REMEDIAL INVESTIGATION REPORT

for

111 Willow Avenue
Bronx, New York

Block 2562, Lot 49
E-Designation E-454
CEQR No. 18DCP007X
OER Project No 18TMP0340X

Prepared for:

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LIST OF ACRONYMS

Acronym	Definition
AST	Aboveground Storage Tank
AOC	Area of Concern
BGS	Below Grade Surface
C2-4	Commercial Zoning Designation
CAMP	Community Air Monitoring Plan
CEQR	City Environmental Quality Review
CFR	Code of Federal Regulations
DOT	Department of Transportation
ESA	Environmental Site Assessment
ESI	Environmental Site Investigation
ELAP	Environmental Laboratory Accreditation Program
eV	Electron Volt
Ft btoc	Feet below top-of-casing
GPR	Ground Penetrating Radar
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
µg/L	Micrograms per liter
$\mu g/m^3$	Micrograms per cubic meter
mg/kg	Milligrams per kilogram
NYC OER	New York City Office of Environmental Remediation
NYCRR	New York City Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OSHA	Occupational Safety and Health Administration
OW	Observation Well
PCB	Polychlorinated Biphenyls
PCE	Tetrachloroethylene
PE	Professional Engineer
PID	Photoionization Detector
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
R7-3	Residential Zoning Designation
RCNY	Rules of the City of New York
REC	Recognized Environmental Condition
RURR	Restricted Use Restricted-Residential
RI	Remedial Investigation
RIR	Remedial Investigation Report
RIWP	Remedial Investigation Work Plan

RSCO	Recommended Soil Cleanup Objective
SCO	Soil Cleanup Objective
SGV	Standards and Guidance Value
SVOC	Semivolatile Organic Compound
TAL	Target Analyte List
TAGM	Technical Administrative Guidance Memorandum
TCE	Trichloroethylene
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TOGS	Technical and Operation Guidance Series
USEPA	United States Environmental Protection Agency
UU	Unrestricted Use
UST	Underground Storage Tank
VOC	Volatile Organic Compound

CERTIFICATION

I, Jason J. Hayes, am a Professional Engineer, as defined in RCNY § 43-1402(rr). I have primary direct responsibility for implementation of the remedial investigation for the 111 Willow Avenue site (OER Project No. 18TMP0340X). I am responsible for the content of this Remedial Investigation Report (RIR), have reviewed its contents, and certify that this report is accurate to the best of my knowledge and contains available environmental information and data regarding the site.

Jason J. Hayes

Name

089491

PE License Number

Signature

Date

PE Stamp

EXECUTIVE SUMMARY

This Remedial Investigation Report (RIR) for 111 Willow Avenue in Bronx, New York (the site) was prepared as part of the New York City (NYC) Brownfield Jumpstart Program and the NYC Community Brownfield Planning Area Program and is consistent with applicable guidance.

Site Location and Current Usage

The site is located at 111 Willow Avenue in the Port Morris neighborhood of Bronx, New York and is identified as Block 2562, Lot 49 (formerly Lots 49, 56, 58 and 60) on the Bronx Borough tax map. The site is associated with City Environmental Quality Review (CEQR) No. 18DCPO007X (Willow Avenue Rezoning) and a Negative Declaration was issued for the site by the Department of City Planning on November 22, 2017. A zoning map amendment (C 180088 ZMX) was approved on June 7, 2018, that changed the zoning district for the site from an M1-2 to an M1-4/R7D. The site is subject to an E-Designation (E-454) for hazardous materials (Hazmat) and air quality (Air).

The approximately 21,000-square-foot site is comprised of a one-story building used as warehouse space, a three-story building with a cellar used as commercial office space, a storage shed, and an asphalt-paved parking lot. The site is bounded by East 134th Street followed by a multi-story industrial/manufacturing building to the north, Willow Avenue followed by a multi-story industrial/manufacturing building to the east, East 133rd Street followed by multi-story industrial/manufacturing buildings to the south, and one- to two-story industrial/manufacturing and residential buildings to the west.

Summary of Proposed Redevelopment Plan

The proposed development project will include demolition of existing structures and construction of a new nine-story mixed-use building with a cellar, which will occupy the entirety of the site. The cellar level will include utility rooms, bike storage, and parking accessible via a driveway from East 134th Street. The first floor will contain commercial retail space and a residential lobby area. Floors two through nine will contain 120 affordable housing units and laundry rooms. An open air residential courtyard will be located on the second floor of the building. The proposed development plans are subject to change; however, based on the layout of the cellar, it is expected that a net cut of about 10,000 cubic yards of material will be required during development.

Summary of Past Uses of Site and Areas of Concern

According to the November 18, 2016 Phase I Environmental Site Assessment (ESA) prepared by Middleton Environmental Inc. (Middleton), the site has been developed since at least 1908. Former on-site uses include a piano string manufacturer (circa 1927 to 1976), an automotive parts and equipment company (circa 1976), a natural stone contracting company for marble (circa 1927 to 2008) and residential tenants since about 1931.

Areas of concern (AOC) identified during previous investigations include:

1. Historic Fill Material – Historic fill material of unknown origin may have been imported to the site during past development activities.
2. Historical Site Use – The site was historically used as a piano string manufacturer and an automotive parts and equipment company. Chemicals associated with these former uses may have impacted subsurface conditions at the site.
3. Current and Historical Surrounding Property Use – Potential subsurface environmental impacts may be associated with current and historical usage of the surrounding properties, including dry cleaning use at the eastern-adjoining property, underground storage tanks (USTs) at the southern-adjoining property, and up-gradient closed spill listings.

Summary of Remedial Investigation Field Work

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology (Langan) implemented the RI between May 21 and 24, 2018 in general conformance with the NYC OER-approved May 21, 2018 Remedial Investigation Work Plan (RIWP), prepared by Langan. The following RI scope of work was completed:

1. A geophysical survey was conducted to identify anomalies indicative of USTs and associated piping, and clear boring locations of subsurface utilities and structures.
2. Nine soil borings (SB-01 through SB-09) were advanced and 19 soil samples, including 1 duplicate sample, were collected for chemical analysis from the soil borings to evaluate soil quality.
3. Five groundwater monitoring wells (MW-01 through MW-05) were installed throughout the site and six groundwater samples, including one duplicate sample, were collected for chemical analysis to evaluate groundwater quality and to establish groundwater flow.
4. Eight soil vapor probes (SV-01 through SV-08) were installed and seven samples were collected for laboratory analysis; due to sample equipment malfunction, the sample from SV-08 was not able to be collected.

Summary of Environmental Findings

1. The subsurface consisted of historic fill material from below the surface cover (asphalt or building slab) to a maximum depth of about 8 feet below ground surface (bgs). The fill layer was underlain by native soils primarily consisting of silt, sand and clay.
2. Grossly impacted material was not observed during the investigation. Photoionization detector (PID) readings in soil did not exceed background conditions. Chemical staining or odors were not apparent during soil sampling and no petroleum-like sheen was observed on groundwater.

3. Groundwater was encountered from 0.47 feet below the cellar slab in the 767 East 133rd Street building to 9.56 feet bgs in the parking lot, corresponding to groundwater elevations ranging from elevation (el.) 3.59 to el. 5.54 in reference to North American Vertical Datum of 1988 (NAVD88). Based on the groundwater measurements, site groundwater flows southwest.

4. Soil samples were compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 NYCRR Part 375 Unrestricted Use (UU) and Restricted Use Restricted-Residential (RURR) Soil Cleanup Objectives (SCO). The results are summarized below:

    - Volatile organic compounds (VOC) – VOCs were not detected at concentrations above UU SCOs in any soil samples, with the exception of acetone, which was detected above the UU SCO but below the RURR SCO (maximum |max| concentration 0.19 milligrams per kilogram [mg/kg]). Acetone is a common laboratory artifact and likely not representative of site conditions.

    - Semivolatile organic compounds (SVOC) – Seven SVOCs, including benzo(a)anthracene (max concentration 20 mg/kg), benzo(a)pyrene (max concentration 17 mg/kg), benzo(b)fluoranthene (max concentration 24 mg/kg), benzo(k)fluoranthene (max concentration 7.6 mg/kg), chrysene (max concentration 17 mg/kg), indeno(1,2,3-cd)pyrene (max concentration 3.3 mg/kg), and dibenzo[a,h]anthracene (max concentration 3.6 mg/kg), were detected at concentrations above UU and RURR SCOs.

    - Pesticides – Four pesticides, including total chlordane (max concentration 0.13 mg/kg), p-p'-DDE (max concentration 0.13 mg/kg), p,p'-DDD (max concentration 0.13 mg/kg), and p-p'-DDT (max concentration 0.13 mg/kg), were detected at concentrations above UU SCOs but not RURR SCOs.

    - Polychlorinated biphenyls (PCB) – Total PCBs were not detected at concentrations above UU SCOs in any soil samples,, with the exception of one sample, which was detected above the UU SCO but below the RURR SCO (max concentration 0.29 mg/kg of total PCBs).

    - Metals – Eight metals, including barium (max concentration 1,000 mg/kg), cadmium (max concentration 3.5 mg/kg), chromium (max concentration 110 mg/kg), copper (max concentration 440 mg/kg), lead (max concentration 1,000 mg/kg), mercury (max concentration 5.2 mg/kg), nickel (max concentration 100 mg/kg), and zinc (max concentration 2,400 mg/kg), were detected at concentrations exceeding UU and RURR SCOs.

5. Groundwater samples were compared to the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (SGV) for Class GA water. The results are summarized below:

    - VOCs – Seven VOCs including 1,1,1-trichloroethane (TCA - max concentration 130 micrograms per liter [µg/L]), 1,1-dichloroethane (1,1-DCA - max concentration 38 µg/L), 1,1-dichloroethene (1,1-DCE - max concentration 65 µg/L), cis-1,2-dichloroethene (cis-1,2-DCE - max concentration 320 µg/L), tetrachloroethene (PCE - max concentration 3,700 µg/L), trichloroethene (TCE - max concentration 420 µg/L), and vinyl chloride (VC - max concentration 5.6 µg/L), were detected at concentrations exceeding their SGVs. These compounds are all chlorinated aliphatic hydrocarbons.

    - SVOCs, Pesticides, Herbicides, and PCBs – SVOCs, pesticides, herbicides and PCBs were not detected at concentrations above SGVs in any groundwater samples.

    - Dissolved Metals – Three dissolved metals, iron (max concentration 3,200 µg/L), manganese (max concentration 3,000 µg/L), and sodium (maximum 520,000 µg/L), were detected at concentrations exceeding their SGVs. These compounds are likely associated with regional conditions.

6. Soil vapor samples were compared to New York State Department of Health (NYSDOH) Final Guidance on Soil Vapor Intrusion (May 2017) Matrix A, B, and C guidance values. Samples showed petroleum-related VOCs and chlorinated VOCs present in soil vapor.

    - The total concentration of petroleum-related VOCs (BTEX – benzene, toluene, ethylbenzene, and xylene) ranged from 32.4 micrograms per cubic meter (µg/m^3) to 49.7 µg/m^3.

    - PCE and TCE were detected in one sample (SV07_062218) at 160 and 8.4 µg/m^3, respectively. VOCs were not detected above comparison criteria in any other sample. In the absence of indoor air samples, the results for PCE and TCE in soil vapor samples indicate a range of suggested action from "no further action" through "mitigate".

REMEDIAL INVESTIGATION REPORT

1.0 SITE BACKGROUND

Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C. (Langan) was retained by the NYC Office of Environmental Remediation (OER) to complete this Remedial Investigation (RI) for an approximately 21,000-square-foot redevelopment at 111 Willow Avenue in the Port Morris neighborhood of the Bronx, New York (the site). The RI was conducted as part of the New York City (NYC) Brownfield Jumpstart Program and the NYC Community Brownfield Planning Area Program.

1.1 Site Location and Current Usage

The site is located at 111 Willow Avenue in the Port Morris neighborhood of Bronx, New York and is identified as Block 2562, Lot 49 (formerly Lots 49, 56, 58 and 60) on the Bronx Borough tax map. The site is associated with City Environmental Quality Review (CEQR) No. 18DCPO007X (Willow Avenue Rezoning) and a Negative Declaration was issued for the site by the Department of City Planning on November 22, 2017. A zoning map amendment (C 180088 ZMX) was recently approved on June 7, 2018, that changed the zoning district for the site from an M1-2 District to an M1-4/R7D. The site is subject to an E-Designation (E-454) for hazardous materials and air quality. The approximately 21,000-square-foot site is comprised of a one-story building used as warehouse space, a three-story building with a cellar used as commercial office space, a storage shed, and an asphalt-paved parking lot. The site is bounded by East 134th Street followed by a multi-story industrial/manufacturing building to the north, Willow Avenue followed by a multi-story industrial/manufacturing building to the east, East 133rd Street followed by multi-story industrial/manufacturing buildings to the south, and one- to two-story industrial/manufacturing and residential buildings to the west.

A site location map is included as Figure 1 and a site map is included as Figure 2.

1.2 Proposed Redevelopment Plan

The proposed development project will include demolition of existing structures and construction of a new nine-story mixed-use building with a cellar, which will occupy the entirety of the site. The cellar level will include utility rooms, bike storage, and parking accessible via a driveway from East 134th Street. The first floor will contain commercial retail space and a residential lobby area. Floors two through nine will contain 120 affordable housing units and laundry rooms. An open air residential courtyard will be located on the second floor of the building. The proposed development plans are subject to change; however, based on the layout of the cellar, it is expected that a net cut of about 10,000 cubic yards of material will be required during development. The proposed development plans are included in Appendix A.

1.3 Description of Surrounding Property

The site is located in an area generally characterized by single- and multi-story manufacturing/industrial and residential buildings in zoning districts designated for manufacturing and residential uses, as shown below:

DIRECTION	ADJOINING PROPERTIES	SURROUNDING PROPERTIES
North	East 134th Street	One- to four-story industrial/manufacturing building apparently used for metal and glass fabrication and related office space
East	Willow Avenue	Six-story industrial/manufacturing building reportedly operating as a commercial drycleaner
South	East 133rd Street	One-story industrial/manufacturing building
West	740 East 134th Street and 759 East 133rd Street	One-story industrial/manufacturing building and two-story residential building

Nearby sensitive receptors were not identified. The nearest hospital is the NYC Health + Hospitals/Harlem, which is located about 1.6 miles northwest of the site. The nearest public school (P.S. 030 Wilton) is located about 2,700 feet northwest of the site. A surrounding land use map is included as Figure 3.

2.0 SITE HISTORY

2.1 Past Uses and Ownership

The site is owned by Markland 745, LLC. According to a November 18, 2016 Phase I Environmental Site Assessment (ESA) prepared by Middleton Environmental Inc. (Middleton), the site has been developed since at least 1908. Former on-site uses include a piano string manufacturer (circa 1927 to 1976), an automotive parts and equipment company (circa 1976) a natural stone contracting company for marble (circa 1927 to 2008), and residential uses since about 1931.

2.2 Previous Reports

The following reports were prepared for the site:

November 18, 2016 Phase I Environmental Site Assessment Report, by Middleton Environmental, Inc.

Historical uses of environmental concern at the site included a piano string manufacturer (circa 1927 to 1976) and an automotive parts and equipment company (circa 1976). The report also identified Resource Conservation and Recovery Act (RCRA) hazardous waste generator sites for the generation of halogenated solvents on the eastern-adjoining property and three New York State Department of Environmental Conservation (NYSDEC) closed spills within a 0.125-mile radius of the site.

November 17, 2017 Preliminary Geotechnical Investigation, by Pillori Associates

The report describes a geotechnical investigation performed between October 30 and November 7, 2017. Fill material consisting of sand, silt, gravel, and miscellaneous debris, brick, and asphalt fragments was identified from the surface down to 8 to 13 feet below grade surface (bgs). Groundwater was measured at approximately 8.4 feet bgs.

Copies of the above reports are included in Appendix B.

2.3 Areas of Concern

The areas of concern (AOC) identified based on known information about the site include:

- Historic Fill Material – Historic fill material of unknown origin may have been imported to the site during past development activities. Historic fill material is expected to be encountered across the site.
- Historical Site Use – The site was historically used as a piano string manufacturer and an automotive parts and equipment company. Chemicals associated with these former uses may have impacted subsurface conditions.
- Current and Historical Adjoining and Surrounding Property Use – Potential environmental impacts may be associated with current and historical usage of the adjoining and

surrounding properties, including dry cleaning use at the eastern-adjoining property, underground storage tanks (USTs) at the southern-adjoining property, and up-gradient closed spill listings.

A map showing sample locations and the AOCs are presented on Figure 4.

3.0 PROJECT MANAGEMENT

3.1 Project Organization

The Professional Engineer (PE) responsible for preparation of this RIR is Jason J. Hayes of Langan.

3.2 Health and Safety

The work described in this RIR was performed under the Health and Safety Plan (HASP) included in the RIWP and applicable laws and regulations, including Occupational Safety and Health Administration (OSHA) worker safety requirements and Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements.

3.3 Materials Management

Material encountered during the RI was managed in accordance with applicable laws and regulations. Purge and development water was containerized properly in one labeled Department of Transportation (DOT)-approved 55-gallon drum for future off-site disposal at a permitted facility. Soil cuttings were returned to the borehole that generated them.

4.0 REMEDIAL INVESTIGATION ACTIVITIES

The RI was performed from May 21 through 24, 2018 and the scope of work was completed in accordance with the OER-approved May 21, 2018 RIWP. The following scope of work was completed as part of the RI:

1. A geophysical survey was conducted to identify anomalies indicative of underground UST and associated piping and clear boring locations of subsurface utilities and structures.
2. Nine soil borings (SB-01 through SB-09) were advanced and 19 soil samples, including 1 duplicate sample, were collected for chemical analysis from the soil borings to evaluate soil quality.
3. Five groundwater monitoring wells (MW-01 through MW-05) were installed throughout the site and six groundwater samples, including one duplicate sample, were collected for chemical analysis to evaluate groundwater quality and to establish groundwater flow.
4. Eight soil vapor probes (SV-01 through SV-08) were installed and seven samples were collected for the laboratory analysis; due to sample equipment malfunction, the sample from SV-08 was not able to be collected.

Sample locations are shown on Figure 4. Details of the field activities are discussed in the following sections.

4.1 Geophysical Investigation

Prior to commencement of intrusive field activities (i.e., soil borings, well installation, and soil vapor sampling), Nova Geophysical Services (Nova) conducted a geophysical survey on May 21, 2018. The survey was conducted using ground penetrating radar (GPR) to identify any underground storage tanks (UST), anomalies, utilities, and other subsurface structures, and to clear proposed boring locations.

4.2 Borings, Monitoring Wells and Soil Vapor Points

Soil Investigation

Nine soil borings (SB-01 through SB-09) were advanced by AARCO Environmental Services Corp. (Aarco) of Lindenhurst, New York using a track-mounted Geoprobe® 7822DT direct-push unit and a Geoprobe® 420 M (in low overhead clearance areas). Borings SB-01 through SB-08 were advanced to about 16 feet bgs and boring SB-09 was advanced to about 9 feet below cellar slab in the 767 East 133rd Street building, which corresponds to about 17 feet below sidewalk grade. A sample location map is included as Figure 4.

Soil samples were collected continuously in 3- or 4-foot Macro-Core® sample barrels with dedicated acetate liners. Soil samples retrieved from each soil boring were visually classified for soil type, grain size, and texture; inspected for visual and olfactory evidence of

contamination; and screened for VOCs with a photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp. Following sample collection, five of the borings were converted into permanent groundwater monitoring wells. The remaining boreholes were backfilled with soil cuttings from which they were generated because no grossly-contaminated soil or free product was encountered during the RI. The ground surface was restored with an asphalt or concrete patch. Boring logs are included in Appendix D.

Groundwater Monitoring Well Construction

Five permanent groundwater monitoring wells (MW-01 through MW-05) were installed within SB-01, SB-03, SB-05, and SB-06, and SB-09, respectively. Monitoring wells were constructed with about 10 feet of 2-inch diameter, 0.02-inch slotted schedule (SCH) 40 polyvinyl chloride (PVC) well screen threaded to 2-inch diameter SCH 40 PVC that extended to surface grade. The well screen was set to straddle the observed groundwater table. Monitoring wells were completed with a clean sand filter to about 4 feet above the well screen, followed by a 0.5-foot-thick hydrated bentonite seal, grout to surface, and an expandable well plug and bolted-down manhole cover. After installation, monitoring wells were developed by purging until water quality parameters stabilized. If stabilization could not be achieved, a minimum of 3 well volumes was purged and purging continued for a full hour before sampling. Monitoring wells MW-02 and MW-03 achieved stabilization during purging; monitoring wells MW-01 and MW-05 exhibited poor recharge and became dry after 1.25 gallons of purge volume; and MW-04 achieved stabilization with the exception of turbidity after one hour of purging. Monitoring well locations are depicted on Figure 4 and well construction logs are included in Appendix E.

Soil Vapor Probe Installation

Eight sub-slab and soil vapor probes (SV-01 through SV-08) were installed to between 5 and 12 feet bgs or directly beneath the concrete slab in indoor locations. SV-05, SV-06 and SV-08 were installed within buildings, SV-01 through SV-04 were installed within the parking lot, and SV-07 was installed in an outdoor location in the southwest corner of the site. The soil vapor investigation followed protocols provided in the 2006 New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion. Sample locations are shown on Figure 7. Each soil vapor sample location included a 2-inch long polyethylene screen implant threaded into 1/4-inch Teflon tubing extending to the surface. After the sampling points were placed, boreholes were backfilled with clean sand around the implant, immediately followed by a hydrated bentonite seal to prevent ambient air infiltration.

The seal integrity was checked before and after sample collection using a shroud and helium detector. Prior to sample collection, a minimum of three probe assembly volumes of air were purged using a MultiRAE gas monitor, calibrated for a flow rate of 0.2 liters per minute (L/min). Following purging, the soil vapor samples were drawn through the polyethylene tubing into laboratory supplied Summa® canisters under vacuum pressure. The Summa® canisters were

equipped with flow regulators calibrated for a two-hour sampling period. Vapor sample construction and sampling logs are located in Appendix F.

4.3 Sample Collection and Chemical Analysis

RI soil, groundwater, and soil vapor sampling was conducted to investigate the AOCs and also considered other means for bias of sampling based on professional judgment, area history, field instrument measurements, and other field indicators. Discrete (grab) samples were used to determine the potential impact of contaminants on public health and the environment. Soil, groundwater, and soil vapor samples were collected into laboratory-supplied containers and transported to Hampton-Clarke, a NYSDOH Environmental Laboratory Approval Program (ELAP)-certified (ELAP No. 11408) laboratory located in Fairfield, New Jersey. A sample summary is included as Table 1 and a sample location map is included as Figure 4.

Soil

Nineteen soil samples (including one field duplicate) were collected and analyzed for VOCs via United States Environmental Protection Agency (USEPA) Method 8260, semivolatile organic compounds (SVOC) via USEPA Method 8270, polychlorinated biphenyls (PCB) via USEPA Method 8082, pesticides via USEPA Method 8081, and Target Analyte List (TAL) metals via USEPA Methods 6010 and 7471. A blind duplicate sample was collected from SB07_1-3.

Two grab soil samples were collected from each boring: one sample was collected from the existing shallow subsurface (within the 0 to 3 feet bgs interval); a second sample was collected from either the proposed development depth or the groundwater interface. Samples submitted for VOC analysis were collected directly from the dedicated acetate sleeve via laboratory supplied Terra Core® soil samplers. The remaining sample volume was homogenized and placed in pre-cleaned, laboratory-supplied glassware and placed in a laboratory-supplied cooler packed with ice (to maintain a temperature of 4ºC). The coolers were picked up at the end of each sampling event by a laboratory courier and transported under standard chain-of-custody protocol to Hampton-Clarke.

Data on soil sample collection for chemical analyses, including dates of collection and sample depths, is reported in Table 1. Figure 5 shows the location of samples collected during this investigation.

Groundwater

Six groundwater samples were collected from five monitoring wells (one from each well and one field duplicate) and submitted for laboratory analysis. A blind duplicate sample was collected from MW-05. Groundwater samples were collected in accordance with USEPA Region 2 – Low Stress Groundwater Sampling Protocol. Before sample collection, static water level was measured to the nearest 0.01 foot with a Solinst interface probe. Groundwater depths at each monitoring well are presented in Table 5. The well effluent was pumped

through a Horiba U-52 flow-through cell to monitor for hydrogen ion concentration (pH), oxidation/reduction potential (ORP), conductivity, temperature, dissolved oxygen (DO), and turbidity. Groundwater was purged prior to sampling until the water level and monitored parameters stabilized, with the exception of wells MW-01, MW-04, and MW-05 where stabilization could not be achieved due to poor recharge. Wells with poor recharge were sampled after the wells were purged dry. Wells were sampled directly from the discharge line into laboratory-supplied glassware and transported under chain-of-custody protocols to Hampton-Clarke. The samples were analyzed for VOCs, SVOCs, PCBs, pesticides, and TAL metals (total and dissolved). Groundwater sample field sampling forms are included in Appendix F.

Soil Vapor

Seven soil vapor samples were collected for laboratory analysis. Sample collection was attempted at SV-08; however, a sample could not be collected due to a sample equipment malfunction. The soil vapor samples were collected over 2-hour period into laboratory-supplied 1-liter Summa® canisters. Soil vapor samples were analyzed for VOCs via USEPA Method TO-15. Soil vapor sampling logs are included in Appendix G.

QA/QC Samples

One field blank sample, one trip blank sample, one duplicate soil sample and one duplicate groundwater sample were collected and submitted to Hampton-Clarke for QA/QC purposes. The field blank, which consists of laboratory-supplied deionized water poured over a clean nitrile glove into sample containers, determines the effectiveness of pre-cleaning procedures for the soil and groundwater sampling equipment. The field blank was analyzed for TCL VOCs, SVOCs, pesticides, PCBs, and TAL total metals. The trip blank, which consist of about 40 milliliters (mL) of acidic water prepared by the laboratory and sent with the sample containers, was analyzed for TCL VOCs.

4.4 Results of Chemical Analyses

Laboratory data for soil, groundwater and soil vapor are summarized in Tables 2A, 2B, 2C, 3, and 5 and presented on Figures 5, 6, and 7, respectively. Laboratory data deliverables are provided in Appendix H.

5.0 ENVIRONMENTAL EVALUATION

5.1 Geological and Hydrogeological Conditions

The United States Geological Survey (USGS) "Bedrock and Engineering Geologic Maps of New York County and Parts of Kings and Queens Counties, New York, and parts of Bergen and Hudson counties, New Jersey" (Baskerville 1994) indicates Manhattan Schist (Lower Cambrian) as the bedrock unit underlying the site. More specifically, this formation is described as a gray, medium- to coarse-grained layered schist and gneiss with black amphibolite layers 3 feet thick or more.

According to the April 6, 2018 Survey prepared by Gerald T. O'Buckley Professional Land Surveyors, the site ground surface elevation ranges from about elevation (el.) 12 to el. 14 in reference to North American Vertical Datum of 1988 (NAVD88).

Stratigraphy

The generalized stratigraphy beneath the site concrete and asphalt surface cover includes historic fill material followed by estuarine river deposits. Fill material was observed from immediately below the existing grade down to 8 feet below sidewalk grade during the RI. The fill layer consists of fine to medium sand with varying amounts of gravel, brick, coal ash, slag, plastic, concrete, and asphalt; underlain by native silts and fine sands.

Grossly impacted material was not observed during the investigation. PID readings in soil did not exceed background. No chemical odors or staining were apparent in any sampling locations.

During the November 2017 geotechnical investigation conducted by Pillori, fill was identified to depths between 8 and 13 feet below sidewalk grade and was underlain by soft estuarine deposits and glacial soil. The bedrock was generally encountered between about 30 to 45 feet bgs; however, in some locations, borings were advanced to 85 feet and the bedrock was not encountered.

Hydrogeology

Groundwater flow is typically topographically influenced, as shallow groundwater tends to originate in areas of topographic highs and flows toward areas of topographic lows, such as rivers, stream valleys, ponds and wetlands. A broader, interconnected hydrogeologic network often governs groundwater flow at depth or in the bedrock aquifer. Groundwater depth and flow direction are also subject to hydrogeologic and anthropogenic variables such as precipitation, evaporation, extent of vegetative cover, subsurface structures (e.g., subways), and coverage by impervious surfaces. Other factors influencing groundwater include depth to bedrock, the presence of historical fill and variability in local geology and groundwater sources or sinks.

Depth to groundwater on July 13, 2018 ranged from about 0.47 feet below cellar slab in the 767 East 133rd Street building to 9.56 feet bgs, corresponding to el. 3.59 (at MW-05) to el. 5.54 (at MW-03). Based on groundwater measurements, site groundwater flows to the southwest. Groundwater elevation measured during sampling and gauging events are recorded in Table 5 and a groundwater contour map is provided on Figure 8.

5.2 Soil Chemistry

Nineteen grab soil samples, including one duplicate sample, were collected and submitted for laboratory analysis. Soil samples were analyzed for VOCs, SVOCs, metals, PCBs, and pesticides, and results were compared to the NYSDEC Title 6 NYCRR Part 375 Unrestricted Use (UU) and Restricted Use Restricted-Residential (RURR) soil cleanup objectives (SCO). The results are summarized below, and the SCOs for each compound are presented in brackets (e.g., "[UU SCO / RURR SCO]"):

VOCs – Concentrations of one VOC exceeded the UU SCO, as summarized below:

- acetone (maximum |max| of 0.19 milligrams per kilograms |mg/kg|) in SB05_9-11) [UU SCO of 0.05 mg/kg; RURR SCO of 100 mg/kg] - Acetone is a common laboratory artifact and is not likely indicative of site conditions.

SVOCs – Concentrations of SVOCs exceeded UU SCOs in three samples (SB02_7-8, SB05_1-2, and SB08_0-2), several of which also exceeded RURR SCOs, as summarized below:

- benzo(a)anthracene (max concentration 20 mg/kg in SB02_7-8) [1 mg/kg / 1 mg/kg]
- benzo(a)pyrene (max concentration 17 mg/kg in SB02_7-8) [1 mg/kg / 1 mg/kg]
- benzo(b)fluoranthene (max concentration 24 mg/kg in SB02_7-8) [1 mg/kg / 1 mg/kg]
- benzo(k)fluoranthene (max concentration 7.6 mg/kg in SB02_7-8) [0.8 mg/kg / 3.9 mg/kg]
- chrysene (max concentration 17 mg/kg in SB02_7-8) [1 mg/kg / 3.9 mg/kg]
- dibenzo[a,h]anthracene (max concentration 3.6 mg/kg in SB02_7-8) [0.33 mg/kg / 0.33 mg/kg]
- indeno(1,2,3-cd)pyrene (max concentration 3.3 mg/kg in SB08_0-2) [0.5 mg/kg / 0.5 mg/kg]

Two out of three of the samples that had SVOCs exceeding SCOs were detected in shallow soil and appear to be constituents of the heterogeneous historic fill material and are not related to a spill or release. The remaining sample (SB02_7-8) was collected from the capillary fringe, which was encountered in SB02 at the historic fill horizon; the detected SVOCs may be related to an on- or off-site source.

Metals – Concentrations of metals exceeded UU SCOs in all 19 samples, 6 of which also exceeded RURR SCOs, as summarized below:

- barium (max concentration of 1,000 mg/kg in SB08_0-2) [350 mg/kg / 400 mg/kg]
- cadmium (max concentration of 3.5 mg/kg in SB08_0-2) [2.5 mg/kg / 4.3 mg/kg]
- chromium (max concentration of 110 mg/kg in SB02_7-8) [1 mg/kg / 110 mg/kg]
- copper (max concentration of 440 mg/kg in SB02_1-3) [50 mg/kg / 270 mg/kg]
- lead (max concentration of 1,000 mg/kg in SB08_0-2) [63 mg/kg / 400 mg/kg]
- mercury (max concentration of 5.2 mg/kg in SB06_1-2) [0.18 mg/kg / 0.81 mg/kg]
- nickel (max concentration of 100 mg/kg in SB08_7-8) [30 mg/kg / 310 mg/kg]
- zinc (max concentration of 2,400 mg/kg in SB02_1-3) [109 mg/kg / 10,000 mg/kg]

Soil samples with metals exceeding SCOs were collected from the heterogeneous historic fill interval.

Pesticides – Concentrations of pesticides exceeded UU SCOs in five samples, but did not exceed RURR SCOs, as summarized below:

- total chlordane (max concentration of 0.16 mg/kg in SB08_0-2) [0.094 mg/kg / 4.2 mg/kg]
- p-p'-DDE (max concentration of 0.13 mg/kg in SB08_0-2) [0.0033 mg/kg / 8.9 mg/kg]
- p,p'-DDD (max concentration of 0.13 mg/kg in SB08_0-2) [0.0033 mg/kg / 13 mg/kg]
- p-p'-DDT (max concentration of 0.13 mg/kg in SB08_0-2) [0.0033 mg/kg / 7.9 mg/kg]

These pesticides have been banned in the United States and are either remnants of historic pest control at the site or potentially constituents of historic fill.

PCBs – Concentration of total PCBs exceeded its UU SCO in one soil sample (SB02_1-3), as summarized below:

- aroclor-1262 (max concentration of 0.29 mg/kg in SB02_1-3) [0.1 mg/kg / 1 mg/kg]

Herbicides – No herbicides were detected in any of the soil samples.

A summary of data for chemical analyses performed on soil samples is included in Tables 2A, 2B and 2C. Figure 5 provides a map of soil sample locations with a summary of analytical results that exceeded the Part 375 UU and RURR SCOs. Laboratory analytical reports are provided in Appendix H.

5.3 Groundwater Chemistry

Six groundwater samples were collected from five monitoring wells (one from each well and one field duplicate from MW-05) and submitted for laboratory analysis. Groundwater analytical results were compared to the NYSDEC Technical and Operational Guidance (TOGS) 1.1.1 Ambient Water Quality Standard and Guidance Values (SGV) for Class GA groundwater. A summary of the results, with the SGVs shown in brackets, is presented below.

VOCs – Concentrations of VOCs exceeded the SGVs in five samples:

- 1,1,1-Trichloroethane (TCA - max concentration of 130 micrograms per liter [µg/L] in MW-02) [5 µg/L]
- 1,1-Dichloroethane (1,1-DCA - max concentration of 38 µg/L in MW-02) [5 µg/L]
- 1,1-Dichloroethene (1,1-DCE - max concentration of 65 µg/L in MW-02) [5 µg/L]
- cis-1,2-Dichloroethene (cis-1,2-DCE - max concentration of 320 µg/L in MW-02) [5 µg/L]
- Tetrachloroethene (PCE - max concentration of 3,700 µg/L in MW-02) [5 µg/L]
- Trichloroethene (TCE - max concentration of 420 µg/L in MW-02) [5 µg/L]
- Vinyl chloride (VC - max concentration of 5.6 µg/L in duplicate sample collected from MW-05) [2 µg/L]

The VOCs exceeding SGVs were chlorinated aliphatic hydrocarbons. These compounds were not detected in soil samples and may have originated at an off-site source. The highest concentrations of VOCs in groundwater were detected in monitoring well MW-02.

SVOCs – SVOCs were not detected in groundwater above the SGVs.

Dissolved Metals – Concentrations of dissolved metals exceeded the SGVs in all six groundwater samples, as summarized below:

- iron (max concentration of 3,200 µg/L in MW-05) [300 µg/L]
- manganese (max concentration of 3,000 µg/L in MW-02) [300 µg/L]
- sodium (max concentration of 520,000 µg/L in MW-05) [20,000 µg/L]

Metals exceeding SGVs are attributable to regional conditions likely attributed to naturally occurring minerals in groundwater.

Pesticides, Herbicides, and PCBs – These compounds were not detected above the SGVs.

A groundwater analytical summary is included in Table 3 and Table 4 and the sampling results are depicted on Figure 6. Laboratory analytical reports are provided in Appendix H.

5.4 Soil Vapor Chemistry

Soil vapor analytical results were evaluated using the Decision Matrices in the NYSDOH Final Guidance on Soil Vapor Intrusion in the State of New York (May 2017). The NYSDOH matrix evaluation presents a comparison of sub-surface and indoor air data for PCE, TCE, TCA, methylene chloride, carbon tetrachloride, 1,1-DCE, cis-1,2-DCE, and VC. A complete comparison cannot be made to the matrices because indoor air samples were not collected. PCE and TCE were detected in one sample (SV07_062218) at 160 micrograms per cubic meter (µg/m^3) and at 8.4 ug/m^3, respectively). VOCs were not detected above comparison criteria in any other sample. In the absence of indoor air samples, the results for PCE and TCE in soil vapor samples indicate a range of suggested action from "no further action" through "mitigate".

PCE and TCE were not detected in soil samples but were detected in groundwater, along with other chlorinated aliphatic hydrocarbons, indicating that soil vapor contaminants may be migrating from an off-site source(s).

The total concentration of petroleum-related VOCs (BTEX – benzene, toluene, ethylbenzene, and xylene) ranged from 32.4 µg/m^3 to 49.7 µg/m^3.

A summary of soil vapor analytical results is provided in Table 6, and soil vapor sampling results are provided on Figure 7. Laboratory analytical reports are provided in Appendix H.

5.5 Preliminary Hazardous Waste Assessment

Resource Conservation and Recovery Act (RCRA) characteristics for hazardous waste (ignitability, corrosivity, reactivity, and toxicity) were not analyzed as part of this RI; however, chromium (in one sample) and lead (in four samples) were detected at total concentrations in soil that exceed the "Rule of 20," indicating that chromium and lead in soil may be present at concentrations above the RCRA hazardous waste thresholds for toxicity at the site.

5.6 Impediments to Remedial Action

There are no known impediments to remedial action at the site.

FIGURES



Notes:
Topographic basemap provided by United States Geological Survey. Quadrangles: Central Park, New York, Date: 2016

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Project	111 WILLOW AVE NEW YORK BRONX NEW YORK
Drawing Title	SITE LOCATION MAP
Project No.	170497201
Date	6/22/2018
Scale	1"=2,000'
Drawn By	ESCARANGELLO
Submission Date	6/22/2018
Figure	1
Sheet	Sheet ### of ###

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LEGEND:

APPROXIMATE SITE BOUNDARY

49 LOT NUMBER

2562 BLOCK NUMBER

NOTES:

1. BASEMAP OBTAINED FROM NYC OASIS MAP ON OCTOBER 17, 2017.

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111 WILLOW AVENUE

BLOCK No. 2562, LOT No. 49

BRONX NEW YORK

Figure Title

SITE MAP

Project No. 170497201	Figure No. 2
Date 07/03/2018	
Scale 1" = 40'	
Drawn By KG / Checked By TC	
Submission Date	Page 2 of 8

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Filename: \\langan.com\data\NYC\data2\170497201\Project Data\CAD\01\2D-DesignFiles\Environmental\Figure 2 - Site Map.dwg Date: 7/19/2018 Time: 15:16 User: kgarrett Style Table: Langan.stb Layout: ANSIB-BL



LEGEND:

APPROXIMATE SITE BOUNDARY

LAND USE LEGEND:

- 1 & 2 FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- MIXED USE
- OPEN SPACE & OUTDOOR RECREATION
- COMMERCIAL
- INSTITUTIONS
- INDUSTRIAL
- PARKING
- TRANSPORTATION/UTILITIES
- VACANT LOTS

NOTES:

1. BASE MAP OBTAINED FROM WWW.OASISNYC.NET

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Figure Title
SURROUNDING LAND USE MAP

Project No. 170497201	Figure No. 3
Date 06/05/2018	
Scale 1" = 250'	
Drawn By KG / Checked By	
Submission Date	Sheet 3 of 3

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Filename: \\langan.com\data\NYC\data2\170497201\Project Data\CAD\01\2D-DesignFiles\Environmental\Figure 3 - Surrounding Land Use.dwg Date: 7/13/2018 Time: 12:04 User: kgarrett Style Table: Langan.stb Layout: Figure 2 - Site Map With 1000 Ft Line



LEGEND:

- APPROXIMATE SITE BOUNDARY
- SB-02 — SOIL BORING LOCATION
- SB-01/MW-01 — SOIL BORING/MONITORING WELL LOCATION
- SV-01 — SUB SLAB/SOIL VAPOR SAMPLE LOCATION
- AOC 1 - HISTORIC FILL
- AOC 2 - HISTORICAL SITE USE
- AOC 3 - CURRENT AND HISTORICAL SURROUNDING PROPERTY USE AND REGULATORY LISTINGS

NOTES:

1. BASEMAP OBTAINED FROM NYC OASIS MAP ON OCTOBER 17, 2017.
2. SOIL BORINGS SB-04, SB-06, AND SB-07 WERE ADVANCED WITHIN THE ONSITE BUILDINGS. SB-09 WAS LOCATED IN A CELLAR.
3. SOIL VAPOR SV05, SV06, AND SV08 WERE INSTALLED SUB-SLAB.

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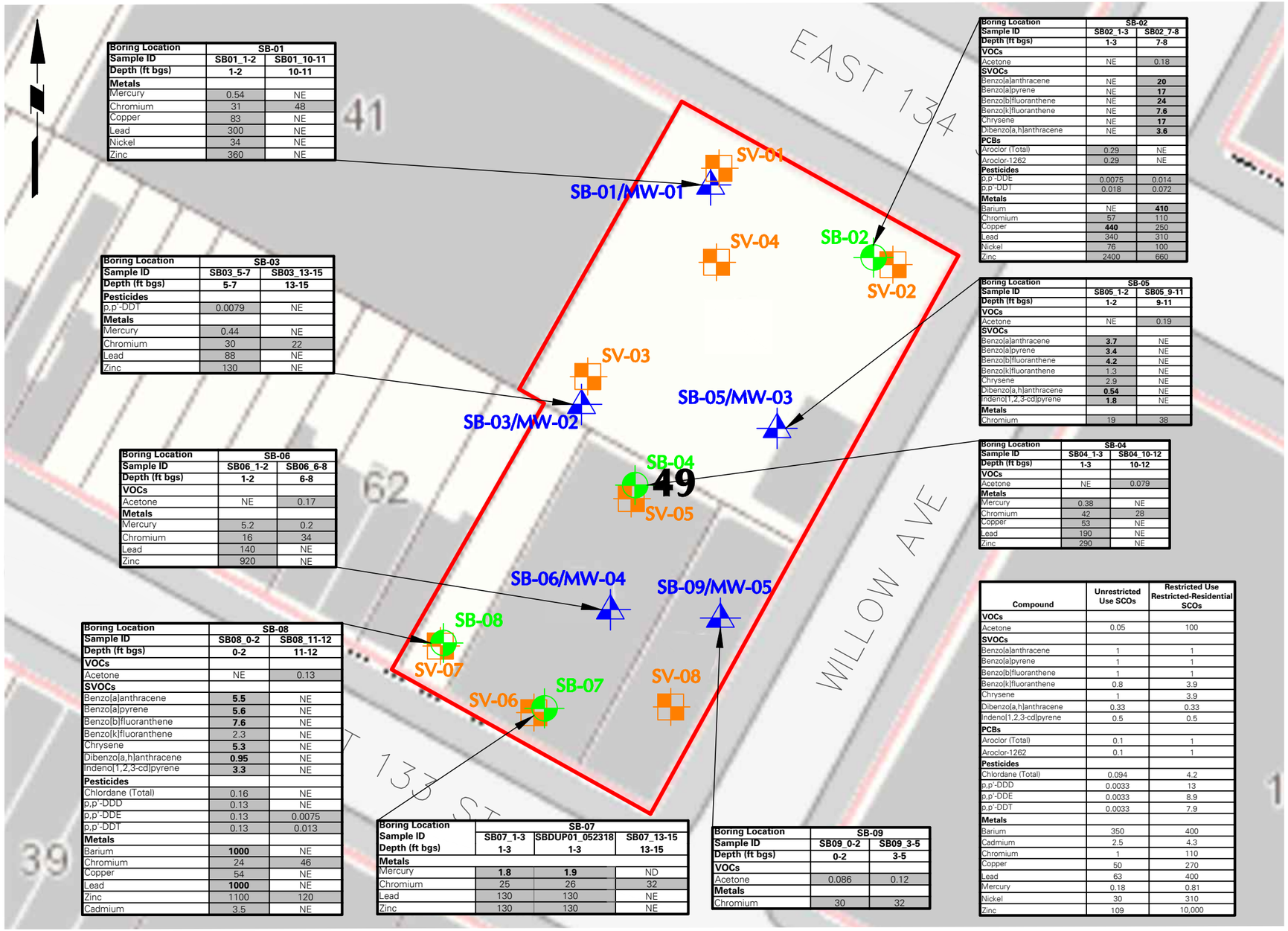
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Figure Title
SITE LOCATION AND AOC MAP

Project No. 170497201	Figure No. 4
Date 07/19/2018	
Scale 1" = 40'	
Drawn By KG / Checked By TC	
Submission Date	Page 4 of 8

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Filename: \\langan.com\data\NYC\data2\170497201\Project Data\CAD\01\2D-DesignFiles\Environmental\Figure 4 - Sample Location and AOC Map.dwg Date: 7/19/2018 Time: 14:55 User: kgarrett Style Table: Langan.stb Layout: ANSIB-BL



Boring Location	SB-01	
Sample ID	SB01_1-2	SB01_10-11
Depth (ft bgs)	1-2	10-11
Metals		
Mercury	0.54	NE
Chromium	31	48
Copper	83	NE
Lead	300	NE
Nickel	34	NE
Zinc	360	NE

Boring Location	SB-02	
Sample ID	SB02_1-3	SB02_7-8
Depth (ft bgs)	1-3	7-8
VOCs		
Acetone	NE	0.18
SVOCs		
Benzo[a]anthracene	NE	**20**
Benzo[a]pyrene	NE	**17**
Benzo[b]fluoranthene	NE	**24**
Benzo[k]fluoranthene	NE	**7.6**
Chrysene	NE	**17**
Dibenzo[a,h]anthracene	NE	**3.6**
PCBs		
Aroclor (Total)	0.29	NE
Aroclor-1262	0.29	NE
Pesticides		
p,p'-DDE	0.0075	0.014
p,p'-DDT	0.018	0.072
Metals		
Barium	NE	**410**
Chromium	57	110
Copper	**440**	250
Lead	340	310
Nickel	76	100
Zinc	2400	660

Boring Location	SB-03	
Sample ID	SB03_5-7	SB03_13-15
Depth (ft bgs)	5-7	13-15
Pesticides		
p,p'-DDT	0.0079	NE
Metals		
Mercury	0.44	NE
Chromium	30	22
Lead	88	NE
Zinc	130	NE

Boring Location	SB-05	
Sample ID	SB05_1-2	SB05_9-11
Depth (ft bgs)	1-2	9-11
VOCs		
Acetone	NE	0.19
SVOCs		
Benzo[a]anthracene	**3.7**	NE
Benzo[a]pyrene	**3.4**	NE
Benzo[b]fluoranthene	**4.2**	NE
Benzo[k]fluoranthene	1.3	NE
Chrysene	2.9	NE
Dibenzo[a,h]anthracene	**0.54**	NE
Indeno[1,2,3-cd]pyrene	**1.8**	NE
Metals		
Chromium	19	38

Boring Location	SB-04	
Sample ID	SB04_1-3	SB04_10-12
Depth (ft bgs)	1-3	10-12
VOCs		
Acetone	NE	0.079
Metals		
Mercury	0.38	NE
Chromium	42	28
Copper	53	NE
Lead	190	NE
Zinc	290	NE

Boring Location	SB-06	
Sample ID	SB06_1-2	SB06_6-8
Depth (ft bgs)	1-2	6-8
VOCs		
Acetone	NE	0.17
Metals		
Mercury	5.2	0.2
Chromium	16	34
Lead	140	NE
Zinc	920	NE

Compound	Unrestricted Use SCOs	Restricted Use Restricted-Residential SCOs
VOCs		
Acetone	0.05	100
SVOCs		
Benzo[a]anthracene	1	1
Benzo[a]pyrene	1	1
Benzo[b]fluoranthene	1	1
Benzo[k]fluoranthene	0.8	3.9
Chrysene	1	3.9
Dibenzo[a,h]anthracene	0.33	0.33
Indeno[1,2,3-cd]pyrene	0.5	0.5
PCBs		
Aroclor (Total)	0.1	1
Aroclor-1262	0.1	1
Pesticides		
Chlordane (Total)	0.094	4.2
p,p'-DDD	0.0033	13
p,p'-DDE	0.0033	8.9
p,p'-DDT	0.0033	7.9
Metals		
Barium	350	400
Cadmium	2.5	4.3
Chromium	1	110
Copper	50	270
Lead	63	400
Mercury	0.18	0.81
Nickel	30	310
Zinc	109	10,000

Boring Location	SB-08	
Sample ID	SB08_0-2	SB08_11-12
Depth (ft bgs)	0-2	11-12
VOCs		
Acetone	NE	0.13
SVOCs		
Benzo[a]anthracene	**5.5**	NE
Benzo[a]pyrene	**5.6**	NE
Benzo[b]fluoranthene	**7.6**	NE
Benzo[k]fluoranthene	2.3	NE
Chrysene	**5.3**	NE
Dibenzo[a,h]anthracene	**0.95**	NE
Indeno[1,2,3-cd]pyrene	**3.3**	NE
Pesticides		
Chlordane (Total)	0.16	NE
p,p'-DDD	0.13	NE
p,p'-DDE	0.13	0.0075
p,p'-DDT	0.13	0.013
Metals		
Barium	**1000**	NE
Chromium	24	46
Copper	54	NE
Lead	**1000**	NE
Zinc	1100	120
Cadmium	3.5	NE

Boring Location	SB-07		
Sample ID	SB07_1-3	SBDUP01_052318	SB07_13-15
Depth (ft bgs)	1-3	1-3	13-15
Metals			
Mercury	**1.8**	**1.9**	ND
Chromium	25	26	32
Lead	130	130	NE
Zinc	130	130	NE

Boring Location	SB-09	
Sample ID	SB09_0-2	SB09_3-5
Depth (ft bgs)	0-2	3-5
VOCs		
Acetone	0.086	0.12
Metals		
Chromium	30	32

LEGEND:

- APPROXIMATE SITE BOUNDARY
- SB-02 — SOIL BORING LOCATION
- SB-01/MW-01 — SOIL BORING/MONITORING WELL LOCATION
- SV-01 — SUB SLAB/SOIL VAPOR SAMPLE LOCATION

NOTES:

1. BASEMAP OBTAINED FROM NYC OASIS MAP ON OCTOBER 17, 2017.
2. DATA GENERATED DURING REMEDIAL INVESTIGATION PERFORMED BY LANGAN ON 5/21/18-5/24/18.
3. ALL LOCATIONS ARE APPROXIMATE.
4. FT BGS = FEET BELOW GROUND SURFACE.
5. ALL RESULTS ARE PRESENTED IN MILLIGRAMS PER KILOGRAM (MG/KG).
6. SOIL RESULTS ARE COMPARED TO TITLE 6 OF THE OFFICIAL COMPILATION OF NEW YORK CODES, RULES, AND REGULATIONS (NYCRR) PART 375 UNRESTRICTED USE AND RESTRICTED USE RESTRICTED-RESIDENTIAL SOIL CLEANUP OBJECTIVES (SCOs).
7. ONLY COMPOUNDS EXCEEDING COMPARISON CRITERIA ARE SHOWN
8. RESULTS ABOVE PART 375 UNRESTRICTED USE SCOS ARE SHADED.
9. RESULTS ABOVE PART 375 RESTRICTED-RESIDENTIAL SCOS ARE BOLDED AND SHADED.
10. VOC = VOLATILE ORGANIC COMPOUND
11. SVOC = SEMI-VOLATILE ORGANIC COMPOUND
12. PCBs = POLYCHLORINATED BIPHENYLS
13. NE = NO EXCEEDANCES

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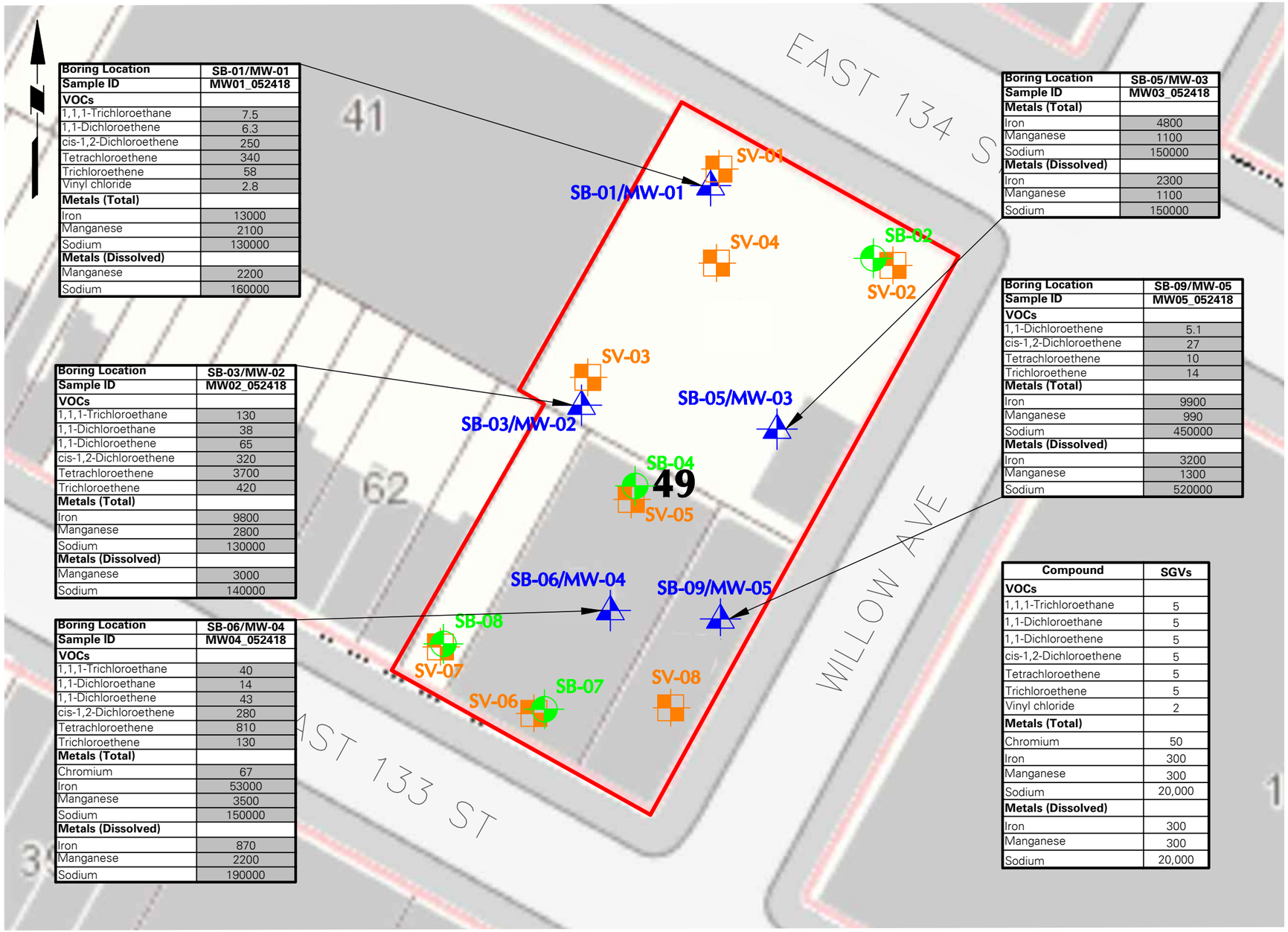
Figure Title
SOIL ANALYTICAL SUMMARY RESULTS MAP

Project No. 170497201
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Scale 1" = 40'
Drawn By KG
Checked By TC
Submission Date

Figure No. 5

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Boring Location	SB-01/MW-01
Sample ID	MW01_052418
VOCs	
1,1,1-Trichloroethane	7.5
1,1-Dichloroethene	6.3
cis-1,2-Dichloroethene	250
Tetrachloroethene	340
Trichloroethene	58
Vinyl chloride	2.8
Metals (Total)	
Iron	13000
Manganese	2100
Sodium	130000
Metals (Dissolved)	
Manganese	2200
Sodium	160000

Boring Location	SB-03/MW-02
Sample ID	MW02_052418
VOCs	
1,1,1-Trichloroethane	130
1,1-Dichloroethane	38
1,1-Dichloroethene	65
cis-1,2-Dichloroethene	320
Tetrachloroethene	3700
Trichloroethene	420
Metals (Total)	
Iron	9800
Manganese	2800
Sodium	130000
Metals (Dissolved)	
Manganese	3000
Sodium	140000

Boring Location	SB-06/MW-04
Sample ID	MW04_052418
VOCs	
1,1,1-Trichloroethane	40
1,1-Dichloroethane	14
1,1-Dichloroethene	43
cis-1,2-Dichloroethene	280
Tetrachloroethene	810
Trichloroethene	130
Metals (Total)	
Chromium	67
Iron	53000
Manganese	3500
Sodium	150000
Metals (Dissolved)	
Iron	870
Manganese	2200
Sodium	190000

Boring Location	SB-05/MW-03
Sample ID	MW03_052418
Metals (Total)	
Iron	4800
Manganese	1100
Sodium	150000
Metals (Dissolved)	
Iron	2300
Manganese	1100
Sodium	150000

Boring Location	SB-09/MW-05
Sample ID	MW05_052418
VOCs	
1,1-Dichloroethene	5.1
cis-1,2-Dichloroethene	27
Tetrachloroethene	10
Trichloroethene	14
Metals (Total)	
Iron	9900
Manganese	990
Sodium	450000
Metals (Dissolved)	
Iron	3200
Manganese	1300
Sodium	520000

Compound	SGVs
VOCs	
1,1,1-Trichloroethane	5
1,1-Dichloroethane	5
1,1-Dichloroethene	5
cis-1,2-Dichloroethene	5
Tetrachloroethene	5
Trichloroethene	5
Vinyl chloride	2
Metals (Total)	
Chromium	50
Iron	300
Manganese	300
Sodium	20,000
Metals (Dissolved)	
Iron	300
Manganese	300
Sodium	20,000

LEGEND:

- APPROXIMATE SITE BOUNDARY
- SB-02 — SOIL BORING LOCATION
- SB-01/MW-01 — SOIL BORING/MONITORING WELL LOCATION
- SV-01 — SOIL VAPOR SAMPLE LOCATION

NOTES:

1. BASEMAP OBTAINED FROM NYC OASIS MAP ON OCTOBER 17, 2017.
2. DATA GENERATED DURING REMEDIAL INVESTIGATION PERFORMED BY LANGAN ON 5/21/18-5/24/18.
3. ALL LOCATIONS ARE APPROXIMATE.
4. ALL RESULTS ARE PRESENTED IN MICROGRAMS PER LITER (µg/L)
5. GROUNDWATER RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1 AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES (SGVs) FOR CLASS GA GROUNDWATER
6. ONLY COMPOUNDS EXCEEDING COMPARISON CRITERIA ARE SHOWN
7. RESULTS ABOVE NYSDEC SGVs ARE SHADED
8. VOCs = VOLATILE ORGANIC COMPOUNDS

40 0 20 40
SCALE IN FEET

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Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project
111 WILLOW AVENUE
BLOCK No. 2562, LOT No. 49
BRONX NEW YORK

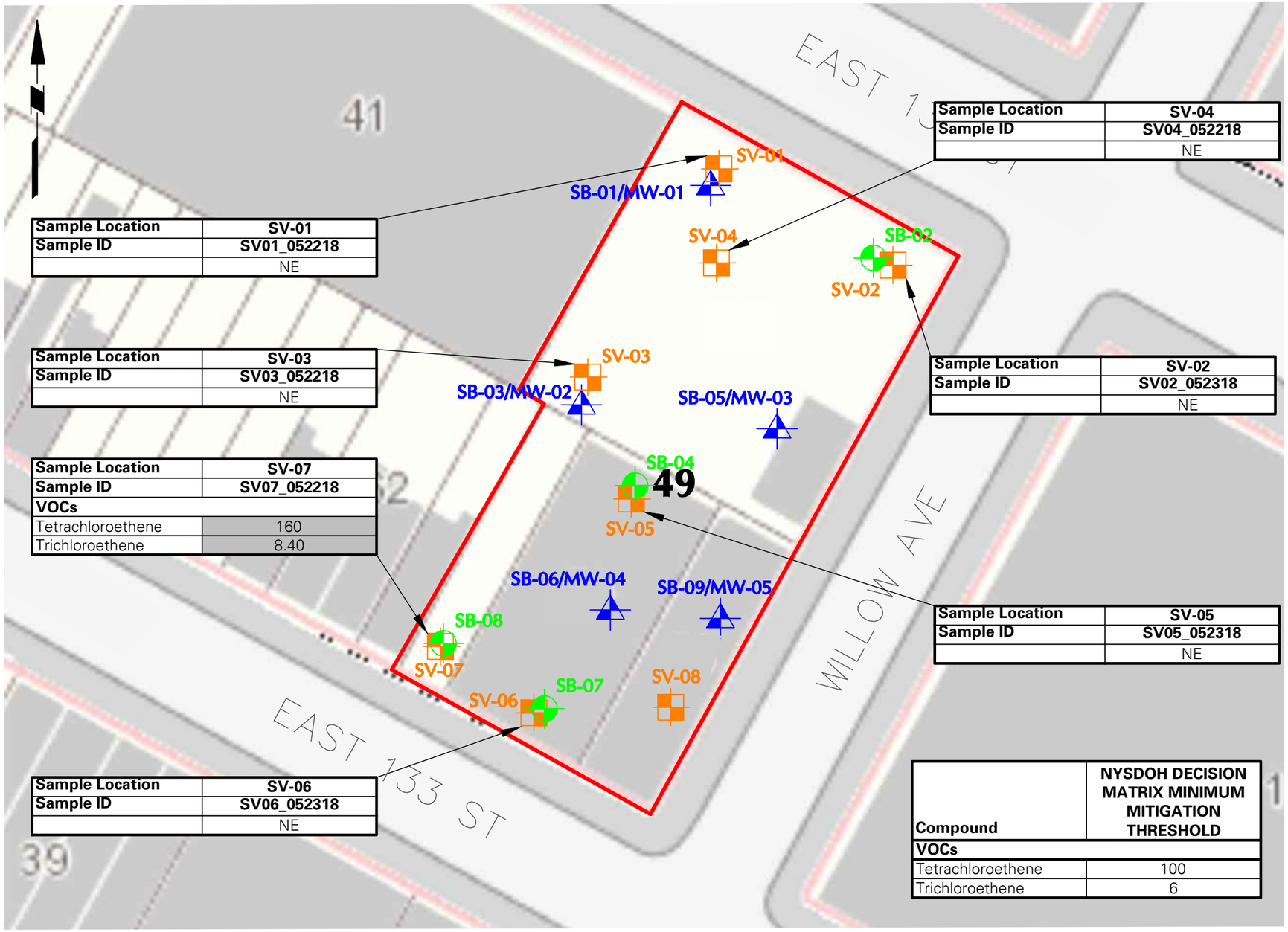
Figure Title
GROUNDWATER ANALYTICAL SUMMARY RESULTS MAP

Project No. 170497201
Date 07/06/2018
Scale 1" = 40'
Drawn By KG | Checked By TC
Submission Date

Figure No. 6

© 2017 Langan

Filename: \\langan.com\data\NYC\data2\170497201\Project Data\CAD\01\2D-DesignFiles\Environmental\Figure 6 - Groundwater Analytical Summary Results Map_base.dwg Date: 7/30/2018 Time: 13:42 User: kgarrett Style Table: Langan.stb Layout: ANSIB-BL



LEGEND:

- APPROXIMATE SITE BOUNDARY
- SB-02 — SOIL BORING LOCATION
- SB-01/MW-01 — SOIL BORING/MONITORING WELL LOCATION
- SV-01 — SUB SLAB/SOIL VAPOR SAMPLE LOCATION

NOTES:

1. BASEMAP OBTAINED FROM NYC OASIS MAP ON OCTOBER 17, 2017.
2. DATA GENERATED DURING RI PERFORMED BY LANGAN ON 5/21/18-5/24/18.
3. ALL LOCATIONS ARE APPROXIMATE.
4. ALL RESULTS ARE PRESENTED IN MICROGRAMS PER CUBIC METER ($\mu g/m^3$).
5. SOIL VAPOR SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF HEALTH (NYSDOH) MINIMUM SUB-SLAB SOIL VAPOR CONCENTRATION AT WHICH MITIGATION IS RECOMMENDED ON THE NYSDOH DECISION MATRICES A, B AND C PRESENTED IN THE NYSDOH FINAL GUIDANCE ON SOIL VAPOR INTRUSION.
6. ONLY COMPOUNDS EXCEEDING COMPARISON CRITERIA ARE SHOWN.
7. NE = NO EXCEEDANCES.

40 0 20 40
SCALE IN FEET

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Project
111 WILLOW AVENUE
BLOCK No. 2562, LOT No. 49
BRONX NEW YORK

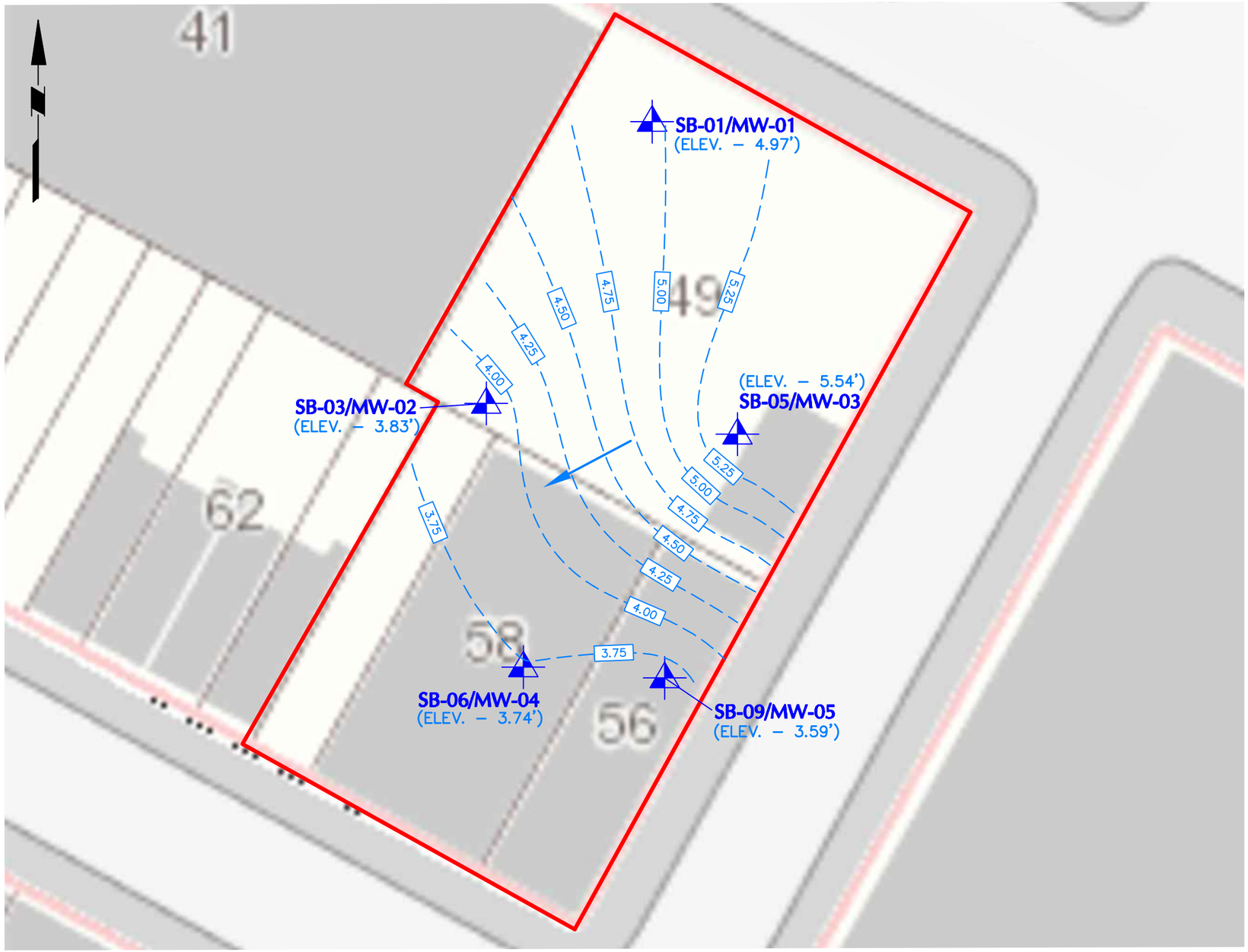
Figure Title
SOIL VAPOR ANALYTICAL SUMMARY RESULTS MAP

Project No. 170497201
Date 07/06/2018
Scale 1" = 40'
Drawn By KG | Checked By TC
Submission Date

Figure No. 7

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Filename: \\langan.com\data\NYC\data2\170497201\Project Data\CAD\01\2D-DesignFiles\Environmental\Figure 7 - Soil Vapor Analytical Summary Results Map_base.dwg Date: 7/30/2018 Time: 13:55 User: kgarrett Style Table: Langan.stb Layout: ANSIB-BL



LEGEND:

- APPROXIMATE SITE BOUNDARY
- SB-01/MW-01 (ELEV. – 4.97') — SOIL BORING/MONITORING WELL LOCATION (GROUNDWATER ELEVATION)
- 5.00 — GROUNDWATER CONTOUR ELEVATION
- INFERRED GROUNDWATER FLOW DIRECTION

NOTES:

1. BASEMAP OBTAINED FROM NYC OASIS MAP ON OCTOBER 17, 2017.
2. ELEVATIONS ARE IN REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. GROUNDWATER ELEVATIONS ARE BASED ON A SYNOPTIC ROUND OF GROUNDWATER GAUGING ON JULY 13, 2018.
4. GROUNDWATER CONTOUR INTERVAL IS 0.25 FEET

30 0 15 30
SCALE IN FEET

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Langan International LLC
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Project
111 WILLOW AVENUE
BLOCK No. 2562, LOT No. 49
BRONX NEW YORK

Figure Title
GROUNDWATER ELEVATION CONTOUR MAP

Project No. 170497201	Figure No. 8
Date 07/19/2018	
Scale 1" = 30'	
Drawn By JFY / Checked By TC	
Submission Date	Page 8 of 8

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Filename: \\langan.com\data\NYC\data2\170497201\Project Data\CAD\01\2D-DesignFiles\Environmental\Figure 8 - Groundwater Contour Map.dwg Date: 7/19/2018 Time: 14:27 User: jyanowitz Style Table: Langan.stb Layout: ANSIB-BL

TABLES

Table 1
Remedial Investigation Sample Summary
111 Willow St
Bronx, New York
Langan Project No. 170497201

Parent Location	Sample Name	Sample Date	Sample Type	Depth (feet bgs)	Analysis
SOIL					
SB01	SB01_1-2	5/21/2018	Grab	1-2	VOCs, SVOCs, PCBs, Pesticides/Herbicides, Metals
	SB01_10-11			10-11	
SB02	SB02_1-3	5/22/2018		1-3	
	SB02_7-8			7-8	
SB03	SB03_5-7	5/21/2018		5-7	
	SB03_13-15			13-15	
SB04	SB04_1-3	5/23/2018		1-3	
	SB04_10-12			10-12	
SB05	SB05_1-2	5/21/2018		1-2	
	SB05_9-11			9-11	
SB06	SB06_1-2	5/23/2018		1-2	
	SB06_6-8			6-8	
SB07	SB07_1-3	5/23/2018		1-3	
	SBDUP01_052318			1-3	
	SB07_1315	5/23/2018		13-15	
SB08	SB08_0-2	5/21/2018		0-2	
	SB08_11-12			11-12	
SB09	SB09_0-2	5/22/2018		0-2	
	SB09_3-5			3-5	
GROUNDWATER					
MW01	MW01_052418	5/24/2018	Grab	N/A	VOCs, SVOCs, PCBs, Pesticides/Herbicides, Metals (total and dissolved)
MW02	MW02_052418	5/24/2018		N/A	
MW03	MW03_052418	5/24/2018		N/A	
MW04	MW04_052418	5/24/2018		N/A	
MW05	MW05_052418	5/24/2018		N/A	
	MWDUP01_052418			N/A	
SOIL VAPOR					
SV01	SV01_052218	5/22/2018	1-liter SUMMA canister connected to 2-hour flow controller	7	TO-15 VOCs
SV02	SV02_052318	5/23/2018		5	
SV03	SV03_052218	5/22/2018		7	
SV04	SV04_052218	5/22/2018		7	
SV05	SV05_052318	5/23/2018		Subslab	
SV06	SV06_052318	5/23/2018		Subslab	
SV07	SV07_052118	5/21/2018		12	
SV08	SV08_052218	5/22/2018		Subslab	
QA/QC					
N/A	TB01_052418	5/24/2018	Trip Blank	N/A	VOCs
N/A	FB01_052418	5/24/2018	Field Blank	N/A	VOCs, SVOCs, PCBs, Pesticides/Herbicides, Total Metals

Notes:

1. VOC = volatile organic compound
2. SVOC = semivolatile organic compounds
3. PCB = polychlorinated biphenyl
4. bgs = below grade surface
5. N/A = Not Applicable
6. QA/QC = Quality Assurance/Quality control
7. Dissolved metals were field filtered
8. Sample SV08_052218 was not collected due to a sample equipment malfunction

Table 2A
Soil Analytical Summary - Volatile Organic Compounds
111 Willow Avenue
Bronx, New York
Langan Project No. 170497201

Sample ID Lab Sample ID Sample Date Sample Depth (feet bgs)	Unrestricted Use SCOs	Restricted Use Restricted-Residential SCOs	SB01_1-2 AD04329-001 5/21/2018 1 to 2	SB01_10-11 AD04329-002 5/21/2018 10 to 11	SB02_1-3 AD04347-001 5/22/2018 1 to 3	SB02_7-8 AD04347-002 5/22/2018 7 to 8	SB03_5-7 AD04329-008 5/21/2018 5 to 7	SB03_13-15 AD04329-007 5/21/2018 13 to 15	SB04_1-3 AD04371-005 5/23/2018 1 to 3	SB04_10-12 AD04371-006 5/23/2018 10 to 12	SB05_1-2 AD04329-003 5/21/2018 1 to 2	SB05_9-11 AD04329-004 5/21/2018 9 to 11	SB06_1-2 AD04371-003 5/23/2018 1 to 2
VOLATILE ORGANIC COMPOUNDS (VOCs) (mg/kg)													
1,1,1,2-Tetrachloroethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,1,1-Trichloroethane	0.68	100	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,1,2,2-Tetrachloroethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,1,2-Trichloro-1,2,2-trifluoroethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,1,2-Trichloroethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,1-Dichloroethane	0.27	26	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,1-Dichloroethene	0.33	100	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,1-Dichloropropene	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,2,3-Trichlorobenzene	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,2,3-Trichloropropane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,2,4,5-Tetramethylbenzene	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,2,4-Trichlorobenzene	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,2,4-Trimethylbenzene	3.6	52	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
1,2-Dibromo-3-chloropropane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,2-Dibromoethane	~	~	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
1,2-Dichlorobenzene	1.1	100	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,2-Dichloroethane	0.02	3.1	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.057 U	0.0019 U	0.0019 U
1,2-Dichloropropane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,3,5-Trimethylbenzene	8.4	52	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
1,3-Dichlorobenzene	2.4	49	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,3-Dichloropropane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,4-Dichlorobenzene	1.8	13	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
1,4-Dioxane	0.1	13	0.098 U	0.081 U	0.094 U	0.11 U	0.081 U	0.092 U	0.098 U	0.13 U	5.7 U	0.095 U	0.093 U
2,2-Dichloropropane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
2-Butanone	0.12	100	0.002 U	0.0016 U	0.0019 U	0.075	0.0016 U	0.0018 U	0.002 U	0.045	0.11 U	0.084	0.0019 U
2-Chlorotoluene	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
2-Hexanone	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
4-Chlorotoluene	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
4-Isopropyltoluene	10	~	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
4-Methyl-2-pentanone	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Acetone	0.05	100	0.0098 U	0.0081 U	0.0094 U	0.18	0.0081 U	0.038	0.0098 U	0.079	0.57 U	0.19	0.0093 U
Acrolein	~	~	0.0098 U	0.0081 U	0.0094 U	0.011 U	0.0081 U	0.0092 U	0.0098 U	0.013 U	0.57 U	0.0095 U	0.0093 U
Acrylonitrile	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Benzene	0.06	4.8	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.057 U	0.00095 U	0.00093 U
Bromobenzene	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Bromochloromethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Bromodichloromethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Bromoform	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Bromomethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Carbon disulfide	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Carbon tetrachloride	0.76	2.4	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Chlorobenzene	1.1	100	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Chloroethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Chloroform	0.37	49	0.0035	0.0016 U	0.0093	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Chloromethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
cis-1,2-Dichloroethene	0.25	100	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.046	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
cis-1,3-Dichloropropene	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Cyclohexane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Dibromochloromethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Dibromomethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Dichlorodifluoromethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Ethylbenzene	1	41	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
Hexachlorobutadiene	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Isopropylbenzene	2.3	~	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
m&p-Xylenes	0.26	100	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
Methyl Acetate	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.21	0.0019 U	0.0019 U
Methylcyclohexane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Methylene chloride	0.05	100	0.002 U	0.0016 U	0.0026	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Methyl-t-butyl ether	0.93	100	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.057 U	0.00095 U	0.00093 U
n-Butylbenzene	12	100	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
n-Propylbenzene	3.9	100	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
o-Xylene	0.26	100	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
sec-Butylbenzene	11	100	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
Styrene	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
t-Butylbenzene	5.9	100	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
Tetrachloroethene	1.3	19	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0019	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Toluene	0.7	100	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U
trans-1,2-Dichloroethene	0.19	100	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
trans-1,3-Dichloropropene	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
trans-1,4-Dichloro-2-butene	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Trichloroethene	0.47	21	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Trichlorofluoromethane	~	~	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Vinyl chloride	0.02	0.9	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0016 U	0.0018 U	0.002 U	0.0026 U	0.11 U	0.0019 U	0.0019 U
Xylenes (Total)	0.26	100	0.00098 U	0.00081 U	0.00094 U	0.0011 U	0.00081 U	0.00092 U	0.00098 U	0.0013 U	0.11 U	0.00095 U	0.00093 U

NOTES:

1. mg/kg = milligrams per kilogram.
2. Soil sample analytical results are compared to Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 375 Unrestricted Use and Restricted Use Restricted-Residential Soil Cleanup Objectives (SCOs).
3. Results above Part 375 Unrestricted Use SCOs are shaded.
4. Results above Part 375 Restricted Use Restricted-Residential SCOs are bolded and shaded.
5. ~ = Criterion does not exist.
6. bgs = below grade surface
7. J = Detected above the Method Detection Limit (MDL) but below the reporting limig (RL); therefore, the result is an estimated concentration.
8. U = The analyte was not detected at a concentration greater than or equal to the MDL; the value shown in the table is the RL.
9. Reporting Limits (RL) above the NYSDEC Part 375 Unrestricted Use and Restricted Use Commercial SCOs are italicized.
10. Sample SBDUP01_052318 is a duplicate of parent sample SB07_1-3.

Table 2A
Soil Analytical Summary - Volatile Organic Compounds
111 Willow Avenue
Bronx, New York
Langan Project No. 170497201

					Duplicate							
Sample ID **Lab Sample ID** **Sample Date** **Sample Depth (feet bgs)**	**Unrestricted Use SCOs**	**Restricted Use Restricted-Residential SCOs**	**SB06_6-8** **AD04371-004** **5/23/2018** **6 to 8**	**SB07_1-3** **AD04371-001** **5/23/2018** **1 to 3**	**SBDUP01_052318** **AD04371-007** **5/23/2018** **1 to 3**	**SB07_13-15** **AD04371-002** **5/23/2018** **13 to 15**	**SB08_0-2** **AD04329-005** **5/21/2018** **0 to 2**	**SB08_11-12** **AD04329-006** **5/21/2018** **11 to 12**	**SB09_0-2** **AD04347-003** **5/22/2018** **0 to 2**	**SB09_3-5** **AD04347-004** **5/22/2018** **3 to 5**
VOLATILE ORGANIC COMPOUNDS (VOCs) (mg/kg)										
1,1,1,2-Tetrachloroethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,1,1-Trichloroethane	0.68	100	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,1,2,2-Tetrachloroethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,1,2-Trichloro-1,2,2-trifluoroethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,1,2-Trichloroethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,1-Dichloroethane	0.27	26	0.0018 U	0.0019 U	0.002 U	0.0025 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,1-Dichloroethene	0.33	100	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,1-Dichloropropene	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,2,3-Trichlorobenzene	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,2,3-Trichloropropane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,2,4,5-Tetramethylbenzene	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,2,4-Trichlorobenzene	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,2,4-Trimethylbenzene	3.6	52	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
1,2-Dibromo-3-chloropropane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,2-Dibromoethane	~	~	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
1,2-Dichlorobenzene	1.1	100	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,2-Dichloroethane	0.02	3.1	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,2-Dichloropropane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,3,5-Trimethylbenzene	8.4	52	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
1,3-Dichlorobenzene	2.4	49	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,3-Dichloropropane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,4-Dichlorobenzene	1.8	13	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
1,4-Dioxane	0.1	13	0.091 U	0.097 U	0.1 U	0.092 U	0.1 U	0.086 U	0.11 U	0.16 U
2,2-Dichloropropane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
2-Butanone	0.12	100	0.071	0.0019 U	0.002 U	0.0018 U	0.03	0.0017 U	0.039	0.035
2-Chlorotoluene	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
2-Hexanone	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
4-Chlorotoluene	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
4-Isopropyltoluene	10	~	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
4-Methyl-2-pentanone	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Acetone	0.05	100	0.17	0.0097 U	0.01 U	0.019 U	0.13	0.0086 U	0.086	0.12
Acrolein	~	~	0.0091 U	0.0097 U	0.01 U	0.0092 U	0.01 U	0.0086 U	0.011 U	0.016 U
Acrylonitrile	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Benzene	0.06	4.8	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
Bromobenzene	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Bromochloromethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Bromodichloromethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Bromoform	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Bromomethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Carbon disulfide	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0023	0.0033 U
Carbon tetrachloride	0.76	2.4	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Chlorobenzene	1.1	100	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Chloroethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Chloroform	0.37	49	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Chloromethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
cis-1,2-Dichloroethene	0.25	100	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
cis-1,3-Dichloropropene	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Cyclohexane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Dibromochloromethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Dibromomethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Dichlorodifluoromethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Ethylbenzene	1	41	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
Hexachlorobutadiene	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Isopropylbenzene	2.3	~	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
m&p-Xylenes	0.26	100	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
Methyl Acetate	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Methylcyclohexane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Methylene chloride	0.05	100	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Methyl-t-butyl ether	0.93	100	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
n-Butylbenzene	12	100	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
n-Propylbenzene	3.9	100	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
o-Xylene	0.26	100	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
sec-Butylbenzene	11	100	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
Styrene	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
t-Butylbenzene	5.9	100	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
Tetrachloroethene	1.3	19	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Toluene	0.7	100	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U
trans-1,2-Dichloroethene	0.19	100	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
trans-1,3-Dichloropropene	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
trans-1,4-Dichloro-2-butene	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Trichloroethene	0.47	21	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Trichlorofluoromethane	~	~	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Vinyl chloride	0.02	0.9	0.0018 U	0.0019 U	0.002 U	0.0018 U	0.0021 U	0.0017 U	0.0021 U	0.0033 U
Xylenes (Total)	0.26	100	0.00091 U	0.00097 U	0.001 U	0.00092 U	0.001 U	0.00086 U	0.0011 U	0.0016 U

NOTES:

1. mg/kg = milligrams per kilogram.
2. Soil sample analytical results are compared to Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 375 Unrestricted Use and Restricted Use Restricted-Residential Soil Cleanup Objectives (SCOs).
3. Results above Part 375 Unrestricted Use SCOs are shaded.
4. Results above Part 375 Restricted Use Restricted-Residential SCOs are bolded and shaded.
5. ~ = Criterion does not exist.
6. bgs = below grade surface
7. J = Detected above the Method Detection Limit (MDL) but below the reporting limig (RL); therefore, the result is an estimated concentration.
8. U = The analyte was not detected at a concentration greater than or equal to the MDL; the value shown in the table is the RL.
9. Reporting Limits (RL) above the NYSDEC Part 375 Unrestricted Use and Restricted Use Commercial SCOs are italicized.
10. Sample SBDUP01_052318 is a duplicate of parent sample SB07_1-3.

