 20:15	12/10/14 16:53	EPA 3050B	1,6010C	JH



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-04  
 Client ID: SB-2 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Percent Solids: 91%

Date Collected: 12/03/14 13:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	5000		mg/kg	8.8	1.8	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Antimony, Total	ND		mg/kg	4.4	0.70	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Arsenic, Total	7.5		mg/kg	0.88	0.18	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Barium, Total	97		mg/kg	0.88	0.26	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Beryllium, Total	0.28	J	mg/kg	0.44	0.09	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Cadmium, Total	0.99		mg/kg	0.88	0.06	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Calcium, Total	12000		mg/kg	8.8	2.6	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Chromium, Total	19		mg/kg	0.88	0.18	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Cobalt, Total	6.9		mg/kg	1.8	0.44	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Copper, Total	22		mg/kg	0.88	0.18	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Iron, Total	11000		mg/kg	4.4	1.8	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Lead, Total	220		mg/kg	4.4	0.18	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Magnesium, Total	4400		mg/kg	8.8	0.88	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Manganese, Total	280		mg/kg	0.88	0.18	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Mercury, Total	0.13		mg/kg	0.07	0.02	1	12/06/14 15:10	12/08/14 11:45	EPA 7471B	1,7471B	MC
Nickel, Total	63		mg/kg	2.2	0.35	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Potassium, Total	1200		mg/kg	220	35.	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Selenium, Total	0.31	J	mg/kg	1.8	0.26	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Silver, Total	0.19	J	mg/kg	0.88	0.18	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Sodium, Total	100	J	mg/kg	180	26.	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Thallium, Total	ND		mg/kg	1.8	0.35	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Vanadium, Total	15		mg/kg	0.88	0.09	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH
Zinc, Total	80		mg/kg	4.4	0.62	2	12/05/14 20:15	12/10/14 16:56	EPA 3050B	1,6010C	JH



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-05  
 Client ID: SB-3 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Percent Solids: 84%

Date Collected: 12/03/14 10:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	10000		mg/kg	9.3	1.8	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Antimony, Total	ND		mg/kg	4.6	0.74	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Arsenic, Total	2.1		mg/kg	0.93	0.18	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Barium, Total	42		mg/kg	0.93	0.28	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Beryllium, Total	0.42	J	mg/kg	0.46	0.09	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Cadmium, Total	ND		mg/kg	0.93	0.07	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Calcium, Total	1500		mg/kg	9.3	2.8	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Chromium, Total	17		mg/kg	0.93	0.18	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Cobalt, Total	6.8		mg/kg	1.8	0.46	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Copper, Total	13		mg/kg	0.93	0.18	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Iron, Total	17000		mg/kg	4.6	1.8	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Lead, Total	7.5		mg/kg	4.6	0.18	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Magnesium, Total	3300		mg/kg	9.3	0.93	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Manganese, Total	230		mg/kg	0.93	0.18	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Mercury, Total	0.16		mg/kg	0.08	0.02	1	12/06/14 15:10	12/08/14 11:51	EPA 7471B	1,7471B	MC
Nickel, Total	12		mg/kg	2.3	0.37	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Potassium, Total	750		mg/kg	230	37.	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Selenium, Total	0.43	J	mg/kg	1.8	0.28	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Silver, Total	ND		mg/kg	0.93	0.18	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Sodium, Total	36	J	mg/kg	180	28.	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Thallium, Total	ND		mg/kg	1.8	0.37	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Vanadium, Total	19		mg/kg	0.93	0.09	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH
Zinc, Total	47		mg/kg	4.6	0.65	2	12/05/14 20:15	12/10/14 17:00	EPA 3050B	1,6010C	JH



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-06  
 Client ID: SB-3 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Percent Solids: 82%

Date Collected: 12/03/14 13:50  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	9000		mg/kg	9.1	1.8	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Antimony, Total	ND		mg/kg	4.5	0.73	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Arsenic, Total	6.4		mg/kg	0.91	0.18	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Barium, Total	390		mg/kg	0.91	0.27	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Beryllium, Total	0.33	J	mg/kg	0.45	0.09	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Cadmium, Total	0.48	J	mg/kg	0.91	0.06	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Calcium, Total	15000		mg/kg	9.1	2.7	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Chromium, Total	17		mg/kg	0.91	0.18	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Cobalt, Total	5.6		mg/kg	1.8	0.45	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Copper, Total	42		mg/kg	0.91	0.18	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Iron, Total	17000		mg/kg	4.5	1.8	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Lead, Total	230		mg/kg	4.5	0.18	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Magnesium, Total	10000		mg/kg	9.1	0.91	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Manganese, Total	230		mg/kg	0.91	0.18	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Mercury, Total	0.49		mg/kg	0.08	0.02	1	12/06/14 15:10	12/08/14 11:52	EPA 7471B	1,7471B	MC
Nickel, Total	18		mg/kg	2.3	0.36	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Potassium, Total	890		mg/kg	230	36.	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Selenium, Total	0.72	J	mg/kg	1.8	0.27	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Silver, Total	ND		mg/kg	0.91	0.18	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Sodium, Total	64	J	mg/kg	180	27.	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Thallium, Total	ND		mg/kg	1.8	0.36	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Vanadium, Total	39		mg/kg	0.91	0.09	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH
Zinc, Total	320		mg/kg	4.5	0.64	2	12/05/14 20:15	12/10/14 17:04	EPA 3050B	1,6010C	JH



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-07  
 Client ID: SB-4 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Percent Solids: 90%

Date Collected: 12/03/14 07:55  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	5700		mg/kg	8.6	1.7	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Antimony, Total	ND		mg/kg	4.3	0.69	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Arsenic, Total	2.4		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Barium, Total	81		mg/kg	0.86	0.26	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Beryllium, Total	0.27	J	mg/kg	0.43	0.09	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Cadmium, Total	1.5		mg/kg	0.86	0.06	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Calcium, Total	27000		mg/kg	8.6	2.6	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Chromium, Total	17		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Cobalt, Total	7.0		mg/kg	1.7	0.43	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Copper, Total	22		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Iron, Total	13000		mg/kg	4.3	1.7	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Lead, Total	44		mg/kg	4.3	0.17	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Magnesium, Total	12000		mg/kg	8.6	0.86	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Manganese, Total	230		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Mercury, Total	0.13		mg/kg	0.07	0.02	1	12/06/14 15:10	12/08/14 11:54	EPA 7471B	1,7471B	MC
Nickel, Total	74		mg/kg	2.2	0.34	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Potassium, Total	1400		mg/kg	220	34.	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Selenium, Total	0.42	J	mg/kg	1.7	0.26	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Silver, Total	ND		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Sodium, Total	270		mg/kg	170	26.	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Thallium, Total	ND		mg/kg	1.7	0.34	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Vanadium, Total	17		mg/kg	0.86	0.09	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH
Zinc, Total	84		mg/kg	4.3	0.60	2	12/05/14 20:15	12/10/14 17:40	EPA 3050B	1,6010C	JH



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-08  
 Client ID: SB-4 11FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Percent Solids: 86%

Date Collected: 12/03/14 08:05  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	7100		mg/kg	9.0	1.8	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Antimony, Total	ND		mg/kg	4.5	0.72	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Arsenic, Total	2.0		mg/kg	0.90	0.18	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Barium, Total	72		mg/kg	0.90	0.27	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Beryllium, Total	0.38	J	mg/kg	0.45	0.09	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Cadmium, Total	ND		mg/kg	0.90	0.06	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Calcium, Total	22000		mg/kg	9.0	2.7	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Chromium, Total	15		mg/kg	0.90	0.18	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Cobalt, Total	6.8		mg/kg	1.8	0.45	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Copper, Total	19		mg/kg	0.90	0.18	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Iron, Total	15000		mg/kg	4.5	1.8	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Lead, Total	3.2	J	mg/kg	4.5	0.18	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Magnesium, Total	7300		mg/kg	9.0	0.90	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Manganese, Total	370		mg/kg	0.90	0.18	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Mercury, Total	ND		mg/kg	0.08	0.02	1	12/06/14 15:10	12/08/14 11:56	EPA 7471B	1,7471B	MC
Nickel, Total	14		mg/kg	2.2	0.36	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Potassium, Total	1800		mg/kg	220	36.	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Selenium, Total	0.36	J	mg/kg	1.8	0.27	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Silver, Total	ND		mg/kg	0.90	0.18	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Sodium, Total	120	J	mg/kg	180	27.	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Thallium, Total	ND		mg/kg	1.8	0.36	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Vanadium, Total	18		mg/kg	0.90	0.09	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH
Zinc, Total	37		mg/kg	4.5	0.63	2	12/05/14 20:15	12/10/14 17:44	EPA 3050B	1,6010C	JH



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-09  
 Client ID: SB-5 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Percent Solids: 93%

Date Collected: 12/03/14 10:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	8000		mg/kg	8.6	1.7	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Antimony, Total	ND		mg/kg	4.3	0.69	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Arsenic, Total	1.7		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Barium, Total	42		mg/kg	0.86	0.26	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Beryllium, Total	0.28	J	mg/kg	0.43	0.09	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Cadmium, Total	0.69	J	mg/kg	0.86	0.06	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Calcium, Total	11000		mg/kg	8.6	2.6	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Chromium, Total	13		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Cobalt, Total	3.5		mg/kg	1.7	0.43	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Copper, Total	11		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Iron, Total	10000		mg/kg	4.3	1.7	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Lead, Total	47		mg/kg	4.3	0.17	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Magnesium, Total	3600		mg/kg	8.6	0.86	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Manganese, Total	97		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Mercury, Total	0.22		mg/kg	0.07	0.02	1	12/06/14 15:10	12/08/14 11:58	EPA 7471B	1,7471B	MC
Nickel, Total	10		mg/kg	2.1	0.34	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Potassium, Total	890		mg/kg	210	34.	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Selenium, Total	0.53	J	mg/kg	1.7	0.26	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Silver, Total	ND		mg/kg	0.86	0.17	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Sodium, Total	97	J	mg/kg	170	26.	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Thallium, Total	ND		mg/kg	1.7	0.34	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Vanadium, Total	16		mg/kg	0.86	0.09	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH
Zinc, Total	59		mg/kg	4.3	0.60	2	12/05/14 20:15	12/10/14 17:48	EPA 3050B	1,6010C	JH



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-10  
 Client ID: SB-5 8-9FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Percent Solids: 85%

Date Collected: 12/03/14 10:50  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	7500		mg/kg	9.1	1.8	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Antimony, Total	ND		mg/kg	4.6	0.73	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Arsenic, Total	1.4		mg/kg	0.91	0.18	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Barium, Total	29		mg/kg	0.91	0.27	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Beryllium, Total	0.31	J	mg/kg	0.46	0.09	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Cadmium, Total	ND		mg/kg	0.91	0.06	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Calcium, Total	1700		mg/kg	9.1	2.7	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Chromium, Total	16		mg/kg	0.91	0.18	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Cobalt, Total	6.7		mg/kg	1.8	0.46	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Copper, Total	14		mg/kg	0.91	0.18	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Iron, Total	14000		mg/kg	4.6	1.8	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Lead, Total	2.2	J	mg/kg	4.6	0.18	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Magnesium, Total	3200		mg/kg	9.1	0.91	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Manganese, Total	290		mg/kg	0.91	0.18	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Mercury, Total	0.03	J	mg/kg	0.08	0.02	1	12/06/14 15:10	12/08/14 12:00	EPA 7471B	1,7471B	MC
Nickel, Total	14		mg/kg	2.3	0.36	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Potassium, Total	1400		mg/kg	230	36.	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Selenium, Total	ND		mg/kg	1.8	0.27	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Silver, Total	ND		mg/kg	0.91	0.18	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Sodium, Total	46	J	mg/kg	180	27.	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Thallium, Total	ND		mg/kg	1.8	0.36	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Vanadium, Total	12		mg/kg	0.91	0.09	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH
Zinc, Total	45		mg/kg	4.6	0.64	2	12/05/14 20:15	12/10/14 17:52	EPA 3050B	1,6010C	JH



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-11  
 Client ID: SB-6 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Percent Solids: 91%

Date Collected: 12/03/14 12:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	5500		mg/kg	8.4	1.7	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Antimony, Total	ND		mg/kg	4.2	0.67	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Arsenic, Total	1.9		mg/kg	0.84	0.17	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Barium, Total	69		mg/kg	0.84	0.25	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Beryllium, Total	0.33	J	mg/kg	0.42	0.08	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Cadmium, Total	28		mg/kg	0.84	0.06	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Calcium, Total	2900		mg/kg	8.4	2.5	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Chromium, Total	37		mg/kg	0.84	0.17	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Cobalt, Total	5.8		mg/kg	1.7	0.42	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Copper, Total	77		mg/kg	0.84	0.17	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Iron, Total	18000		mg/kg	4.2	1.7	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Lead, Total	29		mg/kg	4.2	0.17	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Magnesium, Total	2400		mg/kg	8.4	0.84	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Manganese, Total	330		mg/kg	0.84	0.17	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Mercury, Total	0.13		mg/kg	0.07	0.02	1	12/06/14 15:10	12/08/14 12:02	EPA 7471B	1,7471B	MC
Nickel, Total	37		mg/kg	2.1	0.33	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Potassium, Total	1200		mg/kg	210	33.	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Selenium, Total	0.95	J	mg/kg	1.7	0.25	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Silver, Total	ND		mg/kg	0.84	0.17	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Sodium, Total	65	J	mg/kg	170	25.	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Thallium, Total	ND		mg/kg	1.7	0.33	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Vanadium, Total	20		mg/kg	0.84	0.08	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH
Zinc, Total	70		mg/kg	4.2	0.58	2	12/05/14 20:15	12/10/14 17:55	EPA 3050B	1,6010C	JH



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-12  
 Client ID: SB-6 8-9FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil  
 Percent Solids: 86%

Date Collected: 12/03/14 12:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	6500		mg/kg	9.0	1.8	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Antimony, Total	ND		mg/kg	4.5	0.72	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Arsenic, Total	2.4		mg/kg	0.90	0.18	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Barium, Total	77		mg/kg	0.90	0.27	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Beryllium, Total	0.37	J	mg/kg	0.45	0.09	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Cadmium, Total	27		mg/kg	0.90	0.06	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Calcium, Total	8200		mg/kg	9.0	2.7	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Chromium, Total	36		mg/kg	0.90	0.18	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Cobalt, Total	6.3		mg/kg	1.8	0.45	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Copper, Total	81		mg/kg	0.90	0.18	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Iron, Total	18000		mg/kg	4.5	1.8	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Lead, Total	41		mg/kg	4.5	0.18	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Magnesium, Total	3900		mg/kg	9.0	0.90	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Manganese, Total	330		mg/kg	0.90	0.18	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Mercury, Total	0.13		mg/kg	0.08	0.02	1	12/06/14 15:10	12/08/14 12:04	EPA 7471B	1,7471B	MC
Nickel, Total	47		mg/kg	2.2	0.36	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Potassium, Total	1300		mg/kg	220	36.	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Selenium, Total	1.0	J	mg/kg	1.8	0.27	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Silver, Total	ND		mg/kg	0.90	0.18	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Sodium, Total	110	J	mg/kg	180	27.	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Thallium, Total	ND		mg/kg	1.8	0.36	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Vanadium, Total	25		mg/kg	0.90	0.09	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH
Zinc, Total	91		mg/kg	4.5	0.63	2	12/05/14 20:15	12/10/14 17:59	EPA 3050B	1,6010C	JH



Project Name: WSFSSH  
Project Number: WSFSSH

Lab Number: L1429082  
Report Date: 12/11/14

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-12 Batch: WG746137-1										
Aluminum, Total	ND		mg/kg	4.0	0.80	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Antimony, Total	ND		mg/kg	2.0	0.32	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Arsenic, Total	0.32	J	mg/kg	0.40	0.08	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Barium, Total	ND		mg/kg	0.40	0.12	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Beryllium, Total	ND		mg/kg	0.20	0.04	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Cadmium, Total	ND		mg/kg	0.40	0.03	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Calcium, Total	ND		mg/kg	4.0	1.2	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Chromium, Total	ND		mg/kg	0.40	0.08	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Cobalt, Total	ND		mg/kg	0.80	0.20	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Copper, Total	ND		mg/kg	0.40	0.08	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Iron, Total	6.0		mg/kg	2.0	0.80	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Lead, Total	ND		mg/kg	2.0	0.08	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Magnesium, Total	ND		mg/kg	4.0	0.40	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Manganese, Total	ND		mg/kg	0.40	0.08	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Nickel, Total	ND		mg/kg	1.0	0.16	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Potassium, Total	ND		mg/kg	100	16.	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Selenium, Total	ND		mg/kg	0.80	0.12	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Silver, Total	ND		mg/kg	0.40	0.08	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Sodium, Total	ND		mg/kg	80	12.	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Thallium, Total	ND		mg/kg	0.80	0.16	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Vanadium, Total	ND		mg/kg	0.40	0.04	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH
Zinc, Total	ND		mg/kg	2.0	0.28	1	12/05/14 20:15	12/10/14 16:01	1,6010C	JH

### Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-12 Batch: WG746221-1										
Mercury, Total	ND		mg/kg	0.08	0.02	1	12/06/14 15:10	12/08/14 11:28	1,7471B	MC



**Project Name:** WSFSSH

**Lab Number:** L1429082

**Project Number:** WSFSSH

**Report Date:** 12/11/14

## **Method Blank Analysis Batch Quality Control**

### **Prep Information**

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Digestion Method: EPA 7471B

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Westborough Lab Associated sample(s): 01-12 Batch: WG746137-2 SRM Lot Number: D083-540								
Aluminum, Total	79		-		51-148	-		
Antimony, Total	172		-		1-210	-		
Arsenic, Total	98		-		78-122	-		
Barium, Total	96		-		82-117	-		
Beryllium, Total	94		-		82-118	-		
Cadmium, Total	90		-		82-118	-		
Calcium, Total	88		-		82-118	-		
Chromium, Total	92		-		79-121	-		
Cobalt, Total	92		-		83-117	-		
Copper, Total	97		-		80-120	-		
Iron, Total	99		-		47-153	-		
Lead, Total	87		-		81-119	-		
Magnesium, Total	79		-		75-124	-		
Manganese, Total	90		-		81-119	-		
Nickel, Total	90		-		82-118	-		
Potassium, Total	92		-		70-130	-		
Selenium, Total	102		-		78-123	-		
Silver, Total	99		-		74-125	-		
Sodium, Total	93		-		70-130	-		
Thallium, Total	86		-		78-122	-		
Vanadium, Total	95		-		65-135	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Project Number: WSFSSH

Lab Number: L1429082

Report Date: 12/11/14

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-12 Batch: WG746137-2 SRM Lot Number: D083-540					
Zinc, Total	92	-	80-121	-	
Total Metals - Westborough Lab Associated sample(s): 01-12 Batch: WG746221-2 SRM Lot Number: D083-540					
Mercury, Total	116	-	75-126	-	

### Matrix Spike Analysis Batch Quality Control

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG746137-4 QC Sample: L1429082-01 Client ID: SB-1 0-2FT												
Aluminum, Total	6000	174	6600	345	Q	-	-		75-125	-		20
Antimony, Total	ND	43.5	35	80		-	-		75-125	-		20
Arsenic, Total	2.2	10.4	12	94		-	-		75-125	-		20
Barium, Total	68.	174	220	87		-	-		75-125	-		20
Beryllium, Total	0.35J	4.35	4.3	99		-	-		75-125	-		20
Cadmium, Total	46.	4.44	38	0	Q	-	-		75-125	-		20
Calcium, Total	2600	870	2300	0	Q	-	-		75-125	-		20
Chromium, Total	46.	17.4	52	34	Q	-	-		75-125	-		20
Cobalt, Total	6.0	43.5	45	90		-	-		75-125	-		20
Copper, Total	110	21.8	110	0	Q	-	-		75-125	-		20
Iron, Total	17000	87	16000	0	Q	-	-		75-125	-		20
Lead, Total	33.	44.4	63	68	Q	-	-		75-125	-		20
Magnesium, Total	2000	870	2700	80		-	-		75-125	-		20
Manganese, Total	320	43.5	330	23	Q	-	-		75-125	-		20
Nickel, Total	52.	43.5	82	69	Q	-	-		75-125	-		20
Potassium, Total	1300	870	2100	92		-	-		75-125	-		20
Selenium, Total	1.6J	10.4	11	105		-	-		75-125	-		20
Silver, Total	ND	26.1	25	96		-	-		75-125	-		20
Sodium, Total	190	870	1000	93		-	-		75-125	-		20
Thallium, Total	ND	10.4	8.2	78		-	-		75-125	-		20
Vanadium, Total	22.	43.5	62	92		-	-		75-125	-		20

**Matrix Spike Analysis**  
Batch Quality Control

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG746137-4 QC Sample: L1429082-01 Client ID: SB-1 0-2FT									
Zinc, Total	83.	43.5	110	<b>62</b>	Q	-	75-125	-	20
Total Metals - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG746221-4 QC Sample: L1429082-01 Client ID: SB-1 0-2FT									
Mercury, Total	0.05J	0.145	0.29	<b>200</b>	Q	-	80-120	-	20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: WSFSSH

Project Number: WSFSSH

Lab Number: L1429082

Report Date: 12/11/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG746137-3 QC Sample: L1429082-01 Client ID: SB-1 0-2FT						
Aluminum, Total	6000	6200	mg/kg	3		20
Antimony, Total	ND	ND	mg/kg	NC		20
Arsenic, Total	2.2	2.2	mg/kg	0		20
Barium, Total	68.	69	mg/kg	1		20
Beryllium, Total	0.35J	0.38J	mg/kg	NC		20
Cadmium, Total	46.	43	mg/kg	7		20
Calcium, Total	2600	1900	mg/kg	31	Q	20
Chromium, Total	46.	47	mg/kg	2		20
Cobalt, Total	6.0	6.4	mg/kg	6		20
Copper, Total	110	120	mg/kg	9		20
Iron, Total	17000	22000	mg/kg	26	Q	20
Lead, Total	33.	34	mg/kg	3		20
Magnesium, Total	2000	2400	mg/kg	18		20
Manganese, Total	320	390	mg/kg	20		20
Nickel, Total	52.	58	mg/kg	11		20
Potassium, Total	1300	1200	mg/kg	8		20
Selenium, Total	1.6J	1.7	mg/kg	NC		20
Silver, Total	ND	ND	mg/kg	NC		20
Sodium, Total	190	190	mg/kg	0		20

**Lab Duplicate Analysis**  
**Batch Quality Control**

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
<b>Total Metals - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG746137-3 QC Sample: L1429082-01 Client ID: SB-1 0-2FT</b>					
Thallium, Total	ND	ND	mg/kg	NC	20
Vanadium, Total	22.	26	mg/kg	17	20
Zinc, Total	83.	92	mg/kg	10	20
<b>Total Metals - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG746221-3 QC Sample: L1429082-01 Client ID: SB-1 0-2FT</b>					
Mercury, Total	0.05J	0.06J	mg/kg	NC	20



# **INORGANICS & MISCELLANEOUS**

Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-01  
 Client ID: SB-1 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil

Date Collected: 12/03/14 07:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.4		%	0.100	NA	1	-	12/05/14 20:27	30,2540G	RT



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-02  
 Client ID: SB-1 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil

Date Collected: 12/03/14 14:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.0		%	0.100	NA	1	-	12/05/14 20:27	30,2540G	RT



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## SAMPLE RESULTS

Lab ID: L1429082-03  
 Client ID: SB-2 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil

Date Collected: 12/03/14 07:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.8		%	0.100	NA	1	-	12/05/14 20:27	30,2540G	RT



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-04  
 Client ID: SB-2 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil

Date Collected: 12/03/14 13:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.6		%	0.100	NA	1	-	12/05/14 20:27	30,2540G	RT



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-05  
 Client ID: SB-3 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil

Date Collected: 12/03/14 10:00  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.6		%	0.100	NA	1	-	12/05/14 20:27	30,2540G	RT



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-06  
 Client ID: SB-3 4-5FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil

Date Collected: 12/03/14 13:50  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.4		%	0.100	NA	1	-	12/05/14 20:27	30,2540G	RT



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-07  
 Client ID: SB-4 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil

Date Collected: 12/03/14 07:55  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.4		%	0.100	NA	1	-	12/05/14 20:27	30,2540G	RT



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-08  
 Client ID: SB-4 11FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil

Date Collected: 12/03/14 08:05  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.4		%	0.100	NA	1	-	12/05/14 20:27	30,2540G	RT



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-09  
 Client ID: SB-5 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil

Date Collected: 12/03/14 10:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92.7		%	0.100	NA	1	-	12/05/14 20:27	30,2540G	RT



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-10  
 Client ID: SB-5 8-9FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil

Date Collected: 12/03/14 10:50  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.5		%	0.100	NA	1	-	12/05/14 20:27	30,2540G	RT



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-11  
 Client ID: SB-6 0-2FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil

Date Collected: 12/03/14 12:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.5		%	0.100	NA	1	-	12/05/14 20:27	30,2540G	RT



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

**SAMPLE RESULTS**

Lab ID: L1429082-12  
 Client ID: SB-6 8-9FT  
 Sample Location: 153-157 SHERMAN AVE., NY, NY  
 Matrix: Soil

Date Collected: 12/03/14 12:40  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.3		%	0.100	NA	1	-	12/05/14 20:27	30,2540G	RT



## Lab Duplicate Analysis

Batch Quality Control

Project Name: WSFSSH

Project Number: WSFSSH

Lab Number: L1429082

Report Date: 12/11/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG746139-1 QC Sample: L1429082-01 Client ID: SB-1 0-2FT						
Solids, Total	90.4	90.3	%	0		20

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

**Reagent H2O Preserved Vials Frozen on:** 12/05/2014 02:57

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429082-01A	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-01B	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-01C	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-01D	Plastic 2oz unpreserved for TS	A	N/A	4.5	Y	Absent	TS(7)
L1429082-01E	Glass 100ml unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-01F	Glass 250ml/8oz unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-01X	Vial MeOH preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-01Y	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-01Z	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-02A	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-02B	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-02C	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-02D	Plastic 2oz unpreserved for TS	A	N/A	4.5	Y	Absent	TS(7)

\*Values in parentheses indicate holding time in days



Project Name: WSFSSH

Project Number: WSFSSH

Lab Number: L1429082

Report Date: 12/11/14

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429082-02E	Glass 100ml unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-02F	Glass 250ml/8oz unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-02X	Vial MeOH preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-02Y	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-02Z	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-03A	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-03B	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-03C	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-03D	Plastic 2oz unpreserved for TS	A	N/A	4.5	Y	Absent	TS(7)
L1429082-03E	Glass 100ml unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)

\*Values in parentheses indicate holding time in days



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429082-03F	Glass 250ml/8oz unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-03X	Vial MeOH preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-03Y	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-03Z	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-04A	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-04B	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-04C	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-04D	Plastic 2oz unpreserved for TS	A	N/A	4.5	Y	Absent	TS(7)
L1429082-04E	Glass 100ml unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-04F	Glass 250ml/8oz unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-04X	Vial MeOH preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-04Y	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-04Z	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-05A	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-05B	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-05C	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)

\*Values in parentheses indicate holding time in days



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429082-05D	Plastic 2oz unpreserved for TS	A	N/A	4.5	Y	Absent	TS(7)
L1429082-05E	Glass 100ml unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-05F	Glass 250ml/8oz unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-05X	Vial MeOH preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-05Y	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-05Z	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-06A	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-06B	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-06C	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-06D	Plastic 2oz unpreserved for TS	A	N/A	4.5	Y	Absent	TS(7)
L1429082-06E	Glass 100ml unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)

\*Values in parentheses indicate holding time in days



Project Name: WSFSSH

Lab Number: L1429082

Project Number: WSFSSH

Report Date: 12/11/14

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429082-06F	Glass 250ml/8oz unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-06X	Vial MeOH preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-06Y	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-06Z	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-07A	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-07B	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-07C	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-07D	Plastic 2oz unpreserved for TS	A	N/A	4.5	Y	Absent	TS(7)
L1429082-07E	Glass 100ml unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-07F	Glass 250ml/8oz unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-07X	Vial MeOH preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-07Y	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-07Z	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-08A	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-08B	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-08C	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)

\*Values in parentheses indicate holding time in days



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429082-08D	Plastic 2oz unpreserved for TS	A	N/A	4.5	Y	Absent	TS(7)
L1429082-08E	Glass 100ml unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-08F	Glass 250ml/8oz unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-08X	Vial MeOH preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-08Y	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-08Z	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-09A	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-09B	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-09C	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-09D	Plastic 2oz unpreserved for TS	A	N/A	4.5	Y	Absent	TS(7)
L1429082-09E	Glass 100ml unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)

\*Values in parentheses indicate holding time in days



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429082-09F	Glass 250ml/8oz unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-09X	Vial MeOH preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-09Y	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-09Z	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-10A	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-10B	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-10C	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-10D	Plastic 2oz unpreserved for TS	A	N/A	4.5	Y	Absent	TS(7)
L1429082-10E	Glass 100ml unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-10F	Glass 250ml/8oz unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-10X	Vial MeOH preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-10Y	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-10Z	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-11A	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-11B	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-11C	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)

\*Values in parentheses indicate holding time in days



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429082-11D	Plastic 2oz unpreserved for TS	A	N/A	4.5	Y	Absent	TS(7)
L1429082-11E	Glass 100ml unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-11F	Glass 250ml/8oz unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-11X	Vial MeOH preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-11Y	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-11Z	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-12A	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-12B	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-12C	5 gram Encore Sampler	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(2)
L1429082-12D	Plastic 2oz unpreserved for TS	A	N/A	4.5	Y	Absent	TS(7)
L1429082-12E	Glass 100ml unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)

\*Values in parentheses indicate holding time in days



Project Name: WSFSSH

Project Number: WSFSSH

Lab Number: L1429082

Report Date: 12/11/14

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429082-12F	Glass 250ml/8oz unpreserved	A	N/A	4.5	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1429082-12X	Vial MeOH preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-12Y	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)
L1429082-12Z	Vial Water preserved split	A	N/A	4.5	Y	Absent	NYTCL-8260HLW(14)

\*Values in parentheses indicate holding time in days

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**Report Format:** DU Report with 'J' Qualifiers



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**Lab Number:** L1429082  
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#### Data Qualifiers

- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429082  
**Report Date:** 12/11/14

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

Last revised April 15, 2014

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**The following analytes are not included in our NELAP Scope of Accreditation:**

### Westborough Facility

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

**EPA 8260C:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

**EPA 8330A/B:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

### Mansfield Facility

**EPA 8270D:** Biphenyl.

**EPA 2540D:** TSS

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

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**The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:**

### Drinking Water

**EPA 200.8:** Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

### Non-Potable Water

**EPA 200.8:** Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

**EPA 200.7:** Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

**EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F,**

**EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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For a complete listing of analytes and methods, please contact your Alpha Project Manager.



**NEW YORK  
CHAIN OF  
CUSTODY**

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**Service Centers**  
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5  
Albany, NY 12205: 14 Walker Way  
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

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of 2

Date Rec'd  
in Lab

12/4/14

ALPHA Job #

214291082

<b>Client Information</b>		<b>Project Information</b>		<b>Deliverables</b>		<b>Billing Information</b>	
Client: <i>CARich Consultants</i>		Project Name: <i>WSFSSH</i>		<input type="checkbox"/> ASP-A <input type="checkbox"/> ASP-B <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other		<input checked="" type="checkbox"/> Same as Client Info PO #	
Address: <i>17 Dupont Street Plainview NY 11803</i>		Project Location: <i>153-157 Sherman Ave NY NY</i>		<input type="checkbox"/> NY TOGS <input checked="" type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:	
Phone: <i>(516) 576-8844</i>		Project #		Regulatory Requirement		Disposal Site Information	
Fax:		(Use Project name as Project #) <input checked="" type="checkbox"/>		<input type="checkbox"/> NY TOGS <input checked="" type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:	
Email: <i>tbrown@carichinc.com</i>		Project Manager: <i>Thomas Brown</i>		Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: <i>12/11/14</i> Rush (only if pre approved) <input type="checkbox"/> # of Days: <i>5 days</i>		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:	
ALPHAQuote #: <i>2014 720</i>		These samples have been previously analyzed by Alpha <input type="checkbox"/>		<b>ANALYSIS</b>		<b>Sample Filtration</b> <input type="checkbox"/> Done <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please Specify below)	

Other project specific requirements/comments:

Please specify Metals or TAL.

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS						Sample Specific Comments
		Date	Time			8200C	5035A	9028S	8081B	8067A	6010C/7471B	
29082-01	SB-1 0-2H	12/3/14	700	SOI	TB	X	X	X	X	X	X	
02	SB-1 4-5H		1400		TB	X	X	X	X	X	X	
03	SB-2 0-2H		730		TB	X	X	X	X	X	X	
04	SB-2 4-5H		1340		TB	X	X	X	X	X	X	
05	SB-3 0-2H		1000		TB	X	X	X	X	X	X	
06	SB-3 4-5H		1350		TB	X	X	X	X	X	X	
07	SB-4 0-2H		755		TB	X	X	X	X	X	X	
08	SB-4 1H		805		TB	X	X	X	X	X	X	
09	SB-5 0-2H		1040		TB	X	X	X	X	X	X	
10	SB-5 8-9H		1050		TR	X	X	X	X	X	X	

Preservative Code: A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K/E = Zn Ac/NaOH O = Other	Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle	Westboro: Certification No: MA935 Mansfield: Certification No: MA015	Container Type Preservative	G E G G G G A A A A A A	Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)
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Relinquished By:	Date/Time	Received By:	Date/Time
<i>Thomas Brown</i>	12-4-14 1106	<i>Kari APL</i>	12-4-14 1106
<i>Tom</i>	12-4-14 1825	<i>Tom</i>	12-4-14 1825
<i>Tom</i>	12-4-14 2358	<i>Quinn</i>	12/4/14 2358

Total Bottles



**NEW YORK  
CHAIN OF  
CUSTODY**

Westborough, MA 01581  
8 Walkup Dr.  
TEL: 508-898-9220  
FAX: 508-898-9193

Mansfield, MA 02048  
320 Forbes Blvd  
TEL: 508-822-9300  
FAX: 508-822-3288

**Service Centers**  
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5  
Albany, NY 12205: 14 Walker Way  
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page **2**  
of **2**

Date Rec'd  
in Lab

12/4/14

ALPHA Job #

11499082

<b>Client Information</b>		<b>Project Information</b>	<b>Deliverables</b>	<b>Billing Information</b>
Client: <b>Carich</b>	Project #	Project Name: <b>WFSFH</b>	<input type="checkbox"/> ASP-A <input type="checkbox"/> ASP-B	<input checked="" type="checkbox"/> Same as Client Info
Address: <b>17 Dupont Street</b>	(Use Project name as Project #) <input checked="" type="checkbox"/>	Project Location:	<input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File)	PO #
Phone: <b>516 576 8844</b>	Project Manager: <b>Thomas Brown</b>	ALPHAQuote #: <b>2014726</b>	<input type="checkbox"/> Other	
Fax:	Turn-Around Time	Standard <input checked="" type="checkbox"/> Due Date: <b>12/11/14</b>	<input type="checkbox"/> NY TOGS <input checked="" type="checkbox"/> NY Part 375	<b>Disposal Site Information</b>
Email: <b>tbrown@carichinc.com</b>	Rush (only if pre approved) <input type="checkbox"/>	# of Days: <b>5 days</b>	<input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51	Please identify below location of applicable disposal facilities.
			<input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other	Disposal Facility:
			<input type="checkbox"/> NY Unrestricted Use	<input type="checkbox"/> NJ <input type="checkbox"/> NY
			<input type="checkbox"/> NYC Sewer Discharge	<input type="checkbox"/> Other:

These samples have been previously analyzed by Alpha

**Other project specific requirements/comments:**

Please specify Metals or TAL.

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS						Sample Filtration	Sample Specific Comments
		Date	Time			8260C	8035A	8270D	8081B	8082A	60105/747B		
29082-11	SB-6 0-2ft	12/3/14	1230	Soil	TB	X	X	X	X	X	X		
12	SB-6 8-9ft	12/3/14	1240	Soil	TB	X	X	X	X	X	X		

Preservative Code: A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K/E = Zn Ac/NaOH O = Other	Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle	Westboro: Certification No: MA935 Mansfield: Certification No: MA015	Container Type G E G G G G	Preservative A A X A A	Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)	
Relinquished By:		Date/Time	Received By:			Date/Time
Thomas Brown		12-4-14 1106	Karl NAC			12-4-14 1106
Tom Taler		12-4-14 1825	Tom Taler		12-4-14 1825	
Tom Taler		12-4-14 2358	Challen dlu		12/4/14 2358	

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# **APPENDIX F**

**Laboratory Data Deliverables for Groundwater Analytical Data**

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## ANALYTICAL REPORT

Lab Number:	L1431312
Client:	CA RICH CONSULTANTS, INC. 17 Dupont St Plainview, NY 11803
ATTN:	Thomas Brown
Phone:	(516) 576-8844
Project Name:	14-WSFSSH-1B
Project Number:	14-WSFSSH-1B
Report Date:	01/08/15

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1431312-01	MW-1	WATER	153-157 SHERMAN AVE.	12/30/14 08:40	12/30/14
L1431312-02	MW-2	WATER	153-157 SHERMAN AVE.	12/30/14 09:20	12/30/14
L1431312-03	MW-3	WATER	153-157 SHERMAN AVE.	12/30/14 08:00	12/30/14
L1431312-04	TRIP BLANK	WATER	153-157 SHERMAN AVE.	12/30/14 00:00	12/30/14

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

### Case Narrative (continued)

#### Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Semivolatile Organics

WG753077-3 The WG753077-3 LCSD recovery, associated with L1431312-01 through -03, are below the acceptance criteria for Benzoic acid (5%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

#### Dissolved Metals

L1431312-01: The dissolved results are greater than the total results. The sample containers were verified as being labeled correctly by the laboratory. The samples were field filtered and contained visible sediment. The WG753347-4 MS recovery, performed on L1431312-02, is outside the acceptance criteria for iron (260%), magnesium (141%), and calcium (60%). A post digestion spike was performed and was within acceptance criteria.

#### Total Mercury

The WG753312-4 MS recovery, performed on L1431312-01, is outside the acceptance criteria for mercury (71%). A post digestion spike was performed and was within acceptance criteria.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Cynthia McQueen

Title: Technical Director/Representative

Date: 01/08/15

# ORGANICS

# VOLATILES

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-01  
 Client ID: MW-1  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 01/06/15 15:08  
 Analyst: PD

Date Collected: 12/30/14 08:40  
 Date Received: 12/30/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-01

Date Collected: 12/30/14 08:40

Client ID: MW-1

Date Received: 12/30/14

Sample Location: 153-157 SHERMAN AVE.

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-01

Date Collected: 12/30/14 08:40

Client ID: MW-1

Date Received: 12/30/14

Sample Location: 153-157 SHERMAN AVE.

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	101		70-130

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-02  
 Client ID: MW-2  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 01/06/15 15:36  
 Analyst: PD

Date Collected: 12/30/14 09:20  
 Date Received: 12/30/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	1.6		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-02

Date Collected: 12/30/14 09:20

Client ID: MW-2

Date Received: 12/30/14

Sample Location: 153-157 SHERMAN AVE.

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-02

Date Collected: 12/30/14 09:20

Client ID: MW-2

Date Received: 12/30/14

Sample Location: 153-157 SHERMAN AVE.

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	88		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	101		70-130

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-03  
 Client ID: MW-3  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 01/06/15 16:05  
 Analyst: PD

Date Collected: 12/30/14 08:00  
 Date Received: 12/30/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	2.8		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-03

Date Collected: 12/30/14 08:00

Client ID: MW-3

Date Received: 12/30/14

Sample Location: 153-157 SHERMAN AVE.

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-03

Date Collected: 12/30/14 08:00

Client ID: MW-3

Date Received: 12/30/14

Sample Location: 153-157 SHERMAN AVE.

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	101		70-130

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

**Lab ID:** L1431312-04  
**Client ID:** TRIP BLANK  
**Sample Location:** 153-157 SHERMAN AVE.  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 01/06/15 16:33  
**Analyst:** PD

**Date Collected:** 12/30/14 00:00  
**Date Received:** 12/30/14  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-04  
 Client ID: TRIP BLANK  
 Sample Location: 153-157 SHERMAN AVE.