Table 2B
Soil Analytical Summary - Semivolatile Organic Compounds
111 Willow Avenue
Bronx, New York
Langan Project No. 170497201

Sample ID Lab Sample ID Sample Date Sample Depth (feet bgs)	Unrestricted Use SCOs	Restricted Use Restricted-Residential SCOs	SB01_1-2 AD04329-001 5/21/2018 1 to 2	SB01_10-11 AD04329-002 5/21/2018 10 to 11	SB02_1-3 AD04347-001 5/22/2018 1 to 3	SB02_7-8 AD04347-002 5/22/2018 7 to 8	SB03_5-7 AD04329-008 5/21/2018 5 to 7	SB03_13-15 AD04329-007 5/21/2018 13 to 15	SB04_1-3 AD04371-005 5/23/2018 1 to 3	SB04_10-12 AD04371-006 5/23/2018 10 to 12	SB05_1-2 AD04329-003 5/21/2018 1 to 2	SB05_9-11 AD04329-004 5/21/2018 9 to 11	SB06_1-2 AD04371-003 5/23/2018 1 to 2	SB06_6-8 AD04371-004 5/23/2018 6 to 8
SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs) (mg/kg)														
1,1'-Biphenyl	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.24	0.04 U	0.038 U	0.039 U
1,2,4,5-Tetrachlorobenzene	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
2,3,4,6-Tetrachlorophenol	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
2,4,5-Trichlorophenol	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
2,4,6-Trichlorophenol	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
2,4-Dichlorophenol	~	~	0.0096 U	0.0097 U	0.056 U	0.23 U	0.0095 U	0.0098 U	0.011 U	0.015 U	0.046 U	0.0099 U	0.0095 U	0.0097 U
2,4-Dimethylphenol	~	~	0.0096 U	0.0097 U	0.056 U	0.23 U	0.0095 U	0.0098 U	0.011 U	0.015 U	0.05	0.0099 U	0.0095 U	0.0097 U
2,4-Dinitrophenol	~	~	0.19 U	0.19 U	1.1 U	4.7 U	0.19 U	0.2 U	0.21 U	0.3 U	0.93 U	0.2 U	0.19 U	0.19 U
2,4-Dinitrotoluene	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
2,6-Dinitrotoluene	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
2-Chloronaphthalene	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
2-Chlorophenol	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
2-Methylnaphthalene	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	1.1	0.091	0.038 U	0.039 U
2-Methylphenol	0.33	100	0.0096 U	0.0097 U	0.056 U	0.23 U	0.0095 U	0.0098 U	0.011 U	0.015 U	0.046 U	0.0099 U	0.0095 U	0.0097 U
2-Nitroaniline	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
2-Nitrophenol	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
3&4-Methylphenol	0.33	100	0.0096 U	0.0097 U	0.056 U	0.23 U	0.0095 U	0.0098 U	0.011 U	0.015 U	0.1	0.0099 U	0.0095 U	0.0097 U
3,3'-Dichlorobenzidine	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
3-Nitroaniline	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
4,6-Dinitro-2-methylphenol	~	~	0.19 U	0.19 U	1.1 U	4.7 U	0.19 U	0.2 U	0.21 U	0.3 U	0.93 U	0.2 U	0.19 U	0.19 U
4-Bromophenyl-phenylether	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
4-Chloro-3-methylphenol	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
4-Chloroaniline	~	~	0.0096 U	0.0097 U	0.056 U	0.23 U	0.0095 U	0.0098 U	0.011 U	0.015 U	0.046 U	0.0099 U	0.0095 U	0.0097 U
4-Chlorophenyl-phenylether	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
4-Nitroaniline	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
4-Nitrophenol	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Acenaphthene	20	100	0.038 U	0.039 U	0.22 U	1.9	0.038 U	0.039 U	0.11 U	0.061 U	1.6	0.13	0.054	0.039 U
Acenaphthylene	100	100	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Acetophenone	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Anthracene	100	100	0.038 U	0.039 U	0.22 U	6.3	0.038 U	0.039 U	0.17	0.061 U	2.3	0.19	0.053	0.039 U
Atrazine	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Benzaldehyde	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Benzo[a]anthracene	1	1	0.078	0.039 U	0.57	**20**	0.039	0.039 U	0.39	0.061 U	**3.7**	0.34	0.34	0.039 U
Benzo[a]pyrene	1	1	0.077	0.039 U	0.6	**17**	0.038 U	0.039 U	0.34	0.061 U	**3.4**	0.31	0.3	0.039 U
Benzo[b]fluoranthene	1	1	0.099	0.039 U	0.82	**24**	0.051	0.039 U	0.43	0.061 U	**4.2**	0.38	0.38	0.039 U
Benzo[g,h,i]perylene	100	100	0.058	0.039 U	0.49	13	0.038 U	0.039 U	0.21	0.061 U	2	0.21	0.18	0.039 U
Benzo[k]fluoranthene	0.8	3.9	0.038 U	0.039 U	0.28	**7.6**	0.038 U	0.039 U	0.13	0.061 U	1.3	0.12	0.11	0.039 U
bis(2-Chloroethoxy)methane	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
bis(2-Chloroethyl)ether	~	~	0.0096 U	0.0097 U	0.056 U	0.23 U	0.0095 U	0.0098 U	0.011 U	0.015 U	0.046 U	0.0099 U	0.0095 U	0.0097 U
bis(2-Chloroisopropyl)ether	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
bis(2-Ethylhexyl)phthalate	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.096	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.11	0.039 U
Butylbenzylphthalate	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.096	0.039 U
Caprolactam	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Carbazole	~	~	0.038 U	0.039 U	0.22 U	2.9	0.038 U	0.039 U	0.076	0.061 U	1	0.086	0.038 U	0.039 U
Chrysene	1	3.9	0.071	0.039 U	0.55	**17**	0.038 U	0.039 U	0.34	0.061 U	2.9	0.27	0.33	0.039 U
Dibenzo[a,h]anthracene	0.33	0.33	0.038 U	0.039 U	0.22 U	**3.6**	0.038 U	0.039 U	0.044	0.061 U	**0.54**	0.053	0.048	0.039 U
Dibenzofuran	7	59	0.0096 U	0.0097 U	0.056 U	1.8	0.0095 U	0.0098 U	0.054	0.015 U	0.88	0.073	0.065	0.029
Diethylphthalate	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Dimethylphthalate	~	~	0.038 U	0.039 U	0.22 U	2.4	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Di-n-butylphthalate	~	~	0.0096 U	0.0097 U	0.056 U	0.23 U	0.01	0.0099	0.011 U	0.015 U	0.046 U	0.0099 U	0.021	0.0097 U
Di-n-octylphthalate	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Fluoranthene	100	100	0.038 U	0.039 U	0.99	51	0.06	0.039 U	0.87	0.061 U	9.3	0.7	0.55	0.066
Fluorene	30	100	0.14	0.039 U	0.22 U	1.4	0.038 U	0.039 U	0.067	0.061 U	1.5	0.12	0.058	0.039 U
Hexachlorobenzene	0.33	1.2	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Hexachlorobutadiene	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Hexachlorocyclopentadiene	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Hexachloroethane	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Indeno[1,2,3-cd]pyrene	0.5	0.5	0.047	0.039 U	0.22	0.94 U	0.038 U	0.039 U	0.18	0.061 U	**1.8**	0.18	0.17	0.039 U
Isophorone	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Naphthalene	12	100	0.0096 U	0.0097 U	0.056 U	0.81	0.0095 U	0.0098 U	0.03	0.015 U	3.1	0.23	0.062	0.13
Nitrobenzene	~	15	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
N-Nitroso-di-n-propylamine	~	~	0.0096 U	0.0097 U	0.056 U	0.23 U	0.0095 U	0.0098 U	0.011 U	0.015 U	0.046 U	0.0099 U	0.0095 U	0.0097 U
N-Nitrosodiphenylamine	~	~	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Pentachlorophenol	0.8	6.7	0.19 U	0.19 U	1.1 U	4.7 U	0.19 U	0.2 U	0.21 U	0.3 U	0.93 U	0.2 U	0.19 U	0.19 U
Phenanthrene	100	100	0.085	0.039 U	0.59	34	0.038 U	0.039 U	0.83	0.061 U	9.7	0.73	0.22	0.043
Phenol	0.33	100	0.038 U	0.039 U	0.22 U	0.94 U	0.038 U	0.039 U	0.042 U	0.061 U	0.19 U	0.04 U	0.038 U	0.039 U
Pyrene	100	100	0.14	0.039 U	1	40	0.06	0.039 U	0.88	0.061 U	6.4	0.62	0.58	0.065

NOTES:

1. mg/kg = milligrams per kilogram.
2. Soil sample analytical results are compared to Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 375 Unrestricted Use and Restricted Use Restricted-Residential Soil Cleanup Objectives (SCOs).
3. Results above Part 375 Unrestricted Use SCOs are shaded.
4. Results above Part 375 Restricted Use Restricted-Residential SCOs are bolded and shaded.
5. ~ = Criterion does not exist.
6. bgs = below grade surface
7. J = Detected above the Method Detection Limit (MDL) but below the reporting limig (RL); therefore, the result is an estimated concentration.
8. U = The analyte was not detected at a concentration greater than or equal to the MDL; the value shown in the table is the RL.
9. Reporting Limits (RL) above the NYSDEC Part 375 Unrestricted Use and Restricted Use Commercial SCOs are italicized.
10. Sample SBDUP01_052318 is a duplicate of parent sample SB07_1-3.

Table 2B
Soil Analytical Summary - Semivolatile Organic Compounds
111 Willow Avenue
Bronx, New York
Langan Project No. 170497201

			Duplicate																	
Sample ID	**Unrestricted Use SCOs**	**Restricted Use Restricted-Residential SCOs**	**SB07_1-3**		**SBDUP01_052318**		**SB07_13-15**		**SB08_0-2**		**SB08_11-12**		**SB09_0-2**		**SB09_3-5**	
Lab Sample ID			**AD04371-001**		**AD04371-007**		**AD04371-002**		**AD04329-005**		**AD04329-006**		**AD04347-003**		**AD04347-004**	
Sample Date			**5/23/2018**		**5/23/2018**		**5/23/2018**		**5/21/2018**		**5/21/2018**		**5/22/2018**		**5/22/2018**	
Sample Depth (feet bgs)			**1 to 3**		**1 to 3**		**13 to 15**		**0 to 2**		**11 to 12**		**0 to 2**		**3 to 5**	
SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs) (mg/kg)																
1,1'-Biphenyl	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
1,2,4,5-Tetrachlorobenzene	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
2,3,4,6-Tetrachlorophenol	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
2,4,5-Trichlorophenol	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
2,4,6-Trichlorophenol	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
2,4-Dichlorophenol	~	~	0.011	U	0.011	U	0.011	U	0.048	U	0.0096	U	0.0099	U	0.014	U
2,4-Dimethylphenol	~	~	0.011	U	0.011	U	0.011	U	0.048	U	0.0096	U	0.0099	U	0.014	U
2,4-Dinitrophenol	~	~	0.21	U	0.21	U	0.22	U	0.96	U	0.19	U	0.2	U	0.27	U
2,4-Dinitrotoluene	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
2,6-Dinitrotoluene	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
2-Chloronaphthalene	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
2-Chlorophenol	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
2-Methylnaphthalene	~	~	0.042	U	0.043	U	0.044	U	0.23		0.038	U	0.04	U	0.055	U
2-Methylphenol	0.33	100	0.011	U	0.011	U	0.011	U	0.048	U	0.0096	U	0.0099	U	0.014	U
2-Nitroaniline	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
2-Nitrophenol	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
3&4-Methylphenol	0.33	100	0.011	U	0.011	U	0.011	U	0.048	U	0.0096	U	0.0099	U	0.014	U
3,3'-Dichlorobenzidine	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
3-Nitroaniline	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
4,6-Dinitro-2-methylphenol	~	~	0.21	U	0.21	U	0.22	U	0.96	U	0.19	U	0.2	U	0.27	U
4-Bromophenyl-phenylether	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
4-Chloro-3-methylphenol	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
4-Chloroaniline	~	~	0.011	U	0.011	U	0.011	U	0.048	U	0.0096	U	0.0099	U	0.014	U
4-Chlorophenyl-phenylether	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
4-Nitroaniline	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
4-Nitrophenol	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Acenaphthene	20	100	0.042	U	0.043	U	0.044	U	0.34		0.038	U	0.04	U	0.055	U
Acenaphthylene	100	100	0.042	U	0.043	U	0.044	U	0.62		0.038	U	0.04	U	0.055	U
Acetophenone	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Anthracene	100	100	0.042	U	0.043	U	0.044	U	1		0.038	U	0.04	U	0.055	U
Atrazine	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Benzaldehyde	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Benzo[a]anthracene	1	1	0.064		0.049		0.044	U	**5.5**		0.068		0.057		0.055	U
Benzo[a]pyrene	1	1	0.066		0.049		0.044	U	**5.6**		0.063		0.047		0.055	U
Benzo[b]fluoranthene	1	1	0.078		0.055		0.044	U	**7.6**		0.09		0.051		0.055	U
Benzo[g,h,i]perylene	100	100	0.052		0.043	U	0.044	U	0.19	U	0.056		0.04	U	0.055	U
Benzo[k]fluoranthene	0.8	3.9	0.042	U	0.043	U	0.044	U	2.3		0.038	U	0.04	U	0.055	U
bis(2-Chloroethoxy)methane	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
bis(2-Chloroethyl)ether	~	~	0.011	U	0.011	U	0.011	U	0.048	U	0.0096	U	0.0099	U	0.014	U
bis(2-Chloroisopropyl)ether	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
bis(2-Ethylhexyl)phthalate	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.056		0.04	U	0.055	U
Butylbenzylphthalate	~	~	0.042	U	0.043	U	0.044	U	0.2		0.038	U	0.04	U	0.055	U
Caprolactam	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Carbazole	~	~	0.042	U	0.043	U	0.044	U	0.83		0.038	U	0.04	U	0.055	U
Chrysene	1	3.9	0.071		0.043	U	0.044	U	**5.3**		0.067		0.05		0.055	U
Dibenzo[a,h]anthracene	0.33	0.33	0.042	U	0.043	U	0.044	U	**0.95**		0.038	U	0.04	U	0.055	U
Dibenzofuran	7	59	0.011	U	0.011	U	0.011	U	0.28		0.0096	U	0.0099	U	0.014	U
Diethylphthalate	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Dimethylphthalate	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Di-n-butylphthalate	~	~	0.011	U	0.011	U	0.011	U	0.066		0.0096	U	0.0099	U	0.014	U
Di-n-octylphthalate	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Fluoranthene	100	100	0.11		0.073		0.044	U	15		0.12		0.11		0.055	U
Fluorene	30	100	0.042	U	0.043	U	0.044	U	0.5		0.038	U	0.04	U	0.055	U
Hexachlorobenzene	0.33	1.2	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Hexachlorobutadiene	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Hexachlorocyclopentadiene	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Hexachloroethane	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Indeno[1,2,3-cd]pyrene	0.5	0.5	0.042	U	0.043	U	0.044	U	**3.3**		0.042		0.04	U	0.055	U
Isophorone	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Naphthalene	12	100	0.011	U	0.011	U	0.011	U	0.34		0.0096	U	0.02		0.014	U
Nitrobenzene	~	15	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
N-Nitroso-di-n-propylamine	~	~	0.011	U	0.011	U	0.011	U	0.048	U	0.0096	U	0.0099	U	0.014	U
N-Nitrosodiphenylamine	~	~	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Pentachlorophenol	0.8	6.7	0.21	U	0.21	U	0.22	U	0.96	U	0.19	U	0.2	U	0.27	U
Phenanthrene	100	100	0.071		0.043	U	0.044	U	8.6		0.069		0.16		0.055	U
Phenol	0.33	100	0.042	U	0.043	U	0.044	U	0.19	U	0.038	U	0.04	U	0.055	U
Pyrene	100	100	0.11		0.077		0.044	U	13		0.12		0.15		0.055	U

NOTES:
1. mg/kg = milligrams per kilogram.
2. Soil sample analytical results are compared to Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 375 Unrestricted Use and Restricted Use Restricted-Residential Soil Cleanup Objectives (SCOs).
3. Results above Part 375 Unrestricted Use SCOs are shaded.
4. Results above Part 375 Restricted Use Restricted-Residential SCOs are bolded and shaded.
5. ~ = Criterion does not exist.
6. bgs = below grade surface
7. J = Detected above the Method Detection Limit (MDL) but below the reporting limig (RL); therefore, the result is an estimated concentration.
8. U = The analyte was not detected at a concentration greater than or equal to the MDL; the value shown in the table is the RL.
9. Reporting Limits (RL) above the NYSDEC Part 375 Unrestricted Use and Restricted Use Commercial SCOs are italicized.
10. Sample SBDUP01_052318 is a duplicate of parent sample SB07_1-3.

Table 2C
Soil Analytical Summary - Polychlorinated Biphenyls, Pesticides, Herbicides, and Metals
111 Willow Avenue
Bronx, New York
Langan Project No. 170497201

Sample ID Lab Sample ID Sample Date Sample Depth (feet bgs)	Unrestricted Use SCOs	Restricted Use Restricted-Residential SCOs	SB01_1-2 AD04329-001 5/21/2018 1 to 2		SB01_10-11 AD04329-002 5/21/2018 10 to 11		SB02_1-3 AD04347-001 5/22/2018 1 to 3		SB02_7-8 AD04347-002 5/22/2018 7 to 8		SB03_5-7 AD04329-008 5/21/2018 5 to 7		SB03_13-15 AD04329-007 5/21/2018 13 to 15		SB04_1-3 AD04371-005 5/23/2018 1 to 3		SB04_10-12 AD04371-006 5/23/2018 10 to 12		SB05_1-2 AD04329-003 5/21/2018 1 to 2	
POLYCHLORINATED BIPHENYLS (PCBs) (mg/kg)																				
Aroclor (Total)	0.1	1	0.029	U	0.029	U	0.29		0.035	U	0.028	U	0.029	U	0.032	U	0.045	U	0.028	U
Aroclor-1016	~	~	0.029	U	0.029	U	0.028	U	0.035	U	0.028	U	0.029	U	0.032	U	0.045	U	0.028	U
Aroclor-1221	~	~	0.029	U	0.029	U	0.028	U	0.035	U	0.028	U	0.029	U	0.032	U	0.045	U	0.028	U
Aroclor-1232	~	~	0.029	U	0.029	U	0.028	U	0.035	U	0.028	U	0.029	U	0.032	U	0.045	U	0.028	U
Aroclor-1242	~	~	0.029	U	0.029	U	0.028	U	0.035	U	0.028	U	0.029	U	0.032	U	0.045	U	0.028	U
Aroclor-1248	~	~	0.029	U	0.029	U	0.028	U	0.035	U	0.028	U	0.029	U	0.032	U	0.045	U	0.028	U
Aroclor-1254	~	~	0.029	U	0.029	U	0.028	U	0.035	U	0.028	U	0.029	U	0.032	U	0.045	U	0.028	U
Aroclor-1260	~	~	0.029	U	0.029	U	0.028	U	0.035	U	0.028	U	0.029	U	0.032	U	0.045	U	0.028	U
Aroclor-1262	~	~	0.029	U	0.029	U	0.29		0.035	U	0.028	U	0.029	U	0.032	U	0.045	U	0.028	U
Aroclor-1268	~	~	0.029	U	0.029	U	0.028	U	0.035	U	0.028	U	0.029	U	0.032	U	0.045	U	0.028	U
PESTICIDES (mg/kg)																				
a-Chlordane	0.094	4.2	0.0057	U	0.0058	U	0.017		0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
Aldrin	0.005	0.097	0.0057	U	0.0058	U	0.0056	U	0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
Alpha-BHC	0.02	0.48	0.0011	U	0.0012	U	0.0011	U	0.0014	U	0.0011	U	0.0012	U	0.0013	U	0.0018	U	0.0011	U
beta-BHC	0.036	0.36	0.0011	U	0.0012	U	0.0011	U	0.0014	U	0.0011	U	0.0012	U	0.0013	U	0.0018	U	0.0011	U
Chlordane (Total)	0.094	4.2	0.0057	U	0.0058	U	0.029		0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
delta-BHC	0.04	100	0.0057	U	0.0058	U	0.0056	U	0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
Dieldrin	0.005	0.2	0.0011	U	0.0012	U	0.0011	U	0.0014	U	0.0011	U	0.0012	U	0.0013	U	0.0018	U	0.0011	U
Endosulfan I	2.4	24	0.0057	U	0.0058	U	0.0056	U	0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
Endosulfan II	2.4	24	0.0057	U	0.0058	U	0.0056	U	0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
Endosulfan Sulfate	2.4	24	0.0057	U	0.0058	U	0.0056	U	0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
Endrin	0.014	11	0.0057	U	0.0058	U	0.0056	U	0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
Endrin Aldehyde	~	~	0.0057	U	0.0058	U	0.0056	U	0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
Endrin Ketone	~	~	0.0057	U	0.0058	U	0.0056	U	0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
gamma-BHC	0.1	1.3	0.0011	U	0.0012	U	0.0011	U	0.0014	U	0.0011	U	0.0012	U	0.0013	U	0.0018	U	0.0011	U
Heptachlor	0.042	2.1	0.0057	U	0.0058	U	0.0056	U	0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
Heptachlor Epoxide	~	~	0.0057	U	0.0058	U	0.0056	U	0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
Methoxychlor	~	~	0.0057	U	0.0058	U	0.0056	U	0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
p,p'-DDD	0.0033	13	0.0029	U	0.0029	U	0.0028	U	0.0035	U	0.0028	U	0.0029	U	0.0032	U	0.0045	U	0.0028	U
p,p'-DDE	0.0033	8.9	0.0029	U	0.0029	U	0.0075		0.014		0.0028	U	0.0029	U	0.0032	U	0.0045	U	0.0028	U
p,p'-DDT	0.0033	7.9	0.0029	U	0.0029	U	0.018		0.072		0.0079		0.0029	U	0.0032	U	0.0045	U	0.0028	U
Toxaphene	~	~	0.029	U	0.029	U	0.028	U	0.035	U	0.028	U	0.029	U	0.032	U	0.045	U	0.028	U
y-Chlordane	0.094	4.2	0.0057	U	0.0058	U	0.012		0.007	U	0.0057	U	0.0059	U	0.0063	U	0.0091	U	0.0056	U
HERBICIDES (mg/kg)																				
2,4,5-T	~	~	0.011	U	0.012	U	0.011	U	0.014	U	0.011	U	0.012	U	0.018	U	0.013	U	0.011	U
2,4-D	~	~	0.011	U	0.012	U	0.011	U	0.014	U	0.011	U	0.012	U	0.018	U	0.013	U	0.011	U
Dicamba	~	~	0.011	U	0.012	U	0.011	U	0.014	U	0.011	U	0.012	U	0.018	U	0.013	U	0.011	U
Silvex	3.8	100	0.011	U	0.012	U	0.011	U	0.014	U	0.011	U	0.012	U	0.018	U	0.013	U	0.011	U
METALS (mg/kg)																				
Mercury	0.18	0.81	0.54		0.097	U	0.094	U	0.13		0.44		0.098	U	0.38		0.15	U	0.14	
Aluminum	~	~	20000		19000		10000		18000		19000		15000		26000		15000		10000	
Barium	350	400	200		110		140		**410**		160		51		180		74		63	
Calcium	~	~	9400		31000		56000		43000		8400		1200	U	15000		5000		56000	
Chromium	1	110	31		48		57		110		30		22		42		28		19	
Cobalt	~	~	14		14		33		21		12		10		17		10		7.8	
Copper	50	270	83		25		**440**		250		48		20		53		24		23	
Iron	~	~	39000		36000		28000		120000		30000		26000		41000		23000		17000	
Lead	63	400	300		15		340		310		88		7.1		190		18		22	
Magnesium	~	~	9600		19000		9500		17000		9300		4200		15000		5100		32000	
Manganese	1,600	2,000	510		410		340		1500		510		250		910		400		380	
Nickel	30	310	34		25		76		100		19		15		29		18		15	
Potassium	~	~	4800		3600		1700		2600		4400		1500		3500		1900		2700	
Sodium	~	~	360		290	U	530		350	U	280	U	290	U	650		580		450	
Vanadium	~	~	120		47		30		71		42		33		57		37		28	
Zinc	109	10,000	360		86		2400		660		130		41		290		62		70	
Antimony	~	~	0.92	U	0.93	U	0.99		1.1	U	0.91	U	0.94	U	1	U	1.5	U	0.89	U
Arsenic	13	16	4.5		2.9		7.6		5.6		3		3.7		3.4		4.2		1.6	
Beryllium	7.2	72	0.38		0.67		3.5		0.62		0.39		0.39		0.58		0.71		0.32	
Cadmium	2.5	4.3	0.46	U	0.47	U	0.5		1.3		0.45	U	0.47	U	0.51	U	0.73	U	0.44	U
Selenium	3.9	180	2.3	U	2.3	U	2.2	U	2.8	U	2.3	U	2.4	U	2.5	U	3.6	U	2.2	U
Silver	2	180	0.24		0.23	U	0.79		0.28	U	0.29		0.24	U	0.25	U	0.36	U	0.22	U
Thallium	~	~	0.46	U	0.47	U	0.45	U	0.56	U	0.45	U	0.47	U	0.51	U	0.73	U	0.44	U

NOTES:

1. mg/kg = milligrams per kilogram.
2. Soil sample analytical results are compared to Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 375 Unrestricted Use and Restricted Use Restricted-Residential Soil Cleanup Objectives (SCOs).
3. Results above Part 375 Unrestricted Use SCOs are shaded.
4. Results above Part 375 Restricted Use Restricted-Residential SCOs are bolded and shaded.
5. ~ = Criterion does not exist.
6. bgs = below grade surface
7. J = Detected above the Method Detection Limit (MDL) but below the reporting limig (RL); therefore, the result is an estimated concentration.
8. U = The analyte was not detected at a concentration greater than or equal to the MDL; the value shown in the table is the RL.
9. Reporting Limits (RL) above the NYSDEC Part 375 Unrestricted Use and Restricted Use Commercial SCOs are italicized.
10. Sample SBDUP01_052318 is a duplicate of parent sample SB07_1-3.

Table 2C
Soil Analytical Summary - Polychlorinated Biphenyls, Pesticides, Herbicides, and Metals
111 Willow Avenue
Bronx, New York
Langan Project No. 170497201

Sample ID Lab Sample ID Sample Date Sample Depth (feet bgs)	Unrestricted Use SCOs	Restricted Use Restricted-Residential SCOs	SB05_9-11 AD04329-004 5/21/2018 9 to 11	SB06_1-2 AD04371-003 5/23/2018 1 to 2	SB06_6-8 AD04371-004 5/23/2018 6 to 8	Duplicate SB07_1-3 AD04371-001 5/23/2018 1 to 3	Duplicate SBDUP01_052318 AD04371-007 5/23/2018 1 to 3	SB07_13-15 AD04371-002 5/23/2018 13 to 15	SB08_0-2 AD04329-005 5/21/2018 0 to 2	SB08_11-12 AD04329-006 5/21/2018 11 to 12	SB09_0-2 AD04347-003 5/22/2018 0 to 2	SB09_3-5 AD04347-004 5/22/2018 3 to 5
POLYCHLORINATED BIPHENYLS (PCBs) (mg/kg)												
Aroclor (Total)	0.1	1	0.03 U	0.028 U	0.029 U	0.032 U	0.032 U	0.033 U	0.029 U	0.029 U	0.03 U	0.041 U
Aroclor-1016	~	~	0.03 U	0.028 U	0.029 U	0.032 U	0.032 U	0.033 U	0.029 U	0.029 U	0.03 U	0.041 U
Aroclor-1221	~	~	0.03 U	0.028 U	0.029 U	0.032 U	0.032 U	0.033 U	0.029 U	0.029 U	0.03 U	0.041 U
Aroclor-1232	~	~	0.03 U	0.028 U	0.029 U	0.032 U	0.032 U	0.033 U	0.029 U	0.029 U	0.03 U	0.041 U
Aroclor-1242	~	~	0.03 U	0.028 U	0.029 U	0.032 U	0.032 U	0.033 U	0.029 U	0.029 U	0.03 U	0.041 U
Aroclor-1248	~	~	0.03 U	0.028 U	0.029 U	0.032 U	0.032 U	0.033 U	0.029 U	0.029 U	0.03 U	0.041 U
Aroclor-1254	~	~	0.03 U	0.028 U	0.029 U	0.032 U	0.032 U	0.033 U	0.029 U	0.029 U	0.03 U	0.041 U
Aroclor-1260	~	~	0.03 U	0.028 U	0.029 U	0.032 U	0.032 U	0.033 U	0.029 U	0.029 U	0.03 U	0.041 U
Aroclor-1262	~	~	0.03 U	0.028 U	0.029 U	0.032 U	0.032 U	0.033 U	0.029 U	0.029 U	0.03 U	0.041 U
Aroclor-1268	~	~	0.03 U	0.028 U	0.029 U	0.032 U	0.032 U	0.033 U	0.029 U	0.029 U	0.03 U	0.041 U
PESTICIDES (mg/kg)												
a-Chlordane	0.094	4.2	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.08	0.0057 U	0.006 U	0.0082 U
Aldrin	0.005	0.097	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.029 U	0.0057 U	0.006 U	0.0082 U
Alpha-BHC	0.02	0.48	0.0012 U	0.0011 U	0.0012 U	0.0013 U	0.0013 U	0.0013 U	0.0057 U	0.0011 U	0.0012 U	0.0016 U
beta-BHC	0.036	0.36	0.0012 U	0.0011 U	0.0012 U	0.0013 U	0.0013 U	0.0013 U	0.0057 U	0.0011 U	0.0012 U	0.0016 U
Chlordane (Total)	0.094	4.2	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.16	0.0057 U	0.006 U	0.0082 U
delta-BHC	0.04	100	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.029 U	0.0057 U	0.006 U	0.0082 U
Dieldrin	0.005	0.2	0.0012 U	0.0011 U	0.0012 U	0.0013 U	0.0013 U	0.0013 U	0.0057 U	0.0011 U	0.0012 U	0.0016 U
Endosulfan I	2.4	24	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.029 U	0.0057 U	0.006 U	0.0082 U
Endosulfan II	2.4	24	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.029 U	0.0057 U	0.006 U	0.0082 U
Endosulfan Sulfate	2.4	24	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.029 U	0.0057 U	0.006 U	0.0082 U
Endrin	0.014	11	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.029 U	0.0057 U	0.006 U	0.0082 U
Endrin Aldehyde	~	~	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.029 U	0.0057 U	0.006 U	0.0082 U
Endrin Ketone	~	~	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.029 U	0.0057 U	0.006 U	0.0082 U
gamma-BHC	0.1	1.3	0.0012 U	0.0011 U	0.0012 U	0.0013 U	0.0013 U	0.0013 U	0.0057 U	0.0011 U	0.0012 U	0.0016 U
Heptachlor	0.042	2.1	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.029 U	0.0057 U	0.006 U	0.0082 U
Heptachlor Epoxide	~	~	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.029 U	0.0057 U	0.006 U	0.0082 U
Methoxychlor	~	~	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.029 U	0.0057 U	0.006 U	0.0082 U
p,p'-DDD	0.0033	13	0.003 U	0.0028 U	0.0029 U	0.0032 U	0.0032 U	0.0033 U	0.13	0.0029 U	0.003 U	0.0041 U
p,p'-DDE	0.0033	8.9	0.003 U	0.0028 U	0.0029 U	0.0032 U	0.0032 U	0.0033 U	0.13	0.0075	0.003 U	0.0041 U
p,p'-DDT	0.0033	7.9	0.003 U	0.0028 U	0.0029 U	0.0032 U	0.0032 U	0.0033 U	0.13	0.013	0.003 U	0.0041 U
Toxaphene	~	~	0.03 U	0.028 U	0.029 U	0.032 U	0.032 U	0.033 U	0.14 U	0.029 U	0.03 U	0.041 U
γ-Chlordane	0.094	4.2	0.006 U	0.0057 U	0.0058 U	0.0063 U	0.0064 U	0.0066 U	0.078	0.0057 U	0.006 U	0.0082 U
HERBICIDES (mg/kg)												
2,4,5-T	~	~	0.012 U	0.011 U	0.012 U	0.013 U	0.013 U	0.013 U	0.011 U	0.011 U	0.012 U	0.016 U
2,4-D	~	~	0.012 U	0.011 U	0.012 U	0.013 U	0.013 U	0.013 U	0.011 U	0.011 U	0.012 U	0.016 U
Dicamba	~	~	0.012 U	0.011 U	0.012 U	0.013 U	0.013 U	0.013 U	0.011 U	0.011 U	0.012 U	0.016 U
Silvex	3.8	100	0.012 U	0.011 U	0.012 U	0.013 U	0.013 U	0.013 U	0.011 U	0.011 U	0.012 U	0.016 U
METALS (mg/kg)												
Mercury	0.18	0.81	0.099 U	**5.2**	0.2	**1.8**	**1.9**	0.11 U	0.16	0.096 U	0.099 U	0.14 U
Aluminum	~	~	22000	8100	16000	17000	18000	18000	8100	25000	16000	14000
Barium	350	400	83	78	83	120	130	36	**1000**	140	58	57
Calcium	~	~	4000	15000	2100	18000	18000	1300 U	130000	13000	1300	1700
Chromium	1	110	38	16	34	25	26	32	24	46	30	32
Cobalt	~	~	12	6.8	12	12	13	7.8	9.1	14	8.8	8.8
Copper	50	270	19	27	26	24	29	21	54	38	18	19
Iron	~	~	32000	16000	30000	25000	27000	30000	22000	36000	28000	30000
Lead	63	400	12	140	9.5	130	130	11	**1000**	45	10	12
Magnesium	~	~	5500	6600	5400	7600	9400	6300	41000	11000	4500	4600
Manganese	1,600	2,000	710	420	970	890	1100	160	440	730	770	850
Nickel	30	310	20	8.6	21	18	17	20	13	23	17	16
Potassium	~	~	1100	1300	2200	1800	1800	1500	3200	3400	1400	1500
Sodium	~	~	300 U	280 U	290 U	320 U	320 U	1100	370	290 U	1000	1300
Vanadium	~	~	47	20	45	36	40	38	32	59	38	39
Zinc	109	10,000	53	920	57	130	130	67	1100	120	44	42
Antimony	~	~	0.95 U	0.91 U	0.93 U	1 U	1 U	1.1 U	0.92 U	0.92 U	0.095 U	1.3 U
Arsenic	13	16	2.6	2.6	2.1	4.7	4.4	3.3	7.1	5	3.7	4.8
Beryllium	7.2	72	0.59	0.29	0.44	0.66	0.64 U	0.26 U	0.38	0.82	0.35	0.67
Cadmium	2.5	4.3	0.48 U	0.45 U	0.47 U	0.51 U	0.51 U	0.53 U	3.5	0.46 U	0.48 U	0.66 U
Selenium	3.9	180	2.4 U	2.3 U	2.3 U	2.5 U	2.6 U	2.6 U	2.3 U	2.3 U	2.4 U	3.3 U
Silver	2	180	0.24 U	0.23 U	0.23 U	0.25 U	0.26 U	0.26 U	0.29 U	0.23 U	0.24 U	0.33 U
Thallium	~	~	0.48 U	0.45 U	0.47 U	0.51 U	0.51 U	0.53 U	0.46 U	0.46 U	0.48 U	0.66 U

NOTES:

1. mg/kg = milligrams per kilogram.
2. Soil sample analytical results are compared to Title 6 of the Official Compilation of New York Codes, Rules and Regulations (NYCRR) Part 375 Unrestricted Use and Restricted Use Restricted-Residential Soil Cleanup Objectives (SCOs).
3. Results above Part 375 Unrestricted Use SCOs are shaded.
4. Results above Part 375 Restricted Use Restricted-Residential SCOs are bolded and shaded.
5. ~ = Criterion does not exist.
6. bgs = below grade surface
7. J = Detected above the Method Detection Limit (MDL) but below the reporting limig (RL); therefore, the result is an estimated concentration.
8. U = The analyte was not detected at a concentration greater than or equal to the MDL; the value shown in the table is the RL.
9. Reporting Limits (RL) above the NYSDEC Part 375 Unrestricted Use and Restricted Use Commercial SCOs are italicized.
10. Sample SBDUP01_052318 is a duplicate of parent sample SB07_1-3.

Table 3
Groundwater Analytical Summary - Volatile Organic Compounds
111 Willow Avenue
Bronx, New York
Langan Project No. 170497201

																Duplicate					
Sample ID	**TOGS 1.1.1 SGV**	**MW01_052418**		**MW02_052418**		**MW03_052418**		**MW04_052418**		**MW05_052418**		**GWDUP01_052418**									
Laboratory Sample ID		**AD04413-001**		**AD04413-003**		**AD04413-005**		**AD04413-007**		**AD04413-009**		**AD04413-014**									
Sample Date		**5/24/2018**		**5/24/2018**		**5/24/2018**		**5/24/2018**		**5/24/2018**		**5/24/2018**									
Volatile Organic Compounds (µg/L)																					
1,1,1,2-Tetrachloroethane	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
1,1,1-Trichloroethane	5	**7.5**		**130**		1	U	**40**		1	U	**41**									
1,1,2,2-Tetrachloroethane	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
1,1,2-Trichloro-1,2,2-trifluoroethane	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
1,1,2-Trichloroethane	1	1	U	*20*	U	1	U	*5*	U	1	U	*5*	U								
1,1-Dichloroethane	5	4.5		**38**		1	U	**14**		4.4		**14**									
1,1-Dichloroethene	5	**6.3**		**65**		1	U	**43**		**5.1**		**44**									
1,1-Dichloropropene	~	1	U	20	U	1	U	5	U	1	U	5	U								
1,2,3-Trichlorobenzene	~	1	U	20	U	1	U	5	U	1	U	5	U								
1,2,3-Trichloropropane	0.04	*1*	U	*20*	U	*1*	U	*5*	U	*1*	U	*5*	U								
1,2,4,5-Tetramethylbenzene	~	1	U	20	U	1	U	5	U	1	U	5	U								
1,2,4-Trichlorobenzene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
1,2,4-Trimethylbenzene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
1,2-Dibromo-3-chloropropane	0.04	*1*	U	*20*	U	*1*	U	*5*	U	*1*	U	*5*	U								
1,2-Dibromoethane	~	1	U	20	U	1	U	5	U	1	U	5	U								
1,2-Dichlorobenzene	3	1	U	*20*	U	1	U	*5*	U	1	U	*5*	U								
1,2-Dichloroethane	0.6	0.5	U	*10*	U	0.5	U	*2.5*	U	0.5	U	*2.5*	U								
1,2-Dichloropropane	1	1	U	*20*	U	1	U	*5*	U	1	U	*5*	U								
1,3,5-Trimethylbenzene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
1,3-Dichlorobenzene	3	1	U	*20*	U	1	U	*5*	U	1	U	*5*	U								
1,3-Dichloropropane	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
1,4-Dichlorobenzene	3	1	U	*20*	U	1	U	*5*	U	1	U	*5*	U								
1,4-Dioxane	~	50	U	1000	U	50	U	250	U	50	U	250	U								
2,2-Dichloropropane	~	1	U	20	U	1	U	5	U	1	U	5	U								
2-Butanone	~	1	U	20	U	3.2		5	U	1	U	5	U								
2-Chlorotoluene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
2-Hexanone	~	1	U	20	U	1	U	5	U	1	U	5	U								
4-Chlorotoluene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
4-Isopropyltoluene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
4-Methyl-2-pentanone	~	1	U	20	U	1	U	5	U	1	U	5	U								
Acetone	~	14		100	U	45		25	U	13		25	U								
Acrolein	5	5	U	*100*	U	5	U	*25*	U	5	U	*25*	U								
Acrylonitrile	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Benzene	1	0.5	U	*10*	U	0.5	U	*2.5*	U	0.5	U	*2.5*	U								
Bromobenzene	~	1	U	20	U	1	U	5	U	1	U	5	U								
Bromochloromethane	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Bromodichloromethane	~	1	U	20	U	1	U	5	U	1	U	5	U								
Bromoform	~	1	U	20	U	1	U	5	U	1	U	5	U								
Bromomethane	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Carbon disulfide	~	1	U	20	U	1	U	5	U	1	U	5	U								
Carbon tetrachloride	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Chlorobenzene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Chloroethane	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Chloroform	7	1	U	*20*	U	1	U	5	U	1	U	5	U								
Chloromethane	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
cis-1,2-Dichloroethene	5	**250**		**320**		1	U	**280**		**27**		**280**									
cis-1,3-Dichloropropene	0.4	*1*	U	*20*	U	*1*	U	*5*	U	*1*	U	*5*	U								
Cyclohexane	~	1	U	20	U	1	U	5	U	1	U	5	U								
Dibromochloromethane	~	1	U	20	U	1	U	5	U	1	U	5	U								
Dibromomethane	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Dichlorodifluoromethane	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Ethylbenzene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Hexachlorobutadiene	0.5	*1*	U	*20*	U	*1*	U	*5*	U	*1*	U	*5*	U								
Isopropylbenzene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
m&p-Xylenes	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Methyl Acetate	~	1	U	20	U	1	U	5	U	1	U	5	U								
Methylcyclohexane	~	1	U	20	U	1	U	5	U	1	U	5	U								
Methylene chloride	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Methyl-t-butyl ether	~	0.5	U	10	U	0.5	U	2.5	U	0.5	U	2.5	U								
n-Butylbenzene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
n-Propylbenzene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
o-Xylene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
sec-Butylbenzene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Styrene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
t-Butylbenzene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Tetrachloroethene	5	**340**		**3700**		1	U	**810**		**10**		**790**									
Toluene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
trans-1,2-Dichloroethene	5	1		*20*	U	1	U	5	U	2		5	U								
trans-1,3-Dichloropropene	0.4	*1*	U	*20*	U	*1*	U	*5*	U	*1*	U	*5*	U								
trans-1,4-Dichloro-2-butene	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Trichloroethene	5	**58**		**420**		1	U	**130**		**14**		**130**									
Trichlorofluoromethane	5	1	U	*20*	U	1	U	5	U	1	U	5	U								
Vinyl chloride	2	**2.8**		*20*	U	1	U	*5*	U	1.2		**5.6**									
Xylenes (Total)	5	1	U	*20*	U	1	U	5	U	1	U	5	U								

Notes and Qualifiers:

1. µg/L = micrograms per liter
2. Groundwater results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (SGVs) for Class GA groundwater.
3. Concentrations above NYSDEC SGVs are shaded and bolded.
4. Reporting Limits (RL) above NYSDEC SGVs are italicized.
5. Dissolved metals samples were field-filtered with an in-line 45-micron filter.
6. ~ = Criterion does not exist.
7. U = The analyte was not detected at a concentration greater than or equal to the RL; the value shown in the table is the RL.
8. GWDUP01_052418 is a duplicate of parent sample MW05_052418.

Table 4
Groundwater Analytical Summary - SVOCs, Pesticides, Herbicides, PCBs, and Metals
111 Willow Avenue
Bronx, New York
Langan Project No. 170497201

												Duplicate					
Sample ID **Laboratory Sample ID** **Sample Date**	**NYSDEC TOGS SGVs**	**MW01_052418** **AD04413-001** **5/24/2018**		**MW02_052418** **AD04413-003** **5/24/2018**		**MW03_052418** **AD04413-005** **5/24/2018**		**MW04_052418** **AD04413-007** **5/24/2018**		**MW05_052418** **AD04413-009** **5/24/2018**		**GWDUP01_052418** **AD04413-014** **5/24/2018**	
Semivolatile Organic Compounds (µg/L)													
SVOCs, total	~	ND		ND		ND		ND		ND		ND	
Pesticides (µg/L)													
Pesticides, total	~	ND		ND		ND		ND		ND		ND	
Herbicides (µg/L)													
Herbicides, total	~	ND		ND		ND		ND		ND		ND	
Polychlorinated Biphenyls (PCBs) (µg/L)													
PCBs, total	~	ND		ND		ND		ND		ND		ND	
Total Metals (µg/L)													
Mercury	0.7	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Aluminum	~	9600		7800		950		38000		3100		100000	
Barium	1,000	140		110		130		220		88		410	
Calcium	~	77000		110000		120000		48000		52000		52000	
Chromium	50	50	U	50	U	50	U	**67**		50	U	**180**	
Copper	200	50	U	50	U	50	U	67		50	U	170	
Iron	300	**13000**		**9800**		**4800**		**53000**		**9900**		**140000**	
Magnesium	~	26000		37000		42000		37000		51000		59000	
Manganese	300	**2100**		**2800**		**1100**		**3500**		**990**		**4300**	
Nickel	100	50	U	50	U	50	U	82		50	U	**170**	
Potassium	~	6000		6200		10000		12000		27000		18000	
Silver	50	20	U	20	U	20	U	20	U	20	U	20	U
Sodium	20,000	**130000**		**130000**		**150000**		**150000**		**450000**		**160000**	
Vanadium	~	50	U	50	U	50	U	80		50	U	200	
Zinc	~	50	U	50	U	50	U	130		50	U	360	
Antimony	3	3	U	3	U	3	U	3	U	3	U	3	U
Arsenic	25	4.8		2.6		2	U	13		4.4		**35**	
Beryllium	~	1	U	1	U	1	U	1.8		1	U	4.3	
Cadmium	5	2	U	2	U	2	U	2	U	2	U	2	U
Cobalt	~	7.7		11		2.1		53		2.7		93	
Lead	25	8.4		4.9		3	U	21		4.5		**64**	
Selenium	10	10	U	10	U	10	U	10	U	10	U	**12**	
Thallium	~	2	U	2	U	2	U	2	U	2	U	2	U
Dissolved Metals (µg/L)													
Mercury	0.7	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Aluminum	~	200	U	230		200	U	200	U	340		200	U
Barium	1,000	78		94		130		50	U	71		50	U
Calcium	~	84000		120000		130000		47000		67000		48000	
Chromium	50	50	U	50	U	50	U	50	U	50	U	50	U
Copper	200	50	U	50	U	50	U	50	U	50	U	50	U
Iron	300	300	U	300	U	**2300**		**870**		**3200**		**370**	
Magnesium	~	29000		38000		44000		32000		56000		32000	
Manganese	300	**2200**		**3000**		**1100**		**2200**		**1300**		**2200**	
Nickel	100	50	U	50	U	50	U	50	U	50	U	50	U
Potassium	~	5000	U	5300		10000		10000		33000		9300	
Silver	50	20	U	20	U	20	U	20	U	20	U	20	U
Sodium	20,000	**160000**		**140000**		**150000**		**190000**		**520000**		**180000**	
Vanadium	~	50	U	50	U	50	U	50	U	50	U	50	U
Zinc	~	50	U	50	U	50	U	50	U	62		50	U
Antimony	3	3	U	3	U	3	U	3	U	3	U	3	U
Arsenic	25	2.3		2	U	2	U	2.1		3.2		2	U
Beryllium	~	1	U	1	U	1	U	1	U	1	**U**	1	**U**
Cadmium	5	2	U	2	U	2	U	2	U	2	**U**	2	**U**
Cobalt	~	3.3		9.1		2	U	36		2	**U**	35	
Lead	25	3	U	3	U	3	U	3	U	3	**U**	3	**U**
Selenium	10	10	U	10	U	10	U	10	U	10	**U**	10	**U**
Thallium	~	2	U	2	U	2	U	2	U	2	**U**	2	**U**

Notes and Qualifiers:

1. µg/L = micrograms per liter
2. Groundwater results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (SGVs) for Class GA groundwater.
3. Concentrations above NYSDEC TOGS SGVs are shaded and bolded.
4. Reporting Limits (RL) above NYSDEC TOGS SGVs are italicized.
5. Dissolved metals samples were field-filtered with an in-line 45-micron filter.
6. ~ = Criterion does not exist.
7. U = The analyte was not detected at a concentration greater than or equal to the RL; the value shown in the table is the RL.
8. GWDUP01_052418 is a duplicate of parent sample MW05_052418.

Table 5
Groundwater Elevation Summary
111 Willow Avenue
Bronx, New York

Well ID	Depth to Water	Top of Casing el.	Groundwater Elevation	Depth to bottom of well
MW01	9.45	14.42	4.97	16
MW02	9.56	13.39	3.83	18
MW03	7.12	12.66	5.54	16
MW04	7.71	11.45	3.74	16
MW05	0.47	4.06	3.59	11

Notes:
1. Elevations shown are referenced to the North American Vertical Datum of 1988 (NAVD 8
2. Monitoring wells were field surveyed and gauged on 7/13/2018

Table 6
Soil Vapor Analytical Summary
111 Willow Avenue
Bronx, New York
Langan Project No. 170497201

Sample ID Laboratory Sample ID Sample Date	NYSDOH Matrix A, B, and C Minimum Values	SV01_052218 C1805056-002A 5/22/2018		SV02_052318 C1805056-008A 5/23/2018		SV03_052218 C1805056-003A 5/22/2018		SV04_052218 C1805056-004A 5/22/2018		SV05_052318 C1805056-006A 5/23/2018		SV06_052318 C1805056-007A 5/23/2018		SV07_052218 C1805056-001A 5/22/2018	
Volatile Organic Compounds (VOCs) (µg/m3)															
1,1,1-Trichloroethane	100	0.82	U	0.82	U	8.9		0.82	U	1.7		0.82	U	7.9	
1,1,2,2-Tetrachloroethane	~	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane	~	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U
1,1-Dichloroethane	~	0.61	U	0.61	U	0.61	U	0.61	U	0.61	U	0.61	U	0.61	U
1,1-Dichloroethene	6	0.59	U	0.59	U	0.59	U	0.59	U	0.59	U	0.59	U	0.59	U
1,2,3-Trimethylbenzene	~	0.74	U	0.54	J	0.74	U	0.74	U	0.54	J	0.74	U	1	
1,2,4-Trichlorobenzene	~	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
1,2,4-Trimethylbenzene	~	1.6		1.7		1.3		1.4		2.1		1.4		3.1	
1,2-Dibromoethane	~	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
1,2-Dichlorobenzene	~	0.90	U	0.90	U	0.90	U	0.90	U	0.90	U	0.90	U	0.90	U
1,2-Dichloroethane	~	0.61	U	0.61	U	0.61	U	0.61	U	0.61	U	0.61	U	0.61	U
1,2-Dichloropropane	~	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U
1,3,5-Trimethylbenzene	~	0.84		1.1		0.64	J	0.64	J	1.1		0.74	U	2.6	
1,3-butadiene	~	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U
1,3-Dichlorobenzene	~	1.6		1.7		1.5		1.7		0.90	U	0.90	U	15	
1,4-Dichlorobenzene	~	0.90	U	0.90	U	0.90	U	0.90	U	0.90	U	0.90	U	0.90	U
1,4-Dioxane	~	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
2,2,4-trimethylpentane	~	5.3		2.9		13		5.7		4.6		6.9		24	
2-Chlorotoluene	~	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U	0.78	U
4-ethyltoluene	~	0.59	J	0.54	J	0.74	U	0.74	U	0.59	J	0.74	U	0.74	
Acetone	~	340		760		2000		600		71		85		2200	
Allyl chloride	~	0.47	U	0.47	U	0.47	U	0.47	U	0.47	U	0.47	U	0.47	U
Benzene	~	4.6		2.9		3.2		2.9		2.3		10		5.9	
Benzyl chloride	~	0.86	U	0.86	U	0.86	U	0.86	U	0.86	U	0.86	U	0.86	U
Bromodichloromethane	~	1.9		35		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform	~	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
Bromomethane	~	0.58	U	0.58	U	0.58	U	0.58	U	0.58	U	0.58	U	0.58	U
Carbon disulfide	~	4.5		9		6.4		210		23		4.3		0.47	U
Carbon tetrachloride	6	0.75	J	2.4		0.94	U	0.94	U	0.94	U	0.94	U	0.94	U
Chlorobenzene	~	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U	0.69	U
Chloroethane	~	0.9		0.61		0.40	U	0.71		0.40	U	0.40	U	0.34	J
Chloroform	~	320		710		21		2.1		1.2		1.7		9.5	
Chloromethane	~	1.7		1.3		0.54		2.9		0.41		1.1		1.1	
cis-1,2-Dichloroethene	6	0.59	U	2.9		0.59	U	0.59	U	0.59	U	0.59	U	2	
cis-1,3-Dichloropropene	~	0.68	U	0.68	U	0.68	U	0.68	U	0.68	U	0.68	U	0.68	U
Cyclohexane	~	2.5		1.1		3.3		3.8		3.2		0.52	U	4.2	
Dibromochloromethane	~	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U
Ethanol	~	140	J	160		240		320		110		100		2000	
Ethyl acetate	~	10		9.4		10		13		11		6.9		4.6	
Ethylbenzene	~	2.7		2.3		2.3		2.2		1.7		1.7		1.5	
Freon 11	~	1.3		1.5		1.5		1.8		1.3		1.1		2.2	
Freon 113	~	2.8		1.1	U	2.8		2.8		1.1	U	1.1	U	1.1	U
Freon 114	~	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Freon 12	~	2.1		2.3		2		0.74	U	2.3		2.1		2	
Heptane	~	6.2		5.5		17		4.5		6.8		10		16	
Hexachloro-1,3-butadiene	~	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
Hexane	~	9.2		4		21		21		7.3		7.6		18	
Isopropyl alcohol	~	14		16		0.37	U	0.37	U	9.1		4.5		0.37	U
m&p-Xylene	~	8.2		7.7		6.8		7.3		5.5		6		3.7	
Methyl Butyl Ketone	~	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
Methyl Ethyl Ketone	~	65		29		320		51		29		96		2000	
Methyl Isobutyl Ketone	~	1.8		2.6		2.1		2		1.7		1.9		1.8	
Methyl methacrylate	~	0.61	U	0.61	U	0.94		0.61	U	0.61	U	0.74		0.82	
Methyl tert-butyl ether	~	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U	0.54	U
Methylene chloride	100	6.2		3.3		3.6		4.9		18		2.2		7	
Naphthalene	~	0.58	J	0.84		0.79	U	0.79	U	0.58	J	0.79	U	3.1	
o-Xylene	~	2.4		2.5		2.1		2.1		1.9		2		1.4	
Propylene	~	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
Styrene	~	0.72		0.6	J	0.6	J	0.51	J	0.68		0.51	J	1.3	
t-Butyl alcohol	~	28		13		35		27		2.4		3.2		32	
Tetrachloroethylene	100	2.1		2.4		2.8		3.8		5.1		3.5		**160**	
Tetrahydrofuran	~	0.44	U	0.44	U	56		0.44	U	5.5		61		1500	
Toluene	~	27		32		27		26		21		30		22	
trans-1,2-Dichloroethene	~	0.59	U	0.59	U	0.59	U	0.59	U	0.59	U	0.59	U	0.59	U
trans-1,3-Dichloropropene	~	0.68	U	0.68	U	0.68	U	0.68	U	0.68	U	0.68	U	0.68	U
Trichloroethylene	6	0.86		1.4		0.81	U	0.81	U	1.5		0.81	U	**8.40**	
Vinyl acetate	~	0.53	U	0.53	U	0.53	U	0.53	U	0.53	U	0.53	U	0.53	U
Vinyl Bromide	~	0.66	U	0.66	U	0.66	U	0.66	U	0.66	U	0.66	U	0.66	U
Vinyl chloride	6	0.38	U	0.38	U	0.38	U	3.7		0.38	U	0.38	U	0.38	U
Total VOCs	~	1018		1830		2813		1325		354		451		8063	

Notes and Qualifiers:
1. Results are presented in micrograms per cubic meter (µg/m^3).
2. Soil Vapor sample analytical results are compared to the New York State Department of Health (NYSDOH) minimum sub-slab soil vapor concentration at which mitigation is recommended on the NYSDOH Decision Matrices A, B, and C as presented in the NYSDOH Final Guidance on Soil Vapor Intrusion (May 2017).
3. U = Analyte was not detected at a concentration greater than or equal to the Reporting Limit (RL); the value shown in the table is the RL
4. ~ = No AGV or matrix has been established for this compound.
5. Exceedances of the NYSDOH minimum threshold level for mitigation are shaded and bolded.

APPENDIX A

FOR ILLUSTRATIVE PURPOSES ONLY

767 E 133rd St

Block:	2562	**Lot:**	49, 56, 58, 60
Zoning:	M1-2/R7D	**Map:**	6B
Lot Dimensions:	206'-6 x 104'/95'8	**Area:**	20,646.8
Proposed Use			

		Reqd./Permitted		Proposed	ZR
Applicability of Quality Housing Program					23-011 (b)
BULK					
Lot Area		20,647	sq. ft		
Floor Area Ratio (FAR) Inclusionary Housing	5.60	115,622	sq. ft	5.54	23-154
Total Allowed Floor Area		115,622	sq. ft	114,474	
Area not used from FAR		1148			
Max Lot Coverage (corner lot)	80%	16,517		15,269	23-153
YARDS & HEIGHT					
Minimum Base Height	60'			complies	22-664
Maximum Base Height	95'			65'	22-664
Maximum Building Height	110-115'			92'-8"	22-664
DENSITY					
No. of Dwelling Units (Factor)	680	170.0		120	23-22
Parking - Residential	Income Restricted Housi 15%	18.0	nos.	34	25-251
Parking - Commercial	None required in M1-5 districts				44-21, 25-30
Parking - Bicycle	One per Two Dwelling Units	60.0	nos.	60	25-811
	One per 10,000 SF	1.5673	nos.	0	Waived 44-60, 36-70
	15 square feet per bicycle	900	sq. ft	1046 @ CELLAR	25-83

FLOOR AREA SUMMARY (ALL AREAS ARE IN SQ. FT)

FLOORS	USE	TOTAL AREA	DEDUCTIONS	NET AREA	NO. OF APTS.	DISTRIBUTION		
						Studio	1-bed	2-bed
CELLAR	*Residential, parking, Utility*	20647	20647	0				
FIRST FLOOR	*Commercial*	**15673**	0	15673		**10.83%**	**47.50%**	**41.67%**
	Residential lobby, Driveway	**4074**	1243	2831				
SECOND FLOOR	*Residential, Community Room*	**14369**	1555	12814	16	**2**	**7**	**7**
THIRD FLOOR	*Residential*	**15269**	**994**	14275	18	**2**	**8**	**8**
FOURTH FLOOR	*Residential*	15269	994	14275	18	**2**	**8**	**8**
FIFTH	*Residential*	14369	994	13375	17	**2**	**8**	**7**
SIXTH	*Residential*	14369	994	13375	17	**2**	**8**	**7**
SEVENTH	*Residential*	12514	994	11520	14	**3**	**6**	**5**
EIGHTH	*Residential*	**9625**	**1456**	8169	10	**0**	**6**	**4**
NINTH	*Residential*	9625	1456	8169	10	**0**	**6**	**4**
ROOF	*Elevator Bulkhead*	0	0	0	0			
TOTAL AREA RESIDENTIAL		**145,801**		**114,474**	**120**	**13**	**57**	**50**



View of Commerical Plaza



View from Corner of Willow & 134th St

PM ARCHITECTURE
28 W 36th Street 4th Fl New York, NY 10018
Tel (212) 563.2550 Fax (212) 563.2552

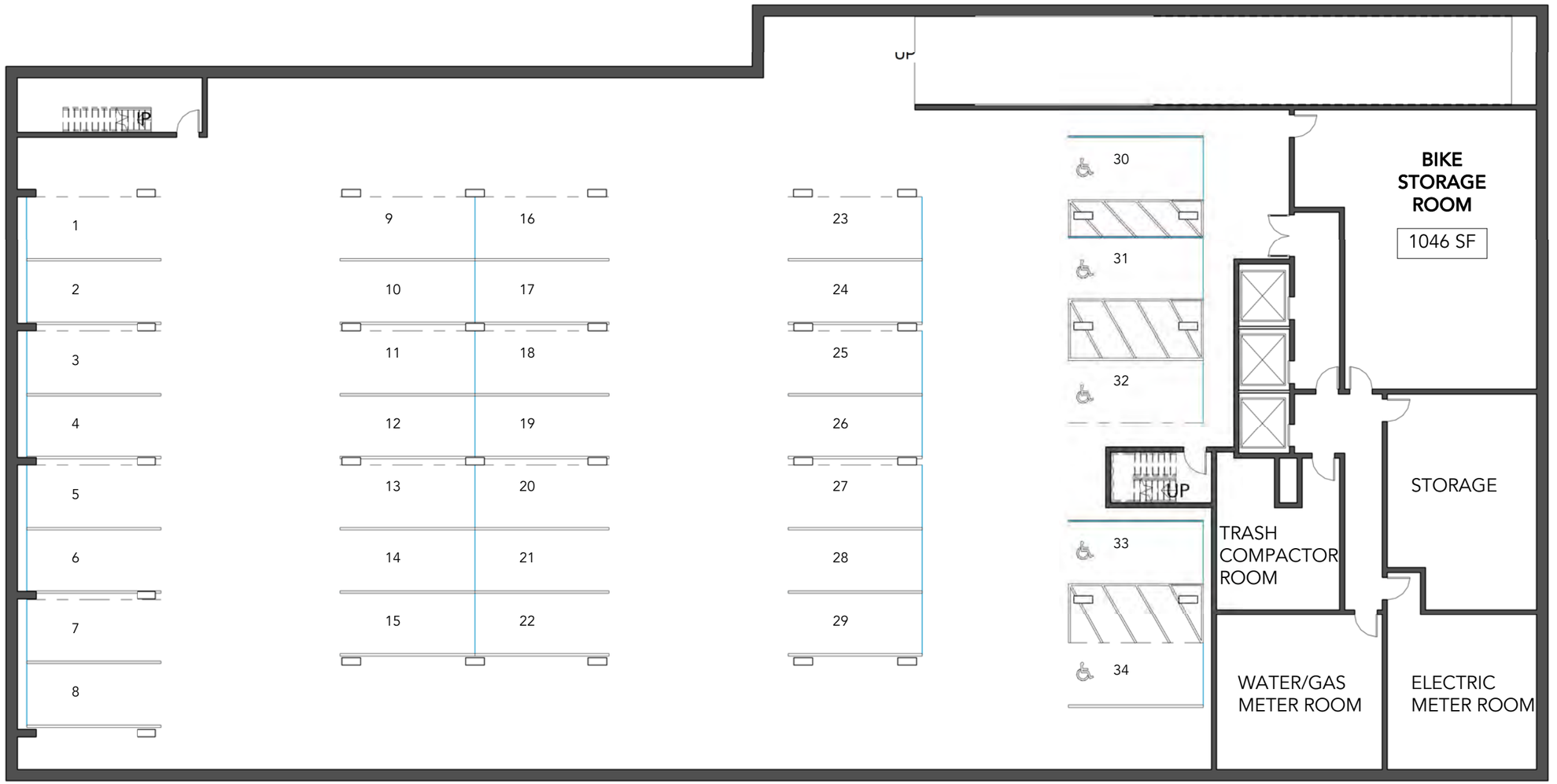
767 E 133rd St

Zoning Analysis & Renderings

SK-1

12/04/15

SCALE: NTS



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767 E 133rd St

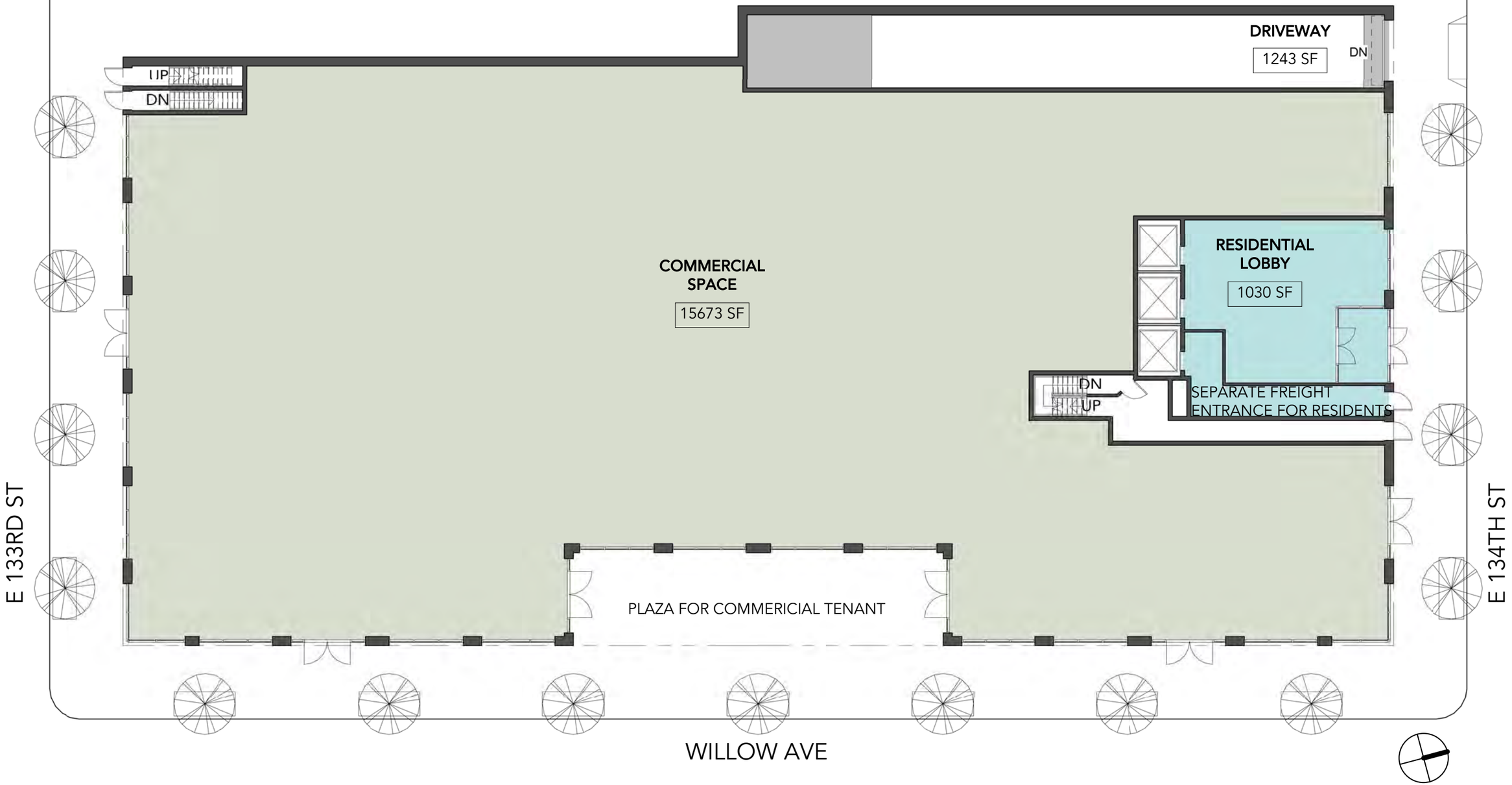
Schematic Cellar Plan

SK-2

12/03/15

SCALE: 1/16" = 1'-0"

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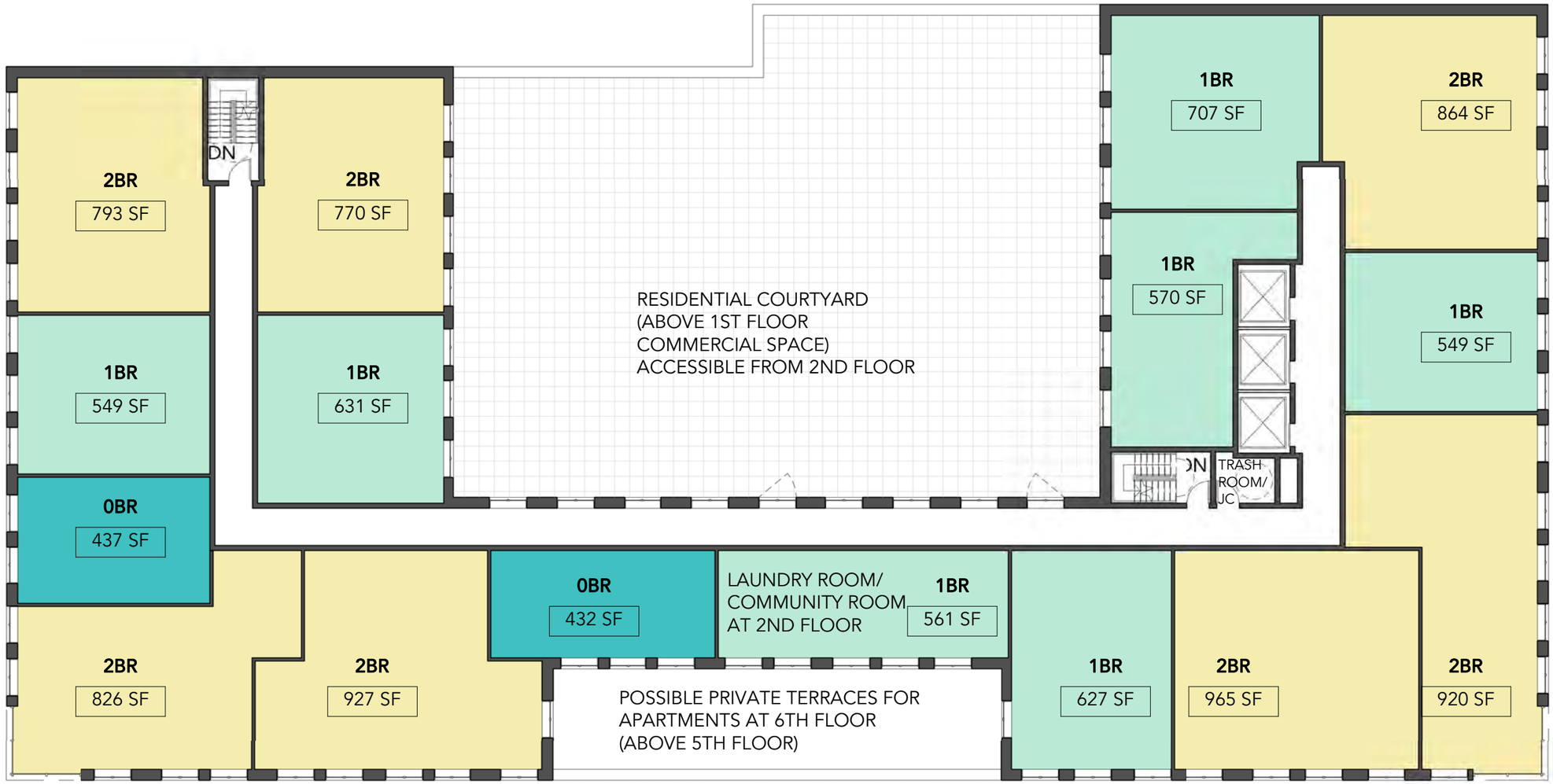
767 E 133rd St

Schematic First Floor Plan

SK-3

12/03/15

SCALE: 1/16" = 1'-0"



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767 E 133rd St

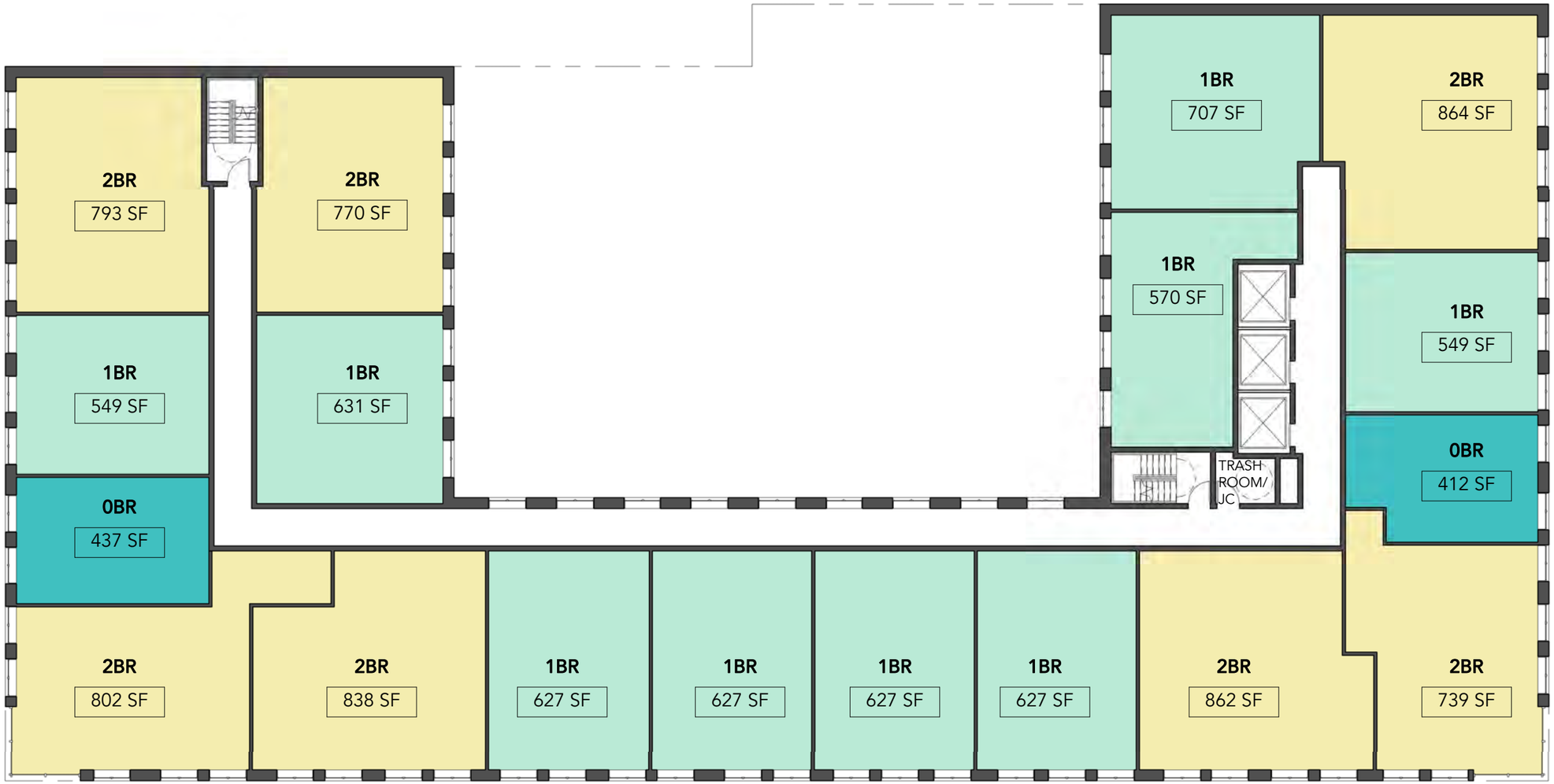
Schematic 2nd, 5th-6th Floor Plans

SK-4

12/03/15

SCALE: 1/16" = 1'-0"

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PM ARCHITECTURE
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PMA architecture pc

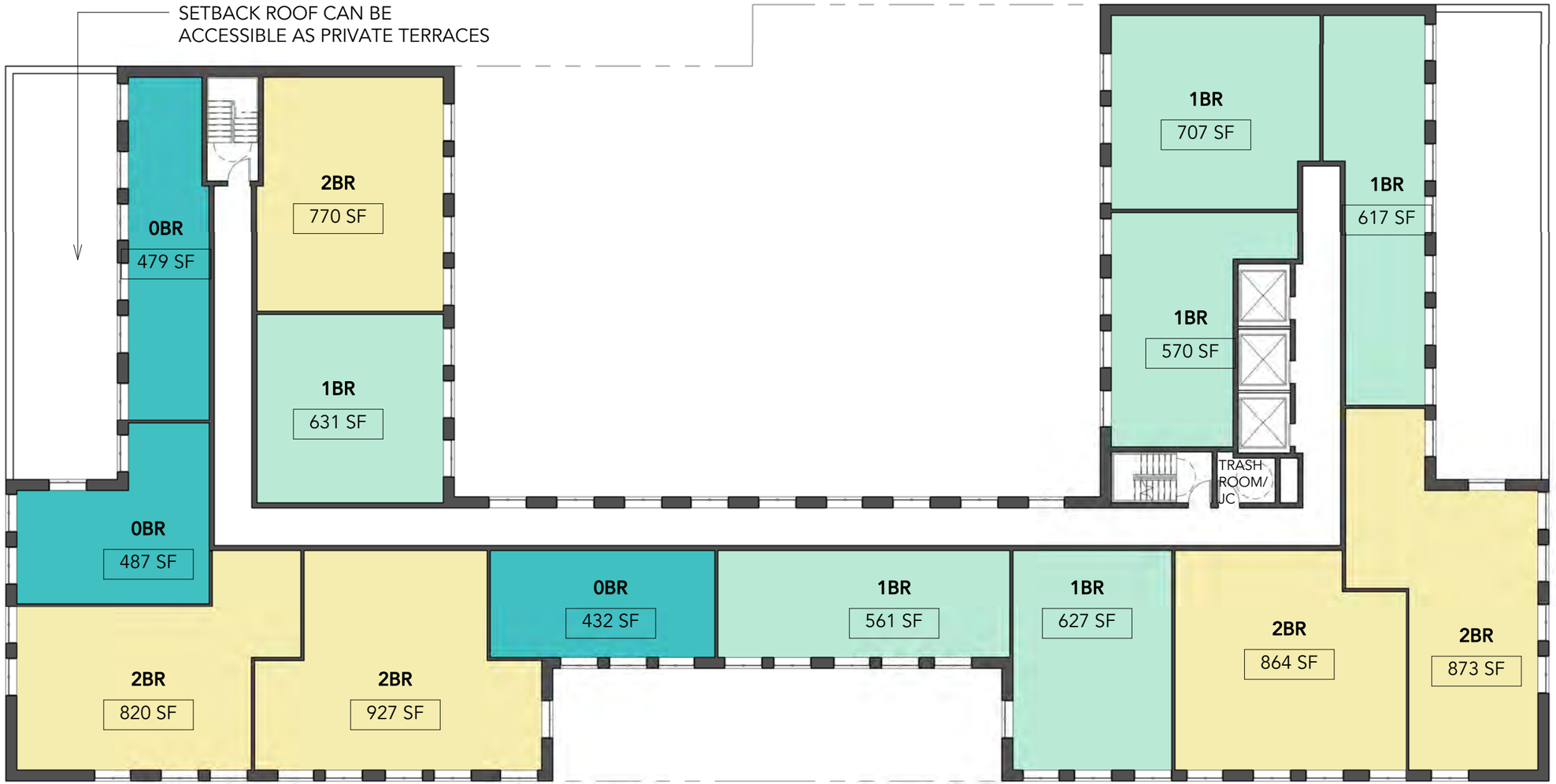
767 E 133rd St

Schematic 3rd & 4th Floor Plan

SK-5

12/03/15

SCALE: 1/16" = 1'-0"



PM ARCHITECTURE
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PMa architecture PC

767 E 133rd St

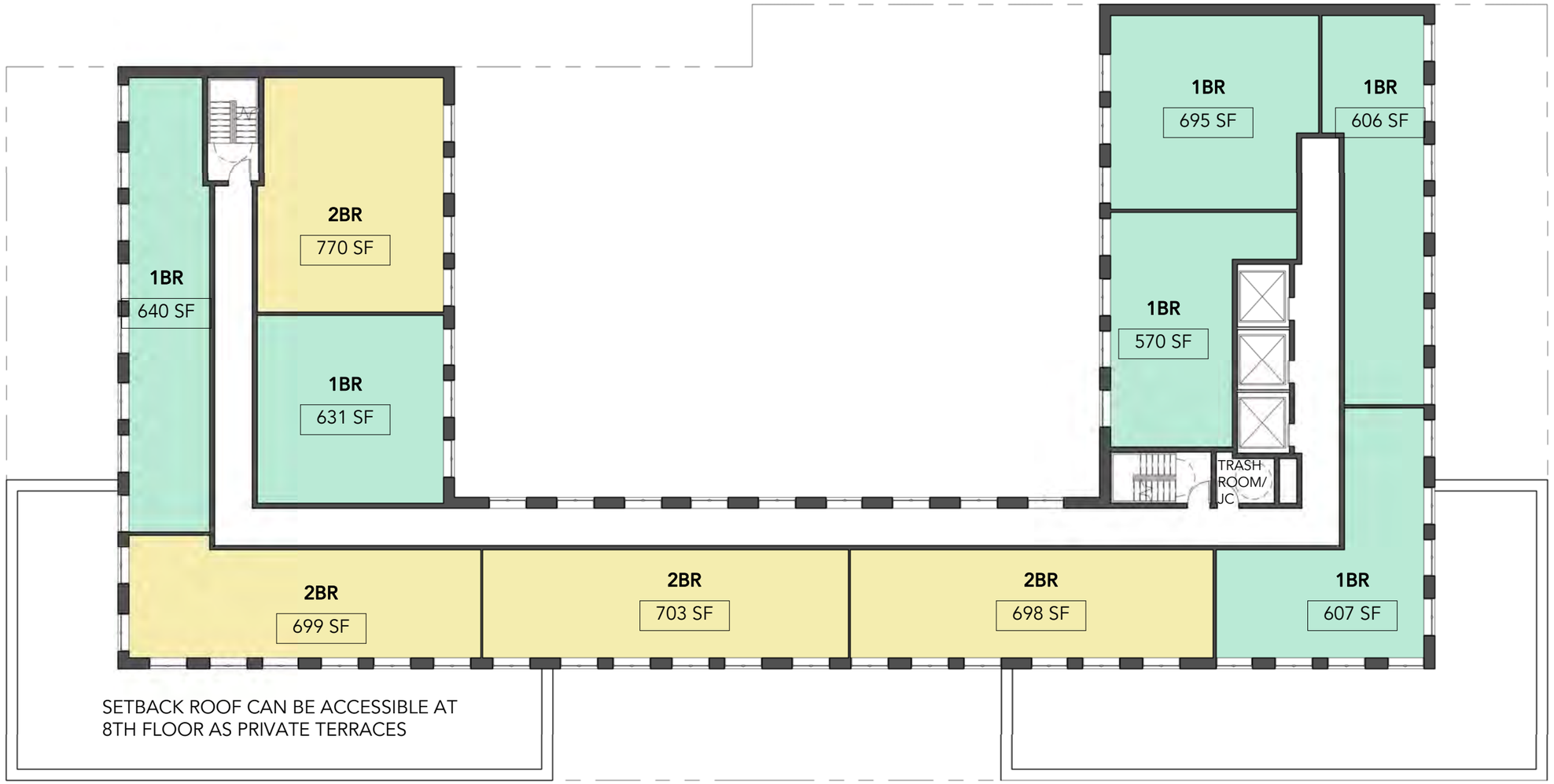
Schematic Setback Floor (7th Floor)

SK-6

04/22/16

SCALE: 1/16" = 1'-0"

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PM ARCHITECTURE
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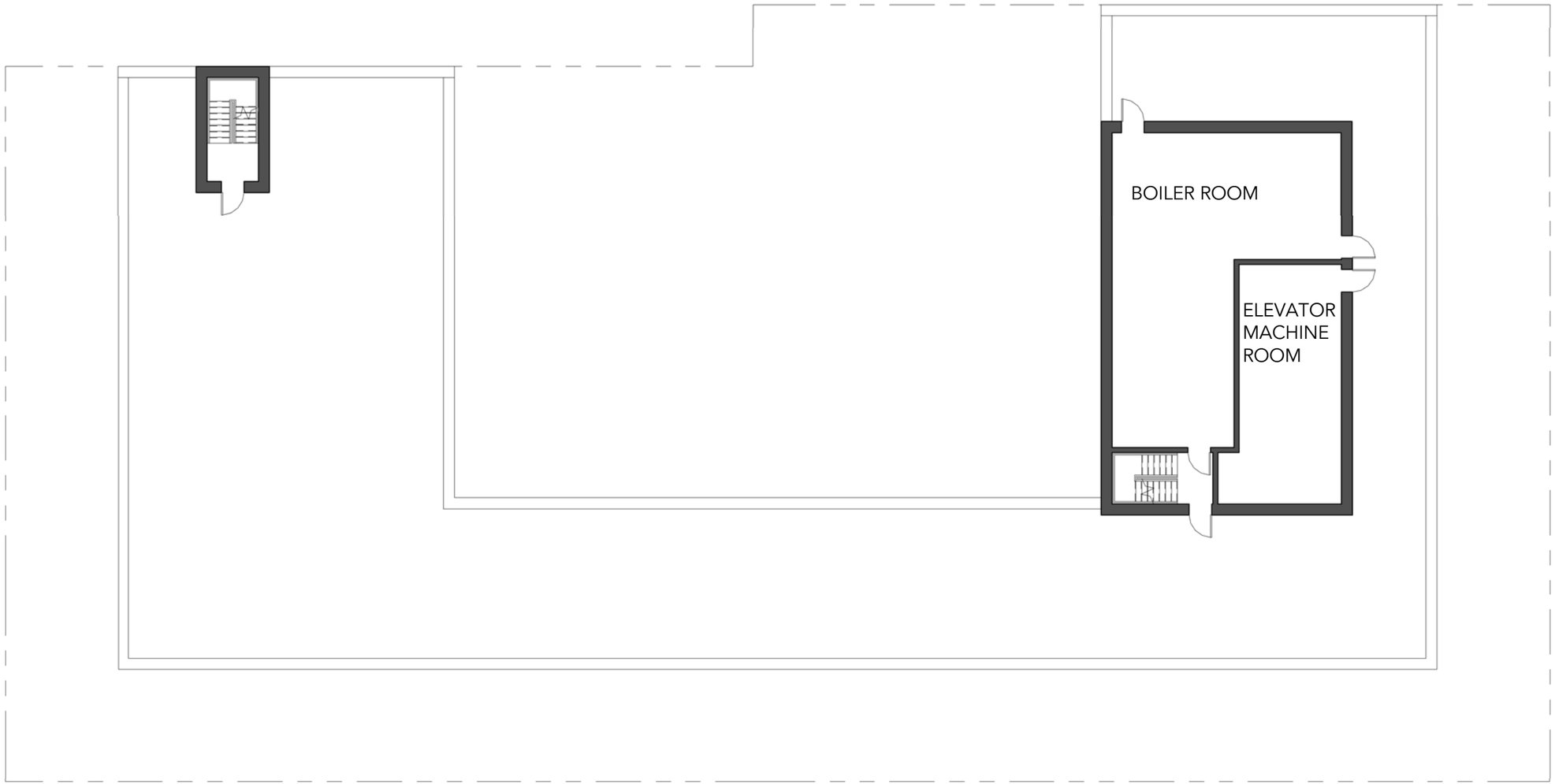
767 E 133rd St

Schematic Setback Floor (8-9th Floor)

SK-7

12/03/15

SCALE: 1/16" = 1'-0"



PM ARCHITECTURE
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767 E 133rd St

Schematic Roof Plan

SK-8

12/04/15

SCALE: 1/16" = 1'-0"



PM ARCHITECTURE
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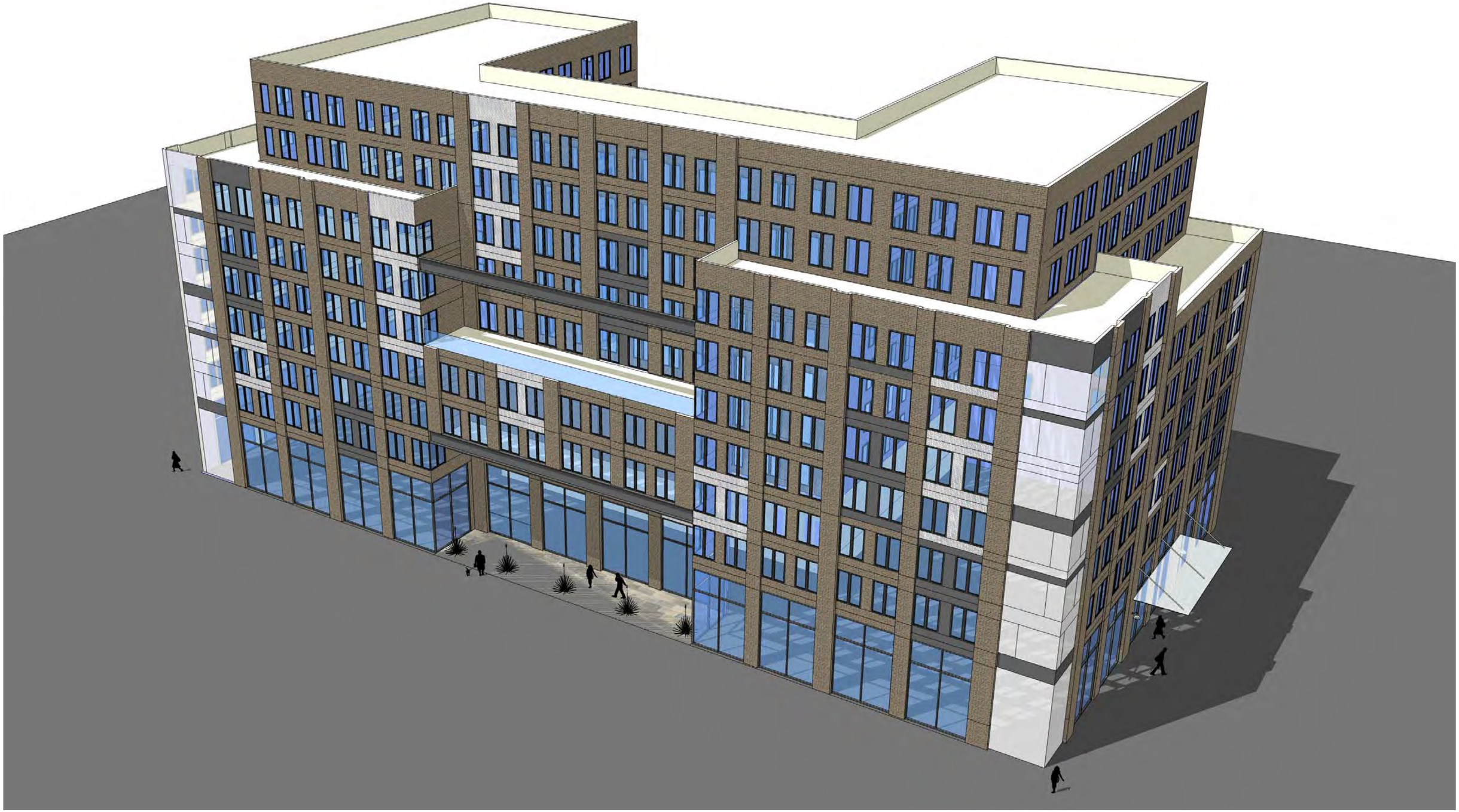
767 E 133rd St

Schematic Elevation (Willow Ave)

SK-9

12/04/15

SCALE: 1/16" = 1'-0"



PM ARCHITECTURE
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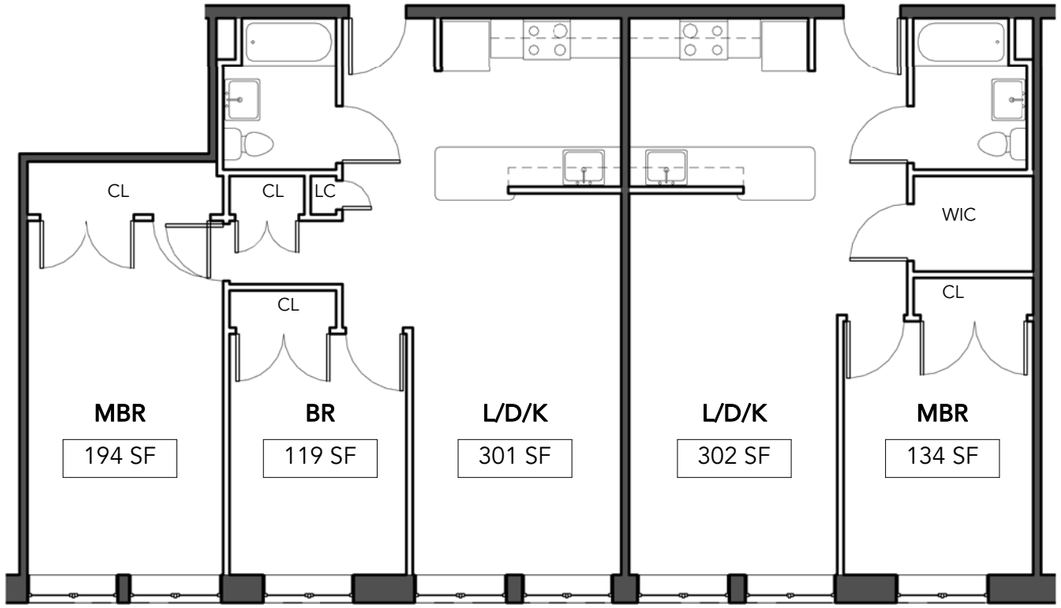
767 E 133rd St

Aerial Rendering

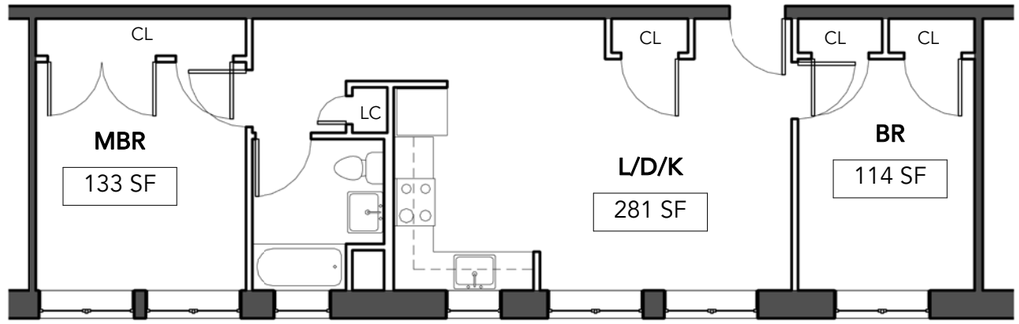
SK-10

12/04/15

SCALE: NTS



Typical 2Br and 1Br Plan



Atypical 2Br Plan at Setback

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767 E 133rd St

Unit Plans

SK-11

3/3/2016

SCALE: 1/8" = 1'-0"

767 E 133rd St

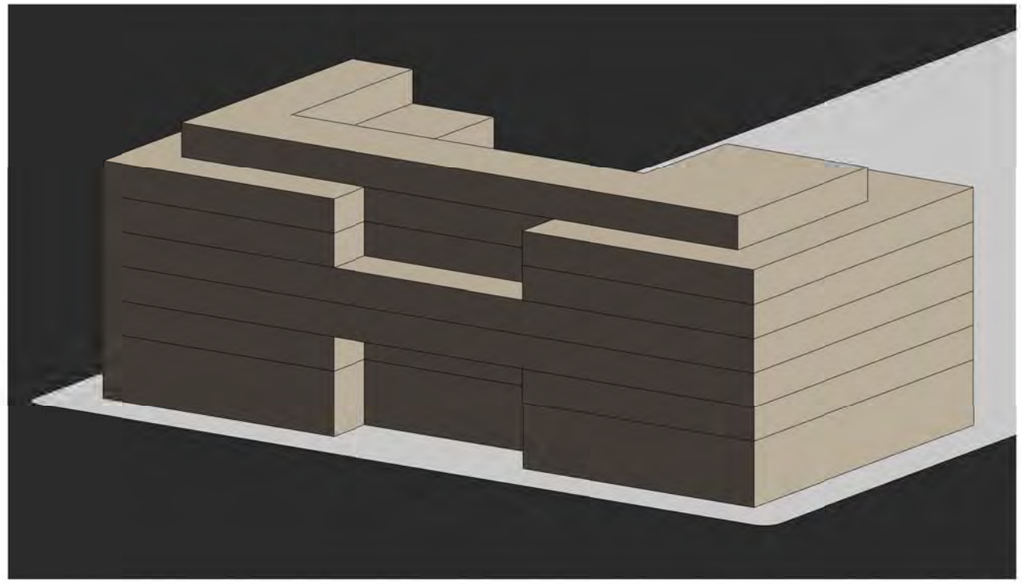
Block:	2562	**Lot:**	49, 56, 58, 60
Zoning:	**M1-5/R7A**	**Map:**	6B
Lot Dimensions:	206'-6 x 104'/95'8	**Area:**	**20,646.8**

Proposed Use

		Reqd./Permitted		Proposed	ZR
Applicability of Quality Housing Program					**23-011 (b)**
BULK					
Lot Area		20,647	sq. ft		
Floor Area Ratio (FAR) Inclusionary Housing	**4.60**	94,975	sq. ft	4.59	23-154
Total Allowed Floor Area		94,975	sq. ft	94,778	
Area not used from FAR		**197**			
Max Lot Coverage (corner lot)	**80%**	16,517		15,269	23-153
YARDS & HEIGHT					
Minimum Base Height	**40'**			complies	22-664
Maximum Base Height	**75'**			65'	22-664
Maximum Building Height	**90'-95'**			75'	22-664
DENSITY					
No. of Dwelling Units (Factor)	680	139.7		93	23-22
Parking - Residential Income Restricted Housi	**15%**	14.0	nos.	34	25-251
Parking - Commercial None required in M1-5 districts					44-21, 25-30
Parking - Bicycle One per Two Dwelling Units		46.5	nos.	47	25-811
One per 10,000 SF		1.5673	nos.	0	Waived 44-60, 36-70
15 square feet per bicycle		698	sq. ft	700 @ CELLAR	25-83

FLOOR AREA SUMMARY (ALL AREAS ARE IN SQ. FT)

FLOORS	USE	TOTAL AREA	DEDUCTIONS	NET AREA	NO. OF APTS.	DISTRIBUTION		
						Studio	1-bed	2-bed
CELLAR	*Residential, parking, Utility*	20647	20647	0				
FIRST FLOOR	*Commercial*	**15673**	0	15673		**12.90%**	**44.09%**	**43.01%**
	Residential lobby, Driveway	**4074**	1243	2831				
SECOND FLOOR	*Residential, Community Room*	**14369**	1182	13187	16	**2**	**7**	**7**
THIRD FLOOR	*Residential*	**15269**	**588**	14681	18	**2**	**8**	**8**
FOURTH FLOOR	*Residential*	15269	588	14681	18	**2**	**8**	**8**
FIFTH	*Residential*	14369	588	13781	17	**2**	**8**	**7**
SIXTH	*Residential*	14369	588	13781	17	**2**	**8**	**7**
SEVENTH	*Residential*	**6918**	**752**	6166	7	**2**	**2**	**3**
ROOF	*Elevator Bulkhead*	0	0	0	0			
TOTAL AREA RESIDENTIAL		**120,954**		**94,778**	**93**	**12**	**41**	**40**



Schematic Massing of R7A building

PM ARCHITECTURE
28 W 36th Street 4th Fl New York, NY 10018
Tel (212) 563.2550 Fax (212) 563.2552

767 E 133rd St

R7A Zoning Analysis

SK-12

03/03/16

SCALE: NTS

APPENDIX B

Middleton Environmental Inc.

Environmental Consultants and Engineers

54 George Street, Babylon, NY 11702
(631) 321-4300 • Fax (631) 321-4349
middletonenvironmental.com

Phase I Environmental Site Assessment Report

MEI Project Number 16-1111



Property located at 763-765 & 767 East 133rd Street
and 750 East 134th Street in Bronx, New York

November 18, 2016

Prepared for Signature Bank

Middleton Environmental Inc.

Environmental Consultants and Engineers

54 George Street, Babylon, NY 11702
(631) 321-4300 • Fax (631) 321-4349
middletonenvironmental.com

November 18, 2016

Ms. Samantha Stewart
Signature Bank
68 South Service Road
Melville, New York 11747

Re: Phase I Environmental Site Assessment Report
763-765 & 767 East 133rd Street, and 750 East 134th Street, Bronx, NY
MEI Project #: 16-1111

In accordance with our agreement, Middleton Environmental Incorporated (MEI), has performed a Phase I Environmental Assessment of the above referenced property in accordance with ASTM E 1527-13 Scope of Work. Please find a copy of the report enclosed.

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

Thank you for choosing MEI as your consultant for this project. If you have any questions, or if we can be of additional service, please contact us at 631 321 4300.

Respectfully submitted,

Middleton Environmental Incorporated

Prepared by: John T. Danko
Project Manager

Reviewed by: Donald J. Middleton Jr.
President

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1.0 EXECUTIVE SUMMARY

At the request of Signature Bank, Middleton Environmental Incorporated (MEI) has performed a Phase I Environmental Site Assessment (ESA) of the property located 763-765 & 767 East 133rd Street, and 750 East 134th Street in Bronx, New York, herein referred to as the Subject Property. The main objective of this ESA was to identify Recognized Environmental Conditions (RECs), Controlled Recognized Environmental Conditions (CRECs), or Historical Recognized Environmental Conditions (HRECs) in connection with the Subject Property, defined in ASTM Practice E 1527-13 as the presence or likely presence of any hazardous substances or petroleum products that indicate an existing release, a past release, or a material threat of a release. This ESA also includes a preliminary evaluation of certain potential environmental conditions that are outside the scope of ASTM Practice E 1527-13. This assessment has identified no evidence of RECs, HRECs or CRECs pertaining to the Subject Property.

The Subject Property consists of four (4) rectangular-shaped parcels with an approximate combined area of 0.475 acres. The 763 East 133rd Street parcel contains a one (1) story commercial building while the 767 East 133rd Street parcel contains a three (3) story commercial building and the 750 East 134th Street parcel contains a single story shed. The 761 East 133rd Street parcel is a vacant lot used for storage. The buildings have an estimated combined gross floor area of 17,500 square feet and only the 767 East 133rd Street building has a basement. The 761-765 East 133rd Street building and 750 East 134th Street building are occupied by one (1) commercial tenant (C&I Communications), while the 767 East 133rd Street building is occupied by multiple commercial tenants and offices (a fashion company, Corporate Events Co., a vacant club). A review of the New York City Building Department property profile overview estimated the year of construction of the building 767 East 133rd Street building in 1908 and the 763 East 133rd Street and 750 East 134th Street building in 1931. The buildings occupy the majority of the parcels with minimal areas of exposed grounds or landscaped areas bordered by municipal walkways and right-of-ways.

Below is the Assessment Summary Table presenting our recommended actions for the Subject Property. MEI's Findings and Opinions and Recommendations for further action or investigation (if any), are presented in Section 10.0.

ASSESSMENT SUMMARY TABLE			
Assessment Component	Section(s)	Recommended Actions	Estimated Cost
Historical Review	5.3, 5.4 & 5.5	No Further Action	
Current Occupants / Operations	3.3	No Further Action	
Hazardous Substances / Petroleum Products	7.2	No Further Action	
Drains, Sumps & Storm Water Drywells	7.2	No Further Action	
Storage Tanks	7.2	No Further Action	
PCBs	7.2	No Further Action	
Regulatory Agency / Database Review	5.1	No Further Action	
Asbestos Containing Materials	9.1	No Further Action	
Lead Based Paint	9.2	No Further Action	
Lead in Drinking Water	9.3	No Further Action	
Radon	9.4	No Further Action	
Mold	9.5	No Further Action	
Wetlands	9.6	No Further Action	

2.0 INTRODUCTION

2.1 Purpose

MEI has performed a Phase I Environmental Site Assessment (Phase I ESA) of property located at 763-765 & 767 East 133rd Street, and 750 East 134th Street in Bronx, New York (Subject Property). The purpose of this Phase I Environmental Site Assessment (Phase I ESA) is to investigate and identify Recognized Environmental Conditions (RECs), Controlled Recognized Environmental Conditions (CRECs), or Historical Recognized Environmental Conditions (HRECs) associated with the Subject Property and/or surrounding property. Recognized Environmental Conditions, as defined in the ASTM Standard Practice E 1527-13, including the following:

The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a 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 agencies.

For the purpose of this Phase I ESA, *recognized environmental conditions (REC's),* may also include the presence or likely presence of other conditions as noted in the Scope of Services.

2.2 Scope of Services

This ESA was conducted utilizing a standard of good commercial and customary practice that was consistent with the ASTM Practice E 1527-13. Any significant scope-of-work additions, deletions or deviations to ASTM Practice E 1527-13 are noted below or in the corresponding sections of this report. The scope-of-work for this assessment included an evaluation of the following:

- Physical characteristics of the Subject Property through a review of referenced sources for topographic, geologic, soils and hydrologic data.
- Subject Property history through a review of referenced sources such as land deeds, fire insurance maps, city directories, aerial photographs, prior reports and interviews.
- Current Subject Property conditions, including observations and interviews regarding the following: the presence or absence of hazardous substances or petroleum products; generation, treatment, storage, or disposal of hazardous, regulated, or biomedical waste; equipment that utilizes oils which potentially contain PCBs; and storage tanks (aboveground and underground).
- Usage of surrounding area properties and the likelihood for releases of hazardous substances and petroleum products (if known and/or suspected) to migrate onto the Subject Property.
- Information in referenced environmental agency databases and local environmental records, within specified minimum search distances.
- Past ownership through a review of available prior reports and local municipal file review.
  The scope-of-work also included consideration of the following potential environmental conditions that are outside the scope of ASTM Practice E 1527-13: asbestos-containing materials (ACM), lead-based paint (LBP), lead in drinking water, radon, mold, and wetlands.

2.3 Assumptions and Limitations

There is a possibility that even with the proper application of these methodologies there may exist on the Subject Property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. The information and conclusions contained in this report are based upon work undertaken by trained professional in accordance with generally accepted engineering and scientific practices current at the time the work was performed. MEI believes that the information obtained from the record review and the interviews concerning the Subject Property is reliable. However, MEI cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The methodologies of this assessment are not intended to produce all inclusive or comprehensive results, but rather to provide the User with information relating to the Subject Property. Due to the nature of this investigation and data available, MEI cannot warrant against undiscovered environmental liabilities. Should any additional information become available which differs significantly from our understanding of conditions or findings represented in this report, we request that this information be supplied to MEI so that MEI may reassess the conclusions provided in this report (if necessary).

The findings, opinions and conclusions of this report contain the limitations inherent in these methodologies that are referred to in ASTM E 1527-13. Specific limitations and exceptions to this ESA are set forth below:

Historical and environmental information pertaining to the Subject Property has been included in this report to the extent that such information is "reasonably ascertainable" as defined in the above-referenced standard practice and in accordance with the project specific timeframes.

MEI reviewed an environmental database search report. MEI's conclusions based on the search report are limited to the accuracy of that report. To the extent possible, MEI's field observations are used to verify the information or identify errors and inconsistencies in the search report regarding the listed facilities in the immediate vicinity of the Subject Property.

With respect to conditions outside the scope of the ASTM Standard, MEI's observations are limited to physical observations and a review of published data. Unless otherwise stated, no sampling for Asbestos Containing Materials, Lead Based Paint, Drinking Water, Radon, Mold or Wetlands was conducted.

2.4 Special Terms and Conditions

This Phase I Environmental Site Assessment ("the report") has been prepared to assist Signature Bank in its underwriting of a proposed mortgage loan or financing on the Subject Property. This report can be relied upon by only the parties stated in the transmittal letter at the front of this report. MEI's liability to a purchaser wishing to use this report is limited to the cost of the report. Amendments to MEI's limitations as stated herein that may occur after issuance of the report are considered to be included in this report. Payment for the report is made by, and MEI's contract and report extends Signature Bank only, in accordance with MEI Terms and Condition and the MEI Scope of Work.

2.5 Data Gaps

Any data gaps identified herein, as defined by ASTM Practice E 1527-13 are not considered to have significantly affected the ability to identify recognized environmental conditions in connection with the Subject Property and do not alter the conclusions of this report.

2.6 Deviations

No deviations from the recommended scope of ASTM Standard E 1527-13 were performed as part of this Phase I ESA with the exception of any additional services noted in Section 2.2 Scope of Services.

2.7 User Reliance

This Phase I Environmental Site Assessment Report is for the benefit of Signature Bank and this report may not be relied upon by any other person or entity without the written consent of MEI.

Only if written agreement has been executed granting the right to utilized this report, no third party which obtains all of portion of this report shall have any rights of recourse or recovery under any course of action against MEI, its officers, employees, vendors, successors or assigns.

Reliance is provided in accordance with MEI's Standard Phase I Environmental Site Assessment Contract and this report is for the benefit of Signature Bank and its successors and assigns. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of MEI.

3.0 SITE DESCRIPTION

3.1 Ownership and Location

The Subject Property consists of four (4) adjacent parcels. According to the Automated City Register Information System (ACRIS) operated by the New York City Department of Finance, the Subject Property is identified as Block 2562 Lot 49 (750 East 134th Street), Lot 56 (767 East 133rd Street), Lot 58 (763 East 133rd Street), and Lot 60 (761 East 133rd Street). The Subject Property is owned by Markland 745 LLC.

The Subject Property is located at 763-765 & 767 East 133rd Street, and 750 East 134th Street in Bronx, NY. The site inspection identified the vacant Lot 60 at 761 East 133rd Street is also part of the Subject Property. MEI did not identify any prior owners or occupants of potential environmental concern in the property records obtained from the NYC Department of Finance.

3.2 Improvements

The Subject Property consists of four (4) rectangular-shaped parcels with an approximate combined area of 0.475 acres. The 763 East 133rd Street parcel contains a one (1) story commercial building while the 767 East 133rd Street parcel contains a three (3) story commercial building and the 750 East 134th Street parcel contains a single story shed. The 761 East 133rd Street parcel is a vacant lot used for storage. The buildings have an estimated combined gross floor area of 17,500 square feet and only the 767 East 133rd Street building has a basement. A review of the New York City Building Department property profile overview estimated the year of construction of the building 767 East 133rd Street building in 1908 and the 763 East 133rd Street and 750 East 134th Street building in 1931. The buildings occupy the majority of the parcels with minimal areas of exposed grounds or landscaped areas bordered by municipal walkways and right-of-ways.

3.3 Current Use of the Subject Property

At the time of inspection, the 761-765 East 133rd Street building and 750 East 134th Street building are occupied by one (1) commercial tenant (C&I Communications), while the 767 East 133rd Street building is occupied by multiple commercial tenants and offices (a fashion company, Corporate Events Co., a vacant club).

3.4 Services, Utilities and Roadways

Street Address(es): 761-765 & 767 East 133rd Street, and 750 East 134th Street

City and State: Bronx, New York

County: Bronx

Owner: Markland 745 LLC

Property Size: 0.475 acres (combined)

Access Roadway to site: East 133rd Street to the south, Willow Avenue to the east, and East 134th Street to the north of the Subject Property.

Site Use: The 763 East 133rd Street parcel contains a one (1) story commercial building while the 767 East 133rd Street parcel contains a three (3) story commercial building and the 750 East 134th Street parcel contains a single story shed. The 761 East 133rd Street parcel is a vacant lot used for storage. The buildings have an estimated combined gross floor area of 17,500 square feet and only the 767 East 133rd Street building has a basement.

Occupants: The 761-765 East 133rd Street building and 750 East 134th Street building are occupied by one (1) commercial tenant (C&I Communications), while the 767 East 133rd Street building is occupied by multiple commercial tenants and offices (a fashion company, Corporate Events Co., a vacant club).

Electricity Provider: Consolidated Edison

Natural Gas Provider: National Grid

Fuel Oil Provider: Not Applicable

Potable Water: Municipal Water Supply

Sewer Services: Municipal Sewer System

Heating System: The 763-765 East 133rd Street building is heated by natural gas-fired overhead blowers. The 767 East 133rd Street is heated by gas-fired HVAC units. The 761 East 133rd and 750 East 134th Street buildings are not heated.

3.5 Adjoining Property Usage

The current use of the adjoining properties is commercial/light industrial and residential. The Subject Property borders are as follows:

North - The property is bordered to the north by East 134th Street and a commercial/light industrial building.

South - The property is bordered to the south by East 133rd Street and a commercial building.

East - The property is bordered to the east by Willow Avenue and a commercial/light industrial building.

West - The property is bordered to the west by a residential and commercial building.

4.0 USER PROVIDED INFORMATION

4.1 Environmental Pre-Survey Questionnaire

Pursuant to ASTM E 1527-13, MEI requested the following site information from the User of this report and from the site contact. The following section summarizes information provided Signature Bank with regard to this Phase I Environmental Site Assessment.

ITEM	PROVIDED BY USER	NOT PROVIDED BY USER	DISCUSSED BELOW	DOES NOT APPLY
4.1 Environmental Pre-survey Questionnaire		X		
4.2 Title Records		X		
4.3 Environmental Liens or Activity and Use Limitation		X		
4.4 Specialized Knowledge		X		
4.5 Commonly Known or Reasonably Ascertainable Information		X		
4.6 Valuation Reduction for Environmental Issues		X		
4.7 Identification of Key Site Manager		X		
4.8 Reason for Performing Phase 1 ESA	X			
4.9 Prior Environmental Reports		X		

4.2 Title Records

Title record information associated with the Subject Property has not been provided to MEI by Signature Bank. Land title records provide information on previous ownership of a property. Typically, deeds signifying transfer of a land parcel are recorded in county files and can be researched to determine the identity of past owners. A "chain of title" is a continuous record of ownership for a specific parcel. A 50-year chain of title search was not included in the scope of work for this assessment.

4.3 Environmental Liens or Activity and Use Limitation

The property owner/user/key site personnel did not report any Environmental Liens or Activity/Use Limitations on the site. An environmental lien search was not included in the scope of work of this assessment and therefore was not performed. However, if the findings of a lien search performed by any other party does reveal the presence of an environmental related lien on the subject property, this information should be forwarded to MEI for review, and any significant findings will be added to this assessment as an addendum to this report.

4.4 Specialized Knowledge

Signature Bank provided no specialized knowledge that is material to Recognized Environmental Conditions (RECs), Controlled Recognized Environmental Conditions (CRECs), or Historical Recognized Environmental Conditions (HRECs). MEI was not provided with or made aware of previous environmental assessments or other documentation that is material to RECs, CRECs or HRECs in connection with the Subject Property, except as presented in Section 4.3 of this report.

4.5 Commonly Known or Reasonably Ascertainable Information

Signature Bank has provided no commonly known or reasonably ascertainable information within the local community about the Subject Property that is material to recognized environmental conditions in connection with the Subject Property.

4.6 Valuation Reduction for Environmental Issues

Signature Bank has provided no information regarding valuation reduction for environmental issues in connection with the Subject Property.

4.7 Identification of Key Site Manager

Signature Bank provided contact information for the Subject Property owner, manager and/or occupants. The Contact person for site access was Mr. Joel Silver.

4.8 Reason for Performing Phase I ESA Report

The purpose of this Phase I Environmental Site Assessment (ESA) was to identify existing or potential Recognized Environmental Conditions (as defined by ASTM Standard E-1527-13) in connection with the Subject Property. This ESA was also performed to permit the User to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) liability (hereinafter, the "landowner liability protections," or "LLPs"). ASTM Standard E-1527-13 constitutes "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35)(B).

4.9 Prior Environmental Reports

No previous environmental reports were provided for review.

5.0 RECORDS REVIEW

5.1 Standard Environmental Record Sources

Information from standard Federal and state environmental record sources was provided through EDR. Data from governmental agency lists are updated and integrated into one database, which is updated as these data are released. This integrated database also contains postal service data in order to enhance address matching. Records from one government source are compared to records from another to clarify any address ambiguities. The demographic and geographic information available provides assistance in identifying and managing risk. The accuracy of the geocoded locations is approximately +/-300 feet.

In some cases, location information supplied by the regulatory agencies is insufficient to allow the database companies to geocode facility locations. These facilities are listed under the unmappables section within the EDR report. A review of the unmappable facilities indicated that none of these facilities are within the ASTM minimum search distance from the Site. Pertinent regulatory files / records associated with the Subject Property and/or any adjoining site will be requested for review in the event the listing is associated with a facility at which a suspected or confirmed release has occurred that has not yet been closed to the satisfaction of the regulatory agency and/or if the facility represents a REC in connection with the Subject Property.

Regulatory information from the following database sources regarding possible recognized environmental conditions, within the ASTM minimum search distance from the Site, was reviewed. Specific facilities are discussed below if determined likely that a potential recognized environmental condition has resulted at the Site from the listed facilities (see appendix 12.5 for Environmental Database Report).

The following table provides a summary of the findings of the environmental database report. Specific properties identified within the database report are further discussed below.

SUMMARY OF FEDERAL, STATE, AND TRIBAL AGENCY DATABASE FINDINGS			
Regulatory Database	Approximate Minimum Search Distance	Subject Property Listed	Off-site Listings Within Search Distance
Federal NPL Sites	1.0 mile	No	0
Federal Delisted NPL Sites	0.5 mile	No	0
Federal CERCLIS Sites	0.5 mile	No	0
Federal CERCLIS NFRAP Sites	0.5 mile	No	0
Federal RCRA CORRACTS Sites	1.0 mile	No	0
Federal RCRA Generators Sites	Property & Adjoining	No	1
Federal RCRA Non-CORRACTS TSD Sites	0.5 mile	No	0
Federal Engineering / Institutional Control Sites	Property & Adjoining	No	0
Federal ERNS Sites	Subject Property	No	0
State and Tribal equivalent NPL Sites	1.0 mile	No	1
State and Tribal equivalent CERCLIS Sites	0.5 mile	No	0
State and Tribal Leaking Storage Tank Sites	0.5 mile	No	35
State and Tribal Spills Sites	Property & Adjoining	No	11
State and Tribal Landfill or Solid Waste Disposal Sites	0.5 mile	No	12
State and Tribal Registered Storage Tank Sites	Property & Adjoining	No	2
State and Tribal Engineering / Institutional Control Sites	Property & Adjoining	No	0
State and Tribal Voluntary Cleanup Sites	0.5 mile	No	0
State and Tribal Brownfield Sites	0.5 mile	No	2

- ***Federal National Priority List (NPL) Sites***

The National Priorities List (NPL) is the Environmental Protection Agency (EPA) database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund Program. The Subject Property is not listed as a Federal NPL site. No Federal NPL sites are located within a mile radius of the Subject Property.

- ***Federal Delisted National Priority List (NPL) Sites***

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425(e), sites may be deleted from the NPL where no further response is appropriate. The Subject Property is not listed as a Federal Delisted NPL site. No Federal Delisted NPL sites are located within a mile radius of the Subject Property.

- ***Federal CERCLIS Sites***

The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) list is a compilation of sites that the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances. The Subject Property is not listed as a Federal CERCLIS site. No Federal CERCLIS sites are located within a mile radius of the Subject Property.

- ***Federal CERCLIS NFRAP Sites***

The CERCLIS No Further Remedial Action Planned (NFRAP) List is a compilation of sites that the EPA has investigated, and has determined that the facility does not pose a threat to human health or the environment. The Subject Property is not listed as a Federal CERCLIS-NFRAP site. No Federal CERCLIS NFRAP sites are located within a mile radius of the Subject Property.

- ***Federal RCRA CORRACTS Sites***

RCRA Corrective Action Tracking System (CORRACTS) is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information regarding sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. The RCRA-CORRACTS database identifies Transportation, Storage or Disposal (TSD), facilities that have conducted, or are currently conducting, corrective action(s) as regulated under RCRA. The Subject Property was not identified on the RCRA CORRACTS site list. No RCRA CORRACTS sites are listed within a mile radius of the Subject Property.

- ***Federal RCRA Hazardous Waste Generators Sites***

Hazardous waste generators tracked under the Resource Conservation and Recovery Act (RCRA) are classified as either Large Quantity Generators (LQGs), Small Quantity Generators (SQGs), or Conditionally Exempt Small Quantity Generators (CESQGs). A RCRA-LQG is a facility that generates over 1,000 kilograms (Kg) of hazardous waste. A RCRA-SQG is a facility that generates between 100 Kg and 1,000 Kg of hazardous waste per month while a RCRA-CESQG generates less than 100 Kg of hazardous waste per month. The Subject Property is not listed as a Federal RCRA Hazardous Waste Generator site. Two (2) commercial tenants in the east adjacent building are listed as Federal RCRA Hazardous Waste Generator sites. The first tenant, Hippodrome Services Corp., is listed as a SQG of halogenated solvents. There are no current violations associated with the site. The second tenant, Princeton Laundry, is listed as a SQG of halogenated solvents. The site was listed with multiple violations; however, they have all been remedied and compliance has been met. Based on regulatory status, the cross-gradient location of facility, and the presence of a street between the properties, the sites are unlikely to have an adverse impact on the Subject Property.

- ***Federal RCRA non-CORRACTS TSD Sites***

RCRA non-CORRACTS Treatment, Storage and/or Disposal (TSD) sites are required to register hazardous waste activity under the Resource Conservation and Recovery Act (RCRA). The Subject Property is not listed as a Federal RCRA non-CORRACTS TSD site. The Subject Property is not listed as a Federal RCRA non-CORRACTS TSD Site. No Federal RCRA non-CORRACTS TSD sites are located within a mile radius of the Subject Property.

- ***Federal Engineering Control / Institutional Control Sites***

The completion of site cleanup activities may include the implementation of engineering controls or institutional controls as part of the response action. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls. Neither the Subject Property nor any of the surrounding properties were listed as a Federal Engineering Control or Institutional Control Site.

- ***Federal Emergency Response Notification System (ERNS) Sites***

ERNS is a national database used to collect information regarding reported releases of petroleum products and/or hazardous substances. The database contains information from spill reports submitted to Federal agencies, including the EPA, the U.S. Coast Guard, the National Response Center, and the U.S. Department of Transportation. A review of this database was conducted in order to determine whether any spills or incidents involving releases of hazardous substances or petroleum products have occurred at the Subject Property. The Subject Property is not listed as a Federal ERNS site.

- ***State and Tribal equivalent NPL Sites***

State and Tribal equivalent NPL databases were searched for sites located within a mile of the Subject Property. The Subject Property is not listed as a State and Tribal equivalent NPL Site. One (1) State and Tribal equivalent NPL site is located within a mile radius of the Subject Property. The site is located 0.276 miles cross-gradient from the Subject Property. Based on distance and groundwater flow direction, the site is unlikely to have an adverse impact on the Subject Property.

- ***State and Tribal equivalent CERCLIS Sites***

State and Tribal equivalent CERCLIS databases were searched for sites located within a half mile of the Subject Property. The Subject Property is not listed as a State and Tribal equivalent CERCLIS Site. No State and Tribal equivalent CERCLIS sites are located within a half mile radius of the Subject Property.

- ***State and Tribal Leaking Storage Tank Sites***

Leaking Storage Tank Sites are properties where releases of hazardous substances or petroleum products from underground storage tanks (USTs) and/or aboveground storage tanks (ASTs) have been identified and reported to state, tribal, or local agencies. The Subject Property is not listed as a State and Tribal Leaking Storage Tank site. Thirty-five (35) State and Tribal Leaking Storage Tank sites are located within a half mile radius of the Subject Property. Thirty-two (32) of the sites are either located greater than 0.125 miles from the Subject Property or are located down-gradient or cross-gradient from the Subject Property. Based on distance and groundwater flow direction, and regulatory status, the sites are unlikely to have an adverse impact on the Subject Property. The remaining sites are located up-gradient and within 0.125 miles of the Subject Property. Each of the remaining leaking tank sites have has their spills closed by the NYSDEC. Based on regulatory status, the sites are unlikely to have an adverse impact on the Subject Property.

- ***State and Tribal Spills Sites***

A review of the State and Tribal Spills database was conducted in order to determine whether any spills or incidents involving releases of hazardous substances or petroleum products have occurred at the Subject Property. The Subject Property is not listed as a State and Tribal Spills site. One (1) adjacent property and 10 street / manhole sites are listed as a State and Tribal Spill Sites. The east adjacent property, 780 East 134th Street, is listed as having a spill due to a faulty gauge. The spill occurred during a fuel oil delivery and was contained to the sidewalk. The spill was cleaned and the NYSDEC closed the spill in 2015. The remaining spills are located in the surrounding area of the Subject Property and occurred on the street or in manholes. All of these spills have been addressed and closed by the NYSDEC. Based on regulatory status, none of the spill sites are likely to have an adverse impact on the Subject Property.

- ***State and Tribal Landfill Sites and Solid Waste Disposal Sites***

The State and Tribal landfill and solid waste disposal site databases identify active or inactive landfill and transfer station facilities, as well as open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites. The Subject Property is not listed as a State and Tribal Landfill and Solid Waste Disposal Site. Twelve (12) State and Tribal Landfill Site and Solid Waste Disposal sites are located within a half mile radius of the Subject Property. All of the sites are located greater than 0.125 miles from the Subject Property, down-gradient or cross-gradient from the Subject Property, and / or are listed as inactive sites. Based on distance, groundwater flow direction, and regulatory status, the sites are unlikely to have an adverse impact on the Subject Property.

- ***State and Tribal Registered Storage Tank Sites***

The Subject Property is not listed as a State and Tribal Registered Storage Tank site. The east adjacent property is listed as a State and Tribal Registers Storage Tank site on the aboveground storage tank (AST) database and the chemical bulk storage (CBS) AST database. The AST is a 5,000-gallon No. 6 fuel oil tank associated with Formula 1 Cleaners at 780 East 134th Street. The CBS AST is a 1,500-gallon sodium hydroxide tank associated with Princeton Laundry Inc. at 781 East 133rd Street. There are no open spills associated with the tanks. Based on regulatory status, the presence of the tanks are unlikely to have an adverse impact on the Subject Property.

- ***State and Tribal Engineering Control / Institutional Control Sites***

The completion of site cleanup activities may include the implementation of engineering controls or institutional controls as part of the response action. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls. The Subject Property was not listed as a State Engineering Control or Institutional Control Site. None of the surrounding properties were listed as a State Engineering Control or Institutional Control Site.

- ***State and Tribal Voluntary Cleanup Sites***

The Subject Property is not listed as a State and Tribal Voluntary Cleanup site. No State and Tribal Voluntary Cleanup sites are listed within a half mile radius of the Subject Property.

- ***State and Tribal Brownfield Sites***

The Subject Property is not listed as a State and Tribal Brownfield site. Two (2) State and Tribal Brownfield sites are listed within a half mile radius of the Subject Property. The sites are both located greater than 0.225 miles from the Subject Property. Based on distance, the sites are unlikely to have an adverse impact on the Subject Property.

5.2 Sanborn Fire Insurance Maps

Historical fire insurance maps depicting the Subject Property were reviewed and are summarized in the following table. Copies of available fire insurance maps are presented in Appendix 12.6.

FIRE INSURANCE MAP SUMMARY		
Year	Issues Noted	Observations
1891	No	Subject Property: The 1891 Sanborn Map shows the Subject Property as vacant land.
		Surrounding Area: The 1891 Sanborn Map shows the surrounding areas as undeveloped land.
1908	No	Subject Property: The 1908 Sanborn Map shows the north side of the Subject Property as developed with residential, commercial, and mixed-use buildings. The south side of the Subject Property remains undeveloped.
		Surrounding Area: The 1908 Sanborn Map shows the surrounding area as undeveloped land, residential buildings, commercial buildings, and industrial manufacturing buildings.
1935 - 1947	No	Subject Property: The 1935 Sanborn Map shows the Subject Property as developed with the current buildings. In addition, a few small buildings are shown on the north portion of the Subject Property. The occupants of the Subject Property are shown as a marble company and a piano string factory.
		Surrounding Area: The 1935 Sanborn Map shows the surrounding area as developed with commercial/light industrial buildings, and residential buildings. Three (3) 550-gallon gasoline USTs are shown on the south adjacent property.
1951	No	Subject Property: Conditions of the Subject Property are similar to those shown on the 1947 Sanborn Map.
		Surrounding Area: Conditions of the surrounding properties are similar to those shown on the 1947 Sanborn Map. The south adjacent tanks are no longer shown.
1968 - 1978	No	Subject Property: Conditions of the Subject Property are similar to those shown on the 1951 Sanborn Map.
		Surrounding Area: Conditions of the surrounding properties are similar to those shown on the 1951 Sanborn Map.
1980 - 1989	No	Subject Property: Conditions of the Subject Property are similar to those shown on the 1978 Sanborn Map. However, the 761 East 133rd Street portion of the Subject Property is now shown as a vacant lot.
		Surrounding Area: Conditions of the surrounding properties are similar to those shown on the 1978 Sanborn Map.
1991 - 1998	No	Subject Property: Conditions of the Subject Property are similar to those depicted on the 1989 Sanborn Map. The 1998 Sanborn Map shows the north portion of the Subject Property as occupied by the current building.
		Surrounding Area: Conditions of the surrounding properties are similar to those depicted on the 1989 Sanborn Map.
2001 - 2007	No	Subject Property: Conditions of the Subject Property are similar to those depicted on the 1998 Sanborn Map.
		Surrounding Area: Conditions of the surrounding properties are similar to those depicted on the 1998 Sanborn Map.

5.3 Aerial Photographs

Historical aerial photographs may be used to evaluate changes in land use and to identify visible areas of potential environmental concern. A search for historical aerial photographs depicting the Subject Property and vicinity was conducted by researching available historical aerial photographs from www.historicaerials.com and other available resources. Aerial photographs depicting the Subject Property were reviewed and are summarized in the following table.

AERIAL PHOTOGRAPH SUMMARY		
Year	Issues Noted	Observations
1954	No	Subject Property: The 1954 aerial photograph appears to show the Subject Property as developed with the current buildings. The north portion of the Subject Property appears to be occupied by additional commercial buildings.
		Surrounding Area: The 1954 aerial photograph appears to show the adjacent properties as occupied by commercial and residential buildings.
1966	No	Subject Property: Conditions on the Subject Property appear to be similar to those depicted on the 1954 aerial photograph.
		Surrounding Area: Conditions on the surrounding properties appear to be similar to those depicted on the 1954 aerial photograph.
1974	No	Subject Property: Conditions on the Subject Property appear to be similar to those depicted on the 1966 aerial photograph.
		Surrounding Area: Conditions on the surrounding properties appear to be similar to those depicted on the 1966 aerial photograph.
1980	No	Subject Property: Conditions on the Subject Property appear to be similar to those depicted on the 1974 aerial photograph.
		Surrounding Area: Conditions on the surrounding properties appear to be similar to those depicted on the 1974 aerial photograph.
1995	No	Subject Property: Conditions on the Subject Property appear to be similar to those depicted on the 1980 aerial photograph.
		Surrounding Area: Conditions on the surrounding properties appear to be similar to those depicted on the 1980aerial photograph.
2004 - 2009	No	Subject Property: The 2004 aerial photograph appears to show the north portion of the Subject Property as it currently exists.
		Surrounding Area: Conditions on the surrounding properties appear to be similar to those depicted on the 1995 aerial photograph.
2011 - 2013	No	Subject Property: Conditions on the Subject Property appear to be similar to those depicted on the 2009 aerial photograph.
		Surrounding Area: Conditions on the surrounding properties appear to be similar to those depicted on the 2009 aerial photograph.

5.4 City Directories

Street directories are commercial publications containing names and addresses, and in many cases, occupations of the occupants of a particular community. The directories may also contain information pertaining to business processes conducted within a community. A search for historical street directories was conducted by MEI and EDR. Historical street directories were reviewed and are summarized in the following table. Copies of the street directories are presented in Appendix 12.6.

CITY DIRECTORY SUMMARY	
Year	Occupants
1927	Miller Druck Marble Co., John Schaff Piano Wires
1931	Residential Tenants
1940	Mapes Novelty Co., Mapes Piano String Co., John Schaff Piano Strings
1949	Mapes Piano String Co.
1956	Mapes Piano String Co., Residential Tenants
1961	Mapes Piano String Co., Residential Tenants
1965	Mapes Piano String Co.
1971	Mapes Piano String Co., Residential Tenants
1976	Barzel Automotive Parts & Equipment Co., Residential Tenants
1983	Eastern Depot Inc.
2008	Miller Druck Co. Inc.
2013	C&I Associates

5.5 Vapor Encroachment Conditions

All readily ascertainable information including all applicable Federal, State, Tribal and local database information, historical usage information, soil and groundwater sources and information from the site reconnaissance were reviewed in order to determine if there is a possibility of a Vapor Encroachment Condition regarding the Subject Property. Based upon the results of the site reconnaissance and review of readily ascertainable information, the Vapor Encroachment Condition survey is described below:

POTENTIAL AREA OF CONCERN	RESULT
Does the Subject Property have a current contamination concern or past contamination concern?	None identified
Does the Subject Property have a suspected contamination concern?	None identified
Does an adjacent property have a current contamination concern or past contamination concern?	None identified
Does a nearby property have a have a current contamination concern or past contamination concern which may impact the Subject Property?	None identified
Does a regional groundwater contamination concern exist beneath the Subject Property?	None identified
Does there exist the possibility for vapor intrusion on the Subject Property?	None identified

The east adjacent commercial dry cleaning facility is not considered to represent a vapor issue because of the regulatory status of the site described in *Section 5.0 Records Review* above, the cross-gradient location of the site and the groundwater flow direction of the area, and the presence of Willow Avenue between the Subject Property and the site. Willow Avenue (and associated piping, mechanical, etc.) act as means of conveyance with reduced resistance to any potential off-site vapor issue. Due to this information, there is no concern for a vapor encroachment condition (VEC) with regard to the Subject Property.

5.6 Local Regulatory Agency Records

Local municipal offices consulted during the completion of this assessment included the New York City Building Department, the New York City Department of Finance and the New York City Fire Department. Information was reviewed in order to determine the possibility of documented adverse environmental conditions, violations or complaints associated with the Subject Property.

New York City Building Department and the New York City Department of Finance

MEI reviewed information listed in the online NYC Building Information System (BIS) provided by the New York City Building Department's website, as well as information from the New York City Department of Finance website, Automated City Register Information System (ACRIS), http://a836-acris.nyc.gov/CP. Specific information provided by these websites includes lot sizes and dimensions, building zoning and usage. These websites also include information pertaining to interior renovations, building improvements and approximate date of construction. The information provided by New York City Department of Finance and New York City Building Department did not identify any conditions or reported events that would indicate the presence of a recognized environmental condition in connection with the Subject Property. A review of available information from these websites estimated that the buildings were constructed on the Subject Property in 1908 and 1931.

New York City Fire Department

MEI reviewed information provided by the New York City Fire Department (NYCFD). Specific information obtained from the NYCFD includes any active and/or voided storage tank permits for the Subject Property. A review of the NYCFD storage tanks files indicated that there is no "active" tank account for Subject Property.

6.0 PHYSICAL SETTING

6.1 Topography

The Subject Property and vicinity characteristics listed below were analyzed utilizing a current USGS 7.5 Minute Topographic Map. This information is useful in determining the grade and topography of the Subject Property. The Subject Property is located at an elevation of approximately 17 feet above mean sea level (msl). The topography of the Subject Property is relatively flat and there were no slopes, depressions or rolling hills observed on the Subject Property and slopes on the Subject Property range from 0 to 3 percent. The Subject Property has been graded for residential usage.

6.2 Geology and Soils

No bedrock outcroppings were observed at the Subject Property. Near-surface geology in heavily developed areas such as the Subject Property and vicinity is considered "urban land" and is characterized by a non-homogeneous distribution of soil and fill types. Excavation and backfilling for building foundations, utility conduits, subway systems and other construction results in a varied subsurface profile. In this setting, estimation of local subsurface parameters such as permeability, moisture content, and organic fraction is not feasible without site-specific testing data.

6.3 Hydrogeology and Hydrology

No natural surface water bodies were identified on or adjacent to the Subject Property. The nearest surface water body is the Bronx Kill to the south of the Subject Property.

Local groundwater gradient is expected to follow surface topography. Groundwater flow near the Subject Property is expected to flow to the south, toward the Bronx Kill and the East River. Groundwater depths and flow gradients are best evaluated by a subsurface investigation involving the installation of at least three groundwater monitoring wells and precise measurements of hydrostatic pressure. Monitoring wells were not observed on the Subject Property.

7.0 SUBJECT PROPERTY RECONNAISSANCE

The Subject Property reconnaissance was conducted by Mr. John T. Danko, Project Manager, on October 19, 2016. Mr. Danko was accompanied by a representative of the building during the inspection.

7.1 Methodology and Limited Conditions

The Subject Property reconnaissance consisted of visual and/or physical observations of the Subject Property and improvements, adjoining properties as viewed from the Subject Property boundaries, and the surrounding area based on visual observations made from adjacent public thoroughfares. Building exteriors were observed along the perimeter from the ground, unless described otherwise. The corridors of the buildings, the meter areas, the basement, and the vacant spaces were observed during the site inspection.

7.2 Physical Observations

Underground Storage Tanks

MEI did not observe any fill ports or vent pipes for any underground storage tanks on the Subject Property. The database review did not indicate the presence of any buried tanks on the Subject Property.

Aboveground Storage Tanks

MEI did not observe any aboveground storage tanks at the Subject Property. A review of the NYCFD storage tanks files indicated that there is no “active” tank account for Subject Property. The database review did not indicate the presence of an aboveground tank on the Subject Property.

Hazardous Substances and Petroleum Products

MEI did not observe any hazardous substances or petroleum products at the Subject Property.

Non-Hazardous Substances and Petroleum Products

MEI did not observe any non-hazardous substances and petroleum products in accessible areas of the Subject Property.

Unidentified Substances Containers

MEI observed a 55-gallon drum on the first floor of 45 Mott Street. It was determined that the drum was used to store waste cooking oil. There was no apparent stains or leaks around the drums during the site inspection.

Drains or Storm Water Drywells

MEI observed floor drains in the basement of the 767 East 133rd Street building at the Subject Property. There was no apparent staining in the vicinity of the drains during the site inspection. MEI did not observe any storm water drywells in accessible areas of the Subject Property.

Polychlorinated Biphenyls (PCB's)

Polychlorinated biphenyls (PCBs) are a chemical component of many dielectric fluids, heat transfer fluids, hydraulic fluids, lubricating oils, paints, or coatings manufactured prior to July 2, 1979 before being banned by Congress. Equipment that may potentially contain PCBs includes electrical equipment such as transformers or capacitors or hydraulically operated equipment, such as elevators, compaction equipment, or manufacturing equipment. MEI did not observe any PCB-containing equipment at the Subject Property.

Stains or Corrosion

MEI did not observe any stains or corrosion at the Subject Property.

Odors

MEI did not observe any strong, pungent or noxious odors at the Subject Property.

Pools of Liquid

MEI did not observe any pools of liquid at the Subject Property.

Stressed Vegetation

MEI did not observe any stressed vegetation at the Subject Property.

Stained Soil or Pavement

MEI did not observe any stained soil or pavement at the Subject Property.

Wells

MEI did not observe any irrigation wells or groundwater monitoring wells at the Subject Property.

Sumps, Pits, Ponds or Lagoons

MEI did not observe any sumps, pits, ponds, or lagoons in accessible areas of the Subject Property.

Waste Water

MEI did not observe any improper disposal of waste water into drains, ditches or streams at the Subject Property.

Solid Wastes Disposal

All solid wastes generated on-site are carted away by a licensed waste hauler to an approved solid waste facility and are not disposed at on-site.

8.0 INTERVIEWS

8.1 Interview With Property Owner and/or Property Manager

The representative of the building was interviewed during the site reconnaissance on November 2, 2016. The representative did not indicate the presence of any environmental liens or was unaware of any contamination concerns regarding the Subject Property.

9.0 CONDITIONS OUTSIDE THE SCOPE OF ASTM PRACTICE E 1527-13

9.1 Asbestos Containing Material (ACM)

Asbestos is a term used to describe a group of six naturally occurring crystalline fiber minerals. Asbestos has excellent thermal stability, a high degree of tensile strength, and has been used extensively in the textile, insulation, and building industries, particularly as a component in fireproofing, decorative coatings, insulation materials, and as reinforcement for plaster binders in building products. Asbestos-containing building materials are generally classified as friable or non-friable. Friable ACM are those which can be crumbled, pulverized, or reduced to powder by hand pressure, or by normal use or maintenance can be expected to emit asbestos fibers into the air. Non-friable ACM is a potential concern if it is damaged by maintenance work, demolition, or other activities, at which time it may be considered friable.

It should be noted that the limited visual screening survey conducted under the scope of work for this assessment does not constitute a full asbestos inspection, in which all areas of the building would have been thoroughly surveyed and sampled. MEI did not observe any signs of ACM on the overhead pipes inside accessible areas of the Subject Property. MEI did not observe any spray-on fireproofing in accessible areas of the Subject Property. There was no boiler at the Subject Property.

9.2 Lead Based Paint (LBP)

Use of lead in household paint was banned by the U.S. Environmental Protection Agency (EPA) effective January I, 1978. The EPA and the U.S. Department of Housing and Urban Development (HUD) consider lead based paint as containing a lead concentration equal to or greater than 1.0 milligram per square centimeter (mg/cm') or 0.5% lead by weight, as defined by Title X of the 1992 Housing and Community Development Act.

MEI observed that the painted surfaces inside the accessible areas of the building were in good condition, with no obvious chipping, flaking or peeling. A review of the New York City Department of Housing Preservation and Development's (NYCHPD), Code Enforcement Database indicated that are no outstanding lead based paint violation associated with the Subject Property.

9.3 Lead in Drinking Water

Lead has historically been used in pipes, solder, and brass fixtures used in water distribution systems and building plumbing systems. In 1986, the USEPA banned the use of lead at concentrations exceeding 0.2% lead in solder and 8% lead in other plumbing materials. Lead in drinking water results primarily from corrosion of lead containing materials in service lines or from corrosion of lead containing materials in building plumbing such as lead solder, brass, bronze, and other lead containing alloys. The USEPA Action Level for lead in public drinking water supplies is 0.015 parts per million (ppm) or 0.015 milligrams per liter (mg/L). MEI did not observe any brass fixtures or lead fixtures at the Subject Property.

9.4 Radon

Radon is a colorless, odorless, radioactive gas. Radon comes from the natural decay of uranium that is found in nearly all soils. Radon typically moves through the ground and into building through cracks and openings in the foundation. The USEPA has developed a "Map of Radon Zones" indicating the levels of radon concentrations from testing and aerial surveys conducted in all counties in New York State. The U.S. Environmental Protection Agency's Map of Radon Zones identified the Subject Property as a radon zone Level 3. Level 3 signifies that the average predicted radon level indoors is less than 2 pico-Curies per liter and this is the lowest level in the state. This level compares favorably with the EPA action level of 4.0 pico-Curies per liter as the guideline (it should be noted that current radon information and EPA Action Levels are designated for residential spaces only and commercial and industrial facilities are not subject to EPA's Action Level of 4 pico-Curies per liter as the guideline and definitive information concerning radon gas in an individual building can only be obtained through long term testing).

9.5 Mold

Molds are a class of fungi, and have been found to cause a variety of health problems in humans, including allergic, toxicological, and infectious responses. Molds are decomposers of organic materials, and thrive in humid environments. As such, interior areas of buildings characterized by poor ventilation and high humidity are the most common locations of mold growth. Building materials including drywall, wallpaper, baseboards, wood framing, insulation and carpeting often play host to such growth.

As part of this assessment, MEI performed a limited visual inspection for the conspicuous presence of mold. MEI observed the accessible interior areas of the Subject Property structure(s), including interior walls and ceilings of the accessible apartment units, the corridors of the building and the basement of the building for the presence of conspicuous mold or observed water intrusion or accumulation. This evaluation did not include a review of pipe chases or areas behind enclosed walls and ceilings. MEI did not observe conspicuous visual or olfactory indications of the presence of mold, nor did MEI observe obvious indications of significant water damage inside the accessible areas of the Subject Property.

9.6 Wetlands

MEI reviewed available information regarding wetlands on the Subject Property, including National Wetlands Inventory online GIS mapping. MEI additionally made general site observations for readily observable potential wetland characteristics. MEI did not observe surface water bodies or any evidence of potential wetlands on or adjacent to the Subject Property.

10.0 FINDINGS, OPINIONS AND RECOMMENDATIONS

MEI has performed this Phase I Environmental Site Assessment of the Subject Property in conformance with the scope and limitations of ASTM Standard E 1527-13. This assessment has identified no evidence of Recognized Environmental Conditions (RECs) or Controlled Recognized Environmental Conditions (CRECs) or Historical Recognized Environmental Conditions (HRECs) in connection with the Subject Property.

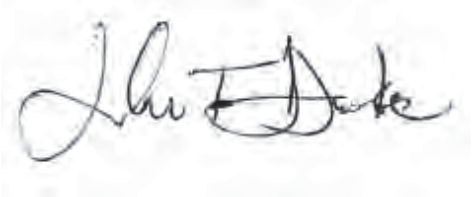
The site reconnaissance, interviews and review of records have not found the presence or possible presence of hazardous substances or petroleum related products in, on, or at the Subject Property due to any release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment.

Lastly, no conditions outside of ASTM E 1527-13 were identified in connection with the Subject Property. It is the opinion of MEI that no further testing (subsurface or otherwise), is warranted on the Subject Property.

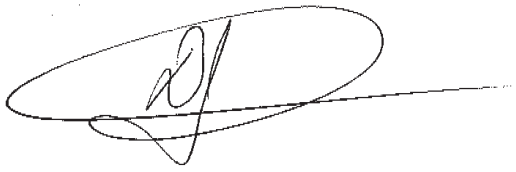
11.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

This Phase I Environmental Site Assessment (ESA) Report documents the research methodology used by qualified environmental professionals of MEI to identify recognized environmental conditions using the scope and limitations of ASTM Standard E 1527-13.

Middleton Environmental Incorporated



Prepared by: John T. Danko
Project Manager



Reviewed by: Donald J. Middleton Jr.
President

12.0 APPENDIX
12.1. Site Map



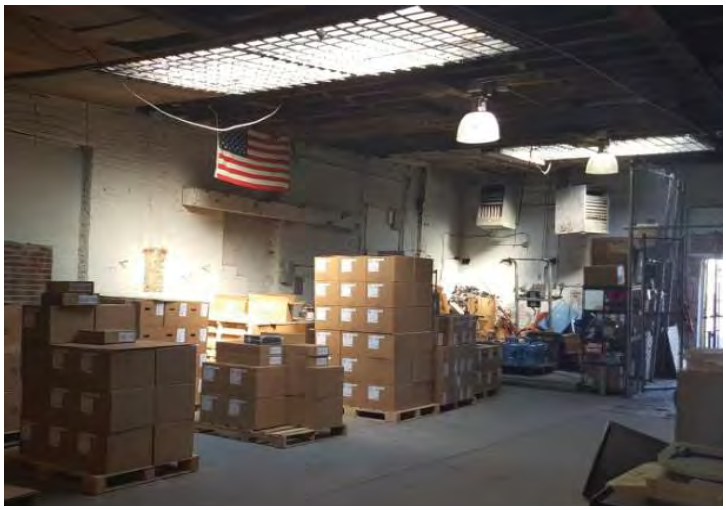
12.2 USGS Topographic Map



12.3 Site Photographs



761 E. 133rd St. SPACE



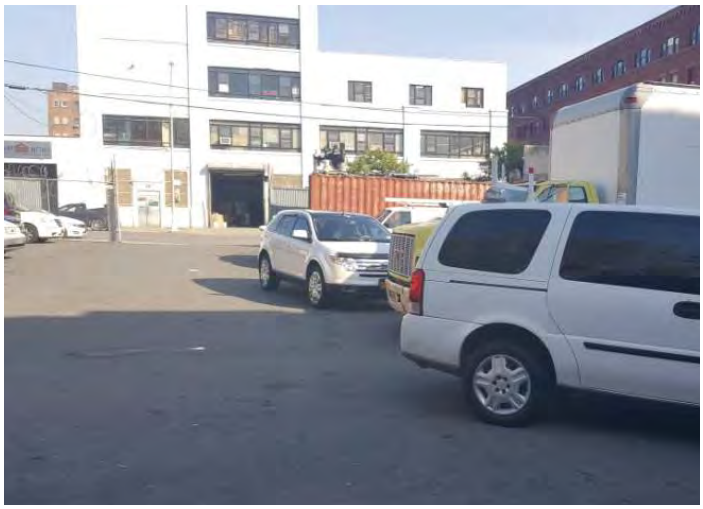
763-765 E. 133rd St. SPACE



763-765 E. 133rd St. SPACE



763-765 E. 133rd St. HEATING UNIT



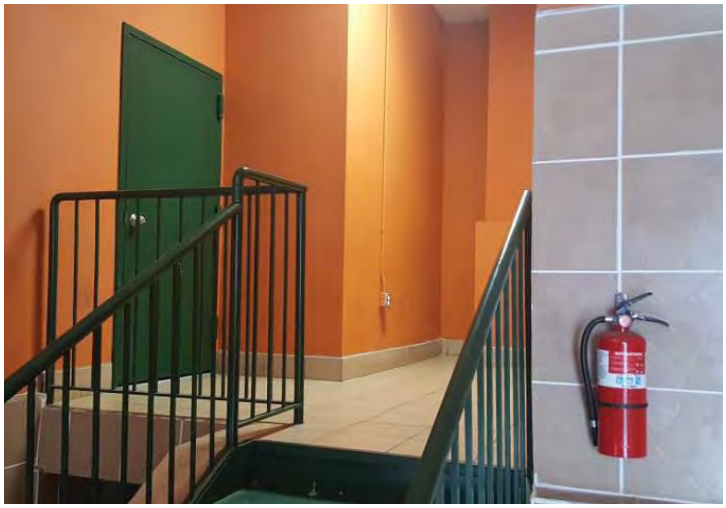
750 E. 134th St. SPACE



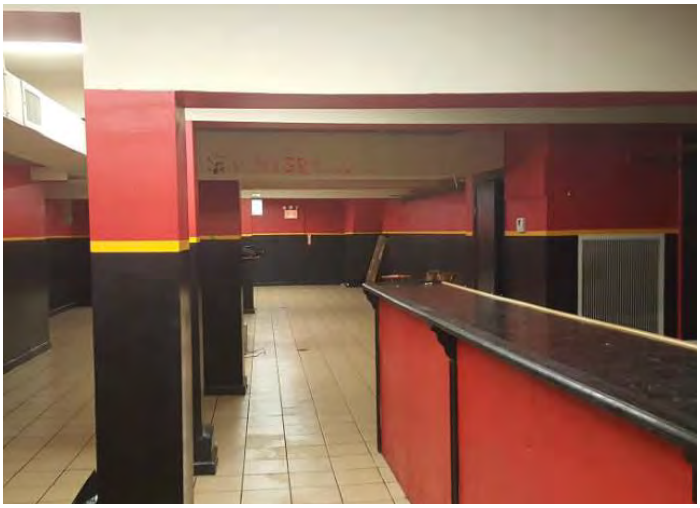
750 E. 134th St. STORAGE SHED



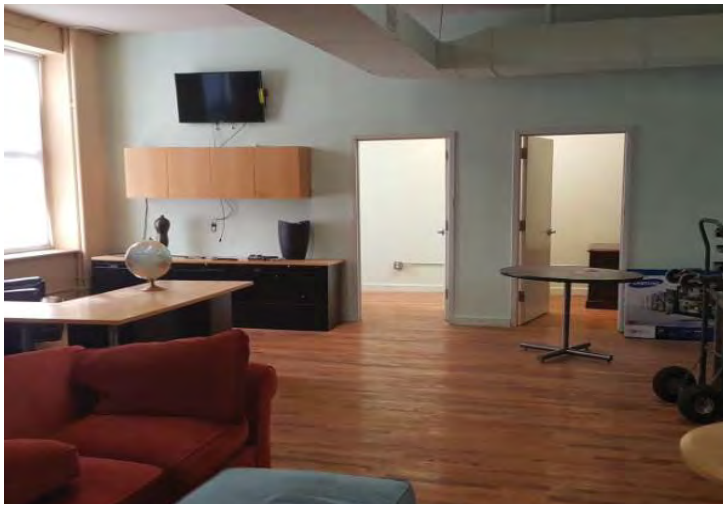
767 E. 133rd St. HEATING UNIT



767 E. 133rd St. HALLWAY



767 E. 133rd St. COMMERCIAL SPACE



767 E. 133rd St. COMMERCIAL SPACE

12.3 Site Photographs (Borders)

The current use of the adjoining properties is commercial/light industrial and residential. The Subject Property borders are as follows:

North - The property is bordered to the north by East 134th Street and a commercial/light industrial building.

South - The property is bordered to the south by East 133rd Street and a commercial building.

East - The property is bordered to the east by Willow Avenue and a commercial/light industrial building.

West - The property is bordered to the west by a residential and commercial building.



BORDER TO THE NORTH



BORDER TO THE SOUTH



BORDER TO THE EAST



BORDER TO THE WEST

REPORT
PRELIMINARY GEOTECHNICAL INVESTIGATION

111 Willow Avenue
Bronx, New York

Prepared for:

JCAL Development Group LLC,
55 Bruckner Boulevard
Bronx, New York 10454

Prepared By:

Pillori Associates
333 Meadowlands Pkwy, Suite 102
Secaucus, New Jersey 07094

November 2017

PILLORI ASSOCIATES, P.A.
Geotechnical Engineering

November 17, 2017
Via Email: josh@jcaldevelopment.com

JCAL Development Group LLC
55 Bruckner Boulevard
Bronx, New York 10454

Attn: Mr. Joshua Weissman

Re: Preliminary Geotechnical Engineering Investigation Report
111 Willow Avenue
Bronx, New York

Gentlemen:

Presented herein is the preliminary geotechnical engineering report for the referenced project. We are confident that the subsurface information and engineering recommendations contained herein will meet the needs of the project. Thank you for the opportunity to be of service. Please call if you have any questions or if we can be of further assistance.

Sincerely,

Pillori Associates, PA



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333 Meadowlands Pkwy, Suite 102, Secaucus, NJ 07094 • Tel: (201) 558-0065 • Fax: (201) 558-1427
www.pilloriassociates.com • e-mail: office@pilloriassociates.com

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- EXCAVATION 7
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- EXTERIOR FILL AND BACKFILL 7
- DEMOLITION OF REMNANT FOUNDATIONS 7

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Introduction

Presented herein are the results of the preliminary geotechnical investigation conducted for the proposed development at 111 Willow Avenue in Bronx, New York. The investigation was performed in accordance with our proposal dated March 20, 2017. The purpose of the investigation was to identify the subsurface soil conditions in order to determine the relative soil parameters for the design and construction of new foundations for the proposed 8-story building.

Project Description

The project site is located on west side of Willow Avenue and extends from East 133rd Street to East 134th Street as shown in Figure 1. The project site measures approximately 20,660 square feet (0.474 acres) in plan dimensions. Currently, the southern half of the site supports two brick buildings (3-story and 1-story) while the northern half supports an asphalt parking lot. A 2-story brick building (#759 East 133rd Street) and 1-story building (#740 East 134th Street) border the site to the west.



Figure 1 Site Vicinity Map

The proposed development entails demolition of the existing buildings on the site and construction of a new 8-story building. The footprint area of the proposed building and the depth of the cellar(s) were not defined at the time of this investigation.

Geotechnical Investigation

The preliminary geotechnical investigation consisted of drilling six exploratory soil borings (B-1 through B-6). Warren George, Inc. drilled the borings between the dates of October 30 and November 7, 2017, using a truck mounted drill rig within the vacant space. Two borings B-2 and B-6 were terminated within the decomposed rock, and the remaining borings, B-1, B-3, B-4W and B-5 were advanced 5 feet into competent bedrock, at completion depths ranging from 28'-6" to 85'-2" beneath the existing grade. In the borings, Standard Penetration Tests (SPTs) were performed within the overburden soil at regular 5-foot intervals in accordance with procedures specified in ASTM D1586. The underlying

bedrock was core drilled using a double tube core barrel in accordance with ASTM D2113. A groundwater observation well consisting of 1-1/4" PVC pipe and well screen was installed in completed boring B-4W.

Full-time special inspection was provided by Pillori Associates to locate the explorations in the field, direct drilling, sampling, and maintain continuous logs of the explorations. Soil/rock types observed in the borings were visually classified according to the Unified Soil Classification System (USCS) and the New York City Building Code (NYCBC). The special inspection was performed in accordance with Sections 1704.7, 1704.8 and 1704.9 of the NYCBC.

At the conclusion of the exploration program, the soil and rock samples were delivered to our soil laboratory for re-examination and further classification. The individual sample classifications were combined according to soil group and geologic origin, and their descriptions were recorded on finalized logs of the borings. The finalized logs of the borings are attached to this report along with a Boring Location Plan (Drawing No. 1), Subsurface Soil Sections A-A and B-B (Drawing Nos. 2 and 3), and a Unified Soils Classification System chart.

Stratigraphy

In general, the subsoil conditions consisted of a surface layer of miscellaneous fill material overlying soft estuarine deposits, followed by glacial soils. Beneath the glacial soils, decomposed bedrock was found overlying competent bedrock. Detailed descriptions of the subsurface stratigraphy encountered in the borings are presented on the individual boring logs attached to this report, and generalized descriptions are presented below in order of increasing depth.

Fill (F): A surface layer of miscellaneous fill was encountered in all the explorations immediately beneath the ground surface. The fill was a heterogeneous mixture of sand, silt and gravel with miscellaneous debris, brick and asphalt fragments. The fill layer was approximately 8 to 13 feet deep, and was loose to medium compact in terms of relative density. The fill was classified as nominally unsatisfactory bearing material, Class 7, in accordance with the NYCBC.

Estuarine River Deposit (E_S): A discontinuous tidal marsh deposit (silt, clay and peat) approximately 6 to 15 feet thick, extending in depth from 16 to 23 feet below the existing grade was encountered in the borings B-1, B-3, B-4W and B-5. The marsh deposit once formed the ground surface, flanking a small stream that fed into the East River. Prior to the existing development, fill was placed to reclaim the land, forming the current ground surface. The marsh deposit was nominally unsatisfactory bearing material MH, Class 6 material, in accordance with USCS and NYCBC, respectively.

Glacial Alluvium (G_A): A stratified deposit of glacial alluvium was encountered beneath the estuarine river deposits and glacial lake deposits in all the borings. The deposit consisted of both well-graded and poorly graded sand, and contained varying percentages of silt and gravel. The thickness of the deposit ranged from 3.5 to 25 feet, varying in depth

from 20.5 to 43 feet below the existing grade. The sand deposits were loose to medium compact to compact in terms of relative density and was classified as SM and SW, Classes 3a, 3b and 6 material, in accordance with the USCS and NYCBC, respectively.

Decomposed Rock/Residual Soil (DR/R_S): Decomposed bedrock and/or residual soil derived from the complete weathering of the underlying parent bedrock were encountered beneath the glacial soils. The residual soil material consisted of sand, silt and decomposed rock fragments and was found overlying the decomposed bedrock. The decomposed rock maintained the fabric and structure of the parent bedrock but was typically weak and could be broken with moderate hand pressure. The residual soil was classified as GP and GW, Class 2a material, and the decomposed rock was classified as Class 1d material, in accordance with the USCS and NYCBC, respectively.

Inwood Marble/Gneiss Bedrock (R): Inwood Marble and Gneiss bedrock was encountered beneath the decomposed rock at depths ranging from 30 to 45 feet in borings B-1, B-3, B-4W and B-5, but was not encountered in borings B-2 and B-6. Boring B-6 was advanced to a depth of 85 feet, but was unable to penetrate the decomposed rock layer. Deep zones of decomposed rock are typical for inter-bedded rock formations with steep folds as was encountered on the site. The core samples of the competent rock possessed recovery values (REC) ranging from 40% to 100% and rock quality designation values (RQD) ranging from 15% to 83% as well. The core samples were classified as Medium Hard Rock, Intermediate Hard Rock, and Soft Rock, Classes 1b, 1c and 1d material, in accordance with the NYCBC.

Groundwater: Groundwater was measured at 8'-5" below the existing grade in the groundwater observation well installed in boring B-4W. The groundwater levels are expected to fluctuate with tidal action in the East River, as well as seasonal wet and dry periods.

Geotechnical Engineering Evaluation

The presence of relatively deep unsuitable fill and soft estuarine deposits preclude the use of shallow foundations for the support of the new building. Conventional shallow foundations bearing in these materials would experience excessive settlement; therefore, excavations to reach suitable bearing soil (glacial soil) would generally be between 16 to 23 feet deep across the site, and as much as 7'-7" to 14'-7" below the measured ground water level. Given the depth of suitable bearing soil on the site, pile foundations will be most economical foundation solution for the proposed building. Two piling options are recommended for the project: 1) driven H piles or open-end pipe piles, 2) drilled caisson piles. Specific recommendations for both piling options are discussed below. Load testing will be required for the driven piles with capacities greater than 40 tons, and for caisson piles that do not reach Class 1b rock or better. Special inspection during installation will be required, regardless of the pile type. The inspection records should be signed and sealed by a professional engineer licensed in the State of New York and submitted to the NYCBD for approval.

Because some of the neighboring buildings may be supported at shallow foundations bearing within the soft surface soils, it would be inadvisable to drive piles within 25 feet of

the neighboring buildings. Ground vibrations generated by pile driving could consolidate the loose fill and soften the estuarine deposits, causing ground loss and/or settlement of surrounding areas. Buildings located within the influence of the ground disturbances could experience significant settlement, resulting in cracking and damage to structural elements, such as walls, floors, beams and columns. As a consequence, we recommend that drilled caisson piles be used in lieu of driven piles within 25 feet of the neighboring structures.

If no cellar level is included in the building design, we recommend constructing a crawl space below the ground floor to allow future access to under-slab utility lines. If no crawl space is included, the ground floor should be pile supported and galvanized steel hangers, suspended from the underside of ground floor slab, should be used to support any underground utility lines.

Engineering Recommendations

Driven Piles

Driven Piles (open-end pipe piles or H piles) can be successfully driven to capacities ranging from 40 to 90 tons capacity within the decomposed rock/bedrock. Typical steel pile sections for 40 and 90-ton pile capacities are presented in the following table. Pile lengths are anticipated to vary from 25 to 50 feet, generally mimicking the depth to compact residual soil or bedrock across the site. Hard driving through the fill should be anticipated, requiring spudding and pre-augering to reach appropriate pile depths. Pile locations intersecting the location of the previous building foundations should be pre-excavated to remove any remnant foundations in order to minimize the number of misaligned piles.

Table 1 – Driven Piles

Pile Capacity	Open-End Pipe Pile	H Pile
40 tons	8 inch O.D. pipe with a 0.322 inch wall, A36 steel	HP 8 X 36
90 tons	10-3/4 inch O.D. pipe with 0.5 inch wall, A36 steel	HP 10 X 57

Piles can be driven using compressed air, single or double acting hammers, with minimum energy of 15,000 or 35,000 ft-lbs for 40 ton and 90 ton capacities. For 90 ton pile capacities, the piles can be driven to refusal (5 blows per ¼ inch) within the residual soil/decomposed rock/bedrock, or to a final driving resistance determined by Pile Dynamic Analyzer (PDA) testing. We recommend that a minimum of 6 index piles should be driven using PDA instrumentation to collect the necessary resistance data to establish the final pile driving criteria. At least two pile load tests must be performed in accordance with NYCBC to verify the driving criteria determined by the PDA test pile program. For 40-ton pile capacities, the final driving resistance can be determined by the following formula.

$$P = 2E / (S+0.1)$$

Where P = allowable load in pounds; E = rated energy in foot-pounds; and S = average penetration in inches per hammer blow over the final foot driving. The driving resistance

due to the non-bearing material must be added to the driving resistance as determined by the driving formula.

The test pile program and installation of production piles should be inspected by a professional engineer licensed in the State of New York.

Drilled Caissons

As discussed, drilled caisson piles bearing within the decomposed rock or underlying bedrock can be used in areas where neighboring buildings are located within 25 feet. Drilled caisson piles bearing in decomposed rock must be treated like driven piles, wherein; load tests will be required to verify the compressive capacity of the piles. Caisson piles bearing within the underlying competent rock do not require load testing to verify compressive capacity. In either case, drilled caisson piles are capable of a wide range of capacities and can be installed with minimal disturbance to adjacent structures. Caisson piles typically consist of N-80 (80 ksi) steel casing with a center-reinforcing rod (75-ksi steel) inserted for full length of the caisson. Typically, the casing will be seated a minimum of 12 inches into the top of bedrock (Class 1b or better) and then the rock socket will be drilled using a slightly smaller bit. Centralizers, spaced 8 to 12 feet on center, should be used to keep the reinforcing rod in the center of the caisson. After the reinforcing rod is installed, the caisson can be tremie grouted, using grout tubes extending to the bottom of the caisson. Grouting will be accomplished in a single step, as the caisson capacity will be developed through sidewall friction in the rock socket. The table below presents typical designs 100-ton, 150-ton and 200-ton capacity mini-caissons.

Table 2 – Mini-Caisson Design Sections

Caisson Capacity	Casing Size (in)	Reinforcing Steel (75 ksi)	Grout (psi)	Rock Socket Diameter, Length
100-ton	7.625 O.D. X 0.43 wall	#14 thread bar	5,000	6.5 in, 9 ft
150-ton	9.625 O.D. X 0.5 wall	#14 thread bar	5,000	7.5 in, 11 ft
200-ton	9.625 O.D. X 0.5 wall	#18 thread bar	5,000	7.5 in, 15 ft

The caisson designs presented above are for estimating purposes only. A final design can be provided once the compression and uplift loads are determined. The caissons must be inspected to verify the construction of the shaft and the depth and quality of the rock socket. The inspection records should be signed and sealed by a professional engineer licensed in the State of New York and submitted to the NYCBD for approval.