Date Collected: 12/30/14 00:00  
 Date Received: 12/30/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

**Lab ID:** L1431312-04  
**Client ID:** TRIP BLANK  
**Sample Location:** 153-157 SHERMAN AVE.

**Date Collected:** 12/30/14 00:00  
**Date Received:** 12/30/14  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	88		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	102		70-130

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 01/06/15 10:00  
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG753703-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
2-Chloroethylvinyl ether	ND		ug/l	10	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.33
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 01/06/15 10:00  
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG753703-3					
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Diisopropyl Ether	ND		ug/l	2.0	0.65
Tert-Butyl Alcohol	ND		ug/l	10	0.90
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Acrolein	ND		ug/l	5.0	0.63
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
Analytical Date: 01/06/15 10:00  
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG753703-3					
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Ethyl Acetate	ND		ug/l	10	0.70
Cyclohexane	ND		ug/l	10	0.27
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.5	0.70
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	41.
Freon-113	ND		ug/l	2.5	0.70
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Tetrahydrofuran	ND		ug/l	5.0	1.5
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 01/06/15 10:00  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG753703-3					
Iodomethane	ND		ug/l	5.0	5.0
Methyl cyclohexane	ND		ug/l	10	0.40

Tentatively Identified Compounds

No Tentatively Identified Compounds      ND      ug/l

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	78		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	97		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG753703-1 WG753703-2								
Methylene chloride	107		104		70-130	3		20
1,1-Dichloroethane	112		108		70-130	4		20
Chloroform	106		103		70-130	3		20
Carbon tetrachloride	99		100		63-132	1		20
1,2-Dichloropropane	111		107		70-130	4		20
Dibromochloromethane	94		91		63-130	3		20
1,1,2-Trichloroethane	98		92		70-130	6		20
Tetrachloroethene	116		112		70-130	4		20
Chlorobenzene	115		107		75-130	7		20
Trichlorofluoromethane	94		96		62-150	2		20
1,2-Dichloroethane	90		86		70-130	5		20
1,1,1-Trichloroethane	103		103		67-130	0		20
Bromodichloromethane	97		95		67-130	2		20
trans-1,3-Dichloropropene	94		90		70-130	4		20
cis-1,3-Dichloropropene	97		92		70-130	5		20
1,1-Dichloropropene	107		105		70-130	2		20
Bromoform	95		92		54-136	3		20
1,1,2,2-Tetrachloroethane	97		93		67-130	4		20
Benzene	111		109		70-130	2		20
Toluene	117		112		70-130	4		20
Ethylbenzene	114		108		70-130	5		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG753703-1 WG753703-2								
Chloromethane	103		102		64-130	1		20
Bromomethane	186	Q	157	Q	39-139	17		20
Vinyl chloride	97		96		55-140	1		20
Chloroethane	110		103		55-138	7		20
1,1-Dichloroethene	96		96		61-145	0		20
trans-1,2-Dichloroethene	112		112		70-130	0		20
Trichloroethene	108		107		70-130	1		20
1,2-Dichlorobenzene	106		102		70-130	4		20
1,3-Dichlorobenzene	116		109		70-130	6		20
1,4-Dichlorobenzene	110		106		70-130	4		20
Methyl tert butyl ether	79		77		63-130	3		20
p/m-Xylene	115		109		70-130	5		20
o-Xylene	109		105		70-130	4		20
cis-1,2-Dichloroethene	110		107		70-130	3		20
Dibromomethane	92		87		70-130	6		20
1,2,3-Trichloropropane	93		92		64-130	1		20
Acrylonitrile	90		84		70-130	7		20
Diisopropyl Ether	103		100		70-130	3		20
Tert-Butyl Alcohol	82		82		70-130	0		20
Styrene	105		101		70-130	4		20
Dichlorodifluoromethane	83		85		36-147	2		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG753703-1 WG753703-2								
Acetone	40	Q	38	Q	58-148	5		20
Carbon disulfide	88		87		51-130	1		20
2-Butanone	66		64		63-138	3		20
Vinyl acetate	77		73		70-130	5		20
4-Methyl-2-pentanone	80		70		59-130	13		20
2-Hexanone	61		56	Q	57-130	9		20
Acrolein	94		91		40-160	3		20
Bromochloromethane	108		106		70-130	2		20
2,2-Dichloropropane	107		106		63-133	1		20
1,2-Dibromoethane	89		87		70-130	2		20
1,3-Dichloropropane	95		93		70-130	2		20
1,1,1,2-Tetrachloroethane	106		105		64-130	1		20
Bromobenzene	116		112		70-130	4		20
n-Butylbenzene	115		102		53-136	12		20
sec-Butylbenzene	119		112		70-130	6		20
tert-Butylbenzene	121		114		70-130	6		20
o-Chlorotoluene	120		118		70-130	2		20
p-Chlorotoluene	118		111		70-130	6		20
1,2-Dibromo-3-chloropropane	88		88		41-144	0		20
Hexachlorobutadiene	99		89		63-130	11		20
Isopropylbenzene	124		119		70-130	4		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG753703-1 WG753703-2								
p-Isopropyltoluene	117		108		70-130	8		20
Naphthalene	61	Q	68	Q	70-130	11		20
n-Propylbenzene	120		116		69-130	3		20
1,2,3-Trichlorobenzene	76		80		70-130	5		20
1,2,4-Trichlorobenzene	72		74		70-130	3		20
1,3,5-Trimethylbenzene	120		114		64-130	5		20
1,2,4-Trimethylbenzene	121		114		70-130	6		20
Methyl Acetate	83		79		70-130	5		20
Ethyl Acetate	74		69	Q	70-130	7		20
Cyclohexane	112		112		70-130	0		20
Ethyl-Tert-Butyl-Ether	98		95		70-130	3		20
Tertiary-Amyl Methyl Ether	90		88		66-130	2		20
1,4-Dioxane	75		73		56-162	3		20
Freon-113	101		102		70-130	1		20
p-Diethylbenzene	114		104		70-130	9		20
p-Ethyltoluene	122		116		70-130	5		20
1,2,4,5-Tetramethylbenzene	107		102		70-130	5		20
Ethyl ether	90		88		59-134	2		20
trans-1,4-Dichloro-2-butene	84		76		70-130	10		20
Iodomethane	85		106		70-130	22	Q	20
Methyl cyclohexane	113		113		70-130	0		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG753703-1 WG753703-2

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
1,2-Dichloroethane-d4	77		77		70-130
Toluene-d8	102		103		70-130
4-Bromofluorobenzene	101		103		70-130
Dibromofluoromethane	94		97		70-130

# SEMIVOLATILES

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-01  
 Client ID: MW-1  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 01/08/15 01:31  
 Analyst: AS

Date Collected: 12/30/14 08:40  
 Date Received: 12/30/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/03/15 11:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.30	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.35	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.32	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-Ethylhexyl)phthalate	1.7	J	ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
Biphenyl	ND		ug/l	2.0	0.24	1
4-Chloroaniline	ND		ug/l	5.0	0.84	1
2-Nitroaniline	ND		ug/l	5.0	0.96	1
3-Nitroaniline	ND		ug/l	5.0	0.67	1
4-Nitroaniline	ND		ug/l	5.0	0.83	1
Dibenzofuran	ND		ug/l	2.0	0.22	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36	1

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-01

Date Collected: 12/30/14 08:40

Client ID: MW-1

Date Received: 12/30/14

Sample Location: 153-157 SHERMAN AVE.

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acetophenone	ND		ug/l	5.0	0.43	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
P-Chloro-M-Cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1
2-Methylphenol	ND		ug/l	5.0	0.70	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75	1
Benzoic Acid	ND		ug/l	50	1.0	1
Benzyl Alcohol	ND		ug/l	2.0	0.68	1
Carbazole	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	33		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	83		15-120
2,4,6-Tribromophenol	81		10-120
4-Terphenyl-d14	92		41-149

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

Lab ID: L1431312-01  
 Client ID: MW-1  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water  
 Analytical Method: 1,8270D-SIM  
 Analytical Date: 01/06/15 13:52  
 Analyst: KV

Date Collected: 12/30/14 08:40  
 Date Received: 12/30/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/03/15 11:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS-SIM - Westborough Lab</b>						
Acenaphthene	ND		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	ND		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	0.08	1
Pyrene	ND		ug/l	0.20	0.06	1
2-Methylnaphthalene	ND		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

**Project Name:** 14-WSFSSH-1B**Lab Number:** L1431312**Project Number:** 14-WSFSSH-1B**Report Date:** 01/08/15**SAMPLE RESULTS**

Lab ID: L1431312-01

Date Collected: 12/30/14 08:40

Client ID: MW-1

Date Received: 12/30/14

Sample Location: 153-157 SHERMAN AVE.

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	83		15-120
2,4,6-Tribromophenol	103		10-120
4-Terphenyl-d14	72		41-149

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-02  
 Client ID: MW-2  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 01/08/15 01:58  
 Analyst: AS

Date Collected: 12/30/14 09:20  
 Date Received: 12/30/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/03/15 11:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.30	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.35	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.32	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-Ethylhexyl)phthalate	1.6	J	ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
Biphenyl	ND		ug/l	2.0	0.24	1
4-Chloroaniline	ND		ug/l	5.0	0.84	1
2-Nitroaniline	ND		ug/l	5.0	0.96	1
3-Nitroaniline	ND		ug/l	5.0	0.67	1
4-Nitroaniline	ND		ug/l	5.0	0.83	1
Dibenzofuran	ND		ug/l	2.0	0.22	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36	1

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-02

Date Collected: 12/30/14 09:20

Client ID: MW-2

Date Received: 12/30/14

Sample Location: 153-157 SHERMAN AVE.

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acetophenone	ND		ug/l	5.0	0.43	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
P-Chloro-M-Cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1
2-Methylphenol	ND		ug/l	5.0	0.70	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75	1
Benzoic Acid	ND		ug/l	50	1.0	1
Benzyl Alcohol	ND		ug/l	2.0	0.68	1
Carbazole	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		21-120
Phenol-d6	35		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	85		15-120
2,4,6-Tribromophenol	86		10-120
4-Terphenyl-d14	96		41-149

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

**Lab ID:** L1431312-02  
**Client ID:** MW-2  
**Sample Location:** 153-157 SHERMAN AVE.  
**Matrix:** Water  
**Analytical Method:** 1,8270D-SIM  
**Analytical Date:** 01/06/15 14:17  
**Analyst:** KV

**Date Collected:** 12/30/14 09:20  
**Date Received:** 12/30/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 01/03/15 11:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS-SIM - Westborough Lab</b>						
Acenaphthene	ND		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	ND		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	0.08	1
Pyrene	ND		ug/l	0.20	0.06	1
2-Methylnaphthalene	ND		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

**Project Name:** 14-WSFSSH-1B**Lab Number:** L1431312**Project Number:** 14-WSFSSH-1B**Report Date:** 01/08/15**SAMPLE RESULTS**

Lab ID: L1431312-02

Date Collected: 12/30/14 09:20

Client ID: MW-2

Date Received: 12/30/14

Sample Location: 153-157 SHERMAN AVE.

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	30		10-120
Nitrobenzene-d5	89		23-120
2-Fluorobiphenyl	87		15-120
2,4,6-Tribromophenol	106		10-120
4-Terphenyl-d14	75		41-149

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-03  
 Client ID: MW-3  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 01/08/15 02:25  
 Analyst: AS

Date Collected: 12/30/14 08:00  
 Date Received: 12/30/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 01/03/15 11:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Westborough Lab</b>						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.30	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.35	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.32	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-Ethylhexyl)phthalate	1.6	J	ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
Biphenyl	ND		ug/l	2.0	0.24	1
4-Chloroaniline	ND		ug/l	5.0	0.84	1
2-Nitroaniline	ND		ug/l	5.0	0.96	1
3-Nitroaniline	ND		ug/l	5.0	0.67	1
4-Nitroaniline	ND		ug/l	5.0	0.83	1
Dibenzofuran	ND		ug/l	2.0	0.22	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36	1

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-03

Date Collected: 12/30/14 08:00

Client ID: MW-3

Date Received: 12/30/14

Sample Location: 153-157 SHERMAN AVE.

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acetophenone	ND		ug/l	5.0	0.43	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
P-Chloro-M-Cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1
2-Methylphenol	ND		ug/l	5.0	0.70	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75	1
Benzoic Acid	ND		ug/l	50	1.0	1
Benzyl Alcohol	ND		ug/l	2.0	0.68	1
Carbazole	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		21-120
Phenol-d6	34		10-120
Nitrobenzene-d5	77		23-120
2-Fluorobiphenyl	82		15-120
2,4,6-Tribromophenol	81		10-120
4-Terphenyl-d14	99		41-149

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

**Lab ID:** L1431312-03  
**Client ID:** MW-3  
**Sample Location:** 153-157 SHERMAN AVE.  
**Matrix:** Water  
**Analytical Method:** 1,8270D-SIM  
**Analytical Date:** 01/06/15 14:42  
**Analyst:** KV

**Date Collected:** 12/30/14 08:00  
**Date Received:** 12/30/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 01/03/15 11:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS-SIM - Westborough Lab</b>						
Acenaphthene	ND		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	ND		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	0.08	1
Pyrene	ND		ug/l	0.20	0.06	1
2-Methylnaphthalene	ND		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

**Project Name:** 14-WSFSSH-1B**Lab Number:** L1431312**Project Number:** 14-WSFSSH-1B**Report Date:** 01/08/15**SAMPLE RESULTS**

Lab ID: L1431312-03

Date Collected: 12/30/14 08:00

Client ID: MW-3

Date Received: 12/30/14

Sample Location: 153-157 SHERMAN AVE.

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		21-120
Phenol-d6	31		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	87		15-120
2,4,6-Tribromophenol	114		10-120
4-Terphenyl-d14	83		41-149

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8270D  
**Analytical Date:** 01/08/15 10:50  
**Analyst:** AS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 01/03/15 11:13

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG753077-1					
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41
1,2-Dichlorobenzene	ND		ug/l	2.0	0.30
1,3-Dichlorobenzene	ND		ug/l	2.0	0.35
1,4-Dichlorobenzene	ND		ug/l	2.0	0.32
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60
Hexachlorocyclopentadiene	ND		ug/l	20	0.58
Isophorone	ND		ug/l	5.0	0.79
Nitrobenzene	ND		ug/l	2.0	0.40
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.34
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-Ethylhexyl)phthalate	1.1	J	ug/l	3.0	0.93
Butyl benzyl phthalate	ND		ug/l	5.0	1.1
Di-n-butylphthalate	ND		ug/l	5.0	0.77
Di-n-octylphthalate	ND		ug/l	5.0	1.2
Diethyl phthalate	ND		ug/l	5.0	0.39
Dimethyl phthalate	ND		ug/l	5.0	0.33
Biphenyl	ND		ug/l	2.0	0.24
4-Chloroaniline	ND		ug/l	5.0	0.84
2-Nitroaniline	ND		ug/l	5.0	0.96
3-Nitroaniline	ND		ug/l	5.0	0.67
4-Nitroaniline	ND		ug/l	5.0	0.83
Dibenzofuran	ND		ug/l	2.0	0.22

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8270D  
**Analytical Date:** 01/08/15 10:50  
**Analyst:** AS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 01/03/15 11:13

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG753077-1					
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36
Acetophenone	ND		ug/l	5.0	0.43
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78
P-Chloro-M-Cresol	ND		ug/l	2.0	0.54
2-Chlorophenol	ND		ug/l	2.0	0.58
2,4-Dichlorophenol	ND		ug/l	5.0	0.56
2,4-Dimethylphenol	ND		ug/l	5.0	0.58
2-Nitrophenol	ND		ug/l	10	1.0
4-Nitrophenol	ND		ug/l	10	1.1
2,4-Dinitrophenol	ND		ug/l	20	1.4
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4
Phenol	ND		ug/l	5.0	0.27
2-Methylphenol	ND		ug/l	5.0	0.70
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75
Benzoic Acid	ND		ug/l	50	1.0
Benzyl Alcohol	ND		ug/l	2.0	0.68
Carbazole	ND		ug/l	2.0	0.37

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	70		23-120
2-Fluorobiphenyl	73		15-120
2,4,6-Tribromophenol	72		10-120
4-Terphenyl-d14	92		41-149

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8270D-SIM  
**Analytical Date:** 01/06/15 10:32  
**Analyst:** KV

**Extraction Method:** EPA 3510C  
**Extraction Date:** 01/03/15 11:12

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG753078-1					
Acenaphthene	ND		ug/l	0.20	0.06
2-Chloronaphthalene	ND		ug/l	0.20	0.07
Fluoranthene	ND		ug/l	0.20	0.04
Hexachlorobutadiene	ND		ug/l	0.50	0.07
Naphthalene	ND		ug/l	0.20	0.06
Benzo(a)anthracene	ND		ug/l	0.20	0.06
Benzo(a)pyrene	ND		ug/l	0.20	0.07
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07
Chrysene	ND		ug/l	0.20	0.05
Acenaphthylene	ND		ug/l	0.20	0.05
Anthracene	ND		ug/l	0.20	0.06
Benzo(ghi)perylene	ND		ug/l	0.20	0.07
Fluorene	ND		ug/l	0.20	0.06
Phenanthrene	ND		ug/l	0.20	0.06
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	0.08
Pyrene	ND		ug/l	0.20	0.06
1-Methylnaphthalene	ND		ug/l	0.20	0.06
2-Methylnaphthalene	ND		ug/l	0.20	0.06
Pentachlorophenol	ND		ug/l	0.80	0.19
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.07

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 01/06/15 10:32

Extraction Date: 01/03/15 11:12

Analyst: KV

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG753078-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		21-120
Phenol-d6	29		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	78		15-120
2,4,6-Tribromophenol	107		10-120
4-Terphenyl-d14	85		41-149

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG753077-2 WG753077-3								
1,2,4-Trichlorobenzene	76		76		39-98	0		30
Bis(2-chloroethyl)ether	85		85		40-140	0		30
1,2-Dichlorobenzene	76		76		40-140	0		30
1,3-Dichlorobenzene	72		73		40-140	1		30
1,4-Dichlorobenzene	74		73		36-97	1		30
3,3'-Dichlorobenzidine	56		59		40-140	5		30
2,4-Dinitrotoluene	96		100	Q	24-96	4		30
2,6-Dinitrotoluene	98		102		40-140	4		30
4-Chlorophenyl phenyl ether	89		91		40-140	2		30
4-Bromophenyl phenyl ether	88		92		40-140	4		30
Bis(2-chloroisopropyl)ether	88		88		40-140	0		30
Bis(2-chloroethoxy)methane	92		92		40-140	0		30
Hexachlorocyclopentadiene	64		65		40-140	2		30
Isophorone	94		96		40-140	2		30
Nitrobenzene	88		87		40-140	1		30
NitrosoDiPhenylAmine(NDPA)/DPA	91		90		40-140	1		30
n-Nitrosodi-n-propylamine	95		94		29-132	1		30
Bis(2-Ethylhexyl)phthalate	106		106		40-140	0		30
Butyl benzyl phthalate	103		104		40-140	1		30
Di-n-butylphthalate	102		102		40-140	0		30
Di-n-octylphthalate	110		111		40-140	1		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG753077-2 WG753077-3								
Diethyl phthalate	91		94		40-140	3		30
Dimethyl phthalate	92		94		40-140	2		30
Biphenyl	86		88			2		30
4-Chloroaniline	60		48		40-140	22		30
2-Nitroaniline	104		107		52-143	3		30
3-Nitroaniline	58		62		25-145	7		30
4-Nitroaniline	80		88		51-143	10		30
Dibenzofuran	91		94		40-140	3		30
1,2,4,5-Tetrachlorobenzene	76		79		2-134	4		30
Acetophenone	98		98		39-129	0		30
2,4,6-Trichlorophenol	95		98		30-130	3		30
P-Chloro-M-Cresol	101	Q	102	Q	23-97	1		30
2-Chlorophenol	90		89		27-123	1		30
2,4-Dichlorophenol	98		98		30-130	0		30
2,4-Dimethylphenol	23	Q	18	Q	30-130	24		30
2-Nitrophenol	98		103		30-130	5		30
4-Nitrophenol	66		68		10-80	3		30
2,4-Dinitrophenol	73		73		20-130	0		30
4,6-Dinitro-o-cresol	96		103		20-164	7		30
Phenol	46		45		12-110	2		30
2-Methylphenol	69		65		30-130	6		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG753077-2 WG753077-3								
3-Methylphenol/4-Methylphenol	74		73		30-130	1		30
2,4,5-Trichlorophenol	100		101		30-130	1		30
Benzoic Acid	14		5	Q		95	Q	30
Benzyl Alcohol	79		79			0		30
Carbazole	103		103		55-144	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	59		56		21-120
Phenol-d6	42		42		10-120
Nitrobenzene-d5	98		99		23-120
2-Fluorobiphenyl	93		94		15-120
2,4,6-Tribromophenol	84		87		10-120
4-Terphenyl-d14	96		100		41-149

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG753078-2 WG753078-3								
Acenaphthene	81		82		37-111	1		40
2-Chloronaphthalene	87		86		40-140	1		40
Fluoranthene	91		91		40-140	0		40
Hexachlorobutadiene	83		89		40-140	7		40
Naphthalene	77		80		40-140	4		40
Benzo(a)anthracene	92		90		40-140	2		40
Benzo(a)pyrene	94		91		40-140	3		40
Benzo(b)fluoranthene	99		99		40-140	0		40
Benzo(k)fluoranthene	94		96		40-140	2		40
Chrysene	90		90		40-140	0		40
Acenaphthylene	84		79		40-140	6		40
Anthracene	82		81		40-140	1		40
Benzo(ghi)perylene	89		91		40-140	2		40
Fluorene	96		98		40-140	2		40
Phenanthrene	82		83		40-140	1		40
Dibenzo(a,h)anthracene	91		93		40-140	2		40
Indeno(1,2,3-cd)Pyrene	90		92		40-140	2		40
Pyrene	90		90		26-127	0		40
1-Methylnaphthalene	85		86		40-140	1		40
2-Methylnaphthalene	88		89		40-140	1		40
Pentachlorophenol	68		75		9-103	10		40

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG753078-2 WG753078-3								
Hexachlorobenzene	81		81		40-140	0		40
Hexachloroethane	60		67		40-140	11		40

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
2-Fluorophenol	47		47		21-120
Phenol-d6	33		29		10-120
Nitrobenzene-d5	81		83		23-120
2-Fluorobiphenyl	90		88		15-120
2,4,6-Tribromophenol	123	Q	119		10-120
4-Terphenyl-d14	88		86		41-149