Uplift and Lateral Load Capacity

The uplift capacity of the drilled caisson piles will be limited by the tension capacity of the internal threadbar, whereas the uplift capacity of driven piles will be achieved through soil friction and will be a function of the actual pile lengths. For design purposes we recommend using an allowable uplift capacity of 25 tons. Static uplift tests may be required

if the allowable uplift capacity possesses a factor of safety less than 3.0 against the ultimate uplift capacity. If required, the static uplift tests should be performed in accordance with ASTM D3689.

The NYCBC allows for a minimum lateral load capacity of 1 ton per pile. Higher capacities must be verified by lateral load tests performed in accordance with ASTM D3966.

Ground Floor Slabs

The existing fill in its current condition is unsuitable for the support of a new ground floor slab. Therefore, the ground floor slab should be designed as structural slab, supported on grade beams spanning between pile caps or individual piles evenly spaced throughout the floor area. The floor piles should be the same type and quality as column piles and should be the same capacity.

If a crawl space is utilized, the crawl space floor can be designed as a conventional slab-on-grade bearing within the existing fill, after the fill has been prepared in accordance with the following recommendations. The existing fill should be excavated to a nominal depth of 12 inches below the planned crawl space slab. The resulting subgrade should be compacted to 95% of the maximum dry density as determined by ASTM D1557. Areas that cannot be suitably compacted should be over excavated to firm ground and the resulting subgrade re-compacted. Once approved, over-excavated areas should then be filled using select fill material (see Table-3) placed in 1-foot loose lifts and compacted to the same 95% of the maximum dry density as determined by ASTM D1557. The fill should be tested and approved prior to placing the crawl space slab. A continuous vapor retarder should be placed between the select fill and the crawl space slab to reduce moisture within the crawl space.

Table 3 - Select Fill

Sieve Size	Percent Passing
1.0 in	100
3/4 in	100 – 80
No. 4	80 – 60
No. 40	60 – 30
No. 200	< 15

Seismic Evaluation and Criteria

The proposed structure must be designed in accordance with all applicable New York City Building Code seismic design criteria. The site classes are based on the average soil properties in the upper 100 feet. The soil and rock encountered in the borings most closely resemble a “Very Dense Soil Profile”, Site Class C. The profile is based on Table 1613.5.2

of the NYCBC. Peak accelerations may be estimated using Table 1813.2.1 and values for the site coefficients Fa and Fv may be estimated using Tables 1613.5.3(1) and 1613.5.3(2), respectively. The building code requires an evaluation of the liquefaction potential of non-cohesive soils below the groundwater table and to a depth of 50 feet below the ground surface. The potential for liquefaction was evaluated using methods recommended by the National Center for Earthquake Engineering Research 2001 committee workshop report chaired by Youd, which is considered the state of the practice by the National Earthquake Hazard Reduction Program. The results of the analyses showed that the site has an adequate margin of safety against liquefaction.

Excavation

Temporary, shallow excavations with vertical sides less than 4 feet high will generally be stable, although there is a potential for sloughing. Temporary excavations sides greater than 4 feet in depth may be sloped back at an inclination of 1.5:1 (horizontal to vertical). Some sloughing or erosion of surface soils should be anticipated. All applicable safety requirements and regulations, including OSHA requirements should be met.

Underpinning

Underpinning of neighboring buildings will be required where new foundations extend below neighboring foundations. If required, the underpinning should be supported on drilled piles or titan piles. The piles should be installed at each underpinning pit location before the pits are excavated. The pits should be lagged to prevent sloughing or loss bearing capacity during excavation. Once the piles are installed, the underpinning pits can be excavated in sequence, in which every fourth pit is excavated and concreted. The final 3 inches should be performed using steel wedges and plates, and dry pack concrete. The sequence is repeated until the entire walls are completely supported on the new pile supported concrete underpinning. The individual underpinning pits should be 4 feet wide and should extend 1-foot below the planned depth of the excavation on the site.

Exterior Fill and Backfill

All compact fill and backfill placed outside the building footprint, beneath floor slabs, pavements and used for backfilling foundation walls and utility trenches should be performed in a controlled manner using onsite or off-site material free of organic matter and debris. The fill material should be placed in 8-inch thick loose lifts and compacted to 95% of the maximum dry density as determined ASTM D1557. Compaction can be performed using walk-behind vibratory plate or roller type compactors. Lift thickness may be increased to 12 inches for larger compaction equipment. Imported fill material, if required, should be approved prior to its use.

Demolition of Remnant Foundations

The cellar depths of the neighboring buildings to the west should be determined prior to finalizing plans for demolition. Removal of remnant walls during demolition should be performed carefully to ensure the neighboring footings are not undermined. If required, soil

berms and/or additional steel bracing can be constructed against the neighboring foundation walls to resist lateral earth, groundwater and foundation pressures.

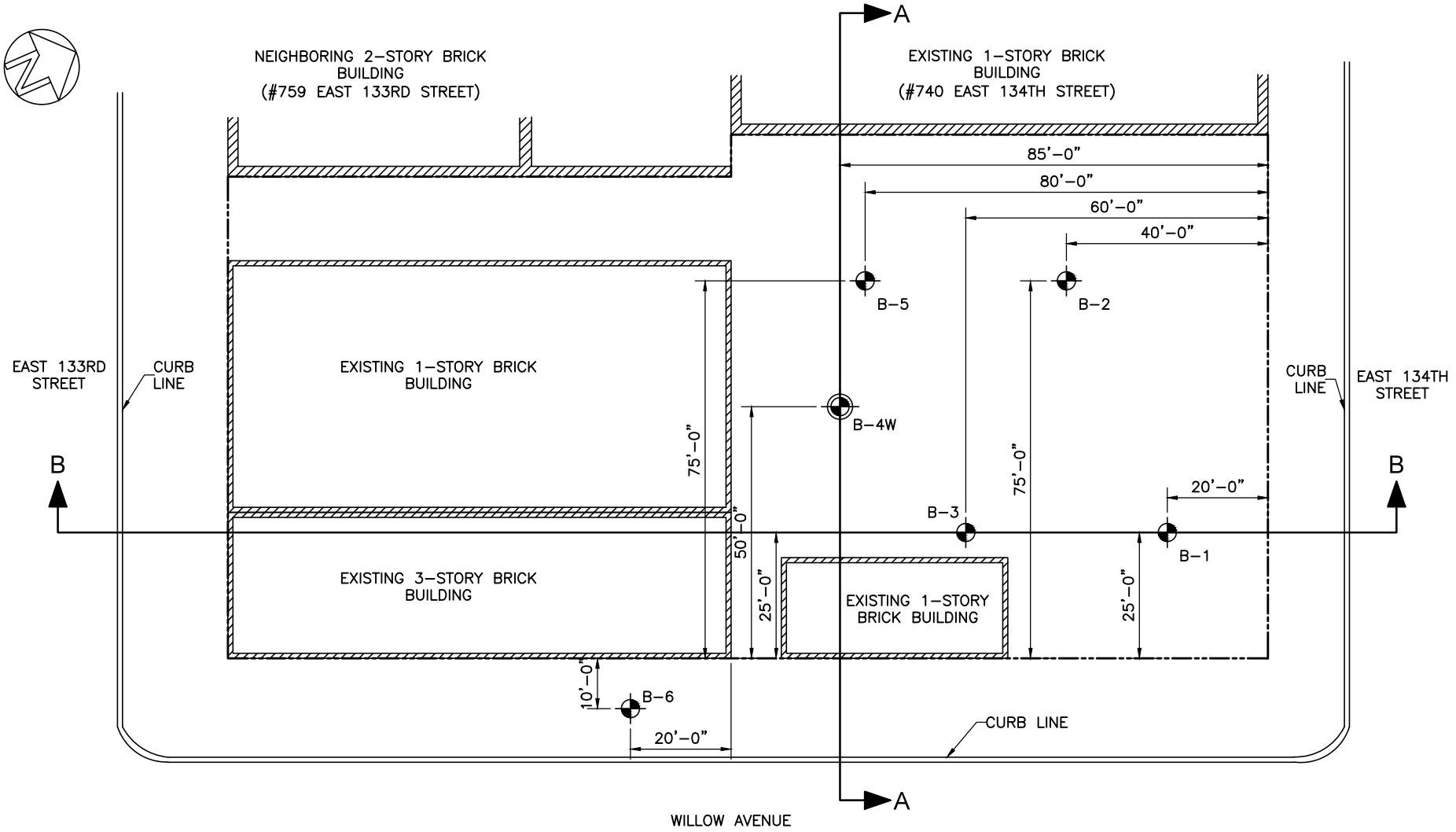
Protection of Adjacent Structure

We strongly recommend that a pre-construction survey be conducted for the neighboring buildings adjacent to the site. The survey should be completed prior to construction. Each building should be inspected and photographed, inside and out, to record existing conditions. In addition, crack monitors should be installed on all visible cracks greater than 1/16 inches.

Vibration and optical survey monitoring programs should be implemented to record potential movements of the neighboring buildings. The monitoring program should be initiated prior to the start of construction, and periodic readings should be taken during construction. Any landmark buildings located within 90 feet of the site must be monitored in accordance with TPPN 10/88.

Closure

This report presents the results of the preliminary geotechnical investigation performed at 111 Willow Avenue in Bronx, New York. This report is not a bid document, and any contractor reviewing this report must draw his own conclusions regarding specific construction techniques to be used on this project.



LEGEND

B–1 BORING LOCATION

B–4W BORING LOCATION WITH WELL

SCALE: 1" = 30'

Title: BORING LOCATION PLAN

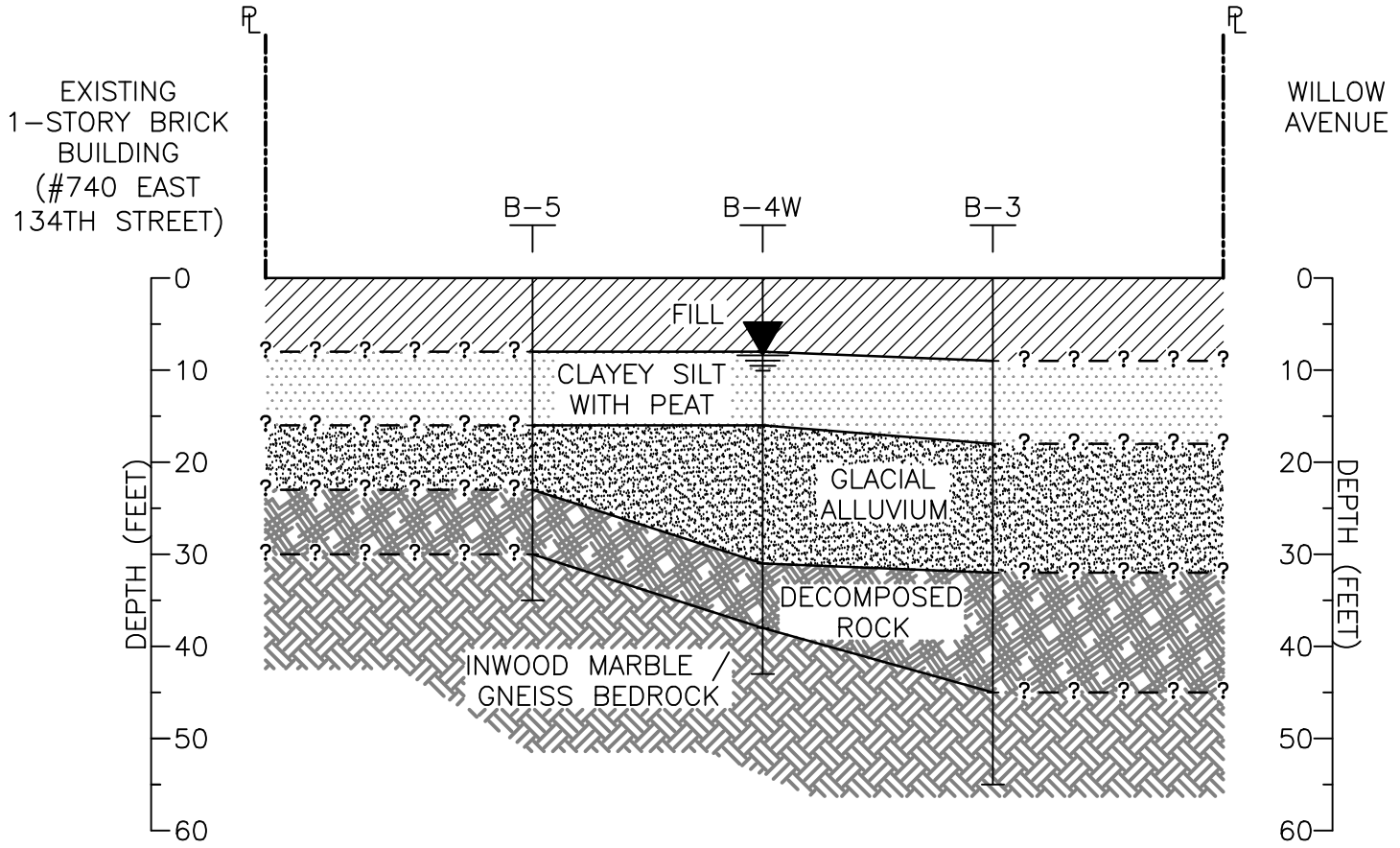
Project: 111 WILLOW AVENUE
BRONX, NEW YORK

PILLORI ASSOCIATES, P.A.
Geotechnical Engineering
71 Route 35, Laurence Harbor, NJ 08879
333 Meadowlands Parkway, Suite 102
Secaucus, NJ 07094

Date: 11–09–2017

Job No.: 170309

Dwg No. 1



SUBSURFACE SECTION A–A

SCALE: 1" = 20'

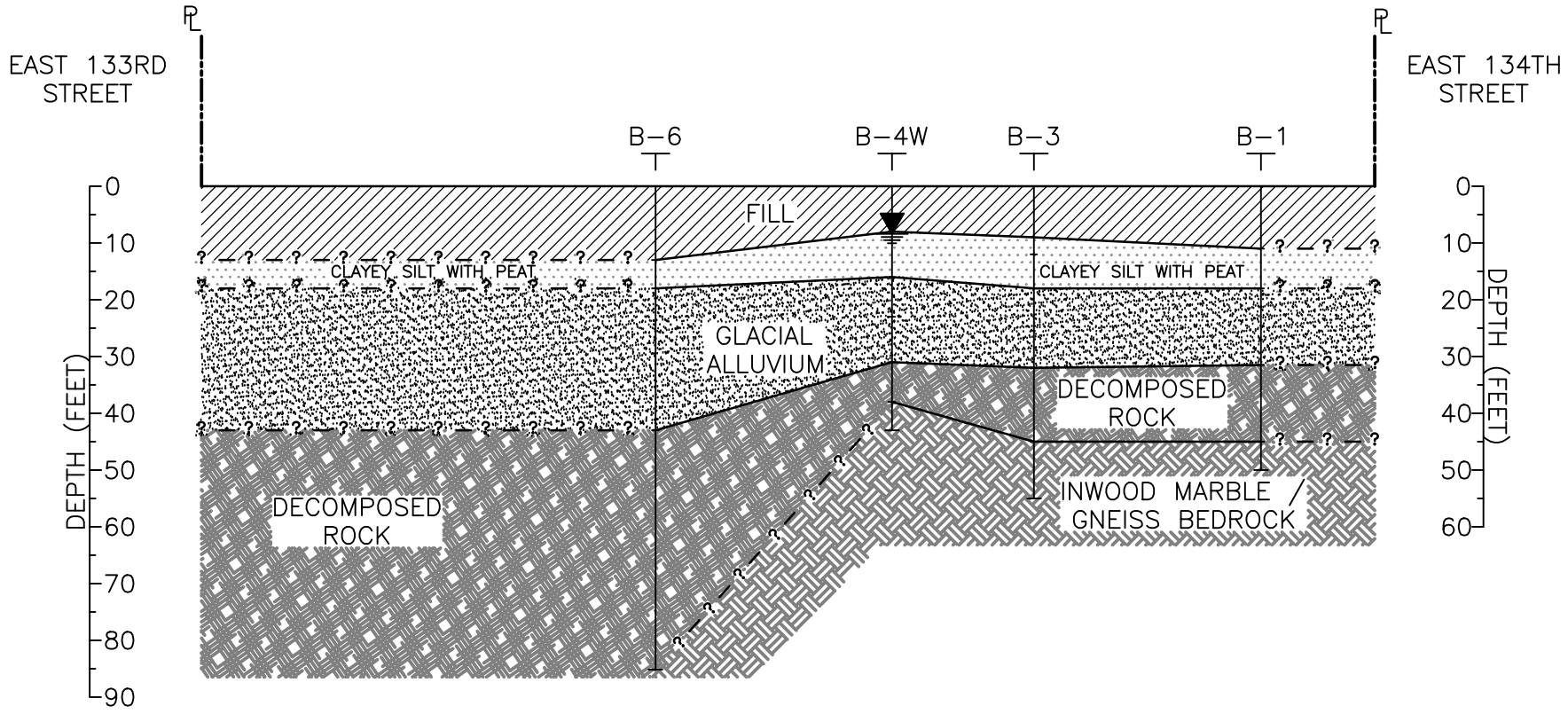
Title:	SOIL/ROCK PROFILE – 1
Project:	111 WILLOW AVENUE BRONX, NEW YORK

PILLORI ASSOCIATES, P.A.
Geotechnical Engineering
71 Route 35, Laurence Harbor, NJ 08879
333 Meadowlands Parkway, Suite 102
Secaucus, NJ 07094

Date: 11–15–2017

Job No.: 170309

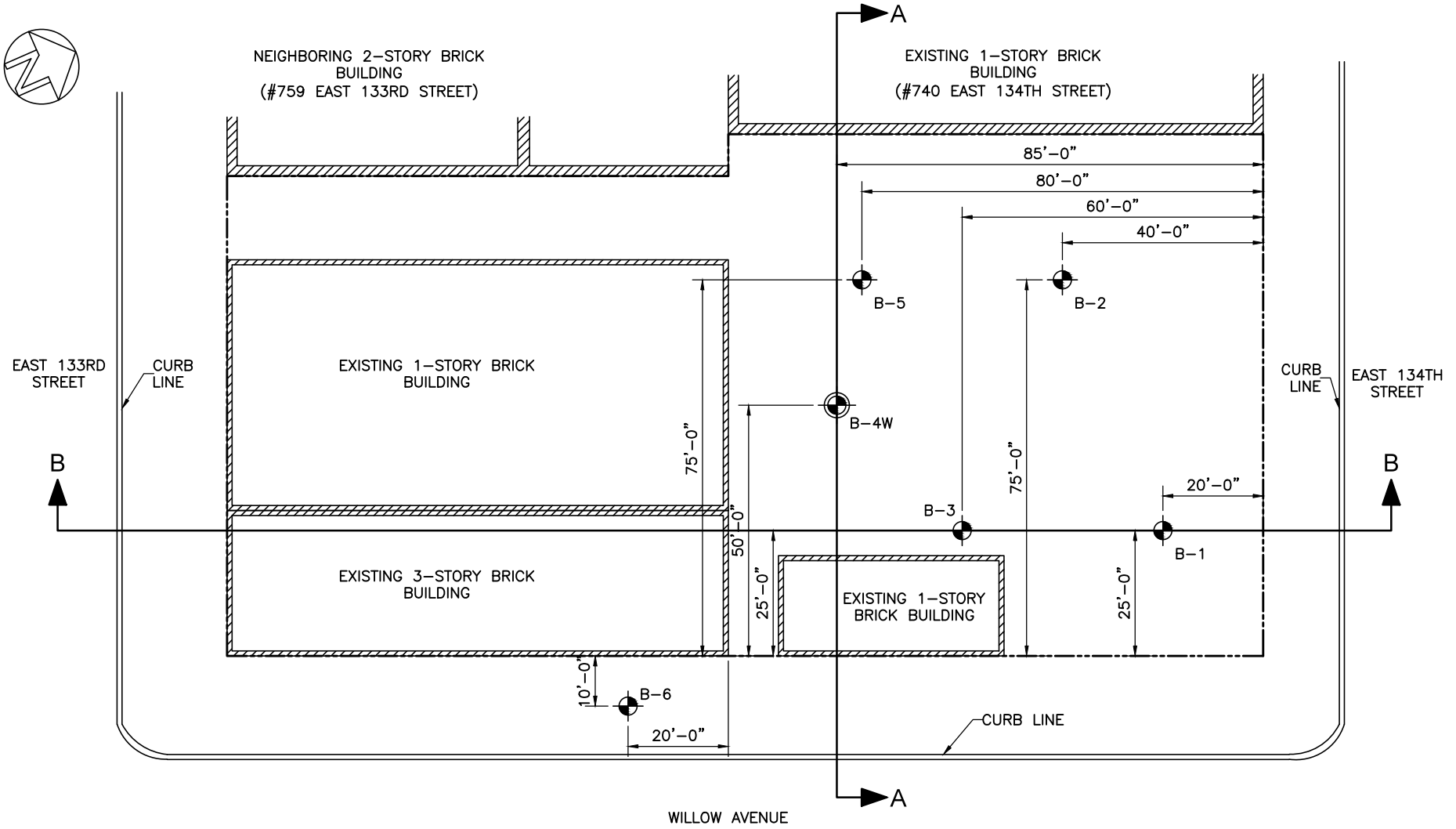
Dwg No. 2



SUBSURFACE SECTION B–B

SCALE: 1" = 30'

Title: SOIL/ROCK PROFILE – 2		
Project: 111 WILLOW AVENUE BRONX, NEW YORK		
PILLORI ASSOCIATES, P.A. *Geotechnical Engineering* 71 Route 35, Laurence Harbor, NJ 08879 333 Meadowlands Parkway, Suite 102 Secaucus, NJ 07094	Date: 11–15–2017	Dwg No. 3
	Job No.: 170309	



LEGEND

B–1 BORING LOCATION

B–4W BORING LOCATION WITH WELL

SCALE: 1" = 30'

Title: BORING LOCATION PLAN

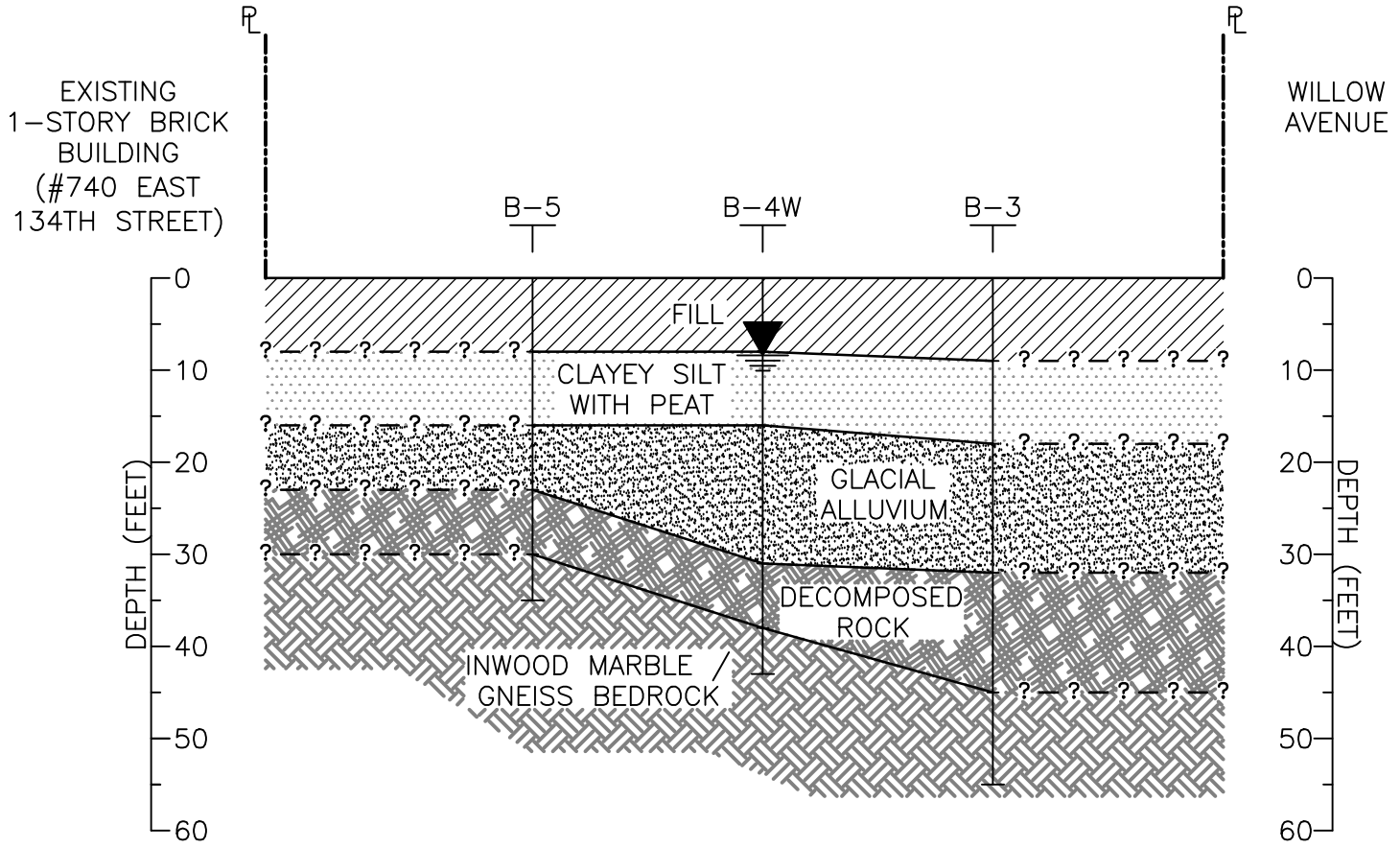
Project: 111 WILLOW AVENUE
BRONX, NEW YORK

PILLORI ASSOCIATES, P.A.
Geotechnical Engineering
71 Route 35, Laurence Harbor, NJ 08879
333 Meadowlands Parkway, Suite 102
Secaucus, NJ 07094

Date: 11–09–2017

Job No.: 170309

Dwg No. 1



SUBSURFACE SECTION A–A

SCALE: 1" = 20'

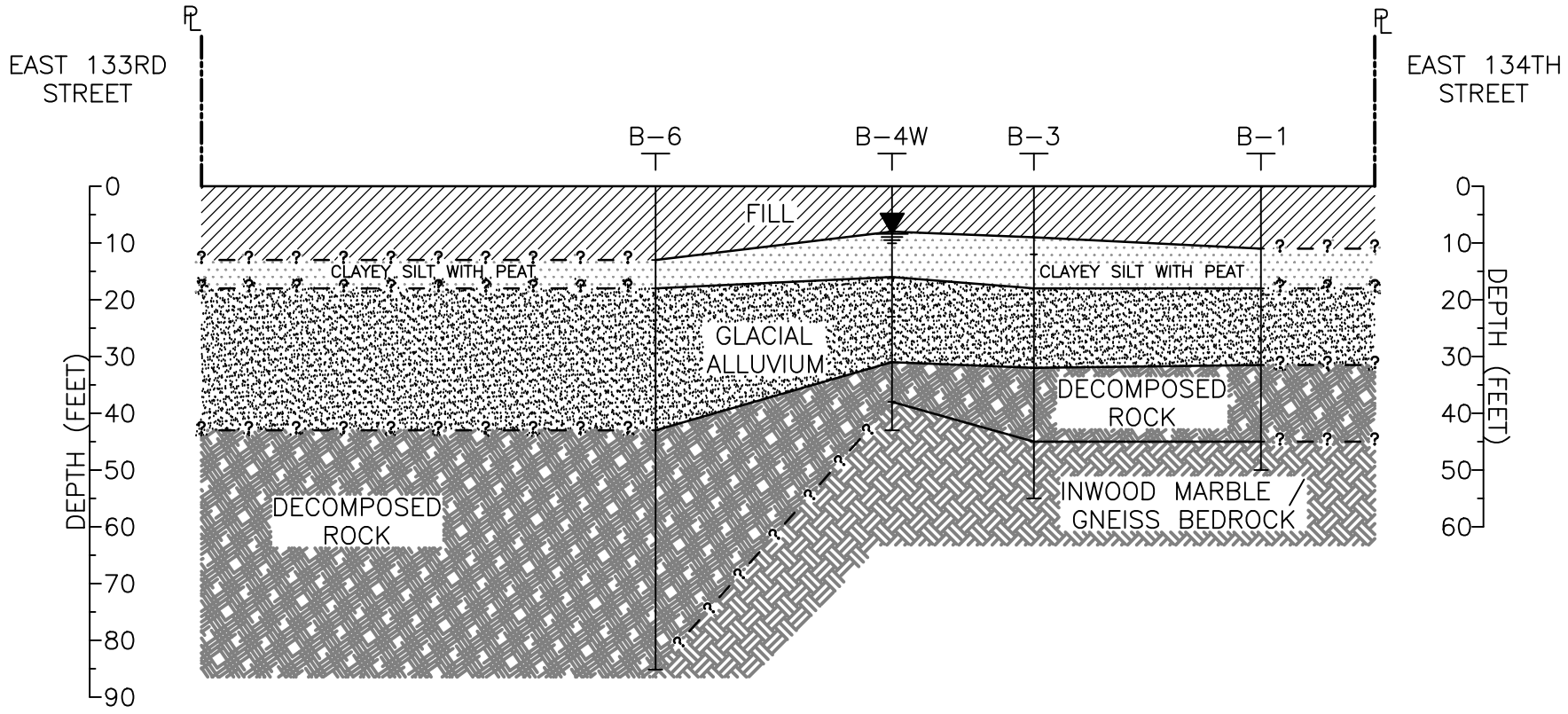
Title:	SOIL/ROCK PROFILE – 1
Project:	111 WILLOW AVENUE BRONX, NEW YORK

PILLORI ASSOCIATES, P.A.
Geotechnical Engineering
71 Route 35, Laurence Harbor, NJ 08879
333 Meadowlands Parkway, Suite 102
Secaucus, NJ 07094

Date: 11–15–2017

Job No.: 170309

Dwg No. 2



SUBSURFACE SECTION B–B

SCALE: 1" = 30'

Title: SOIL/ROCK PROFILE – 2

Project: 111 WILLOW AVENUE
BRONX, NEW YORK

PILLORI ASSOCIATES, P.A.
Geotechnical Engineering
71 Route 35, Laurence Harbor, NJ 08879
333 Meadowlands Parkway, Suite 102
Secaucus, NJ 07094

Date: 11–15–2017

Job No.: 170309

Dwg No. 3

Project: **111 Willow Avenue**
Bronx, New York
Date: 10-30-2017 to 10-31-2017
Contractor: Warren George, Inc.

Boring No.: B-1
Sheet: 1 of 1
Ground El: NA
Groundwater Depth: NA

Depth Feet	SAMPLES Number	Blows / 6"	Strata	SOIL DESCRIPTION	Classification Depth Elevation
	S-1	1-2-1-1	F	Brown coarse to fine Sand w/brick, concrete fragments, & miscellaneous debris	FILL (7)
5	S-2	3-1-1-1			
10	S-3	16-13-8-3			11'-0"
			Es	Gray clayey Silt, little fine Sand, with black Peat	MH (6)
15	S-4	WOR-2-3-6		Gray clayey Silt, trace fine Sand, with black Peat	18'-0"
20	S-5	10-13-14-50/4"	GA	Brown fine Sand, some Silt	SM (3b) 23'-0"
25	S-6	(8-2-2-2)* Disturbed		Boulder from 23.0' to 24.0' Brown coarse to fine Sand, some Silt, little medium to fine Gravel	SM 28'-0"
30	S-7	5-3-8-100/5"		Brown coarse to fine Sand, some Silt, some coarse to fine Gravel	SM (3b) 31'-6"
35	R-1	RUN = 60" 35.0' - 40.0' REC = 50% RQD = 0%	DR	Decomposed Rock	(1d)
40	S-8	53-89-50/1"			45'-0"
45	R-2	RUN = 60" 45.0' - 50.0' REC = 50% RQD = 15%	R	Inwood Marble Bedrock: Soft, weathered	(1d) 50'-0"
50				End of Boring	

Project: **111 Willow Avenue**
Bronx, New York
Date: 10/31/2017 to 11/01/2017
Contractor: Warren George, Inc.

Boring No.: B-2
Sheet: 1 of 1
Ground El: NA
Groundwater Depth: NA

Depth Feet	SAMPLES Number	Blows / 6"	Strata	SOIL DESCRIPTION	Classification Depth Elevation
	S-1	7-5-8-5	F	Brown coarse to fine Sand, little Silt, trace fine Gravel with brick fragments	FILL (7) 8'-0"
5	S-2	4-7-11-9			
10	S-3	26-10-7-8	Es	Gray-brown clayey Silt, little fine Sand	ML (5b) 17'-0"
15	UT-1	PUSH = 24"			
	S-4	9-22-10-12	GA	Brown coarse to fine Sand, trace Silt	SW (3a) 20'-6"
20	S-5	80-50/0"			
25	S-6	80-100/2"	Rs/ DR	Brown medium to fine Sand, trace Silt with decomposed rock fragments	GP (2a) 28'-6"
30				End of Boring	
35					
40					
45					
50					

Project: **111 Willow Avenue**
Bronx, New York
Date: 11-01-2017 to 11-02-2017
Contractor: Warren George, Inc.

Boring No.: B-3
Sheet: 1 of 2
Ground El: NA
Groundwater Depth: NA

Depth Feet	SAMPLES Number	Blows / 6"	Strata	SOIL DESCRIPTION	Classification Depth Elevation
	S-1	7-7-5-4	F	Gray coarse to fine Sand, trace Silt, trace fine Gravel, with asphalt fragments	FILL (7) 9'-0"
5	S-2	6-2-5-11			
	S-3	1-2-2-1			
10	S-4	2-3-4-4	Es	Gray clayey Silt, little fine Sand, with black Peat	MH (6) 18'-0"
15	UT-1	PUSH = 24"			
	S-5	5-8-13-15			
20	S-6	(7-3-3-4)* Disturbed	GA	Brown coarse to fine Sand, little Silt	SM (3b) 23'-0"
25	S-7	(4-5-6-8)* Disturbed		Brown coarse to fine Sand, trace Silt, trace fine Gravel	SW (3b) 28'-0"
30	S-8	5-16-51-100/4"		Brown coarse to fine Sand, trace Silt, trace fine Gravel	SW (3a) 32'-0"
35	R-1	RUN = 60" 35.0' - 40.0' REC = 100% RQD = 0%	DR	Decomposed Rock	(1d) 45'-0"
40	S-8	13-33-63-88			
45	R-2	RUN = 60" 45.0' - 50.0' REC = 40% RQD = 15%	R	Inwood Marble Bedrock: Soft, weathered	(1d) 50'-0"
50					(1c)

Project: **111 Willow Avenue**
Bronx, New York
Date: 11-01-2017 to 11-02-2017
Contractor: Warren George, Inc.

Boring No.: B-3
Sheet: 2 of 2
Ground El: NA
Groundwater Depth: NA

Depth Feet	SAMPLES Number	Blows / 6"	Strata	SOIL DESCRIPTION	Classification Depth Elevation
	R-3	RUN = 60" 50.0' - 55.0' REC = 92% RQD = 36%	R	Gneiss Bedrock: intermediate Hard, slightly weathered, mediumly jointed	(1c)
55				End of Boring	55'-0"
60					
65					
70					
75					
80					
85					
90					
95					
100					

Project: **111 Willow Avenue**
Bronx, New York
Date: 11-02-2017 to 11-03-2017
Contractor: Warren George, Inc.

Boring No.: B-4W
Sheet: 1 of 1
Ground El: NA
Groundwater Depth: 8'-5"

Depth Feet	Number	Blows / 6"	Strata	SOIL DESCRIPTION	Classification Depth Elevation
	S-1	11-12-15-10	F	Gray coarse to fine Sand, trace Silt, trace fine Gravel, with brick fragments	FILL (7) 8'-0"
5	S-2	8-6-4-3			
10	S-3	7-4-5-8	Es	Gray clayey Silt, and fine Sand, with black Peat	MH (6) 16'-0"
15	S-4	4-4-7-8			
20	S-5	WOH-WOH-2-3* Disturbed		Brown medium to fine Silt, some fine Sand	SM 23'-0"
25	S-6	(4-2-3-4)* Disturbed	GA	Brown coarse to fine Sand, little Silt, trace fine Gravel	SM 28'-0"
30	S-7	7-11-78-50/0"		Brown coarse to fine Sand, trace Silt, little fine Gravel	SW (3b) 31'-0"
35	S-8	28-100/3"	DR	Decomposed Rock	(1d) 38'-0"
40	R-2	RUN = 60" 38.0' - 43.0' REC = 73% RQD = 50%	R	Gneiss Bedrock: intermediate Hard, slightly weathered, mediumly jointed	(1c) 43'-0"
45				End of Boring	
50					

Project: **111 Willow Avenue**
Bronx, New York
Date: 11-03-2017
Contractor: Warren George, Inc.

Boring No.: B-5
Sheet: 1 of 1
Ground El: NA
Groundwater Depth: NA

Depth Feet	SAMPLES Number	Blows / 6"	Strata	SOIL DESCRIPTION	Classification Depth Elevation
0	S-1	6-9-16-13	F	Gray coarse to fine Sand, trace Silt, trace fine Gravel, with asphalt fragments	FILL (7)
5	S-2	4-3-3-2			8'-0"
10	S-3	3-1-1-2	Es	Gray clayey Silt, little fine Sand, with black Peat	MH (6)
15	S-4	(7-10-5-3)* Disturbed			16'-0"
20	S-5	13-8-13-58	GA	Brown coarse to fine Sand, trace Silt, trace fine Gravel	SW (3b)
25	S-6	100/4"			23'-0"
30	R-1	RUN = 60" 30.0' - 25.0' REC = 100% RQD = 83%	Rs/ DR	Brown coarse to fine Sand, trace Silt, trace fine Gravel with decomposed rock fragments	GW (2a)
35					30'-0"
40			R	Gneiss Bedrock: medium Hard, unweathered, closely jointed	(1b)
45					35'-0"
50				End of Boring	

Project: **111 Willow Avenue**
Bronx, New York
Date: 11-06-2017 to 11-07-2017
Contractor: Warren George, Inc.

Boring No.: B-6
Sheet: 1 of 2
Ground El: NA
Groundwater Depth: NA

Depth Feet	SAMPLES Number	Blows / 6"	Strata	SOIL DESCRIPTION	Classification Depth Elevation
	S-1	13-14-8-7	F	Gray coarse to fine Sand, trace Silt, trace fine Gravel, with asphalt fragments	FILL (7)
5	S-2	3-2-90-27			
10	S-3				13'-0"
15	S-4	2-2-7-11	Es	Gray clayey Silt, little fine Sand	ML (6) 18'-0"
20	S-5	17-28-28-17	GA	Brown coarse to fine Sand, little Silt, little coarse to fine Gravel	SM (3a)
25	S-6	15-16-22-21			
30	S-7	15-29-44-26			
35	S-8	13-15-19-22			
40	S-9	20-31-24-36			43'-0"
45	S-10	38-37-30-38	DR	Decomposed Rock	(1d)
50	S-11	39-100/4"			

Project: **111 Willow Avenue**
Bronx, New York
Date: 11-06-2017 to 11-07-2017
Contractor: Warren George, Inc.

Boring No.: B-6
Sheet: 2 of 2
Ground El: NA
Groundwater Depth: NA

Depth Feet	SAMPLES Number	Blows / 6"	Strata	SOIL DESCRIPTION	Classification Depth Elevation
	S-11	39-100/4"			
55	S-12	100/2"			
60					
65	S-13	100/2"			
			DR	Decomposed Rock	(1d)
70					
75	S-14	100/1"			
80		RUN = 60" 80.0' - 85.0' REC = 0% RQD = 0%			
	R-1				
85	S-15	100/2"			85'-2"
				End of Boring	
90					
95					
100					

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			GROUP SYMBOLS (ASTM D2487)	TYPICAL DESCRIPTIONS
COARSE-GRAINED SOIL MORE THAN 50% RETAINED ON NO.200 SIEVE*	GRAVEL 50% OR MORE OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVEL	GW	WELL- GRADED GRAVEL & GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
			GP	POORLY GRADED GRAVEL & GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVEL WITH FINES	GM	SILTY GRAVEL, GRAVEL SAND CLAY MIXTURES
			GC	CLAYEY GRAVEL, GRAVEL SAND CLAY MIXTURES
	SANDS MORE THAN 50% OF COARSE FRACTION PASSES NO. 4 SIEVE	CLEAN SAND	SW	WELL-GRADED SAND & GRAVELLY SAND, LITTLE OR NO FINES
			SP	POORLY GRADED SAND & GRAVELLY SAND, LITTLE OR NO FINES
		SAND WITH FINES	SM	SILTY SAND, SAND-SILT MIXTURES
			SC	CLAYEY SAND, SAND-CLAY MIXTURES
FINE-GRAINED SOIL 50% OR MORE PASSING NO.200 SIEVE*	SILT & CLAY LIQUID LIMIT LESS THAN 50%		ML	INORGANIC SILT, VERY FINE SAND, ROCK FLOUR, SILTY OR CLAYEY FINE SAND
			CL	INORGANIC CLAY OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAY, SANDY CLAY, SILTY CLAY, LEAN CLAY
			OL	ORGANIC SILT & ORGANIC SILTY CLAY OF LOW PLASTICITY
	SILT & CLAY LIQUID LIMIT GREATER THAN 50%		MH	INORGANIC SILT, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILT, ELASTIC
			CH	INORGANIC CLAY OF HIGH PLASTICITY, FAT CLAY
			OH	ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOIL			PT	PEAT, MUCK & OTHER HIGHLY ORGANIC SOIL

* BASED ON MATERIAL PASSING THE 3" (75MM) SIEVE

GRADATION**

TERM	% BY WEIGHT
TRACE	1 TO 10
LITTLE	10 TO 20
SOME	20 TO 35
AND	35 TO 50

COMPACTNESS**
(SAND AND/OR GRAVEL)

TERM	% RELATIVE DENSITY
LOOSE	0 TO 40
MEDIUM DENSE	41 TO 70
DENSE	71 TO 90
VERY DENSE	91 TO 100

CONSISTENCY**
(CLAY AND/OR SILT)

SHEAR STRENGTH TERM	TONS/SQ.FT.
SOFT	LESS THAN 0.25
FIRM	0.25 TO 0.5
STIFF	0.5 TO 1.0
VERY STIFF	1.0 TO 2.0
HARD	OVER 2.0

** VALUES ARE FROM LABORATORY OR FIELD TEST DATA, WHERE APPLICABLE, WHEN NO TESTING WAS PERFORMED VALUES ARE ESTIMATED.

APPENDIX C

GEOPHYSICAL ENGINEERING SURVEY REPORT

Commercial Properties
111 Willow Avenue,
Bronx, New York 10454

NOVA PROJECT NUMBER
18-0782

DATED
June 1, 2018

PREPARED FOR:

LANGAN

Phone: 973.560.4900 Fax: 973.560.4901
300 Kimball Drive, 4th Floor
Parsippany, NJ 07054-2172
www.langan.com

PREPARED BY:

NOVA
GEOPHYSICAL
ENGINEERING
Subsurface Mapping Solutions
56-01 Marathon Parkway # 765
Douglaston, New York 11362
347-556-7787 (PHONE)
718-261-1527(FAX)
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NOVA GEOPHYSICAL SERVICES

SUBSURFACE MAPPING SOLUTIONS
56-01 Marathon Parkway #765, Douglaston, New York 11362
Ph. 347-556-7787 Fax. 718-261-1527
www.nova-gsi.com

June 1, 2018,

Kevin Garrett
Staff Geologist
LANGAN
21 Penn Plaza
360 West 31st Street, 8th Floor
New York, NY 10001-2727
Direct: 212.479.5400 x5683
Mobile: 914.548.2646

Re: Geophysical Engineering Survey (GES) Report
Commercial Properties
111 Willow Avenue,
Bronx, New York 10454

Dear Mr. Garrett:

Nova Geophysical Services (NOVA) is pleased to provide the findings of the geophysical engineering survey (GES) at the above referenced project site: 111 Willow Avenue, Bronx, New York 11207 (the "Site").

INTRODUCTION TO GEOPHYSICAL ENGINEERING SURVEY (GES)

NOVA performed a geophysical engineering survey (GES) consisting of a Ground Penetrating Radar (GPR) and Electromagnetic (EM) survey at the site. The purpose of this survey is to clear and mark proposed boring areas as well as to locate and identify utilities, underground storage tanks and other substructures on May 21st, 2018.

The equipment selected for this investigation was a Sensors and Software Noggin 250 MHz ground penetrating radar (GPR) with a shielded antenna and a Radio Detection RD7100 Electromagnetic utility locator.

A GPR system consists of a radar control unit, control cable, and transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 250 MHz. The trigger pulse is sent to the transmitter electronics in the transduce via the control cable. The transmitter

electronics amplify the trigger pulse into bipolar pulses that are radiated to the surface. The transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit and are represented as color graphic images for interpolation.

A typical electromagnetic (EM) utility locating system consists of a transmitter unit and a receiver unit. The receiver unit can be used independently of the transmitter unit in order to detect utility lines with an inherent EM signature (electric utility lines, water lines, etc.). If needed a current at a specific frequency can also be placed on a utility that is being located. This can be done via the transmitter unit by either direct connection or induction via an EM field varying at specific frequency. The receiver unit is then set to the selected frequency and the electromagnetic field created by the current running through the utility can be located allowing the utility to be marked.

GEOPHYSICAL METHODS

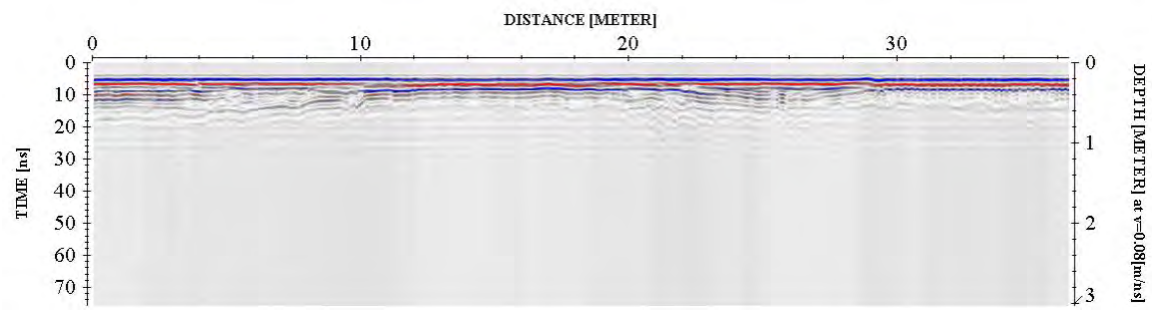
The project site was screened using GPR to search the specified area and inspected for reflections, which could be indicative of substructures and utilities within the subsurface. An EM utility locator was used to help determine the locations of utilities within the survey area.

EM data was collected and interpreted on site and suspected utilities marked as needed. GPR data profiles were collected for the areas of the Site specified by the client and processed as specified below.

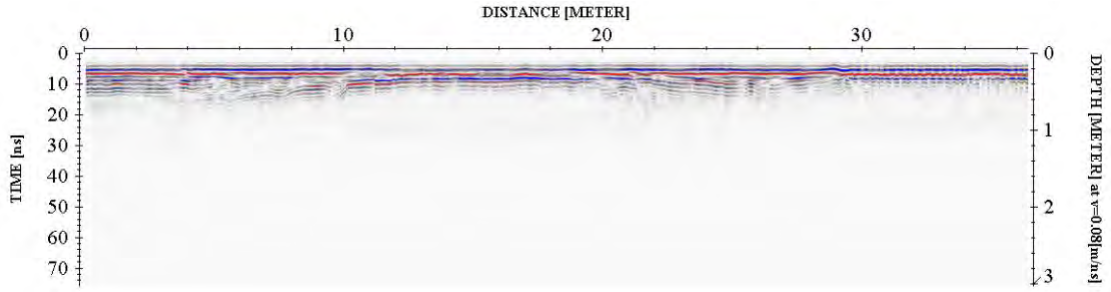
DATA PROCESSING

In order to improve the quality of the results and to better identify anomalies NOVA processed the collected data. The processing work flow is briefly described in this section.

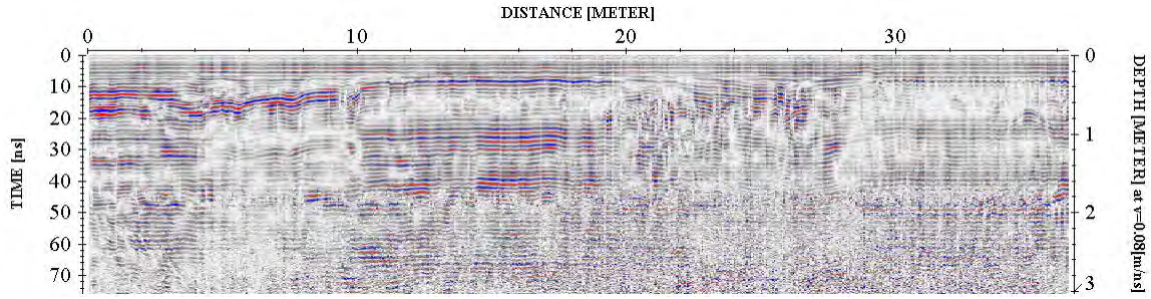
Step 1. Import Raw RAMAC data to standard processing format



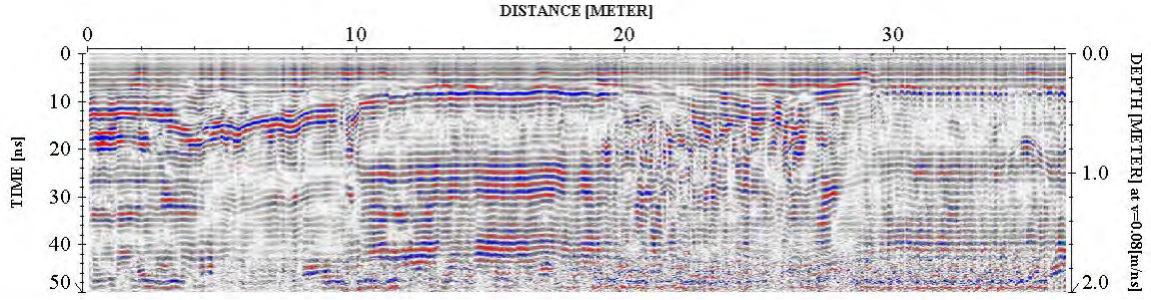
Step 2. Remove instrument noise *(dewow)*



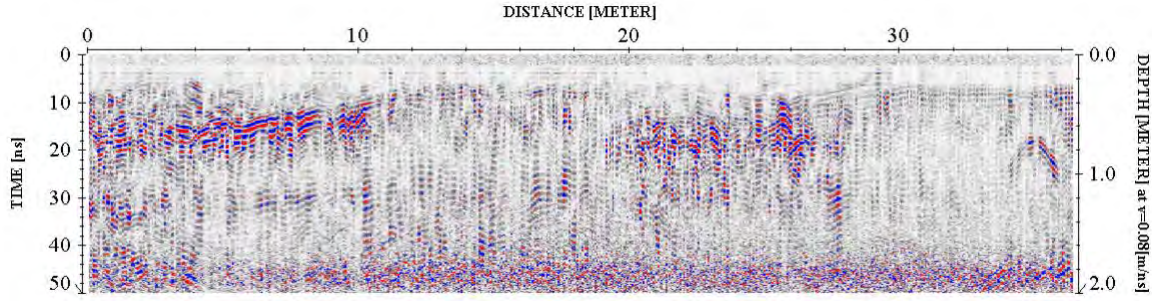
Step 3. Correct for attenuation losses *(energy decay function)*



Step 4. Remove static from bottom of profile *(time cut)*



Step 5. Mute horizontal ringing/noise *(subtracting average)*



The above example shows the significance of data processing. The last image (step 5) has higher resolution than the starting image (raw data – step 1) and represents the subsurface anomalies much more accurately.

PHYSICAL SETTINGS

NOVA observed the following physical conditions at the time of the survey.

Weather: Sunny

Temperature: 68° F

Surface: Asphalt

Geophysical Noise Level: Geophysical noise at the site was high due to being located in an urban environment and parked trucks.

RESULTS

The results of the geophysical engineering survey (GES) identified the following at the project site:

- Subsurface utilities: Water, electric, and gas service lines were identified entering the subject properties from East 133rd Street and Willow Avenue. Their approximate locations are shown in the site survey plan.
- Multiple subsurface drainage systems were found on the property consisting of drains connected to a set of floor drains within the project sites. These were determined to be systems independent from each other. The approximate locations of the drains are shown in the survey plan.
- No large anomalies resembling an underground storage tanks (USTs) were identified in the GES.
- All detected subsurface anomalies were marked in the onsite mark out.
- NOVA cleared and marked all of the proposed environmental boring locations at the project site.

If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

NOVA Geophysical Services



Levent Eskicakit, P.G., E.P.

Project Engineer

Attachments:

Geophysical Images

Survey Plan

Location Map



NOVA
GEOPHYSICAL ENGINEERING
Subsurface Mapping Solutions
56-01 Marathon Parkway # 765
Douglaston, New York 11362
347-556-7787 (PHONE)
718-261-1527(FAX)
www.nova-gsi.com

SITE LOCATION MAP

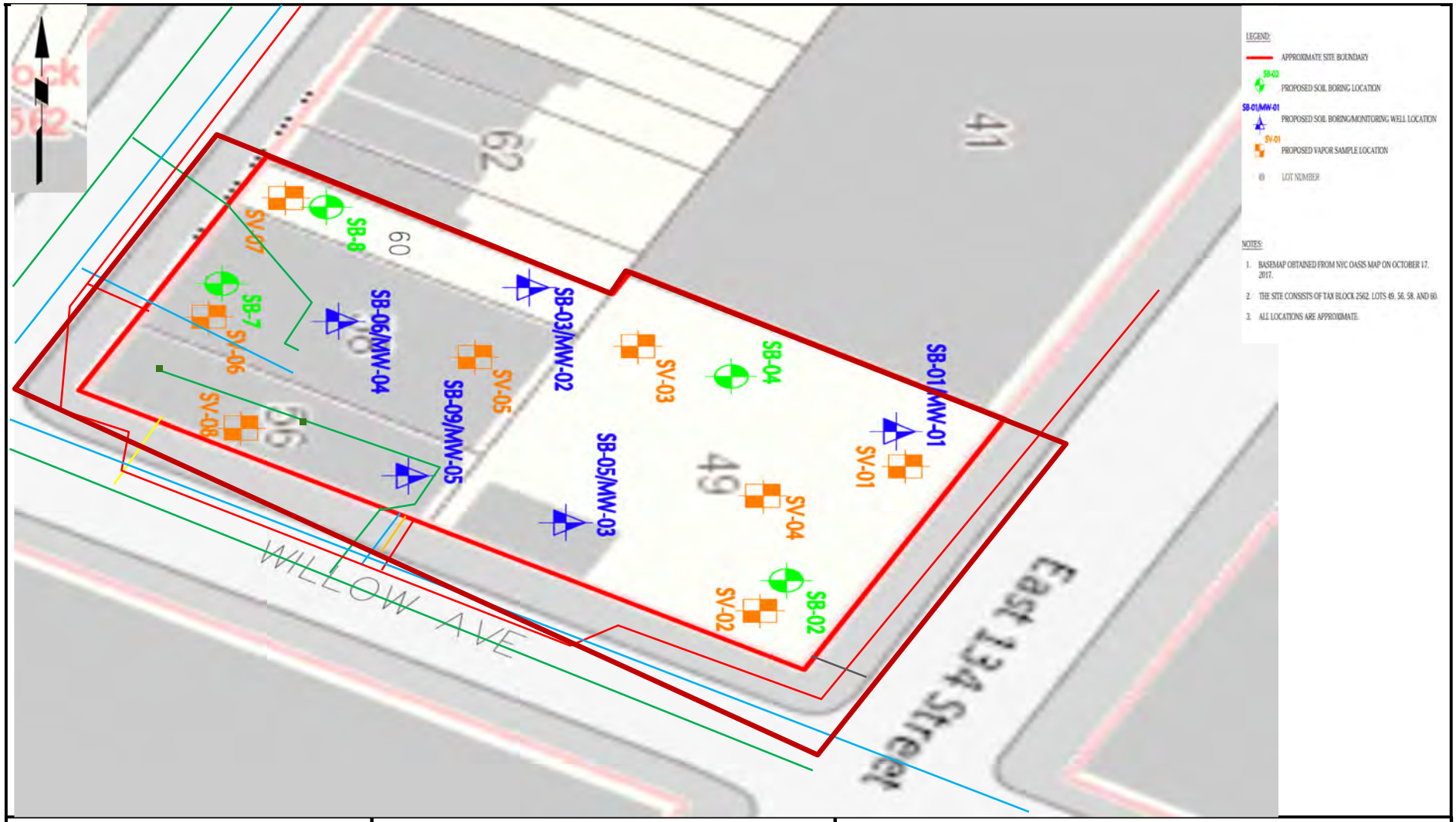
SITE: **Commercial Site**
111 Willow Road,
Bronx, New York 10454

CLIENT: Langan

DATE: May 21, 2018

AUTH: Chris Steinley

LEGEND



NOVA
GEOPHYSICAL
ENGINEERING
Subsurface Mapping Solutions
56-01 Marathon Parkway # 765
Douglaston, New York 11362
347-556-7787 (PHONE)
718-261-1527(FAX)
www.nova-gsi.com

SURVEY PLAN

SITE:	**Commercial Site** 111 Willow Avenue, Bronx, New York 10454
CLIENT:	Langan
DATE:	May 21, 2018
AUTH:	Levent E. / Chris Steinley

LEGEND

- Survey Area
- Drain Line
- Water Line
- Electric Line
- Gas Line
- Drain

GEOPHYSICAL IMAGES

Commercial Properties

111 Willow Avenue

Bronx, New York 10454

May 21st, 2018





Subsurface Utilities

GEOPHYSICAL IMAGES
Commercial Properties
111 Willow Avenue
Bronx, New York 10454
May 21st, 2018







Proposed Boring Areas

GEOPHYSICAL IMAGES
Commercial Properties
111 Willow Avenue
Bronx, New York 10454
May 21st, 2018







Proposed Boring Areas

GEOPHYSICAL IMAGES

Commercial Properties

111 Willow Avenue

Bronx, New York 10454

May 21st, 2018







Proposed Boring Areas

GEOPHYSICAL IMAGES

Commercial Properties

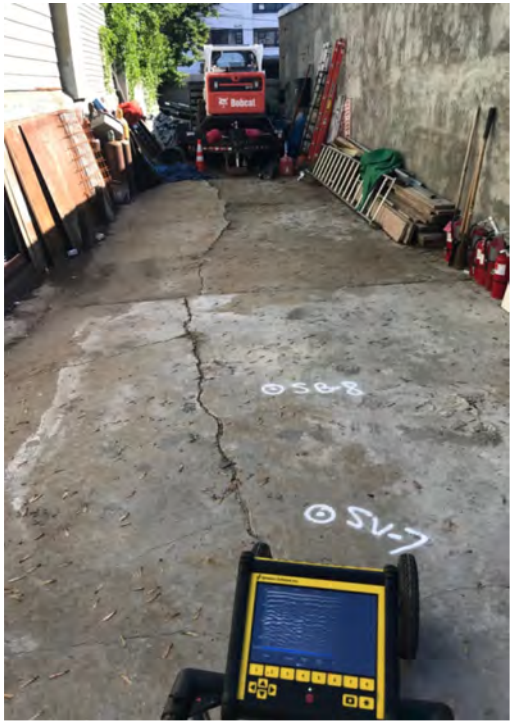
111 Willow Avenue

Bronx, New York 10454

May 21st, 2018







Proposed Boring Areas

GEOPHYSICAL IMAGES

Commercial Properties

111 Willow Avenue

Bronx, New York 10454

May 21st, 2018







Floor Drain / Lines

APPENDIX D

LANGAN

LOG OF BORING SB01 **SHEET** 1 **OF** 2

PROJECT: 111 Willow Avenue	PROJECT NO.: 170497201
LOCATION: Bronx, NY	ELEVATION AND DATUM: N/A
DRILLING AGENCY: AARCO Environmental Services Corp	DATE STARTED: 5/21/17 — DATE FINISHED: 5/21/17
DRILLING EQUIPMENT: Geoprobe 7822 DT	COMPLETION DEPTH: 16A ft — ROCK DEPTH: N/A
SIZE AND TYPE OF BIT: 2" macrocore	NO. SAMPLES: DIST. 4 — UNDIST. N/A — CORE N/A
CASING: N/A	WATER LEVEL: FIRST 11 — COMPL. N/A — 24 HR. N/A
CASING HAMMER: WEIGHT N/A — DROP N/A	FOREMAN: Tim Kelley
SAMPLER: 4 foot macrocore	LOGGED BY: Kevin Garrett
SAMPLER HAMMER: WEIGHT N/A — DROP N/A	

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
R1a (0-13) concrete R1b (13-15) asphalt R1c (15-27") firm, brown, SILT, some fine sand, trace fine gravel, trace coarse sand (dry) [FILL]	1 2			27/48	0.0 0.0 0.0 0.0	
R2 (0-10) loose, brown, fine SAND, some fine gravel, some silt (dry) [FILL]	3 4 5 6 7			10/48		
R3a (0-10") firm, olive, SILT, trace fine sand, trace clay (dry) R3b (10-19") dense, brown, fine SAND, some silt, trace medium sand, trace fine gravel (wet) R3c (19-24") firm, olive, SILT, trace fine sand, trace fine gravel	8 9 10 11			24/48	0.0 0.0 0.0 0.0	Collect sample SB01_1-2 15:10 End fill 8ft Collect sample SB01_10-11 15:15 ▽ groundwater 11ft
R4a (0-12") firm, olive brown, SILT, some fine sand (wet) R4b (12-[illegible]") firm, brown, SILT, some fine sand, trace fine gravel (wet)	12 13 14			48/48	0.0 0.0 0.0	

FILL



LANGAN

JOB NO. 170497201
DATE 5/21/18

LOG OF BORING NO. SB01

SHEET 2 OF 2

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
RLC (44-48") medium dense, brown, medium SAND, some fine sand, trace silt (wet)	15	RL	NC	48/48	0.0	
					0.0	
	16				0.0	End of boring 16 ft
					0.0	Cuttings back filled and permanent well installed.
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

LANGAN

LOG OF BORING SB02 SHEET 1 OF 2

PROJECT: 111 Willow Avenue	PROJECT NO.: 170497201
LOCATION: Bronx, NY	ELEVATION AND DATUM:
DRILLING AGENCY: AARCO Environmental Services Corp.	DATE STARTED: 5/22/18 — DATE FINISHED: 5/22/18
DRILLING EQUIPMENT: Geoprobe 7822DT	COMPLETION DEPTH: 16 — ROCK DEPTH: N/A
SIZE AND TYPE OF BIT: 2" macrocore	NO. SAMPLES: DIST. 4 — UNDIST. N/A — CORE N/A
CASING: N/A	WATER LEVEL: FIRST 7.5 — COMPL. N/A — 24 HR.
CASING HAMMER: WEIGHT N/A — DROP N/A	FOREMAN: Adam Hutchinson
SAMPLER: 4 6out macrocore sampler	LOGGED BY: Kevin Garrett
SAMPLER HAMMER: WEIGHT N/A — DROP N/A	

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC.	TYPE	RECOV. FT.	PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
R1a (0-4") asphalt R1b (4-12") concrete R1c (12-21") loose, brown fine SAND, trace fine gravel, trace silt, brick (dry) [FILL] R1d (21-27") loose, black, medium SAND, some fine sand, some fine gravel, coal ash, slag (dry) [FILL]	1 2 3	R1	MC	27/48	0 0 0 0	
FILL R2a (0-6") brick fragments R2b (6-11") loose, dark brown, medium SAND, some fine gravel, trace fine sand (wet) [FILL] R2c (11-16") firm, dark grey, SILT, trace fine sand (moist)	4 5 6 7	R2	MC	16/48	0 0 0	▽ water table 7.5 ft End drill 7.5 ft
R3a (0-6") firm, dark grey, SILT, trace fine gravel, trace fine sand (wet) R3b (6-13") medium dense, dark grey, medium SAND, trace fine gravel, trace fine sand. (wet) R3c (13-27") soft, olive, SILT, some fine sand, trace fine gravel, trace medium sand (wet)	8 9 10 11	R3	MC	27/48		Sample SB02_1-3 taken 12:50 Sample SB02_7-8 taken 12:55
R4a (0-5") soft, olive, SILT, some fine sand, trace fine gravel, trace medium sand (wet)	12 13	R4	MC	9/48		
	14					



LANGAN

JOB NO. 170497201
DATE 5/22/18

LOG OF BORING NO. SB07

SHEET 2 OF 2

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
RUB (5-9") sofb, black, SILT, trace fine gravel (wet)	15	RU	mC	9/4.8	0.0	End of boring
	16				0.0	Cuttings backfilled and boring patched with concrete.
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

LANGAN

LOG OF BORING SB03 SHEET 1 OF 2

PROJECT: 111 Willow Avenue	PROJECT NO.: 170497201
LOCATION: Bronx, NY	ELEVATION AND DATUM: N/A
DRILLING AGENCY: AARCO Environmental Services Corp.	DATE STARTED: 5/24/18 — DATE FINISHED: 5/24/18
DRILLING EQUIPMENT: Geoprobe 7822 DT	COMPLETION DEPTH: 16 ft — ROCK DEPTH: N/A
SIZE AND TYPE OF BIT: 2" macrocore	NO. SAMPLES: 4 — DIST.: — UNDIST.: N/A — CORE: N/A
CASING: N/A	WATER LEVEL: FIRST 14.5 — COMPL.: N/A — 24 HR.: N/A
CASING HAMMER: WEIGHT N/A — DROP N/A	FOREMAN: Tim Kelly
SAMPLER: 4 foot mc samplers	LOGGED BY: Kevin Garrett
SAMPLER HAMMER: WEIGHT N/A — DROP N/A	

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC.	TYPE	RECOV. FT.	PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
R1a (0-3") asphalt R1b (3-14") concrete	1	R1	mc	14/48	0.0	
	2				0.0	
	3					
R2a (0-16") firm, brown, SILT, some fine SAND, trace fine gravel, trace clay (dry) [FILL	4					
R2b (16-30") firm, (rgh) brown, SILT, some fine sand, trace clay	5					
	6	R2	mc	30/48	0.0	
	7				0.0	
	8				0.0	End fill 7.5 ft
R3a (0-9") soft, brown mottled gray, SILT, trace fine sand (moist)	9					Collected sample SB03_5-7 111145
R3b (9-21") stiff, brown SILT, trace fine sand (moist)	10	R3	mc	27/48	0.0	▽ water table 14.5 ft
R3c (21-27") firm, dive gray, SILT, some fine sand, trace clay (moist)	11				0.0	
	12				0.0	Collected sample SB03_13-15 111141
R4a (0-20.) firm, olive mottled with brown SILT, some fine sand, trace clay (moist)	13	R4	mc	34/48	0.0	
	14				0.0	

FILL



LANGAN

JOB NO. 170497201

DATE 5/21/18

LOG OF BORING NO. SB03

SHEET ___ OF ___

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
RUB (20–34) soft, brown fine SAND, some silt, trace fine gravel, trace clay (wet)	15	RA	NC	4/48	0.0 0.0 0.0	
	16					End of boring Cuttings backfilled and permanent well installed
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

LANGAN

LOG OF BORING SB-04 SHEET 1 OF 2

PROJECT	111 Willow Avenue	PROJECT NO.	170497201
LOCATION	Bronx, NY	ELEVATION AND DATUM	N/A
DRILLING AGENCY	AARCO Environmental Services Corp	DATE STARTED 5/23/18	DATE FINISHED 5/23/18
DRILLING EQUIPMENT	Geoprobe 7288 DT	COMPLETION DEPTH 16'	ROCK DEPTH N/A
SIZE AND TYPE OF BIT	2" macrocore	NO. SAMPLES	DIST. 4 / UNDIST. N/A / CORE N/A
CASING	N/A	WATER LEVEL	FIRST 10 / COMPL. N/A / 24 HR. N/A
CASING HAMMER	WEIGHT N/A DROP N/A	FOREMAN	Tim Kelly
SAMPLER	4 bore macrocore liner	LOGGED BY	Kevin Garrett
SAMPLER HAMMER	WEIGHT N/A DROP N/A		

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC.	TYPE	RECOV. FT.	PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
FILL R1a (0-6") loose, light beige, medium SAND, some fine sand, trace fine gravel, concrete (dry) [FILL] R1b (6-10") asphalt R1c (10-17") medium dense, brown, fine SAND, some fine gravel, trace silt, slag, brick (dry) [FILL] R1d (17-19") dense, white, medium SAND, some fine sand (dry) [FILL] R1e (19-25") loose, brown fine SAND, some fine gravel, trace silt (dry) [FILL] R1f (25-34") Hill., brn, SILT, trace m gravel, trace sand (dry) R2 (0-23") dense, brown, fine SAND, some silt, trace fine gravel, trace medium sand (dry)	1 2 3 4 5 6 7 8	S1	MC	34/48	0.0 0.0 0.0 0.0 0.0 0.0	 Sample SB04_1-3 0944 Grab 6ft 256+
	9 10 11 12	S2	MC	23/48	0.0 0.0 0.0 0.0	Sample SB04_10-12 ▽ water table 10 ft Sample SB04_10-12 0955
R3 a (0-3") loose, brown fine SAND, some silt, trace fine gravel (wet) R3 b (3-11") soft, olive, SILT, some fine gravel, trace fine sand (wet) R3c (11-24") soft, black, SILT, trace fine sand, plant fibers, peat-like (wet) R4a (0-21") loose, brown, fine SAND, some silt, plant fibers (wet), grading into R4 b (21-33") firm, olive-grey, SILT, some fine sand (wet)	13 14	S3	MC	24/48	0.0 0.0	
		S4	MC	33/48	0.0	

LANGAN

JOB NO. 170497201
DATE 5/23/18

LOG OF BORING NO. SB04

SHEET 2 OF 2

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
	15	RU	MC	33/48	0 0 0 0 0 0	End of boring 16 ft. Cuttings backfilled and boring patched with concrete.
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

LANGAN

LOG OF BORING SB05 SHEET 1 OF 2

PROJECT: 111 Willow Avenue	PROJECT NO.: 170497201
LOCATION: Bronx, NY	ELEVATION AND DATUM: N/A
DRILLING AGENCY: AARCO Environmental Services Corp	DATE STARTED: 5/21/18 — DATE FINISHED: 5/21/18
DRILLING EQUIPMENT: Geoprobe 7822 DT	COMPLETION DEPTH: 16 — ROCK DEPTH: N/A
SIZE AND TYPE OF BIT: 2" macrocore	NO. SAMPLES: DIST. 4 — UNDIST. N/A — CORE N/A
CASING: N/A	WATER LEVEL: FIRST 11 — COMPL. N/A — 24 HR. N/A
CASING HAMMER: WEIGHT N/A — DROP N/A	FOREMAN: Tim Kelly
SAMPLER: 4 foot macrocore samplers	LOGGED BY: Kevin Garrett
SAMPLER HAMMER: WEIGHT N/A — DROP N/A	

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES: NO. LOC.	TYPE	RECOV. FT.	PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
R1a(0-3) asphalt R1b(3-17") concrete R1c(17-24") loose brown fine SAND, trace fine gravel, trace silt (dry)[FILL]	1 2	R1	MC	24/48	6.0	
FILL R2a(0-4") loose brown fine SAND, trace fine gravel, trace silt (dry)[FILL] R2b(4-17") medium dense brown medium SAND, some fine sand, trace fine gravel, trace silt (dry)	3 4 5					
R2c(17-21") firm, olive, SILT, some fine sand, trace clay (moist)	6	R2	MC	21/48	0.0 0.0 0.0 0.0	
R3a(0-30") firm, olive, SILT, trace fine gravel, trace fine sand (moist to wet)	7 8 9 10 11	R3	MC	30/48	0.0 0.0 0.0 0.0 0.0	End fill 6.5 ft Collect sample SB05_1-2 13:54 Collect sample SB05_9-11 14:00 GW 11ft
R4a(0-2") firm, olive, SILT, trace fine gravel, trace silt (moist) R4b(2-3") soft, brown, SILT, trace clay, plant fibers (moist)	12 13 14	R4	MC	29/48	0.0	



LANGAN

JOB NO. 170497201
DATE 5/21/18

LOG OF BORING NO. SB05

SHEET ____ OF ____

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS/in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
RHc (3-14") soft, brown, SILT, trace fine sand, trace medium sand, trace clay (wet)	15	R4	N	29/48	0-0	
					0-0	
					0-0	
					0-0	
RHd (14-30") firm, olive, SILT, trace fine gravel, trace fine sand (wet)	16				0-0	End of boring Cuttings backfilled, permanent well installed
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

LANGAN

LOG OF BORING SB06 SHEET 1 OF 2

PROJECT: 111 Willow Avenue	PROJECT NO.: 170497201
LOCATION: Bronx, NY	ELEVATION AND DATUM:
DRILLING AGENCY: AARCO Environmental Services Corp	DATE STARTED: 5/23/18 — DATE FINISHED: 5/23/18
DRILLING EQUIPMENT: Geoprobe 7822DT	COMPLETION DEPTH: 16 — ROCK DEPTH: N/A
SIZE AND TYPE OF BIT: 2" macrocore	NO. SAMPLES: DIST. 4 — UNDIST. N/A — CORE N/A
CASING: N/A	WATER LEVEL: FIRST 6 — COMPL. N/A — 24 HR. N/A
CASING HAMMER: WEIGHT N/A — DROP N/A	FOREMAN: Tim Kelly
SAMPLER: 4 foot acetate liner	LOGGED BY: Kevin Garrett
SAMPLER HAMMER: WEIGHT N/A — DROP N/A	

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES: NO. LOC.	TYPE	RECOV. FT.	PENETR. RESIST BL/6 in/.
R1a (0-10") concrete R1b (10-17") firm, brown, SILT, some fine gravel, some fine sand, brick (dry) [FILL]	1	R1	MC	17/48	0.0 0.0 0.0
R2a (0-4") loose, black, medium SAND, some fine sand, some fine gravel, brick (dry) [FILL] R2b (4-8") firm, dark brown, SILT, some fine sand (dry) R2c (8-11") medium dense, grey, medium SAND, some fine sand, trace silt (dry) R2d (11-28") firm, olive, SILT, some fine sand, trace fine gravel (wet)	2 3 4 5 6 7	R2	MC	28/48	0.0 0.0 0.0 0.0
R3 NO RECOVERY	8 9 10	R3	MC	0/48	
R4a (0-4") soft, black, SILT, trace fine sand, dark fibers (wet) R4b (4-14") soft, brown, SILT, trace fine sand (wet) grading into	11 12 13 14	R4	MC	34/48	0.0 0.0

REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)



Later take 6 ft
Sample SB06_4-6 taken 10:54

Sample SB06_6-8 taken 11:03

LANGAN

JOB NO. 170497201
DATE 5/23/18

LOG OF BORING NO. SB06

SHEET 2 OF 2

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
RH c (14-30") stiff, olive, SILT trace fine sand (wet)	15	RH	MC	34/48	0.0	
RH d (30-34") firm, reddish-brown, SILT, some fine sand (wet)	16				0.0	
	17				0.0	End of boring
	18					Cuttings backfilled and permanent well installed.
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

LANGAN

LOG OF BORING SB7 SHEET 1 OF 2

PROJECT 111 Willow Avenue	PROJECT NO. 170497201
LOCATION Bronx, NY	ELEVATION AND DATUM N/A
DRILLING AGENCY AARCO Environmental Services Corp	DATE STARTED 5/23/18 — DATE FINISHED 5/23/18
DRILLING EQUIPMENT Geoprobe 7822 DT	COMPLETION DEPTH 16 — ROCK DEPTH N/A
SIZE AND TYPE OF BIT 2" macrocore	NO. SAMPLES 4 — DIST. — UNDIST. N/A — CORE N/A
CASING N/A	WATER LEVEL FIRST 6 — COMPL. N/A — 24 HR. N/A
CASING HAMMER — WEIGHT N/A — DROP N/A	FOREMAN Tim Kelly
SAMPLER 4 foot macro core	LOGGED BY Kevin Garrett
SAMPLER HAMMER — WEIGHT N/A — DROP N/A	

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in/.
R1a (0-7") concrete	0				0.0
R1b (7-32") dense, brown, fine SAND, some medium sand, some silt, some fine gravel, brick, slag (dry) [FILL]	1			37/48	0.0
R1c (32-37") firm, brown, SILT, trace fine sand, trace fine gravel (dry)	2				0.0
R2a (0-31") stiff, brown mottled with olive, SILT, trace fine sand, trace fine gravel (wet)	3				0.0
R2b (31-34") dense, black, medium SAND, some fine gravel, some fine sand (wet)	4				0.0
R3a (0-16") soft, olive, SILT, trace fine sand (wet)	5			34/48	0.0
R3b (16-33") soft, black, SILT, trace fine sand, plant fibers (wet)	6				0.0
R3c (33-36") loose, olive, fine SAND, some silt, plant fibers (wet)	7				0.0
R4a (0-14") loose, fine SAND, some silt (wet)	8				0.0
R4b (14-28") firm, olive, SILT, trace fine sand (wet)	9				0.0
	10			36/48	0.0
	11				0.0
	12				0.0
	13			37/48	0.0
	14				0.0

REMARKS
(DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)



Water table 6.6 ft
End fill 2.5 ft
Sample SB07_1-3 collected
Sample SBDUP01_052318 collected

LANGAN

JOB NO. 170497201
DATE 05/23/18

LOG OF BORING NO. SB7

SHEET 2 OF 2

	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
	RHC (28-33") dense, brown, fine SAND, some silt (wet)	15	RH	X	33/48	0.0 0.0 0.0 0.0	Sample SB07_13-15 collected End of boring 16 ft. Cuttings backfilled and patched with concrete
		16					
		17					
		18					
		19					
		20					
		21					
		22					
		23					
		24					
		25					
		26					
		27					
		28					
		29					
		30					
		31					

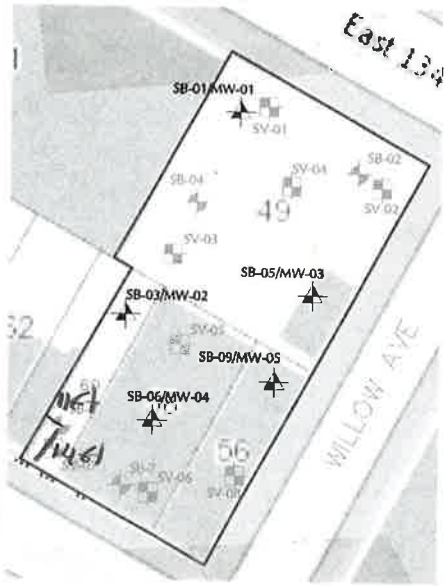
LANGAN

LOG OF BORING SB08 SHEET 1 OF 2

PROJECT: 111 Willow Avenue		PROJECT NO.: 170497201	
LOCATION: Bronx, NY		ELEVATION AND DATUM: N/A	
DRILLING AGENCY: AARCO Environmental Services Corp		DATE STARTED: 5/21/18	DATE FINISHED: 5/21/18
DRILLING EQUIPMENT: Geoprobe 7822DT		COMPLETION DEPTH: 16 ft	ROCK DEPTH: N/A
SIZE AND TYPE OF BIT: 2" macrocore		NO. SAMPLES: DIST. 4	UNDIST. N/A / CORE N/A
CASING: N/A		WATER LEVEL: FIRST 14	COMPL. N/A / 24 HR.
CASING HAMMER: WEIGHT N/A	DROP N/A	FOREMAN: Tim Kelly	
SAMPLER: 4 ft macrocore samples		LOGGED BY: Kevin Garrett	
SAMPLER HAMMER: WEIGHT N/A	DROP N/A		

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.
R1a (0-6") concrete R1b (6-11") loose, brown, medium SAND, trace fine sand, trace fine gravel, trace silt (dry) [FILL] R1c (11-16") loose, dark brown, fine SAND, trace coarse sand, trace silt, plastic (dry) [FILL]	1 2 3	R1	mc	16/48	6.0 6.0 6.0 0.0
FILL R2a (0-3") dense, brown, fine SAND, trace medium sand, trace silt (dry) [FILL] R2b (3-5") loose, grayish brown, fine SAND, trace silt (dry) [FILL] R2c (5.5-23") firm, brown, SILT, trace fine sand, trace clay (dry to moist) [FILL]	4 5 6 7	R2	mc	23/48	0.0 0.0 0.0 0.0 0.0 0.0
R3a (0-7") firm, reddish brown, SILT, trace fine sand, trace clay (dry)	8 9 10	R3	mc	7/48	0.0
R4 (0-24") firm, brown, SILT, some fine sand, some medium sand, trace fine gravel (wet)	11 12 13 14			24/48	0.0 0.0 0.0

REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)



Started 0920

End 6ft 6.5 ft

Sample SB08_0-2 taken 10:32

Collect sample SB08_11-12 10:40

▽ water table 14.61

LANGAN

JOB NO. 170497201
DATE 5/21/18

LOG OF BORING NO. SB 08

SHEET 2 OF 2

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
	15	24	MC	24/48	0.0 6.0 6.0 0.0 2.0	End of boring 16 ft Cuttings backfilled and patched with concrete
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

LANGAN

LOG OF BORING 5009 SHEET 1 OF 1

PROJECT: 111 Willow Avenue	PROJECT NO.: 170497201
LOCATION: Bronx, NY	ELEVATION AND DATUM: N/A
DRILLING AGENCY: AARCO Environmental Services Corp	DATE STARTED: 5/22/18 — DATE FINISHED: 5/22/18
DRILLING EQUIPMENT: Geoprobe 420 M	COMPLETION DEPTH: 9 ft — ROCK DEPTH: N/A
SIZE AND TYPE OF BIT: 2" macrocore	NO. SAMPLES: DIST. 3 — UNDIST. N/A — CORE N/A
CASING: N/A	WATER LEVEL: FIRST 3.5' — COMPL. N/A — 24 HR. N/A
CASING HAMMER: WEIGHT N/A — DROP N/A	FOREMAN: Adam Hutchinson
SAMPLER: 3 6-inch macrocore liner	LOGGED BY: Kevin Garrett
SAMPLER HAMMER: WEIGHT N/A — DROP N/A	

SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO. LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.
R1a (0-2") loose, black, medium SAND, some fine sand, trace fine gravel, brick (dry) [FILL]	1	R1	MC	17/36	0.0 0.0 0.0 0.0
R1b (2-17") firm, olive, SILT, some fine gravel, trace clay (moist) [FILL]	2				
R2a (0-10") firm, olive, SILT, trace clay, trace fine gravel (wet)	3				
R2b (10-30") peat, plant fibers (moist)	4	R2	MC	30/36	0.0 0.0 0.0 0.0 0.0
	5				
R3 (0-25") firm, olive, SILT, some fine sand, plant fibers (wet)	6				
	7	R3	MC	25/36	0.0 0.0 0.0 0.0
	8				
	9				
	10				
	11				
	12				
	13				
	14				

REMARKS
(DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)



Water table 3.5 ft
Sample SB09_0-2 taken 0903
Sample SB04_3-5' taken 0915
Organic odor 4-6 Ft

End of boring 9 ft

Cuttings backfilled and permanent well installed

APPENDIX E

WELL DEVELOPMENT SUMMARY

Well No. MW01

PROJECT		PROJECT NO.	
111 Willow		170497201	
LOCATION		**ELEVATION AND DATUM**	
Bronx		el. N/A NAVD88	
DRILLING AGENCY		**DATE STARTED**	**DATE FINISHED**
AARCO Environmental Services, Corp.		5/21/2018	5/21/2018
DRILLING EQUIPMENT		**DRILLER**	
Geoprobe® 7822 DT		AARCO Environmental Services Corp.	
SIZE AND TYPE OF BIT		**INSPECTOR**	
2-inch Direct Push		Kevin Garrett	
BOREHOLE DIAMETER		**TYPE OF WELL (OVERBURDEN / BEDROCK)**	
2 in		Overburden	
RISER MATERIAL	**DIAMETER**	**TYPE OF BACKFILL MATERIAL**	
PVC	2 in	None	
TYPE OF SCREEN	**DIAMETER**	**TYPE OF WELL PACK**	**TYPE OF SEAL MATERIAL**
PVC No. 20 Slot	2 in	No. 2 Sand	Neat Grout

METHOD OF INSTALLATION

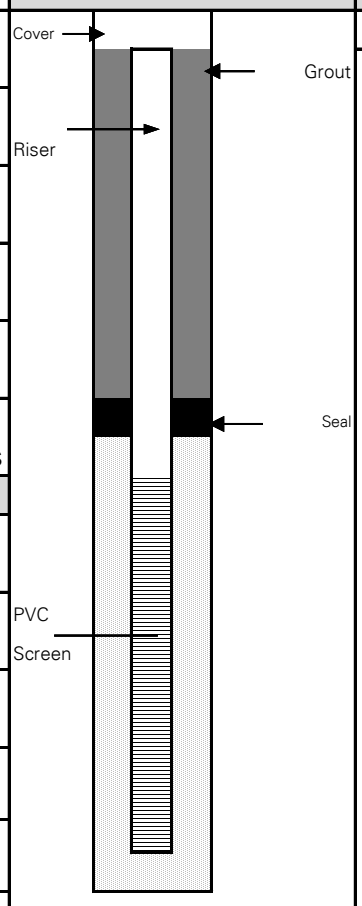
Geoprobe 7822 DT was used to advance the boring to approximately 16 feet bgs. A two-inch (2") PVC monitoring well was installed which consisted of 10' of 20 slot (0.020-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 16 to 6 feet bgs with riser from 6 feet bgs to surface. Wells were finished with a flush mounted road box and concrete pad.

WELL DEVELOPMENT DATA

SURGE BLOCK DIAMETER	N/A	**TYPE PUMP**	Inertial	**DEVELOPMENT CONFIRMATION**
DRILLER OR LANGAN	Langan	**MAX PUMP RATE**	1 LPM	Well developed from 2-4 PM until purged groundwater was no longer turbid or no water was left in well.
NUMBER OF SURGE CYCLES	N/A	**TOTAL VOLUME**	3 gal	

TOP OF CASING	**ELEVATION**	**DEPTH (ft)**		
	N/A	0		
TOP OF SEAL	**ELEVATION**	**DEPTH (ft)**		
	N/A	0		
TOP OF FILTER	**ELEVATION**	**DEPTH (ft)**		
	N/A	0		
TOP OF SCREEN	**ELEVATION**	**DEPTH (ft)**		
	N/A	6.0		
BOTTOM OF BORING	**ELEVATION**	**DEPTH (ft)**		
	N/A	16		
SCREEN LENGTH		10		
SLOT SIZE		No. 20 Slot; 0.020 Inches		

WELL DETAILS



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
	0
	0
	0
	6.00
	16.00

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
N/A	5/24/2018	9.5 ft
N/A		
N/A		
N/A		
N/A		
N/A		

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WELL DEVELOPMENT SUMMARY

Well No. MW02

PROJECT		PROJECT NO.	
111 Willow		170497201	
LOCATION		**ELEVATION AND DATUM**	
Bronx		el. N/A NAVD88	
DRILLING AGENCY		**DATE STARTED**	**DATE FINISHED**
AARCO Environmental Services, Corp.		5/21/2018	5/21/2018
DRILLING EQUIPMENT		**DRILLER**	
Geoprobe® 7822 DT		Tim Kelly	
SIZE AND TYPE OF BIT		**INSPECTOR**	
2-inch Direct Push		Kevin Garrett	
BOREHOLE DIAMETER		**TYPE OF WELL (OVERBURDEN / BEDROCK)**	
2 in		Overburden	
RISER MATERIAL	**DIAMETER**	**TYPE OF BACKFILL MATERIAL**	
PVC	2 in	None	
TYPE OF SCREEN	**DIAMETER**	**TYPE OF WELL PACK**	**TYPE OF SEAL MATERIAL**
PVC No. 20 Slot	2 in	No. 2 Sand	Neat Grout

METHOD OF INSTALLATION

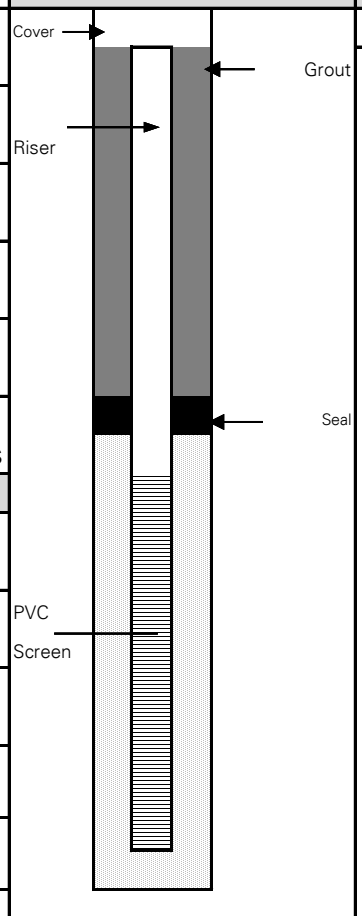
Geoprobe 7822 DT was used to advance the boring to approximately 18 feet bgs. A two-inch (2") PVC monitoring well was installed which consisted of 10' of 20 slot (0.020-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 18 to 8 feet bgs with riser from 8 feet bgs to surface. Wells were finished with a flush mounted road box and concrete pad.

WELL DEVELOPMENT DATA

SURGE BLOCK DIAMETER	N/A	**TYPE PUMP**	Inertial	**DEVELOPMENT CONFIRMATION**
DRILLER OR LANGAN	Driller	**MAX PUMP RATE**	1 LPM	Well developed from 1-2 PM until purged groundwater was no longer turbid.
NUMBER OF SURGE CYCLES	N/A	**TOTAL VOLUME**	2.75 gal	

	ELEVATION	DEPTH (ft)
TOP OF CASING	N/A	0
TOP OF SEAL	N/A	0
TOP OF FILTER	N/A	0
TOP OF SCREEN	N/A	8.0
BOTTOM OF BORING	N/A	18
SCREEN LENGTH		10
SLOT SIZE		No. 20 Slot; 0.020 Inches

WELL DETAILS



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
	0
	0
	8.00
	18.00

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
N/A	5/21/2018	9.4 ft
N/A	5/24/2018	9.14
N/A		
N/A		
N/A		
N/A		

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WELL DEVELOPMENT SUMMARY

Well No. MW03

PROJECT		PROJECT NO.	
111 Willow		170497201	
LOCATION		**ELEVATION AND DATUM**	
Bronx		el. N/A NAVD88	
DRILLING AGENCY		**DATE STARTED**	**DATE FINISHED**
AARCO Environmental Services, Corp.		5/21/2018	5/21/2018
DRILLING EQUIPMENT		**DRILLER**	
Geoprobe® 7822 DT		Tim Kelly	
SIZE AND TYPE OF BIT		**INSPECTOR**	
2-inch Direct Push		Kevin Garrett	
BOREHOLE DIAMETER		**TYPE OF WELL (OVERBURDEN / BEDROCK)**	
2 in		Overburden	
RISER MATERIAL	**DIAMETER**	**TYPE OF BACKFILL MATERIAL**	
PVC	2 in	Sand	
TYPE OF SCREEN	**DIAMETER**	**TYPE OF WELL PACK**	**TYPE OF SEAL MATERIAL**
PVC No. 20 Slot	2 in	No. 2 Sand	Neat Grout

METHOD OF INSTALLATION

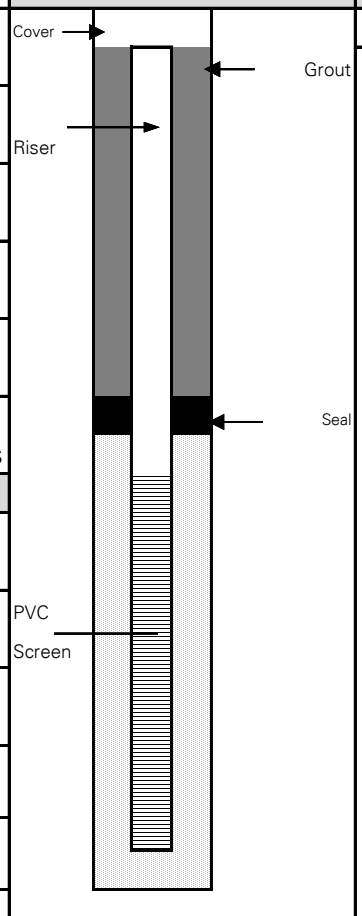
Geoprobe 7822 DT was used to advance the boring to approximately 16 feet bgs. A two-inch (2") PVC monitoring well was installed which consisted of 10' of 20 slot (0.020-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 16 to 6 feet bgs with riser from 6 feet bgs to surface. Wells were finished with a flush mounted road box and concrete pad.

WELL DEVELOPMENT DATA

SURGE BLOCK DIAMETER	N/A	**TYPE PUMP**	Inertial	**DEVELOPMENT CONFIRMATION**
DRILLER OR LANGAN	Driller	**MAX PUMP RATE**	1 LPM	Well developed from 2-2:30 PM until purged groundwater was no longer turbid.
NUMBER OF SURGE CYCLES	N/A	**TOTAL VOLUME**	2.5 gal	

	ELEVATION	DEPTH (ft)
TOP OF CASING	N/A	0
TOP OF SEAL	N/A	0
TOP OF FILTER	N/A	0
TOP OF SCREEN	N/A	6.0
BOTTOM OF BORING	N/A	16
SCREEN LENGTH		10
SLOT SIZE		No. 20 Slot; 0.020 Inches

WELL DETAILS



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
	0
	0
	0
	6.00
	16.00

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
N/A	5/24/2018	7.47 ft
N/A		
N/A		
N/A		
N/A		
N/A		

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21 Penn Plaza, 360 West 31st Street, 8th Floor, New York

WELL DEVELOPMENT SUMMARY

Well No. MW04

PROJECT		PROJECT NO.	
111 Willow		170497201	
LOCATION		**ELEVATION AND DATUM**	
Bronx		el. N/A NAVD88	
DRILLING AGENCY		**DATE STARTED**	**DATE FINISHED**
AARCO Environmental Services, Corp.		5/23/2018	5/23/2018
DRILLING EQUIPMENT		**DRILLER**	
Geoprobe® 7822 DT		Tim Kelly	
SIZE AND TYPE OF BIT		**INSPECTOR**	
2-inch Direct Push		Kevin Garrett	
BOREHOLE DIAMETER		**TYPE OF WELL (OVERBURDEN / BEDROCK)**	
2 in		Overburden	
RISER MATERIAL	**DIAMETER**	**TYPE OF BACKFILL MATERIAL**	
PVC	2 in	None	
TYPE OF SCREEN	**DIAMETER**	**TYPE OF WELL PACK**	**TYPE OF SEAL MATERIAL**
PVC No. 20 Slot	2 in	No. 2 Sand	Neat Grout

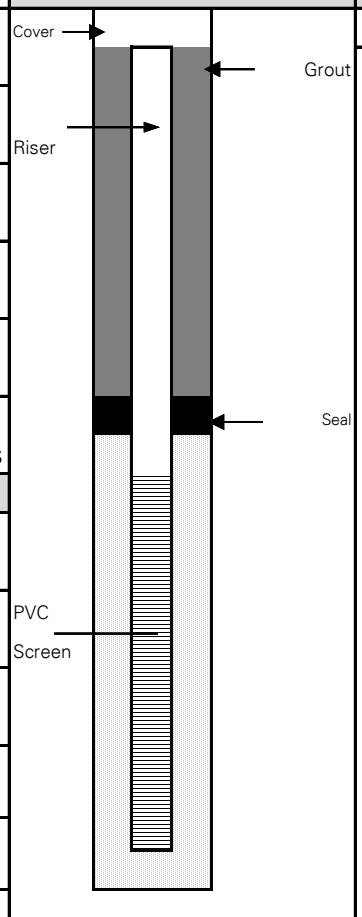
METHOD OF INSTALLATION

Geoprobe 7822 DT was used to advance the boring to approximately 16 feet bgs. A two-inch (2") PVC monitoring well was installed which consisted of 10' of 20 slot (0.020-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 16 to 6 feet bgs with riser from 6 feet bgs to surface. Wells were finished with a flush mounted road box and concrete pad.

WELL DEVELOPMENT DATA

SURGE BLOCK DIAMETER	N/A	**TYPE PUMP**	Peristaltic	**DEVELOPMENT CONFIRMATION**
DRILLER OR LANGAN	Langan	**MAX PUMP RATE**	1 LPM	Well developed from 2-3 PM until purged groundwater was no longer turbid.
NUMBER OF SURGE CYCLES	N/A	**TOTAL VOLUME**	3.25 gal	

TOP OF CASING	**ELEVATION**	**DEPTH (ft)**	**WELL DETAILS**	**SUMMARY SOIL CLASSIFICATION** / **DEPTH (FT)**
	N/A	0		
TOP OF SEAL	**ELEVATION**	**DEPTH (ft)**		0
	N/A	0		
TOP OF FILTER	**ELEVATION**	**DEPTH (ft)**		
	N/A	0		
TOP OF SCREEN	**ELEVATION**	**DEPTH (ft)**		
	N/A	6.0		
BOTTOM OF BORING	**ELEVATION**	**DEPTH (ft)**		
	N/A	16		
SCREEN LENGTH		10		0
SLOT SIZE		No. 20 Slot; 0.020 Inches		0
				6.00
				16.00



GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
N/A	5/24/2018	7.2 ft
N/A		
N/A		
N/A		
N/A		
N/A		

LANGAN Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

21 Penn Plaza, 360 West 31st Street, 8th Floor, New York

WELL DEVELOPMENT SUMMARY

Well No. MW05

PROJECT		PROJECT NO.	
111 Willow		170497201	
LOCATION		**ELEVATION AND DATUM**	
Bronx		el. N/A NAVD88	
DRILLING AGENCY		**DATE STARTED**	**DATE FINISHED**
AARCO Environmental Services, Corp.		5/22/2018	5/22/2018
DRILLING EQUIPMENT		**DRILLER**	
Geoprobe® 420 M		Adam Hutchinson	
SIZE AND TYPE OF BIT		**INSPECTOR**	
2-inch Direct Push		Kevin Garrett	
BOREHOLE DIAMETER		**TYPE OF WELL (OVERBURDEN / BEDROCK)**	
2 in		Overburden	
RISER MATERIAL	**DIAMETER**	**TYPE OF BACKFILL MATERIAL**	
PVC	2 in	None	
TYPE OF SCREEN	**DIAMETER**	**TYPE OF WELL PACK**	**TYPE OF SEAL MATERIAL**
PVC No. 20 Slot	2 in	No. 2 Sand	Neat Grout

METHOD OF INSTALLATION

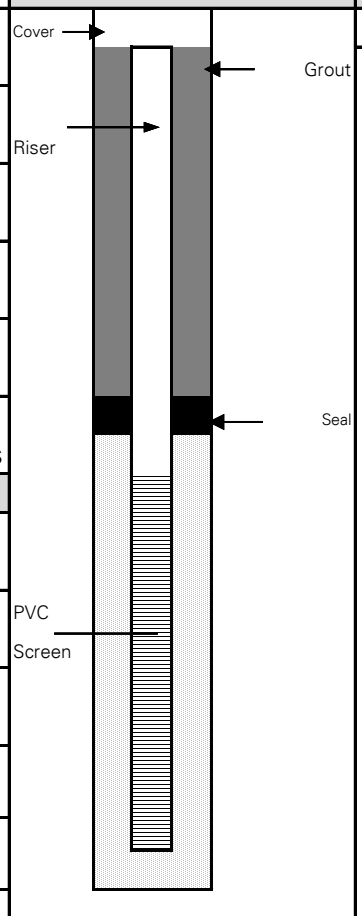
Geoprobe 420 M was used to advance the boring to approximately 11 feet bgs. A two-inch (2") PVC monitoring well was installed which consisted of 10' of 20 slot (0.020-inch) well screen, and a solid 2" PVC riser. Well screen was installed from approximately 11 to 1 feet bgs with riser from 1 feet bgs to surface. Wells were finished with a flush mounted road box and concrete pad.

WELL DEVELOPMENT DATA

SURGE BLOCK DIAMETER	N/A	**TYPE PUMP**	Peristaltic	**DEVELOPMENT CONFIRMATION**
DRILLER OR LANGAN	Driller	**MAX PUMP RATE**	1 LPM	Well developed from 12-2 PM until purged groundwater was no longer turbid.
NUMBER OF SURGE CYCLES	N/A	**TOTAL VOLUME**	2.5 gal	

	ELEVATION	DEPTH (ft)
TOP OF CASING	N/A	0
TOP OF SEAL	N/A	0
TOP OF FILTER	N/A	0
TOP OF SCREEN	N/A	0.5
BOTTOM OF BORING	N/A	10.5
SCREEN LENGTH		10
SLOT SIZE		No. 20 Slot; 0.020 Inches

WELL DETAILS



SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
	0
	0
	0
	0.50
	10.50

GROUNDWATER ELEVATIONS

ELEVATION	DATE	DEPTH TO WATER
N/A	5/22/2018	0.8 ft
N/A		
N/A		
N/A		
N/A		
N/A		

LANGAN Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

21 Penn Plaza, 360 West 31st Street, 8th Floor, New York

APPENDIX F

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV01_052218

PROJECT: 111 Willow	**PROJECT NO.:** 170497201
LOCATION: Bronx	**SURFACE ELEVATION AND DATUM:** N/A
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services, Corp.	**INSTALLATION DATE STARTED:** 5/21/2018 **DATE FINISHED:** 5/21/2018
INSTALLATION FOREMAN: Tim Kelly	**SAMPLE DATE STARTED:** 5/22/2018 **DATE FINISHED:** 5/22/2018
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa Canister
INSPECTOR: Kevin Garrett	**SAMPLER:** Kevin Garrett
POTENTIAL SAMPLE INTERFERENCES: None	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 60's, overcast Wind: 5 ESE Precipitation: rain Pressure: 30.08

METHOD OF INSTALLATION AND PURGING:

Advance Geoprobe 7822 DT to 7 feet below grade surface (bgs), install 2-inch soil vapor probe, backfill with No. 2 sand around probe, seal to surface with hydrated bentonite.

TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** None
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2 in	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.26	
PURGE FLOW RATE (ML/MIN):	66	
PID AFTER PURGE (PPM):	3.2	
HELIUM TESTS	Pre-sampling	Post-sampling
HELIUM TEST IN BUCKET(%):	12.6%	15.6%
HELIUM TEST IN TUBE (PPM):	0.0%	0.0%
SAMPLE START TIME:	8:10	
SAMPLE STOP TIME:	10:10	
TOTAL SAMPLE TIME (MIN):	120	
REGULATOR FLOW RATE (L/MIN):	0.0083	
VOLUME OF SAMPLE (LITERS):	1	
PID AFTER SAMPLE (PPM):	0	
SAMPLE MOISTURE CONTENT:	N/A	
CAN SERIAL NUMBER:	1188	
REGULATOR SERIAL NUMBER:	1157	
CAN START VACUUM PRESS. (" HG):	30	
CAN STOP VACUUM PRESS. (" HG):	5	

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	**DEPTH (FEET FROM SURFACE)**	**NOTES**
SURFACE		
Top of Seal	0.00	
Top of Pack	1.00	
Probe Depth	7.00	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV02_052318

PROJECT: 111 Willow	**PROJECT NO.:** 170497201
LOCATION: Bronx	**SURFACE ELEVATION AND DATUM:** N/A
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services, Corp.	**INSTALLATION DATE STARTED:** 5/22/2018 **DATE FINISHED:** 5/22/2018
INSTALLATION FOREMAN: Tim Kelly	**SAMPLE DATE STARTED:** 5/23/2018 **DATE FINISHED:** 5/23/2018
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa Canister
INSPECTOR: Kevin Garrett	**SAMPLER:** Kevin Garrett
POTENTIAL SAMPLE INTERFERENCES: none	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 70s-80s, cloudy Wind: 0-2.5 WNW Precipitation: none Pressure: 30.38

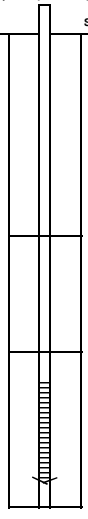
METHOD OF INSTALLATION AND PURGING:

Advance Geoprobe 7822 DT to 7 feet below grade surface (bgs), install 2-inch soil vapor probe, backfill with No. 2 sand around probe, seal to surface with hydrated bentonite.

TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** None
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2 in	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.26
PURGE FLOW RATE (ML/MIN):	66
PID AFTER PURGE (PPM):	0
HELIUM TESTS	Pre-sampling / Post-sampling
HELIUM TEST IN BUCKET(%):	14.8% / 17.4%
HELIUM TEST IN TUBE (PPM):	0.0% / 0.0%
SAMPLE START TIME:	10:28
SAMPLE STOP TIME:	12:28
TOTAL SAMPLE TIME (MIN):	120
REGULATOR FLOW RATE (L/MIN):	0.0083
VOLUME OF SAMPLE (LITERS):	1
PID AFTER SAMPLE (PPM):	0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	471
REGULATOR SERIAL NUMBER:	382
CAN START VACUUM PRESS. (" HG):	30+
CAN STOP VACUUM PRESS. (" HG):	9.9

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)



DEPTH (FEET FROM SURFACE)	NOTES
Top of Seal 0.00	
Top of Pack 0.50	
Probe Depth 5.00	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

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21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV03_052218

PROJECT: 111 Willow	**PROJECT NO.:** 170497201
LOCATION: Bronx	**SURFACE ELEVATION AND DATUM:** N/A
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services, Corp.	**INSTALLATION DATE STARTED:** 5/21/2018 **DATE FINISHED:** 5/21/2018
INSTALLATION FOREMAN: Tim Kelly	**SAMPLE DATE STARTED:** 5/22/2018 **DATE FINISHED:** 5/22/2018
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa Canister
INSPECTOR: Kevin Garrett	**SAMPLER:** Kevin Garrett
POTENTIAL SAMPLE INTERFERENCES: none	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 70s-80s, sunmy Wind: 0-2.5 WNW Precipitation: none Pressure: 30.38

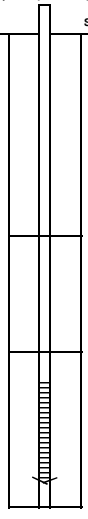
METHOD OF INSTALLATION AND PURGING:

Advance Geoprobe 7822 DT to 7 feet below grade surface (bgs), install 2-inch soil vapor probe, backfill with No. 2 sand around probe, seal to surface with hydrated bentonite.

TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** None
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2 in	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.26
PURGE FLOW RATE (ML/MIN):	66
PID AFTER PURGE (PPM):	4
HELIUM TESTS	Pre-sampling / Post-sampling
HELIUM TEST IN BUCKET(%):	14.9% / 17.4%
HELIUM TEST IN TUBE (PPM):	0.0% / 0.0%
SAMPLE START TIME:	8:14
SAMPLE STOP TIME:	10:14
TOTAL SAMPLE TIME (MIN):	120
REGULATOR FLOW RATE (L/MIN):	0.0083
VOLUME OF SAMPLE (LITERS):	1
PID AFTER SAMPLE (PPM):	0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	327
REGULATOR SERIAL NUMBER:	155
CAN START VACUUM PRESS. (" HG):	30+
CAN STOP VACUUM PRESS. (" HG):	7.9

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)



	DEPTH (FEET FROM SURFACE)	NOTES
Top of Seal	0 ft	
Top of Pack	1.00	
Probe Depth	7.00	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

* All samples collected in 1-L summa canisters

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV04_052218

PROJECT: 111 Willow	**PROJECT NO.:** 170497201
LOCATION: Bronx	**SURFACE ELEVATION AND DATUM:** N/A
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services, Corp.	**INSTALLATION DATE STARTED:** 5/21/2018 **DATE FINISHED:** 5/21/2018
INSTALLATION FOREMAN: Tim Kelly	**SAMPLE DATE STARTED:** 5/22/2018 **DATE FINISHED:** 5/22/2018
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa Canister
INSPECTOR: Kevin Garrett	**SAMPLER:** Kevin Garrett
POTENTIAL SAMPLE INTERFERENCES: None	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 60's; Wind: 5 ESE; Precipitation: rain; Pressure: 30.08

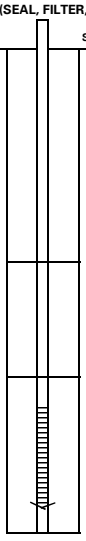
METHOD OF INSTALLATION AND PURGING:

Advance Geoprobe 7822 DT to 7 feet below grade surface (bgs), install 2-inch soil vapor probe, backfill with No. 2 sand around probe, seal to surface with hydrated bentonite.

TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** None
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2 in	**FILTER PACK MATERIAL (Sand or Glass Beads):** Sand

PURGE VOLUME (L):	0.26
PURGE FLOW RATE (ML/MIN):	66
PID AFTER PURGE (PPM):	0
HELIUM TESTS	Pre-sampling / Post-sampling
HELIUM TEST IN BUCKET(%):	14.7% / 13.6%
HELIUM TEST IN TUBE (PPM):	0.0% / 0.0%
SAMPLE START TIME:	12:15
SAMPLE STOP TIME:	14:15
TOTAL SAMPLE TIME (MIN):	120
REGULATOR FLOW RATE (L/MIN):	0.0083
VOLUME OF SAMPLE (LITERS):	1
PID AFTER SAMPLE (PPM):	0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	1175
REGULATOR SERIAL NUMBER:	265
CAN START VACUUM PRESS. (" HG):	30
CAN STOP VACUUM PRESS. (" HG):	6.5

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)



	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE		
Top of Seal	0.00	
Top of Pack	1.00	
Probe Depth	7.00	
SURFACE		

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

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SUB-SLAB SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV05_052218

PROJECT: 111 Willow	**PROJECT NO.:** 170497201
LOCATION: Bronx	**SURFACE ELEVATION AND DATUM:** N/A
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services, Corp.	**INSTALLATION DATE STARTED:** 5/22/2018 **DATE FINISHED:** 5/22/2018
INSTALLATION FOREMAN: Tim Kelly	**SAMPLE DATE STARTED:** 5/23/2018 **DATE FINISHED:** 5/23/2018
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa Canister
INSPECTOR: Kevin Garrett	**SAMPLER:** Kevin Garrett
POTENTIAL SAMPLE INTERFERENCES: none	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 70s-80s, cloudy; Wind: 7 NW; Precipitation: none; Pressure: 29.93

METHOD OF INSTALLATION AND PURGING:

AARCO advanced subslab vapor point to 3-inches below the top of the slab with a hand drill. A small amount of No. 2 sand was backfilled into the borehole to set the vapor tubing. No. 2 sand was backfilled around the tubing to 1 inch bgs, and the remainder of the borehole was sealed with bentonite.

TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** None
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: None	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1 in	**FILTER PACK MATERIAL (Sand or Glass Beads):** None (Prefered)

PURGE VOLUME (L):	0.26
PURGE FLOW RATE (ML/MIN):	66
PID AFTER PURGE (PPM):	4
HELIUM TESTS	Pre-sampling / Post-sampling
HELIUM TEST IN BUCKET(%):	17.6% / 17.4%
HELIUM TEST IN TUBE (PPM):	0.0% / 0.0%
SAMPLE START TIME:	13:19
SAMPLE STOP TIME:	14:53
TOTAL SAMPLE TIME (MIN):	94
REGULATOR FLOW RATE (L/MIN):	0.0083
VOLUME OF SAMPLE (LITERS):	0.78
PID AFTER SAMPLE (PPM):	0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	248
REGULATOR SERIAL NUMBER:	279
CAN START VACUUM PRESS. (" HG):	27.8
CAN STOP VACUUM PRESS. (" HG):	4.9

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
Top of Seal	0 in	
Top of Pack	1 in	
Tube Depth	3 in	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

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SUB-SLAB SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV06_052218

PROJECT: 111 Willow	**PROJECT NO.:** 170497201
LOCATION: Bronx	**SURFACE ELEVATION AND DATUM:** N/A
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services, Corp.	**INSTALLATION DATE STARTED:** 5/22/2018 **DATE FINISHED:** 5/22/2018
INSTALLATION FOREMAN: Tim Kelly	**SAMPLE DATE STARTED:** 5/23/2018 **DATE FINISHED:** 5/23/2018
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa Canister
INSPECTOR: Kevin Garrett	**SAMPLER:** Kevin Garrett
POTENTIAL SAMPLE INTERFERENCES: none	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 70s-80s, cloudy; Wind: 0-2.5 WNW; Precipitation: none; Pressure: 30.38

METHOD OF INSTALLATION AND PURGING:

AARCO advanced subslab vapor point to 3-inches below the top of the slab with a hand drill. A small amount of No. 2 sand was backfilled into the borehole to set the vapor tubing. No. 2 sand was backfilled around the tubing to 1 inch bgs, and the remainder of the borehole was sealed with bentonite.

TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** None
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: None	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1 in	**FILTER PACK MATERIAL (Sand or Glass Beads):** None (Prefered)

PURGE VOLUME (L):	0.26
PURGE FLOW RATE (ML/MIN):	66
PID AFTER PURGE (PPM):	4
HELIUM TESTS	Pre-sampling / Post-sampling
HELIUM TEST IN BUCKET(%):	14.8% / 17.4%
HELIUM TEST IN TUBE (PPM):	0.0% / 0.0%
SAMPLE START TIME:	13:15
SAMPLE STOP TIME:	15:15
TOTAL SAMPLE TIME (MIN):	120
REGULATOR FLOW RATE (L/MIN):	0.0083
VOLUME OF SAMPLE (LITERS):	1
PID AFTER SAMPLE (PPM):	0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	136
REGULATOR SERIAL NUMBER:	1166
CAN START VACUUM PRESS. (" HG):	30+
CAN STOP VACUUM PRESS. (" HG):	4.79

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
Top of Seal	0 in	
Top of Pack	1 in	
Tube Depth	3 in	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV07_052118

PROJECT: 111 Willow	**PROJECT NO.:** 170497201
LOCATION: Bronx	**SURFACE ELEVATION AND DATUM:** N/A
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services, Corp.	**INSTALLATION DATE STARTED:** 5/21/2018 **DATE FINISHED:** 5/21/2018
INSTALLATION FOREMAN: Tim Kelly	**SAMPLE DATE STARTED:** 5/21/2018 **DATE FINISHED:** 5/21/2018
INSTALLATION EQUIPMENT: Geoprobe® 7822 DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa Canister
INSPECTOR: Kevin Garrett	**SAMPLER:** Kevin Garrett
POTENTIAL SAMPLE INTERFERENCES: none	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 70s-80s, sunmy Wind: 0-2.5 WNW Precipitation: none Pressure: 30.38

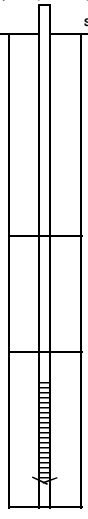
METHOD OF INSTALLATION AND PURGING:

Advance Geoprobe 7822 DT to 7 feet below grade surface (bgs), install 2-inch soil vapor probe, backfill with No. 2 sand around probe, seal to surface with hydrated bentonite.

TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** None
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2 in	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.26
PURGE FLOW RATE (ML/MIN):	66
PID AFTER PURGE (PPM):	0
HELIUM TESTS	Pre-sampling / Post-sampling
HELIUM TEST IN BUCKET(%):	21.5% / 17.4%
HELIUM TEST IN TUBE (PPM):	0.0% / 0.0%
SAMPLE START TIME:	12:37
SAMPLE STOP TIME:	14:37
TOTAL SAMPLE TIME (MIN):	120
REGULATOR FLOW RATE (L/MIN):	0.0083
VOLUME OF SAMPLE (LITERS):	1
PID AFTER SAMPLE (PPM):	0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	1180
REGULATOR SERIAL NUMBER:	175
CAN START VACUUM PRESS. (" HG):	30+
CAN STOP VACUUM PRESS. (" HG):	6.1

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)



	DEPTH (FEET FROM SURFACE)	NOTES
Top of Seal	0 ft	
Top of Pack	1.00	
Probe Depth	12.00	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

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SUB-SLAB SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV08_052218

PROJECT: 111 Willo	**PROJECT NO.:** 170497201
LOCATION: Bronx	**SURFACE ELEVATION AND DATUM:** N/A
DRILLING FIRM OR LANGAN INSTALLER: AARCO Environmental Services, Corp.	**INSTALLATION DATE STARTED:** 5/22/2018 **DATE FINISHED:** 5/22/2018
INSTALLATION FOREMAN: Adam Hutchinson	**SAMPLE DATE STARTED:** 5/22/2018 **DATE FINISHED:** 5/22/2018
INSTALLATION EQUIPMENT: Portable Electric Rig	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa Canister
INSPECTOR: Kevin Garrett	**SAMPLER:** Kevin Garrett
POTENTIAL SAMPLE INTERFERENCES: None	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: indoors Wind: indoors Precipitation: indoors Pressure: 30.08

METHOD OF INSTALLATION AND PURGING:

AARCO advanced subslab vapor point to 3-inches below the top of the slab with a hand drill. A small amount of No. 2 sand was backfilled into the borehole to set the vapor tubing. No. 2 sand was backfilled around the tubing to 1 inch bgs, and the remainder of the borehole was sealed with bentonite.

TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** None
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: None	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 1 in	**FILTER PACK MATERIAL (Sand or Glass Beads):** None (Prefered)

PURGE VOLUME (L):	0.26
PURGE FLOW RATE (ML/MIN):	66
PID AFTER PURGE (PPM):	0
HELIUM TESTS	Pre-sampling / Post-sampling
HELIUM TEST IN BUCKET(%):	13.7% / 16.4%
HELIUM TEST IN TUBE (PPM):	0.0% / 0.0%
SAMPLE START TIME:	11:59
SAMPLE STOP TIME:	13:59
TOTAL SAMPLE TIME (MIN):	120
REGULATOR FLOW RATE (L/MIN):	0.0083
VOLUME OF SAMPLE (LITERS):	1
PID AFTER SAMPLE (PPM):	0
SAMPLE MOISTURE CONTENT:	N/A
CAN SERIAL NUMBER:	229
REGULATOR SERIAL NUMBER:	1187
CAN START VACUUM PRESS. (" HG):	29.9
CAN STOP VACUUM PRESS. (" HG):	29

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE / SURFACE		
Top of Seal	0 in	
Top of Pack	1 in	
Tube Depth	3 in	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

Sample was not collected due to field equipment malfunction

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APPENDIX G

GROUND WATER SAMPLE FIELD INFORMATION FORM

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	**111 Willow**	**Well No:**	MW01	**Water Quality Device Model:**	**Horiba**	**Weather:**	indoors	**Sample(s):**	MW01_052418
Project Number:	**170497201**	**Well Depth:**	10 ft	**Pine Number:**	**21069**	**Background PID (ppm):**	0		
Site Location:	**Bronx**	**Well Diameter:**	2 in	**Pump Make and Model:**	**Pine peri**	**PID Beneath Inner Cap (ppm):**	0		
Sampling Personnel:	**Kevin Garrett**	**Well Screen Interval:**	6 – 16	**Pine Number:**	**19061**	**Pump Intake Depth:**	16.00	**Sample Date:**	5/24/2018
				Tubing Diameter:	**1/4" ID**	**Depth to Water Before Purge:**	9.5	**Sample Time:**	14:10

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
9:01	19.61	7.29	26	1.48	134.0	5.73	10.63		0.1		**N/A**
9:06	19.61	7.28	15	1.47	210.0	4.24	11.71		0.3		**N/A**
9:11	19.99	7.65	15	1.45	222.0	4.58	12.56		0.5		**N**
9:16	20.20	7.93	10	1.43	221.0	4.39	13.47		0.75		**N**
9:21	20.18	8.25	16	1.41	200.0	4.62	14.67		1		**N**
9:26	20.30	8.02	10	1.42	194.0	3.94	15.51		1.25		**N**
										No water remaining, sample collected after recharge	**N**
											N
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Notes:

1. Well depths and groundwater depths were measured in feet below the top of well casing.
2. Well and tubing diameters are measured in inches.
3. PID = Photoionization Detector
4. PPM = Parts per million
5. pH = Hydrogen ion concentration
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
8. DTW = Depth to water
9. mS/cm = milli-Siemans per centimeter
10. NTU = Nephelometric Turbidity Unit

GROUND WATER SAMPLE FIELD INFORMATION FORM

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	111 Willow	Well No:	MW02	Water Quality Device Model:	Horiba	Weather:	indoors	Sample(s):	MW02_052418
Project Number:	170497201	Well Depth:	18	Pine Number:	21069	Background PID (ppm):	0		
Site Location:	Bronx	Well Diameter:	2 in	Pump Make and Model:	Pine peri	PID Beneath Inner Cap (ppm):	57.8		
Sampling Personnel:	Kevin Garrett	Well Screen Interval:	9 – 19	Pine Number:	19061	Pump Intake Depth:	18.00	Sample Date:	5/23/2018
				Tubing Diameter:	1/4" ID	Depth to Water Before Purge:	9.14	Sample Time:	13:23

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
12:22	19.69	7.16	5	1.64	664.0	5.47	9.45		0.25	Solvent-like odor	**N/A**
12:27	19.27	6.95	12	1.77	1000.0	0.47	9.45	0.1	0.75		**N/A**
12:32	20.57	6.88	6	1.82	483.0	0.00	9.46	0.05	1		**N**
12:37	20.81	6.86	6	1.86	276.0	0.00	9.30	0.05	1.25		**N**
12:42	21.07	6.84	6	1.87	171.0	0.00	9.32	0.05	1.5		**N**
12:47	21.13	6.84	7	1.89	123.0	0.00	9.32	0.04	1.7		**N**
12:52	21.03	6.83	5	1.88	91.10	0.00	9.32	0.04	1.9		**N**
12:57	21.25	6.83	8	1.89	89.5	0.00	9.27	0.04	2.1		**N**
13:02	20.96	6.83	7	1.89	68.0	0.00	9.27	0.03	2.25		**N**
13:07	21.05	6.83	10	1.88	69.2	0.00	9.27	0.05	2.5		**N**
13:12	21.06	6.83	10	1.87	58.2	0.00	9.26	0.05	2.75		**N**
13:17	20.91	6.83	10	1.88	60.3	0.00	9.26	0.05	3		**N**
13:22	21.26	6.83	8	1.87	56.7	0.00	9.25	0.05	3.25		**Y**
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N

Notes:

1. Well depths and groundwater depths were measured in feet below the top of well casing.
2. Well and tubing diameters are measured in inches.
3. PID = Photoionization Detector
4. PPM = Parts per million
5. pH = Hydrogen ion concentration
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
8. DTW = Depth to water
9. mS/cm = milli-Siemans per centimeter
10. NTU = Nephelometric Turbidity Unit

GROUND WATER SAMPLE FIELD INFORMATION FORM

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	111 Willow	Well No:	MW03	Water Quality Device Model:	Horiba	Weather:	60s-80s, sunny	Sample(s):	MW03_052418
Project Number:	170497201	Well Depth:	10 ft	Pine Number:	21069	Background PID (ppm):	0		
Site Location:	Bronx	Well Diameter:	2 in	Pump Make and Model:	Pine peri	PID Beneath Inner Cap (ppm):	0		
Sampling Personnel:	Kevin Garrett	Well Screen Interval:	6 16	Pine Number:	19061	Pump Intake Depth:	16.00	Sample Date:	5/24/2018
				Tubing Diameter:	1/4" ID	Depth to Water Before Purge:	7.47	Sample Time:	14:55

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
7:49	17.58	6.97	42	2.26	75.3	8.43	9.00		0.25		N/A
7:54	16.53	6.39	35	2.14	6.2	6.33	10.50	0.05	0.5		N/A
7:59	16.65	6.84	35	2.18	2.9	5.47	11.79	0.02	0.6		N
8:04	16.79	6.91	31	2.22	17.3	4.83	12.85	0.03	0.75		N
8:09	17.04	6.90	31	2.22	25.4	4.81	13.80	0.05	1		N
8:14	16.96	6.94	28	2.22	29.2	4.57	14.62	0.02	1.1		N
8:19	17.05	6.94	26	2.20	28.0	4.87	15.23	0.03	1.25		N
8:24	17.09	6.93	26	2.23	30.0	4.47	16.10	0.05	1.5		Y
										No water left in well, sample to be collected later in day	N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N

Notes:

1. Well depths and groundwater depths were measured in feet below the top of well casing.
2. Well and tubing diameters are measured in inches.
3. PID = Photoionization Detector
4. PPM = Parts per million
5. pH = Hydrogen ion concentration
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
8. DTW = Depth to water
9. mS/cm = milli-Siemans per centimeter
10. NTU = Nephelometric Turbidity Unit

GROUND WATER SAMPLE FIELD INFORMATION FORM

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	111 Willow	Well No:	MW04	Water Quality Device Model:	Horiba	Weather:	indoors	Sample(s):	MW04_052418
Project Number:	170497201	Well Depth:	10 ft	Pine Number:	21069	Background PID (ppm):	0		MWDUP01_052418
Site Location:	Bronx	Well Diameter:	2 in	Pump Make and Model:	Pine peri	PID Beneath Inner Cap (ppm):	2.8		
Sampling Personnel:	Kevin Garrett	Well Screen Interval:	6 16	Pine Number:	19061	Pump Intake Depth:	16.00	Sample Date:	5/24/2018
				Tubing Diameter:	1/4" ID	Depth to Water Before Purge:	7.2	Sample Time:	11:11

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
10:10	21.36	6.79	-24	1.76	1000.0	0.00	8.00	0.1	0.5		N/A
10:15	20.96	6.77	-42	1.75	1000.0	0.00	7.85	0.05	0.75		N/A
10:20	21.14	6.69	-30	1.57	1000.0	0.00	7.45	0.02	0.85		N
10:25	21.10	6.68	-32	1.56	1000.0	0.00	7.42	0.05	1.1		N
10:30	20.93	6.68	-40	1.57	674.0	0.00	7.74	0.08	1.5		N
10:35	20.90	6.67	-39	1.56	510.0	0.00	7.80	0.05	1.75		N
10:40	20.74	6.68	-40	1.55	420.0	0.00	7.80	0.03	1.9		N
10:45	20.76	6.67	-37	1.54	371.0	0.00	7.80	0.07	2.25		N
10:50	20.75	6.67	-38	1.54	405.0	0.00	7.81	0.05	2.5		N
10:55	20.75	6.67	-36	1.53	427.0	0.00	7.79	0.05	2.75		N
11:00	20.71	6.67	-35	1.53	328.0	0.00	7.80	0.05	3		N
11:05	20.68	6.67	-35	1.53	291.0	0.00	7.80	0.04	3.2		N
11:10	20.71	6.67	-36	1.52	147.0	0.00	7.80	0.06	3.5	Sample taken after 1 hr	N
										Sample MWDUP01_052418 taken	N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N

Notes:

1. Well depths and groundwater depths were measured in feet below the top of well casing.
2. Well and tubing diameters are measured in inches.
3. PID = Photoionization Detector
4. PPM = Parts per million
5. pH = Hydrogen ion concentration
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
8. DTW = Depth to water
9. mS/cm = milli-Siemans per centimeter
10. NTU = Nephelometric Turbidity Unit

GROUND WATER SAMPLE FIELD INFORMATION FORM

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information	
Project Name:	111 Willow	Well No:	MW05	Water Quality Device Model:	Horiba	Weather:	indoors	Sample(s):	MW05_052418
Project Number:	170497201	Well Depth:	10 ft	Pine Number:	21069	Background PID (ppm):	0		
Site Location:	Bronx	Well Diameter:	2 in	Pump Make and Model:	Pine peri	PID Beneath Inner Cap (ppm):	0		
Sampling Personnel:	Kevin Garrett	Well Screen Interval:	1 11	Pine Number:	19061	Pump Intake Depth:	11.00	Sample Date:	5/24/2018
				Tubing Diameter:	1/4" ID	Depth to Water Before Purge:	3.1	Sample Time:	14:00

STABILIZATION = 3 successive readings within limits

TIME	TEMP °Celsius (+/- 3%)	PH (+/- 0.1)	ORP mV (+/- 10mV)	CONDUCTIVITY mS/cm (+/- 3%)	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
BEGIN PURGING											
8:07	18.31	7.12	-190	4.09	128.0	3.12	4.34	0.1	0.25		**N/A**
8:12	18.09	7.10	-179	4.07	108.0	1.87	6.30	0.05	0.5		**N/A**
8:17	18.08	7.13	-181	4.06	116.0	1.54	7.23	0.05	0.75		**N**
8:22	18.15	7.15	-120	3.98	190.0	2.68	8.99	0.05	1		**N**
8:27	18.09	7.16	-114	3.97	199.0	2.65	9.94	0.05	1.25		**N**
										Water measurements taken on 5/23/18, sample taken on 5/24/18 due to poor recharge	**N**
											N
											N
											N
											N
											N
											N
											N
											N
											N
											N
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											N
											N
											N

Notes:

1. Well depths and groundwater depths were measured in feet below the top of well casing.
2. Well and tubing diameters are measured in inches.
3. PID = Photoionization Detector
4. PPM = Parts per million
5. pH = Hydrogen ion concentration
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)
8. DTW = Depth to water
9. mS/cm = milli-Siemans per centimeter
10. NTU = Nephelometric Turbidity Unit

APPENDIX H

Hampton-Clarke Report Of Analysis

Client: Langan Engineering & Environmental **HC Project #:** 8052203

Project: 111 Willow 170497201

Sample ID: SB01_1-2 **Collection Date: 5/21/2018**
Lab#: AD04329-001 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

% Solids SM2540G

Analyte	DF	Units	RL	Result
%Solids	**1**	**percent**		**87**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.011	ND
2,4-D	1	mg/kg	0.011	ND
Dicamba	1	mg/kg	0.011	ND
Silvex	1	mg/kg	0.011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	986.98	1000	25	138	99	
Dcaa-Surrogate	993.56	1000	25	138	99	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	**1**	**mg/kg**	**0.096**	**0.54**

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0057	ND
Aldrin	1	mg/kg	0.0057	ND
Alpha-BHC	1	mg/kg	0.0011	ND
beta-BHC	1	mg/kg	0.0011	ND
Chlordane (Total)	1	mg/kg	0.0057	ND
delta-BHC	1	mg/kg	0.0057	ND
Dieldrin	1	mg/kg	0.0011	ND
Endosulfan I	1	mg/kg	0.0057	ND
Endosulfan II	1	mg/kg	0.0057	ND
Endosulfan Sulfate	1	mg/kg	0.0057	ND
Endrin	1	mg/kg	0.0057	ND
Endrin Aldehyde	1	mg/kg	0.0057	ND
Endrin Ketone	1	mg/kg	0.0057	ND
gamma-BHC	1	mg/kg	0.0011	ND
Heptachlor	1	mg/kg	0.0057	ND
Heptachlor Epoxide	1	mg/kg	0.0057	ND
Methoxychlor	1	mg/kg	0.0057	ND
p,p'-DDD	1	mg/kg	0.0029	ND
p,p'-DDE	1	mg/kg	0.0029	ND
p,p'-DDT	1	mg/kg	0.0029	ND
Toxaphene	1	mg/kg	0.029	ND
y-Chlordane	1	mg/kg	0.0057	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	75.88	100	37	141	76	
TCMX-Surrogate	82.26	100	37	141	82	
DCB-Surrogate	79.89	100	33	146	80	
DCB-Surrogate	82.32	100	33	146	82	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.029	ND
Aroclor-1016	1	mg/kg	0.029	ND
Aroclor-1221	1	mg/kg	0.029	ND
Aroclor-1232	1	mg/kg	0.029	ND
Aroclor-1242	1	mg/kg	0.029	ND
Aroclor-1248	1	mg/kg	0.029	ND
Aroclor-1254	1	mg/kg	0.029	ND
Aroclor-1260	1	mg/kg	0.029	ND

Aroclor-1262	1	mg/kg	0.029		ND
Aroclor-1268	1	mg/kg	0.029		ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	75.85	100	37	141	76	
TCMX-Surrogate	86.40	100	37	141	86	
DCB-Surrogate	61.22	100	34	146	61	
DCB-Surrogate	70.79	100	34	146	71	

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.038	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.038	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.038	ND
2,4,5-Trichlorophenol	1	mg/kg	0.038	ND
2,4,6-Trichlorophenol	1	mg/kg	0.038	ND
2,4-Dichlorophenol	1	mg/kg	0.0096	ND
2,4-Dimethylphenol	1	mg/kg	0.0096	ND
2,4-Dinitrophenol	1	mg/kg	0.19	ND
2,4-Dinitrotoluene	1	mg/kg	0.038	ND
2,6-Dinitrotoluene	1	mg/kg	0.038	ND
2-Chloronaphthalene	1	mg/kg	0.038	ND
2-Chlorophenol	1	mg/kg	0.038	ND
2-Methylnaphthalene	1	mg/kg	0.038	ND
2-Methylphenol	1	mg/kg	0.0096	ND
2-Nitroaniline	1	mg/kg	0.038	ND
2-Nitrophenol	1	mg/kg	0.038	ND
3&4-Methylphenol	1	mg/kg	0.0096	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.038	ND
3-Nitroaniline	1	mg/kg	0.038	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.19	ND
4-Bromophenyl-phenylether	1	mg/kg	0.038	ND
4-Chloro-3-methylphenol	1	mg/kg	0.038	ND
4-Chloroaniline	1	mg/kg	0.0096	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.038	ND
4-Nitroaniline	1	mg/kg	0.038	ND
4-Nitrophenol	1	mg/kg	0.038	ND
Acenaphthene	1	mg/kg	0.038	ND
Acenaphthylene	1	mg/kg	0.038	ND
Acetophenone	1	mg/kg	0.038	ND
Anthracene	1	mg/kg	0.038	ND
Atrazine	1	mg/kg	0.038	ND
Benzaldehyde	1	mg/kg	0.038	ND
Benzo[a]anthracene	**1**	**mg/kg**	**0.038**	**0.078**
Benzo[a]pyrene	**1**	**mg/kg**	**0.038**	**0.077**
Benzo[b]fluoranthene	**1**	**mg/kg**	**0.038**	**0.099**
Benzo[g,h,i]perylene	**1**	**mg/kg**	**0.038**	**0.058**
Benzo[k]fluoranthene	1	mg/kg	0.038	ND
bis(2-Chloroethoxy)methane	1	mg/kg	0.038	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.0096	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.038	ND
bis(2-Ethylhexyl)phthalate	1	mg/kg	0.038	ND
Butylbenzylphthalate	1	mg/kg	0.038	ND
Caprolactam	1	mg/kg	0.038	ND
Carbazole	1	mg/kg	0.038	ND
Chrysene	**1**	**mg/kg**	**0.038**	**0.071**
Dibenzo[a,h]anthracene	1	mg/kg	0.038	ND
Dibenzofuran	1	mg/kg	0.0096	ND
Diethylphthalate	1	mg/kg	0.038	ND
Dimethylphthalate	1	mg/kg	0.038	ND
Di-n-butylphthalate	1	mg/kg	0.0096	ND
Di-n-octylphthalate	1	mg/kg	0.038	ND
Fluoranthene	**1**	**mg/kg**	**0.038**	**0.14**
Fluorene	1	mg/kg	0.038	ND
Hexachlorobenzene	1	mg/kg	0.038	ND
Hexachlorobutadiene	1	mg/kg	0.038	ND
Hexachlorocyclopentadiene	1	mg/kg	0.038	ND
Hexachloroethane	1	mg/kg	0.038	ND
Indeno[1,2,3-cd]pyrene	**1**	**mg/kg**	**0.038**	**0.047**
Isophorone	1	mg/kg	0.038	ND

Naphthalene	1	mg/kg	0.0096	ND	
Nitrobenzene	1	mg/kg	0.038	ND	
N-Nitroso-di-n-propylamine	1	mg/kg	0.0096	ND	
N-Nitrosodiphenylamine	1	mg/kg	0.038	ND	
Pentachlorophenol	1	mg/kg	0.19	ND	
Phenanthrene	**1**	**mg/kg**	**0.038**	**0.085**	
Phenol	1	mg/kg	0.038	ND	
Pyrene	**1**	**mg/kg**	**0.038**	**0.14**	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	40.75	50	58	148	81	
Phenol-d5	73.47	100	49	129	73	
Nitrobenzene-d5	32.92	50	52	129	66	
2-Fluorophenol	65.65	100	43	128	66	
2-Fluorobiphenyl	33.47	50	58	125	67	
2,4,6-Tribromophenol	68.52	100	54	145	69	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**230**	**20000**
Barium	**1**	**mg/kg**	**11**	**200**
Calcium	**1**	**mg/kg**	**1100**	**9400**
Chromium	**1**	**mg/kg**	**5.7**	**31**
Cobalt	**1**	**mg/kg**	**2.9**	**14**
Copper	**1**	**mg/kg**	**5.7**	**83**
Iron	**1**	**mg/kg**	**230**	**39000**
Lead	**1**	**mg/kg**	**5.7**	**300**
Magnesium	**1**	**mg/kg**	**570**	**9600**
Manganese	**1**	**mg/kg**	**11**	**510**
Nickel	**1**	**mg/kg**	**5.7**	**34**
Potassium	**1**	**mg/kg**	**570**	**4800**
Sodium	**1**	**mg/kg**	**290**	**360**
Vanadium	**1**	**mg/kg**	**11**	**120**
Zinc	**1**	**mg/kg**	**11**	**360**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	0.92	ND
Arsenic	**1**	**mg/kg**	**0.23**	**4.5**
Beryllium	**1**	**mg/kg**	**0.23**	**0.38**
Cadmium	1	mg/kg	0.46	ND
Selenium	1	mg/kg	2.3	ND
Silver	**1**	**mg/kg**	**0.23**	**0.24**
Thallium	1	mg/kg	0.46	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.852	mg/kg	0.0020	ND
1,1,1-Trichloroethane	0.852	mg/kg	0.0020	ND
1,1,2,2-Tetrachloroethane	0.852	mg/kg	0.0020	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.852	mg/kg	0.0020	ND
1,1,2-Trichloroethane	0.852	mg/kg	0.0020	ND
1,1-Dichloroethane	0.852	mg/kg	0.0020	ND
1,1-Dichloroethene	0.852	mg/kg	0.0020	ND
1,1-Dichloropropene	0.852	mg/kg	0.0020	ND
1,2,3-Trichlorobenzene	0.852	mg/kg	0.0020	ND
1,2,3-Trichloropropane	0.852	mg/kg	0.0020	ND
1,2,4,5-Tetramethylbenzene	0.852	mg/kg	0.0020	ND
1,2,4-Trichlorobenzene	0.852	mg/kg	0.0020	ND
1,2,4-Trimethylbenzene	0.852	mg/kg	0.00098	ND
1,2-Dibromo-3-chloropropane	0.852	mg/kg	0.0020	ND
1,2-Dibromoethane	0.852	mg/kg	0.00098	ND
1,2-Dichlorobenzene	0.852	mg/kg	0.0020	ND
1,2-Dichloroethane	0.852	mg/kg	0.0020	ND
1,2-Dichloropropane	0.852	mg/kg	0.0020	ND
1,3,5-Trimethylbenzene	0.852	mg/kg	0.00098	ND
1,3-Dichlorobenzene	0.852	mg/kg	0.0020	ND
1,3-Dichloropropane	0.852	mg/kg	0.0020	ND
1,4-Dichlorobenzene	0.852	mg/kg	0.0020	ND

Sample ID: SB01_1-2 **Collection Date: 5/21/2018**
Lab#: AD04329-001 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

1,4-Dioxane	0.852	mg/kg	0.098	ND
2,2-Dichloropropane	0.852	mg/kg	0.0020	ND
2-Butanone	0.852	mg/kg	0.0020	ND
2-Chlorotoluene	0.852	mg/kg	0.0020	ND
2-Hexanone	0.852	mg/kg	0.0020	ND
4-Chlorotoluene	0.852	mg/kg	0.0020	ND
4-Isopropyltoluene	0.852	mg/kg	0.00098	ND
4-Methyl-2-pentanone	0.852	mg/kg	0.0020	ND
Acetone	0.852	mg/kg	0.0098	ND
Acrolein	0.852	mg/kg	0.0098	ND
Acrylonitrile	0.852	mg/kg	0.0020	ND
Benzene	0.852	mg/kg	0.00098	ND
Bromobenzene	0.852	mg/kg	0.0020	ND
Bromochloromethane	0.852	mg/kg	0.0020	ND
Bromodichloromethane	0.852	mg/kg	0.0020	ND
Bromoform	0.852	mg/kg	0.0020	ND
Bromomethane	0.852	mg/kg	0.0020	ND
Carbon disulfide	0.852	mg/kg	0.0020	ND
Carbon tetrachloride	0.852	mg/kg	0.0020	ND
Chlorobenzene	0.852	mg/kg	0.0020	ND
Chloroethane	0.852	mg/kg	0.0020	ND
Chloroform	**0.852**	**mg/kg**	**0.0020**	**0.0035**
Chloromethane	0.852	mg/kg	0.0020	ND
cis-1,2-Dichloroethene	0.852	mg/kg	0.0020	ND
cis-1,3-Dichloropropene	0.852	mg/kg	0.0020	ND
Cyclohexane	0.852	mg/kg	0.0020	ND
Dibromochloromethane	0.852	mg/kg	0.0020	ND
Dibromomethane	0.852	mg/kg	0.0020	ND
Dichlorodifluoromethane	0.852	mg/kg	0.0020	ND
Ethylbenzene	0.852	mg/kg	0.00098	ND
Hexachlorobutadiene	0.852	mg/kg	0.0020	ND
Isopropylbenzene	0.852	mg/kg	0.00098	ND
m&p-Xylenes	0.852	mg/kg	0.00098	ND
Methyl Acetate	0.852	mg/kg	0.0020	ND
Methylcyclohexane	0.852	mg/kg	0.0020	ND
Methylene chloride	0.852	mg/kg	0.0020	ND
Methyl-t-butyl ether	0.852	mg/kg	0.00098	ND
n-Butylbenzene	0.852	mg/kg	0.00098	ND
n-Propylbenzene	0.852	mg/kg	0.00098	ND
o-Xylene	0.852	mg/kg	0.00098	ND
sec-Butylbenzene	0.852	mg/kg	0.00098	ND
Styrene	0.852	mg/kg	0.0020	ND
t-Butylbenzene	0.852	mg/kg	0.00098	ND
Tetrachloroethene	0.852	mg/kg	0.0020	ND
Toluene	0.852	mg/kg	0.00098	ND
trans-1,2-Dichloroethene	0.852	mg/kg	0.0020	ND
trans-1,3-Dichloropropene	0.852	mg/kg	0.0020	ND
trans-1,4-Dichloro-2-butene	0.852	mg/kg	0.0020	ND
Trichloroethene	0.852	mg/kg	0.0020	ND
Trichlorofluoromethane	0.852	mg/kg	0.0020	ND
Vinyl chloride	0.852	mg/kg	0.0020	ND
Xylenes (Total)	0.852	mg/kg	0.00098	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	28.68	30	68	122	96	
Dibromofluoromethane	31.24	30	63	140	104	
Bromofluorobenzene	29.43	30	64	129	98	
1,2-Dichloroethane-d4	32.45	30	63	143	108	

Sample ID: SB01_10-11 | **Collection Date: 5/21/2018**
Lab#: AD04329-002 | **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	**1**	**percent**		**86**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.012	ND
2,4-D	1	mg/kg	0.012	ND
Dicamba	1	mg/kg	0.012	ND
Silvex	1	mg/kg	0.012	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	815.13	1000	25	138	82	
Dcaa-Surrogate	864.06	1000	25	138	86	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.097	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0058	ND
Aldrin	1	mg/kg	0.0058	ND
Alpha-BHC	1	mg/kg	0.0012	ND
beta-BHC	1	mg/kg	0.0012	ND
Chlordane (Total)	1	mg/kg	0.0058	ND
delta-BHC	1	mg/kg	0.0058	ND
Dieldrin	1	mg/kg	0.0012	ND
Endosulfan I	1	mg/kg	0.0058	ND
Endosulfan II	1	mg/kg	0.0058	ND
Endosulfan Sulfate	1	mg/kg	0.0058	ND
Endrin	1	mg/kg	0.0058	ND
Endrin Aldehyde	1	mg/kg	0.0058	ND
Endrin Ketone	1	mg/kg	0.0058	ND
gamma-BHC	1	mg/kg	0.0012	ND
Heptachlor	1	mg/kg	0.0058	ND
Heptachlor Epoxide	1	mg/kg	0.0058	ND
Methoxychlor	1	mg/kg	0.0058	ND
p,p'-DDD	1	mg/kg	0.0029	ND
p,p'-DDE	1	mg/kg	0.0029	ND
p,p'-DDT	1	mg/kg	0.0029	ND
Toxaphene	1	mg/kg	0.029	ND
y-Chlordane	1	mg/kg	0.0058	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	77.55	100	37	141	78	
TCMX-Surrogate	83.51	100	37	141	84	
DCB-Surrogate	82.91	100	33	146	83	
DCB-Surrogate	88.32	100	33	146	88	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.029	ND
Aroclor-1016	1	mg/kg	0.029	ND
Aroclor-1221	1	mg/kg	0.029	ND
Aroclor-1232	1	mg/kg	0.029	ND
Aroclor-1242	1	mg/kg	0.029	ND
Aroclor-1248	1	mg/kg	0.029	ND
Aroclor-1254	1	mg/kg	0.029	ND
Aroclor-1260	1	mg/kg	0.029	ND
Aroclor-1262	1	mg/kg	0.029	ND
Aroclor-1268	1	mg/kg	0.029	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	82.85	100	37	141	83	
TCMX-Surrogate	92.26	100	37	141	92	
DCB-Surrogate	63.25	100	34	146	63	
DCB-Surrogate	72.99	100	34	146	73	

Sample ID: SB01_10-11 **Collection Date:** 5/21/2018
Lab#: AD04329-002 **Receipt Date:** 5/21/2018
Matrix: Soil/Encore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.039	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.039	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.039	ND
2,4,5-Trichlorophenol	1	mg/kg	0.039	ND
2,4,6-Trichlorophenol	1	mg/kg	0.039	ND
2,4-Dichlorophenol	1	mg/kg	0.0097	ND
2,4-Dimethylphenol	1	mg/kg	0.0097	ND
2,4-Dinitrophenol	1	mg/kg	0.19	ND
2,4-Dinitrotoluene	1	mg/kg	0.039	ND
2,6-Dinitrotoluene	1	mg/kg	0.039	ND
2-Chloronaphthalene	1	mg/kg	0.039	ND
2-Chlorophenol	1	mg/kg	0.039	ND
2-Methylnaphthalene	1	mg/kg	0.039	ND
2-Methylphenol	1	mg/kg	0.0097	ND
2-Nitroaniline	1	mg/kg	0.039	ND
2-Nitrophenol	1	mg/kg	0.039	ND
3&4-Methylphenol	1	mg/kg	0.0097	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.039	ND
3-Nitroaniline	1	mg/kg	0.039	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.19	ND
4-Bromophenyl-phenylether	1	mg/kg	0.039	ND
4-Chloro-3-methylphenol	1	mg/kg	0.039	ND
4-Chloroaniline	1	mg/kg	0.0097	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.039	ND
4-Nitroaniline	1	mg/kg	0.039	ND
4-Nitrophenol	1	mg/kg	0.039	ND
Acenaphthene	1	mg/kg	0.039	ND
Acenaphthylene	1	mg/kg	0.039	ND
Acetophenone	1	mg/kg	0.039	ND
Anthracene	1	mg/kg	0.039	ND
Atrazine	1	mg/kg	0.039	ND
Benzaldehyde	1	mg/kg	0.039	ND
Benzo[a]anthracene	1	mg/kg	0.039	ND
Benzo[a]pyrene	1	mg/kg	0.039	ND
Benzo[b]fluoranthene	1	mg/kg	0.039	ND
Benzo[g,h,i]perylene	1	mg/kg	0.039	ND
Benzo[k]fluoranthene	1	mg/kg	0.039	ND
bis(2-Chloroethoxy)methane	1	mg/kg	0.039	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.0097	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.039	ND
bis(2-Ethylhexyl)phthalate	1	mg/kg	0.039	ND
Butylbenzylphthalate	1	mg/kg	0.039	ND
Caprolactam	1	mg/kg	0.039	ND
Carbazole	1	mg/kg	0.039	ND
Chrysene	1	mg/kg	0.039	ND
Dibenzo[a,h]anthracene	1	mg/kg	0.039	ND
Dibenzofuran	1	mg/kg	0.0097	ND
Diethylphthalate	1	mg/kg	0.039	ND
Dimethylphthalate	1	mg/kg	0.039	ND
Di-n-butylphthalate	1	mg/kg	0.0097	ND
Di-n-octylphthalate	1	mg/kg	0.039	ND
Fluoranthene	1	mg/kg	0.039	ND
Fluorene	1	mg/kg	0.039	ND
Hexachlorobenzene	1	mg/kg	0.039	ND
Hexachlorobutadiene	1	mg/kg	0.039	ND
Hexachlorocyclopentadiene	1	mg/kg	0.039	ND
Hexachloroethane	1	mg/kg	0.039	ND
Indeno[1,2,3-cd]pyrene	1	mg/kg	0.039	ND
Isophorone	1	mg/kg	0.039	ND
Naphthalene	1	mg/kg	0.0097	ND
Nitrobenzene	1	mg/kg	0.039	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.0097	ND
N-Nitrosodiphenylamine	1	mg/kg	0.039	ND
Pentachlorophenol	1	mg/kg	0.19	ND
Phenanthrene	1	mg/kg	0.039	ND
Phenol	1	mg/kg	0.039	ND

Pyrene	1	mg/kg	0.039		ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	44.52	50	58	148	89	
Phenol-d5	70.66	100	49	129	71	
Nitrobenzene-d5	31.26	50	52	129	63	
2-Fluorophenol	63.70	100	43	128	64	
2-Fluorobiphenyl	32.13	50	58	125	64	
2,4,6-Tribromophenol	70.45	100	54	145	70	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**230**	**19000**
Barium	**1**	**mg/kg**	**12**	**110**
Calcium	**1**	**mg/kg**	**1200**	**31000**
Chromium	**1**	**mg/kg**	**5.8**	**48**
Cobalt	**1**	**mg/kg**	**2.9**	**14**
Copper	**1**	**mg/kg**	**5.8**	**25**
Iron	**1**	**mg/kg**	**230**	**36000**
Lead	**1**	**mg/kg**	**5.8**	**15**
Magnesium	**1**	**mg/kg**	**580**	**19000**
Manganese	**1**	**mg/kg**	**12**	**410**
Nickel	**1**	**mg/kg**	**5.8**	**25**
Potassium	**1**	**mg/kg**	**580**	**3600**
Sodium	1	mg/kg	290	ND
Vanadium	**1**	**mg/kg**	**12**	**47**
Zinc	**1**	**mg/kg**	**12**	**86**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	0.93	ND
Arsenic	**1**	**mg/kg**	**0.23**	**2.9**
Beryllium	**2**	**mg/kg**	**0.47**	**0.67**
Cadmium	1	mg/kg	0.47	ND
Selenium	1	mg/kg	2.3	ND
Silver	1	mg/kg	0.23	ND
Thallium	1	mg/kg	0.47	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.699	mg/kg	0.0016	ND
1,1,1-Trichloroethane	0.699	mg/kg	0.0016	ND
1,1,2,2-Tetrachloroethane	0.699	mg/kg	0.0016	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.699	mg/kg	0.0016	ND
1,1,2-Trichloroethane	0.699	mg/kg	0.0016	ND
1,1-Dichloroethane	0.699	mg/kg	0.0016	ND
1,1-Dichloroethene	0.699	mg/kg	0.0016	ND
1,1-Dichloropropene	0.699	mg/kg	0.0016	ND
1,2,3-Trichlorobenzene	0.699	mg/kg	0.0016	ND
1,2,3-Trichloropropane	0.699	mg/kg	0.0016	ND
1,2,4,5-Tetramethylbenzene	0.699	mg/kg	0.0016	ND
1,2,4-Trichlorobenzene	0.699	mg/kg	0.0016	ND
1,2,4-Trimethylbenzene	0.699	mg/kg	0.00081	ND
1,2-Dibromo-3-chloropropane	0.699	mg/kg	0.0016	ND
1,2-Dibromoethane	0.699	mg/kg	0.00081	ND
1,2-Dichlorobenzene	0.699	mg/kg	0.0016	ND
1,2-Dichloroethane	0.699	mg/kg	0.0016	ND
1,2-Dichloropropane	0.699	mg/kg	0.0016	ND
1,3,5-Trimethylbenzene	0.699	mg/kg	0.00081	ND
1,3-Dichlorobenzene	0.699	mg/kg	0.0016	ND
1,3-Dichloropropane	0.699	mg/kg	0.0016	ND
1,4-Dichlorobenzene	0.699	mg/kg	0.0016	ND
1,4-Dioxane	0.699	mg/kg	0.081	ND
2,2-Dichloropropane	0.699	mg/kg	0.0016	ND
2-Butanone	0.699	mg/kg	0.0016	ND
2-Chlorotoluene	0.699	mg/kg	0.0016	ND
2-Hexanone	0.699	mg/kg	0.0016	ND
4-Chlorotoluene	0.699	mg/kg	0.0016	ND
4-Isopropyltoluene	0.699	mg/kg	0.00081	ND

Sample ID: SB01_10-11 **Collection Date: 5/21/2018**
Lab#: AD04329-002 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

4-Methyl-2-pentanone	0.699	mg/kg	0.0016	ND
Acetone	0.699	mg/kg	0.0081	ND
Acrolein	0.699	mg/kg	0.0081	ND
Acrylonitrile	0.699	mg/kg	0.0016	ND
Benzene	0.699	mg/kg	0.00081	ND
Bromobenzene	0.699	mg/kg	0.0016	ND
Bromochloromethane	0.699	mg/kg	0.0016	ND
Bromodichloromethane	0.699	mg/kg	0.0016	ND
Bromoform	0.699	mg/kg	0.0016	ND
Bromomethane	0.699	mg/kg	0.0016	ND
Carbon disulfide	0.699	mg/kg	0.0016	ND
Carbon tetrachloride	0.699	mg/kg	0.0016	ND
Chlorobenzene	0.699	mg/kg	0.0016	ND
Chloroethane	0.699	mg/kg	0.0016	ND
Chloroform	0.699	mg/kg	0.0016	ND
Chloromethane	0.699	mg/kg	0.0016	ND
cis-1,2-Dichloroethene	0.699	mg/kg	0.0016	ND
cis-1,3-Dichloropropene	0.699	mg/kg	0.0016	ND
Cyclohexane	0.699	mg/kg	0.0016	ND
Dibromochloromethane	0.699	mg/kg	0.0016	ND
Dibromomethane	0.699	mg/kg	0.0016	ND
Dichlorodifluoromethane	0.699	mg/kg	0.0016	ND
Ethylbenzene	0.699	mg/kg	0.00081	ND
Hexachlorobutadiene	0.699	mg/kg	0.0016	ND
Isopropylbenzene	0.699	mg/kg	0.00081	ND
m&p-Xylenes	0.699	mg/kg	0.00081	ND
Methyl Acetate	0.699	mg/kg	0.0016	ND
Methylcyclohexane	0.699	mg/kg	0.0016	ND
Methylene chloride	0.699	mg/kg	0.0016	ND
Methyl-t-butyl ether	0.699	mg/kg	0.00081	ND
n-Butylbenzene	0.699	mg/kg	0.00081	ND
n-Propylbenzene	0.699	mg/kg	0.00081	ND
o-Xylene	0.699	mg/kg	0.00081	ND
sec-Butylbenzene	0.699	mg/kg	0.00081	ND
Styrene	0.699	mg/kg	0.0016	ND
t-Butylbenzene	0.699	mg/kg	0.00081	ND
Tetrachloroethene	0.699	mg/kg	0.0016	ND
Toluene	0.699	mg/kg	0.00081	ND
trans-1,2-Dichloroethene	0.699	mg/kg	0.0016	ND
trans-1,3-Dichloropropene	0.699	mg/kg	0.0016	ND
trans-1,4-Dichloro-2-butene	0.699	mg/kg	0.0016	ND
Trichloroethene	0.699	mg/kg	0.0016	ND
Trichlorofluoromethane	0.699	mg/kg	0.0016	ND
Vinyl chloride	0.699	mg/kg	0.0016	ND
Xylenes (Total)	0.699	mg/kg	0.00081	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	27.50	30	68	122	92	
Dibromofluoromethane	32.29	30	63	140	108	
Bromofluorobenzene	26.21	30	64	129	87	
1,2-Dichloroethane-d4	32.02	30	63	143	107	

Sample ID: SB05_1-2 **Collection Date: 5/21/2018**
Lab#: AD04329-003 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

% Solids SM2540G

Analyte	DF	Units	RL	Result
%Solids	**1**	**percent**		**90**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.011	ND
2,4-D	1	mg/kg	0.011	ND
Dicamba	1	mg/kg	0.011	ND
Silvex	1	mg/kg	0.011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	961.53	1000	25	138	96	
Dcaa-Surrogate	1130.64	1000	25	138	113	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	**1**	**mg/kg**	**0.093**	**0.14**

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0056	ND
Aldrin	1	mg/kg	0.0056	ND
Alpha-BHC	1	mg/kg	0.0011	ND
beta-BHC	1	mg/kg	0.0011	ND
Chlordane (Total)	1	mg/kg	0.0056	ND
delta-BHC	1	mg/kg	0.0056	ND
Dieldrin	1	mg/kg	0.0011	ND
Endosulfan I	1	mg/kg	0.0056	ND
Endosulfan II	1	mg/kg	0.0056	ND
Endosulfan Sulfate	1	mg/kg	0.0056	ND
Endrin	1	mg/kg	0.0056	ND
Endrin Aldehyde	1	mg/kg	0.0056	ND
Endrin Ketone	1	mg/kg	0.0056	ND
gamma-BHC	1	mg/kg	0.0011	ND
Heptachlor	1	mg/kg	0.0056	ND
Heptachlor Epoxide	1	mg/kg	0.0056	ND
Methoxychlor	1	mg/kg	0.0056	ND
p,p'-DDD	1	mg/kg	0.0028	ND
p,p'-DDE	1	mg/kg	0.0028	ND
p,p'-DDT	1	mg/kg	0.0028	ND
Toxaphene	1	mg/kg	0.028	ND
y-Chlordane	1	mg/kg	0.0056	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	81.16	100	37	141	81	
TCMX-Surrogate	73.34	100	37	141	73	
DCB-Surrogate	506.97	100	33	146	507	S8
DCB-Surrogate	76.11	100	33	146	76	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.028	ND
Aroclor-1016	1	mg/kg	0.028	ND
Aroclor-1221	1	mg/kg	0.028	ND
Aroclor-1232	1	mg/kg	0.028	ND
Aroclor-1242	1	mg/kg	0.028	ND
Aroclor-1248	1	mg/kg	0.028	ND
Aroclor-1254	1	mg/kg	0.028	ND
Aroclor-1260	1	mg/kg	0.028	ND
Aroclor-1262	1	mg/kg	0.028	ND
Aroclor-1268	1	mg/kg	0.028	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	85.38	100	37	141	85	
TCMX-Surrogate	89.34	100	37	141	89	
DCB-Surrogate	61.22	100	34	146	61	
DCB-Surrogate	75.38	100	34	146	75	

Sample ID: SB05_1-2 **Collection Date: 5/21/2018**
Lab#: AD04329-003 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	**5**	**mg/kg**	**0.19**	**0.24**
1,2,4,5-Tetrachlorobenzene	5	mg/kg	0.19	ND
2,3,4,6-Tetrachlorophenol	5	mg/kg	0.19	ND
2,4,5-Trichlorophenol	5	mg/kg	0.19	ND
2,4,6-Trichlorophenol	5	mg/kg	0.19	ND
2,4-Dichlorophenol	5	mg/kg	0.046	ND
2,4-Dimethylphenol	**5**	**mg/kg**	**0.046**	**0.050**
2,4-Dinitrophenol	5	mg/kg	0.93	ND
2,4-Dinitrotoluene	5	mg/kg	0.19	ND
2,6-Dinitrotoluene	5	mg/kg	0.19	ND
2-Chloronaphthalene	5	mg/kg	0.19	ND
2-Chlorophenol	5	mg/kg	0.19	ND
2-Methylnaphthalene	**5**	**mg/kg**	**0.19**	**1.1**
2-Methylphenol	5	mg/kg	0.046	ND
2-Nitroaniline	5	mg/kg	0.19	ND
2-Nitrophenol	5	mg/kg	0.19	ND
3&4-Methylphenol	**5**	**mg/kg**	**0.046**	**0.10**
3,3'-Dichlorobenzidine	5	mg/kg	0.19	ND
3-Nitroaniline	5	mg/kg	0.19	ND
4,6-Dinitro-2-methylphenol	5	mg/kg	0.93	ND
4-Bromophenyl-phenylether	5	mg/kg	0.19	ND
4-Chloro-3-methylphenol	5	mg/kg	0.19	ND
4-Chloroaniline	5	mg/kg	0.046	ND
4-Chlorophenyl-phenylether	5	mg/kg	0.19	ND
4-Nitroaniline	5	mg/kg	0.19	ND
4-Nitrophenol	5	mg/kg	0.19	ND
Acenaphthene	**5**	**mg/kg**	**0.19**	**1.6**
Acenaphthylene	5	mg/kg	0.19	ND
Acetophenone	5	mg/kg	0.19	ND
Anthracene	**5**	**mg/kg**	**0.19**	**2.3**
Atrazine	5	mg/kg	0.19	ND
Benzaldehyde	5	mg/kg	0.19	ND
Benzo[a]anthracene	**5**	**mg/kg**	**0.19**	**3.7**
Benzo[a]pyrene	**5**	**mg/kg**	**0.19**	**3.4**
Benzo[b]fluoranthene	**5**	**mg/kg**	**0.19**	**4.2**
Benzo[g,h,i]perylene	**5**	**mg/kg**	**0.19**	**2.0**
Benzo[k]fluoranthene	**5**	**mg/kg**	**0.19**	**1.3**
bis(2-Chloroethoxy)methane	5	mg/kg	0.19	ND
bis(2-Chloroethyl)ether	5	mg/kg	0.046	ND
bis(2-Chloroisopropyl)ether	5	mg/kg	0.19	ND
bis(2-Ethylhexyl)phthalate	5	mg/kg	0.19	ND
Butylbenzylphthalate	5	mg/kg	0.19	ND
Caprolactam	5	mg/kg	0.19	ND
Carbazole	**5**	**mg/kg**	**0.19**	**1.0**
Chrysene	**5**	**mg/kg**	**0.19**	**2.9**
Dibenzo[a,h]anthracene	**5**	**mg/kg**	**0.19**	**0.54**
Dibenzofuran	**5**	**mg/kg**	**0.046**	**0.88**
Diethylphthalate	5	mg/kg	0.19	ND
Dimethylphthalate	5	mg/kg	0.19	ND
Di-n-butylphthalate	5	mg/kg	0.046	ND
Di-n-octylphthalate	5	mg/kg	0.19	ND
Fluoranthene	**5**	**mg/kg**	**0.19**	**9.3**
Fluorene	**5**	**mg/kg**	**0.19**	**1.5**
Hexachlorobenzene	5	mg/kg	0.19	ND
Hexachlorobutadiene	5	mg/kg	0.19	ND
Hexachlorocyclopentadiene	5	mg/kg	0.19	ND
Hexachloroethane	5	mg/kg	0.19	ND
Indeno[1,2,3-cd]pyrene	**5**	**mg/kg**	**0.19**	**1.8**
Isophorone	5	mg/kg	0.19	ND
Naphthalene	**5**	**mg/kg**	**0.046**	**3.1**
Nitrobenzene	5	mg/kg	0.19	ND
N-Nitroso-di-n-propylamine	5	mg/kg	0.046	ND
N-Nitrosodiphenylamine	5	mg/kg	0.19	ND
Pentachlorophenol	5	mg/kg	0.93	ND
Phenanthrene	**5**	**mg/kg**	**0.19**	**9.7**
Phenol	5	mg/kg	0.19	ND

Sample ID: SB05_1-2 **Collection Date: 5/21/2018**
Lab#: AD04329-003 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

Pyrene	**5**	**mg/kg**	**0.19**		**6.4**

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	8.70	50	58	148	87	
Phenol-d5	17.21	100	49	129	86	
Nitrobenzene-d5	8.87	50	52	129	89	
2-Fluorophenol	15.67	100	43	128	78	
2-Fluorobiphenyl	8.89	50	58	125	89	
2,4,6-Tribromophenol	10.79	100	54	145	54	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**220**	**10000**
Barium	**1**	**mg/kg**	**11**	**63**
Calcium	**1**	**mg/kg**	**1100**	**56000**
Chromium	**1**	**mg/kg**	**5.6**	**19**
Cobalt	**1**	**mg/kg**	**2.8**	**7.8**
Copper	**1**	**mg/kg**	**5.6**	**23**
Iron	**1**	**mg/kg**	**220**	**17000**
Lead	**1**	**mg/kg**	**5.6**	**22**
Magnesium	**1**	**mg/kg**	**560**	**32000**
Manganese	**1**	**mg/kg**	**11**	**380**
Nickel	**1**	**mg/kg**	**5.6**	**15**
Potassium	**1**	**mg/kg**	**560**	**2700**
Sodium	**1**	**mg/kg**	**280**	**450**
Vanadium	**1**	**mg/kg**	**11**	**28**
Zinc	**1**	**mg/kg**	**11**	**70**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	0.89	ND
Arsenic	**1**	**mg/kg**	**0.22**	**1.6**
Beryllium	**1**	**mg/kg**	**0.22**	**0.32**
Cadmium	1	mg/kg	0.44	ND
Selenium	1	mg/kg	2.2	ND
Silver	1	mg/kg	0.22	ND
Thallium	1	mg/kg	0.44	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	102	mg/kg	0.11	ND
1,1,1-Trichloroethane	102	mg/kg	0.11	ND
1,1,2,2-Tetrachloroethane	102	mg/kg	0.11	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	102	mg/kg	0.11	ND
1,1,2-Trichloroethane	102	mg/kg	0.11	ND
1,1-Dichloroethane	102	mg/kg	0.11	ND
1,1-Dichloroethene	102	mg/kg	0.11	ND
1,1-Dichloropropene	102	mg/kg	0.11	ND
1,2,3-Trichlorobenzene	102	mg/kg	0.11	ND
1,2,3-Trichloropropane	102	mg/kg	0.11	ND
1,2,4,5-Tetramethylbenzene	102	mg/kg	0.11	ND
1,2,4-Trichlorobenzene	102	mg/kg	0.11	ND
1,2,4-Trimethylbenzene	102	mg/kg	0.11	ND
1,2-Dibromo-3-chloropropane	102	mg/kg	0.11	ND
1,2-Dibromoethane	102	mg/kg	0.11	ND
1,2-Dichlorobenzene	102	mg/kg	0.11	ND
1,2-Dichloroethane	102	mg/kg	0.057	ND
1,2-Dichloropropane	102	mg/kg	0.11	ND
1,3,5-Trimethylbenzene	102	mg/kg	0.11	ND
1,3-Dichlorobenzene	102	mg/kg	0.11	ND
1,3-Dichloropropane	102	mg/kg	0.11	ND
1,4-Dichlorobenzene	102	mg/kg	0.11	ND
1,4-Dioxane	102	mg/kg	5.7	ND
2,2-Dichloropropane	102	mg/kg	0.11	ND
2-Butanone	102	mg/kg	0.11	ND
2-Chlorotoluene	102	mg/kg	0.11	ND
2-Hexanone	102	mg/kg	0.11	ND
4-Chlorotoluene	102	mg/kg	0.11	ND
4-Isopropyltoluene	102	mg/kg	0.11	ND