# PCBS

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

**Lab ID:** L1431312-01  
**Client ID:** MW-1  
**Sample Location:** 153-157 SHERMAN AVE.  
**Matrix:** Water  
**Analytical Method:** 1,8082A  
**Analytical Date:** 01/04/15 23:15  
**Analyst:** JT

**Date Collected:** 12/30/14 08:40  
**Date Received:** 12/30/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 12/31/14 15:46  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 01/04/15  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 01/04/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	45		30-150	B
Decachlorobiphenyl	54		30-150	B
2,4,5,6-Tetrachloro-m-xylene	40		30-150	A
Decachlorobiphenyl	44		30-150	A

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

Lab ID: L1431312-02  
 Client ID: MW-2  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water  
 Analytical Method: 1,8082A  
 Analytical Date: 01/04/15 23:39  
 Analyst: JT

Date Collected: 12/30/14 09:20  
 Date Received: 12/30/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 12/31/14 15:46  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 01/04/15  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 01/04/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	B
Decachlorobiphenyl	65		30-150	B
2,4,5,6-Tetrachloro-m-xylene	54		30-150	A
Decachlorobiphenyl	50		30-150	A

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

**Lab ID:** L1431312-03  
**Client ID:** MW-3  
**Sample Location:** 153-157 SHERMAN AVE.  
**Matrix:** Water  
**Analytical Method:** 1,8082A  
**Analytical Date:** 01/04/15 23:27  
**Analyst:** JT

**Date Collected:** 12/30/14 08:00  
**Date Received:** 12/30/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 12/31/14 15:46  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 01/04/15  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 01/04/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	52		30-150	B
Decachlorobiphenyl	57		30-150	B
2,4,5,6-Tetrachloro-m-xylene	55		30-150	A
Decachlorobiphenyl	47		30-150	A

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**Method Blank Analysis  
 Batch Quality Control**

**Analytical Method:** 1,8082A  
**Analytical Date:** 01/04/15 23:52  
**Analyst:** JT

**Extraction Method:** EPA 3510C  
**Extraction Date:** 12/31/14 15:46  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 01/04/15  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 01/04/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-03 Batch: WG752978-1						
Aroclor 1016	ND		ug/l	0.083	0.055	A
Aroclor 1221	ND		ug/l	0.083	0.053	A
Aroclor 1232	ND		ug/l	0.083	0.031	A
Aroclor 1242	ND		ug/l	0.083	0.060	A
Aroclor 1248	ND		ug/l	0.083	0.051	A
Aroclor 1254	ND		ug/l	0.083	0.034	A
Aroclor 1260	ND		ug/l	0.083	0.032	A
Aroclor 1262	ND		ug/l	0.083	0.029	A
Aroclor 1268	ND		ug/l	0.083	0.038	A
PCBs, Total	ND		ug/l	0.083	0.029	A

Surrogate	%Recovery	Qualifier	Acceptance	
			Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	44		30-150	B
Decachlorobiphenyl	66		30-150	B
2,4,5,6-Tetrachloro-m-xylene	45		30-150	A
Decachlorobiphenyl	51		30-150	A



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG752978-2 WG752978-3									
Aroclor 1016	66		61		40-140	8		50	A
Aroclor 1260	62		56		40-140	9		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		52		30-150	B
Decachlorobiphenyl	53		49		30-150	B
2,4,5,6-Tetrachloro-m-xylene	55		47		30-150	A
Decachlorobiphenyl	45		43		30-150	A

# PESTICIDES

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

Lab ID: L1431312-01  
 Client ID: MW-1  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water  
 Analytical Method: 1,8081B  
 Analytical Date: 01/05/15 12:11  
 Analyst: GP

Date Collected: 12/30/14 08:40  
 Date Received: 12/30/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 12/31/14 15:50  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 01/05/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		30-150	A
Decachlorobiphenyl	81		30-150	A
2,4,5,6-Tetrachloro-m-xylene	88		30-150	B
Decachlorobiphenyl	88		30-150	B

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

**Lab ID:** L1431312-02  
**Client ID:** MW-2  
**Sample Location:** 153-157 SHERMAN AVE.  
**Matrix:** Water  
**Analytical Method:** 1,8081B  
**Analytical Date:** 01/05/15 12:24  
**Analyst:** GP

**Date Collected:** 12/30/14 09:20  
**Date Received:** 12/30/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 12/31/14 15:50  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 01/05/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	75		30-150	B

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

**Lab ID:** L1431312-03  
**Client ID:** MW-3  
**Sample Location:** 153-157 SHERMAN AVE.  
**Matrix:** Water  
**Analytical Method:** 1,8081B  
**Analytical Date:** 01/05/15 12:37  
**Analyst:** GP

**Date Collected:** 12/30/14 08:00  
**Date Received:** 12/30/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 12/31/14 15:50  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 01/05/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	82		30-150	B
Decachlorobiphenyl	66		30-150	B

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8081B  
**Analytical Date:** 01/05/15 11:31  
**Analyst:** GP

**Extraction Method:** EPA 3510C  
**Extraction Date:** 12/31/14 15:50  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 01/05/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-03 Batch: WG752979-1						
Delta-BHC	ND		ug/l	0.020	0.005	A
Lindane	ND		ug/l	0.020	0.004	A
Alpha-BHC	ND		ug/l	0.020	0.004	A
Beta-BHC	ND		ug/l	0.020	0.006	A
Heptachlor	ND		ug/l	0.020	0.003	A
Aldrin	ND		ug/l	0.020	0.002	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	A
Endrin	ND		ug/l	0.040	0.004	A
Endrin ketone	ND		ug/l	0.040	0.005	A
Dieldrin	ND		ug/l	0.040	0.004	A
4,4'-DDE	ND		ug/l	0.040	0.004	A
4,4'-DDD	ND		ug/l	0.040	0.005	A
4,4'-DDT	ND		ug/l	0.040	0.004	A
Endosulfan I	ND		ug/l	0.020	0.003	A
Endosulfan II	ND		ug/l	0.040	0.005	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	A
Methoxychlor	ND		ug/l	0.200	0.007	A
Toxaphene	ND		ug/l	0.200	0.063	A
cis-Chlordane	ND		ug/l	0.020	0.007	A
trans-Chlordane	ND		ug/l	0.020	0.006	A
Chlordane	ND		ug/l	0.200	0.046	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	85		30-150	B

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG752979-2 WG752979-3									
Delta-BHC	61		64		30-150	6		20	A
Lindane	87		92		30-150	6		20	A
Alpha-BHC	78		82		30-150	5		20	A
Beta-BHC	85		91		30-150	7		20	A
Heptachlor	71		76		30-150	7		20	A
Aldrin	71		75		30-150	5		20	A
Heptachlor epoxide	85		90		30-150	5		20	A
Endrin	92		96		30-150	4		20	A
Endrin ketone	70		74		30-150	6		20	A
Dieldrin	91		96		30-150	5		20	A
4,4'-DDE	86		90		30-150	5		20	A
4,4'-DDD	88		92		30-150	5		20	A
4,4'-DDT	78		84		30-150	6		20	A
Endosulfan I	85		89		30-150	5		20	A
Endosulfan II	77		81		30-150	6		20	A
Endosulfan sulfate	74		79		30-150	6		20	A
Methoxychlor	69		73		30-150	6		20	A
cis-Chlordane	79		84		30-150	6		20	A
trans-Chlordane	81		87		30-150	6		20	A

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG752979-2 WG752979-3

<u>Surrogate</u>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria	<i>Column</i>
2,4,5,6-Tetrachloro-m-xylene	61		62		30-150	A
Decachlorobiphenyl	69		72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		64		30-150	B
Decachlorobiphenyl	78		82		30-150	B

## METALS

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

Lab ID: L1431312-01  
 Client ID: MW-1  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water

Date Collected: 12/30/14 08:40  
 Date Received: 12/30/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	84.0		mg/l	2.00	0.338	200	01/06/15 11:07	01/07/15 17:58	EPA 3005A	1,6020A	BM
Antimony, Total	0.0007	J	mg/l	0.0020	0.0001	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Arsenic, Total	0.0116		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Barium, Total	0.8878		mg/l	0.0100	0.0013	20	01/06/15 11:07	01/06/15 18:13	EPA 3005A	1,6020A	BM
Beryllium, Total	0.0048		mg/l	0.0005	0.0002	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Cadmium, Total	0.0038		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Calcium, Total	635		mg/l	2.00	0.640	20	01/06/15 11:07	01/06/15 18:13	EPA 3005A	1,6020A	BM
Chromium, Total	0.1298		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Cobalt, Total	0.1090		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Copper, Total	0.2560		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Iron, Total	142		mg/l	1.00	0.240	20	01/06/15 11:07	01/06/15 18:13	EPA 3005A	1,6020A	BM
Lead, Total	0.1423		mg/l	0.0010	0.0001	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Magnesium, Total	155		mg/l	1.40	0.446	20	01/06/15 11:07	01/06/15 18:13	EPA 3005A	1,6020A	BM
Manganese, Total	8.340		mg/l	0.0100	0.0060	20	01/06/15 11:07	01/06/15 18:13	EPA 3005A	1,6020A	BM
Mercury, Total	0.00024		mg/l	0.00020	0.00006	1	01/05/15 15:04	01/07/15 12:08	EPA 7470A	1,7470A	MC
Nickel, Total	0.2076		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Potassium, Total	29.9		mg/l	0.100	0.019	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Selenium, Total	0.024		mg/l	0.005	0.001	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Silver, Total	0.0004		mg/l	0.0003	0.0001	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Sodium, Total	23.1		mg/l	2.00	0.322	20	01/06/15 11:07	01/06/15 18:13	EPA 3005A	1,6020A	BM
Thallium, Total	0.0014		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Vanadium, Total	0.1318		mg/l	0.0050	0.0006	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
Zinc, Total	0.4478		mg/l	0.0100	0.0026	1	01/06/15 11:07	01/06/15 18:09	EPA 3005A	1,6020A	BM
<b>Dissolved Metals - Westborough Lab</b>											
Aluminum, Dissolved	19.8		mg/l	2.00	0.338	200	01/06/15 11:07	01/06/15 17:06	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.0012	J	mg/l	0.0020	0.0001	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.0150		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Barium, Dissolved	0.2948		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	0.0013		mg/l	0.0005	0.0002	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	0.0089		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

**Lab ID:** L1431312-01  
**Client ID:** MW-1  
**Sample Location:** 153-157 SHERMAN AVE.  
**Matrix:** Water

**Date Collected:** 12/30/14 08:40  
**Date Received:** 12/30/14  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Calcium, Dissolved	318		mg/l	2.00	0.640	20	01/06/15 11:07	01/06/15 16:47	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.0414		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	0.0813		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.080		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Iron, Dissolved	37.8		mg/l	0.050	0.012	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.0628		mg/l	0.0010	0.0001	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	68.7		mg/l	1.40	0.446	20	01/06/15 11:07	01/06/15 16:47	EPA 3005A	1,6020A	BM
Manganese, Dissolved	2.355		mg/l	0.0100	0.0060	20	01/06/15 11:07	01/06/15 16:47	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.00009	J	mg/l	0.00020	0.00006	1	01/05/15 15:04	01/07/15 11:40	EPA 7470A	1,7470A	MC
Nickel, Dissolved	0.0640		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Potassium, Dissolved	23.5		mg/l	0.100	0.019	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.020		mg/l	0.005	0.001	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Silver, Dissolved	0.0002	J	mg/l	0.0003	0.0001	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Sodium, Dissolved	67.9		mg/l	0.100	0.016	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Thallium, Dissolved	0.0003		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.0499		mg/l	0.0050	0.0006	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM
Zinc, Dissolved	0.1495		mg/l	0.0100	0.0026	1	01/06/15 11:07	01/06/15 16:44	EPA 3005A	1,6020A	BM



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

Lab ID: L1431312-02  
 Client ID: MW-2  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water

Date Collected: 12/30/14 09:20  
 Date Received: 12/30/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	12.2		mg/l	2.00	0.338	200	01/06/15 11:07	01/06/15 17:15	EPA 3005A	1,6020A	BM
Antimony, Total	0.0009	J	mg/l	0.0020	0.0001	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Arsenic, Total	0.0052		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Barium, Total	0.1654		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Beryllium, Total	0.0006		mg/l	0.0005	0.0002	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Cadmium, Total	0.0002		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Calcium, Total	138		mg/l	2.00	0.640	20	01/06/15 11:07	01/06/15 16:50	EPA 3005A	1,6020A	BM
Chromium, Total	0.0196		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Cobalt, Total	0.0144		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Copper, Total	0.0329		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Iron, Total	16.7		mg/l	0.050	0.012	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Lead, Total	0.0303		mg/l	0.0010	0.0001	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Magnesium, Total	44.2		mg/l	0.070	0.022	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Manganese, Total	0.8674		mg/l	0.0100	0.0060	20	01/06/15 11:07	01/06/15 16:50	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	01/05/15 15:04	01/07/15 12:13	EPA 7470A	1,7470A	MC
Nickel, Total	0.0219		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Potassium, Total	10.0		mg/l	0.100	0.019	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Selenium, Total	0.005		mg/l	0.005	0.001	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Silver, Total	0.0001	J	mg/l	0.0003	0.0001	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Sodium, Total	25.1		mg/l	0.100	0.016	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Thallium, Total	0.0002	J	mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Vanadium, Total	0.0231		mg/l	0.0050	0.0006	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM
Zinc, Total	0.0876		mg/l	0.0100	0.0026	1	01/06/15 11:07	01/06/15 17:02	EPA 3005A	1,6020A	BM

**Dissolved Metals - Westborough Lab**

Aluminum, Dissolved	11.8		mg/l	1.00	0.169	100	01/06/15 11:07	01/06/15 19:30	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.0005	J	mg/l	0.0020	0.0001	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.0054		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Barium, Dissolved	0.1584		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	0.0006		mg/l	0.0005	0.0002	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	0.0001	J	mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

**Lab ID:** L1431312-02  
**Client ID:** MW-2  
**Sample Location:** 153-157 SHERMAN AVE.  
**Matrix:** Water

**Date Collected:** 12/30/14 09:20  
**Date Received:** 12/30/14  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Calcium, Dissolved	139		mg/l	2.00	0.640	20	01/06/15 11:07	01/06/15 18:19	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.0182		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	0.0130		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.0312		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Iron, Dissolved	16.1		mg/l	0.050	0.012	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.0262		mg/l	0.0010	0.0001	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	42.0		mg/l	0.070	0.022	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Manganese, Dissolved	0.8091		mg/l	0.0100	0.0060	20	01/06/15 11:07	01/06/15 18:19	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.00006	J	mg/l	0.00020	0.00006	1	01/05/15 15:04	01/07/15 11:46	EPA 7470A	1,7470A	MC
Nickel, Dissolved	0.0211		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Potassium, Dissolved	8.55		mg/l	0.100	0.019	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.004	J	mg/l	0.005	0.001	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Silver, Dissolved	0.0001	J	mg/l	0.0003	0.0001	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Sodium, Dissolved	26.0		mg/l	0.100	0.016	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Thallium, Dissolved	0.0002	J	mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.0211		mg/l	0.0050	0.0006	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM
Zinc, Dissolved	0.0838		mg/l	0.0100	0.0026	1	01/06/15 11:07	01/06/15 18:16	EPA 3005A	1,6020A	BM



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

**SAMPLE RESULTS**

Lab ID: L1431312-03  
 Client ID: MW-3  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water

Date Collected: 12/30/14 08:00  
 Date Received: 12/30/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	21.0		mg/l	2.00	0.338	200	01/06/15 11:07	01/06/15 17:31	EPA 3005A	1,6020A	BM
Antimony, Total	0.0011	J	mg/l	0.0020	0.0001	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Arsenic, Total	0.0165		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Barium, Total	0.3231		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Beryllium, Total	0.0017		mg/l	0.0005	0.0002	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Cadmium, Total	0.0107		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Calcium, Total	353		mg/l	2.00	0.640	20	01/06/15 11:07	01/06/15 17:12	EPA 3005A	1,6020A	BM
Chromium, Total	0.0442		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Cobalt, Total	0.0829		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Copper, Total	0.0870		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Iron, Total	40.9		mg/l	0.050	0.012	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Lead, Total	0.0726		mg/l	0.0010	0.0001	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Magnesium, Total	79.4		mg/l	1.40	0.446	20	01/06/15 11:07	01/06/15 17:12	EPA 3005A	1,6020A	BM
Manganese, Total	2.986		mg/l	0.0100	0.0060	20	01/06/15 11:07	01/06/15 17:12	EPA 3005A	1,6020A	BM
Mercury, Total	0.00008	J	mg/l	0.00020	0.00006	1	01/05/15 15:04	01/07/15 12:15	EPA 7470A	1,7470A	MC
Nickel, Total	0.0715		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Potassium, Total	24.0		mg/l	0.100	0.019	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Selenium, Total	0.020		mg/l	0.005	0.001	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Silver, Total	0.0002	J	mg/l	0.0003	0.0001	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Sodium, Total	76.0		mg/l	2.00	0.322	20	01/06/15 11:07	01/06/15 17:12	EPA 3005A	1,6020A	BM
Thallium, Total	0.0003		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Vanadium, Total	0.0545		mg/l	0.0050	0.0006	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM
Zinc, Total	0.1600		mg/l	0.0100	0.0026	1	01/06/15 11:07	01/06/15 17:09	EPA 3005A	1,6020A	BM

**Dissolved Metals - Westborough Lab**

Aluminum, Dissolved	67.8		mg/l	2.00	0.338	200	01/06/15 11:07	01/06/15 20:20	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.0006	J	mg/l	0.0020	0.0001	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.0143		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Barium, Dissolved	0.8907		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	0.0039		mg/l	0.0005	0.0002	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	0.0043		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM



Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## SAMPLE RESULTS

Lab ID: L1431312-03  
 Client ID: MW-3  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water

Date Collected: 12/30/14 08:00  
 Date Received: 12/30/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Calcium, Dissolved	819		mg/l	2.00	0.640	20	01/06/15 11:07	01/06/15 19:16	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.1100		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	0.0852		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.2197		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Iron, Dissolved	101		mg/l	0.050	0.012	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.1115		mg/l	0.0010	0.0001	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	170		mg/l	1.40	0.446	20	01/06/15 11:07	01/06/15 19:16	EPA 3005A	1,6020A	BM
Manganese, Dissolved	8.086		mg/l	0.0100	0.0060	20	01/06/15 11:07	01/06/15 19:16	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.00033		mg/l	0.00020	0.00006	1	01/05/15 15:04	01/07/15 11:48	EPA 7470A	1,7470A	MC
Nickel, Dissolved	0.1634		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Potassium, Dissolved	29.5		mg/l	0.100	0.019	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.020		mg/l	0.005	0.001	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Silver, Dissolved	0.0004		mg/l	0.0003	0.0001	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Sodium, Dissolved	20.6		mg/l	0.100	0.016	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Thallium, Dissolved	0.0012		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.1177		mg/l	0.0050	0.0006	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM
Zinc, Dissolved	0.3677		mg/l	0.0100	0.0026	1	01/06/15 11:07	01/06/15 19:13	EPA 3005A	1,6020A	BM



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

## Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-03 Batch: WG753312-1									
Mercury, Total	ND	mg/l	0.00020	0.00006	1	01/05/15 15:04	01/07/15 11:50	1,7470A	MC

### Prep Information

Digestion Method: EPA 7470A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01-03 Batch: WG753313-1									
Mercury, Dissolved	ND	mg/l	0.00020	0.00006	1	01/05/15 15:04	01/07/15 11:37	1,7470A	MC

### Prep Information

Digestion Method: EPA 7470A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01-03 Batch: WG753347-1									
Aluminum, Dissolved	ND	mg/l	0.010	0.002	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Antimony, Dissolved	0.0005 J	mg/l	0.0020	0.0001	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Arsenic, Dissolved	ND	mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Barium, Dissolved	ND	mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Beryllium, Dissolved	ND	mg/l	0.0005	0.0002	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Cadmium, Dissolved	ND	mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Calcium, Dissolved	ND	mg/l	0.100	0.032	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Chromium, Dissolved	ND	mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Cobalt, Dissolved	ND	mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Copper, Dissolved	ND	mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Iron, Dissolved	ND	mg/l	0.050	0.012	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Lead, Dissolved	ND	mg/l	0.0010	0.0001	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Magnesium, Dissolved	ND	mg/l	0.070	0.022	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Manganese, Dissolved	ND	mg/l	0.0005	0.0003	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Nickel, Dissolved	ND	mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Potassium, Dissolved	ND	mg/l	0.100	0.019	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

## Method Blank Analysis Batch Quality Control

Selenium, Dissolved	ND	mg/l	0.005	0.001	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Silver, Dissolved	ND	mg/l	0.0003	0.0001	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Sodium, Dissolved	ND	mg/l	0.100	0.016	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Thallium, Dissolved	ND	mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Vanadium, Dissolved	ND	mg/l	0.0050	0.0006	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM
Zinc, Dissolved	ND	mg/l	0.0100	0.0026	1	01/06/15 11:07	01/06/15 17:54	1,6020A	BM

### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Total Metals - Westborough Lab for sample(s): 01-03 Batch: WG753349-1</b>										
Aluminum, Total	ND		mg/l	0.010	0.002	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Antimony, Total	0.0009	J	mg/l	0.0020	0.0001	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Arsenic, Total	ND		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Barium, Total	ND		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Beryllium, Total	ND		mg/l	0.0005	0.0002	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Cadmium, Total	ND		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Calcium, Total	ND		mg/l	0.100	0.032	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Chromium, Total	ND		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Cobalt, Total	ND		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Copper, Total	ND		mg/l	0.0010	0.0003	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Iron, Total	ND		mg/l	0.050	0.012	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Lead, Total	ND		mg/l	0.0010	0.0001	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Magnesium, Total	ND		mg/l	0.070	0.022	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Manganese, Total	ND		mg/l	0.0005	0.0003	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Nickel, Total	ND		mg/l	0.0005	0.0001	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Potassium, Total	ND		mg/l	0.100	0.019	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Selenium, Total	ND		mg/l	0.005	0.001	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Silver, Total	ND		mg/l	0.0003	0.0001	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Sodium, Total	ND		mg/l	0.100	0.016	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Thallium, Total	ND		mg/l	0.0002	0.0001	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Vanadium, Total	ND		mg/l	0.0050	0.0006	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM
Zinc, Total	ND		mg/l	0.0100	0.0026	1	01/06/15 11:07	01/06/15 16:22	1,6020A	BM

**Project Name:** 14-WSFSSH-1B

**Lab Number:** L1431312

**Project Number:** 14-WSFSSH-1B

**Report Date:** 01/08/15

## **Method Blank Analysis Batch Quality Control**

### **Prep Information**

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Digestion Method: EPA 3005A

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Project Number: 14-WSFSSH-1B

Lab Number: L1431312

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG753312-2								
Mercury, Total	89		-		80-120	-		
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG753313-2								
Mercury, Dissolved	89		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG753347-2					
Aluminum, Dissolved	104	-	80-120	-	
Antimony, Dissolved	106	-	80-120	-	
Arsenic, Dissolved	106	-	80-120	-	
Barium, Dissolved	103	-	80-120	-	
Beryllium, Dissolved	107	-	80-120	-	
Cadmium, Dissolved	116	-	80-120	-	
Calcium, Dissolved	100	-	80-120	-	
Chromium, Dissolved	101	-	80-120	-	
Cobalt, Dissolved	107	-	80-120	-	
Copper, Dissolved	107	-	80-120	-	
Iron, Dissolved	101	-	80-120	-	
Lead, Dissolved	113	-	80-120	-	
Magnesium, Dissolved	104	-	80-120	-	
Manganese, Dissolved	100	-	80-120	-	
Nickel, Dissolved	107	-	80-120	-	
Potassium, Dissolved	97	-	80-120	-	
Selenium, Dissolved	111	-	80-120	-	
Silver, Dissolved	114	-	80-120	-	
Sodium, Dissolved	108	-	80-120	-	
Thallium, Dissolved	102	-	80-120	-	
Vanadium, Dissolved	104	-	80-120	-	

## Lab Control Sample Analysis

Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG753347-2					
Zinc, Dissolved	112	-	80-120	-	

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG753349-2					
Aluminum, Total	106	-	80-120	-	
Antimony, Total	104	-	80-120	-	
Arsenic, Total	102	-	80-120	-	
Barium, Total	100	-	80-120	-	
Beryllium, Total	111	-	80-120	-	
Cadmium, Total	116	-	80-120	-	
Calcium, Total	100	-	80-120	-	
Chromium, Total	103	-	80-120	-	
Cobalt, Total	105	-	80-120	-	
Copper, Total	107	-	80-120	-	
Iron, Total	102	-	80-120	-	
Lead, Total	113	-	80-120	-	
Magnesium, Total	104	-	80-120	-	
Manganese, Total	98	-	80-120	-	
Nickel, Total	103	-	80-120	-	
Potassium, Total	102	-	80-120	-	
Selenium, Total	105	-	80-120	-	
Silver, Total	113	-	80-120	-	
Sodium, Total	108	-	80-120	-	
Thallium, Total	103	-	80-120	-	
Vanadium, Total	104	-	80-120	-	

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG753349-2					
Zinc, Total	111	-	80-120	-	

**Matrix Spike Analysis**  
Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG753312-4 QC Sample: L1431312-01 Client ID: MW-1												
Mercury, Total	0.00024	0.005	0.00379	71	Q	-	-		75-125	-		20
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG753313-4 QC Sample: L1431312-01 Client ID: MW-1												
Mercury, Dissolved	0.00009J	0.005	0.00418	84		-	-		75-125	-		20

### Matrix Spike Analysis Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG753347-4 QC Sample: L1431312-02 Client ID: MW-2									
Aluminum, Dissolved	11.8	2	13.8	100	-	-	75-125	-	20
Antimony, Dissolved	0.0005J	0.5	0.3999	80	-	-	75-125	-	20
Arsenic, Dissolved	0.0054	0.12	0.1235	98	-	-	75-125	-	20
Barium, Dissolved	0.1584	2	2.143	99	-	-	75-125	-	20
Beryllium, Dissolved	0.0006	0.05	0.0528	104	-	-	75-125	-	20
Cadmium, Dissolved	0.0001J	0.051	0.0595	117	-	-	75-125	-	20
Calcium, Dissolved	139.	10	145	60	Q	-	75-125	-	20
Chromium, Dissolved	0.0182	0.2	0.2157	99	-	-	75-125	-	20
Cobalt, Dissolved	0.0130	0.5	0.5179	101	-	-	75-125	-	20
Copper, Dissolved	0.0312	0.25	0.2941	105	-	-	75-125	-	20
Iron, Dissolved	16.1	1	18.7	260	Q	-	75-125	-	20
Lead, Dissolved	0.0262	0.51	0.5952	112	-	-	75-125	-	20
Magnesium, Dissolved	42.0	10	56.1	141	Q	-	75-125	-	20
Manganese, Dissolved	0.8091	0.5	1.227	84	-	-	75-125	-	20
Nickel, Dissolved	0.0211	0.5	0.5144	99	-	-	75-125	-	20
Potassium, Dissolved	8.55	10	17.7	92	-	-	75-125	-	20
Selenium, Dissolved	0.004J	0.12	0.130	108	-	-	75-125	-	20
Silver, Dissolved	0.0001J	0.05	0.0543	108	-	-	75-125	-	20
Sodium, Dissolved	26.0	10	37.6	116	-	-	75-125	-	20
Thallium, Dissolved	0.0002J	0.12	0.1196	100	-	-	75-125	-	20
Vanadium, Dissolved	0.0211	0.5	0.5001	96	-	-	75-125	-	20

### Matrix Spike Analysis Batch Quality Control

**Project Name:** 14-WSFSSH-1B

**Lab Number:** L1431312

**Project Number:** 14-WSFSSH-1B

**Report Date:** 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG753347-4 QC Sample: L1431312-02 Client ID: MW-2									
Zinc, Dissolved	0.0838	0.5	0.5985	103	-	-	75-125	-	20

### Matrix Spike Analysis Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG753349-4 QC Sample: L1430655-01 Client ID: MS Sample									
Aluminum, Total	0.005J	2	2.24	112	-	-	75-125	-	20
Antimony, Total	0.0010J	0.5	0.5533	111	-	-	75-125	-	20
Arsenic, Total	0.1406	0.12	0.2682	106	-	-	75-125	-	20
Barium, Total	0.5284	2	2.622	105	-	-	75-125	-	20
Beryllium, Total	ND	0.05	0.0553	110	-	-	75-125	-	20
Cadmium, Total	ND	0.051	0.0582	114	-	-	75-125	-	20
Calcium, Total	89.0	10	99.8	108	-	-	75-125	-	20
Chromium, Total	0.0004J	0.2	0.2078	104	-	-	75-125	-	20
Cobalt, Total	0.0354	0.5	0.5713	107	-	-	75-125	-	20
Copper, Total	0.0015	0.25	0.2676	106	-	-	75-125	-	20
Iron, Total	14.2	1	16.1	190	Q	-	75-125	-	20
Lead, Total	0.0006J	0.51	0.5929	116	-	-	75-125	-	20
Magnesium, Total	21.0	10	33.6	126	Q	-	75-125	-	20
Manganese, Total	2.664	0.5	3.280	123	-	-	75-125	-	20
Nickel, Total	0.4766	0.5	1.040	113	-	-	75-125	-	20
Potassium, Total	0.215	10	10.9	107	-	-	75-125	-	20
Selenium, Total	0.002J	0.12	0.137	114	-	-	75-125	-	20
Silver, Total	ND	0.05	0.0555	111	-	-	75-125	-	20
Sodium, Total	309.	10	339	300	Q	-	75-125	-	20
Thallium, Total	ND	0.12	0.1253	104	-	-	75-125	-	20
Vanadium, Total	0.0029J	0.5	0.5397	108	-	-	75-125	-	20

**Matrix Spike Analysis**  
Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG753349-4 QC Sample: L1430655-01 Client ID: MS Sample									
Zinc, Total	0.0267	0.5	0.5618	107	-	-	75-125	-	20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: 14-WSFSSH-1B

Project Number: 14-WSFSSH-1B

Lab Number: L1431312

Report Date: 01/08/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG753312-3 QC Sample: L1431312-01 Client ID: MW-1						
Mercury, Total	0.00024	0.00014J	mg/l	NC		20
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG753313-3 QC Sample: L1431312-01 Client ID: MW-1						
Mercury, Dissolved	0.00009J	0.00006J	mg/l	NC		20
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG753347-3 QC Sample: L1431312-02 Client ID: MW-2						
Calcium, Dissolved	139.	130	mg/l	7		20
Manganese, Dissolved	0.8091	0.7365	mg/l	9		20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: 14-WSFSSH-1B

Project Number: 14-WSFSSH-1B

Lab Number: L1431312

Report Date: 01/08/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG753347-3 QC Sample: L1431312-02 Client ID: MW-2					
Antimony, Dissolved	0.0005J	0.0007J	mg/l	NC	20
Arsenic, Dissolved	0.0054	0.0061	mg/l	13	20
Barium, Dissolved	0.1584	0.1719	mg/l	8	20
Beryllium, Dissolved	0.0006	0.0006	mg/l	3	20
Cadmium, Dissolved	0.0001J	0.0002J	mg/l	NC	20
Chromium, Dissolved	0.0182	0.0210	mg/l	14	20
Cobalt, Dissolved	0.0130	0.0145	mg/l	11	20
Copper, Dissolved	0.0312	0.0347	mg/l	11	20
Iron, Dissolved	16.1	18.4	mg/l	13	20
Lead, Dissolved	0.0262	0.0280	mg/l	7	20
Magnesium, Dissolved	42.0	45.1	mg/l	7	20
Nickel, Dissolved	0.0211	0.0225	mg/l	6	20
Potassium, Dissolved	8.55	9.33	mg/l	9	20
Selenium, Dissolved	0.004J	0.005	mg/l	NC	20
Silver, Dissolved	0.0001J	0.0001J	mg/l	NC	20
Sodium, Dissolved	26.0	25.8	mg/l	1	20
Thallium, Dissolved	0.0002J	0.0002J	mg/l	NC	20
Vanadium, Dissolved	0.0211	0.0233	mg/l	10	20
Zinc, Dissolved	0.0838	0.0886	mg/l	6	20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: 14-WSFSSH-1B

Project Number: 14-WSFSSH-1B

Lab Number: L1431312

Report Date: 01/08/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG753347-3 QC Sample: L1431312-02 Client ID: MW-2					
Aluminum, Dissolved	11.8	12.1	mg/l	3	20
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG753349-3 QC Sample: L1430655-01 Client ID: DUP Sample					
Antimony, Total	0.0010J	0.0008J	mg/l	NC	20
Beryllium, Total	ND	ND	mg/l	NC	20
Cobalt, Total	0.0354	0.0350	mg/l	1	20
Thallium, Total	ND	ND	mg/l	NC	20
Vanadium, Total	0.0029J	0.0027J	mg/l	NC	20

Project Name: 14-WFSSH-1B

Lab Number: L1431312

Project Number: 14-WFSSH-1B

Report Date: 01/08/15

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

## Cooler Information Custody Seal

## Cooler

A Absent  
B Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1431312-01A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1431312-01B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1431312-01C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1431312-01D	Amber 1000ml unpreserved	A	8	3.1	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1431312-01E	Amber 1000ml unpreserved	A	8	3.1	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1431312-01F	Amber 1000ml unpreserved	A	8	3.1	Y	Absent	NYTCL-8082-1200ML(7)
L1431312-01G	Amber 1000ml unpreserved	A	8	3.1	Y	Absent	NYTCL-8082-1200ML(7)
L1431312-01H	Amber 500ml unpreserved	A	8	3.1	Y	Absent	NYTCL-8081(7)
L1431312-01I	Amber 500ml unpreserved	A	8	3.1	Y	Absent	NYTCL-8081(7)
L1431312-01J	Plastic 500ml HNO3 preserved	A	<2	3.1	Y	Absent	BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1431312-01K	Plastic 500ml HNO3 preserved	A	<2	3.1	Y	Absent	CU-6020S(180),K-6020S(180),SE-6020S(180),V-6020S(180),MN-6020S(180),BE-6020S(180),CO-6020S(180),MG-6020S(180),ZN-6020S(180),CA-6020S(180),CR-6020S(180),FE-6020S(180),BA-6020S(180),NA-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),AL-6020S(180),CD-6020S(180),HG-S(28)
L1431312-02A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)

\*Values in parentheses indicate holding time in days



Project Name: 14-WSFSSH-1B

Lab Number: L1431312

Project Number: 14-WSFSSH-1B

Report Date: 01/08/15

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1431312-02B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1431312-02C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1431312-02D	Amber 1000ml unpreserved	A	8	3.1	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1431312-02E	Amber 1000ml unpreserved	A	8	3.1	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1431312-02F	Amber 1000ml unpreserved	A	8	3.1	Y	Absent	NYTCL-8082-1200ML(7)
L1431312-02G	Amber 1000ml unpreserved	A	8	3.1	Y	Absent	NYTCL-8082-1200ML(7)
L1431312-02H	Amber 500ml unpreserved	A	8	3.1	Y	Absent	NYTCL-8081(7)
L1431312-02I	Amber 500ml unpreserved	A	8	3.1	Y	Absent	NYTCL-8081(7)
L1431312-02J	Plastic 500ml HNO3 preserved	A	<2	3.1	Y	Absent	BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1431312-02K	Plastic 500ml HNO3 preserved	A	<2	3.1	Y	Absent	CU-6020S(180),K-6020S(180),SE-6020S(180),V-6020S(180),MN-6020S(180),BE-6020S(180),CO-6020S(180),MG-6020S(180),ZN-6020S(180),CA-6020S(180),CR-6020S(180),FE-6020S(180),BA-6020S(180),NA-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),AL-6020S(180),CD-6020S(180),HG-S(28)
L1431312-03A	Vial HCl preserved	B	N/A	4.3	Y	Absent	NYTCL-8260(14)
L1431312-03B	Vial HCl preserved	B	N/A	4.3	Y	Absent	NYTCL-8260(14)
L1431312-03C	Vial HCl preserved	B	N/A	4.3	Y	Absent	NYTCL-8260(14)
L1431312-03D	Amber 1000ml unpreserved	B	8	4.3	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1431312-03E	Amber 1000ml unpreserved	B	8	4.3	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1431312-03F	Amber 1000ml unpreserved	B	8	4.3	Y	Absent	NYTCL-8082-1200ML(7)
L1431312-03G	Amber 1000ml unpreserved	B	8	4.3	Y	Absent	NYTCL-8082-1200ML(7)
L1431312-03H	Amber 500ml unpreserved	B	8	4.3	Y	Absent	NYTCL-8081(7)
L1431312-03I	Amber 500ml unpreserved	B	8	4.3	Y	Absent	NYTCL-8081(7)

\*Values in parentheses indicate holding time in days



Project Name: 14-WSFSSH-1B

Project Number: 14-WSFSSH-1B

Lab Number: L1431312

Report Date: 01/08/15

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1431312-03J	Plastic 500ml HNO3 preserved	B	<2	4.3	Y	Absent	BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1431312-03K	Plastic 500ml HNO3 preserved	B	<2	4.3	Y	Absent	CU-6020S(180),K-6020S(180),SE-6020S(180),V-6020S(180),MN-6020S(180),BE-6020S(180),CO-6020S(180),MG-6020S(180),ZN-6020S(180),CA-6020S(180),CR-6020S(180),FE-6020S(180),BA-6020S(180),NA-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),AL-6020S(180),CD-6020S(180),HG-S(28)
L1431312-04A	Vial HCl preserved	B	N/A	4.3	Y	Absent	NYTCL-8260(14)
L1431312-04B	Vial HCl preserved	B	N/A	4.3	Y	Absent	NYTCL-8260(14)
L1431312-04C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1431312-04D	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)

\*Values in parentheses indicate holding time in days



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

#### Data Qualifiers

- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

**Project Name:** 14-WFSSH-1B  
**Project Number:** 14-WFSSH-1B

**Lab Number:** L1431312  
**Report Date:** 01/08/15

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

Last revised December 16, 2014

**The following analytes are not included in our NELAP Scope of Accreditation:**

### Westborough Facility

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

**EPA 8260C:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

### Mansfield Facility

**EPA 8270D:** Biphenyl.

**EPA 2540D:** TSS

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:**

### Drinking Water

**EPA 200.8:** Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

### Non-Potable Water

**EPA 200.8:** Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

**EPA 200.7:** Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

**EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



# CHAIN OF CUSTODY

PAGE \_\_\_\_\_ OF \_\_\_\_\_

Serial No. 01081517-08

ALPHA Job #: 6143/312

WESTBORO, MA      MANSFIELD, MA  
 TEL: 508-898-9220    TEL: 508-822-9300  
 FAX: 508-898-9193    FAX: 508-822-3288

**Project Information**

Project Name: 14-WFSSH-1B  
 Project Location: 153-157 Sherman Ave  
 Project #: 14-WFSSH-1B  
 Project Manager:  
 ALPHA Quote #: 2014 726

**Report Information - Data Deliverables**

FAX       EMAIL  
 ADEX       Add'l Deliverables

**Billing Information**

Same as Client info    PO #:

**Client Information**

Client: Carich Consultants Inc  
 Address: 17 Dupont Street  
Plainville, NY 11803  
 Phone: 516 576 8844  
 Fax:  
 Email: tbrown@carichinc.com

**Turn-Around Time**

Standard       RUSH (only confirmed if pre-approved!)