Sample ID: SB05_1-2 **Collection Date: 5/21/2018**
Lab#: AD04329-003 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

4-Methyl-2-pentanone	102	mg/kg	0.11	ND
Acetone	102	mg/kg	0.57	ND
Acrolein	102	mg/kg	0.57	ND
Acrylonitrile	102	mg/kg	0.11	ND
Benzene	102	mg/kg	0.057	ND
Bromobenzene	102	mg/kg	0.11	ND
Bromochloromethane	102	mg/kg	0.11	ND
Bromodichloromethane	102	mg/kg	0.11	ND
Bromoform	102	mg/kg	0.11	ND
Bromomethane	102	mg/kg	0.11	ND
Carbon disulfide	102	mg/kg	0.11	ND
Carbon tetrachloride	102	mg/kg	0.11	ND
Chlorobenzene	102	mg/kg	0.11	ND
Chloroethane	102	mg/kg	0.11	ND
Chloroform	102	mg/kg	0.11	ND
Chloromethane	102	mg/kg	0.11	ND
cis-1,2-Dichloroethene	102	mg/kg	0.11	ND
cis-1,3-Dichloropropene	102	mg/kg	0.11	ND
Cyclohexane	102	mg/kg	0.11	ND
Dibromochloromethane	102	mg/kg	0.11	ND
Dibromomethane	102	mg/kg	0.11	ND
Dichlorodifluoromethane	102	mg/kg	0.11	ND
Ethylbenzene	102	mg/kg	0.11	ND
Hexachlorobutadiene	102	mg/kg	0.11	ND
Isopropylbenzene	102	mg/kg	0.11	ND
m&p-Xylenes	102	mg/kg	0.11	ND
Methyl Acetate	**102**	**mg/kg**	**0.11**	**0.21**
Methylcyclohexane	102	mg/kg	0.11	ND
Methylene chloride	102	mg/kg	0.11	ND
Methyl-t-butyl ether	102	mg/kg	0.057	ND
n-Butylbenzene	102	mg/kg	0.11	ND
n-Propylbenzene	102	mg/kg	0.11	ND
o-Xylene	102	mg/kg	0.11	ND
sec-Butylbenzene	102	mg/kg	0.11	ND
Styrene	102	mg/kg	0.11	ND
t-Butylbenzene	102	mg/kg	0.11	ND
Tetrachloroethene	102	mg/kg	0.11	ND
Toluene	102	mg/kg	0.11	ND
trans-1,2-Dichloroethene	102	mg/kg	0.11	ND
trans-1,3-Dichloropropene	102	mg/kg	0.11	ND
trans-1,4-Dichloro-2-butene	102	mg/kg	0.11	ND
Trichloroethene	102	mg/kg	0.11	ND
Trichlorofluoromethane	102	mg/kg	0.11	ND
Vinyl chloride	102	mg/kg	0.11	ND
Xylenes (Total)	102	mg/kg	0.11	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	30.60	30	68	122	102	
Dibromofluoromethane	30.84	30	63	140	103	
Bromofluorobenzene	30.81	30	64	129	103	
1,2-Dichloroethane-d4	31.82	30	63	143	106	

Sample ID: SB05_9-11 **Collection Date: 5/21/2018**
Lab#: AD04329-004 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	**1**	**percent**		**84**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.012	ND
2,4-D	1	mg/kg	0.012	ND
Dicamba	1	mg/kg	0.012	ND
Silvex	1	mg/kg	0.012	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1097.58	1000	25	138	110	
Dcaa-Surrogate	1111.29	1000	25	138	111	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.099	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0060	ND
Aldrin	1	mg/kg	0.0060	ND
Alpha-BHC	1	mg/kg	0.0012	ND
beta-BHC	1	mg/kg	0.0012	ND
Chlordane (Total)	1	mg/kg	0.0060	ND
delta-BHC	1	mg/kg	0.0060	ND
Dieldrin	1	mg/kg	0.0012	ND
Endosulfan I	1	mg/kg	0.0060	ND
Endosulfan II	1	mg/kg	0.0060	ND
Endosulfan Sulfate	1	mg/kg	0.0060	ND
Endrin	1	mg/kg	0.0060	ND
Endrin Aldehyde	1	mg/kg	0.0060	ND
Endrin Ketone	1	mg/kg	0.0060	ND
gamma-BHC	1	mg/kg	0.0012	ND
Heptachlor	1	mg/kg	0.0060	ND
Heptachlor Epoxide	1	mg/kg	0.0060	ND
Methoxychlor	1	mg/kg	0.0060	ND
p,p'-DDD	1	mg/kg	0.0030	ND
p,p'-DDE	1	mg/kg	0.0030	ND
p,p'-DDT	1	mg/kg	0.0030	ND
Toxaphene	1	mg/kg	0.030	ND
y-Chlordane	1	mg/kg	0.0060	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	87.09	100	37	141	87	
TCMX-Surrogate	93.76	100	37	141	94	
DCB-Surrogate	122.79	100	33	146	123	
DCB-Surrogate	85.79	100	33	146	86	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.030	ND
Aroclor-1016	1	mg/kg	0.030	ND
Aroclor-1221	1	mg/kg	0.030	ND
Aroclor-1232	1	mg/kg	0.030	ND
Aroclor-1242	1	mg/kg	0.030	ND
Aroclor-1248	1	mg/kg	0.030	ND
Aroclor-1254	1	mg/kg	0.030	ND
Aroclor-1260	1	mg/kg	0.030	ND
Aroclor-1262	1	mg/kg	0.030	ND
Aroclor-1268	1	mg/kg	0.030	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	85.96	100	37	141	86	
TCMX-Surrogate	96.24	100	37	141	96	
DCB-Surrogate	97.61	100	34	146	98	
DCB-Surrogate	78.18	100	34	146	78	

Sample ID: SB05_9-11 **Collection Date: 5/21/2018**
Lab#: AD04329-004 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.040	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.040	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.040	ND
2,4,5-Trichlorophenol	1	mg/kg	0.040	ND
2,4,6-Trichlorophenol	1	mg/kg	0.040	ND
2,4-Dichlorophenol	1	mg/kg	0.0099	ND
2,4-Dimethylphenol	1	mg/kg	0.0099	ND
2,4-Dinitrophenol	1	mg/kg	0.20	ND
2,4-Dinitrotoluene	1	mg/kg	0.040	ND
2,6-Dinitrotoluene	1	mg/kg	0.040	ND
2-Chloronaphthalene	1	mg/kg	0.040	ND
2-Chlorophenol	1	mg/kg	0.040	ND
2-Methylnaphthalene	**1**	**mg/kg**	**0.040**	**0.091**
2-Methylphenol	1	mg/kg	0.0099	ND
2-Nitroaniline	1	mg/kg	0.040	ND
2-Nitrophenol	1	mg/kg	0.040	ND
3&4-Methylphenol	1	mg/kg	0.0099	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.040	ND
3-Nitroaniline	1	mg/kg	0.040	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.20	ND
4-Bromophenyl-phenylether	1	mg/kg	0.040	ND
4-Chloro-3-methylphenol	1	mg/kg	0.040	ND
4-Chloroaniline	1	mg/kg	0.0099	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.040	ND
4-Nitroaniline	1	mg/kg	0.040	ND
4-Nitrophenol	1	mg/kg	0.040	ND
Acenaphthene	**1**	**mg/kg**	**0.040**	**0.13**
Acenaphthylene	1	mg/kg	0.040	ND
Acetophenone	1	mg/kg	0.040	ND
Anthracene	**1**	**mg/kg**	**0.040**	**0.19**
Atrazine	1	mg/kg	0.040	ND
Benzaldehyde	1	mg/kg	0.040	ND
Benzo[a]anthracene	**1**	**mg/kg**	**0.040**	**0.34**
Benzo[a]pyrene	**1**	**mg/kg**	**0.040**	**0.31**
Benzo[b]fluoranthene	**1**	**mg/kg**	**0.040**	**0.38**
Benzo[g,h,i]perylene	**1**	**mg/kg**	**0.040**	**0.21**
Benzo[k]fluoranthene	**1**	**mg/kg**	**0.040**	**0.12**
bis(2-Chloroethoxy)methane	1	mg/kg	0.040	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.0099	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.040	ND
bis(2-Ethylhexyl)phthalate	1	mg/kg	0.040	ND
Butylbenzylphthalate	1	mg/kg	0.040	ND
Caprolactam	1	mg/kg	0.040	ND
Carbazole	**1**	**mg/kg**	**0.040**	**0.086**
Chrysene	**1**	**mg/kg**	**0.040**	**0.27**
Dibenzo[a,h]anthracene	**1**	**mg/kg**	**0.040**	**0.053**
Dibenzofuran	**1**	**mg/kg**	**0.0099**	**0.073**
Diethylphthalate	1	mg/kg	0.040	ND
Dimethylphthalate	1	mg/kg	0.040	ND
Di-n-butylphthalate	1	mg/kg	0.0099	ND
Di-n-octylphthalate	1	mg/kg	0.040	ND
Fluoranthene	**1**	**mg/kg**	**0.040**	**0.70**
Fluorene	**1**	**mg/kg**	**0.040**	**0.12**
Hexachlorobenzene	1	mg/kg	0.040	ND
Hexachlorobutadiene	1	mg/kg	0.040	ND
Hexachlorocyclopentadiene	1	mg/kg	0.040	ND
Hexachloroethane	1	mg/kg	0.040	ND
Indeno[1,2,3-cd]pyrene	**1**	**mg/kg**	**0.040**	**0.18**
Isophorone	1	mg/kg	0.040	ND
Naphthalene	**1**	**mg/kg**	**0.0099**	**0.23**
Nitrobenzene	1	mg/kg	0.040	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.0099	ND
N-Nitrosodiphenylamine	1	mg/kg	0.040	ND
Pentachlorophenol	1	mg/kg	0.20	ND
Phenanthrene	**1**	**mg/kg**	**0.040**	**0.73**
Phenol	1	mg/kg	0.040	ND

Pyrene	**1**	**mg/kg**	**0.040**		**0.62**	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	51.66	50	58	148	103	
Phenol-d5	80.15	100	49	129	80	
Nitrobenzene-d5	41.54	50	52	129	83	
2-Fluorophenol	77.47	100	43	128	77	
2-Fluorobiphenyl	43.16	50	58	125	86	
2,4,6-Tribromophenol	95.83	100	54	145	96	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**240**	**22000**
Barium	**1**	**mg/kg**	**12**	**83**
Calcium	**1**	**mg/kg**	**1200**	**4000**
Chromium	**1**	**mg/kg**	**6.0**	**38**
Cobalt	**1**	**mg/kg**	**3.0**	**12**
Copper	**1**	**mg/kg**	**6.0**	**19**
Iron	**1**	**mg/kg**	**240**	**32000**
Lead	**1**	**mg/kg**	**6.0**	**12**
Magnesium	**1**	**mg/kg**	**600**	**5500**
Manganese	**1**	**mg/kg**	**12**	**710**
Nickel	**1**	**mg/kg**	**6.0**	**20**
Potassium	**1**	**mg/kg**	**600**	**1100**
Sodium	1	mg/kg	300	ND
Vanadium	**1**	**mg/kg**	**12**	**47**
Zinc	**1**	**mg/kg**	**12**	**53**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	0.95	ND
Arsenic	**1**	**mg/kg**	**0.24**	**2.6**
Beryllium	**1**	**mg/kg**	**0.24**	**0.59**
Cadmium	1	mg/kg	0.48	ND
Selenium	1	mg/kg	2.4	ND
Silver	1	mg/kg	0.24	ND
Thallium	1	mg/kg	0.48	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.795	mg/kg	0.0019	ND
1,1,1-Trichloroethane	0.795	mg/kg	0.0019	ND
1,1,2,2-Tetrachloroethane	0.795	mg/kg	0.0019	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.795	mg/kg	0.0019	ND
1,1,2-Trichloroethane	0.795	mg/kg	0.0019	ND
1,1-Dichloroethane	0.795	mg/kg	0.0019	ND
1,1-Dichloroethene	0.795	mg/kg	0.0019	ND
1,1-Dichloropropene	0.795	mg/kg	0.0019	ND
1,2,3-Trichlorobenzene	0.795	mg/kg	0.0019	ND
1,2,3-Trichloropropane	0.795	mg/kg	0.0019	ND
1,2,4,5-Tetramethylbenzene	0.795	mg/kg	0.0019	ND
1,2,4-Trichlorobenzene	0.795	mg/kg	0.0019	ND
1,2,4-Trimethylbenzene	0.795	mg/kg	0.00095	ND
1,2-Dibromo-3-chloropropane	0.795	mg/kg	0.0019	ND
1,2-Dibromoethane	0.795	mg/kg	0.00095	ND
1,2-Dichlorobenzene	0.795	mg/kg	0.0019	ND
1,2-Dichloroethane	0.795	mg/kg	0.0019	ND
1,2-Dichloropropane	0.795	mg/kg	0.0019	ND
1,3,5-Trimethylbenzene	0.795	mg/kg	0.00095	ND
1,3-Dichlorobenzene	0.795	mg/kg	0.0019	ND
1,3-Dichloropropane	0.795	mg/kg	0.0019	ND
1,4-Dichlorobenzene	0.795	mg/kg	0.0019	ND
1,4-Dioxane	0.795	mg/kg	0.095	ND
2,2-Dichloropropane	0.795	mg/kg	0.0019	ND
2-Butanone	**0.795**	**mg/kg**	**0.0019**	**0.084**
2-Chlorotoluene	0.795	mg/kg	0.0019	ND
2-Hexanone	0.795	mg/kg	0.0019	ND
4-Chlorotoluene	0.795	mg/kg	0.0019	ND
4-Isopropyltoluene	0.795	mg/kg	0.00095	ND

Sample ID: SB05_9-11 **Collection Date: 5/21/2018**
Lab#: AD04329-004 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

4-Methyl-2-pentanone	0.795	mg/kg	0.0019	ND
Acetone	**0.795**	**mg/kg**	**0.0095**	**0.19**
Acrolein	0.795	mg/kg	0.0095	ND
Acrylonitrile	0.795	mg/kg	0.0019	ND
Benzene	0.795	mg/kg	0.00095	ND
Bromobenzene	0.795	mg/kg	0.0019	ND
Bromochloromethane	0.795	mg/kg	0.0019	ND
Bromodichloromethane	0.795	mg/kg	0.0019	ND
Bromoform	0.795	mg/kg	0.0019	ND
Bromomethane	0.795	mg/kg	0.0019	ND
Carbon disulfide	0.795	mg/kg	0.0019	ND
Carbon tetrachloride	0.795	mg/kg	0.0019	ND
Chlorobenzene	0.795	mg/kg	0.0019	ND
Chloroethane	0.795	mg/kg	0.0019	ND
Chloroform	0.795	mg/kg	0.0019	ND
Chloromethane	0.795	mg/kg	0.0019	ND
cis-1,2-Dichloroethene	0.795	mg/kg	0.0019	ND
cis-1,3-Dichloropropene	0.795	mg/kg	0.0019	ND
Cyclohexane	0.795	mg/kg	0.0019	ND
Dibromochloromethane	0.795	mg/kg	0.0019	ND
Dibromomethane	0.795	mg/kg	0.0019	ND
Dichlorodifluoromethane	0.795	mg/kg	0.0019	ND
Ethylbenzene	0.795	mg/kg	0.00095	ND
Hexachlorobutadiene	0.795	mg/kg	0.0019	ND
Isopropylbenzene	0.795	mg/kg	0.00095	ND
m&p-Xylenes	0.795	mg/kg	0.00095	ND
Methyl Acetate	0.795	mg/kg	0.0019	ND
Methylcyclohexane	0.795	mg/kg	0.0019	ND
Methylene chloride	0.795	mg/kg	0.0019	ND
Methyl-t-butyl ether	0.795	mg/kg	0.00095	ND
n-Butylbenzene	0.795	mg/kg	0.00095	ND
n-Propylbenzene	0.795	mg/kg	0.00095	ND
o-Xylene	0.795	mg/kg	0.00095	ND
sec-Butylbenzene	0.795	mg/kg	0.00095	ND
Styrene	0.795	mg/kg	0.0019	ND
t-Butylbenzene	0.795	mg/kg	0.00095	ND
Tetrachloroethene	0.795	mg/kg	0.0019	ND
Toluene	0.795	mg/kg	0.00095	ND
trans-1,2-Dichloroethene	0.795	mg/kg	0.0019	ND
trans-1,3-Dichloropropene	0.795	mg/kg	0.0019	ND
trans-1,4-Dichloro-2-butene	0.795	mg/kg	0.0019	ND
Trichloroethene	0.795	mg/kg	0.0019	ND
Trichlorofluoromethane	0.795	mg/kg	0.0019	ND
Vinyl chloride	0.795	mg/kg	0.0019	ND
Xylenes (Total)	0.795	mg/kg	0.00095	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	33.45	30	68	122	111	
Dibromofluoromethane	29.01	30	63	140	97	
Bromofluorobenzene	32.63	30	64	129	109	
1,2-Dichloroethane-d4	34.26	30	63	143	114	

Sample ID: SB08_0-2 **Collection Date: 5/21/2018**
Lab#: AD04329-005 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

% Solids SM2540G

Analyte	DF	Units	RL	Result
%Solids	**1**	**percent**		**87**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.011	ND
2,4-D	1	mg/kg	0.011	ND
Dicamba	1	mg/kg	0.011	ND
Silvex	1	mg/kg	0.011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1356.39	1000	25	138	136	
Dcaa-Surrogate	1591.77	1000	25	138	159	S8

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	**1**	**mg/kg**	**0.096**	**0.16**

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	**5**	**mg/kg**	**0.029**	**0.080**
Aldrin	5	mg/kg	0.029	ND
Alpha-BHC	5	mg/kg	0.0057	ND
beta-BHC	5	mg/kg	0.0057	ND
Chlordane (Total)	**5**	**mg/kg**	**0.029**	**0.16**
delta-BHC	5	mg/kg	0.029	ND
Dieldrin	5	mg/kg	0.0057	ND
Endosulfan I	5	mg/kg	0.029	ND
Endosulfan II	5	mg/kg	0.029	ND
Endosulfan Sulfate	5	mg/kg	0.029	ND
Endrin	5	mg/kg	0.029	ND
Endrin Aldehyde	5	mg/kg	0.029	ND
Endrin Ketone	5	mg/kg	0.029	ND
gamma-BHC	5	mg/kg	0.0057	ND
Heptachlor	5	mg/kg	0.029	ND
Heptachlor Epoxide	5	mg/kg	0.029	ND
Methoxychlor	5	mg/kg	0.029	ND
p,p'-DDD	**5**	**mg/kg**	**0.014**	**0.13**
p,p'-DDE	**5**	**mg/kg**	**0.014**	**0.13**
p,p'-DDT	**5**	**mg/kg**	**0.014**	**0.13**
Toxaphene	5	mg/kg	0.14	ND
y-Chlordane	**5**	**mg/kg**	**0.029**	**0.078**

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	18.88	100	37	141	94	
TCMX-Surrogate	23.21	100	37	141	116	
DCB-Surrogate	67.50	100	33	146	338	S8
DCB-Surrogate	11.09	100	33	146	55	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.029	ND
Aroclor-1016	1	mg/kg	0.029	ND
Aroclor-1221	1	mg/kg	0.029	ND
Aroclor-1232	1	mg/kg	0.029	ND
Aroclor-1242	1	mg/kg	0.029	ND
Aroclor-1248	1	mg/kg	0.029	ND
Aroclor-1254	1	mg/kg	0.029	ND
Aroclor-1260	1	mg/kg	0.029	ND
Aroclor-1262	1	mg/kg	0.029	ND
Aroclor-1268	1	mg/kg	0.029	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	79.98	100	37	141	80	
TCMX-Surrogate	88.50	100	37	141	88	
DCB-Surrogate	70.13	100	34	146	70	
DCB-Surrogate	77.20	100	34	146	77	

Sample ID: SB08_0-2 **Collection Date: 5/21/2018**
Lab#: AD04329-005 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	5	mg/kg	0.19	ND
1,2,4,5-Tetrachlorobenzene	5	mg/kg	0.19	ND
2,3,4,6-Tetrachlorophenol	5	mg/kg	0.19	ND
2,4,5-Trichlorophenol	5	mg/kg	0.19	ND
2,4,6-Trichlorophenol	5	mg/kg	0.19	ND
2,4-Dichlorophenol	5	mg/kg	0.048	ND
2,4-Dimethylphenol	5	mg/kg	0.048	ND
2,4-Dinitrophenol	5	mg/kg	0.96	ND
2,4-Dinitrotoluene	5	mg/kg	0.19	ND
2,6-Dinitrotoluene	5	mg/kg	0.19	ND
2-Chloronaphthalene	5	mg/kg	0.19	ND
2-Chlorophenol	5	mg/kg	0.19	ND
2-Methylnaphthalene	**5**	**mg/kg**	**0.19**	**0.23**
2-Methylphenol	5	mg/kg	0.048	ND
2-Nitroaniline	5	mg/kg	0.19	ND
2-Nitrophenol	5	mg/kg	0.19	ND
3&4-Methylphenol	5	mg/kg	0.048	ND
3,3'-Dichlorobenzidine	5	mg/kg	0.19	ND
3-Nitroaniline	5	mg/kg	0.19	ND
4,6-Dinitro-2-methylphenol	5	mg/kg	0.96	ND
4-Bromophenyl-phenylether	5	mg/kg	0.19	ND
4-Chloro-3-methylphenol	5	mg/kg	0.19	ND
4-Chloroaniline	5	mg/kg	0.048	ND
4-Chlorophenyl-phenylether	5	mg/kg	0.19	ND
4-Nitroaniline	5	mg/kg	0.19	ND
4-Nitrophenol	5	mg/kg	0.19	ND
Acenaphthene	**5**	**mg/kg**	**0.19**	**0.34**
Acenaphthylene	**5**	**mg/kg**	**0.19**	**0.62**
Acetophenone	5	mg/kg	0.19	ND
Anthracene	**5**	**mg/kg**	**0.19**	**1.0**
Atrazine	5	mg/kg	0.19	ND
Benzaldehyde	5	mg/kg	0.19	ND
Benzo[a]anthracene	**5**	**mg/kg**	**0.19**	**5.5**
Benzo[a]pyrene	**5**	**mg/kg**	**0.19**	**5.6**
Benzo[b]fluoranthene	**5**	**mg/kg**	**0.19**	**7.6**
Benzo[g,h,i]perylene	5	mg/kg	0.19	ND
Benzo[k]fluoranthene	**5**	**mg/kg**	**0.19**	**2.3**
bis(2-Chloroethoxy)methane	5	mg/kg	0.19	ND
bis(2-Chloroethyl)ether	5	mg/kg	0.048	ND
bis(2-Chloroisopropyl)ether	5	mg/kg	0.19	ND
bis(2-Ethylhexyl)phthalate	5	mg/kg	0.19	ND
Butylbenzylphthalate	**5**	**mg/kg**	**0.19**	**0.20**
Caprolactam	5	mg/kg	0.19	ND
Carbazole	**5**	**mg/kg**	**0.19**	**0.83**
Chrysene	**5**	**mg/kg**	**0.19**	**5.3**
Dibenzo[a,h]anthracene	**5**	**mg/kg**	**0.19**	**0.95**
Dibenzofuran	**5**	**mg/kg**	**0.048**	**0.28**
Diethylphthalate	5	mg/kg	0.19	ND
Dimethylphthalate	5	mg/kg	0.19	ND
Di-n-butylphthalate	**5**	**mg/kg**	**0.048**	**0.066**
Di-n-octylphthalate	5	mg/kg	0.19	ND
Fluoranthene	**5**	**mg/kg**	**0.19**	**15**
Fluorene	**5**	**mg/kg**	**0.19**	**0.50**
Hexachlorobenzene	5	mg/kg	0.19	ND
Hexachlorobutadiene	5	mg/kg	0.19	ND
Hexachlorocyclopentadiene	5	mg/kg	0.19	ND
Hexachloroethane	5	mg/kg	0.19	ND
Indeno[1,2,3-cd]pyrene	**5**	**mg/kg**	**0.19**	**3.3**
Isophorone	5	mg/kg	0.19	ND
Naphthalene	**5**	**mg/kg**	**0.048**	**0.34**
Nitrobenzene	5	mg/kg	0.19	ND
N-Nitroso-di-n-propylamine	5	mg/kg	0.048	ND
N-Nitrosodiphenylamine	5	mg/kg	0.19	ND
Pentachlorophenol	5	mg/kg	0.96	ND
Phenanthrene	**5**	**mg/kg**	**0.19**	**8.6**
Phenol	5	mg/kg	0.19	ND

Sample ID: SB08_0-2 **Collection Date: 5/21/2018**
Lab#: AD04329-005 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

Pyrene	**5**	**mg/kg**	**0.19**		**13**	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	9.17	50	58	148	92	
Phenol-d5	16.97	100	49	129	85	
Nitrobenzene-d5	8.70	50	52	129	87	
2-Fluorophenol	12.46	100	43	128	62	
2-Fluorobiphenyl	9.05	50	58	125	90	
2,4,6-Tribromophenol	9.56	100	54	145	48	Sa8

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**230**	**8100**
Barium	**2**	**mg/kg**	**23**	**1000**
Calcium	**2**	**mg/kg**	**2300**	**130000**
Chromium	**1**	**mg/kg**	**5.7**	**24**
Cobalt	**1**	**mg/kg**	**2.9**	**9.1**
Copper	**2**	**mg/kg**	**11**	**54**
Iron	**1**	**mg/kg**	**230**	**22000**
Lead	**2**	**mg/kg**	**11**	**1000**
Magnesium	**1**	**mg/kg**	**570**	**41000**
Manganese	**1**	**mg/kg**	**11**	**440**
Nickel	**1**	**mg/kg**	**5.7**	**13**
Potassium	**1**	**mg/kg**	**570**	**3200**
Sodium	**1**	**mg/kg**	**290**	**370**
Vanadium	**1**	**mg/kg**	**11**	**32**
Zinc	**1**	**mg/kg**	**11**	**1100**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	0.92	ND
Arsenic	**1**	**mg/kg**	**0.23**	**7.1**
Beryllium	**1**	**mg/kg**	**0.23**	**0.38**
Cadmium	**1**	**mg/kg**	**0.46**	**3.5**
Selenium	1	mg/kg	2.3	ND
Silver	**1**	**mg/kg**	**0.23**	**0.29**
Thallium	1	mg/kg	0.46	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.904	mg/kg	0.0021	ND
1,1,1-Trichloroethane	0.904	mg/kg	0.0021	ND
1,1,2,2-Tetrachloroethane	0.904	mg/kg	0.0021	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.904	mg/kg	0.0021	ND
1,1,2-Trichloroethane	0.904	mg/kg	0.0021	ND
1,1-Dichloroethane	0.904	mg/kg	0.0021	ND
1,1-Dichloroethene	0.904	mg/kg	0.0021	ND
1,1-Dichloropropene	0.904	mg/kg	0.0021	ND
1,2,3-Trichlorobenzene	0.904	mg/kg	0.0021	ND
1,2,3-Trichloropropane	0.904	mg/kg	0.0021	ND
1,2,4,5-Tetramethylbenzene	0.904	mg/kg	0.0021	ND
1,2,4-Trichlorobenzene	0.904	mg/kg	0.0021	ND
1,2,4-Trimethylbenzene	0.904	mg/kg	0.0010	ND
1,2-Dibromo-3-chloropropane	0.904	mg/kg	0.0021	ND
1,2-Dibromoethane	0.904	mg/kg	0.0010	ND
1,2-Dichlorobenzene	0.904	mg/kg	0.0021	ND
1,2-Dichloroethane	0.904	mg/kg	0.0021	ND
1,2-Dichloropropane	0.904	mg/kg	0.0021	ND
1,3,5-Trimethylbenzene	0.904	mg/kg	0.0010	ND
1,3-Dichlorobenzene	0.904	mg/kg	0.0021	ND
1,3-Dichloropropane	0.904	mg/kg	0.0021	ND
1,4-Dichlorobenzene	0.904	mg/kg	0.0021	ND
1,4-Dioxane	0.904	mg/kg	0.10	ND
2,2-Dichloropropane	0.904	mg/kg	0.0021	ND
2-Butanone	**0.904**	**mg/kg**	**0.0021**	**0.030**
2-Chlorotoluene	0.904	mg/kg	0.0021	ND
2-Hexanone	0.904	mg/kg	0.0021	ND
4-Chlorotoluene	0.904	mg/kg	0.0021	ND
4-Isopropyltoluene	0.904	mg/kg	0.0010	ND

Sample ID: SB08_0-2 **Collection Date: 5/21/2018**
Lab#: AD04329-005 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

4-Methyl-2-pentanone	0.904	mg/kg	0.0021	ND
Acetone	**0.904**	**mg/kg**	**0.010**	**0.13**
Acrolein	0.904	mg/kg	0.010	ND
Acrylonitrile	0.904	mg/kg	0.0021	ND
Benzene	0.904	mg/kg	0.0010	ND
Bromobenzene	0.904	mg/kg	0.0021	ND
Bromochloromethane	0.904	mg/kg	0.0021	ND
Bromodichloromethane	0.904	mg/kg	0.0021	ND
Bromoform	0.904	mg/kg	0.0021	ND
Bromomethane	0.904	mg/kg	0.0021	ND
Carbon disulfide	0.904	mg/kg	0.0021	ND
Carbon tetrachloride	0.904	mg/kg	0.0021	ND
Chlorobenzene	0.904	mg/kg	0.0021	ND
Chloroethane	0.904	mg/kg	0.0021	ND
Chloroform	0.904	mg/kg	0.0021	ND
Chloromethane	0.904	mg/kg	0.0021	ND
cis-1,2-Dichloroethene	0.904	mg/kg	0.0021	ND
cis-1,3-Dichloropropene	0.904	mg/kg	0.0021	ND
Cyclohexane	0.904	mg/kg	0.0021	ND
Dibromochloromethane	0.904	mg/kg	0.0021	ND
Dibromomethane	0.904	mg/kg	0.0021	ND
Dichlorodifluoromethane	0.904	mg/kg	0.0021	ND
Ethylbenzene	0.904	mg/kg	0.0010	ND
Hexachlorobutadiene	0.904	mg/kg	0.0021	ND
Isopropylbenzene	0.904	mg/kg	0.0010	ND
m&p-Xylenes	0.904	mg/kg	0.0010	ND
Methyl Acetate	0.904	mg/kg	0.0021	ND
Methylcyclohexane	0.904	mg/kg	0.0021	ND
Methylene chloride	0.904	mg/kg	0.0021	ND
Methyl-t-butyl ether	0.904	mg/kg	0.0010	ND
n-Butylbenzene	0.904	mg/kg	0.0010	ND
n-Propylbenzene	0.904	mg/kg	0.0010	ND
o-Xylene	0.904	mg/kg	0.0010	ND
sec-Butylbenzene	0.904	mg/kg	0.0010	ND
Styrene	0.904	mg/kg	0.0021	ND
t-Butylbenzene	0.904	mg/kg	0.0010	ND
Tetrachloroethene	0.904	mg/kg	0.0021	ND
Toluene	0.904	mg/kg	0.0010	ND
trans-1,2-Dichloroethene	0.904	mg/kg	0.0021	ND
trans-1,3-Dichloropropene	0.904	mg/kg	0.0021	ND
trans-1,4-Dichloro-2-butene	0.904	mg/kg	0.0021	ND
Trichloroethene	0.904	mg/kg	0.0021	ND
Trichlorofluoromethane	0.904	mg/kg	0.0021	ND
Vinyl chloride	0.904	mg/kg	0.0021	ND
Xylenes (Total)	0.904	mg/kg	0.0010	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	29.13	30	68	122	97	
Dibromofluoromethane	30.28	30	63	140	101	
Bromofluorobenzene	30.34	30	64	129	101	
1,2-Dichloroethane-d4	31.29	30	63	143	104	

Sample ID: SB08_11-12 | **Collection Date: 5/21/2018**
Lab#: AD04329-006 | **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

% Solids SM2540G

Analyte	DF	Units	RL	Result
%Solids	**1**	**percent**		**87**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.011	ND
2,4-D	1	mg/kg	0.011	ND
Dicamba	1	mg/kg	0.011	ND
Silvex	1	mg/kg	0.011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	942.81	1000	25	138	94	
Dcaa-Surrogate	1008.13	1000	25	138	101	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.096	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0057	ND
Aldrin	1	mg/kg	0.0057	ND
Alpha-BHC	1	mg/kg	0.0011	ND
beta-BHC	1	mg/kg	0.0011	ND
Chlordane (Total)	1	mg/kg	0.0057	ND
delta-BHC	1	mg/kg	0.0057	ND
Dieldrin	1	mg/kg	0.0011	ND
Endosulfan I	1	mg/kg	0.0057	ND
Endosulfan II	1	mg/kg	0.0057	ND
Endosulfan Sulfate	1	mg/kg	0.0057	ND
Endrin	1	mg/kg	0.0057	ND
Endrin Aldehyde	1	mg/kg	0.0057	ND
Endrin Ketone	1	mg/kg	0.0057	ND
gamma-BHC	1	mg/kg	0.0011	ND
Heptachlor	1	mg/kg	0.0057	ND
Heptachlor Epoxide	1	mg/kg	0.0057	ND
Methoxychlor	1	mg/kg	0.0057	ND
p,p'-DDD	1	mg/kg	0.0029	ND
p,p'-DDE	**1**	**mg/kg**	**0.0029**	**0.0075**
p,p'-DDT	**1**	**mg/kg**	**0.0029**	**0.013**
Toxaphene	1	mg/kg	0.029	ND
y-Chlordane	1	mg/kg	0.0057	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	92.80	100	37	141	93	
TCMX-Surrogate	105.62	100	37	141	106	
DCB-Surrogate	102.25	100	33	146	102	
DCB-Surrogate	87.15	100	33	146	87	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.029	ND
Aroclor-1016	1	mg/kg	0.029	ND
Aroclor-1221	1	mg/kg	0.029	ND
Aroclor-1232	1	mg/kg	0.029	ND
Aroclor-1242	1	mg/kg	0.029	ND
Aroclor-1248	1	mg/kg	0.029	ND
Aroclor-1254	1	mg/kg	0.029	ND
Aroclor-1260	1	mg/kg	0.029	ND
Aroclor-1262	1	mg/kg	0.029	ND
Aroclor-1268	1	mg/kg	0.029	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	97.93	100	37	141	98	
TCMX-Surrogate	99.75	100	37	141	100	
DCB-Surrogate	85.25	100	34	146	85	
DCB-Surrogate	95.20	100	34	146	95	

Sample ID: SB08_11-12 **Collection Date: 5/21/2018**
Lab#: AD04329-006 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.038	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.038	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.038	ND
2,4,5-Trichlorophenol	1	mg/kg	0.038	ND
2,4,6-Trichlorophenol	1	mg/kg	0.038	ND
2,4-Dichlorophenol	1	mg/kg	0.0096	ND
2,4-Dimethylphenol	1	mg/kg	0.0096	ND
2,4-Dinitrophenol	1	mg/kg	0.19	ND
2,4-Dinitrotoluene	1	mg/kg	0.038	ND
2,6-Dinitrotoluene	1	mg/kg	0.038	ND
2-Chloronaphthalene	1	mg/kg	0.038	ND
2-Chlorophenol	1	mg/kg	0.038	ND
2-Methylnaphthalene	1	mg/kg	0.038	ND
2-Methylphenol	1	mg/kg	0.0096	ND
2-Nitroaniline	1	mg/kg	0.038	ND
2-Nitrophenol	1	mg/kg	0.038	ND
3&4-Methylphenol	1	mg/kg	0.0096	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.038	ND
3-Nitroaniline	1	mg/kg	0.038	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.19	ND
4-Bromophenyl-phenylether	1	mg/kg	0.038	ND
4-Chloro-3-methylphenol	1	mg/kg	0.038	ND
4-Chloroaniline	1	mg/kg	0.0096	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.038	ND
4-Nitroaniline	1	mg/kg	0.038	ND
4-Nitrophenol	1	mg/kg	0.038	ND
Acenaphthene	1	mg/kg	0.038	ND
Acenaphthylene	1	mg/kg	0.038	ND
Acetophenone	1	mg/kg	0.038	ND
Anthracene	1	mg/kg	0.038	ND
Atrazine	1	mg/kg	0.038	ND
Benzaldehyde	1	mg/kg	0.038	ND
Benzo[a]anthracene	**1**	**mg/kg**	**0.038**	**0.068**
Benzo[a]pyrene	**1**	**mg/kg**	**0.038**	**0.063**
Benzo[b]fluoranthene	**1**	**mg/kg**	**0.038**	**0.090**
Benzo[g,h,i]perylene	**1**	**mg/kg**	**0.038**	**0.056**
Benzo[k]fluoranthene	1	mg/kg	0.038	ND
bis(2-Chloroethoxy)methane	1	mg/kg	0.038	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.0096	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.038	ND
bis(2-Ethylhexyl)phthalate	**1**	**mg/kg**	**0.038**	**0.056**
Butylbenzylphthalate	1	mg/kg	0.038	ND
Caprolactam	1	mg/kg	0.038	ND
Carbazole	1	mg/kg	0.038	ND
Chrysene	**1**	**mg/kg**	**0.038**	**0.067**
Dibenzo[a,h]anthracene	1	mg/kg	0.038	ND
Dibenzofuran	1	mg/kg	0.0096	ND
Diethylphthalate	1	mg/kg	0.038	ND
Dimethylphthalate	1	mg/kg	0.038	ND
Di-n-butylphthalate	1	mg/kg	0.0096	ND
Di-n-octylphthalate	1	mg/kg	0.038	ND
Fluoranthene	**1**	**mg/kg**	**0.038**	**0.12**
Fluorene	1	mg/kg	0.038	ND
Hexachlorobenzene	1	mg/kg	0.038	ND
Hexachlorobutadiene	1	mg/kg	0.038	ND
Hexachlorocyclopentadiene	1	mg/kg	0.038	ND
Hexachloroethane	1	mg/kg	0.038	ND
Indeno[1,2,3-cd]pyrene	**1**	**mg/kg**	**0.038**	**0.042**
Isophorone	1	mg/kg	0.038	ND
Naphthalene	1	mg/kg	0.0096	ND
Nitrobenzene	1	mg/kg	0.038	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.0096	ND
N-Nitrosodiphenylamine	1	mg/kg	0.038	ND
Pentachlorophenol	1	mg/kg	0.19	ND
Phenanthrene	**1**	**mg/kg**	**0.038**	**0.069**
Phenol	1	mg/kg	0.038	ND

Pyrene	**1**	**mg/kg**	**0.038**		**0.12**	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	56.94	50	58	148	114	
Phenol-d5	86.36	100	49	129	86	
Nitrobenzene-d5	43.41	50	52	129	87	
2-Fluorophenol	83.76	100	43	128	84	
2-Fluorobiphenyl	45.47	50	58	125	91	
2,4,6-Tribromophenol	105.48	100	54	145	105	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**230**	**25000**
Barium	**1**	**mg/kg**	**11**	**140**
Calcium	**1**	**mg/kg**	**1100**	**13000**
Chromium	**1**	**mg/kg**	**5.7**	**46**
Cobalt	**1**	**mg/kg**	**2.9**	**14**
Copper	**1**	**mg/kg**	**5.7**	**38**
Iron	**1**	**mg/kg**	**230**	**36000**
Lead	**1**	**mg/kg**	**5.7**	**45**
Magnesium	**1**	**mg/kg**	**570**	**11000**
Manganese	**1**	**mg/kg**	**11**	**730**
Nickel	**1**	**mg/kg**	**5.7**	**23**
Potassium	**1**	**mg/kg**	**570**	**3400**
Sodium	1	mg/kg	290	ND
Vanadium	**1**	**mg/kg**	**11**	**59**
Zinc	**1**	**mg/kg**	**11**	**120**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	0.92	ND
Arsenic	**1**	**mg/kg**	**0.23**	**5.0**
Beryllium	**3**	**mg/kg**	**0.69**	**0.82**
Cadmium	1	mg/kg	0.46	ND
Selenium	1	mg/kg	2.3	ND
Silver	1	mg/kg	0.23	ND
Thallium	1	mg/kg	0.46	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.75	mg/kg	0.0017	ND
1,1,1-Trichloroethane	0.75	mg/kg	0.0017	ND
1,1,2,2-Tetrachloroethane	0.75	mg/kg	0.0017	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.75	mg/kg	0.0017	ND
1,1,2-Trichloroethane	0.75	mg/kg	0.0017	ND
1,1-Dichloroethane	0.75	mg/kg	0.0017	ND
1,1-Dichloroethene	0.75	mg/kg	0.0017	ND
1,1-Dichloropropene	0.75	mg/kg	0.0017	ND
1,2,3-Trichlorobenzene	0.75	mg/kg	0.0017	ND
1,2,3-Trichloropropane	0.75	mg/kg	0.0017	ND
1,2,4,5-Tetramethylbenzene	0.75	mg/kg	0.0017	ND
1,2,4-Trichlorobenzene	0.75	mg/kg	0.0017	ND
1,2,4-Trimethylbenzene	0.75	mg/kg	0.00086	ND
1,2-Dibromo-3-chloropropane	0.75	mg/kg	0.0017	ND
1,2-Dibromoethane	0.75	mg/kg	0.00086	ND
1,2-Dichlorobenzene	0.75	mg/kg	0.0017	ND
1,2-Dichloroethane	0.75	mg/kg	0.0017	ND
1,2-Dichloropropane	0.75	mg/kg	0.0017	ND
1,3,5-Trimethylbenzene	0.75	mg/kg	0.00086	ND
1,3-Dichlorobenzene	0.75	mg/kg	0.0017	ND
1,3-Dichloropropane	0.75	mg/kg	0.0017	ND
1,4-Dichlorobenzene	0.75	mg/kg	0.0017	ND
1,4-Dioxane	0.75	mg/kg	0.086	ND
2,2-Dichloropropane	0.75	mg/kg	0.0017	ND
2-Butanone	0.75	mg/kg	0.0017	ND
2-Chlorotoluene	0.75	mg/kg	0.0017	ND
2-Hexanone	0.75	mg/kg	0.0017	ND
4-Chlorotoluene	0.75	mg/kg	0.0017	ND
4-Isopropyltoluene	0.75	mg/kg	0.00086	ND

Sample ID: SB08_11-12 **Collection Date: 5/21/2018**
Lab#: AD04329-006 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

4-Methyl-2-pentanone	0.75	mg/kg	0.0017	ND
Acetone	0.75	mg/kg	0.0086	ND
Acrolein	0.75	mg/kg	0.0086	ND
Acrylonitrile	0.75	mg/kg	0.0017	ND
Benzene	0.75	mg/kg	0.00086	ND
Bromobenzene	0.75	mg/kg	0.0017	ND
Bromochloromethane	0.75	mg/kg	0.0017	ND
Bromodichloromethane	0.75	mg/kg	0.0017	ND
Bromoform	0.75	mg/kg	0.0017	ND
Bromomethane	0.75	mg/kg	0.0017	ND
Carbon disulfide	0.75	mg/kg	0.0017	ND
Carbon tetrachloride	0.75	mg/kg	0.0017	ND
Chlorobenzene	0.75	mg/kg	0.0017	ND
Chloroethane	0.75	mg/kg	0.0017	ND
Chloroform	0.75	mg/kg	0.0017	ND
Chloromethane	0.75	mg/kg	0.0017	ND
cis-1,2-Dichloroethene	0.75	mg/kg	0.0017	ND
cis-1,3-Dichloropropene	0.75	mg/kg	0.0017	ND
Cyclohexane	0.75	mg/kg	0.0017	ND
Dibromochloromethane	0.75	mg/kg	0.0017	ND
Dibromomethane	0.75	mg/kg	0.0017	ND
Dichlorodifluoromethane	0.75	mg/kg	0.0017	ND
Ethylbenzene	0.75	mg/kg	0.00086	ND
Hexachlorobutadiene	0.75	mg/kg	0.0017	ND
Isopropylbenzene	0.75	mg/kg	0.00086	ND
m&p-Xylenes	0.75	mg/kg	0.00086	ND
Methyl Acetate	0.75	mg/kg	0.0017	ND
Methylcyclohexane	0.75	mg/kg	0.0017	ND
Methylene chloride	0.75	mg/kg	0.0017	ND
Methyl-t-butyl ether	0.75	mg/kg	0.00086	ND
n-Butylbenzene	0.75	mg/kg	0.00086	ND
n-Propylbenzene	0.75	mg/kg	0.00086	ND
o-Xylene	0.75	mg/kg	0.00086	ND
sec-Butylbenzene	0.75	mg/kg	0.00086	ND
Styrene	0.75	mg/kg	0.0017	ND
t-Butylbenzene	0.75	mg/kg	0.00086	ND
Tetrachloroethene	0.75	mg/kg	0.0017	ND
Toluene	0.75	mg/kg	0.00086	ND
trans-1,2-Dichloroethene	0.75	mg/kg	0.0017	ND
trans-1,3-Dichloropropene	0.75	mg/kg	0.0017	ND
trans-1,4-Dichloro-2-butene	0.75	mg/kg	0.0017	ND
Trichloroethene	0.75	mg/kg	0.0017	ND
Trichlorofluoromethane	0.75	mg/kg	0.0017	ND
Vinyl chloride	0.75	mg/kg	0.0017	ND
Xylenes (Total)	0.75	mg/kg	0.00086	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	27.86	30	68	122	93	
Dibromofluoromethane	35.58	30	63	140	119	
Bromofluorobenzene	29.88	30	64	129	100	
1,2-Dichloroethane-d4	32.78	30	63	143	109	

Sample ID: SB03_13-15 | **Collection Date: 5/21/2018**
Lab#: AD04329-007 | **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	**1**	**percent**		**85**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.012	ND
2,4-D	1	mg/kg	0.012	ND
Dicamba	1	mg/kg	0.012	ND
Silvex	1	mg/kg	0.012	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	901.17	1000	25	138	90	
Dcaa-Surrogate	969.57	1000	25	138	97	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.098	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0059	ND
Aldrin	1	mg/kg	0.0059	ND
Alpha-BHC	1	mg/kg	0.0012	ND
beta-BHC	1	mg/kg	0.0012	ND
Chlordane (Total)	1	mg/kg	0.0059	ND
delta-BHC	1	mg/kg	0.0059	ND
Dieldrin	1	mg/kg	0.0012	ND
Endosulfan I	1	mg/kg	0.0059	ND
Endosulfan II	1	mg/kg	0.0059	ND
Endosulfan Sulfate	1	mg/kg	0.0059	ND
Endrin	1	mg/kg	0.0059	ND
Endrin Aldehyde	1	mg/kg	0.0059	ND
Endrin Ketone	1	mg/kg	0.0059	ND
gamma-BHC	1	mg/kg	0.0012	ND
Heptachlor	1	mg/kg	0.0059	ND
Heptachlor Epoxide	1	mg/kg	0.0059	ND
Methoxychlor	1	mg/kg	0.0059	ND
p,p'-DDD	1	mg/kg	0.0029	ND
p,p'-DDE	1	mg/kg	0.0029	ND
p,p'-DDT	1	mg/kg	0.0029	ND
Toxaphene	1	mg/kg	0.029	ND
y-Chlordane	1	mg/kg	0.0059	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	84.26	100	37	141	84	
TCMX-Surrogate	86.91	100	37	141	87	
DCB-Surrogate	86.93	100	33	146	87	
DCB-Surrogate	91.23	100	33	146	91	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.029	ND
Aroclor-1016	1	mg/kg	0.029	ND
Aroclor-1221	1	mg/kg	0.029	ND
Aroclor-1232	1	mg/kg	0.029	ND
Aroclor-1242	1	mg/kg	0.029	ND
Aroclor-1248	1	mg/kg	0.029	ND
Aroclor-1254	1	mg/kg	0.029	ND
Aroclor-1260	1	mg/kg	0.029	ND
Aroclor-1262	1	mg/kg	0.029	ND
Aroclor-1268	1	mg/kg	0.029	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	97.00	100	37	141	97	
TCMX-Surrogate	98.51	100	37	141	99	
DCB-Surrogate	85.14	100	34	146	85	
DCB-Surrogate	93.56	100	34	146	94	

Sample ID: SB03_13-15 **Collection Date: 5/21/2018**
Lab#: AD04329-007 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.039	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.039	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.039	ND
2,4,5-Trichlorophenol	1	mg/kg	0.039	ND
2,4,6-Trichlorophenol	1	mg/kg	0.039	ND
2,4-Dichlorophenol	1	mg/kg	0.0098	ND
2,4-Dimethylphenol	1	mg/kg	0.0098	ND
2,4-Dinitrophenol	1	mg/kg	0.20	ND
2,4-Dinitrotoluene	1	mg/kg	0.039	ND
2,6-Dinitrotoluene	1	mg/kg	0.039	ND
2-Chloronaphthalene	1	mg/kg	0.039	ND
2-Chlorophenol	1	mg/kg	0.039	ND
2-Methylnaphthalene	1	mg/kg	0.039	ND
2-Methylphenol	1	mg/kg	0.0098	ND
2-Nitroaniline	1	mg/kg	0.039	ND
2-Nitrophenol	1	mg/kg	0.039	ND
3&4-Methylphenol	1	mg/kg	0.0098	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.039	ND
3-Nitroaniline	1	mg/kg	0.039	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.20	ND
4-Bromophenyl-phenylether	1	mg/kg	0.039	ND
4-Chloro-3-methylphenol	1	mg/kg	0.039	ND
4-Chloroaniline	1	mg/kg	0.0098	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.039	ND
4-Nitroaniline	1	mg/kg	0.039	ND
4-Nitrophenol	1	mg/kg	0.039	ND
Acenaphthene	1	mg/kg	0.039	ND
Acenaphthylene	1	mg/kg	0.039	ND
Acetophenone	1	mg/kg	0.039	ND
Anthracene	1	mg/kg	0.039	ND
Atrazine	1	mg/kg	0.039	ND
Benzaldehyde	1	mg/kg	0.039	ND
Benzo[a]anthracene	1	mg/kg	0.039	ND
Benzo[a]pyrene	1	mg/kg	0.039	ND
Benzo[b]fluoranthene	1	mg/kg	0.039	ND
Benzo[g,h,i]perylene	1	mg/kg	0.039	ND
Benzo[k]fluoranthene	1	mg/kg	0.039	ND
bis(2-Chloroethoxy)methane	1	mg/kg	0.039	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.0098	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.039	ND
bis(2-Ethylhexyl)phthalate	1	mg/kg	0.039	ND
Butylbenzylphthalate	1	mg/kg	0.039	ND
Caprolactam	1	mg/kg	0.039	ND
Carbazole	1	mg/kg	0.039	ND
Chrysene	1	mg/kg	0.039	ND
Dibenzo[a,h]anthracene	1	mg/kg	0.039	ND
Dibenzofuran	1	mg/kg	0.0098	ND
Diethylphthalate	1	mg/kg	0.039	ND
Dimethylphthalate	1	mg/kg	0.039	ND
Di-n-butylphthalate	**1**	**mg/kg**	**0.0098**	**0.0099**
Di-n-octylphthalate	1	mg/kg	0.039	ND
Fluoranthene	1	mg/kg	0.039	ND
Fluorene	1	mg/kg	0.039	ND
Hexachlorobenzene	1	mg/kg	0.039	ND
Hexachlorobutadiene	1	mg/kg	0.039	ND
Hexachlorocyclopentadiene	1	mg/kg	0.039	ND
Hexachloroethane	1	mg/kg	0.039	ND
Indeno[1,2,3-cd]pyrene	1	mg/kg	0.039	ND
Isophorone	1	mg/kg	0.039	ND
Naphthalene	1	mg/kg	0.0098	ND
Nitrobenzene	1	mg/kg	0.039	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.0098	ND
N-Nitrosodiphenylamine	1	mg/kg	0.039	ND
Pentachlorophenol	1	mg/kg	0.20	ND
Phenanthrene	1	mg/kg	0.039	ND
Phenol	1	mg/kg	0.039	ND

Pyrene	1	mg/kg	0.039		ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	47.89	50	58	148	96	
Phenol-d5	79.50	100	49	129	79	
Nitrobenzene-d5	34.84	50	52	129	70	
2-Fluorophenol	71.76	100	43	128	72	
2-Fluorobiphenyl	35.09	50	58	125	70	
2,4,6-Tribromophenol	85.79	100	54	145	86	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**240**	**15000**
Barium	**1**	**mg/kg**	**12**	**51**
Calcium	1	mg/kg	1200	ND
Chromium	**1**	**mg/kg**	**5.9**	**22**
Cobalt	**1**	**mg/kg**	**2.9**	**10**
Copper	**1**	**mg/kg**	**5.9**	**20**
Iron	**1**	**mg/kg**	**240**	**26000**
Lead	**1**	**mg/kg**	**5.9**	**7.1**
Magnesium	**1**	**mg/kg**	**590**	**4200**
Manganese	**1**	**mg/kg**	**12**	**250**
Nickel	**1**	**mg/kg**	**5.9**	**15**
Potassium	**1**	**mg/kg**	**590**	**1500**
Sodium	1	mg/kg	290	ND
Vanadium	**1**	**mg/kg**	**12**	**33**
Zinc	**1**	**mg/kg**	**12**	**41**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	0.94	ND
Arsenic	**1**	**mg/kg**	**0.24**	**3.7**
Beryllium	**1**	**mg/kg**	**0.24**	**0.39**
Cadmium	1	mg/kg	0.47	ND
Selenium	1	mg/kg	2.4	ND
Silver	1	mg/kg	0.24	ND
Thallium	1	mg/kg	0.47	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.781	mg/kg	0.0018	ND
1,1,1-Trichloroethane	0.781	mg/kg	0.0018	ND
1,1,2,2-Tetrachloroethane	0.781	mg/kg	0.0018	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.781	mg/kg	0.0018	ND
1,1,2-Trichloroethane	0.781	mg/kg	0.0018	ND
1,1-Dichloroethane	0.781	mg/kg	0.0018	ND
1,1-Dichloroethene	0.781	mg/kg	0.0018	ND
1,1-Dichloropropene	0.781	mg/kg	0.0018	ND
1,2,3-Trichlorobenzene	0.781	mg/kg	0.0018	ND
1,2,3-Trichloropropane	0.781	mg/kg	0.0018	ND
1,2,4,5-Tetramethylbenzene	0.781	mg/kg	0.0018	ND
1,2,4-Trichlorobenzene	0.781	mg/kg	0.0018	ND
1,2,4-Trimethylbenzene	0.781	mg/kg	0.00092	ND
1,2-Dibromo-3-chloropropane	0.781	mg/kg	0.0018	ND
1,2-Dibromoethane	0.781	mg/kg	0.00092	ND
1,2-Dichlorobenzene	0.781	mg/kg	0.0018	ND
1,2-Dichloroethane	0.781	mg/kg	0.0018	ND
1,2-Dichloropropane	0.781	mg/kg	0.0018	ND
1,3,5-Trimethylbenzene	0.781	mg/kg	0.00092	ND
1,3-Dichlorobenzene	0.781	mg/kg	0.0018	ND
1,3-Dichloropropane	0.781	mg/kg	0.0018	ND
1,4-Dichlorobenzene	0.781	mg/kg	0.0018	ND
1,4-Dioxane	0.781	mg/kg	0.092	ND
2,2-Dichloropropane	0.781	mg/kg	0.0018	ND
2-Butanone	0.781	mg/kg	0.0018	ND
2-Chlorotoluene	0.781	mg/kg	0.0018	ND
2-Hexanone	0.781	mg/kg	0.0018	ND
4-Chlorotoluene	0.781	mg/kg	0.0018	ND
4-Isopropyltoluene	0.781	mg/kg	0.00092	ND

Sample ID: SB03_13-15 **Collection Date: 5/21/2018**
Lab#: AD04329-007 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

4-Methyl-2-pentanone	0.781	mg/kg	0.0018	ND
Acetone	**0.781**	**mg/kg**	**0.0092**	**0.038**
Acrolein	0.781	mg/kg	0.0092	ND
Acrylonitrile	0.781	mg/kg	0.0018	ND
Benzene	0.781	mg/kg	0.00092	ND
Bromobenzene	0.781	mg/kg	0.0018	ND
Bromochloromethane	0.781	mg/kg	0.0018	ND
Bromodichloromethane	0.781	mg/kg	0.0018	ND
Bromoform	0.781	mg/kg	0.0018	ND
Bromomethane	0.781	mg/kg	0.0018	ND
Carbon disulfide	0.781	mg/kg	0.0018	ND
Carbon tetrachloride	0.781	mg/kg	0.0018	ND
Chlorobenzene	0.781	mg/kg	0.0018	ND
Chloroethane	0.781	mg/kg	0.0018	ND
Chloroform	0.781	mg/kg	0.0018	ND
Chloromethane	0.781	mg/kg	0.0018	ND
cis-1,2-Dichloroethene	**0.781**	**mg/kg**	**0.0018**	**0.046**
cis-1,3-Dichloropropene	0.781	mg/kg	0.0018	ND
Cyclohexane	0.781	mg/kg	0.0018	ND
Dibromochloromethane	0.781	mg/kg	0.0018	ND
Dibromomethane	0.781	mg/kg	0.0018	ND
Dichlorodifluoromethane	0.781	mg/kg	0.0018	ND
Ethylbenzene	0.781	mg/kg	0.00092	ND
Hexachlorobutadiene	0.781	mg/kg	0.0018	ND
Isopropylbenzene	0.781	mg/kg	0.00092	ND
m&p-Xylenes	0.781	mg/kg	0.00092	ND
Methyl Acetate	0.781	mg/kg	0.0018	ND
Methylcyclohexane	0.781	mg/kg	0.0018	ND
Methylene chloride	0.781	mg/kg	0.0018	ND
Methyl-t-butyl ether	0.781	mg/kg	0.00092	ND
n-Butylbenzene	0.781	mg/kg	0.00092	ND
n-Propylbenzene	0.781	mg/kg	0.00092	ND
o-Xylene	0.781	mg/kg	0.00092	ND
sec-Butylbenzene	0.781	mg/kg	0.00092	ND
Styrene	0.781	mg/kg	0.0018	ND
t-Butylbenzene	0.781	mg/kg	0.00092	ND
Tetrachloroethene	0.781	mg/kg	0.0018	ND
Toluene	0.781	mg/kg	0.00092	ND
trans-1,2-Dichloroethene	0.781	mg/kg	0.0018	ND
trans-1,3-Dichloropropene	0.781	mg/kg	0.0018	ND
trans-1,4-Dichloro-2-butene	0.781	mg/kg	0.0018	ND
Trichloroethene	0.781	mg/kg	0.0018	ND
Trichlorofluoromethane	0.781	mg/kg	0.0018	ND
Vinyl chloride	0.781	mg/kg	0.0018	ND
Xylenes (Total)	0.781	mg/kg	0.00092	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	27.42	30	68	122	91	
Dibromofluoromethane	32.15	30	63	140	107	
Bromofluorobenzene	31.78	30	64	129	106	
1,2-Dichloroethane-d4	35.95	30	63	143	120	

Sample ID: SB03_5-7 **Collection Date: 5/21/2018**
Lab#: AD04329-008 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

% Solids SM2540G

Analyte	DF	Units	RL	Result
%Solids	**1**	**percent**		**88**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.011	ND
2,4-D	1	mg/kg	0.011	ND
Dicamba	1	mg/kg	0.011	ND
Silvex	1	mg/kg	0.011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1198.50	1000	25	138	120	
Dcaa-Surrogate	1325.58	1000	25	138	133	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	**1**	**mg/kg**	**0.095**	**0.44**

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0057	ND
Aldrin	1	mg/kg	0.0057	ND
Alpha-BHC	1	mg/kg	0.0011	ND
beta-BHC	1	mg/kg	0.0011	ND
Chlordane (Total)	1	mg/kg	0.0057	ND
delta-BHC	1	mg/kg	0.0057	ND
Dieldrin	1	mg/kg	0.0011	ND
Endosulfan I	1	mg/kg	0.0057	ND
Endosulfan II	1	mg/kg	0.0057	ND
Endosulfan Sulfate	1	mg/kg	0.0057	ND
Endrin	1	mg/kg	0.0057	ND
Endrin Aldehyde	1	mg/kg	0.0057	ND
Endrin Ketone	1	mg/kg	0.0057	ND
gamma-BHC	1	mg/kg	0.0011	ND
Heptachlor	1	mg/kg	0.0057	ND
Heptachlor Epoxide	1	mg/kg	0.0057	ND
Methoxychlor	1	mg/kg	0.0057	ND
p,p'-DDD	1	mg/kg	0.0028	ND
p,p'-DDE	1	mg/kg	0.0028	ND
p,p'-DDT	**1**	**mg/kg**	**0.0028**	**0.0079**
Toxaphene	1	mg/kg	0.028	ND
y-Chlordane	1	mg/kg	0.0057	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	82.69	100	37	141	83	
TCMX-Surrogate	86.30	100	37	141	86	
DCB-Surrogate	87.16	100	33	146	87	
DCB-Surrogate	89.97	100	33	146	90	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.028	ND
Aroclor-1016	1	mg/kg	0.028	ND
Aroclor-1221	1	mg/kg	0.028	ND
Aroclor-1232	1	mg/kg	0.028	ND
Aroclor-1242	1	mg/kg	0.028	ND
Aroclor-1248	1	mg/kg	0.028	ND
Aroclor-1254	1	mg/kg	0.028	ND
Aroclor-1260	1	mg/kg	0.028	ND
Aroclor-1262	1	mg/kg	0.028	ND
Aroclor-1268	1	mg/kg	0.028	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	98.16	100	37	141	98	
TCMX-Surrogate	99.79	100	37	141	100	
DCB-Surrogate	87.40	100	34	146	87	
DCB-Surrogate	97.61	100	34	146	98	

Sample ID: SB03_5-7 **Collection Date: 5/21/2018**
Lab#: AD04329-008 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.038	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.038	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.038	ND
2,4,5-Trichlorophenol	1	mg/kg	0.038	ND
2,4,6-Trichlorophenol	1	mg/kg	0.038	ND
2,4-Dichlorophenol	1	mg/kg	0.0095	ND
2,4-Dimethylphenol	1	mg/kg	0.0095	ND
2,4-Dinitrophenol	1	mg/kg	0.19	ND
2,4-Dinitrotoluene	1	mg/kg	0.038	ND
2,6-Dinitrotoluene	1	mg/kg	0.038	ND
2-Chloronaphthalene	1	mg/kg	0.038	ND
2-Chlorophenol	1	mg/kg	0.038	ND
2-Methylnaphthalene	1	mg/kg	0.038	ND
2-Methylphenol	1	mg/kg	0.0095	ND
2-Nitroaniline	1	mg/kg	0.038	ND
2-Nitrophenol	1	mg/kg	0.038	ND
3&4-Methylphenol	1	mg/kg	0.0095	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.038	ND
3-Nitroaniline	1	mg/kg	0.038	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.19	ND
4-Bromophenyl-phenylether	1	mg/kg	0.038	ND
4-Chloro-3-methylphenol	1	mg/kg	0.038	ND
4-Chloroaniline	1	mg/kg	0.0095	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.038	ND
4-Nitroaniline	1	mg/kg	0.038	ND
4-Nitrophenol	1	mg/kg	0.038	ND
Acenaphthene	1	mg/kg	0.038	ND
Acenaphthylene	1	mg/kg	0.038	ND
Acetophenone	1	mg/kg	0.038	ND
Anthracene	1	mg/kg	0.038	ND
Atrazine	1	mg/kg	0.038	ND
Benzaldehyde	1	mg/kg	0.038	ND
Benzo[a]anthracene	**1**	**mg/kg**	**0.038**	**0.039**
Benzo[a]pyrene	1	mg/kg	0.038	ND
Benzo[b]fluoranthene	**1**	**mg/kg**	**0.038**	**0.051**
Benzo[g,h,i]perylene	1	mg/kg	0.038	ND
Benzo[k]fluoranthene	1	mg/kg	0.038	ND
bis(2-Chloroethoxy)methane	1	mg/kg	0.038	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.0095	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.038	ND
bis(2-Ethylhexyl)phthalate	**1**	**mg/kg**	**0.038**	**0.096**
Butylbenzylphthalate	1	mg/kg	0.038	ND
Caprolactam	1	mg/kg	0.038	ND
Carbazole	1	mg/kg	0.038	ND
Chrysene	1	mg/kg	0.038	ND
Dibenzo[a,h]anthracene	1	mg/kg	0.038	ND
Dibenzofuran	1	mg/kg	0.0095	ND
Diethylphthalate	1	mg/kg	0.038	ND
Dimethylphthalate	1	mg/kg	0.038	ND
Di-n-butylphthalate	**1**	**mg/kg**	**0.0095**	**0.010**
Di-n-octylphthalate	1	mg/kg	0.038	ND
Fluoranthene	**1**	**mg/kg**	**0.038**	**0.060**
Fluorene	1	mg/kg	0.038	ND
Hexachlorobenzene	1	mg/kg	0.038	ND
Hexachlorobutadiene	1	mg/kg	0.038	ND
Hexachlorocyclopentadiene	1	mg/kg	0.038	ND
Hexachloroethane	1	mg/kg	0.038	ND
Indeno[1,2,3-cd]pyrene	1	mg/kg	0.038	ND
Isophorone	1	mg/kg	0.038	ND
Naphthalene	1	mg/kg	0.0095	ND
Nitrobenzene	1	mg/kg	0.038	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.0095	ND
N-Nitrosodiphenylamine	1	mg/kg	0.038	ND
Pentachlorophenol	1	mg/kg	0.19	ND
Phenanthrene	1	mg/kg	0.038	ND
Phenol	1	mg/kg	0.038	ND

Pyrene	**1**	**mg/kg**	**0.038**		**0.060**	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	41.30	50	58	148	83	
Phenol-d5	72.81	100	49	129	73	
Nitrobenzene-d5	34.42	50	52	129	69	
2-Fluorophenol	66.55	100	43	128	67	
2-Fluorobiphenyl	33.81	50	58	125	68	
2,4,6-Tribromophenol	76.75	100	54	145	77	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**230**	**19000**
Barium	**1**	**mg/kg**	**11**	**160**
Calcium	**1**	**mg/kg**	**1100**	**8400**
Chromium	**1**	**mg/kg**	**5.7**	**30**
Cobalt	**1**	**mg/kg**	**2.8**	**12**
Copper	**1**	**mg/kg**	**5.7**	**48**
Iron	**1**	**mg/kg**	**230**	**30000**
Lead	**1**	**mg/kg**	**5.7**	**88**
Magnesium	**1**	**mg/kg**	**570**	**9300**
Manganese	**1**	**mg/kg**	**11**	**510**
Nickel	**1**	**mg/kg**	**5.7**	**19**
Potassium	**1**	**mg/kg**	**570**	**4400**
Sodium	1	mg/kg	280	ND
Vanadium	**1**	**mg/kg**	**11**	**42**
Zinc	**1**	**mg/kg**	**11**	**130**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	0.91	ND
Arsenic	**1**	**mg/kg**	**0.23**	**3.0**
Beryllium	**1**	**mg/kg**	**0.23**	**0.39**
Cadmium	1	mg/kg	0.45	ND
Selenium	1	mg/kg	2.3	ND
Silver	**1**	**mg/kg**	**0.23**	**0.29**
Thallium	1	mg/kg	0.45	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.709	mg/kg	0.0016	ND
1,1,1-Trichloroethane	0.709	mg/kg	0.0016	ND
1,1,2,2-Tetrachloroethane	0.709	mg/kg	0.0016	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.709	mg/kg	0.0016	ND
1,1,2-Trichloroethane	0.709	mg/kg	0.0016	ND
1,1-Dichloroethane	0.709	mg/kg	0.0016	ND
1,1-Dichloroethene	0.709	mg/kg	0.0016	ND
1,1-Dichloropropene	0.709	mg/kg	0.0016	ND
1,2,3-Trichlorobenzene	0.709	mg/kg	0.0016	ND
1,2,3-Trichloropropane	0.709	mg/kg	0.0016	ND
1,2,4,5-Tetramethylbenzene	0.709	mg/kg	0.0016	ND
1,2,4-Trichlorobenzene	0.709	mg/kg	0.0016	ND
1,2,4-Trimethylbenzene	0.709	mg/kg	0.00081	ND
1,2-Dibromo-3-chloropropane	0.709	mg/kg	0.0016	ND
1,2-Dibromoethane	0.709	mg/kg	0.00081	ND
1,2-Dichlorobenzene	0.709	mg/kg	0.0016	ND
1,2-Dichloroethane	0.709	mg/kg	0.0016	ND
1,2-Dichloropropane	0.709	mg/kg	0.0016	ND
1,3,5-Trimethylbenzene	0.709	mg/kg	0.00081	ND
1,3-Dichlorobenzene	0.709	mg/kg	0.0016	ND
1,3-Dichloropropane	0.709	mg/kg	0.0016	ND
1,4-Dichlorobenzene	0.709	mg/kg	0.0016	ND
1,4-Dioxane	0.709	mg/kg	0.081	ND
2,2-Dichloropropane	0.709	mg/kg	0.0016	ND
2-Butanone	0.709	mg/kg	0.0016	ND
2-Chlorotoluene	0.709	mg/kg	0.0016	ND
2-Hexanone	0.709	mg/kg	0.0016	ND
4-Chlorotoluene	0.709	mg/kg	0.0016	ND
4-Isopropyltoluene	0.709	mg/kg	0.00081	ND

Sample ID: SB03_5-7 **Collection Date: 5/21/2018**
Lab#: AD04329-008 **Receipt Date: 5/21/2018**
Matrix: Soil/Encore

4-Methyl-2-pentanone	0.709	mg/kg	0.0016	ND
Acetone	0.709	mg/kg	0.0081	ND
Acrolein	0.709	mg/kg	0.0081	ND
Acrylonitrile	0.709	mg/kg	0.0016	ND
Benzene	0.709	mg/kg	0.00081	ND
Bromobenzene	0.709	mg/kg	0.0016	ND
Bromochloromethane	0.709	mg/kg	0.0016	ND
Bromodichloromethane	0.709	mg/kg	0.0016	ND
Bromoform	0.709	mg/kg	0.0016	ND
Bromomethane	0.709	mg/kg	0.0016	ND
Carbon disulfide	0.709	mg/kg	0.0016	ND
Carbon tetrachloride	0.709	mg/kg	0.0016	ND
Chlorobenzene	0.709	mg/kg	0.0016	ND
Chloroethane	0.709	mg/kg	0.0016	ND
Chloroform	0.709	mg/kg	0.0016	ND
Chloromethane	0.709	mg/kg	0.0016	ND
cis-1,2-Dichloroethene	0.709	mg/kg	0.0016	ND
cis-1,3-Dichloropropene	0.709	mg/kg	0.0016	ND
Cyclohexane	0.709	mg/kg	0.0016	ND
Dibromochloromethane	0.709	mg/kg	0.0016	ND
Dibromomethane	0.709	mg/kg	0.0016	ND
Dichlorodifluoromethane	0.709	mg/kg	0.0016	ND
Ethylbenzene	0.709	mg/kg	0.00081	ND
Hexachlorobutadiene	0.709	mg/kg	0.0016	ND
Isopropylbenzene	0.709	mg/kg	0.00081	ND
m&p-Xylenes	0.709	mg/kg	0.00081	ND
Methyl Acetate	0.709	mg/kg	0.0016	ND
Methylcyclohexane	0.709	mg/kg	0.0016	ND
Methylene chloride	0.709	mg/kg	0.0016	ND
Methyl-t-butyl ether	0.709	mg/kg	0.00081	ND
n-Butylbenzene	0.709	mg/kg	0.00081	ND
n-Propylbenzene	0.709	mg/kg	0.00081	ND
o-Xylene	0.709	mg/kg	0.00081	ND
sec-Butylbenzene	0.709	mg/kg	0.00081	ND
Styrene	0.709	mg/kg	0.0016	ND
t-Butylbenzene	0.709	mg/kg	0.00081	ND
Tetrachloroethene	**0.709**	**mg/kg**	**0.0016**	**0.0019**
Toluene	0.709	mg/kg	0.00081	ND
trans-1,2-Dichloroethene	0.709	mg/kg	0.0016	ND
trans-1,3-Dichloropropene	0.709	mg/kg	0.0016	ND
trans-1,4-Dichloro-2-butene	0.709	mg/kg	0.0016	ND
Trichloroethene	0.709	mg/kg	0.0016	ND
Trichlorofluoromethane	0.709	mg/kg	0.0016	ND
Vinyl chloride	0.709	mg/kg	0.0016	ND
Xylenes (Total)	0.709	mg/kg	0.00081	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	26.98	30	68	122	90	
Dibromofluoromethane	33.40	30	63	140	111	
Bromofluorobenzene	28.82	30	64	129	96	
1,2-Dichloroethane-d4	31.62	30	63	143	105	

Hampton-Clarke, Inc. (WBE/DBE/SBE)

175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054
Ph (Service Center): 856-780-6057 Fax: 856-780-6056

Hampton-Clarke WBE/DBE/SBE 800-426-9992

A Women-Owned, Disadvantaged, Small Business Enterprise

NELAC/NJ #07071 | PA #68-00463 | NY #11408 | CT #PH-0671 | KY #90124 | DE HSCA Approved

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 8052203

Page _____ of _____

3) Reporting Requirements (Please Circle)

Turnaround	Report Type	Electronic Data Deliv.
When Available:	Summary	NJ Hazsite
1 Business Day (100%)*	Results + QC (Waste)	Excel Reg. NJ / NY / PA
2 Business Days (75%)*	Reduced:	EnviroData
3 Business Days (50%)*	[ ] NJ [ ] NY	EQuIS:
4 Business Days (35%)*	[ ] PA [ ] Other___	[ ] 4-File [ ] EZ
5 Business Days (25%)	NJ Full / NY ASP CatB	[ ] NYDEC
8 Business Days (Stand.)	NY ASP CatA	[ ] Region 2 or 5
Other:		Other:

* Expedited TAT Not Always Available. Please Check with Lab.

Customer Information

1a) Customer: Langan
Address: 360 W 31st St 8th Floor NY NY 10001
1b) Email/Cell/Fax/Ph: 212 594-5400
1c) Send Invoice to: tchow@langan.com
1d) Send Report to: tchow@langan.com

Project Information

2a) Project: 111 Willow 170497201
2b) Project Mgr: Tyler Chow
2c) Project Location (City/State): Bronx, NY
2d) Quote/PO # (If Applicable):

FOR LAB USE ONLY ↓

Batch # A804829

===> Check If Contingent ===>

<=== Check If Contingent <===

Matrix Codes

DW - Drinking Water; GW - Ground Water; WW - Waste Water; S - Soil; SL - Sludge; OL - Oil; A - Air; OT - Other (please specify under item 9, Comments)

7) Analysis (specify methods & parameter lists): VOCs; SVOCs, Pest/Herb; PCBs, metals

Lab Sample #	4) Customer Sample ID	5) Matrix	6) Sample Date	6) Sample Time	Sample Type: Composite (C)	Sample Type: Grab (G)	8) # of Bottles: None	MeOH	En Core	NaOH	HCl	H2SO4	HNO3	Other:	9) Comments
001	SB01_1-2	S	5/21/18	15:10		✓	1	1						2	
002	SB01_10-11	S	5/21/18	15:15		✓	1	1						2	
003	SB05_1-2	S	5/21/18	13:54		✓	1	1						2	
004	SB05_9-11	S	5/21/18	14:00		✓	1	1						2	
005	SB08_0-2	S	5/21/18	10:32		✓	1	1						2	
006	SB08_11-12	S	5/21/18	10:40		✓	1	1						2	
007	SB03_13-15	S	5/21/18	11:41		✓	1	1						2	
008	SB03_5-7	S	5/21/18	11:45		✓	1	1						2	

10) Relinquished by:

Accepted by:

Date	Time
5/21/18	17:18
5/21/18	18:04

11) Sampler (print name): Date:

Special Notes

Comments, Notes, Special Requirements, HAZARDS

Indicate if low-level methods required to meet current groundwater standards (SPLP for soil):
- [ ] BN or BNA (8270D SIM)
- [ ] VOC (8260C SIM or 8011)
- [ ] SPLP (BN, BNA, Metals)
- [ ] 1,4 Dioxane

For NJ LSRP projects, indicate which standards need to be met:
- [ ] NJDEP GWQS
- [ ] NJDEP SRS
- [ ] NJDEP SPLP
- [ ] Other (specify):

Check if applicable:
- [ ] Project-Specific Reporting Limits
- [ ] High Contaminant Concentrations
- [ ] NJ LSRP Project (also check boxes above/right)

Cooler Temperature: 2.6

Please note NUMBERED items. If not completed your analytical work may be delayed.
A fee of $5/sample will be assessed for storage should sample not be activated for any analysis.