Date Due: 01/08/15    Time:

**Regulatory Requirements/Report Limits**

State /Fed Program      Criteria

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS  
8260C  
8270D  
8081B  
8082A  
6010C/7470A (Total)  
6010C/7470A (Dissolved)

**SAMPLE HANDLING**

Filtration \_\_\_\_\_  
 Done  
 Not needed  
 Lab to do  
 Preservation  
 Lab to do  
 (Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS						Sample Specific Comments	TOTAL # BOTTLES
		Date	Time			8260C	8270D	8081B	8082A	6010C/7470A (Total)	6010C/7470A (Dissolved)		
<u>31312_01</u>	<u>MW-1</u>	<u>12/30/14</u>	<u>0840</u>	<u>GW</u>	<u>TB</u>	X	X	X	X	X	X		<u>11</u>
<u>02</u>	<u>MW-2</u>	<u>12/30/14</u>	<u>0930</u>	<u>GW</u>	<u>TB</u>	X	X	X	X	X	X		<u>11</u>
<u>03</u>	<u>MW-3</u>	<u>12/30/14</u>	<u>0800</u>	<u>GW</u>	<u>TB</u>	X	X	X	X	X	X		<u>11</u>
<u>04</u>	<u>Trip Blank</u>	<u>12/30/14</u>				X							<u>4</u>

Container Type G G G G P P  
 Preservative B A A A C C

Relinquished By: [Signature]    Date/Time: 12/30/14  
 Received By: [Signature]    Date/Time: 12/30/14 12:15

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



## ANALYTICAL REPORT

Lab Number:	L1500834
Client:	CA RICH CONSULTANTS, INC. 17 Dupont St Plainview, NY 11803
ATTN:	Thomas Brown
Phone:	(516) 576-8844
Project Name:	14-WSFSSH-1B
Project Number:	14-WSFSSH-1B
Report Date:	01/21/15

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1500834-01	MW-1	WATER	153-157 SHERMAN AVE.	01/14/15 10:10	01/14/15
L1500834-02	MW-2	WATER	153-157 SHERMAN AVE.	01/14/15 10:40	01/14/15
L1500834-03	MW-3	WATER	153-157 SHERMAN AVE.	01/14/15 09:30	01/14/15

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

---

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

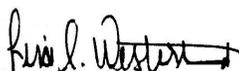
**Case Narrative (continued)**

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Lisa Westerlind

Title: Technical Director/Representative

Date: 01/21/15

## METALS

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

**SAMPLE RESULTS**

Lab ID: L1500834-01  
 Client ID: MW-1  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water

Date Collected: 01/14/15 10:10  
 Date Received: 01/14/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	23.6		mg/l	2.00	0.338	200	01/16/15 10:52	01/16/15 17:06	EPA 3005A	1,6020A	BM
Antimony, Total	0.0008	J	mg/l	0.0010	0.0001	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Arsenic, Total	0.0119		mg/l	0.0005	0.0001	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Barium, Total	0.3125		mg/l	0.0005	0.0001	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Beryllium, Total	0.0014		mg/l	0.0005	0.0002	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Cadmium, Total	0.0160		mg/l	0.0002	0.0001	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Calcium, Total	291		mg/l	2.00	0.640	20	01/16/15 10:52	01/16/15 16:39	EPA 3005A	1,6020A	BM
Chromium, Total	0.0437		mg/l	0.0010	0.0003	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Cobalt, Total	0.0866		mg/l	0.0002	0.0001	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Copper, Total	0.0902		mg/l	0.0010	0.0003	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Iron, Total	35.4		mg/l	0.050	0.012	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Lead, Total	0.0851		mg/l	0.0010	0.0001	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Magnesium, Total	71.7		mg/l	1.40	0.446	20	01/16/15 10:52	01/16/15 16:39	EPA 3005A	1,6020A	BM
Manganese, Total	2.441		mg/l	0.0100	0.0060	20	01/16/15 10:52	01/16/15 16:39	EPA 3005A	1,6020A	BM
Mercury, Total	0.00018	J	mg/l	0.00020	0.00006	1	01/16/15 12:00	01/19/15 12:55	EPA 7470A	1,7470A	AB
Nickel, Total	0.0753		mg/l	0.0005	0.0001	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Potassium, Total	27.3		mg/l	0.100	0.019	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Selenium, Total	0.007		mg/l	0.005	0.001	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Silver, Total	0.0003		mg/l	0.0003	0.0001	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Sodium, Total	76.4		mg/l	2.00	0.322	20	01/16/15 10:52	01/16/15 16:39	EPA 3005A	1,6020A	BM
Thallium, Total	0.0003		mg/l	0.0002	0.0001	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Vanadium, Total	0.0491		mg/l	0.0050	0.0006	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
Zinc, Total	0.1614		mg/l	0.0100	0.0026	1	01/16/15 10:52	01/16/15 17:03	EPA 3005A	1,6020A	BM
<b>Dissolved Metals - Westborough Lab</b>											
Aluminum, Dissolved	0.00661	J	mg/l	0.0100	0.00169	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Antimony, Dissolved	0.00134	J	mg/l	0.00200	0.00006	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Arsenic, Dissolved	0.00118		mg/l	0.00050	0.00012	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Barium, Dissolved	0.08735		mg/l	0.00050	0.00006	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Cadmium, Dissolved	0.00159		mg/l	0.00020	0.00005	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

**SAMPLE RESULTS**

**Lab ID:** L1500834-01  
**Client ID:** MW-1  
**Sample Location:** 153-157 SHERMAN AVE.  
**Matrix:** Water

**Date Collected:** 01/14/15 10:10  
**Date Received:** 01/14/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Calcium, Dissolved	221.		mg/l	2.00	0.640	20	01/20/15 17:38	01/21/15 13:50	EPA 3005A	1,6020A	KL
Chromium, Dissolved	0.00056	J	mg/l	0.00100	0.00025	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Cobalt, Dissolved	0.06859		mg/l	0.00020	0.00006	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Copper, Dissolved	0.00649		mg/l	0.00100	0.00026	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Iron, Dissolved	0.112		mg/l	0.0500	0.0120	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Lead, Dissolved	ND		mg/l	0.00100	0.00012	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Magnesium, Dissolved	44.2		mg/l	0.0700	0.0223	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Manganese, Dissolved	0.5278		mg/l	0.01000	0.00604	20	01/20/15 17:38	01/21/15 13:50	EPA 3005A	1,6020A	KL
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	01/20/15 15:25	01/21/15 11:31	EPA 7470A	1,7470A	AB
Nickel, Dissolved	0.00604		mg/l	0.00050	0.00008	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Potassium, Dissolved	22.4		mg/l	0.100	0.0193	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Selenium, Dissolved	0.00360	J	mg/l	0.00500	0.00100	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Sodium, Dissolved	80.5		mg/l	2.00	0.322	20	01/20/15 17:38	01/21/15 13:50	EPA 3005A	1,6020A	KL
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Vanadium, Dissolved	0.00169	J	mg/l	0.00500	0.00055	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL
Zinc, Dissolved	0.00387	J	mg/l	0.01000	0.00256	1	01/20/15 17:38	01/21/15 13:54	EPA 3005A	1,6020A	KL



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

**SAMPLE RESULTS**

Lab ID: L1500834-02  
 Client ID: MW-2  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water

Date Collected: 01/14/15 10:40  
 Date Received: 01/14/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	34.2		mg/l	2.00	0.338	200	01/16/15 10:52	01/16/15 17:13	EPA 3005A	1,6020A	BM
Antimony, Total	0.0005	J	mg/l	0.0010	0.0001	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Arsenic, Total	0.0150		mg/l	0.0005	0.0001	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Barium, Total	0.4357		mg/l	0.0100	0.0013	20	01/16/15 10:52	01/16/15 16:43	EPA 3005A	1,6020A	BM
Beryllium, Total	0.0021		mg/l	0.0005	0.0002	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Cadmium, Total	0.0024		mg/l	0.0002	0.0001	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Calcium, Total	203		mg/l	2.00	0.640	20	01/16/15 10:52	01/16/15 16:43	EPA 3005A	1,6020A	BM
Chromium, Total	0.0685		mg/l	0.0010	0.0003	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Cobalt, Total	0.0435		mg/l	0.0002	0.0001	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Copper, Total	0.1056		mg/l	0.0010	0.0003	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Iron, Total	52.9		mg/l	1.00	0.240	20	01/16/15 10:52	01/16/15 16:43	EPA 3005A	1,6020A	BM
Lead, Total	0.1719		mg/l	0.0010	0.0001	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Magnesium, Total	64.8		mg/l	1.40	0.446	20	01/16/15 10:52	01/16/15 16:43	EPA 3005A	1,6020A	BM
Manganese, Total	2.345		mg/l	0.0100	0.0060	20	01/16/15 10:52	01/16/15 16:43	EPA 3005A	1,6020A	BM
Mercury, Total	0.00044		mg/l	0.00020	0.00006	1	01/16/15 12:00	01/19/15 12:57	EPA 7470A	1,7470A	AB
Nickel, Total	0.0867		mg/l	0.0005	0.0001	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Potassium, Total	16.2		mg/l	0.100	0.019	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Selenium, Total	0.009		mg/l	0.005	0.001	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Silver, Total	0.0004		mg/l	0.0003	0.0001	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Sodium, Total	24.3		mg/l	0.100	0.016	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Thallium, Total	0.0005		mg/l	0.0002	0.0001	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Vanadium, Total	0.0747		mg/l	0.0050	0.0006	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
Zinc, Total	0.2516		mg/l	0.0100	0.0026	1	01/16/15 10:52	01/16/15 17:09	EPA 3005A	1,6020A	BM
<b>Dissolved Metals - Westborough Lab</b>											
Aluminum, Dissolved	0.00627	J	mg/l	0.0100	0.00169	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Antimony, Dissolved	0.00065	J	mg/l	0.00200	0.00006	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Arsenic, Dissolved	0.00090		mg/l	0.00050	0.00012	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Barium, Dissolved	0.04734		mg/l	0.00050	0.00006	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Cadmium, Dissolved	0.00011	J	mg/l	0.00020	0.00005	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

**SAMPLE RESULTS**

**Lab ID:** L1500834-02  
**Client ID:** MW-2  
**Sample Location:** 153-157 SHERMAN AVE.  
**Matrix:** Water

**Date Collected:** 01/14/15 10:40  
**Date Received:** 01/14/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Calcium, Dissolved	108.		mg/l	2.00	0.640	20	01/20/15 17:38	01/21/15 13:58	EPA 3005A	1,6020A	KL
Chromium, Dissolved	0.00168		mg/l	0.00100	0.00025	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Cobalt, Dissolved	0.00407		mg/l	0.00020	0.00006	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Copper, Dissolved	0.00136		mg/l	0.00100	0.00026	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Iron, Dissolved	0.0153	J	mg/l	0.0500	0.0120	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Lead, Dissolved	ND		mg/l	0.00100	0.00012	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Magnesium, Dissolved	36.1		mg/l	0.0700	0.0223	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Manganese, Dissolved	0.1465		mg/l	0.00100	0.00030	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Mercury, Dissolved	0.00010	J	mg/l	0.00020	0.00006	1	01/20/15 15:25	01/21/15 11:37	EPA 7470A	1,7470A	AB
Nickel, Dissolved	0.00105		mg/l	0.00050	0.00008	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Potassium, Dissolved	9.20		mg/l	0.100	0.0193	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Selenium, Dissolved	0.00120	J	mg/l	0.00500	0.00100	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Sodium, Dissolved	24.7		mg/l	0.100	0.0161	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Vanadium, Dissolved	0.00253	J	mg/l	0.00500	0.00055	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL
Zinc, Dissolved	ND		mg/l	0.01000	0.00256	1	01/20/15 17:38	01/21/15 14:16	EPA 3005A	1,6020A	KL



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

**SAMPLE RESULTS**

Lab ID: L1500834-03  
 Client ID: MW-3  
 Sample Location: 153-157 SHERMAN AVE.  
 Matrix: Water

Date Collected: 01/14/15 09:30  
 Date Received: 01/14/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	71.7		mg/l	4.00	0.676	400	01/16/15 10:52	01/16/15 17:19	EPA 3005A	1,6020A	BM
Antimony, Total	0.0004	J	mg/l	0.0010	0.0001	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Arsenic, Total	0.0181		mg/l	0.0005	0.0001	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Barium, Total	0.8472		mg/l	0.0100	0.0013	20	01/16/15 10:52	01/16/15 16:46	EPA 3005A	1,6020A	BM
Beryllium, Total	0.0041		mg/l	0.0005	0.0002	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Cadmium, Total	0.0046		mg/l	0.0002	0.0001	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Calcium, Total	688		mg/l	2.00	0.640	20	01/16/15 10:52	01/16/15 16:46	EPA 3005A	1,6020A	BM
Chromium, Total	0.1089		mg/l	0.0010	0.0003	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Cobalt, Total	0.0789		mg/l	0.0002	0.0001	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Copper, Total	0.2338		mg/l	0.0010	0.0003	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Iron, Total	130		mg/l	1.00	0.240	20	01/16/15 10:52	01/16/15 16:46	EPA 3005A	1,6020A	BM
Lead, Total	0.1210		mg/l	0.0010	0.0001	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Magnesium, Total	158		mg/l	1.40	0.446	20	01/16/15 10:52	01/16/15 16:46	EPA 3005A	1,6020A	BM
Manganese, Total	6.813		mg/l	0.0100	0.0060	20	01/16/15 10:52	01/16/15 16:46	EPA 3005A	1,6020A	BM
Mercury, Total	0.00060		mg/l	0.00020	0.00006	1	01/16/15 12:00	01/19/15 12:59	EPA 7470A	1,7470A	AB
Nickel, Total	0.1628		mg/l	0.0005	0.0001	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Potassium, Total	26.8		mg/l	0.100	0.019	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Selenium, Total	0.011		mg/l	0.005	0.001	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Silver, Total	0.0003		mg/l	0.0003	0.0001	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Sodium, Total	29.8		mg/l	0.100	0.016	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Thallium, Total	0.0012		mg/l	0.0002	0.0001	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Vanadium, Total	0.1234		mg/l	0.0050	0.0006	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
Zinc, Total	0.3743		mg/l	0.0100	0.0026	1	01/16/15 10:52	01/16/15 17:16	EPA 3005A	1,6020A	BM
<b>Dissolved Metals - Westborough Lab</b>											
Aluminum, Dissolved	0.0334		mg/l	0.0100	0.00169	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Antimony, Dissolved	0.00068	J	mg/l	0.00200	0.00006	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Arsenic, Dissolved	0.00024	J	mg/l	0.00050	0.00012	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Barium, Dissolved	0.04221		mg/l	0.00050	0.00006	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Cadmium, Dissolved	0.00015	J	mg/l	0.00020	0.00005	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

**SAMPLE RESULTS**

**Lab ID:** L1500834-03  
**Client ID:** MW-3  
**Sample Location:** 153-157 SHERMAN AVE.  
**Matrix:** Water

**Date Collected:** 01/14/15 09:30  
**Date Received:** 01/14/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Calcium, Dissolved	421.		mg/l	2.00	0.640	20	01/20/15 17:38	01/21/15 14:20	EPA 3005A	1,6020A	KL
Chromium, Dissolved	0.00158		mg/l	0.00100	0.00025	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Cobalt, Dissolved	0.00125		mg/l	0.00020	0.00006	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Copper, Dissolved	0.00187		mg/l	0.00100	0.00026	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Iron, Dissolved	0.0747		mg/l	0.0500	0.0120	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Lead, Dissolved	ND		mg/l	0.00100	0.00012	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Magnesium, Dissolved	49.3		mg/l	0.0700	0.0223	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Manganese, Dissolved	0.1214		mg/l	0.00100	0.00030	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	01/20/15 15:25	01/21/15 11:38	EPA 7470A	1,7470A	AB
Nickel, Dissolved	0.00292		mg/l	0.00050	0.00008	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Potassium, Dissolved	14.1		mg/l	0.100	0.0193	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Selenium, Dissolved	ND		mg/l	0.00500	0.00100	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Sodium, Dissolved	20.7		mg/l	2.00	0.322	20	01/20/15 17:38	01/21/15 14:20	EPA 3005A	1,6020A	KL
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Vanadium, Dissolved	ND		mg/l	0.00500	0.00055	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL
Zinc, Dissolved	0.00322	J	mg/l	0.01000	0.00256	1	01/20/15 17:38	01/21/15 14:24	EPA 3005A	1,6020A	KL



Project Name: 14-WSFSSH-1B  
 Project Number: 14-WSFSSH-1B

Lab Number: L1500834  
 Report Date: 01/21/15

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-03 Batch: WG756235-1										
Aluminum, Total	ND		mg/l	0.010	0.002	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Antimony, Total	0.0002	J	mg/l	0.0010	0.0001	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Arsenic, Total	ND		mg/l	0.0005	0.0001	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Barium, Total	ND		mg/l	0.0005	0.0001	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Beryllium, Total	ND		mg/l	0.0005	0.0002	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Cadmium, Total	ND		mg/l	0.0002	0.0001	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Calcium, Total	ND		mg/l	0.100	0.032	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Chromium, Total	ND		mg/l	0.0010	0.0003	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Cobalt, Total	ND		mg/l	0.0002	0.0001	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Copper, Total	ND		mg/l	0.0010	0.0003	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Iron, Total	ND		mg/l	0.050	0.012	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Lead, Total	ND		mg/l	0.0010	0.0001	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Magnesium, Total	ND		mg/l	0.070	0.022	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Manganese, Total	ND		mg/l	0.0005	0.0003	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Nickel, Total	ND		mg/l	0.0005	0.0001	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Potassium, Total	ND		mg/l	0.100	0.019	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Selenium, Total	ND		mg/l	0.005	0.001	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Silver, Total	ND		mg/l	0.0003	0.0001	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Sodium, Total	ND		mg/l	0.100	0.016	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Thallium, Total	ND		mg/l	0.0002	0.0001	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Vanadium, Total	ND		mg/l	0.0050	0.0006	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM
Zinc, Total	ND		mg/l	0.0100	0.0026	1	01/16/15 10:52	01/16/15 16:19	1,6020A	BM

### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-03 Batch: WG756262-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	01/16/15 12:00	01/19/15 12:20	1,7470A	AB



**Project Name:** 14-WFSSH-1B  
**Project Number:** 14-WFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

## Method Blank Analysis Batch Quality Control

### Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01-03 Batch: WG757018-1										
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	01/20/15 15:25	01/21/15 11:28	1,7470A	AB

### Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01-03 Batch: WG757076-1										
Aluminum, Dissolved	0.00194	J	mg/l	0.0100	0.00169	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Antimony, Dissolved	0.00089	J	mg/l	0.00200	0.00006	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Arsenic, Dissolved	0.00013	J	mg/l	0.00050	0.00012	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Barium, Dissolved	0.00007	J	mg/l	0.00050	0.00006	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Calcium, Dissolved	ND		mg/l	0.100	0.0320	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Chromium, Dissolved	0.00026	J	mg/l	0.00100	0.00025	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Cobalt, Dissolved	ND		mg/l	0.00020	0.00006	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Copper, Dissolved	ND		mg/l	0.00100	0.00026	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Iron, Dissolved	ND		mg/l	0.0500	0.0120	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Lead, Dissolved	ND		mg/l	0.00050	0.00012	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Magnesium, Dissolved	ND		mg/l	0.0700	0.0223	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Manganese, Dissolved	ND		mg/l	0.00100	0.00030	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Nickel, Dissolved	0.00012	J	mg/l	0.00050	0.00008	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Potassium, Dissolved	0.0520	J	mg/l	0.100	0.0193	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Selenium, Dissolved	0.00119	J	mg/l	0.00500	0.00100	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Sodium, Dissolved	0.0726	J	mg/l	0.100	0.0161	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
Vanadium, Dissolved	ND		mg/l	0.00500	0.00055	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL

**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

## Method Blank Analysis Batch Quality Control

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Zinc, Dissolved	0.00282	J	mg/l	0.01000	0.00256	1	01/20/15 17:38	01/21/15 12:00	1,6020A	KL
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### Prep Information

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Digestion Method: EPA 3005A

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1500834

Project Number: 14-WSFSSH-1B

Report Date: 01/21/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG756235-2								
Aluminum, Total	92		-		80-120	-		
Antimony, Total	92		-		80-120	-		
Arsenic, Total	96		-		80-120	-		
Barium, Total	90		-		80-120	-		
Beryllium, Total	98		-		80-120	-		
Cadmium, Total	101		-		80-120	-		
Calcium, Total	86		-		80-120	-		
Chromium, Total	90		-		80-120	-		
Cobalt, Total	92		-		80-120	-		
Copper, Total	92		-		80-120	-		
Iron, Total	90		-		80-120	-		
Lead, Total	93		-		80-120	-		
Magnesium, Total	96		-		80-120	-		
Manganese, Total	84		-		80-120	-		
Nickel, Total	89		-		80-120	-		
Potassium, Total	87		-		80-120	-		
Selenium, Total	93		-		80-120	-		
Silver, Total	98		-		80-120	-		
Sodium, Total	94		-		80-120	-		
Thallium, Total	98		-		80-120	-		
Vanadium, Total	93		-		80-120	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Project Number: 14-WSFSSH-1B

Lab Number: L1500834

Report Date: 01/21/15

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG756235-2					
Zinc, Total	95	-	80-120	-	
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG756262-2					
Mercury, Total	103	-	80-120	-	
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG757018-2					
Mercury, Dissolved	105	-	70-130	-	

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1500834

Project Number: 14-WSFSSH-1B

Report Date: 01/21/15

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG757076-2					
Aluminum, Dissolved	112	-	80-120	-	
Antimony, Dissolved	120	-	80-120	-	
Arsenic, Dissolved	108	-	80-120	-	
Barium, Dissolved	119	-	80-120	-	
Beryllium, Dissolved	112	-	80-120	-	
Cadmium, Dissolved	120	-	80-120	-	
Calcium, Dissolved	99	-	80-120	-	
Chromium, Dissolved	109	-	80-120	-	
Cobalt, Dissolved	113	-	80-120	-	
Copper, Dissolved	114	-	80-120	-	
Iron, Dissolved	118	-	80-120	-	
Lead, Dissolved	112	-	80-120	-	
Magnesium, Dissolved	105	-	80-120	-	
Manganese, Dissolved	120	-	80-120	-	
Nickel, Dissolved	110	-	80-120	-	
Potassium, Dissolved	107	-	80-120	-	
Selenium, Dissolved	108	-	80-120	-	
Silver, Dissolved	120	-	80-120	-	
Sodium, Dissolved	100	-	80-120	-	
Thallium, Dissolved	116	-	80-120	-	
Vanadium, Dissolved	113	-	80-120	-	

## Lab Control Sample Analysis

Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1500834

Project Number: 14-WSFSSH-1B

Report Date: 01/21/15

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG757076-2					
Zinc, Dissolved	112	-	80-120	-	