Internal use: sampling plan (check box) HC [ ] or client [ ] FSP#

Hampton-Clarke Report Of Analysis

Client: Langan Engineering & Environmental **HC Project #:** 8052221

Project: 111 Willow 170497201

Sample ID: SB02_1-3 **Collection Date: 5/22/2018**
Lab#: AD04347-001 **Receipt Date: 5/22/2018**
Matrix: Soil/Encore

% Solids SM2540G

Analyte	DF	Units	RL	Result
%Solids	**1**	**percent**		**89**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.011	ND
2,4-D	1	mg/kg	0.011	ND
Dicamba	1	mg/kg	0.011	ND
Silvex	1	mg/kg	0.011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	897.00	1000	25	138	90	
Dcaa-Surrogate	997.47	1000	25	138	100	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.094	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	**1**	**mg/kg**	**0.0056**	**0.017**
Aldrin	1	mg/kg	0.0056	ND
Alpha-BHC	1	mg/kg	0.0011	ND
beta-BHC	1	mg/kg	0.0011	ND
Chlordane (Total)	**1**	**mg/kg**	**0.0056**	**0.029**
delta-BHC	1	mg/kg	0.0056	ND
Dieldrin	1	mg/kg	0.0011	ND
Endosulfan I	1	mg/kg	0.0056	ND
Endosulfan II	1	mg/kg	0.0056	ND
Endosulfan Sulfate	1	mg/kg	0.0056	ND
Endrin	1	mg/kg	0.0056	ND
Endrin Aldehyde	1	mg/kg	0.0056	ND
Endrin Ketone	1	mg/kg	0.0056	ND
gamma-BHC	1	mg/kg	0.0011	ND
Heptachlor	1	mg/kg	0.0056	ND
Heptachlor Epoxide	1	mg/kg	0.0056	ND
Methoxychlor	1	mg/kg	0.0056	ND
p,p'-DDD	1	mg/kg	0.0028	ND
p,p'-DDE	**1**	**mg/kg**	**0.0028**	**0.0075d**
p,p'-DDT	**1**	**mg/kg**	**0.0028**	**0.018d**
Toxaphene	1	mg/kg	0.028	ND
y-Chlordane	**1**	**mg/kg**	**0.0056**	**0.012d**

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	98.40	100	37	141	98	
TCMX-Surrogate	88.74	100	37	141	89	
DCB-Surrogate	599.38	100	33	146	599	S8
DCB-Surrogate	66.58	100	33	146	67	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	**1**	**mg/kg**	**0.028**	**0.29**
Aroclor-1016	1	mg/kg	0.028	ND
Aroclor-1221	1	mg/kg	0.028	ND
Aroclor-1232	1	mg/kg	0.028	ND
Aroclor-1242	1	mg/kg	0.028	ND
Aroclor-1248	1	mg/kg	0.028	ND
Aroclor-1254	1	mg/kg	0.028	ND
Aroclor-1260	**1**	**mg/kg**	**0.028**	**0.29**

Aroclor-1262	1	mg/kg	0.028	ND	
Aroclor-1268	1	mg/kg	0.028	ND	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	107.44	100	37	141	107	
TCMX-Surrogate	104.17	100	37	141	104	
DCB-Surrogate	70.28	100	34	146	70	
DCB-Surrogate	77.23	100	34	146	77	

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	3	mg/kg	0.22	ND
1,2,4,5-Tetrachlorobenzene	3	mg/kg	0.22	ND
2,3,4,6-Tetrachlorophenol	3	mg/kg	0.22	ND
2,4,5-Trichlorophenol	3	mg/kg	0.22	ND
2,4,6-Trichlorophenol	3	mg/kg	0.22	ND
2,4-Dichlorophenol	3	mg/kg	0.056	ND
2,4-Dimethylphenol	3	mg/kg	0.056	ND
2,4-Dinitrophenol	3	mg/kg	1.1	ND
2,4-Dinitrotoluene	3	mg/kg	0.22	ND
2,6-Dinitrotoluene	3	mg/kg	0.22	ND
2-Chloronaphthalene	3	mg/kg	0.22	ND
2-Chlorophenol	3	mg/kg	0.22	ND
2-Methylnaphthalene	3	mg/kg	0.22	ND
2-Methylphenol	3	mg/kg	0.056	ND
2-Nitroaniline	3	mg/kg	0.22	ND
2-Nitrophenol	3	mg/kg	0.22	ND
3&4-Methylphenol	3	mg/kg	0.056	ND
3,3'-Dichlorobenzidine	3	mg/kg	0.22	ND
3-Nitroaniline	3	mg/kg	0.22	ND
4,6-Dinitro-2-methylphenol	3	mg/kg	1.1	ND
4-Bromophenyl-phenylether	3	mg/kg	0.22	ND
4-Chloro-3-methylphenol	3	mg/kg	0.22	ND
4-Chloroaniline	3	mg/kg	0.056	ND
4-Chlorophenyl-phenylether	3	mg/kg	0.22	ND
4-Nitroaniline	3	mg/kg	0.22	ND
4-Nitrophenol	3	mg/kg	0.22	ND
Acenaphthene	3	mg/kg	0.22	ND
Acenaphthylene	3	mg/kg	0.22	ND
Acetophenone	3	mg/kg	0.22	ND
Anthracene	3	mg/kg	0.22	ND
Atrazine	3	mg/kg	0.22	ND
Benzaldehyde	3	mg/kg	0.22	ND
Benzo[a]anthracene	**3**	**mg/kg**	**0.22**	**0.57**
Benzo[a]pyrene	**3**	**mg/kg**	**0.22**	**0.60**
Benzo[b]fluoranthene	**3**	**mg/kg**	**0.22**	**0.82**
Benzo[g,h,i]perylene	**3**	**mg/kg**	**0.22**	**0.49**
Benzo[k]fluoranthene	**3**	**mg/kg**	**0.22**	**0.28**
bis(2-Chloroethoxy)methane	3	mg/kg	0.22	ND
bis(2-Chloroethyl)ether	3	mg/kg	0.056	ND
bis(2-Chloroisopropyl)ether	3	mg/kg	0.22	ND
bis(2-Ethylhexyl)phthalate	3	mg/kg	0.22	ND
Butylbenzylphthalate	3	mg/kg	0.22	ND
Caprolactam	3	mg/kg	0.22	ND
Carbazole	3	mg/kg	0.22	ND
Chrysene	**3**	**mg/kg**	**0.22**	**0.55**
Dibenzo[a,h]anthracene	3	mg/kg	0.22	ND
Dibenzofuran	3	mg/kg	0.056	ND
Diethylphthalate	3	mg/kg	0.22	ND
Dimethylphthalate	3	mg/kg	0.22	ND
Di-n-butylphthalate	3	mg/kg	0.056	ND
Di-n-octylphthalate	3	mg/kg	0.22	ND
Fluoranthene	**3**	**mg/kg**	**0.22**	**0.99**
Fluorene	3	mg/kg	0.22	ND
Hexachlorobenzene	3	mg/kg	0.22	ND
Hexachlorobutadiene	3	mg/kg	0.22	ND
Hexachlorocyclopentadiene	3	mg/kg	0.22	ND
Hexachloroethane	3	mg/kg	0.22	ND
Indeno[1,2,3-cd]pyrene	**3**	**mg/kg**	**0.22**	**0.39**
Isophorone	3	mg/kg	0.22	ND

Sample ID: SB02_1-3 **Collection Date: 5/22/2018**
Lab#: AD04347-001 **Receipt Date: 5/22/2018**
Matrix: Soil/Encore

Naphthalene	3	mg/kg	0.056	ND	
Nitrobenzene	3	mg/kg	0.22	ND	
N-Nitroso-di-n-propylamine	3	mg/kg	0.056	ND	
N-Nitrosodiphenylamine	3	mg/kg	0.22	ND	
Pentachlorophenol	3	mg/kg	1.1	ND	
Phenanthrene	**3**	**mg/kg**	**0.22**	**0.59**	
Phenol	3	mg/kg	0.22	ND	
Pyrene	**3**	**mg/kg**	**0.22**	**1.0**	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	8.36	50	58	148	100	
Phenol-d5	12.17	100	49	129	73	
Nitrobenzene-d5	5.46	50	52	129	66	
2-Fluorophenol	10.34	100	43	128	62	
2-Fluorobiphenyl	6.65	50	58	125	80	
2,4,6-Tribromophenol	7.75	100	54	145	46	Sa8

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**220**	**10000**
Barium	**1**	**mg/kg**	**11**	**140**
Calcium	**1**	**mg/kg**	**1100**	**56000**
Chromium	**1**	**mg/kg**	**5.6**	**57**
Cobalt	**1**	**mg/kg**	**2.8**	**33**
Copper	**1**	**mg/kg**	**5.6**	**440**
Iron	**1**	**mg/kg**	**220**	**28000**
Lead	**1**	**mg/kg**	**5.6**	**340**
Magnesium	**1**	**mg/kg**	**560**	**9500**
Manganese	**1**	**mg/kg**	**11**	**340**
Nickel	**1**	**mg/kg**	**5.6**	**76**
Potassium	**1**	**mg/kg**	**560**	**1700**
Sodium	**1**	**mg/kg**	**280**	**530**
Vanadium	**1**	**mg/kg**	**11**	**30**
Zinc	**1**	**mg/kg**	**11**	**2400**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	**1**	**mg/kg**	**0.90**	**0.99**
Arsenic	**1**	**mg/kg**	**0.22**	**7.6**
Beryllium	**1**	**mg/kg**	**0.22**	**3.5**
Cadmium	**1**	**mg/kg**	**0.45**	**0.50**
Selenium	1	mg/kg	2.2	ND
Silver	**1**	**mg/kg**	**0.22**	**0.79**
Thallium	1	mg/kg	0.45	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.84	mg/kg	0.0019	ND
1,1,1-Trichloroethane	0.84	mg/kg	0.0019	ND
1,1,2,2-Tetrachloroethane	0.84	mg/kg	0.0019	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.84	mg/kg	0.0019	ND
1,1,2-Trichloroethane	0.84	mg/kg	0.0019	ND
1,1-Dichloroethane	0.84	mg/kg	0.0019	ND
1,1-Dichloroethene	0.84	mg/kg	0.0019	ND
1,1-Dichloropropene	0.84	mg/kg	0.0019	ND
1,2,3-Trichlorobenzene	0.84	mg/kg	0.0019	ND
1,2,3-Trichloropropane	0.84	mg/kg	0.0019	ND
1,2,4,5-Tetramethylbenzene	0.84	mg/kg	0.0019	ND
1,2,4-Trichlorobenzene	0.84	mg/kg	0.0019	ND
1,2,4-Trimethylbenzene	0.84	mg/kg	0.00094	ND
1,2-Dibromo-3-chloropropane	0.84	mg/kg	0.0019	ND
1,2-Dibromoethane	0.84	mg/kg	0.00094	ND
1,2-Dichlorobenzene	0.84	mg/kg	0.0019	ND
1,2-Dichloroethane	0.84	mg/kg	0.0019	ND
1,2-Dichloropropane	0.84	mg/kg	0.0019	ND
1,3,5-Trimethylbenzene	0.84	mg/kg	0.00094	ND
1,3-Dichlorobenzene	0.84	mg/kg	0.0019	ND
1,3-Dichloropropane	0.84	mg/kg	0.0019	ND
1,4-Dichlorobenzene	0.84	mg/kg	0.0019	ND

Sample ID: SB02_1-3 **Collection Date: 5/22/2018**
Lab#: AD04347-001 **Receipt Date: 5/22/2018**
Matrix: Soil/Encore

1,4-Dioxane	0.84	mg/kg	0.094	ND
2,2-Dichloropropane	0.84	mg/kg	0.0019	ND
2-Butanone	0.84	mg/kg	0.0019	ND
2-Chlorotoluene	0.84	mg/kg	0.0019	ND
2-Hexanone	0.84	mg/kg	0.0019	ND
4-Chlorotoluene	0.84	mg/kg	0.0019	ND
4-Isopropyltoluene	0.84	mg/kg	0.00094	ND
4-Methyl-2-pentanone	0.84	mg/kg	0.0019	ND
Acetone	0.84	mg/kg	0.0094	ND
Acrolein	0.84	mg/kg	0.0094	ND
Acrylonitrile	0.84	mg/kg	0.0019	ND
Benzene	0.84	mg/kg	0.00094	ND
Bromobenzene	0.84	mg/kg	0.0019	ND
Bromochloromethane	0.84	mg/kg	0.0019	ND
Bromodichloromethane	0.84	mg/kg	0.0019	ND
Bromoform	0.84	mg/kg	0.0019	ND
Bromomethane	0.84	mg/kg	0.0019	ND
Carbon disulfide	0.84	mg/kg	0.0019	ND
Carbon tetrachloride	0.84	mg/kg	0.0019	ND
Chlorobenzene	0.84	mg/kg	0.0019	ND
Chloroethane	0.84	mg/kg	0.0019	ND
Chloroform	**0.84**	**mg/kg**	**0.0019**	**0.0093**
Chloromethane	0.84	mg/kg	0.0019	ND
cis-1,2-Dichloroethene	0.84	mg/kg	0.0019	ND
cis-1,3-Dichloropropene	0.84	mg/kg	0.0019	ND
Cyclohexane	0.84	mg/kg	0.0019	ND
Dibromochloromethane	0.84	mg/kg	0.0019	ND
Dibromomethane	0.84	mg/kg	0.0019	ND
Dichlorodifluoromethane	0.84	mg/kg	0.0019	ND
Ethylbenzene	0.84	mg/kg	0.00094	ND
Hexachlorobutadiene	0.84	mg/kg	0.0019	ND
Isopropylbenzene	0.84	mg/kg	0.00094	ND
m&p-Xylenes	0.84	mg/kg	0.00094	ND
Methyl Acetate	0.84	mg/kg	0.0019	ND
Methylcyclohexane	0.84	mg/kg	0.0019	ND
Methylene chloride	**0.84**	**mg/kg**	**0.0019**	**0.0026**
Methyl-t-butyl ether	0.84	mg/kg	0.00094	ND
n-Butylbenzene	0.84	mg/kg	0.00094	ND
n-Propylbenzene	0.84	mg/kg	0.00094	ND
o-Xylene	0.84	mg/kg	0.00094	ND
sec-Butylbenzene	0.84	mg/kg	0.00094	ND
Styrene	0.84	mg/kg	0.0019	ND
t-Butylbenzene	0.84	mg/kg	0.00094	ND
Tetrachloroethene	0.84	mg/kg	0.0019	ND
Toluene	0.84	mg/kg	0.00094	ND
trans-1,2-Dichloroethene	0.84	mg/kg	0.0019	ND
trans-1,3-Dichloropropene	0.84	mg/kg	0.0019	ND
trans-1,4-Dichloro-2-butene	0.84	mg/kg	0.0019	ND
Trichloroethene	0.84	mg/kg	0.0019	ND
Trichlorofluoromethane	0.84	mg/kg	0.0019	ND
Vinyl chloride	0.84	mg/kg	0.0019	ND
Xylenes (Total)	0.84	mg/kg	0.00094	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	32.35	30	68	122	108	
Dibromofluoromethane	32.52	30	63	140	108	
Bromofluorobenzene	37.07	30	64	129	124	
1,2-Dichloroethane-d4	38.30	30	63	143	128	

Sample ID: SB02_7-8 **Collection Date: 5/22/2018**
Lab#: AD04347-002 **Receipt Date: 5/22/2018**
Matrix: Soil/Encore

% Solids SM2540G

Analyte	DF	Units	RL	Result
%Solids	**1**	**percent**		**71**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.014	ND
2,4-D	1	mg/kg	0.014	ND
Dicamba	1	mg/kg	0.014	ND
Silvex	1	mg/kg	0.014	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1023.03	1000	25	138	102	
Dcaa-Surrogate	1170.16	1000	25	138	117	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	**1**	**mg/kg**	**0.12**	**0.13**

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0070	ND
Aldrin	1	mg/kg	0.0070	ND
Alpha-BHC	1	mg/kg	0.0014	ND
beta-BHC	1	mg/kg	0.0014	ND
Chlordane (Total)	1	mg/kg	0.0070	ND
delta-BHC	1	mg/kg	0.0070	ND
Dieldrin	1	mg/kg	0.0014	ND
Endosulfan I	1	mg/kg	0.0070	ND
Endosulfan II	1	mg/kg	0.0070	ND
Endosulfan Sulfate	1	mg/kg	0.0070	ND
Endrin	1	mg/kg	0.0070	ND
Endrin Aldehyde	1	mg/kg	0.0070	ND
Endrin Ketone	1	mg/kg	0.0070	ND
gamma-BHC	1	mg/kg	0.0014	ND
Heptachlor	1	mg/kg	0.0070	ND
Heptachlor Epoxide	1	mg/kg	0.0070	ND
Methoxychlor	1	mg/kg	0.0070	ND
p,p'-DDD	1	mg/kg	0.0035	ND
p,p'-DDE	**1**	**mg/kg**	**0.0035**	**0.014d**
p,p'-DDT	**1**	**mg/kg**	**0.0035**	**0.072d**
Toxaphene	1	mg/kg	0.035	ND
y-Chlordane	1	mg/kg	0.0070	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	90.69	100	37	141	91	
TCMX-Surrogate	77.46	100	37	141	77	
DCB-Surrogate	144.22	100	33	146	144	
DCB-Surrogate	65.20	100	33	146	65	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.035	ND
Aroclor-1016	1	mg/kg	0.035	ND
Aroclor-1221	1	mg/kg	0.035	ND
Aroclor-1232	1	mg/kg	0.035	ND
Aroclor-1242	1	mg/kg	0.035	ND
Aroclor-1248	1	mg/kg	0.035	ND
Aroclor-1254	1	mg/kg	0.035	ND
Aroclor-1260	1	mg/kg	0.035	ND
Aroclor-1262	1	mg/kg	0.035	ND
Aroclor-1268	1	mg/kg	0.035	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	95.83	100	37	141	96	
TCMX-Surrogate	99.92	100	37	141	100	
DCB-Surrogate	67.74	100	34	146	68	
DCB-Surrogate	75.45	100	34	146	75	

Sample ID: SB02_7-8 **Collection Date: 5/22/2018**
Lab#: AD04347-002 **Receipt Date: 5/22/2018**
Matrix: Soil/Encore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	10	mg/kg	0.94	ND
1,2,4,5-Tetrachlorobenzene	10	mg/kg	0.94	ND
2,3,4,6-Tetrachlorophenol	10	mg/kg	0.94	ND
2,4,5-Trichlorophenol	10	mg/kg	0.94	ND
2,4,6-Trichlorophenol	10	mg/kg	0.94	ND
2,4-Dichlorophenol	10	mg/kg	0.23	ND
2,4-Dimethylphenol	10	mg/kg	0.23	ND
2,4-Dinitrophenol	10	mg/kg	4.7	ND
2,4-Dinitrotoluene	10	mg/kg	0.94	ND
2,6-Dinitrotoluene	10	mg/kg	0.94	ND
2-Chloronaphthalene	10	mg/kg	0.94	ND
2-Chlorophenol	10	mg/kg	0.94	ND
2-Methylnaphthalene	10	mg/kg	0.94	ND
2-Methylphenol	10	mg/kg	0.23	ND
2-Nitroaniline	10	mg/kg	0.94	ND
2-Nitrophenol	10	mg/kg	0.94	ND
3&4-Methylphenol	10	mg/kg	0.23	ND
3,3'-Dichlorobenzidine	10	mg/kg	0.94	ND
3-Nitroaniline	10	mg/kg	0.94	ND
4,6-Dinitro-2-methylphenol	10	mg/kg	4.7	ND
4-Bromophenyl-phenylether	10	mg/kg	0.94	ND
4-Chloro-3-methylphenol	10	mg/kg	0.94	ND
4-Chloroaniline	10	mg/kg	0.23	ND
4-Chlorophenyl-phenylether	10	mg/kg	0.94	ND
4-Nitroaniline	10	mg/kg	0.94	ND
4-Nitrophenol	10	mg/kg	0.94	ND
Acenaphthene	**10**	**mg/kg**	**0.94**	**1.9**
Acenaphthylene	10	mg/kg	0.94	ND
Acetophenone	10	mg/kg	0.94	ND
Anthracene	**10**	**mg/kg**	**0.94**	**6.3**
Atrazine	10	mg/kg	0.94	ND
Benzaldehyde	10	mg/kg	0.94	ND
Benzo[a]anthracene	**10**	**mg/kg**	**0.94**	**20**
Benzo[a]pyrene	**10**	**mg/kg**	**0.94**	**17**
Benzo[b]fluoranthene	**10**	**mg/kg**	**0.94**	**24**
Benzo[g,h,i]perylene	**10**	**mg/kg**	**0.94**	**13**
Benzo[k]fluoranthene	**10**	**mg/kg**	**0.94**	**7.6**
bis(2-Chloroethoxy)methane	10	mg/kg	0.94	ND
bis(2-Chloroethyl)ether	10	mg/kg	0.23	ND
bis(2-Chloroisopropyl)ether	10	mg/kg	0.94	ND
bis(2-Ethylhexyl)phthalate	10	mg/kg	0.94	ND
Butylbenzylphthalate	10	mg/kg	0.94	ND
Caprolactam	10	mg/kg	0.94	ND
Carbazole	**10**	**mg/kg**	**0.94**	**2.9**
Chrysene	**10**	**mg/kg**	**0.94**	**17**
Dibenzo[a,h]anthracene	**10**	**mg/kg**	**0.94**	**3.6**
Dibenzofuran	**10**	**mg/kg**	**0.23**	**1.8**
Diethylphthalate	10	mg/kg	0.94	ND
Dimethylphthalate	**10**	**mg/kg**	**0.94**	**2.4**
Di-n-butylphthalate	10	mg/kg	0.23	ND
Di-n-octylphthalate	10	mg/kg	0.94	ND
Fluoranthene	**10**	**mg/kg**	**0.94**	**51**
Fluorene	**10**	**mg/kg**	**0.94**	**1.4**
Hexachlorobenzene	10	mg/kg	0.94	ND
Hexachlorobutadiene	10	mg/kg	0.94	ND
Hexachlorocyclopentadiene	10	mg/kg	0.94	ND
Hexachloroethane	10	mg/kg	0.94	ND
Indeno[1,2,3-cd]pyrene	10	mg/kg	0.94	ND
Isophorone	10	mg/kg	0.94	ND
Naphthalene	**10**	**mg/kg**	**0.23**	**0.81**
Nitrobenzene	10	mg/kg	0.94	ND
N-Nitroso-di-n-propylamine	10	mg/kg	0.23	ND
N-Nitrosodiphenylamine	10	mg/kg	0.94	ND
Pentachlorophenol	10	mg/kg	4.7	ND
Phenanthrene	**10**	**mg/kg**	**0.94**	**34**
Phenol	10	mg/kg	0.94	ND

Pyrene	**10**	**mg/kg**	**0.94**		**40**	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	2.36	50	58	148	95	
Phenol-d5	3.41	100	49	129	68	
Nitrobenzene-d5	1.89	50	52	129	76	
2-Fluorophenol	2.95	100	43	128	59	
2-Fluorobiphenyl	2.07	50	58	125	83	
2,4,6-Tribromophenol	4.13	100	54	145	83	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**280**	**18000**
Barium	**1**	**mg/kg**	**14**	**410**
Calcium	**1**	**mg/kg**	**1400**	**43000**
Chromium	**1**	**mg/kg**	**7.0**	**110**
Cobalt	**1**	**mg/kg**	**3.5**	**21**
Copper	**1**	**mg/kg**	**7.0**	**250**
Iron	**1**	**mg/kg**	**280**	**120000**
Lead	**1**	**mg/kg**	**7.0**	**310**
Magnesium	**1**	**mg/kg**	**700**	**17000**
Manganese	**1**	**mg/kg**	**14**	**1500**
Nickel	**1**	**mg/kg**	**7.0**	**100**
Potassium	**1**	**mg/kg**	**700**	**2600**
Sodium	1	mg/kg	350	ND
Vanadium	**1**	**mg/kg**	**14**	**71**
Zinc	**1**	**mg/kg**	**14**	**660**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	1.1	ND
Arsenic	**1**	**mg/kg**	**0.28**	**5.6**
Beryllium	**1**	**mg/kg**	**0.28**	**0.62**
Cadmium	**1**	**mg/kg**	**0.56**	**1.3**
Selenium	1	mg/kg	2.8	ND
Silver	1	mg/kg	0.28	ND
Thallium	1	mg/kg	0.56	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.779	mg/kg	0.0022	ND
1,1,1-Trichloroethane	0.779	mg/kg	0.0022	ND
1,1,2,2-Tetrachloroethane	0.779	mg/kg	0.0022	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.779	mg/kg	0.0022	ND
1,1,2-Trichloroethane	0.779	mg/kg	0.0022	ND
1,1-Dichloroethane	0.779	mg/kg	0.0022	ND
1,1-Dichloroethene	0.779	mg/kg	0.0022	ND
1,1-Dichloropropene	0.779	mg/kg	0.0022	ND
1,2,3-Trichlorobenzene	0.779	mg/kg	0.0022	ND
1,2,3-Trichloropropane	0.779	mg/kg	0.0022	ND
1,2,4,5-Tetramethylbenzene	0.779	mg/kg	0.0022	ND
1,2,4-Trichlorobenzene	0.779	mg/kg	0.0022	ND
1,2,4-Trimethylbenzene	0.779	mg/kg	0.0011	ND
1,2-Dibromo-3-chloropropane	0.779	mg/kg	0.0022	ND
1,2-Dibromoethane	0.779	mg/kg	0.0011	ND
1,2-Dichlorobenzene	0.779	mg/kg	0.0022	ND
1,2-Dichloroethane	0.779	mg/kg	0.0022	ND
1,2-Dichloropropane	0.779	mg/kg	0.0022	ND
1,3,5-Trimethylbenzene	0.779	mg/kg	0.0011	ND
1,3-Dichlorobenzene	0.779	mg/kg	0.0022	ND
1,3-Dichloropropane	0.779	mg/kg	0.0022	ND
1,4-Dichlorobenzene	0.779	mg/kg	0.0022	ND
1,4-Dioxane	0.779	mg/kg	0.11	ND
2,2-Dichloropropane	0.779	mg/kg	0.0022	ND
2-Butanone	**0.779**	**mg/kg**	**0.0022**	**0.075**
2-Chlorotoluene	0.779	mg/kg	0.0022	ND
2-Hexanone	0.779	mg/kg	0.0022	ND
4-Chlorotoluene	0.779	mg/kg	0.0022	ND
4-Isopropyltoluene	0.779	mg/kg	0.0011	ND

Sample ID: SB02_7-8 **Collection Date: 5/22/2018**
Lab#: AD04347-002 **Receipt Date: 5/22/2018**
Matrix: Soil/Encore

4-Methyl-2-pentanone	0.779	mg/kg	0.0022	ND
Acetone	**0.779**	**mg/kg**	**0.011**	**0.18**
Acrolein	0.779	mg/kg	0.011	ND
Acrylonitrile	0.779	mg/kg	0.0022	ND
Benzene	0.779	mg/kg	0.0011	ND
Bromobenzene	0.779	mg/kg	0.0022	ND
Bromochloromethane	0.779	mg/kg	0.0022	ND
Bromodichloromethane	0.779	mg/kg	0.0022	ND
Bromoform	0.779	mg/kg	0.0022	ND
Bromomethane	0.779	mg/kg	0.0022	ND
Carbon disulfide	0.779	mg/kg	0.0022	ND
Carbon tetrachloride	0.779	mg/kg	0.0022	ND
Chlorobenzene	0.779	mg/kg	0.0022	ND
Chloroethane	0.779	mg/kg	0.0022	ND
Chloroform	0.779	mg/kg	0.0022	ND
Chloromethane	0.779	mg/kg	0.0022	ND
cis-1,2-Dichloroethene	0.779	mg/kg	0.0022	ND
cis-1,3-Dichloropropene	0.779	mg/kg	0.0022	ND
Cyclohexane	0.779	mg/kg	0.0022	ND
Dibromochloromethane	0.779	mg/kg	0.0022	ND
Dibromomethane	0.779	mg/kg	0.0022	ND
Dichlorodifluoromethane	0.779	mg/kg	0.0022	ND
Ethylbenzene	0.779	mg/kg	0.0011	ND
Hexachlorobutadiene	0.779	mg/kg	0.0022	ND
Isopropylbenzene	0.779	mg/kg	0.0011	ND
m&p-Xylenes	0.779	mg/kg	0.0011	ND
Methyl Acetate	0.779	mg/kg	0.0022	ND
Methylcyclohexane	0.779	mg/kg	0.0022	ND
Methylene chloride	0.779	mg/kg	0.0022	ND
Methyl-t-butyl ether	0.779	mg/kg	0.0011	ND
n-Butylbenzene	0.779	mg/kg	0.0011	ND
n-Propylbenzene	0.779	mg/kg	0.0011	ND
o-Xylene	0.779	mg/kg	0.0011	ND
sec-Butylbenzene	0.779	mg/kg	0.0011	ND
Styrene	0.779	mg/kg	0.0022	ND
t-Butylbenzene	0.779	mg/kg	0.0011	ND
Tetrachloroethene	0.779	mg/kg	0.0022	ND
Toluene	0.779	mg/kg	0.0011	ND
trans-1,2-Dichloroethene	0.779	mg/kg	0.0022	ND
trans-1,3-Dichloropropene	0.779	mg/kg	0.0022	ND
trans-1,4-Dichloro-2-butene	0.779	mg/kg	0.0022	ND
Trichloroethene	0.779	mg/kg	0.0022	ND
Trichlorofluoromethane	0.779	mg/kg	0.0022	ND
Vinyl chloride	0.779	mg/kg	0.0022	ND
Xylenes (Total)	0.779	mg/kg	0.0011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	32.64	30	68	122	109	
Dibromofluoromethane	30.03	30	63	140	100	
Bromofluorobenzene	35.19	30	64	129	117	
1,2-Dichloroethane-d4	33.43	30	63	143	111	

Sample ID: SB09_0-2 **Collection Date: 5/22/2018**
Lab#: AD04347-003 **Receipt Date: 5/22/2018**
Matrix: Soil/Encore

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	**1**	**percent**		**84**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.012	ND
2,4-D	1	mg/kg	0.012	ND
Dicamba	1	mg/kg	0.012	ND
Silvex	1	mg/kg	0.012	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1195.29	1000	25	138	120	
Dcaa-Surrogate	1206.60	1000	25	138	121	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.099	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0060	ND
Aldrin	1	mg/kg	0.0060	ND
Alpha-BHC	1	mg/kg	0.0012	ND
beta-BHC	1	mg/kg	0.0012	ND
Chlordane (Total)	1	mg/kg	0.0060	ND
delta-BHC	1	mg/kg	0.0060	ND
Dieldrin	1	mg/kg	0.0012	ND
Endosulfan I	1	mg/kg	0.0060	ND
Endosulfan II	1	mg/kg	0.0060	ND
Endosulfan Sulfate	1	mg/kg	0.0060	ND
Endrin	1	mg/kg	0.0060	ND
Endrin Aldehyde	1	mg/kg	0.0060	ND
Endrin Ketone	1	mg/kg	0.0060	ND
gamma-BHC	1	mg/kg	0.0012	ND
Heptachlor	1	mg/kg	0.0060	ND
Heptachlor Epoxide	1	mg/kg	0.0060	ND
Methoxychlor	1	mg/kg	0.0060	ND
p,p'-DDD	1	mg/kg	0.0030	ND
p,p'-DDE	1	mg/kg	0.0030	ND
p,p'-DDT	1	mg/kg	0.0030	ND
Toxaphene	1	mg/kg	0.030	ND
y-Chlordane	1	mg/kg	0.0060	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	84.01	100	37	141	84	
TCMX-Surrogate	78.07	100	37	141	78	
DCB-Surrogate	87.13	100	33	146	87	
DCB-Surrogate	83.29	100	33	146	83	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.030	ND
Aroclor-1016	1	mg/kg	0.030	ND
Aroclor-1221	1	mg/kg	0.030	ND
Aroclor-1232	1	mg/kg	0.030	ND
Aroclor-1242	1	mg/kg	0.030	ND
Aroclor-1248	1	mg/kg	0.030	ND
Aroclor-1254	1	mg/kg	0.030	ND
Aroclor-1260	1	mg/kg	0.030	ND
Aroclor-1262	1	mg/kg	0.030	ND
Aroclor-1268	1	mg/kg	0.030	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	86.96	100	37	141	87	
TCMX-Surrogate	88.63	100	37	141	89	
DCB-Surrogate	60.85	100	34	146	61	
DCB-Surrogate	70.13	100	34	146	70	

Sample ID: SB09_0-2 **Collection Date: 5/22/2018**
Lab#: AD04347-003 **Receipt Date: 5/22/2018**
Matrix: Soil/Encore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.040	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.040	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.040	ND
2,4,5-Trichlorophenol	1	mg/kg	0.040	ND
2,4,6-Trichlorophenol	1	mg/kg	0.040	ND
2,4-Dichlorophenol	1	mg/kg	0.0099	ND
2,4-Dimethylphenol	1	mg/kg	0.0099	ND
2,4-Dinitrophenol	1	mg/kg	0.20	ND
2,4-Dinitrotoluene	1	mg/kg	0.040	ND
2,6-Dinitrotoluene	1	mg/kg	0.040	ND
2-Chloronaphthalene	1	mg/kg	0.040	ND
2-Chlorophenol	1	mg/kg	0.040	ND
2-Methylnaphthalene	1	mg/kg	0.040	ND
2-Methylphenol	1	mg/kg	0.0099	ND
2-Nitroaniline	1	mg/kg	0.040	ND
2-Nitrophenol	1	mg/kg	0.040	ND
3&4-Methylphenol	1	mg/kg	0.0099	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.040	ND
3-Nitroaniline	1	mg/kg	0.040	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.20	ND
4-Bromophenyl-phenylether	1	mg/kg	0.040	ND
4-Chloro-3-methylphenol	1	mg/kg	0.040	ND
4-Chloroaniline	1	mg/kg	0.0099	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.040	ND
4-Nitroaniline	1	mg/kg	0.040	ND
4-Nitrophenol	1	mg/kg	0.040	ND
Acenaphthene	1	mg/kg	0.040	ND
Acenaphthylene	1	mg/kg	0.040	ND
Acetophenone	1	mg/kg	0.040	ND
Anthracene	1	mg/kg	0.040	ND
Atrazine	1	mg/kg	0.040	ND
Benzaldehyde	1	mg/kg	0.040	ND
Benzo[a]anthracene	**1**	**mg/kg**	**0.040**	**0.057**
Benzo[a]pyrene	**1**	**mg/kg**	**0.040**	**0.047**
Benzo[b]fluoranthene	**1**	**mg/kg**	**0.040**	**0.051**
Benzo[g,h,i]perylene	1	mg/kg	0.040	ND
Benzo[k]fluoranthene	1	mg/kg	0.040	ND
bis(2-Chloroethoxy)methane	1	mg/kg	0.040	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.0099	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.040	ND
bis(2-Ethylhexyl)phthalate	1	mg/kg	0.040	ND
Butylbenzylphthalate	1	mg/kg	0.040	ND
Caprolactam	1	mg/kg	0.040	ND
Carbazole	1	mg/kg	0.040	ND
Chrysene	**1**	**mg/kg**	**0.040**	**0.050**
Dibenzo[a,h]anthracene	1	mg/kg	0.040	ND
Dibenzofuran	1	mg/kg	0.0099	ND
Diethylphthalate	1	mg/kg	0.040	ND
Dimethylphthalate	1	mg/kg	0.040	ND
Di-n-butylphthalate	1	mg/kg	0.0099	ND
Di-n-octylphthalate	1	mg/kg	0.040	ND
Fluoranthene	**1**	**mg/kg**	**0.040**	**0.11**
Fluorene	1	mg/kg	0.040	ND
Hexachlorobenzene	1	mg/kg	0.040	ND
Hexachlorobutadiene	1	mg/kg	0.040	ND
Hexachlorocyclopentadiene	1	mg/kg	0.040	ND
Hexachloroethane	1	mg/kg	0.040	ND
Indeno[1,2,3-cd]pyrene	1	mg/kg	0.040	ND
Isophorone	1	mg/kg	0.040	ND
Naphthalene	**1**	**mg/kg**	**0.0099**	**0.020**
Nitrobenzene	1	mg/kg	0.040	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.0099	ND
N-Nitrosodiphenylamine	1	mg/kg	0.040	ND
Pentachlorophenol	1	mg/kg	0.20	ND
Phenanthrene	**1**	**mg/kg**	**0.040**	**0.16**
Phenol	1	mg/kg	0.040	ND

Pyrene	**1**	**mg/kg**	**0.040**		**0.15**	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	53.01	50	58	148	106	
Phenol-d5	85.57	100	49	129	86	
Nitrobenzene-d5	36.01	50	52	129	72	
2-Fluorophenol	71.29	100	43	128	71	
2-Fluorobiphenyl	39.74	50	58	125	79	
2,4,6-Tribromophenol	80.14	100	54	145	80	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**240**	**16000**
Barium	**1**	**mg/kg**	**12**	**58**
Calcium	**1**	**mg/kg**	**1200**	**1300**
Chromium	**1**	**mg/kg**	**6.0**	**30**
Cobalt	**1**	**mg/kg**	**3.0**	**8.8**
Copper	**1**	**mg/kg**	**6.0**	**18**
Iron	**1**	**mg/kg**	**240**	**28000**
Lead	**1**	**mg/kg**	**6.0**	**10**
Magnesium	**1**	**mg/kg**	**600**	**4500**
Manganese	**1**	**mg/kg**	**12**	**770**
Nickel	**1**	**mg/kg**	**6.0**	**17**
Potassium	**1**	**mg/kg**	**600**	**1400**
Sodium	**1**	**mg/kg**	**300**	**1000**
Vanadium	**1**	**mg/kg**	**12**	**38**
Zinc	**1**	**mg/kg**	**12**	**44**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	0.95	ND
Arsenic	**1**	**mg/kg**	**0.24**	**3.7**
Beryllium	**1**	**mg/kg**	**0.24**	**0.35**
Cadmium	1	mg/kg	0.48	ND
Selenium	1	mg/kg	2.4	ND
Silver	1	mg/kg	0.24	ND
Thallium	1	mg/kg	0.48	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.888	mg/kg	0.0021	ND
1,1,1-Trichloroethane	0.888	mg/kg	0.0021	ND
1,1,2,2-Tetrachloroethane	0.888	mg/kg	0.0021	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.888	mg/kg	0.0021	ND
1,1,2-Trichloroethane	0.888	mg/kg	0.0021	ND
1,1-Dichloroethane	0.888	mg/kg	0.0021	ND
1,1-Dichloroethene	0.888	mg/kg	0.0021	ND
1,1-Dichloropropene	0.888	mg/kg	0.0021	ND
1,2,3-Trichlorobenzene	0.888	mg/kg	0.0021	ND
1,2,3-Trichloropropane	0.888	mg/kg	0.0021	ND
1,2,4,5-Tetramethylbenzene	0.888	mg/kg	0.0021	ND
1,2,4-Trichlorobenzene	0.888	mg/kg	0.0021	ND
1,2,4-Trimethylbenzene	0.888	mg/kg	0.0011	ND
1,2-Dibromo-3-chloropropane	0.888	mg/kg	0.0021	ND
1,2-Dibromoethane	0.888	mg/kg	0.0011	ND
1,2-Dichlorobenzene	0.888	mg/kg	0.0021	ND
1,2-Dichloroethane	0.888	mg/kg	0.0021	ND
1,2-Dichloropropane	0.888	mg/kg	0.0021	ND
1,3,5-Trimethylbenzene	0.888	mg/kg	0.0011	ND
1,3-Dichlorobenzene	0.888	mg/kg	0.0021	ND
1,3-Dichloropropane	0.888	mg/kg	0.0021	ND
1,4-Dichlorobenzene	0.888	mg/kg	0.0021	ND
1,4-Dioxane	0.888	mg/kg	0.11	ND
2,2-Dichloropropane	0.888	mg/kg	0.0021	ND
2-Butanone	**0.888**	**mg/kg**	**0.0021**	**0.039**
2-Chlorotoluene	0.888	mg/kg	0.0021	ND
2-Hexanone	0.888	mg/kg	0.0021	ND
4-Chlorotoluene	0.888	mg/kg	0.0021	ND
4-Isopropyltoluene	0.888	mg/kg	0.0011	ND

Sample ID: SB09_0-2 **Collection Date: 5/22/2018**
Lab#: AD04347-003 **Receipt Date: 5/22/2018**
Matrix: Soil/Encore

4-Methyl-2-pentanone	0.888	mg/kg	0.0021	ND
Acetone	**0.888**	**mg/kg**	**0.011**	**0.086**
Acrolein	0.888	mg/kg	0.011	ND
Acrylonitrile	0.888	mg/kg	0.0021	ND
Benzene	0.888	mg/kg	0.0011	ND
Bromobenzene	0.888	mg/kg	0.0021	ND
Bromochloromethane	0.888	mg/kg	0.0021	ND
Bromodichloromethane	0.888	mg/kg	0.0021	ND
Bromoform	0.888	mg/kg	0.0021	ND
Bromomethane	0.888	mg/kg	0.0021	ND
Carbon disulfide	**0.888**	**mg/kg**	**0.0021**	**0.0023**
Carbon tetrachloride	0.888	mg/kg	0.0021	ND
Chlorobenzene	0.888	mg/kg	0.0021	ND
Chloroethane	0.888	mg/kg	0.0021	ND
Chloroform	0.888	mg/kg	0.0021	ND
Chloromethane	0.888	mg/kg	0.0021	ND
cis-1,2-Dichloroethene	0.888	mg/kg	0.0021	ND
cis-1,3-Dichloropropene	0.888	mg/kg	0.0021	ND
Cyclohexane	0.888	mg/kg	0.0021	ND
Dibromochloromethane	0.888	mg/kg	0.0021	ND
Dibromomethane	0.888	mg/kg	0.0021	ND
Dichlorodifluoromethane	0.888	mg/kg	0.0021	ND
Ethylbenzene	0.888	mg/kg	0.0011	ND
Hexachlorobutadiene	0.888	mg/kg	0.0021	ND
Isopropylbenzene	0.888	mg/kg	0.0011	ND
m&p-Xylenes	0.888	mg/kg	0.0011	ND
Methyl Acetate	0.888	mg/kg	0.0021	ND
Methylcyclohexane	0.888	mg/kg	0.0021	ND
Methylene chloride	0.888	mg/kg	0.0021	ND
Methyl-t-butyl ether	0.888	mg/kg	0.0011	ND
n-Butylbenzene	0.888	mg/kg	0.0011	ND
n-Propylbenzene	0.888	mg/kg	0.0011	ND
o-Xylene	0.888	mg/kg	0.0011	ND
sec-Butylbenzene	0.888	mg/kg	0.0011	ND
Styrene	0.888	mg/kg	0.0021	ND
t-Butylbenzene	0.888	mg/kg	0.0011	ND
Tetrachloroethene	0.888	mg/kg	0.0021	ND
Toluene	0.888	mg/kg	0.0011	ND
trans-1,2-Dichloroethene	0.888	mg/kg	0.0021	ND
trans-1,3-Dichloropropene	0.888	mg/kg	0.0021	ND
trans-1,4-Dichloro-2-butene	0.888	mg/kg	0.0021	ND
Trichloroethene	0.888	mg/kg	0.0021	ND
Trichlorofluoromethane	0.888	mg/kg	0.0021	ND
Vinyl chloride	0.888	mg/kg	0.0021	ND
Xylenes (Total)	0.888	mg/kg	0.0011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	27.61	30	68	122	92	
Dibromofluoromethane	34.61	30	63	140	115	
Bromofluorobenzene	28.31	30	64	129	94	
1,2-Dichloroethane-d4	35.29	30	63	143	118	

Sample ID: SB09_3-5 **Collection Date: 5/22/2018**
Lab#: AD04347-004 **Receipt Date: 5/22/2018**
Matrix: Soil/Encore

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	**1**	**percent**		**61**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.016	ND
2,4-D	1	mg/kg	0.016	ND
Dicamba	1	mg/kg	0.016	ND
Silvex	1	mg/kg	0.016	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1503.28	1000	25	138	150	S8
Dcaa-Surrogate	1548.08	1000	25	138	155	S8

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.14	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0082	ND
Aldrin	1	mg/kg	0.0082	ND
Alpha-BHC	1	mg/kg	0.0016	ND
beta-BHC	1	mg/kg	0.0016	ND
Chlordane (Total)	1	mg/kg	0.0082	ND
delta-BHC	1	mg/kg	0.0082	ND
Dieldrin	1	mg/kg	0.0016	ND
Endosulfan I	1	mg/kg	0.0082	ND
Endosulfan II	1	mg/kg	0.0082	ND
Endosulfan Sulfate	1	mg/kg	0.0082	ND
Endrin	1	mg/kg	0.0082	ND
Endrin Aldehyde	1	mg/kg	0.0082	ND
Endrin Ketone	1	mg/kg	0.0082	ND
gamma-BHC	1	mg/kg	0.0016	ND
Heptachlor	1	mg/kg	0.0082	ND
Heptachlor Epoxide	1	mg/kg	0.0082	ND
Methoxychlor	1	mg/kg	0.0082	ND
p,p'-DDD	1	mg/kg	0.0041	ND
p,p'-DDE	1	mg/kg	0.0041	ND
p,p'-DDT	1	mg/kg	0.0041	ND
Toxaphene	1	mg/kg	0.041	ND
y-Chlordane	1	mg/kg	0.0082	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	86.62	100	37	141	87	
TCMX-Surrogate	82.62	100	37	141	83	
DCB-Surrogate	95.93	100	33	146	96	
DCB-Surrogate	73.80	100	33	146	74	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.041	ND
Aroclor-1016	1	mg/kg	0.041	ND
Aroclor-1221	1	mg/kg	0.041	ND
Aroclor-1232	1	mg/kg	0.041	ND
Aroclor-1242	1	mg/kg	0.041	ND
Aroclor-1248	1	mg/kg	0.041	ND
Aroclor-1254	1	mg/kg	0.041	ND
Aroclor-1260	1	mg/kg	0.041	ND
Aroclor-1262	1	mg/kg	0.041	ND
Aroclor-1268	1	mg/kg	0.041	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	89.94	100	37	141	90	
TCMX-Surrogate	91.62	100	37	141	92	
DCB-Surrogate	61.55	100	34	146	62	
DCB-Surrogate	69.46	100	34	146	69	

Sample ID: SB09_3-5 **Collection Date: 5/22/2018**
Lab#: AD04347-004 **Receipt Date: 5/22/2018**
Matrix: Soil/Encore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.055	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.055	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.055	ND
2,4,5-Trichlorophenol	1	mg/kg	0.055	ND
2,4,6-Trichlorophenol	1	mg/kg	0.055	ND
2,4-Dichlorophenol	1	mg/kg	0.014	ND
2,4-Dimethylphenol	1	mg/kg	0.014	ND
2,4-Dinitrophenol	1	mg/kg	0.27	ND
2,4-Dinitrotoluene	1	mg/kg	0.055	ND
2,6-Dinitrotoluene	1	mg/kg	0.055	ND
2-Chloronaphthalene	1	mg/kg	0.055	ND
2-Chlorophenol	1	mg/kg	0.055	ND
2-Methylnaphthalene	1	mg/kg	0.055	ND
2-Methylphenol	1	mg/kg	0.014	ND
2-Nitroaniline	1	mg/kg	0.055	ND
2-Nitrophenol	1	mg/kg	0.055	ND
3&4-Methylphenol	1	mg/kg	0.014	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.055	ND
3-Nitroaniline	1	mg/kg	0.055	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.27	ND
4-Bromophenyl-phenylether	1	mg/kg	0.055	ND
4-Chloro-3-methylphenol	1	mg/kg	0.055	ND
4-Chloroaniline	1	mg/kg	0.014	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.055	ND
4-Nitroaniline	1	mg/kg	0.055	ND
4-Nitrophenol	1	mg/kg	0.055	ND
Acenaphthene	1	mg/kg	0.055	ND
Acenaphthylene	1	mg/kg	0.055	ND
Acetophenone	1	mg/kg	0.055	ND
Anthracene	1	mg/kg	0.055	ND
Atrazine	1	mg/kg	0.055	ND
Benzaldehyde	1	mg/kg	0.055	ND
Benzo[a]anthracene	1	mg/kg	0.055	ND
Benzo[a]pyrene	1	mg/kg	0.055	ND
Benzo[b]fluoranthene	1	mg/kg	0.055	ND
Benzo[g,h,i]perylene	1	mg/kg	0.055	ND
Benzo[k]fluoranthene	1	mg/kg	0.055	ND
bis(2-Chloroethoxy)methane	1	mg/kg	0.055	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.014	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.055	ND
bis(2-Ethylhexyl)phthalate	1	mg/kg	0.055	ND
Butylbenzylphthalate	1	mg/kg	0.055	ND
Caprolactam	1	mg/kg	0.055	ND
Carbazole	1	mg/kg	0.055	ND
Chrysene	1	mg/kg	0.055	ND
Dibenzo[a,h]anthracene	1	mg/kg	0.055	ND
Dibenzofuran	1	mg/kg	0.014	ND
Diethylphthalate	1	mg/kg	0.055	ND
Dimethylphthalate	1	mg/kg	0.055	ND
Di-n-butylphthalate	1	mg/kg	0.014	ND
Di-n-octylphthalate	1	mg/kg	0.055	ND
Fluoranthene	1	mg/kg	0.055	ND
Fluorene	1	mg/kg	0.055	ND
Hexachlorobenzene	1	mg/kg	0.055	ND
Hexachlorobutadiene	1	mg/kg	0.055	ND
Hexachlorocyclopentadiene	1	mg/kg	0.055	ND
Hexachloroethane	1	mg/kg	0.055	ND
Indeno[1,2,3-cd]pyrene	1	mg/kg	0.055	ND
Isophorone	1	mg/kg	0.055	ND
Naphthalene	1	mg/kg	0.014	ND
Nitrobenzene	1	mg/kg	0.055	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.014	ND
N-Nitrosodiphenylamine	1	mg/kg	0.055	ND
Pentachlorophenol	1	mg/kg	0.27	ND
Phenanthrene	1	mg/kg	0.055	ND
Phenol	1	mg/kg	0.055	ND

Pyrene	1	mg/kg	0.055		ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	51.13	50	58	148	102	
Phenol-d5	77.03	100	49	129	77	
Nitrobenzene-d5	31.04	50	52	129	62	
2-Fluorophenol	61.10	100	43	128	61	
2-Fluorobiphenyl	36.29	50	58	125	73	
2,4,6-Tribromophenol	88.99	100	54	145	89	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**330**	**14000**
Barium	**1**	**mg/kg**	**16**	**57**
Calcium	**1**	**mg/kg**	**1600**	**1700**
Chromium	**1**	**mg/kg**	**8.2**	**32**
Cobalt	**1**	**mg/kg**	**4.1**	**8.8**
Copper	**1**	**mg/kg**	**8.2**	**19**
Iron	**1**	**mg/kg**	**330**	**30000**
Lead	**1**	**mg/kg**	**8.2**	**12**
Magnesium	**1**	**mg/kg**	**820**	**4600**
Manganese	**1**	**mg/kg**	**16**	**850**
Nickel	**1**	**mg/kg**	**8.2**	**16**
Potassium	**1**	**mg/kg**	**820**	**1500**
Sodium	**1**	**mg/kg**	**410**	**1300**
Vanadium	**1**	**mg/kg**	**16**	**39**
Zinc	**1**	**mg/kg**	**16**	**42**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	1.3	ND
Arsenic	**1**	**mg/kg**	**0.33**	**4.8**
Beryllium	**1**	**mg/kg**	**0.33**	**0.67**
Cadmium	1	mg/kg	0.66	ND
Selenium	1	mg/kg	3.3	ND
Silver	1	mg/kg	0.33	ND
Thallium	1	mg/kg	0.66	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.996	mg/kg	0.0033	ND
1,1,1-Trichloroethane	0.996	mg/kg	0.0033	ND
1,1,2,2-Tetrachloroethane	0.996	mg/kg	0.0033	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.996	mg/kg	0.0033	ND
1,1,2-Trichloroethane	0.996	mg/kg	0.0033	ND
1,1-Dichloroethane	0.996	mg/kg	0.0033	ND
1,1-Dichloroethene	0.996	mg/kg	0.0033	ND
1,1-Dichloropropene	0.996	mg/kg	0.0033	ND
1,2,3-Trichlorobenzene	0.996	mg/kg	0.0033	ND
1,2,3-Trichloropropane	0.996	mg/kg	0.0033	ND
1,2,4,5-Tetramethylbenzene	0.996	mg/kg	0.0033	ND
1,2,4-Trichlorobenzene	0.996	mg/kg	0.0033	ND
1,2,4-Trimethylbenzene	0.996	mg/kg	0.0016	ND
1,2-Dibromo-3-chloropropane	0.996	mg/kg	0.0033	ND
1,2-Dibromoethane	0.996	mg/kg	0.0016	ND
1,2-Dichlorobenzene	0.996	mg/kg	0.0033	ND
1,2-Dichloroethane	0.996	mg/kg	0.0033	ND
1,2-Dichloropropane	0.996	mg/kg	0.0033	ND
1,3,5-Trimethylbenzene	0.996	mg/kg	0.0016	ND
1,3-Dichlorobenzene	0.996	mg/kg	0.0033	ND
1,3-Dichloropropane	0.996	mg/kg	0.0033	ND
1,4-Dichlorobenzene	0.996	mg/kg	0.0033	ND
1,4-Dioxane	0.996	mg/kg	0.16	ND
2,2-Dichloropropane	0.996	mg/kg	0.0033	ND
2-Butanone	**0.996**	**mg/kg**	**0.0033**	**0.035**
2-Chlorotoluene	0.996	mg/kg	0.0033	ND
2-Hexanone	0.996	mg/kg	0.0033	ND
4-Chlorotoluene	0.996	mg/kg	0.0033	ND
4-Isopropyltoluene	0.996	mg/kg	0.0016	ND

Sample ID: SB09_3-5 **Collection Date: 5/22/2018**
Lab#: AD04347-004 **Receipt Date: 5/22/2018**
Matrix: Soil/Encore

4-Methyl-2-pentanone	0.996	mg/kg	0.0033	ND
Acetone	**0.996**	**mg/kg**	**0.016**	**0.12**
Acrolein	0.996	mg/kg	0.016	ND
Acrylonitrile	0.996	mg/kg	0.0033	ND
Benzene	0.996	mg/kg	0.0016	ND
Bromobenzene	0.996	mg/kg	0.0033	ND
Bromochloromethane	0.996	mg/kg	0.0033	ND
Bromodichloromethane	0.996	mg/kg	0.0033	ND
Bromoform	0.996	mg/kg	0.0033	ND
Bromomethane	0.996	mg/kg	0.0033	ND
Carbon disulfide	0.996	mg/kg	0.0033	ND
Carbon tetrachloride	0.996	mg/kg	0.0033	ND
Chlorobenzene	0.996	mg/kg	0.0033	ND
Chloroethane	0.996	mg/kg	0.0033	ND
Chloroform	0.996	mg/kg	0.0033	ND
Chloromethane	0.996	mg/kg	0.0033	ND
cis-1,2-Dichloroethene	0.996	mg/kg	0.0033	ND
cis-1,3-Dichloropropene	0.996	mg/kg	0.0033	ND
Cyclohexane	0.996	mg/kg	0.0033	ND
Dibromochloromethane	0.996	mg/kg	0.0033	ND
Dibromomethane	0.996	mg/kg	0.0033	ND
Dichlorodifluoromethane	0.996	mg/kg	0.0033	ND
Ethylbenzene	0.996	mg/kg	0.0016	ND
Hexachlorobutadiene	0.996	mg/kg	0.0033	ND
Isopropylbenzene	0.996	mg/kg	0.0016	ND
m&p-Xylenes	0.996	mg/kg	0.0016	ND
Methyl Acetate	0.996	mg/kg	0.0033	ND
Methylcyclohexane	0.996	mg/kg	0.0033	ND
Methylene chloride	0.996	mg/kg	0.0033	ND
Methyl-t-butyl ether	0.996	mg/kg	0.0016	ND
n-Butylbenzene	0.996	mg/kg	0.0016	ND
n-Propylbenzene	0.996	mg/kg	0.0016	ND
o-Xylene	0.996	mg/kg	0.0016	ND
sec-Butylbenzene	0.996	mg/kg	0.0016	ND
Styrene	0.996	mg/kg	0.0033	ND
t-Butylbenzene	0.996	mg/kg	0.0016	ND
Tetrachloroethene	0.996	mg/kg	0.0033	ND
Toluene	0.996	mg/kg	0.0016	ND
trans-1,2-Dichloroethene	0.996	mg/kg	0.0033	ND
trans-1,3-Dichloropropene	0.996	mg/kg	0.0033	ND
trans-1,4-Dichloro-2-butene	0.996	mg/kg	0.0033	ND
Trichloroethene	0.996	mg/kg	0.0033	ND
Trichlorofluoromethane	0.996	mg/kg	0.0033	ND
Vinyl chloride	0.996	mg/kg	0.0033	ND
Xylenes (Total)	0.996	mg/kg	0.0016	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	30.25	30	68	122	101	
Dibromofluoromethane	31.58	30	63	140	105	
Bromofluorobenzene	28.45	30	64	129	95	
1,2-Dichloroethane-d4	38.20	30	63	143	127	

Hampton-Clarke, Inc. (WBE/DBE/SBE)

175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054
Ph (Service Center): 856-780-6057 Fax: 856-780-6056

Hampton-Clarke WBE/DBE/SBE 800-426-9992
A Women-Owned, Disadvantaged, Small Business Enterprise

NELAC/NJ #07071 | PA #68-00463 | NY #11408 | CT #PH-0671 | KY #90124 | DE HSCA Approved

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 805222 1

Page 1 of ____

3) Reporting Requirements (Please Circle)

Turnaround	Report Type	Electronic Data Deliv.
When Available:	Summary	NJ Hazsite
1 Business Day (100%)*	Results + QC (Waste)	Excel Reg. NJ / NY / PA
2 Business Days (75%)*	Reduced:	EnviroData
3 Business Days (50%)*	[ ] NJ [ ] NY	EQuIS:
4 Business Days (35%)*	[ ] PA [ ] Other___	[ ] 4-File [ ] EZ
5 Business Days (25%)	NJ Full / NY ASP CatB	[ ] NYDEC
8 Business Days (Stand.)	NY ASP CatA	[ ] Region 2 or 5
Other:		Other:

* Expedited TAT Not Always Available. Please Check with Lab.

Customer Information

1a) Customer: Langan
Address: 360 W 31st St 8th Fl NY NY 10001
1b) Email/Cell/Fax/Ph: 212 479-5400
1c) Send Invoice to: tchow@langan.com
1d) Send Report to: tchow@langan.com

Project Information

2a) Project: 111 Willow 170497201
2b) Project Mgr: Tyler Chow
2c) Project Location (City/State): Bronx, NY
2d) Quote/PO # (If Applicable):

FOR LAB USE ONLY ↓

Batch # A04347

===> Check If Contingent ===>

Matrix Codes
DW - Drinking Water S - Soil A - Air
GW - Ground Water SL - Sludge
WW - Waste Water OL - Oil
OT - Other (please specify under item 9, Comments)

7) Analysis *(specify methods & parameter lists)*

<=== Check If Contingent <===

Lab Sample #	4) Customer Sample ID	5) Matrix	6) Sample Date	6) Sample Time	Sample Type: Composite (C)	Sample Type: Grab (G)	VOCs	SVOCs, Pest/Herb	PCBs, Metals	8) # of Bottles: None	MeOH	En Core	NaOH	HCl	H2SO4	HNO3	Other:	9) Comments
001	SB02_1-3	S	5/22/18	12:50		✓	✓	✓	✓	1	1						2	
002	SB02_7-8	S	5/22/18	12:55		✓	✓	✓	✓	1	1						2	
003	SB09_0-2	S	5/22/18	0903		✓	✓	✓	✓	1	1						2	
004	SB09_3-5	S	5/22/18	0915		✓	✓	✓	✓	1	1		NaOH 5/22/18				2	

10) Relinquished by:	Accepted by:	Date	Time
		5/22/18	15:55
		5/23/18	18:10

11) Sampler (print name): Date:

Additional Notes

Comments, Notes, Special Requirements, HAZARDS

Indicate if low-level methods required to meet current groundwater standards (SPLP for soil):
- [ ] BN or BNA (8270D SIM)
- [ ] VOC (8260C SIM or 8011)
- [ ] SPLP (BN, BNA, Metals)
- [ ] 1,4 Dioxane

For NJ LSRP projects, indicate which standards need to be met:
- [ ] NJDEP GWQS
- [ ] NJDEP SRS
- [ ] NJDEP SPLP
- [ ] Other (specify):

Check if applicable:
- [ ] Project-Specific Reporting Limits
- [ ] High Contaminant Concentrations
- [ ] NJ LSRP Project (also check boxes above/right)

Cooler Temperature: 3.0

Please note NUMBERED items. If not completed your analytical work may be delayed.
A fee of $5/sample will be assessed for storage should sample not be activated for any analysis.

Internal use: sampling plan (check box) HC [ ] or client [ ] FSP#

Hampton-Clarke Report Of Analysis

Client: Langan Engineering & Environmental **HC Project #:** 8052401

Project: 111 Willow

Sample ID: SB07_1-3 **Collection Date: 5/23/2018**
Lab#: AD04371-001 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

% Solids SM2540G

Analyte	DF	Units	RL	Result
%Solids	**1**	**percent**		**79**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.013	ND
2,4-D	1	mg/kg	0.013	ND
Dicamba	1	mg/kg	0.013	ND
Silvex	1	mg/kg	0.013	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1207.19	1000	25	138	121	
Dcaa-Surrogate	1424.35	1000	25	138	142	S8

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	**1**	**mg/kg**	**0.11**	**1.8**

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0063	ND
Aldrin	1	mg/kg	0.0063	ND
Alpha-BHC	1	mg/kg	0.0013	ND
beta-BHC	1	mg/kg	0.0013	ND
Chlordane (Total)	1	mg/kg	0.0063	ND
delta-BHC	1	mg/kg	0.0063	ND
Dieldrin	1	mg/kg	0.0013	ND
Endosulfan I	1	mg/kg	0.0063	ND
Endosulfan II	1	mg/kg	0.0063	ND
Endosulfan Sulfate	1	mg/kg	0.0063	ND
Endrin	1	mg/kg	0.0063	ND
Endrin Aldehyde	1	mg/kg	0.0063	ND
Endrin Ketone	1	mg/kg	0.0063	ND
gamma-BHC	1	mg/kg	0.0013	ND
Heptachlor	1	mg/kg	0.0063	ND
Heptachlor Epoxide	1	mg/kg	0.0063	ND
Methoxychlor	1	mg/kg	0.0063	ND
p,p'-DDD	1	mg/kg	0.0032	ND
p,p'-DDE	1	mg/kg	0.0032	ND
p,p'-DDT	1	mg/kg	0.0032	ND
Toxaphene	1	mg/kg	0.032	ND
y-Chlordane	1	mg/kg	0.0063	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	79.05	100	37	141	79	
TCMX-Surrogate	83.98	100	37	141	84	
DCB-Surrogate	82.54	100	33	146	83	
DCB-Surrogate	92.31	100	33	146	92	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.032	ND
Aroclor-1016	1	mg/kg	0.032	ND
Aroclor-1221	1	mg/kg	0.032	ND
Aroclor-1232	1	mg/kg	0.032	ND
Aroclor-1242	1	mg/kg	0.032	ND
Aroclor-1248	1	mg/kg	0.032	ND
Aroclor-1254	1	mg/kg	0.032	ND
Aroclor-1260	1	mg/kg	0.032	ND

Aroclor-1262	1	mg/kg	0.032		ND
Aroclor-1268	1	mg/kg	0.032		ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	82.07	100	37	141	82	
TCMX-Surrogate	80.07	100	37	141	80	
DCB-Surrogate	52.48	100	34	146	52	
DCB-Surrogate	58.96	100	34	146	59	

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.042	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.042	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.042	ND
2,4,5-Trichlorophenol	1	mg/kg	0.042	ND
2,4,6-Trichlorophenol	1	mg/kg	0.042	ND
2,4-Dichlorophenol	1	mg/kg	0.011	ND
2,4-Dimethylphenol	1	mg/kg	0.011	ND
2,4-Dinitrophenol	1	mg/kg	0.21	ND
2,4-Dinitrotoluene	1	mg/kg	0.042	ND
2,6-Dinitrotoluene	1	mg/kg	0.042	ND
2-Chloronaphthalene	1	mg/kg	0.042	ND
2-Chlorophenol	1	mg/kg	0.042	ND
2-Methylnaphthalene	1	mg/kg	0.042	ND
2-Methylphenol	1	mg/kg	0.011	ND
2-Nitroaniline	1	mg/kg	0.042	ND
2-Nitrophenol	1	mg/kg	0.042	ND
3&4-Methylphenol	1	mg/kg	0.011	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.042	ND
3-Nitroaniline	1	mg/kg	0.042	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.21	ND
4-Bromophenyl-phenylether	1	mg/kg	0.042	ND
4-Chloro-3-methylphenol	1	mg/kg	0.042	ND
4-Chloroaniline	1	mg/kg	0.011	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.042	ND
4-Nitroaniline	1	mg/kg	0.042	ND
4-Nitrophenol	1	mg/kg	0.042	ND
Acenaphthene	1	mg/kg	0.042	ND
Acenaphthylene	1	mg/kg	0.042	ND
Acetophenone	1	mg/kg	0.042	ND
Anthracene	1	mg/kg	0.042	ND
Atrazine	1	mg/kg	0.042	ND
Benzaldehyde	1	mg/kg	0.042	ND
Benzo[a]anthracene	**1**	**mg/kg**	**0.042**	**0.064**
Benzo[a]pyrene	**1**	**mg/kg**	**0.042**	**0.066**
Benzo[b]fluoranthene	**1**	**mg/kg**	**0.042**	**0.078**
Benzo[g,h,i]perylene	**1**	**mg/kg**	**0.042**	**0.052**
Benzo[k]fluoranthene	1	mg/kg	0.042	ND
bis(2-Chloroethoxy)methane	1	mg/kg	0.042	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.011	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.042	ND
bis(2-Ethylhexyl)phthalate	1	mg/kg	0.042	ND
Butylbenzylphthalate	1	mg/kg	0.042	ND
Caprolactam	1	mg/kg	0.042	ND
Carbazole	1	mg/kg	0.042	ND
Chrysene	**1**	**mg/kg**	**0.042**	**0.071**
Dibenzo[a,h]anthracene	1	mg/kg	0.042	ND
Dibenzofuran	1	mg/kg	0.011	ND
Diethylphthalate	1	mg/kg	0.042	ND
Dimethylphthalate	1	mg/kg	0.042	ND
Di-n-butylphthalate	1	mg/kg	0.011	ND
Di-n-octylphthalate	1	mg/kg	0.042	ND
Fluoranthene	**1**	**mg/kg**	**0.042**	**0.11**
Fluorene	1	mg/kg	0.042	ND
Hexachlorobenzene	1	mg/kg	0.042	ND
Hexachlorobutadiene	1	mg/kg	0.042	ND
Hexachlorocyclopentadiene	1	mg/kg	0.042	ND
Hexachloroethane	1	mg/kg	0.042	ND
Indeno[1,2,3-cd]pyrene	1	mg/kg	0.042	ND
Isophorone	1	mg/kg	0.042	ND

Naphthalene	1	mg/kg	0.011	ND	
Nitrobenzene	1	mg/kg	0.042	ND	
N-Nitroso-di-n-propylamine	1	mg/kg	0.011	ND	
N-Nitrosodiphenylamine	1	mg/kg	0.042	ND	
Pentachlorophenol	1	mg/kg	0.21	ND	
Phenanthrene	**1**	**mg/kg**	**0.042**	**0.071**	
Phenol	1	mg/kg	0.042	ND	
Pyrene	**1**	**mg/kg**	**0.042**	**0.11**	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	48.11	50	58	148	96	
Phenol-d5	77.83	100	49	129	78	
Nitrobenzene-d5	35.94	50	52	129	72	
2-Fluorophenol	62.15	100	43	128	62	
2-Fluorobiphenyl	40.06	50	58	125	80	
2,4,6-Tribromophenol	86.86	100	54	145	87	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**250**	**17000**
Barium	**1**	**mg/kg**	**13**	**120**
Calcium	**1**	**mg/kg**	**1300**	**18000**
Chromium	**1**	**mg/kg**	**6.3**	**25**
Cobalt	**1**	**mg/kg**	**3.2**	**12**
Copper	**1**	**mg/kg**	**6.3**	**24**
Iron	**1**	**mg/kg**	**250**	**25000**
Lead	**1**	**mg/kg**	**6.3**	**130**
Magnesium	**1**	**mg/kg**	**630**	**7600**
Manganese	**1**	**mg/kg**	**13**	**890**
Nickel	**1**	**mg/kg**	**6.3**	**18**
Potassium	**1**	**mg/kg**	**630**	**1800**
Sodium	1	mg/kg	320	ND
Vanadium	**1**	**mg/kg**	**13**	**36**
Zinc	**1**	**mg/kg**	**13**	**130**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	1.0	ND
Arsenic	**1**	**mg/kg**	**0.25**	**4.7**
Beryllium	**1**	**mg/kg**	**0.25**	**0.66**
Cadmium	1	mg/kg	0.51	ND
Selenium	1	mg/kg	2.5	ND
Silver	1	mg/kg	0.25	ND
Thallium	1	mg/kg	0.51	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.763	mg/kg	0.0019	ND
1,1,1-Trichloroethane	0.763	mg/kg	0.0019	ND
1,1,2,2-Tetrachloroethane	0.763	mg/kg	0.0019	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.763	mg/kg	0.0019	ND
1,1,2-Trichloroethane	0.763	mg/kg	0.0019	ND
1,1-Dichloroethane	0.763	mg/kg	0.0019	ND
1,1-Dichloroethene	0.763	mg/kg	0.0019	ND
1,1-Dichloropropene	0.763	mg/kg	0.0019	ND
1,2,3-Trichlorobenzene	0.763	mg/kg	0.0019	ND
1,2,3-Trichloropropane	0.763	mg/kg	0.0019	ND
1,2,4,5-Tetramethylbenzene	0.763	mg/kg	0.0019	ND
1,2,4-Trichlorobenzene	0.763	mg/kg	0.0019	ND
1,2,4-Trimethylbenzene	0.763	mg/kg	0.00097	ND
1,2-Dibromo-3-chloropropane	0.763	mg/kg	0.0019	ND
1,2-Dibromoethane	0.763	mg/kg	0.00097	ND
1,2-Dichlorobenzene	0.763	mg/kg	0.0019	ND
1,2-Dichloroethane	0.763	mg/kg	0.0019	ND
1,2-Dichloropropane	0.763	mg/kg	0.0019	ND
1,3,5-Trimethylbenzene	0.763	mg/kg	0.00097	ND
1,3-Dichlorobenzene	0.763	mg/kg	0.0019	ND
1,3-Dichloropropane	0.763	mg/kg	0.0019	ND
1,4-Dichlorobenzene	0.763	mg/kg	0.0019	ND

Sample ID: SB07_1-3 **Collection Date: 5/23/2018**
Lab#: AD04371-001 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

1,4-Dioxane	0.763	mg/kg	0.097	ND
2,2-Dichloropropane	0.763	mg/kg	0.0019	ND
2-Butanone	0.763	mg/kg	0.0019	ND
2-Chlorotoluene	0.763	mg/kg	0.0019	ND
2-Hexanone	0.763	mg/kg	0.0019	ND
4-Chlorotoluene	0.763	mg/kg	0.0019	ND
4-Isopropyltoluene	0.763	mg/kg	0.00097	ND
4-Methyl-2-pentanone	0.763	mg/kg	0.0019	ND
Acetone	0.763	mg/kg	0.0097	ND
Acrolein	0.763	mg/kg	0.0097	ND
Acrylonitrile	0.763	mg/kg	0.0019	ND
Benzene	0.763	mg/kg	0.00097	ND
Bromobenzene	0.763	mg/kg	0.0019	ND
Bromochloromethane	0.763	mg/kg	0.0019	ND
Bromodichloromethane	0.763	mg/kg	0.0019	ND
Bromoform	0.763	mg/kg	0.0019	ND
Bromomethane	0.763	mg/kg	0.0019	ND
Carbon disulfide	0.763	mg/kg	0.0019	ND
Carbon tetrachloride	0.763	mg/kg	0.0019	ND
Chlorobenzene	0.763	mg/kg	0.0019	ND
Chloroethane	0.763	mg/kg	0.0019	ND
Chloroform	0.763	mg/kg	0.0019	ND
Chloromethane	0.763	mg/kg	0.0019	ND
cis-1,2-Dichloroethene	0.763	mg/kg	0.0019	ND
cis-1,3-Dichloropropene	0.763	mg/kg	0.0019	ND
Cyclohexane	0.763	mg/kg	0.0019	ND
Dibromochloromethane	0.763	mg/kg	0.0019	ND
Dibromomethane	0.763	mg/kg	0.0019	ND
Dichlorodifluoromethane	0.763	mg/kg	0.0019	ND
Ethylbenzene	0.763	mg/kg	0.00097	ND
Hexachlorobutadiene	0.763	mg/kg	0.0019	ND
Isopropylbenzene	0.763	mg/kg	0.00097	ND
m&p-Xylenes	0.763	mg/kg	0.00097	ND
Methyl Acetate	0.763	mg/kg	0.0019	ND
Methylcyclohexane	0.763	mg/kg	0.0019	ND
Methylene chloride	0.763	mg/kg	0.0019	ND
Methyl-t-butyl ether	0.763	mg/kg	0.00097	ND
n-Butylbenzene	0.763	mg/kg	0.00097	ND
n-Propylbenzene	0.763	mg/kg	0.00097	ND
o-Xylene	0.763	mg/kg	0.00097	ND
sec-Butylbenzene	0.763	mg/kg	0.00097	ND
Styrene	0.763	mg/kg	0.0019	ND
t-Butylbenzene	0.763	mg/kg	0.00097	ND
Tetrachloroethene	0.763	mg/kg	0.0019	ND
Toluene	0.763	mg/kg	0.00097	ND
trans-1,2-Dichloroethene	0.763	mg/kg	0.0019	ND
trans-1,3-Dichloropropene	0.763	mg/kg	0.0019	ND
trans-1,4-Dichloro-2-butene	0.763	mg/kg	0.0019	ND
Trichloroethene	0.763	mg/kg	0.0019	ND
Trichlorofluoromethane	0.763	mg/kg	0.0019	ND
Vinyl chloride	0.763	mg/kg	0.0019	ND
Xylenes (Total)	0.763	mg/kg	0.00097	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	34.09	30	68	122	114	
Dibromofluoromethane	30.64	30	63	140	102	
Bromofluorobenzene	31.19	30	64	129	104	
1,2-Dichloroethane-d4	36.26	30	63	143	121	

Sample ID: SB07_13-15 | **Collection Date: 5/23/2018**
Lab#: AD04371-002 | **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	**1**	**percent**		**76**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.013	ND
2,4-D	1	mg/kg	0.013	ND
Dicamba	1	mg/kg	0.013	ND
Silvex	1	mg/kg	0.013	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1123.31	1000	25	138	112	
Dcaa-Surrogate	1295.60	1000	25	138	130	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.11	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0066	ND
Aldrin	1	mg/kg	0.0066	ND
Alpha-BHC	1	mg/kg	0.0013	ND
beta-BHC	1	mg/kg	0.0013	ND
Chlordane (Total)	1	mg/kg	0.0066	ND
delta-BHC	1	mg/kg	0.0066	ND
Dieldrin	1	mg/kg	0.0013	ND
Endosulfan I	1	mg/kg	0.0066	ND
Endosulfan II	1	mg/kg	0.0066	ND
Endosulfan Sulfate	1	mg/kg	0.0066	ND
Endrin	1	mg/kg	0.0066	ND
Endrin Aldehyde	1	mg/kg	0.0066	ND
Endrin Ketone	1	mg/kg	0.0066	ND
gamma-BHC	1	mg/kg	0.0013	ND
Heptachlor	1	mg/kg	0.0066	ND
Heptachlor Epoxide	1	mg/kg	0.0066	ND
Methoxychlor	1	mg/kg	0.0066	ND
p,p'-DDD	1	mg/kg	0.0033	ND
p,p'-DDE	1	mg/kg	0.0033	ND
p,p'-DDT	1	mg/kg	0.0033	ND
Toxaphene	1	mg/kg	0.033	ND
y-Chlordane	1	mg/kg	0.0066	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	75.58	100	37	141	76	
TCMX-Surrogate	98.95	100	37	141	99	
DCB-Surrogate	79.24	100	33	146	79	
DCB-Surrogate	92.29	100	33	146	92	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.033	ND
Aroclor-1016	1	mg/kg	0.033	ND
Aroclor-1221	1	mg/kg	0.033	ND
Aroclor-1232	1	mg/kg	0.033	ND
Aroclor-1242	1	mg/kg	0.033	ND
Aroclor-1248	1	mg/kg	0.033	ND
Aroclor-1254	1	mg/kg	0.033	ND
Aroclor-1260	1	mg/kg	0.033	ND
Aroclor-1262	1	mg/kg	0.033	ND
Aroclor-1268	1	mg/kg	0.033	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	82.61	100	37	141	83	
TCMX-Surrogate	81.52	100	37	141	82	
DCB-Surrogate	54.07	100	34	146	54	
DCB-Surrogate	60.51	100	34	146	61	

Sample ID: SB07_13-15 **Collection Date: 5/23/2018**
Lab#: AD04371-002 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.044	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.044	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.044	ND
2,4,5-Trichlorophenol	1	mg/kg	0.044	ND
2,4,6-Trichlorophenol	1	mg/kg	0.044	ND
2,4-Dichlorophenol	1	mg/kg	0.011	ND
2,4-Dimethylphenol	1	mg/kg	0.011	ND
2,4-Dinitrophenol	1	mg/kg	0.22	ND
2,4-Dinitrotoluene	1	mg/kg	0.044	ND
2,6-Dinitrotoluene	1	mg/kg	0.044	ND
2-Chloronaphthalene	1	mg/kg	0.044	ND
2-Chlorophenol	1	mg/kg	0.044	ND
2-Methylnaphthalene	1	mg/kg	0.044	ND
2-Methylphenol	1	mg/kg	0.011	ND
2-Nitroaniline	1	mg/kg	0.044	ND
2-Nitrophenol	1	mg/kg	0.044	ND
3&4-Methylphenol	1	mg/kg	0.011	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.044	ND
3-Nitroaniline	1	mg/kg	0.044	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.22	ND
4-Bromophenyl-phenylether	1	mg/kg	0.044	ND
4-Chloro-3-methylphenol	1	mg/kg	0.044	ND
4-Chloroaniline	1	mg/kg	0.011	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.044	ND
4-Nitroaniline	1	mg/kg	0.044	ND
4-Nitrophenol	1	mg/kg	0.044	ND
Acenaphthene	1	mg/kg	0.044	ND
Acenaphthylene	1	mg/kg	0.044	ND
Acetophenone	1	mg/kg	0.044	ND
Anthracene	1	mg/kg	0.044	ND
Atrazine	1	mg/kg	0.044	ND
Benzaldehyde	1	mg/kg	0.044	ND
Benzo[a]anthracene	1	mg/kg	0.044	ND
Benzo[a]pyrene	1	mg/kg	0.044	ND
Benzo[b]fluoranthene	1	mg/kg	0.044	ND
Benzo[g,h,i]perylene	1	mg/kg	0.044	ND
Benzo[k]fluoranthene	1	mg/kg	0.044	ND
bis(2-Chloroethoxy)methane	1	mg/kg	0.044	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.011	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.044	ND
bis(2-Ethylhexyl)phthalate	1	mg/kg	0.044	ND
Butylbenzylphthalate	1	mg/kg	0.044	ND
Caprolactam	1	mg/kg	0.044	ND
Carbazole	1	mg/kg	0.044	ND
Chrysene	1	mg/kg	0.044	ND
Dibenzo[a,h]anthracene	1	mg/kg	0.044	ND
Dibenzofuran	1	mg/kg	0.011	ND
Diethylphthalate	1	mg/kg	0.044	ND
Dimethylphthalate	1	mg/kg	0.044	ND
Di-n-butylphthalate	1	mg/kg	0.011	ND
Di-n-octylphthalate	1	mg/kg	0.044	ND
Fluoranthene	1	mg/kg	0.044	ND
Fluorene	1	mg/kg	0.044	ND
Hexachlorobenzene	1	mg/kg	0.044	ND
Hexachlorobutadiene	1	mg/kg	0.044	ND
Hexachlorocyclopentadiene	1	mg/kg	0.044	ND
Hexachloroethane	1	mg/kg	0.044	ND
Indeno[1,2,3-cd]pyrene	1	mg/kg	0.044	ND
Isophorone	1	mg/kg	0.044	ND
Naphthalene	1	mg/kg	0.011	ND
Nitrobenzene	1	mg/kg	0.044	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.011	ND
N-Nitrosodiphenylamine	1	mg/kg	0.044	ND
Pentachlorophenol	1	mg/kg	0.22	ND
Phenanthrene	1	mg/kg	0.044	ND
Phenol	1	mg/kg	0.044	ND

Pyrene	1	mg/kg	0.044		ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	45.97	50	58	148	92	
Phenol-d5	74.76	100	49	129	75	
Nitrobenzene-d5	35.69	50	52	129	71	
2-Fluorophenol	67.17	100	43	128	67	
2-Fluorobiphenyl	36.49	50	58	125	73	
2,4,6-Tribromophenol	83.74	100	54	145	84	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**260**	**18000**
Barium	**1**	**mg/kg**	**13**	**36**
Calcium	1	mg/kg	1300	ND
Chromium	**1**	**mg/kg**	**6.6**	**32**
Cobalt	**1**	**mg/kg**	**3.3**	**7.8**
Copper	**1**	**mg/kg**	**6.6**	**21**
Iron	**1**	**mg/kg**	**260**	**30000**
Lead	**1**	**mg/kg**	**6.6**	**11**
Magnesium	**1**	**mg/kg**	**660**	**6300**
Manganese	**1**	**mg/kg**	**13**	**160**
Nickel	**1**	**mg/kg**	**6.6**	**20**
Potassium	**1**	**mg/kg**	**660**	**1500**
Sodium	**1**	**mg/kg**	**330**	**1100**
Vanadium	**1**	**mg/kg**	**13**	**38**
Zinc	**1**	**mg/kg**	**13**	**67**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	1.1	ND
Arsenic	**1**	**mg/kg**	**0.26**	**3.3**
Beryllium	1	mg/kg	0.26	ND
Cadmium	1	mg/kg	0.53	ND
Selenium	1	mg/kg	2.6	ND
Silver	1	mg/kg	0.26	ND
Thallium	1	mg/kg	0.53	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.702	mg/kg	0.0018	ND
1,1,1-Trichloroethane	0.702	mg/kg	0.0018	ND
1,1,2,2-Tetrachloroethane	0.702	mg/kg	0.0018	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.702	mg/kg	0.0018	ND
1,1,2-Trichloroethane	0.702	mg/kg	0.0018	ND
1,1-Dichloroethane	**0.702**	**mg/kg**	**0.0018**	**0.0025**
1,1-Dichloroethene	0.702	mg/kg	0.0018	ND
1,1-Dichloropropene	0.702	mg/kg	0.0018	ND
1,2,3-Trichlorobenzene	0.702	mg/kg	0.0018	ND
1,2,3-Trichloropropane	0.702	mg/kg	0.0018	ND
1,2,4,5-Tetramethylbenzene	0.702	mg/kg	0.0018	ND
1,2,4-Trichlorobenzene	0.702	mg/kg	0.0018	ND
1,2,4-Trimethylbenzene	0.702	mg/kg	0.00092	ND
1,2-Dibromo-3-chloropropane	0.702	mg/kg	0.0018	ND
1,2-Dibromoethane	0.702	mg/kg	0.00092	ND
1,2-Dichlorobenzene	0.702	mg/kg	0.0018	ND
1,2-Dichloroethane	0.702	mg/kg	0.0018	ND
1,2-Dichloropropane	0.702	mg/kg	0.0018	ND
1,3,5-Trimethylbenzene	0.702	mg/kg	0.00092	ND
1,3-Dichlorobenzene	0.702	mg/kg	0.0018	ND
1,3-Dichloropropane	0.702	mg/kg	0.0018	ND
1,4-Dichlorobenzene	0.702	mg/kg	0.0018	ND
1,4-Dioxane	0.702	mg/kg	0.092	ND
2,2-Dichloropropane	0.702	mg/kg	0.0018	ND
2-Butanone	0.702	mg/kg	0.0018	ND
2-Chlorotoluene	0.702	mg/kg	0.0018	ND
2-Hexanone	0.702	mg/kg	0.0018	ND
4-Chlorotoluene	0.702	mg/kg	0.0018	ND
4-Isopropyltoluene	0.702	mg/kg	0.00092	ND

Sample ID: SB07_13-15 **Collection Date: 5/23/2018**
Lab#: AD04371-002 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

4-Methyl-2-pentanone	0.702	mg/kg	0.0018	ND
Acetone	**0.702**	**mg/kg**	**0.0092**	**0.019**
Acrolein	0.702	mg/kg	0.0092	ND
Acrylonitrile	0.702	mg/kg	0.0018	ND
Benzene	0.702	mg/kg	0.00092	ND
Bromobenzene	0.702	mg/kg	0.0018	ND
Bromochloromethane	0.702	mg/kg	0.0018	ND
Bromodichloromethane	0.702	mg/kg	0.0018	ND
Bromoform	0.702	mg/kg	0.0018	ND
Bromomethane	0.702	mg/kg	0.0018	ND
Carbon disulfide	0.702	mg/kg	0.0018	ND
Carbon tetrachloride	0.702	mg/kg	0.0018	ND
Chlorobenzene	0.702	mg/kg	0.0018	ND
Chloroethane	0.702	mg/kg	0.0018	ND
Chloroform	0.702	mg/kg	0.0018	ND
Chloromethane	0.702	mg/kg	0.0018	ND
cis-1,2-Dichloroethene	0.702	mg/kg	0.0018	ND
cis-1,3-Dichloropropene	0.702	mg/kg	0.0018	ND
Cyclohexane	0.702	mg/kg	0.0018	ND
Dibromochloromethane	0.702	mg/kg	0.0018	ND
Dibromomethane	0.702	mg/kg	0.0018	ND
Dichlorodifluoromethane	0.702	mg/kg	0.0018	ND
Ethylbenzene	0.702	mg/kg	0.00092	ND
Hexachlorobutadiene	0.702	mg/kg	0.0018	ND
Isopropylbenzene	0.702	mg/kg	0.00092	ND
m&p-Xylenes	0.702	mg/kg	0.00092	ND
Methyl Acetate	0.702	mg/kg	0.0018	ND
Methylcyclohexane	0.702	mg/kg	0.0018	ND
Methylene chloride	0.702	mg/kg	0.0018	ND
Methyl-t-butyl ether	0.702	mg/kg	0.00092	ND
n-Butylbenzene	0.702	mg/kg	0.00092	ND
n-Propylbenzene	0.702	mg/kg	0.00092	ND
o-Xylene	0.702	mg/kg	0.00092	ND
sec-Butylbenzene	0.702	mg/kg	0.00092	ND
Styrene	0.702	mg/kg	0.0018	ND
t-Butylbenzene	0.702	mg/kg	0.00092	ND
Tetrachloroethene	0.702	mg/kg	0.0018	ND
Toluene	0.702	mg/kg	0.00092	ND
trans-1,2-Dichloroethene	0.702	mg/kg	0.0018	ND
trans-1,3-Dichloropropene	0.702	mg/kg	0.0018	ND
trans-1,4-Dichloro-2-butene	0.702	mg/kg	0.0018	ND
Trichloroethene	0.702	mg/kg	0.0018	ND
Trichlorofluoromethane	0.702	mg/kg	0.0018	ND
Vinyl chloride	0.702	mg/kg	0.0018	ND
Xylenes (Total)	0.702	mg/kg	0.00092	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	33.80	30	68	122	113	
Dibromofluoromethane	30.22	30	63	140	101	
Bromofluorobenzene	27.17	30	64	129	91	
1,2-Dichloroethane-d4	32.64	30	63	143	109	