### Matrix Spike Analysis Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1500834

Project Number: 14-WSFSSH-1B

Report Date: 01/21/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG756235-4 QC Sample: L1500880-06 Client ID: MS Sample												
Aluminum, Total	ND	2	2.11	106		-	-		75-125	-		20
Antimony, Total	ND	0.5	0.5117	102		-	-		75-125	-		20
Arsenic, Total	ND	0.12	0.1180	98		-	-		75-125	-		20
Barium, Total	0.0229	2	1.958	97		-	-		75-125	-		20
Beryllium, Total	ND	0.05	0.0494	99		-	-		75-125	-		20
Cadmium, Total	ND	0.051	0.0603	118		-	-		75-125	-		20
Calcium, Total	50.8	10	59.7	89		-	-		75-125	-		20
Chromium, Total	0.0153J	0.2	0.2067	103		-	-		75-125	-		20
Cobalt, Total	ND	0.5	0.5053	101		-	-		75-125	-		20
Copper, Total	ND	0.25	0.2674	107		-	-		75-125	-		20
Iron, Total	0.647J	1	1.56	156	Q	-	-		75-125	-		20
Lead, Total	ND	0.51	0.5178	102		-	-		75-125	-		20
Magnesium, Total	16.0	10	28.4	124		-	-		75-125	-		20
Manganese, Total	0.2530	0.5	0.7441	98		-	-		75-125	-		20
Nickel, Total	0.0093J	0.5	0.4872	97		-	-		75-125	-		20
Potassium, Total	6.58	10	16.9	103		-	-		75-125	-		20
Selenium, Total	ND	0.12	0.127	106		-	-		75-125	-		20
Silver, Total	ND	0.05	0.0498	100		-	-		75-125	-		20
Sodium, Total	334.	10	366	320	Q	-	-		75-125	-		20
Thallium, Total	ND	0.12	0.1274	106		-	-		75-125	-		20
Vanadium, Total	ND	0.5	0.5098	102		-	-		75-125	-		20

### Matrix Spike Analysis Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1500834

Project Number: 14-WSFSSH-1B

Report Date: 01/21/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG756235-4 QC Sample: L1500880-06 Client ID: MS Sample									
Zinc, Total	ND	0.5	0.5603	112	-	-	75-125	-	20
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG756262-3 WG756262-4 QC Sample: L1500729-02 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.00526	105	0.00496	99	75-125	6	20
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG757018-4 QC Sample: L1500834-01 Client ID: MW-1									
Mercury, Dissolved	ND	0.005	0.00485	97	-	-	75-125	-	20

### Matrix Spike Analysis Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1500834

Project Number: 14-WSFSSH-1B

Report Date: 01/21/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG757076-4 QC Sample: L1500327-08 Client ID: MS Sample									
Aluminum, Dissolved	0.104	2	2.38	114	-	-	75-125	-	20
Antimony, Dissolved	0.0015	0.5	0.6026	120	-	-	75-125	-	20
Arsenic, Dissolved	0.0002J	0.12	0.1475	123	-	-	75-125	-	20
Barium, Dissolved	0.0218	2	2.366	117	-	-	75-125	-	20
Beryllium, Dissolved	ND	0.05	0.05912	118	-	-	75-125	-	20
Cadmium, Dissolved	0.00005J	0.051	0.05895	116	-	-	75-125	-	20
Calcium, Dissolved	7.85	10	18.5	106	-	-	75-125	-	20
Chromium, Dissolved	0.0005J	0.2	0.2361	118	-	-	75-125	-	20
Cobalt, Dissolved	0.0004	0.5	0.5981	120	-	-	75-125	-	20
Copper, Dissolved	0.00181	0.25	0.3072	122	-	-	75-125	-	20
Iron, Dissolved	0.039J	1	1.25	125	-	-	75-125	-	20
Lead, Dissolved	0.00025J	0.51	0.6261	123	-	-	75-125	-	20
Magnesium, Dissolved	0.717	10	7.15	64	Q	-	75-125	-	20
Manganese, Dissolved	0.0203	0.5	0.5955	115	-	-	75-125	-	20
Nickel, Dissolved	0.0011	0.5	0.5900	118	-	-	75-125	-	20
Potassium, Dissolved	0.457	10	4.23	38	Q	-	75-125	-	20
Selenium, Dissolved	ND	0.12	0.151	126	Q	-	75-125	-	20
Silver, Dissolved	ND	0.05	0.05896	118	-	-	75-125	-	20
Sodium, Dissolved	38.4	10	47.0	86	-	-	75-125	-	20
Thallium, Dissolved	ND	0.12	0.1386	116	-	-	75-125	-	20
Vanadium, Dissolved	ND	0.5	0.5879	118	-	-	75-125	-	20

### Matrix Spike Analysis Batch Quality Control

Project Name: 14-WSFSSH-1B

Lab Number: L1500834

Project Number: 14-WSFSSH-1B

Report Date: 01/21/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG757076-4 QC Sample: L1500327-08 Client ID: MS Sample									
Zinc, Dissolved	0.0149	0.5	0.6461	126	Q	-	75-125	-	20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: 14-WSFSSH-1B

Project Number: 14-WSFSSH-1B

Lab Number: L1500834

Report Date: 01/21/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
<b>Total Metals - Westborough Lab</b> Associated sample(s): 01-03 QC Batch ID: WG756235-3 QC Sample: L1500880-06 Client ID: DUP Sample						
Magnesium, Total	16.0	17.5	mg/l	9		20
<b>Dissolved Metals - Westborough Lab</b> Associated sample(s): 01-03 QC Batch ID: WG757018-3 QC Sample: L1500834-01 Client ID: MW-1						
Mercury, Dissolved	ND	ND	mg/l	NC		20
<b>Dissolved Metals - Westborough Lab</b> Associated sample(s): 01-03 QC Batch ID: WG757076-3 QC Sample: L1500327-08 Client ID: DUP Sample						
Cadmium, Dissolved	0.00005J	0.00011J	mg/l	NC		20
Copper, Dissolved	0.00181	0.00155	mg/l	15		20
Lead, Dissolved	0.00025J	0.00025J	mg/l	NC		20
Silver, Dissolved	ND	ND	mg/l	NC		20

Project Name: 14-WSFSSH-1B

Lab Number: L1500834

Project Number: 14-WSFSSH-1B

Report Date: 01/21/15

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

## Cooler Information Custody Seal

## Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1500834-01A	Plastic 250ml unpreserved	A	8	2.1	Y	Absent	FILTER-MET(1)
L1500834-01B	Plastic 500ml HNO3 preserved	A	<2	2.1	Y	Absent	BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1500834-01X	Plastic 500ml HNO3 preserved	A	<2	2.1	Y	Absent	CU-6020S(180),K-6020S(180),SE-6020S(180),V-6020S(180),MN-6020S(180),BE-6020S(180),CO-6020S(180),MG-6020S(180),ZN-6020S(180),CA-6020S(180),CR-6020S(180),FE-6020S(180),BA-6020S(180),NA-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),AL-6020S(180),CD-6020S(180),HG-S(28)
L1500834-02A	Plastic 250ml unpreserved	A	8	2.1	Y	Absent	FILTER-MET(1)
L1500834-02B	Plastic 500ml HNO3 preserved	A	<2	2.1	Y	Absent	BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)

\*Values in parentheses indicate holding time in days



Project Name: 14-WSFSSH-1B

Project Number: 14-WSFSSH-1B

Lab Number: L1500834

Report Date: 01/21/15

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1500834-02X	Plastic 500ml HNO3 preserved	A	<2	2.1	Y	Absent	CU-6020S(180),K-6020S(180),SE-6020S(180),V-6020S(180),MN-6020S(180),BE-6020S(180),CO-6020S(180),MG-6020S(180),ZN-6020S(180),CA-6020S(180),CR-6020S(180),FE-6020S(180),BA-6020S(180),NA-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),AL-6020S(180),CD-6020S(180),HG-S(28)
L1500834-03A	Plastic 250ml unpreserved	A	8	2.1	Y	Absent	FILTER-MET(1)
L1500834-03B	Plastic 500ml HNO3 preserved	A	<2	2.1	Y	Absent	BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1500834-03X	Plastic 500ml HNO3 preserved	A	<2	2.1	Y	Absent	CU-6020S(180),K-6020S(180),SE-6020S(180),V-6020S(180),MN-6020S(180),BE-6020S(180),CO-6020S(180),MG-6020S(180),ZN-6020S(180),CA-6020S(180),CR-6020S(180),FE-6020S(180),BA-6020S(180),NA-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),AL-6020S(180),CD-6020S(180),HG-S(28)

\*Values in parentheses indicate holding time in days



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** 14-WSFSSH-1B  
**Project Number:** 14-WSFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

#### **Data Qualifiers**

- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

**Project Name:** 14-WFSSH-1B  
**Project Number:** 14-WFSSH-1B

**Lab Number:** L1500834  
**Report Date:** 01/21/15

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

Last revised December 16, 2014

### The following analytes are not included in our NELAP Scope of Accreditation:

#### Westborough Facility

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

**EPA 8260C:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

#### Mansfield Facility

**EPA 8270D:** Biphenyl.

**EPA 2540D:** TSS

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

### The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

#### Drinking Water

**EPA 200.8:** Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

#### Non-Potable Water

**EPA 200.8:** Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

**EPA 200.7:** Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

**EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



**NEW YORK  
CHAIN OF  
CUSTODY**

Westborough, MA 01581  
8 Walkup Dr.  
TEL: 508-898-9220  
FAX: 508-898-9193

Mansfield, MA 02048  
320 Forbes Blvd  
TEL: 508-822-9300  
FAX: 508-822-3288

**Service Centers**  
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5  
Albany, NY 12205: 14 Walker Way  
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1  
of 1

Date Rec'd  
in Lab 14-Jan-15

ALPHA Job #  
L1500834

<b>Project Information</b>		<b>Deliverables</b>		<b>Billing Information</b>	
Project Name: 14-WSESSH-1B		<input type="checkbox"/> ASP-A <input type="checkbox"/> ASP-B		<input checked="" type="checkbox"/> Same as Client Info	
Project Location: 153-157 Sherman Ave		<input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File)		PO #	
Project # 14-WSESSH-1B		<input type="checkbox"/> Other			
(Use Project name as Project #) <input type="checkbox"/>		<b>Regulatory Requirement</b>		<b>Disposal Site Information</b>	
Project Manager:		<input checked="" type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375		Please identify below location of applicable disposal facilities.	
ALPHAQuote #: 2014720		<input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51		Disposal Facility:	
<b>Turn-Around Time</b>		<input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other		<input type="checkbox"/> NJ <input type="checkbox"/> NY	
Standard <input checked="" type="checkbox"/> Due Date: 21-Jan-15		<input type="checkbox"/> NY Unrestricted Use		<input type="checkbox"/> Other:	
Rush (only if pre approved) <input type="checkbox"/> # of Days:		<input type="checkbox"/> NYC Sewer Discharge.			

These samples have been previously analyzed by Alpha

**Other project specific requirements/comments:**

Please specify Metals or TAL.

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS		Sample Filtration	Sample Specific Comments	Total Bottle
		Date	Time			6010C/710A	6010C/710A			
0834-01	MW-1	1/14/15	1010	GW	TB	X	X	<input type="checkbox"/> Done <input checked="" type="checkbox"/> Lab to do Preservation <input checked="" type="checkbox"/> Lab to do	Lab to filter	2
0834-02	MW-2	1/14/15	1040	GW	TB	X	X		and preserve	2
0834-03	MW-3	1/14/15	930	GW	TB	X	X		test dissolved metals	2

<b>Preservative Code:</b> A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K/E = Zn Ac/NaOH O = Other	<b>Container Code</b> P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle	Westboro: Certification No: MA935 Mansfield: Certification No: MA015	Container Type: PP Preservative: CA	Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)
<b>Relinquished By:</b> Tom [Signature] 1/14/15 1700 Tom [Signature] 1/14-15 2210		<b>Date/Time</b> 1/14/15 1700 14-Jan-15 2210		<b>Received By:</b> [Signature] 1/14/15 12:30 [Signature] 1-14-15 1700 [Signature] 14-Jan-15 2210

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## **APPENDIX G**

**Laboratory Data Deliverables for Soil Vapor Analytical Data**

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## ANALYTICAL REPORT

Lab Number:	L1429167
Client:	CA RICH CONSULTANTS, INC. 17 Dupont St Plainview, NY 11803
ATTN:	Thomas Brown
Phone:	(516) 576-8844
Project Name:	WSFSSH
Project Number:	WSFSSH
Report Date:	12/11/14

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**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429167  
**Report Date:** 12/11/14

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1429167-01	SV-1	SOIL_VAPOR	153-157 SHERMAN AVE	12/03/14 12:05	12/04/14
L1429167-02	SV-2	SOIL_VAPOR	153-157 SHERMAN AVE	12/03/14 09:30	12/04/14
L1429167-03	SV-3	SOIL_VAPOR	153-157 SHERMAN AVE	12/03/14 14:20	12/04/14

**Project Name:** WSFSSH  
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### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEX data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

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### Case Narrative (continued)

#### Volatile Organics in Air

Canisters were released from the laboratory on November 12 and December 3, 2014. The canister certification results are provided as an addendum.

Samples L1429167-01 through -03 results for Acetone should be considered estimated due to co-elution with a non-target peak.

Samples L1429167-01 and -02 results for Chloromethane should be considered estimated due to co-elution with a non-target peak.

Samples L1429167-01 through -03 The presence of 2,2,4-Trimethylpentane could not be determined in these samples due to a non-target compound interfering with the identification and quantification of this compound.

Samples L1429167-01 and -02 The presence of Isopropyl alcohol could not be determined in these samples due to a non-target compound interfering with the identification and quantification of this compound.

Sample L1429167-03 : The canister vacuum measured on receipt at the laboratory was > 15 in. Hg. Prior to sample analysis, the canister was pressurized with UHP Nitrogen in order to facilitate the transfer of sample to the Gas Chromatograph. The addition of Nitrogen resulted in a dilution of the sample. The reporting limits have been elevated accordingly.

The WG747406-3 LCS recovery for 1,2,4-Trichlorobenzene (134%) is above the upper 130% acceptance limit. The response for this compound was elevated however it was not detected in any of the associated samples therefore no further action was taken

The sample designated SV-3 (L1429167-03) had a RPD for the pre- and post-flow controller calibration check (124% RPD) that was outside of the control limit (20% RPD). The initial flow rate for the flow controller was 18.0 mL/minute; the final flow rate was 4.2 mL/minute. The final pressure recorded by the laboratory of the

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**Case Narrative (continued)**

associated canister was -20.6 inches of mercury.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 12/11/14

**AIR**

**Project Name:** WSFSSH**Lab Number:** L1429167**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429167-01  
 Client ID: SV-1  
 Sample Location: 153-157 SHERMAN AVE  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 12/11/14 02:01  
 Analyst: RY

Date Collected: 12/03/14 12:05  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.378	0.200	--	1.87	0.989	--		1
Chloromethane	1.90	0.200	--	3.92	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	3.42	0.200	--	8.74	0.511	--		1
1,3-Butadiene	21.4	0.200	--	47.3	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	8.83	2.50	--	16.6	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	35.2	1.00	--	83.6	2.38	--		1
Trichlorofluoromethane	0.270	0.200	--	1.52	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	0.207	0.200	--	0.821	0.793	--		1
Tertiary butyl Alcohol	1.80	0.500	--	5.46	1.52	--		1
Methylene chloride	25.8	0.500	--	89.6	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	5.76	0.200	--	17.9	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	1.22	0.200	--	4.84	0.793	--		1
1,1-Dichloroethane	0.900	0.200	--	3.64	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	11.4	0.200	--	33.6	0.590	--		1
cis-1,2-Dichloroethene	3.66	0.200	--	14.5	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429167  
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### SAMPLE RESULTS

Lab ID: L1429167-01  
 Client ID: SV-1  
 Sample Location: 153-157 SHERMAN AVE

Date Collected: 12/03/14 12:05  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	0.597	0.200	--	2.92	0.977	--		1
Tetrahydrofuran	32.9	0.200	--	97.0	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	16.8	0.200	--	59.2	0.705	--		1
1,1,1-Trichloroethane	0.319	0.200	--	1.74	1.09	--		1
Benzene	7.58	0.200	--	24.2	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	5.99	0.200	--	20.6	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	17.6	0.200	--	94.6	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	12.0	0.200	--	49.2	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	3.52	0.200	--	14.4	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	39.6	0.200	--	149	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	33.7	0.200	--	229	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	12.6	0.200	--	54.7	0.869	--		1
p/m-Xylene	41.6	0.400	--	181	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	0.642	0.200	--	2.73	0.852	--		1



**Project Name:** WSFSSH**Lab Number:** L1429167**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429167-01

Date Collected: 12/03/14 12:05

Client ID: SV-1

Date Received: 12/04/14

Sample Location: 153-157 SHERMAN AVE

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	11.9	0.200	--	51.7	0.869	--		1
4-Ethyltoluene	0.815	0.200	--	4.01	0.983	--		1
1,3,5-Trimethylbenzene	0.599	0.200	--	2.94	0.983	--		1
1,2,4-Trimethylbenzene	1.67	0.200	--	8.21	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	73		60-140
Bromochloromethane	80		60-140
chlorobenzene-d5	84		60-140



**Project Name:** WSFSSH**Lab Number:** L1429167**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429167-02  
 Client ID: SV-2  
 Sample Location: 153-157 SHERMAN AVE  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 12/11/14 02:34  
 Analyst: RY

Date Collected: 12/03/14 09:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.397	0.200	--	1.96	0.989	--		1
Chloromethane	0.218	0.200	--	0.450	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	2.91	0.200	--	7.44	0.511	--		1
1,3-Butadiene	0.949	0.200	--	2.10	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	3.88	2.50	--	7.31	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	34.9	1.00	--	82.9	2.38	--		1
Trichlorofluoromethane	0.723	0.200	--	4.06	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	2.00	0.500	--	6.06	1.52	--		1
Methylene chloride	28.1	0.500	--	97.6	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	1.81	0.200	--	5.64	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	0.227	0.200	--	0.900	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	11.7	0.200	--	34.5	0.590	--		1
cis-1,2-Dichloroethene	0.811	0.200	--	3.22	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429167  
**Report Date:** 12/11/14

### SAMPLE RESULTS

Lab ID: L1429167-02  
 Client ID: SV-2  
 Sample Location: 153-157 SHERMAN AVE

Date Collected: 12/03/14 09:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	3.78	0.200	--	18.5	0.977	--		1
Tetrahydrofuran	32.8	0.200	--	96.7	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	7.93	0.200	--	27.9	0.705	--		1
1,1,1-Trichloroethane	1.04	0.200	--	5.67	1.09	--		1
Benzene	3.16	0.200	--	10.1	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	4.14	0.200	--	14.3	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	21.7	0.200	--	117	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	11.8	0.200	--	48.4	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	4.03	0.200	--	16.5	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	57.1	0.200	--	215	0.754	--		1
2-Hexanone	0.226	0.200	--	0.926	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	58.6	0.200	--	397	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	21.4	0.200	--	93.0	0.869	--		1
p/m-Xylene	71.9	0.400	--	312	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	1.06	0.200	--	4.51	0.852	--		1



**Project Name:** WSFSSH**Lab Number:** L1429167**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429167-02  
 Client ID: SV-2  
 Sample Location: 153-157 SHERMAN AVE

Date Collected: 12/03/14 09:30  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	21.6	0.200	--	93.8	0.869	--		1
4-Ethyltoluene	1.21	0.200	--	5.95	0.983	--		1
1,3,5-Trimethylbenzene	0.796	0.200	--	3.91	0.983	--		1
1,2,4-Trimethylbenzene	2.19	0.200	--	10.8	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	74		60-140
Bromochloromethane	82		60-140
chlorobenzene-d5	90		60-140



**Project Name:** WSFSSH**Lab Number:** L1429167**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429167-03 D  
 Client ID: SV-3  
 Sample Location: 153-157 SHERMAN AVE  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 12/11/14 03:06  
 Analyst: RY

Date Collected: 12/03/14 14:20  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	ND	0.435	--	ND	2.15	--		2.174
Chloromethane	ND	0.435	--	ND	0.898	--		2.174
Freon-114	ND	0.435	--	ND	3.04	--		2.174
Vinyl chloride	ND	0.435	--	ND	1.11	--		2.174
1,3-Butadiene	26.1	0.435	--	57.7	0.962	--		2.174
Bromomethane	ND	0.435	--	ND	1.69	--		2.174
Chloroethane	ND	0.435	--	ND	1.15	--		2.174
Ethanol	ND	5.44	--	ND	10.3	--		2.174
Vinyl bromide	ND	0.435	--	ND	1.90	--		2.174
Acetone	46.4	2.17	--	110	5.15	--		2.174
Trichlorofluoromethane	ND	0.435	--	ND	2.44	--		2.174
Isopropanol	ND	1.09	--	ND	2.68	--		2.174
1,1-Dichloroethene	ND	0.435	--	ND	1.72	--		2.174
Tertiary butyl Alcohol	2.64	1.09	--	8.00	3.30	--		2.174
Methylene chloride	64.7	1.09	--	225	3.79	--		2.174
3-Chloropropene	ND	0.435	--	ND	1.36	--		2.174
Carbon disulfide	2.30	0.435	--	7.16	1.35	--		2.174
Freon-113	ND	0.435	--	ND	3.33	--		2.174
trans-1,2-Dichloroethene	ND	0.435	--	ND	1.72	--		2.174
1,1-Dichloroethane	ND	0.435	--	ND	1.76	--		2.174
Methyl tert butyl ether	ND	0.435	--	ND	1.57	--		2.174
2-Butanone	8.53	0.435	--	25.2	1.28	--		2.174
cis-1,2-Dichloroethene	ND	0.435	--	ND	1.72	--		2.174
Ethyl Acetate	ND	1.09	--	ND	3.93	--		2.174



**Project Name:** WSFSSH**Lab Number:** L1429167**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429167-03 D  
 Client ID: SV-3  
 Sample Location: 153-157 SHERMAN AVE

Date Collected: 12/03/14 14:20  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	0.435	--	ND	2.12	--		2.174
Tetrahydrofuran	19.9	0.435	--	58.7	1.28	--		2.174
1,2-Dichloroethane	ND	0.435	--	ND	1.76	--		2.174
n-Hexane	17.0	0.435	--	59.9	1.53	--		2.174
1,1,1-Trichloroethane	ND	0.435	--	ND	2.37	--		2.174
Benzene	3.95	0.435	--	12.6	1.39	--		2.174
Carbon tetrachloride	ND	0.435	--	ND	2.74	--		2.174
Cyclohexane	9.20	0.435	--	31.7	1.50	--		2.174
1,2-Dichloropropane	ND	0.435	--	ND	2.01	--		2.174
Bromodichloromethane	ND	0.435	--	ND	2.91	--		2.174
1,4-Dioxane	ND	0.435	--	ND	1.57	--		2.174
Trichloroethene	24.5	0.435	--	132	2.34	--		2.174
2,2,4-Trimethylpentane	ND	0.435	--	ND	2.03	--		2.174
Heptane	13.3	0.435	--	54.5	1.78	--		2.174
cis-1,3-Dichloropropene	ND	0.435	--	ND	1.97	--		2.174
4-Methyl-2-pentanone	3.12	0.435	--	12.8	1.78	--		2.174
trans-1,3-Dichloropropene	ND	0.435	--	ND	1.97	--		2.174
1,1,2-Trichloroethane	ND	0.435	--	ND	2.37	--		2.174
Toluene	48.2	0.435	--	182	1.64	--		2.174
2-Hexanone	ND	0.435	--	ND	1.78	--		2.174
Dibromochloromethane	ND	0.435	--	ND	3.71	--		2.174
1,2-Dibromoethane	ND	0.435	--	ND	3.34	--		2.174
Tetrachloroethene	48.0	0.435	--	325	2.95	--		2.174
Chlorobenzene	ND	0.435	--	ND	2.00	--		2.174
Ethylbenzene	30.1	0.435	--	131	1.89	--		2.174
p/m-Xylene	118	0.870	--	513	3.78	--		2.174
Bromoform	ND	0.435	--	ND	4.50	--		2.174
Styrene	1.50	0.435	--	6.39	1.85	--		2.174



**Project Name:** WSFSSH**Lab Number:** L1429167**Project Number:** WSFSSH**Report Date:** 12/11/14**SAMPLE RESULTS**

Lab ID: L1429167-03 D  
 Client ID: SV-3  
 Sample Location: 153-157 SHERMAN AVE

Date Collected: 12/03/14 14:20  
 Date Received: 12/04/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.435	--	ND	2.99	--		2.174
o-Xylene	49.3	0.435	--	214	1.89	--		2.174
4-Ethyltoluene	1.88	0.435	--	9.24	2.14	--		2.174
1,3,5-Trimethylbenzene	1.61	0.435	--	7.92	2.14	--		2.174
1,2,4-Trimethylbenzene	5.31	0.435	--	26.1	2.14	--		2.174
Benzyl chloride	ND	0.435	--	ND	2.25	--		2.174
1,3-Dichlorobenzene	ND	0.435	--	ND	2.62	--		2.174
1,4-Dichlorobenzene	ND	0.435	--	ND	2.62	--		2.174
1,2-Dichlorobenzene	ND	0.435	--	ND	2.62	--		2.174
1,2,4-Trichlorobenzene	ND	0.435	--	ND	3.23	--		2.174
Hexachlorobutadiene	ND	0.435	--	ND	4.64	--		2.174

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	73		60-140
Bromochloromethane	81		60-140
chlorobenzene-d5	86		60-140



Project Name: WSFSSH

Lab Number: L1429167

Project Number: WSFSSH

Report Date: 12/11/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/10/14 16:32

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG747406-4								
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: WSFSSH

Lab Number: L1429167

Project Number: WSFSSH

Report Date: 12/11/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/10/14 16:32

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG747406-4								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1

Project Name: WSFSSH

Lab Number: L1429167

Project Number: WSFSSH

Report Date: 12/11/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/10/14 16:32

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG747406-4								
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429167

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG747406-3								
Chlorodifluoromethane	88		-		70-130	-		
Propylene	102		-		70-130	-		
Propane	86		-		70-130	-		
Dichlorodifluoromethane	110		-		70-130	-		
Chloromethane	95		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	104		-		70-130	-		
Methanol	93		-		70-130	-		
Vinyl chloride	104		-		70-130	-		
1,3-Butadiene	103		-		70-130	-		
Butane	89		-		70-130	-		
Bromomethane	96		-		70-130	-		
Chloroethane	98		-		70-130	-		
Ethyl Alcohol	101		-		70-130	-		
Dichlorofluoromethane	92		-		70-130	-		
Vinyl bromide	98		-		70-130	-		
Acrolein	93		-		70-130	-		
Acetone	99		-		70-130	-		
Acetonitrile	92		-		70-130	-		
Trichlorofluoromethane	102		-		70-130	-		
iso-Propyl Alcohol	106		-		70-130	-		
Acrylonitrile	94		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429167

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG747406-3								
Pentane	87		-		70-130	-		
Ethyl ether	90		-		70-130	-		
1,1-Dichloroethene	102		-		70-130	-		
tert-Butyl Alcohol	99		-		70-130	-		
Methylene chloride	101		-		70-130	-		
3-Chloropropene	100		-		70-130	-		
Carbon disulfide	99		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	102		-		70-130	-		
trans-1,2-Dichloroethene	93		-		70-130	-		
1,1-Dichloroethane	101		-		70-130	-		
Methyl tert butyl ether	103		-		70-130	-		
Vinyl acetate	114		-		70-130	-		
2-Butanone	96		-		70-130	-		
cis-1,2-Dichloroethene	110		-		70-130	-		
Ethyl Acetate	96		-		70-130	-		
Chloroform	103		-		70-130	-		
Tetrahydrofuran	95		-		70-130	-		
2,2-Dichloropropane	93		-		70-130	-		
1,2-Dichloroethane	100		-		70-130	-		
n-Hexane	94		-		70-130	-		
Isopropyl Ether	91		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429167

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG747406-3								
Ethyl-Tert-Butyl-Ether	89		-		70-130	-		
1,1,1-Trichloroethane	102		-		70-130	-		
1,1-Dichloropropene	94		-		70-130	-		
Benzene	97		-		70-130	-		
Carbon tetrachloride	101		-		70-130	-		
Cyclohexane	95		-		70-130	-		
Tertiary-Amyl Methyl Ether	91		-		70-130	-		
Dibromomethane	92		-		70-130	-		
1,2-Dichloropropane	99		-		70-130	-		
Bromodichloromethane	100		-		70-130	-		
1,4-Dioxane	101		-		70-130	-		
Trichloroethene	97		-		70-130	-		
2,2,4-Trimethylpentane	95		-		70-130	-		
Methyl methacrylate	94		-		70-130	-		
Heptane	91		-		70-130	-		
cis-1,3-Dichloropropene	108		-		70-130	-		
4-Methyl-2-pentanone	97		-		70-130	-		
trans-1,3-Dichloropropene	95		-		70-130	-		
1,1,2-Trichloroethane	104		-		70-130	-		
Toluene	98		-		70-130	-		
1,3-Dichloropropane	94		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429167

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG747406-3								
2-Hexanone	107		-		70-130	-		
Dibromochloromethane	101		-		70-130	-		
1,2-Dibromoethane	103		-		70-130	-		
Butyl Acetate	96		-		70-130	-		
Octane	94		-		70-130	-		
Tetrachloroethene	99		-		70-130	-		
1,1,1,2-Tetrachloroethane	96		-		70-130	-		
Chlorobenzene	103		-		70-130	-		
Ethylbenzene	101		-		70-130	-		
p/m-Xylene	102		-		70-130	-		
Bromoform	103		-		70-130	-		
Styrene	103		-		70-130	-		
1,1,2,2-Tetrachloroethane	105		-		70-130	-		
o-Xylene	103		-		70-130	-		
1,2,3-Trichloropropane	95		-		70-130	-		
Nonane (C9)	89		-		70-130	-		
Isopropylbenzene	98		-		70-130	-		
Bromobenzene	96		-		70-130	-		
o-Chlorotoluene	95		-		70-130	-		
n-Propylbenzene	95		-		70-130	-		
p-Chlorotoluene	92		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: WSFSSH

Lab Number: L1429167

Project Number: WSFSSH

Report Date: 12/11/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG747406-3								
4-Ethyltoluene	99		-		70-130	-		
1,3,5-Trimethylbenzene	101		-		70-130	-		
tert-Butylbenzene	98		-		70-130	-		
1,2,4-Trimethylbenzene	107		-		70-130	-		
Decane (C10)	94		-		70-130	-		
Benzyl chloride	111		-		70-130	-		
1,3-Dichlorobenzene	106		-		70-130	-		
1,4-Dichlorobenzene	106		-		70-130	-		
sec-Butylbenzene	98		-		70-130	-		
p-Isopropyltoluene	91		-		70-130	-		
1,2-Dichlorobenzene	109		-		70-130	-		
n-Butylbenzene	102		-		70-130	-		
1,2-Dibromo-3-chloropropane	103		-		70-130	-		
Undecane	104		-		70-130	-		
Dodecane (C12)	125		-		70-130	-		
1,2,4-Trichlorobenzene	134	Q	-		70-130	-		
Naphthalene	112		-		70-130	-		
1,2,3-Trichlorobenzene	128		-		70-130	-		
Hexachlorobutadiene	122		-		70-130	-		

## Lab Duplicate Analysis

Batch Quality Control

Project Name: WSFSSH

Project Number: WSFSSH

Lab Number: L1429167

Report Date: 12/11/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG747406-5 QC Sample: L1429035-01 Client ID: DUP Sample						
Dichlorodifluoromethane	0.380	0.397	ppbV	4		25
Chloromethane	0.465	0.591	ppbV	24		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethyl Alcohol	ND	2.62	ppbV	NC		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	5.74	5.05	ppbV	13		25
Trichlorofluoromethane	0.238	0.247	ppbV	4		25
iso-Propyl Alcohol	ND	ND	ppbV	NC		25
tert-Butyl Alcohol	ND	ND	ppbV	NC		25
Methylene chloride	ND	0.512	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	ND	ND	ppbV	NC		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: WSFSSH

Project Number: WSFSSH

Lab Number: L1429167

Report Date: 12/11/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG747406-5 QC Sample: L1429035-01 Client ID: DUP Sample					
2-Butanone	0.370	0.468	ppbV	23	25
Ethyl Acetate	ND	ND	ppbV	NC	25
Chloroform	ND	ND	ppbV	NC	25
Tetrahydrofuran	ND	ND	ppbV	NC	25
1,2-Dichloroethane	ND	ND	ppbV	NC	25
n-Hexane	ND	ND	ppbV	NC	25
Benzene	ND	ND	ppbV	NC	25
Cyclohexane	ND	ND	ppbV	NC	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
Bromodichloromethane	ND	ND	ppbV	NC	25
1,4-Dioxane	ND	ND	ppbV	NC	25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC	25
Heptane	ND	ND	ppbV	NC	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
4-Methyl-2-pentanone	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
Toluene	1.43	1.38	ppbV	4	25
2-Hexanone	ND	ND	ppbV	NC	25

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429167  
**Report Date:** 12/11/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG747406-5 QC Sample: L1429035-01 Client ID: DUP Sample					
Dibromochloromethane	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	ND	ND	ppbV	NC	25
p/m-Xylene	0.452	0.450	ppbV	0	25
Bromoform	ND	ND	ppbV	NC	25
Styrene	ND	ND	ppbV	NC	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
o-Xylene	ND	ND	ppbV	NC	25
4-Ethyltoluene	ND	ND	ppbV	NC	25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC	25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC	25
Benzyl chloride	ND	ND	ppbV	NC	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25
Hexachlorobutadiene	ND	ND	ppbV	NC	25

Project Name: WSFSSH

Project Number: WSFSSH

Serial\_No:12111416:45  
Lab Number: L1429167

Report Date: 12/11/14

### Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1429167-01	SV-1	0224	#20 SV	11/12/14	111109		-	-	-	Pass	17.6	17.9	2
L1429167-01	SV-1	326	2.7L Can	11/12/14	111109	L1426897-01	Pass	-29.8	-10.0	-	-	-	-
L1429167-02	SV-2	0100	#20 SV	11/12/14	111109		-	-	-	Pass	17.6	18.3	4
L1429167-02	SV-2	379	2.7L Can	11/12/14	111109	L1426897-01	Pass	-29.6	-5.8	-	-	-	-
L1429167-03	SV-3	0217	#30 SV	12/03/14	112245		-	-	-	Pass	18.0	4.2	124
L1429167-03	SV-3	184	2.7L Can	12/03/14	112245	L1428266-01	Pass	-30.0	-20.6	-	-	-	-

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1426897  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1426897-01  
 Client ID: CAN 1724 SHELF 4  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 11/08/14 18:07  
 Analyst: RY

Date Collected: 11/07/14 18:26  
 Date Received: 11/08/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.200	--	ND	0.434	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1426897  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1426897-01  
 Client ID: CAN 1724 SHELF 4  
 Sample Location:

Date Collected: 11/07/14 18:26  
 Date Received: 11/08/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1426897  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1426897-01  
 Client ID: CAN 1724 SHELF 4  
 Sample Location:

Date Collected: 11/07/14 18:26  
 Date Received: 11/08/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1426897  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1426897-01  
 Client ID: CAN 1724 SHELF 4  
 Sample Location:

Date Collected: 11/07/14 18:26  
 Date Received: 11/08/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1426897  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1426897-01 Date Collected: 11/07/14 18:26  
 Client ID: CAN 1724 SHELF 4 Date Received: 11/08/14  
 Sample Location: Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	94		60-140

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1426897  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1426897-01  
 Client ID: CAN 1724 SHELF 4  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 11/08/14 18:07  
 Analyst: RY

Date Collected: 11/07/14 18:26  
 Date Received: 11/08/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.404	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1426897  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1426897-01  
 Client ID: CAN 1724 SHELF 4  
 Sample Location:

Date Collected: 11/07/14 18:26  
 Date Received: 11/08/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.500	--	ND	2.46	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1426897  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1426897-01  
 Client ID: CAN 1724 SHELF 4  
 Sample Location:

Date Collected: 11/07/14 18:26  
 Date Received: 11/08/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
n-Butylbenzene	ND	0.500	--	ND	2.74	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	96		60-140

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1428266  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1428266-01  
 Client ID: CAN 176 SHELF 13  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 11/22/14 18:29  
 Analyst: RY

Date Collected: 11/21/14 17:54  
 Date Received: 11/22/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.200	--	ND	0.434	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1428266  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1428266-01  
 Client ID: CAN 176 SHELF 13  
 Sample Location:

Date Collected: 11/21/14 17:54  
 Date Received: 11/22/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1428266  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1428266-01  
 Client ID: CAN 176 SHELF 13  
 Sample Location:

Date Collected: 11/21/14 17:54  
 Date Received: 11/22/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1428266  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1428266-01  
 Client ID: CAN 176 SHELF 13  
 Sample Location:

Date Collected: 11/21/14 17:54  
 Date Received: 11/22/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
Silanol, Trimethyl-	1.9	NJ	ppbV		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1428266  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1428266-01 Date Collected: 11/21/14 17:54  
 Client ID: CAN 176 SHELF 13 Date Received: 11/22/14  
 Sample Location: Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	78		60-140
Bromochloromethane	84		60-140
chlorobenzene-d5	81		60-140

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1428266  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1428266-01  
 Client ID: CAN 176 SHELF 13  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 11/22/14 18:29  
 Analyst: RY

Date Collected: 11/21/14 17:54  
 Date Received: 11/22/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.404	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1428266  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1428266-01  
 Client ID: CAN 176 SHELF 13  
 Sample Location:

Date Collected: 11/21/14 17:54  
 Date Received: 11/22/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.500	--	ND	2.46	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1428266  
**Report Date:** 12/11/14

### Air Canister Certification Results

Lab ID: L1428266-01  
 Client ID: CAN 176 SHELF 13  
 Sample Location:

Date Collected: 11/21/14 17:54  
 Date Received: 11/22/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
n-Butylbenzene	ND	0.500	--	ND	2.74	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	79		60-140
bromochloromethane	87		60-140
chlorobenzene-d5	83		60-140

Project Name: WSFSSH

Lab Number: L1429167

Project Number: WSFSSH

Report Date: 12/11/14

**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

**Cooler Information Custody Seal****Cooler**

N/A Present/Intact

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429167-01A	Canister - 2.7 Liter	N/A	NA		Y	Present/Intact	TO15-LL(30)
L1429167-02A	Canister - 2.7 Liter	N/A	NA		Y	Present/Intact	TO15-LL(30)
L1429167-03A	Canister - 2.7 Liter	N/A	NA		Y	Present/Intact	TO15-LL(30)

\*Values in parentheses indicate holding time in days

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429167  
**Report Date:** 12/11/14

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Total:** With respect to Organic analyses, a "Total" result is defined as the summation of results for individual isomers or Aroclors. If a "Total" result is requested, the results of its individual components will also be reported. This is applicable to "Total" results for methods 8260, 8081 and 8082.

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**Report Format:** Data Usability Report



**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429167  
**Report Date:** 12/11/14

#### **Data Qualifiers**

- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** WSFSSH  
**Project Number:** WSFSSH

**Lab Number:** L1429167  
**Report Date:** 12/11/14

## REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

Last revised April 15, 2014

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**The following analytes are not included in our NELAP Scope of Accreditation:**

### Westborough Facility

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

**EPA 8260C:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

**EPA 8330A/B:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

### Mansfield Facility

**EPA 8270D:** Biphenyl.

**EPA 2540D:** TSS

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

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**The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:**

### Drinking Water

**EPA 200.8:** Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

### Non-Potable Water

**EPA 200.8:** Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

**EPA 200.7:** Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

**EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F,**

**EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4,**

**SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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For a complete listing of analytes and methods, please contact your Alpha Project Manager.



# AIR ANALYSIS

PAGE 1 OF 1

**CHAIN OF CUSTODY**

320 Forbes Blvd, Mansfield, MA 02048  
 TEL: 508-822-9300 FAX: 508-822-3288

**Client Information**

Client: CARich Consultants  
 Address: 17 Dupont Street  
Plainville NY 11803  
 Phone: (516) 570-8844  
 Fax:  
 Email: tbrown@carichinc.com

These samples have been previously analyzed by Alpha

**Project Information**

Project Name: WSFSSH  
 Project Location: 153-57 Sherman Ave  
 Project #:  
 Project Manager: Thomas Brown  
 ALPHA Quote #: 2014726

**Turn-Around Time**

Standard  RUSH (only confirmed if pre-approved!)  
5 day TAT  
 Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

Date Rec'd in Lab: \_\_\_\_\_

**Report Information - Data Deliverables**

FAX  
 ADEX  
 Criteria Checker: \_\_\_\_\_  
 (Default based on Regulatory Criteria Indicated)  
 Other Formats: \_\_\_\_\_  
 EMAIL (standard pdf report)  
 Additional Deliverables:  
 Report to: (if different than Project Manager)

ALPHA Job #: L1429167

**Billing Information**

Same as Client info PO #:

**Regulatory Requirements/Report Limits**

State/Fed	Program	Criteria

**Other Project Specific Requirements/Comments:**

Please analyze SV-3 first and contact me if another sample needs to be collected

**All Columns Below Must Be Filled Out**

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection				Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	ANALYSIS					Sample Comments (i.e. PID)		
		Date	Start Time	End Time									TO-14A By TO-15	TO-15	TO-15 SIM	APH	FIXED GASES		TO-13A	TO-4 / TO-10
-01	SV-1	12/3/14	720	1205	30.20	10.73	SV	TB	2.7L	326	0204	X								
-02	SV-2	12/3/14	745	930	30.33	6.68	SV	TB	2.7L	379	0100	X								
-03	SV-3	12/3/14	1020	1420	30.30	20.31	SV	TB	2.7L	184	0217	X								

**\*SAMPLE MATRIX CODES**

AA = Ambient Air (Indoor/Outdoor)  
 SV = Soil Vapor/Landfill Gas/SVE  
 Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:

Date/Time

Received By:

Date/Time

Thomas Brown  
Tom Brown

12-4-14 1106

12-4-14 1850

12-5-14 0120

Tom Brown  
Tom Brown

12-4-14 1106

12-4-14 1850

12/5/14 0120