Sample ID: SB06_1-2 **Collection Date: 5/23/2018**
Lab#: AD04371-003 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	**1**	**percent**		**88**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.011	ND
2,4-D	1	mg/kg	0.011	ND
Dicamba	1	mg/kg	0.011	ND
Silvex	1	mg/kg	0.011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1604.06	1000	25	138	160	S8
Dcaa-Surrogate	1510.23	1000	25	138	151	S8

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	**2**	**mg/kg**	**0.19**	**5.2**

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0057	ND
Aldrin	1	mg/kg	0.0057	ND
Alpha-BHC	1	mg/kg	0.0011	ND
beta-BHC	1	mg/kg	0.0011	ND
Chlordane (Total)	1	mg/kg	0.0057	ND
delta-BHC	1	mg/kg	0.0057	ND
Dieldrin	1	mg/kg	0.0011	ND
Endosulfan I	1	mg/kg	0.0057	ND
Endosulfan II	1	mg/kg	0.0057	ND
Endosulfan Sulfate	1	mg/kg	0.0057	ND
Endrin	1	mg/kg	0.0057	ND
Endrin Aldehyde	1	mg/kg	0.0057	ND
Endrin Ketone	1	mg/kg	0.0057	ND
gamma-BHC	1	mg/kg	0.0011	ND
Heptachlor	1	mg/kg	0.0057	ND
Heptachlor Epoxide	1	mg/kg	0.0057	ND
Methoxychlor	1	mg/kg	0.0057	ND
p,p'-DDD	1	mg/kg	0.0028	ND
p,p'-DDE	1	mg/kg	0.0028	ND
p,p'-DDT	1	mg/kg	0.0028	ND
Toxaphene	1	mg/kg	0.028	ND
y-Chlordane	1	mg/kg	0.0057	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	79.41	100	37	141	79	
TCMX-Surrogate	86.36	100	37	141	86	
DCB-Surrogate	89.12	100	33	146	89	
DCB-Surrogate	92.61	100	33	146	93	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.028	ND
Aroclor-1016	1	mg/kg	0.028	ND
Aroclor-1221	1	mg/kg	0.028	ND
Aroclor-1232	1	mg/kg	0.028	ND
Aroclor-1242	1	mg/kg	0.028	ND
Aroclor-1248	1	mg/kg	0.028	ND
Aroclor-1254	1	mg/kg	0.028	ND
Aroclor-1260	1	mg/kg	0.028	ND
Aroclor-1262	1	mg/kg	0.028	ND
Aroclor-1268	1	mg/kg	0.028	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	91.04	100	37	141	91	
TCMX-Surrogate	88.63	100	37	141	89	
DCB-Surrogate	60.20	100	34	146	60	
DCB-Surrogate	67.08	100	34	146	67	

Sample ID: SB06_1-2 **Collection Date: 5/23/2018**
Lab#: AD04371-003 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.038	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.038	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.038	ND
2,4,5-Trichlorophenol	1	mg/kg	0.038	ND
2,4,6-Trichlorophenol	1	mg/kg	0.038	ND
2,4-Dichlorophenol	1	mg/kg	0.0095	ND
2,4-Dimethylphenol	1	mg/kg	0.0095	ND
2,4-Dinitrophenol	1	mg/kg	0.19	ND
2,4-Dinitrotoluene	1	mg/kg	0.038	ND
2,6-Dinitrotoluene	1	mg/kg	0.038	ND
2-Chloronaphthalene	1	mg/kg	0.038	ND
2-Chlorophenol	1	mg/kg	0.038	ND
2-Methylnaphthalene	1	mg/kg	0.038	ND
2-Methylphenol	1	mg/kg	0.0095	ND
2-Nitroaniline	1	mg/kg	0.038	ND
2-Nitrophenol	1	mg/kg	0.038	ND
3&4-Methylphenol	1	mg/kg	0.0095	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.038	ND
3-Nitroaniline	1	mg/kg	0.038	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.19	ND
4-Bromophenyl-phenylether	1	mg/kg	0.038	ND
4-Chloro-3-methylphenol	1	mg/kg	0.038	ND
4-Chloroaniline	1	mg/kg	0.0095	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.038	ND
4-Nitroaniline	1	mg/kg	0.038	ND
4-Nitrophenol	1	mg/kg	0.038	ND
Acenaphthene	**1**	**mg/kg**	**0.038**	**0.054**
Acenaphthylene	1	mg/kg	0.038	ND
Acetophenone	1	mg/kg	0.038	ND
Anthracene	**1**	**mg/kg**	**0.038**	**0.053**
Atrazine	1	mg/kg	0.038	ND
Benzaldehyde	1	mg/kg	0.038	ND
Benzo[a]anthracene	**1**	**mg/kg**	**0.038**	**0.34**
Benzo[a]pyrene	**1**	**mg/kg**	**0.038**	**0.30**
Benzo[b]fluoranthene	**1**	**mg/kg**	**0.038**	**0.38**
Benzo[g,h,i]perylene	**1**	**mg/kg**	**0.038**	**0.18**
Benzo[k]fluoranthene	**1**	**mg/kg**	**0.038**	**0.11**
bis(2-Chloroethoxy)methane	1	mg/kg	0.038	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.0095	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.038	ND
bis(2-Ethylhexyl)phthalate	**1**	**mg/kg**	**0.038**	**0.11**
Butylbenzylphthalate	**1**	**mg/kg**	**0.038**	**0.096**
Caprolactam	1	mg/kg	0.038	ND
Carbazole	1	mg/kg	0.038	ND
Chrysene	**1**	**mg/kg**	**0.038**	**0.33**
Dibenzo[a,h]anthracene	**1**	**mg/kg**	**0.038**	**0.048**
Dibenzofuran	**1**	**mg/kg**	**0.0095**	**0.065**
Diethylphthalate	1	mg/kg	0.038	ND
Dimethylphthalate	1	mg/kg	0.038	ND
Di-n-butylphthalate	**1**	**mg/kg**	**0.0095**	**0.021**
Di-n-octylphthalate	1	mg/kg	0.038	ND
Fluoranthene	**1**	**mg/kg**	**0.038**	**0.55**
Fluorene	**1**	**mg/kg**	**0.038**	**0.058**
Hexachlorobenzene	1	mg/kg	0.038	ND
Hexachlorobutadiene	1	mg/kg	0.038	ND
Hexachlorocyclopentadiene	1	mg/kg	0.038	ND
Hexachloroethane	1	mg/kg	0.038	ND
Indeno[1,2,3-cd]pyrene	**1**	**mg/kg**	**0.038**	**0.17**
Isophorone	1	mg/kg	0.038	ND
Naphthalene	**1**	**mg/kg**	**0.0095**	**0.062**
Nitrobenzene	1	mg/kg	0.038	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.0095	ND
N-Nitrosodiphenylamine	1	mg/kg	0.038	ND
Pentachlorophenol	1	mg/kg	0.19	ND
Phenanthrene	**1**	**mg/kg**	**0.038**	**0.22**
Phenol	1	mg/kg	0.038	ND

Pyrene	**1**	**mg/kg**	**0.038**		**0.58**	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	51.46	50	58	148	103	
Phenol-d5	77.02	100	49	129	77	
Nitrobenzene-d5	34.90	50	52	129	70	
2-Fluorophenol	58.87	100	43	128	59	
2-Fluorobiphenyl	37.88	50	58	125	76	
2,4,6-Tribromophenol	82.35	100	54	145	82	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**230**	**8100**
Barium	**1**	**mg/kg**	**11**	**78**
Calcium	**1**	**mg/kg**	**1100**	**15000**
Chromium	**1**	**mg/kg**	**5.7**	**16**
Cobalt	**1**	**mg/kg**	**2.8**	**6.8**
Copper	**1**	**mg/kg**	**5.7**	**27**
Iron	**1**	**mg/kg**	**230**	**16000**
Lead	**1**	**mg/kg**	**5.7**	**140**
Magnesium	**1**	**mg/kg**	**570**	**6600**
Manganese	**1**	**mg/kg**	**11**	**420**
Nickel	**1**	**mg/kg**	**5.7**	**8.6**
Potassium	**1**	**mg/kg**	**570**	**1300**
Sodium	1	mg/kg	280	ND
Vanadium	**1**	**mg/kg**	**11**	**20**
Zinc	**1**	**mg/kg**	**11**	**920**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	0.91	ND
Arsenic	**1**	**mg/kg**	**0.23**	**2.6**
Beryllium	**1**	**mg/kg**	**0.23**	**0.29**
Cadmium	1	mg/kg	0.45	ND
Selenium	1	mg/kg	2.3	ND
Silver	1	mg/kg	0.23	ND
Thallium	1	mg/kg	0.45	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.817	mg/kg	0.0019	ND
1,1,1-Trichloroethane	0.817	mg/kg	0.0019	ND
1,1,2,2-Tetrachloroethane	0.817	mg/kg	0.0019	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.817	mg/kg	0.0019	ND
1,1,2-Trichloroethane	0.817	mg/kg	0.0019	ND
1,1-Dichloroethane	0.817	mg/kg	0.0019	ND
1,1-Dichloroethene	0.817	mg/kg	0.0019	ND
1,1-Dichloropropene	0.817	mg/kg	0.0019	ND
1,2,3-Trichlorobenzene	0.817	mg/kg	0.0019	ND
1,2,3-Trichloropropane	0.817	mg/kg	0.0019	ND
1,2,4,5-Tetramethylbenzene	0.817	mg/kg	0.0019	ND
1,2,4-Trichlorobenzene	0.817	mg/kg	0.0019	ND
1,2,4-Trimethylbenzene	0.817	mg/kg	0.00093	ND
1,2-Dibromo-3-chloropropane	0.817	mg/kg	0.0019	ND
1,2-Dibromoethane	0.817	mg/kg	0.00093	ND
1,2-Dichlorobenzene	0.817	mg/kg	0.0019	ND
1,2-Dichloroethane	0.817	mg/kg	0.0019	ND
1,2-Dichloropropane	0.817	mg/kg	0.0019	ND
1,3,5-Trimethylbenzene	0.817	mg/kg	0.00093	ND
1,3-Dichlorobenzene	0.817	mg/kg	0.0019	ND
1,3-Dichloropropane	0.817	mg/kg	0.0019	ND
1,4-Dichlorobenzene	0.817	mg/kg	0.0019	ND
1,4-Dioxane	0.817	mg/kg	0.093	ND
2,2-Dichloropropane	0.817	mg/kg	0.0019	ND
2-Butanone	0.817	mg/kg	0.0019	ND
2-Chlorotoluene	0.817	mg/kg	0.0019	ND
2-Hexanone	0.817	mg/kg	0.0019	ND
4-Chlorotoluene	0.817	mg/kg	0.0019	ND
4-Isopropyltoluene	0.817	mg/kg	0.00093	ND

Sample ID: SB06_1-2 **Collection Date: 5/23/2018**
Lab#: AD04371-003 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

4-Methyl-2-pentanone	0.817	mg/kg	0.0019	ND
Acetone	0.817	mg/kg	0.0093	ND
Acrolein	0.817	mg/kg	0.0093	ND
Acrylonitrile	0.817	mg/kg	0.0019	ND
Benzene	0.817	mg/kg	0.00093	ND
Bromobenzene	0.817	mg/kg	0.0019	ND
Bromochloromethane	0.817	mg/kg	0.0019	ND
Bromodichloromethane	0.817	mg/kg	0.0019	ND
Bromoform	0.817	mg/kg	0.0019	ND
Bromomethane	0.817	mg/kg	0.0019	ND
Carbon disulfide	0.817	mg/kg	0.0019	ND
Carbon tetrachloride	0.817	mg/kg	0.0019	ND
Chlorobenzene	0.817	mg/kg	0.0019	ND
Chloroethane	0.817	mg/kg	0.0019	ND
Chloroform	0.817	mg/kg	0.0019	ND
Chloromethane	0.817	mg/kg	0.0019	ND
cis-1,2-Dichloroethene	0.817	mg/kg	0.0019	ND
cis-1,3-Dichloropropene	0.817	mg/kg	0.0019	ND
Cyclohexane	0.817	mg/kg	0.0019	ND
Dibromochloromethane	0.817	mg/kg	0.0019	ND
Dibromomethane	0.817	mg/kg	0.0019	ND
Dichlorodifluoromethane	0.817	mg/kg	0.0019	ND
Ethylbenzene	0.817	mg/kg	0.00093	ND
Hexachlorobutadiene	0.817	mg/kg	0.0019	ND
Isopropylbenzene	0.817	mg/kg	0.00093	ND
m&p-Xylenes	0.817	mg/kg	0.00093	ND
Methyl Acetate	0.817	mg/kg	0.0019	ND
Methylcyclohexane	0.817	mg/kg	0.0019	ND
Methylene chloride	0.817	mg/kg	0.0019	ND
Methyl-t-butyl ether	0.817	mg/kg	0.00093	ND
n-Butylbenzene	0.817	mg/kg	0.00093	ND
n-Propylbenzene	0.817	mg/kg	0.00093	ND
o-Xylene	0.817	mg/kg	0.00093	ND
sec-Butylbenzene	0.817	mg/kg	0.00093	ND
Styrene	0.817	mg/kg	0.0019	ND
t-Butylbenzene	0.817	mg/kg	0.00093	ND
Tetrachloroethene	0.817	mg/kg	0.0019	ND
Toluene	0.817	mg/kg	0.00093	ND
trans-1,2-Dichloroethene	0.817	mg/kg	0.0019	ND
trans-1,3-Dichloropropene	0.817	mg/kg	0.0019	ND
trans-1,4-Dichloro-2-butene	0.817	mg/kg	0.0019	ND
Trichloroethene	0.817	mg/kg	0.0019	ND
Trichlorofluoromethane	0.817	mg/kg	0.0019	ND
Vinyl chloride	0.817	mg/kg	0.0019	ND
Xylenes (Total)	0.817	mg/kg	0.00093	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	30.32	30	68	122	101	
Dibromofluoromethane	31.66	30	63	140	106	
Bromofluorobenzene	30.14	30	64	129	100	
1,2-Dichloroethane-d4	32.06	30	63	143	107	

Sample ID: SB06_6-8 **Collection Date: 5/23/2018**
Lab#: AD04371-004 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	**1**	**percent**		**86**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.012	ND
2,4-D	1	mg/kg	0.012	ND
Dicamba	1	mg/kg	0.012	ND
Silvex	1	mg/kg	0.012	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1193.61	1000	25	138	119	
Dcaa-Surrogate	1089.74	1000	25	138	109	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	**1**	**mg/kg**	**0.097**	**0.20**

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0058	ND
Aldrin	1	mg/kg	0.0058	ND
Alpha-BHC	1	mg/kg	0.0012	ND
beta-BHC	1	mg/kg	0.0012	ND
Chlordane (Total)	1	mg/kg	0.0058	ND
delta-BHC	1	mg/kg	0.0058	ND
Dieldrin	1	mg/kg	0.0012	ND
Endosulfan I	1	mg/kg	0.0058	ND
Endosulfan II	1	mg/kg	0.0058	ND
Endosulfan Sulfate	1	mg/kg	0.0058	ND
Endrin	1	mg/kg	0.0058	ND
Endrin Aldehyde	1	mg/kg	0.0058	ND
Endrin Ketone	1	mg/kg	0.0058	ND
gamma-BHC	1	mg/kg	0.0012	ND
Heptachlor	1	mg/kg	0.0058	ND
Heptachlor Epoxide	1	mg/kg	0.0058	ND
Methoxychlor	1	mg/kg	0.0058	ND
p,p'-DDD	1	mg/kg	0.0029	ND
p,p'-DDE	1	mg/kg	0.0029	ND
p,p'-DDT	1	mg/kg	0.0029	ND
Toxaphene	1	mg/kg	0.029	ND
y-Chlordane	1	mg/kg	0.0058	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	73.77	100	37	141	74	
TCMX-Surrogate	77.84	100	37	141	78	
DCB-Surrogate	79.95	100	33	146	80	
DCB-Surrogate	86.57	100	33	146	87	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.029	ND
Aroclor-1016	1	mg/kg	0.029	ND
Aroclor-1221	1	mg/kg	0.029	ND
Aroclor-1232	1	mg/kg	0.029	ND
Aroclor-1242	1	mg/kg	0.029	ND
Aroclor-1248	1	mg/kg	0.029	ND
Aroclor-1254	1	mg/kg	0.029	ND
Aroclor-1260	1	mg/kg	0.029	ND
Aroclor-1262	1	mg/kg	0.029	ND
Aroclor-1268	1	mg/kg	0.029	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	100.83	100	37	141	101	
TCMX-Surrogate	97.67	100	37	141	98	
DCB-Surrogate	64.09	100	34	146	64	
DCB-Surrogate	71.60	100	34	146	72	

Sample ID: SB06_6-8 **Collection Date: 5/23/2018**
Lab#: AD04371-004 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.039	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.039	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.039	ND
2,4,5-Trichlorophenol	1	mg/kg	0.039	ND
2,4,6-Trichlorophenol	1	mg/kg	0.039	ND
2,4-Dichlorophenol	1	mg/kg	0.0097	ND
2,4-Dimethylphenol	1	mg/kg	0.0097	ND
2,4-Dinitrophenol	1	mg/kg	0.19	ND
2,4-Dinitrotoluene	1	mg/kg	0.039	ND
2,6-Dinitrotoluene	1	mg/kg	0.039	ND
2-Chloronaphthalene	1	mg/kg	0.039	ND
2-Chlorophenol	1	mg/kg	0.039	ND
2-Methylnaphthalene	1	mg/kg	0.039	ND
2-Methylphenol	1	mg/kg	0.0097	ND
2-Nitroaniline	1	mg/kg	0.039	ND
2-Nitrophenol	1	mg/kg	0.039	ND
3&4-Methylphenol	1	mg/kg	0.0097	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.039	ND
3-Nitroaniline	1	mg/kg	0.039	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.19	ND
4-Bromophenyl-phenylether	1	mg/kg	0.039	ND
4-Chloro-3-methylphenol	1	mg/kg	0.039	ND
4-Chloroaniline	1	mg/kg	0.0097	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.039	ND
4-Nitroaniline	1	mg/kg	0.039	ND
4-Nitrophenol	1	mg/kg	0.039	ND
Acenaphthene	1	mg/kg	0.039	ND
Acenaphthylene	1	mg/kg	0.039	ND
Acetophenone	1	mg/kg	0.039	ND
Anthracene	1	mg/kg	0.039	ND
Atrazine	1	mg/kg	0.039	ND
Benzaldehyde	1	mg/kg	0.039	ND
Benzo[a]anthracene	1	mg/kg	0.039	ND
Benzo[a]pyrene	1	mg/kg	0.039	ND
Benzo[b]fluoranthene	1	mg/kg	0.039	ND
Benzo[g,h,i]perylene	1	mg/kg	0.039	ND
Benzo[k]fluoranthene	1	mg/kg	0.039	ND
bis(2-Chloroethoxy)methane	1	mg/kg	0.039	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.0097	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.039	ND
bis(2-Ethylhexyl)phthalate	1	mg/kg	0.039	ND
Butylbenzylphthalate	1	mg/kg	0.039	ND
Caprolactam	1	mg/kg	0.039	ND
Carbazole	1	mg/kg	0.039	ND
Chrysene	1	mg/kg	0.039	ND
Dibenzo[a,h]anthracene	1	mg/kg	0.039	ND
Dibenzofuran	**1**	**mg/kg**	**0.0097**	**0.029**
Diethylphthalate	1	mg/kg	0.039	ND
Dimethylphthalate	1	mg/kg	0.039	ND
Di-n-butylphthalate	1	mg/kg	0.0097	ND
Di-n-octylphthalate	1	mg/kg	0.039	ND
Fluoranthene	**1**	**mg/kg**	**0.039**	**0.066**
Fluorene	1	mg/kg	0.039	ND
Hexachlorobenzene	1	mg/kg	0.039	ND
Hexachlorobutadiene	1	mg/kg	0.039	ND
Hexachlorocyclopentadiene	1	mg/kg	0.039	ND
Hexachloroethane	1	mg/kg	0.039	ND
Indeno[1,2,3-cd]pyrene	1	mg/kg	0.039	ND
Isophorone	1	mg/kg	0.039	ND
Naphthalene	**1**	**mg/kg**	**0.0097**	**0.13**
Nitrobenzene	1	mg/kg	0.039	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.0097	ND
N-Nitrosodiphenylamine	1	mg/kg	0.039	ND
Pentachlorophenol	1	mg/kg	0.19	ND
Phenanthrene	**1**	**mg/kg**	**0.039**	**0.043**
Phenol	1	mg/kg	0.039	ND

Pyrene	**1**	**mg/kg**	**0.039**		**0.065**	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	57.11	50	58	148	114	
Phenol-d5	99.14	100	49	129	99	
Nitrobenzene-d5	47.06	50	52	129	94	
2-Fluorophenol	86.88	100	43	128	87	
2-Fluorobiphenyl	47.38	50	58	125	95	
2,4,6-Tribromophenol	103.28	100	54	145	103	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**230**	**16000**
Barium	**1**	**mg/kg**	**12**	**83**
Calcium	**1**	**mg/kg**	**1200**	**2100**
Chromium	**1**	**mg/kg**	**5.8**	**34**
Cobalt	**1**	**mg/kg**	**2.9**	**12**
Copper	**1**	**mg/kg**	**5.8**	**26**
Iron	**1**	**mg/kg**	**230**	**30000**
Lead	**1**	**mg/kg**	**5.8**	**9.5**
Magnesium	**1**	**mg/kg**	**580**	**5400**
Manganese	**1**	**mg/kg**	**12**	**970**
Nickel	**1**	**mg/kg**	**5.8**	**21**
Potassium	**1**	**mg/kg**	**580**	**2200**
Sodium	1	mg/kg	290	ND
Vanadium	**1**	**mg/kg**	**12**	**45**
Zinc	**1**	**mg/kg**	**12**	**57**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	0.93	ND
Arsenic	**1**	**mg/kg**	**0.23**	**2.1**
Beryllium	**1**	**mg/kg**	**0.23**	**0.44**
Cadmium	1	mg/kg	0.47	ND
Selenium	1	mg/kg	2.3	ND
Silver	1	mg/kg	0.23	ND
Thallium	1	mg/kg	0.47	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.785	mg/kg	0.0018	ND
1,1,1-Trichloroethane	0.785	mg/kg	0.0018	ND
1,1,2,2-Tetrachloroethane	0.785	mg/kg	0.0018	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.785	mg/kg	0.0018	ND
1,1,2-Trichloroethane	0.785	mg/kg	0.0018	ND
1,1-Dichloroethane	0.785	mg/kg	0.0018	ND
1,1-Dichloroethene	0.785	mg/kg	0.0018	ND
1,1-Dichloropropene	0.785	mg/kg	0.0018	ND
1,2,3-Trichlorobenzene	0.785	mg/kg	0.0018	ND
1,2,3-Trichloropropane	0.785	mg/kg	0.0018	ND
1,2,4,5-Tetramethylbenzene	0.785	mg/kg	0.0018	ND
1,2,4-Trichlorobenzene	0.785	mg/kg	0.0018	ND
1,2,4-Trimethylbenzene	0.785	mg/kg	0.00091	ND
1,2-Dibromo-3-chloropropane	0.785	mg/kg	0.0018	ND
1,2-Dibromoethane	0.785	mg/kg	0.00091	ND
1,2-Dichlorobenzene	0.785	mg/kg	0.0018	ND
1,2-Dichloroethane	0.785	mg/kg	0.0018	ND
1,2-Dichloropropane	0.785	mg/kg	0.0018	ND
1,3,5-Trimethylbenzene	0.785	mg/kg	0.00091	ND
1,3-Dichlorobenzene	0.785	mg/kg	0.0018	ND
1,3-Dichloropropane	0.785	mg/kg	0.0018	ND
1,4-Dichlorobenzene	0.785	mg/kg	0.0018	ND
1,4-Dioxane	0.785	mg/kg	0.091	ND
2,2-Dichloropropane	0.785	mg/kg	0.0018	ND
2-Butanone	**0.785**	**mg/kg**	**0.0018**	**0.071**
2-Chlorotoluene	0.785	mg/kg	0.0018	ND
2-Hexanone	0.785	mg/kg	0.0018	ND
4-Chlorotoluene	0.785	mg/kg	0.0018	ND
4-Isopropyltoluene	0.785	mg/kg	0.00091	ND

Sample ID: SB06_6-8 **Collection Date: 5/23/2018**
Lab#: AD04371-004 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

4-Methyl-2-pentanone	0.785	mg/kg	0.0018	ND
Acetone	**0.785**	**mg/kg**	**0.0091**	**0.17**
Acrolein	0.785	mg/kg	0.0091	ND
Acrylonitrile	0.785	mg/kg	0.0018	ND
Benzene	0.785	mg/kg	0.00091	ND
Bromobenzene	0.785	mg/kg	0.0018	ND
Bromochloromethane	0.785	mg/kg	0.0018	ND
Bromodichloromethane	0.785	mg/kg	0.0018	ND
Bromoform	0.785	mg/kg	0.0018	ND
Bromomethane	0.785	mg/kg	0.0018	ND
Carbon disulfide	0.785	mg/kg	0.0018	ND
Carbon tetrachloride	0.785	mg/kg	0.0018	ND
Chlorobenzene	0.785	mg/kg	0.0018	ND
Chloroethane	0.785	mg/kg	0.0018	ND
Chloroform	0.785	mg/kg	0.0018	ND
Chloromethane	0.785	mg/kg	0.0018	ND
cis-1,2-Dichloroethene	0.785	mg/kg	0.0018	ND
cis-1,3-Dichloropropene	0.785	mg/kg	0.0018	ND
Cyclohexane	0.785	mg/kg	0.0018	ND
Dibromochloromethane	0.785	mg/kg	0.0018	ND
Dibromomethane	0.785	mg/kg	0.0018	ND
Dichlorodifluoromethane	0.785	mg/kg	0.0018	ND
Ethylbenzene	0.785	mg/kg	0.00091	ND
Hexachlorobutadiene	0.785	mg/kg	0.0018	ND
Isopropylbenzene	0.785	mg/kg	0.00091	ND
m&p-Xylenes	0.785	mg/kg	0.00091	ND
Methyl Acetate	0.785	mg/kg	0.0018	ND
Methylcyclohexane	0.785	mg/kg	0.0018	ND
Methylene chloride	0.785	mg/kg	0.0018	ND
Methyl-t-butyl ether	0.785	mg/kg	0.00091	ND
n-Butylbenzene	0.785	mg/kg	0.00091	ND
n-Propylbenzene	0.785	mg/kg	0.00091	ND
o-Xylene	0.785	mg/kg	0.00091	ND
sec-Butylbenzene	0.785	mg/kg	0.00091	ND
Styrene	0.785	mg/kg	0.0018	ND
t-Butylbenzene	0.785	mg/kg	0.00091	ND
Tetrachloroethene	0.785	mg/kg	0.0018	ND
Toluene	0.785	mg/kg	0.00091	ND
trans-1,2-Dichloroethene	0.785	mg/kg	0.0018	ND
trans-1,3-Dichloropropene	0.785	mg/kg	0.0018	ND
trans-1,4-Dichloro-2-butene	0.785	mg/kg	0.0018	ND
Trichloroethene	0.785	mg/kg	0.0018	ND
Trichlorofluoromethane	0.785	mg/kg	0.0018	ND
Vinyl chloride	0.785	mg/kg	0.0018	ND
Xylenes (Total)	0.785	mg/kg	0.00091	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	30.44	30	68	122	101	
Dibromofluoromethane	28.66	30	63	140	96	
Bromofluorobenzene	34.16	30	64	129	114	
1,2-Dichloroethane-d4	28.95	30	63	143	96	

Sample ID: SB04_1-3 **Collection Date: 5/23/2018**
Lab#: AD04371-005 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	**1**	**percent**		**79**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.013	ND
2,4-D	1	mg/kg	0.013	ND
Dicamba	1	mg/kg	0.013	ND
Silvex	1	mg/kg	0.013	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	979.99	1000	25	138	98	
Dcaa-Surrogate	1058.43	1000	25	138	106	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	**1**	**mg/kg**	**0.11**	**0.38**

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0063	ND
Aldrin	1	mg/kg	0.0063	ND
Alpha-BHC	1	mg/kg	0.0013	ND
beta-BHC	1	mg/kg	0.0013	ND
Chlordane (Total)	1	mg/kg	0.0063	ND
delta-BHC	1	mg/kg	0.0063	ND
Dieldrin	1	mg/kg	0.0013	ND
Endosulfan I	1	mg/kg	0.0063	ND
Endosulfan II	1	mg/kg	0.0063	ND
Endosulfan Sulfate	1	mg/kg	0.0063	ND
Endrin	1	mg/kg	0.0063	ND
Endrin Aldehyde	1	mg/kg	0.0063	ND
Endrin Ketone	1	mg/kg	0.0063	ND
gamma-BHC	1	mg/kg	0.0013	ND
Heptachlor	1	mg/kg	0.0063	ND
Heptachlor Epoxide	1	mg/kg	0.0063	ND
Methoxychlor	1	mg/kg	0.0063	ND
p,p'-DDD	1	mg/kg	0.0032	ND
p,p'-DDE	1	mg/kg	0.0032	ND
p,p'-DDT	1	mg/kg	0.0032	ND
Toxaphene	1	mg/kg	0.032	ND
y-Chlordane	1	mg/kg	0.0063	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	78.37	100	37	141	78	
TCMX-Surrogate	83.49	100	37	141	83	
DCB-Surrogate	87.38	100	33	146	87	
DCB-Surrogate	94.21	100	33	146	94	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.032	ND
Aroclor-1016	1	mg/kg	0.032	ND
Aroclor-1221	1	mg/kg	0.032	ND
Aroclor-1232	1	mg/kg	0.032	ND
Aroclor-1242	1	mg/kg	0.032	ND
Aroclor-1248	1	mg/kg	0.032	ND
Aroclor-1254	1	mg/kg	0.032	ND
Aroclor-1260	1	mg/kg	0.032	ND
Aroclor-1262	1	mg/kg	0.032	ND
Aroclor-1268	1	mg/kg	0.032	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	91.36	100	37	141	91	
TCMX-Surrogate	90.85	100	37	141	91	
DCB-Surrogate	56.63	100	34	146	57	
DCB-Surrogate	63.75	100	34	146	64	

Sample ID: SB04_1-3 **Collection Date: 5/23/2018**
Lab#: AD04371-005 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.042	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.042	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.042	ND
2,4,5-Trichlorophenol	1	mg/kg	0.042	ND
2,4,6-Trichlorophenol	1	mg/kg	0.042	ND
2,4-Dichlorophenol	1	mg/kg	0.011	ND
2,4-Dimethylphenol	1	mg/kg	0.011	ND
2,4-Dinitrophenol	1	mg/kg	0.21	ND
2,4-Dinitrotoluene	1	mg/kg	0.042	ND
2,6-Dinitrotoluene	1	mg/kg	0.042	ND
2-Chloronaphthalene	1	mg/kg	0.042	ND
2-Chlorophenol	1	mg/kg	0.042	ND
2-Methylnaphthalene	1	mg/kg	0.042	ND
2-Methylphenol	1	mg/kg	0.011	ND
2-Nitroaniline	1	mg/kg	0.042	ND
2-Nitrophenol	1	mg/kg	0.042	ND
3&4-Methylphenol	1	mg/kg	0.011	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.042	ND
3-Nitroaniline	1	mg/kg	0.042	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.21	ND
4-Bromophenyl-phenylether	1	mg/kg	0.042	ND
4-Chloro-3-methylphenol	1	mg/kg	0.042	ND
4-Chloroaniline	1	mg/kg	0.011	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.042	ND
4-Nitroaniline	1	mg/kg	0.042	ND
4-Nitrophenol	1	mg/kg	0.042	ND
Acenaphthene	**1**	**mg/kg**	**0.042**	**0.11**
Acenaphthylene	1	mg/kg	0.042	ND
Acetophenone	1	mg/kg	0.042	ND
Anthracene	**1**	**mg/kg**	**0.042**	**0.17**
Atrazine	1	mg/kg	0.042	ND
Benzaldehyde	1	mg/kg	0.042	ND
Benzo[a]anthracene	**1**	**mg/kg**	**0.042**	**0.39**
Benzo[a]pyrene	**1**	**mg/kg**	**0.042**	**0.34**
Benzo[b]fluoranthene	**1**	**mg/kg**	**0.042**	**0.43**
Benzo[g,h,i]perylene	**1**	**mg/kg**	**0.042**	**0.21**
Benzo[k]fluoranthene	**1**	**mg/kg**	**0.042**	**0.13**
bis(2-Chloroethoxy)methane	1	mg/kg	0.042	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.011	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.042	ND
bis(2-Ethylhexyl)phthalate	1	mg/kg	0.042	ND
Butylbenzylphthalate	1	mg/kg	0.042	ND
Caprolactam	1	mg/kg	0.042	ND
Carbazole	**1**	**mg/kg**	**0.042**	**0.076**
Chrysene	**1**	**mg/kg**	**0.042**	**0.34**
Dibenzo[a,h]anthracene	**1**	**mg/kg**	**0.042**	**0.044**
Dibenzofuran	**1**	**mg/kg**	**0.011**	**0.054**
Diethylphthalate	1	mg/kg	0.042	ND
Dimethylphthalate	1	mg/kg	0.042	ND
Di-n-butylphthalate	1	mg/kg	0.011	ND
Di-n-octylphthalate	1	mg/kg	0.042	ND
Fluoranthene	**1**	**mg/kg**	**0.042**	**0.87**
Fluorene	**1**	**mg/kg**	**0.042**	**0.067**
Hexachlorobenzene	1	mg/kg	0.042	ND
Hexachlorobutadiene	1	mg/kg	0.042	ND
Hexachlorocyclopentadiene	1	mg/kg	0.042	ND
Hexachloroethane	1	mg/kg	0.042	ND
Indeno[1,2,3-cd]pyrene	**1**	**mg/kg**	**0.042**	**0.18**
Isophorone	1	mg/kg	0.042	ND
Naphthalene	**1**	**mg/kg**	**0.011**	**0.030**
Nitrobenzene	1	mg/kg	0.042	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.011	ND
N-Nitrosodiphenylamine	1	mg/kg	0.042	ND
Pentachlorophenol	1	mg/kg	0.21	ND
Phenanthrene	**1**	**mg/kg**	**0.042**	**0.83**
Phenol	1	mg/kg	0.042	ND

Sample ID: SB04_1-3 **Collection Date: 5/23/2018**
Lab#: AD04371-005 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

Pyrene	**1**	**mg/kg**	**0.042**		**0.88**

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	59.45	50	58	148	119	
Phenol-d5	91.59	100	49	129	92	
Nitrobenzene-d5	43.25	50	52	129	87	
2-Fluorophenol	74.68	100	43	128	75	
2-Fluorobiphenyl	47.13	50	58	125	94	
2,4,6-Tribromophenol	102.65	100	54	145	103	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**250**	**26000**
Barium	**1**	**mg/kg**	**13**	**180**
Calcium	**1**	**mg/kg**	**1300**	**15000**
Chromium	**1**	**mg/kg**	**6.3**	**42**
Cobalt	**1**	**mg/kg**	**3.2**	**17**
Copper	**1**	**mg/kg**	**6.3**	**53**
Iron	**1**	**mg/kg**	**250**	**41000**
Lead	**1**	**mg/kg**	**6.3**	**190**
Magnesium	**1**	**mg/kg**	**630**	**15000**
Manganese	**1**	**mg/kg**	**13**	**910**
Nickel	**1**	**mg/kg**	**6.3**	**29**
Potassium	**1**	**mg/kg**	**630**	**3500**
Sodium	**1**	**mg/kg**	**320**	**650**
Vanadium	**1**	**mg/kg**	**13**	**57**
Zinc	**1**	**mg/kg**	**13**	**290**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	1.0	ND
Arsenic	**1**	**mg/kg**	**0.25**	**3.4**
Beryllium	**1**	**mg/kg**	**0.25**	**0.58**
Cadmium	1	mg/kg	0.51	ND
Selenium	1	mg/kg	2.5	ND
Silver	1	mg/kg	0.25	ND
Thallium	1	mg/kg	0.51	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.773	mg/kg	0.0020	ND
1,1,1-Trichloroethane	0.773	mg/kg	0.0020	ND
1,1,2,2-Tetrachloroethane	0.773	mg/kg	0.0020	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.773	mg/kg	0.0020	ND
1,1,2-Trichloroethane	0.773	mg/kg	0.0020	ND
1,1-Dichloroethane	0.773	mg/kg	0.0020	ND
1,1-Dichloroethene	0.773	mg/kg	0.0020	ND
1,1-Dichloropropene	0.773	mg/kg	0.0020	ND
1,2,3-Trichlorobenzene	0.773	mg/kg	0.0020	ND
1,2,3-Trichloropropane	0.773	mg/kg	0.0020	ND
1,2,4,5-Tetramethylbenzene	0.773	mg/kg	0.0020	ND
1,2,4-Trichlorobenzene	0.773	mg/kg	0.0020	ND
1,2,4-Trimethylbenzene	0.773	mg/kg	0.00098	ND
1,2-Dibromo-3-chloropropane	0.773	mg/kg	0.0020	ND
1,2-Dibromoethane	0.773	mg/kg	0.00098	ND
1,2-Dichlorobenzene	0.773	mg/kg	0.0020	ND
1,2-Dichloroethane	0.773	mg/kg	0.0020	ND
1,2-Dichloropropane	0.773	mg/kg	0.0020	ND
1,3,5-Trimethylbenzene	0.773	mg/kg	0.00098	ND
1,3-Dichlorobenzene	0.773	mg/kg	0.0020	ND
1,3-Dichloropropane	0.773	mg/kg	0.0020	ND
1,4-Dichlorobenzene	0.773	mg/kg	0.0020	ND
1,4-Dioxane	0.773	mg/kg	0.098	ND
2,2-Dichloropropane	0.773	mg/kg	0.0020	ND
2-Butanone	0.773	mg/kg	0.0020	ND
2-Chlorotoluene	0.773	mg/kg	0.0020	ND
2-Hexanone	0.773	mg/kg	0.0020	ND
4-Chlorotoluene	0.773	mg/kg	0.0020	ND
4-Isopropyltoluene	0.773	mg/kg	0.00098	ND

Sample ID: SB04_1-3 **Collection Date: 5/23/2018**
Lab#: AD04371-005 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

4-Methyl-2-pentanone	0.773	mg/kg	0.0020	ND
Acetone	0.773	mg/kg	0.0098	ND
Acrolein	0.773	mg/kg	0.0098	ND
Acrylonitrile	0.773	mg/kg	0.0020	ND
Benzene	0.773	mg/kg	0.00098	ND
Bromobenzene	0.773	mg/kg	0.0020	ND
Bromochloromethane	0.773	mg/kg	0.0020	ND
Bromodichloromethane	0.773	mg/kg	0.0020	ND
Bromoform	0.773	mg/kg	0.0020	ND
Bromomethane	0.773	mg/kg	0.0020	ND
Carbon disulfide	0.773	mg/kg	0.0020	ND
Carbon tetrachloride	0.773	mg/kg	0.0020	ND
Chlorobenzene	0.773	mg/kg	0.0020	ND
Chloroethane	0.773	mg/kg	0.0020	ND
Chloroform	0.773	mg/kg	0.0020	ND
Chloromethane	0.773	mg/kg	0.0020	ND
cis-1,2-Dichloroethene	0.773	mg/kg	0.0020	ND
cis-1,3-Dichloropropene	0.773	mg/kg	0.0020	ND
Cyclohexane	0.773	mg/kg	0.0020	ND
Dibromochloromethane	0.773	mg/kg	0.0020	ND
Dibromomethane	0.773	mg/kg	0.0020	ND
Dichlorodifluoromethane	0.773	mg/kg	0.0020	ND
Ethylbenzene	0.773	mg/kg	0.00098	ND
Hexachlorobutadiene	0.773	mg/kg	0.0020	ND
Isopropylbenzene	0.773	mg/kg	0.00098	ND
m&p-Xylenes	0.773	mg/kg	0.00098	ND
Methyl Acetate	0.773	mg/kg	0.0020	ND
Methylcyclohexane	0.773	mg/kg	0.0020	ND
Methylene chloride	0.773	mg/kg	0.0020	ND
Methyl-t-butyl ether	0.773	mg/kg	0.00098	ND
n-Butylbenzene	0.773	mg/kg	0.00098	ND
n-Propylbenzene	0.773	mg/kg	0.00098	ND
o-Xylene	0.773	mg/kg	0.00098	ND
sec-Butylbenzene	0.773	mg/kg	0.00098	ND
Styrene	0.773	mg/kg	0.0020	ND
t-Butylbenzene	0.773	mg/kg	0.00098	ND
Tetrachloroethene	0.773	mg/kg	0.0020	ND
Toluene	0.773	mg/kg	0.00098	ND
trans-1,2-Dichloroethene	0.773	mg/kg	0.0020	ND
trans-1,3-Dichloropropene	0.773	mg/kg	0.0020	ND
trans-1,4-Dichloro-2-butene	0.773	mg/kg	0.0020	ND
Trichloroethene	0.773	mg/kg	0.0020	ND
Trichlorofluoromethane	0.773	mg/kg	0.0020	ND
Vinyl chloride	0.773	mg/kg	0.0020	ND
Xylenes (Total)	0.773	mg/kg	0.00098	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	34.42	30	68	122	115	
Dibromofluoromethane	29.39	30	63	140	98	
Bromofluorobenzene	35.30	30	64	129	118	
1,2-Dichloroethane-d4	35.45	30	63	143	118	

Sample ID: SB04_10-12 | **Collection Date: 5/23/2018**
Lab#: AD04371-006 | **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	**1**	**percent**		**55**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.018	ND
2,4-D	1	mg/kg	0.018	ND
Dicamba	1	mg/kg	0.018	ND
Silvex	1	mg/kg	0.018	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1635.80	1000	25	138	164	S8
Dcaa-Surrogate	1424.72	1000	25	138	142	S8

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	1	mg/kg	0.15	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0091	ND
Aldrin	1	mg/kg	0.0091	ND
Alpha-BHC	1	mg/kg	0.0018	ND
beta-BHC	1	mg/kg	0.0018	ND
Chlordane (Total)	1	mg/kg	0.0091	ND
delta-BHC	1	mg/kg	0.0091	ND
Dieldrin	1	mg/kg	0.0018	ND
Endosulfan I	1	mg/kg	0.0091	ND
Endosulfan II	1	mg/kg	0.0091	ND
Endosulfan Sulfate	1	mg/kg	0.0091	ND
Endrin	1	mg/kg	0.0091	ND
Endrin Aldehyde	1	mg/kg	0.0091	ND
Endrin Ketone	1	mg/kg	0.0091	ND
gamma-BHC	1	mg/kg	0.0018	ND
Heptachlor	1	mg/kg	0.0091	ND
Heptachlor Epoxide	1	mg/kg	0.0091	ND
Methoxychlor	1	mg/kg	0.0091	ND
p,p'-DDD	1	mg/kg	0.0045	ND
p,p'-DDE	1	mg/kg	0.0045	ND
p,p'-DDT	1	mg/kg	0.0045	ND
Toxaphene	1	mg/kg	0.045	ND
y-Chlordane	1	mg/kg	0.0091	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	48.07	100	37	141	48	
TCMX-Surrogate	52.26	100	37	141	52	
DCB-Surrogate	53.49	100	33	146	53	
DCB-Surrogate	58.59	100	33	146	59	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.045	ND
Aroclor-1016	1	mg/kg	0.045	ND
Aroclor-1221	1	mg/kg	0.045	ND
Aroclor-1232	1	mg/kg	0.045	ND
Aroclor-1242	1	mg/kg	0.045	ND
Aroclor-1248	1	mg/kg	0.045	ND
Aroclor-1254	1	mg/kg	0.045	ND
Aroclor-1260	1	mg/kg	0.045	ND
Aroclor-1262	1	mg/kg	0.045	ND
Aroclor-1268	1	mg/kg	0.045	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	58.15	100	37	141	58	
TCMX-Surrogate	58.55	100	37	141	59	
DCB-Surrogate	35.81	100	34	146	36	
DCB-Surrogate	40.96	100	34	146	41	

Sample ID: SB04_10-12 **Collection Date: 5/23/2018**
Lab#: AD04371-006 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.061	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.061	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.061	ND
2,4,5-Trichlorophenol	1	mg/kg	0.061	ND
2,4,6-Trichlorophenol	1	mg/kg	0.061	ND
2,4-Dichlorophenol	1	mg/kg	0.015	ND
2,4-Dimethylphenol	1	mg/kg	0.015	ND
2,4-Dinitrophenol	1	mg/kg	0.30	ND
2,4-Dinitrotoluene	1	mg/kg	0.061	ND
2,6-Dinitrotoluene	1	mg/kg	0.061	ND
2-Chloronaphthalene	1	mg/kg	0.061	ND
2-Chlorophenol	1	mg/kg	0.061	ND
2-Methylnaphthalene	1	mg/kg	0.061	ND
2-Methylphenol	1	mg/kg	0.015	ND
2-Nitroaniline	1	mg/kg	0.061	ND
2-Nitrophenol	1	mg/kg	0.061	ND
3&4-Methylphenol	1	mg/kg	0.015	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.061	ND
3-Nitroaniline	1	mg/kg	0.061	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.30	ND
4-Bromophenyl-phenylether	1	mg/kg	0.061	ND
4-Chloro-3-methylphenol	1	mg/kg	0.061	ND
4-Chloroaniline	1	mg/kg	0.015	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.061	ND
4-Nitroaniline	1	mg/kg	0.061	ND
4-Nitrophenol	1	mg/kg	0.061	ND
Acenaphthene	1	mg/kg	0.061	ND
Acenaphthylene	1	mg/kg	0.061	ND
Acetophenone	1	mg/kg	0.061	ND
Anthracene	1	mg/kg	0.061	ND
Atrazine	1	mg/kg	0.061	ND
Benzaldehyde	1	mg/kg	0.061	ND
Benzo[a]anthracene	1	mg/kg	0.061	ND
Benzo[a]pyrene	1	mg/kg	0.061	ND
Benzo[b]fluoranthene	1	mg/kg	0.061	ND
Benzo[g,h,i]perylene	1	mg/kg	0.061	ND
Benzo[k]fluoranthene	1	mg/kg	0.061	ND
bis(2-Chloroethoxy)methane	1	mg/kg	0.061	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.015	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.061	ND
bis(2-Ethylhexyl)phthalate	1	mg/kg	0.061	ND
Butylbenzylphthalate	1	mg/kg	0.061	ND
Caprolactam	1	mg/kg	0.061	ND
Carbazole	1	mg/kg	0.061	ND
Chrysene	1	mg/kg	0.061	ND
Dibenzo[a,h]anthracene	1	mg/kg	0.061	ND
Dibenzofuran	1	mg/kg	0.015	ND
Diethylphthalate	1	mg/kg	0.061	ND
Dimethylphthalate	1	mg/kg	0.061	ND
Di-n-butylphthalate	1	mg/kg	0.015	ND
Di-n-octylphthalate	1	mg/kg	0.061	ND
Fluoranthene	1	mg/kg	0.061	ND
Fluorene	1	mg/kg	0.061	ND
Hexachlorobenzene	1	mg/kg	0.061	ND
Hexachlorobutadiene	1	mg/kg	0.061	ND
Hexachlorocyclopentadiene	1	mg/kg	0.061	ND
Hexachloroethane	1	mg/kg	0.061	ND
Indeno[1,2,3-cd]pyrene	1	mg/kg	0.061	ND
Isophorone	1	mg/kg	0.061	ND
Naphthalene	1	mg/kg	0.015	ND
Nitrobenzene	1	mg/kg	0.061	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.015	ND
N-Nitrosodiphenylamine	1	mg/kg	0.061	ND
Pentachlorophenol	1	mg/kg	0.30	ND
Phenanthrene	1	mg/kg	0.061	ND
Phenol	1	mg/kg	0.061	ND

Pyrene	1	mg/kg	0.061		ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	57.39	50	58	148	115	
Phenol-d5	80.03	100	49	129	80	
Nitrobenzene-d5	35.83	50	52	129	72	
2-Fluorophenol	61.27	100	43	128	61	
2-Fluorobiphenyl	41.86	50	58	125	84	
2,4,6-Tribromophenol	101.41	100	54	145	101	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**360**	**15000**
Barium	**1**	**mg/kg**	**18**	**74**
Calcium	**1**	**mg/kg**	**1800**	**5000**
Chromium	**1**	**mg/kg**	**9.1**	**28**
Cobalt	**1**	**mg/kg**	**4.5**	**10**
Copper	**1**	**mg/kg**	**9.1**	**24**
Iron	**1**	**mg/kg**	**360**	**23000**
Lead	**1**	**mg/kg**	**9.1**	**18**
Magnesium	**1**	**mg/kg**	**910**	**5100**
Manganese	**1**	**mg/kg**	**18**	**400**
Nickel	**1**	**mg/kg**	**9.1**	**18**
Potassium	**1**	**mg/kg**	**910**	**1900**
Sodium	**1**	**mg/kg**	**450**	**580**
Vanadium	**1**	**mg/kg**	**18**	**37**
Zinc	**1**	**mg/kg**	**18**	**62**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	1.5	ND
Arsenic	**1**	**mg/kg**	**0.36**	**4.2**
Beryllium	**1**	**mg/kg**	**0.36**	**0.71**
Cadmium	1	mg/kg	0.73	ND
Selenium	1	mg/kg	3.6	ND
Silver	1	mg/kg	0.36	ND
Thallium	1	mg/kg	0.73	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.709	mg/kg	0.0026	ND
1,1,1-Trichloroethane	0.709	mg/kg	0.0026	ND
1,1,2,2-Tetrachloroethane	0.709	mg/kg	0.0026	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.709	mg/kg	0.0026	ND
1,1,2-Trichloroethane	0.709	mg/kg	0.0026	ND
1,1-Dichloroethane	0.709	mg/kg	0.0026	ND
1,1-Dichloroethene	0.709	mg/kg	0.0026	ND
1,1-Dichloropropene	0.709	mg/kg	0.0026	ND
1,2,3-Trichlorobenzene	0.709	mg/kg	0.0026	ND
1,2,3-Trichloropropane	0.709	mg/kg	0.0026	ND
1,2,4,5-Tetramethylbenzene	0.709	mg/kg	0.0026	ND
1,2,4-Trichlorobenzene	0.709	mg/kg	0.0026	ND
1,2,4-Trimethylbenzene	0.709	mg/kg	0.0013	ND
1,2-Dibromo-3-chloropropane	0.709	mg/kg	0.0026	ND
1,2-Dibromoethane	0.709	mg/kg	0.0013	ND
1,2-Dichlorobenzene	0.709	mg/kg	0.0026	ND
1,2-Dichloroethane	0.709	mg/kg	0.0026	ND
1,2-Dichloropropane	0.709	mg/kg	0.0026	ND
1,3,5-Trimethylbenzene	0.709	mg/kg	0.0013	ND
1,3-Dichlorobenzene	0.709	mg/kg	0.0026	ND
1,3-Dichloropropane	0.709	mg/kg	0.0026	ND
1,4-Dichlorobenzene	0.709	mg/kg	0.0026	ND
1,4-Dioxane	0.709	mg/kg	0.13	ND
2,2-Dichloropropane	0.709	mg/kg	0.0026	ND
2-Butanone	**0.709**	**mg/kg**	**0.0026**	**0.045**
2-Chlorotoluene	0.709	mg/kg	0.0026	ND
2-Hexanone	0.709	mg/kg	0.0026	ND
4-Chlorotoluene	0.709	mg/kg	0.0026	ND
4-Isopropyltoluene	0.709	mg/kg	0.0013	ND

Sample ID: SB04_10-12 **Collection Date: 5/23/2018**
Lab#: AD04371-006 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

4-Methyl-2-pentanone	0.709	mg/kg	0.0026	ND
Acetone	**0.709**	**mg/kg**	**0.013**	**0.079**
Acrolein	0.709	mg/kg	0.013	ND
Acrylonitrile	0.709	mg/kg	0.0026	ND
Benzene	0.709	mg/kg	0.0013	ND
Bromobenzene	0.709	mg/kg	0.0026	ND
Bromochloromethane	0.709	mg/kg	0.0026	ND
Bromodichloromethane	0.709	mg/kg	0.0026	ND
Bromoform	0.709	mg/kg	0.0026	ND
Bromomethane	0.709	mg/kg	0.0026	ND
Carbon disulfide	0.709	mg/kg	0.0026	ND
Carbon tetrachloride	0.709	mg/kg	0.0026	ND
Chlorobenzene	0.709	mg/kg	0.0026	ND
Chloroethane	0.709	mg/kg	0.0026	ND
Chloroform	0.709	mg/kg	0.0026	ND
Chloromethane	0.709	mg/kg	0.0026	ND
cis-1,2-Dichloroethene	0.709	mg/kg	0.0026	ND
cis-1,3-Dichloropropene	0.709	mg/kg	0.0026	ND
Cyclohexane	0.709	mg/kg	0.0026	ND
Dibromochloromethane	0.709	mg/kg	0.0026	ND
Dibromomethane	0.709	mg/kg	0.0026	ND
Dichlorodifluoromethane	0.709	mg/kg	0.0026	ND
Ethylbenzene	0.709	mg/kg	0.0013	ND
Hexachlorobutadiene	0.709	mg/kg	0.0026	ND
Isopropylbenzene	0.709	mg/kg	0.0013	ND
m&p-Xylenes	0.709	mg/kg	0.0013	ND
Methyl Acetate	0.709	mg/kg	0.0026	ND
Methylcyclohexane	0.709	mg/kg	0.0026	ND
Methylene chloride	0.709	mg/kg	0.0026	ND
Methyl-t-butyl ether	0.709	mg/kg	0.0013	ND
n-Butylbenzene	0.709	mg/kg	0.0013	ND
n-Propylbenzene	0.709	mg/kg	0.0013	ND
o-Xylene	0.709	mg/kg	0.0013	ND
sec-Butylbenzene	0.709	mg/kg	0.0013	ND
Styrene	0.709	mg/kg	0.0026	ND
t-Butylbenzene	0.709	mg/kg	0.0013	ND
Tetrachloroethene	0.709	mg/kg	0.0026	ND
Toluene	0.709	mg/kg	0.0013	ND
trans-1,2-Dichloroethene	0.709	mg/kg	0.0026	ND
trans-1,3-Dichloropropene	0.709	mg/kg	0.0026	ND
trans-1,4-Dichloro-2-butene	0.709	mg/kg	0.0026	ND
Trichloroethene	0.709	mg/kg	0.0026	ND
Trichlorofluoromethane	0.709	mg/kg	0.0026	ND
Vinyl chloride	0.709	mg/kg	0.0026	ND
Xylenes (Total)	0.709	mg/kg	0.0013	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	36.48	30	68	122	122	
Dibromofluoromethane	32.17	30	63	140	107	
Bromofluorobenzene	38.06	30	64	129	127	
1,2-Dichloroethane-d4	37.58	30	63	143	125	

Sample ID: SBDUP01_052318 | **Collection Date: 5/23/2018**
Lab#: AD04371-007 | **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

% Solids SM2540G

Analyte	DF	Units	RL	Result
% Solids	**1**	**percent**		**78**

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	mg/kg	0.013	ND
2,4-D	1	mg/kg	0.013	ND
Dicamba	1	mg/kg	0.013	ND
Silvex	1	mg/kg	0.013	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1179.70	1000	25	138	118	
Dcaa-Surrogate	1356.20	1000	25	138	136	

Mercury (Soil/Waste) 7471B

Analyte	DF	Units	RL	Result
Mercury	**1**	**mg/kg**	**0.11**	**1.9**

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	mg/kg	0.0064	ND
Aldrin	1	mg/kg	0.0064	ND
Alpha-BHC	1	mg/kg	0.0013	ND
beta-BHC	1	mg/kg	0.0013	ND
Chlordane (Total)	1	mg/kg	0.0064	ND
delta-BHC	1	mg/kg	0.0064	ND
Dieldrin	1	mg/kg	0.0013	ND
Endosulfan I	1	mg/kg	0.0064	ND
Endosulfan II	1	mg/kg	0.0064	ND
Endosulfan Sulfate	1	mg/kg	0.0064	ND
Endrin	1	mg/kg	0.0064	ND
Endrin Aldehyde	1	mg/kg	0.0064	ND
Endrin Ketone	1	mg/kg	0.0064	ND
gamma-BHC	1	mg/kg	0.0013	ND
Heptachlor	1	mg/kg	0.0064	ND
Heptachlor Epoxide	1	mg/kg	0.0064	ND
Methoxychlor	1	mg/kg	0.0064	ND
p,p'-DDD	1	mg/kg	0.0032	ND
p,p'-DDE	1	mg/kg	0.0032	ND
p,p'-DDT	1	mg/kg	0.0032	ND
Toxaphene	1	mg/kg	0.032	ND
y-Chlordane	1	mg/kg	0.0064	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	73.99	100	37	141	74	
TCMX-Surrogate	81.55	100	37	141	82	
DCB-Surrogate	80.44	100	33	146	80	
DCB-Surrogate	86.64	100	33	146	87	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	mg/kg	0.032	ND
Aroclor-1016	1	mg/kg	0.032	ND
Aroclor-1221	1	mg/kg	0.032	ND
Aroclor-1232	1	mg/kg	0.032	ND
Aroclor-1242	1	mg/kg	0.032	ND
Aroclor-1248	1	mg/kg	0.032	ND
Aroclor-1254	1	mg/kg	0.032	ND
Aroclor-1260	1	mg/kg	0.032	ND
Aroclor-1262	1	mg/kg	0.032	ND
Aroclor-1268	1	mg/kg	0.032	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	84.46	100	37	141	84	
TCMX-Surrogate	84.30	100	37	141	84	
DCB-Surrogate	49.59	100	34	146	50	
DCB-Surrogate	55.84	100	34	146	56	

Sample ID: SBDUP01_052318 **Collection Date: 5/23/2018**
Lab#: AD04371-007 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	mg/kg	0.043	ND
1,2,4,5-Tetrachlorobenzene	1	mg/kg	0.043	ND
2,3,4,6-Tetrachlorophenol	1	mg/kg	0.043	ND
2,4,5-Trichlorophenol	1	mg/kg	0.043	ND
2,4,6-Trichlorophenol	1	mg/kg	0.043	ND
2,4-Dichlorophenol	1	mg/kg	0.011	ND
2,4-Dimethylphenol	1	mg/kg	0.011	ND
2,4-Dinitrophenol	1	mg/kg	0.21	ND
2,4-Dinitrotoluene	1	mg/kg	0.043	ND
2,6-Dinitrotoluene	1	mg/kg	0.043	ND
2-Chloronaphthalene	1	mg/kg	0.043	ND
2-Chlorophenol	1	mg/kg	0.043	ND
2-Methylnaphthalene	1	mg/kg	0.043	ND
2-Methylphenol	1	mg/kg	0.011	ND
2-Nitroaniline	1	mg/kg	0.043	ND
2-Nitrophenol	1	mg/kg	0.043	ND
3&4-Methylphenol	1	mg/kg	0.011	ND
3,3'-Dichlorobenzidine	1	mg/kg	0.043	ND
3-Nitroaniline	1	mg/kg	0.043	ND
4,6-Dinitro-2-methylphenol	1	mg/kg	0.21	ND
4-Bromophenyl-phenylether	1	mg/kg	0.043	ND
4-Chloro-3-methylphenol	1	mg/kg	0.043	ND
4-Chloroaniline	1	mg/kg	0.011	ND
4-Chlorophenyl-phenylether	1	mg/kg	0.043	ND
4-Nitroaniline	1	mg/kg	0.043	ND
4-Nitrophenol	1	mg/kg	0.043	ND
Acenaphthene	1	mg/kg	0.043	ND
Acenaphthylene	1	mg/kg	0.043	ND
Acetophenone	1	mg/kg	0.043	ND
Anthracene	1	mg/kg	0.043	ND
Atrazine	1	mg/kg	0.043	ND
Benzaldehyde	1	mg/kg	0.043	ND
Benzo[a]anthracene	**1**	**mg/kg**	**0.043**	**0.049**
Benzo[a]pyrene	**1**	**mg/kg**	**0.043**	**0.049**
Benzo[b]fluoranthene	**1**	**mg/kg**	**0.043**	**0.055**
Benzo[g,h,i]perylene	1	mg/kg	0.043	ND
Benzo[k]fluoranthene	1	mg/kg	0.043	ND
bis(2-Chloroethoxy)methane	1	mg/kg	0.043	ND
bis(2-Chloroethyl)ether	1	mg/kg	0.011	ND
bis(2-Chloroisopropyl)ether	1	mg/kg	0.043	ND
bis(2-Ethylhexyl)phthalate	1	mg/kg	0.043	ND
Butylbenzylphthalate	1	mg/kg	0.043	ND
Caprolactam	1	mg/kg	0.043	ND
Carbazole	1	mg/kg	0.043	ND
Chrysene	1	mg/kg	0.043	ND
Dibenzo[a,h]anthracene	1	mg/kg	0.043	ND
Dibenzofuran	1	mg/kg	0.011	ND
Diethylphthalate	1	mg/kg	0.043	ND
Dimethylphthalate	1	mg/kg	0.043	ND
Di-n-butylphthalate	1	mg/kg	0.011	ND
Di-n-octylphthalate	1	mg/kg	0.043	ND
Fluoranthene	**1**	**mg/kg**	**0.043**	**0.073**
Fluorene	1	mg/kg	0.043	ND
Hexachlorobenzene	1	mg/kg	0.043	ND
Hexachlorobutadiene	1	mg/kg	0.043	ND
Hexachlorocyclopentadiene	1	mg/kg	0.043	ND
Hexachloroethane	1	mg/kg	0.043	ND
Indeno[1,2,3-cd]pyrene	1	mg/kg	0.043	ND
Isophorone	1	mg/kg	0.043	ND
Naphthalene	1	mg/kg	0.011	ND
Nitrobenzene	1	mg/kg	0.043	ND
N-Nitroso-di-n-propylamine	1	mg/kg	0.011	ND
N-Nitrosodiphenylamine	1	mg/kg	0.043	ND
Pentachlorophenol	1	mg/kg	0.21	ND
Phenanthrene	1	mg/kg	0.043	ND
Phenol	1	mg/kg	0.043	ND

Pyrene	**1**	**mg/kg**	**0.043**		**0.077**	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	64.70	50	58	148	129	
Phenol-d5	111.49	100	49	129	111	
Nitrobenzene-d5	49.30	50	52	129	99	
2-Fluorophenol	87.04	100	43	128	87	
2-Fluorobiphenyl	51.74	50	58	125	103	
2,4,6-Tribromophenol	115.84	100	54	145	116	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**mg/kg**	**260**	**18000**
Barium	**1**	**mg/kg**	**13**	**130**
Calcium	**1**	**mg/kg**	**1300**	**18000**
Chromium	**1**	**mg/kg**	**6.4**	**26**
Cobalt	**1**	**mg/kg**	**3.2**	**13**
Copper	**1**	**mg/kg**	**6.4**	**29**
Iron	**1**	**mg/kg**	**260**	**27000**
Lead	**1**	**mg/kg**	**6.4**	**130**
Magnesium	**1**	**mg/kg**	**640**	**9400**
Manganese	**1**	**mg/kg**	**13**	**1100**
Nickel	**1**	**mg/kg**	**6.4**	**17**
Potassium	**1**	**mg/kg**	**640**	**1800**
Sodium	1	mg/kg	320	ND
Vanadium	**1**	**mg/kg**	**13**	**40**
Zinc	**1**	**mg/kg**	**13**	**130**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	mg/kg	1.0	ND
Arsenic	**1**	**mg/kg**	**0.26**	**4.4**
Beryllium	**1**	**mg/kg**	**0.26**	**0.64**
Cadmium	1	mg/kg	0.51	ND
Selenium	1	mg/kg	2.6	ND
Silver	1	mg/kg	0.26	ND
Thallium	1	mg/kg	0.51	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	0.792	mg/kg	0.0020	ND
1,1,1-Trichloroethane	0.792	mg/kg	0.0020	ND
1,1,2,2-Tetrachloroethane	0.792	mg/kg	0.0020	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	0.792	mg/kg	0.0020	ND
1,1,2-Trichloroethane	0.792	mg/kg	0.0020	ND
1,1-Dichloroethane	0.792	mg/kg	0.0020	ND
1,1-Dichloroethene	0.792	mg/kg	0.0020	ND
1,1-Dichloropropene	0.792	mg/kg	0.0020	ND
1,2,3-Trichlorobenzene	0.792	mg/kg	0.0020	ND
1,2,3-Trichloropropane	0.792	mg/kg	0.0020	ND
1,2,4,5-Tetramethylbenzene	0.792	mg/kg	0.0020	ND
1,2,4-Trichlorobenzene	0.792	mg/kg	0.0020	ND
1,2,4-Trimethylbenzene	0.792	mg/kg	0.0010	ND
1,2-Dibromo-3-chloropropane	0.792	mg/kg	0.0020	ND
1,2-Dibromoethane	0.792	mg/kg	0.0010	ND
1,2-Dichlorobenzene	0.792	mg/kg	0.0020	ND
1,2-Dichloroethane	0.792	mg/kg	0.0020	ND
1,2-Dichloropropane	0.792	mg/kg	0.0020	ND
1,3,5-Trimethylbenzene	0.792	mg/kg	0.0010	ND
1,3-Dichlorobenzene	0.792	mg/kg	0.0020	ND
1,3-Dichloropropane	0.792	mg/kg	0.0020	ND
1,4-Dichlorobenzene	0.792	mg/kg	0.0020	ND
1,4-Dioxane	0.792	mg/kg	0.10	ND
2,2-Dichloropropane	0.792	mg/kg	0.0020	ND
2-Butanone	0.792	mg/kg	0.0020	ND
2-Chlorotoluene	0.792	mg/kg	0.0020	ND
2-Hexanone	0.792	mg/kg	0.0020	ND
4-Chlorotoluene	0.792	mg/kg	0.0020	ND
4-Isopropyltoluene	0.792	mg/kg	0.0010	ND

Sample ID: SBDUP01_052318 **Collection Date: 5/23/2018**
Lab#: AD04371-007 **Receipt Date: 5/23/2018**
Matrix: Soil/Terracore

4-Methyl-2-pentanone	0.792	mg/kg	0.0020	ND
Acetone	0.792	mg/kg	0.010	ND
Acrolein	0.792	mg/kg	0.010	ND
Acrylonitrile	0.792	mg/kg	0.0020	ND
Benzene	0.792	mg/kg	0.0010	ND
Bromobenzene	0.792	mg/kg	0.0020	ND
Bromochloromethane	0.792	mg/kg	0.0020	ND
Bromodichloromethane	0.792	mg/kg	0.0020	ND
Bromoform	0.792	mg/kg	0.0020	ND
Bromomethane	0.792	mg/kg	0.0020	ND
Carbon disulfide	0.792	mg/kg	0.0020	ND
Carbon tetrachloride	0.792	mg/kg	0.0020	ND
Chlorobenzene	0.792	mg/kg	0.0020	ND
Chloroethane	0.792	mg/kg	0.0020	ND
Chloroform	0.792	mg/kg	0.0020	ND
Chloromethane	0.792	mg/kg	0.0020	ND
cis-1,2-Dichloroethene	0.792	mg/kg	0.0020	ND
cis-1,3-Dichloropropene	0.792	mg/kg	0.0020	ND
Cyclohexane	0.792	mg/kg	0.0020	ND
Dibromochloromethane	0.792	mg/kg	0.0020	ND
Dibromomethane	0.792	mg/kg	0.0020	ND
Dichlorodifluoromethane	0.792	mg/kg	0.0020	ND
Ethylbenzene	0.792	mg/kg	0.0010	ND
Hexachlorobutadiene	0.792	mg/kg	0.0020	ND
Isopropylbenzene	0.792	mg/kg	0.0010	ND
m&p-Xylenes	0.792	mg/kg	0.0010	ND
Methyl Acetate	0.792	mg/kg	0.0020	ND
Methylcyclohexane	0.792	mg/kg	0.0020	ND
Methylene chloride	0.792	mg/kg	0.0020	ND
Methyl-t-butyl ether	0.792	mg/kg	0.0010	ND
n-Butylbenzene	0.792	mg/kg	0.0010	ND
n-Propylbenzene	0.792	mg/kg	0.0010	ND
o-Xylene	0.792	mg/kg	0.0010	ND
sec-Butylbenzene	0.792	mg/kg	0.0010	ND
Styrene	0.792	mg/kg	0.0020	ND
t-Butylbenzene	0.792	mg/kg	0.0010	ND
Tetrachloroethene	0.792	mg/kg	0.0020	ND
Toluene	0.792	mg/kg	0.0010	ND
trans-1,2-Dichloroethene	0.792	mg/kg	0.0020	ND
trans-1,3-Dichloropropene	0.792	mg/kg	0.0020	ND
trans-1,4-Dichloro-2-butene	0.792	mg/kg	0.0020	ND
Trichloroethene	0.792	mg/kg	0.0020	ND
Trichlorofluoromethane	0.792	mg/kg	0.0020	ND
Vinyl chloride	0.792	mg/kg	0.0020	ND
Xylenes (Total)	0.792	mg/kg	0.0010	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	35.82	30	68	122	119	
Dibromofluoromethane	33.01	30	63	140	110	
Bromofluorobenzene	35.12	30	64	129	117	
1,2-Dichloroethane-d4	33.19	30	63	143	111	

Hampton-Clarke, Inc. (WBE/DBE/SBE)

175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054
Ph (Service Center): 856-780-6057 Fax: 856-780-6056

Hampton-Clarke WBE/DBE/SBE 800-426-9992
A Women-Owned, Disadvantaged, Small Business Enterprise

NELAC/NJ #07071 | PA #68-00463 | NY #11408 | CT #PH-0671 | KY #90124 | DE HSCA Approved

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 805401

Page _____ of _____

3) Reporting Requirements (Please Circle)

Turnaround	Report Type	Electronic Data Deliv.
When Available:	Summary	NJ Hazsite
1 Business Day (100%)*	Results + QC (Waste)	Excel Reg. NJ / NY / PA
2 Business Days (75%)*	Reduced:	EnviroData
3 Business Days (50%)*	[ ] NJ [ ] NY	EQuIS:
4 Business Days (35%)*	[ ] PA [ ] Other___	[ ] 4-File [ ] EZ
5 Business Days (25%)	NJ Full / NY ASP CatB	[ ] NYDEC
8 Business Days (Stand.)	NY ASP CatA	[ ] Region 2 or 5
Other:		Other:

* Expedited TAT Not Always Available. Please Check with Lab.

Customer Information

1a) Customer: Langan
Address: 360 W 31st St NY NY 10001
1b) Email/Cell/Fax/Ph: 212 479-5400
1c) Send Invoice to: tchow@langan.com
1d) Send Report to: tchow@langan.com

Project Information

2a) Project: 111 Willow
2b) Project Mgr: Tyler Chow
2c) Project Location (City/State): Bronx, NY
2d) Quote/PO # (If Applicable):

FOR LAB USE ONLY ↓

Batch # A604371

===> *Check If Contingent* ===>

Matrix Codes

DW - Drinking Water S - Soil A - Air
GW - Ground Water SL - Sludge
WW - Waste Water OL - Oil
OT - Other (please specify under item 9, Comments)

7) Analysis *(specify methods & parameter lists)*

<=== *Check If Contingent* <===

Lab Sample #	4) Customer Sample ID	5) Matrix	6) Sample Date	6) Sample Time	Sample Type: Composite (C)	Sample Type: Grab (G)	VOCs	SVOCs+Pest/Herb	PCBs, Metals	8) # of Bottles: None	MeOH	En Core	NaOH	HCl	H2SO4	HNO3	Other:	9) Comments
001	SB07_1-3	S	5/23/18	15:46		✓	✓	✓	✓	1	1						2	
002	SB07_13-15	S	5/23/18	15:54		✓	✓	✓	✓	1	1						2	
003	SB05_1-2	S	5/23/18	10:54		✓	✓	✓	✓	1	1						2	
004	SB05_6-8	S	5/23/18	11:03		✓	✓	✓	✓	1	1						2	
005	SB04_1-3	S	5/23/18	0944		✓	✓	✓	✓	1	1						2	
006	SB04_10-12	S	5/23/18	0955		✓	✓	✓	✓	1	1						2	
007	SBDUP01_052318	S	5/23/18	0000		✓	✓	✓	✓	1	1						2	

10) Relinquished by:	Accepted by:	Date	Time
		5/23/18	15:45
		5/23/18	0810

11) Sampler (print name): Date:

Additional Notes

Comments, Notes, Special Requirements, HAZARDS

Indicate if low-level methods required to meet current groundwater standards (SPLP for soil):
- [ ] BN or BNA (8270D SIM)
- [ ] VOC (8260C SIM or 8011)
- [ ] SPLP (BN, BNA, Metals)
- [ ] 1,4 Dioxane

For NJ LSRP projects, indicate which standards need to be met:
- [ ] NJDEP GWQS
- [ ] NJDEP SRS
- [ ] NJDEP SPLP
- [ ] Other (specify):

Check if applicable:
- [ ] Project-Specific Reporting Limits
- [ ] High Contaminant Concentrations
- [ ] NJ LSRP Project (also check boxes above/right)

Cooler Temperature: 2.9

Please note NUMBERED items. If not completed your analytical work may be delayed.
A fee of $5/sample will be assessed for storage should sample not be activated for any analysis.

Internal use: sampling plan (check box) HC [ ] or client [ ] FSP#

Hampton-Clarke Report Of Analysis

Client: Langan Engineering & Environmental **HC Project #:** 8052515

Project: 111 Willow

Sample ID: MW01_052418 U **Collection Date:** 5/24/2018
Lab#: AD04413-001 **Receipt Date:** 5/24/2018
Matrix: Aqueous

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	ug/l	0.50	ND
2,4-D	1	ug/l	0.50	ND
Dicamba	1	ug/l	0.50	ND
Silvex	1	ug/l	0.50	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	5474.96	1000	31	151	109	
Dcaa-Surrogate	6952.01	1000	31	151	139	

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	ug/l	0.010	ND
Aldrin	1	ug/l	0.010	ND
Alpha-BHC	1	ug/l	0.010	ND
beta-BHC	1	ug/l	0.010	ND
Chlordane (Total)	1	ug/l	0.010	ND
delta-BHC	1	ug/l	0.010	ND
Dieldrin	1	ug/l	0.010	ND
Endosulfan I	1	ug/l	0.010	ND
Endosulfan II	1	ug/l	0.010	ND
Endosulfan Sulfate	1	ug/l	0.010	ND
Endrin	1	ug/l	0.010	ND
Endrin Aldehyde	1	ug/l	0.010	ND
Endrin Ketone	1	ug/l	0.010	ND
gamma-BHC	1	ug/l	0.010	ND
Heptachlor	1	ug/l	0.010	ND
Heptachlor Epoxide	1	ug/l	0.010	ND
Methoxychlor	1	ug/l	0.010	ND
p,p'-DDD	1	ug/l	0.010	ND
p,p'-DDE	1	ug/l	0.010	ND
p,p'-DDT	1	ug/l	0.010	ND
Toxaphene	1	ug/l	0.25	ND
y-Chlordane	1	ug/l	0.010	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	63.92	100	39	132	64	
TCMX-Surrogate	64.76	100	39	132	65	
DCB-Surrogate	85.35	100	39	142	85	
DCB-Surrogate	92.16	100	39	142	92	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	ug/l	0.25	ND
Aroclor-1016	1	ug/l	0.25	ND
Aroclor-1221	1	ug/l	0.25	ND
Aroclor-1232	1	ug/l	0.25	ND
Aroclor-1242	1	ug/l	0.25	ND
Aroclor-1248	1	ug/l	0.25	ND
Aroclor-1254	1	ug/l	0.25	ND
Aroclor-1260	1	ug/l	0.25	ND
Aroclor-1262	1	ug/l	0.25	ND
Aroclor-1268	1	ug/l	0.25	ND

Sample ID: MW01_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-001 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	131.24	100	39	132	131	
TCMX-Surrogate	75.45	100	39	132	75	
DCB-Surrogate	88.70	100	39	142	89	
DCB-Surrogate	96.05	100	39	142	96	

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	ug/l	2.0	ND
1,2,4,5-Tetrachlorobenzene	1	ug/l	2.0	ND
2,3,4,6-Tetrachlorophenol	1	ug/l	2.0	ND
2,4,5-Trichlorophenol	1	ug/l	2.0	ND
2,4,6-Trichlorophenol	1	ug/l	2.0	ND
2,4-Dichlorophenol	1	ug/l	0.50	ND
2,4-Dimethylphenol	1	ug/l	0.50	ND
2,4-Dinitrophenol	1	ug/l	10	ND
2,4-Dinitrotoluene	1	ug/l	2.0	ND
2,6-Dinitrotoluene	1	ug/l	2.0	ND
2-Chloronaphthalene	1	ug/l	2.0	ND
2-Chlorophenol	1	ug/l	2.0	ND
2-Methylnaphthalene	1	ug/l	2.0	ND
2-Methylphenol	1	ug/l	0.50	ND
2-Nitroaniline	1	ug/l	2.0	ND
2-Nitrophenol	1	ug/l	2.0	ND
3&4-Methylphenol	1	ug/l	0.50	ND
3,3'-Dichlorobenzidine	1	ug/l	2.0	ND
3-Nitroaniline	1	ug/l	2.0	ND
4,6-Dinitro-2-methylphenol	1	ug/l	10	ND
4-Bromophenyl-phenylether	1	ug/l	2.0	ND
4-Chloro-3-methylphenol	1	ug/l	2.0	ND
4-Chloroaniline	1	ug/l	0.50	ND
4-Chlorophenyl-phenylether	1	ug/l	2.0	ND
4-Nitroaniline	1	ug/l	2.0	ND
4-Nitrophenol	1	ug/l	2.0	ND
Acenaphthene	1	ug/l	2.0	ND
Acenaphthylene	1	ug/l	2.0	ND
Acetophenone	1	ug/l	2.0	ND
Anthracene	1	ug/l	2.0	ND
Atrazine	1	ug/l	2.0	ND
Benzaldehyde	1	ug/l	2.0	ND
Benzo[a]anthracene	1	ug/l	2.0	ND
Benzo[a]pyrene	1	ug/l	2.0	ND
Benzo[b]fluoranthene	1	ug/l	2.0	ND
Benzo[g,h,i]perylene	1	ug/l	2.0	ND
Benzo[k]fluoranthene	1	ug/l	2.0	ND
bis(2-Chloroethoxy)methane	1	ug/l	2.0	ND
bis(2-Chloroethyl)ether	1	ug/l	0.50	ND
bis(2-Chloroisopropyl)ether	1	ug/l	2.0	ND
bis(2-Ethylhexyl)phthalate	1	ug/l	2.0	ND
Butylbenzylphthalate	1	ug/l	2.0	ND
Caprolactam	1	ug/l	2.0	ND
Carbazole	1	ug/l	2.0	ND
Chrysene	1	ug/l	2.0	ND
Dibenzo[a,h]anthracene	1	ug/l	2.0	ND
Dibenzofuran	1	ug/l	0.50	ND
Diethylphthalate	1	ug/l	2.0	ND
Dimethylphthalate	1	ug/l	2.0	ND
Di-n-butylphthalate	1	ug/l	0.50	ND
Di-n-octylphthalate	1	ug/l	2.0	ND
Fluoranthene	1	ug/l	2.0	ND
Fluorene	1	ug/l	2.0	ND
Hexachlorobenzene	1	ug/l	2.0	ND
Hexachlorobutadiene	1	ug/l	2.0	ND
Hexachlorocyclopentadiene	1	ug/l	2.0	ND
Hexachloroethane	1	ug/l	2.0	ND
Indeno[1,2,3-cd]pyrene	1	ug/l	2.0	ND
Isophorone	1	ug/l	2.0	ND
Naphthalene	1	ug/l	0.50	ND
Nitrobenzene	1	ug/l	2.0	ND

N-Nitroso-di-n-propylamine	1	ug/l	0.50	ND	
N-Nitrosodiphenylamine	1	ug/l	2.0	ND	
Pentachlorophenol	1	ug/l	10	ND	
Phenanthrene	1	ug/l	2.0	ND	
Phenol	1	ug/l	2.0	ND	
Pyrene	1	ug/l	2.0	ND	

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	49.15	50	55	146	98	
Phenol-d5	54.55	100	27	115	55	
Nitrobenzene-d5	46.72	50	51	139	93	
2-Fluorophenol	65.72	100	29	113	66	
2-Fluorobiphenyl	39.25	50	53	129	78	
2,4,6-Tribromophenol	97.26	100	54	149	97	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**ug/l**	**200**	**9600**
Barium	**1**	**ug/l**	**50**	**140**
Calcium	**1**	**ug/l**	**5000**	**77000**
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	**1**	**ug/l**	**300**	**13000**
Magnesium	**1**	**ug/l**	**5000**	**26000**
Manganese	**1**	**ug/l**	**40**	**2100**
Nickel	1	ug/l	50	ND
Potassium	**1**	**ug/l**	**5000**	**6000**
Silver	1	ug/l	20	ND
Sodium	**1**	**ug/l**	**5000**	**130000**
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	**1**	**ug/l**	**2.0**	**4.8**
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	**1**	**ug/l**	**2.0**	**7.7**
Lead	**1**	**ug/l**	**3.0**	**8.4**
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,1-Trichloroethane	**1**	**ug/l**	**1.0**	**7.5**
1,1,2,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	1.0	ND
1,1,2-Trichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethane	**1**	**ug/l**	**1.0**	**4.5**
1,1-Dichloroethene	**1**	**ug/l**	**1.0**	**6.3**
1,1-Dichloropropene	1	ug/l	1.0	ND
1,2,3-Trichlorobenzene	1	ug/l	1.0	ND
1,2,3-Trichloropropane	1	ug/l	1.0	ND
1,2,4,5-Tetramethylbenzene	1	ug/l	1.0	ND
1,2,4-Trichlorobenzene	1	ug/l	1.0	ND
1,2,4-Trimethylbenzene	1	ug/l	1.0	ND
1,2-Dibromo-3-chloropropane	1	ug/l	1.0	ND
1,2-Dibromoethane	1	ug/l	1.0	ND
1,2-Dichlorobenzene	1	ug/l	1.0	ND
1,2-Dichloroethane	1	ug/l	0.50	ND
1,2-Dichloropropane	1	ug/l	1.0	ND
1,3,5-Trimethylbenzene	1	ug/l	1.0	ND
1,3-Dichlorobenzene	1	ug/l	1.0	ND
1,3-Dichloropropane	1	ug/l	1.0	ND
1,4-Dichlorobenzene	1	ug/l	1.0	ND
1,4-Dioxane	1	ug/l	50	ND
2,2-Dichloropropane	1	ug/l	1.0	ND

Sample ID: MW01_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-001 **Receipt Date: 5/24/2018**
Matrix: Aqueous

2-Butanone	1	ug/l	1.0	ND
2-Chlorotoluene	1	ug/l	1.0	ND
2-Hexanone	1	ug/l	1.0	ND
4-Chlorotoluene	1	ug/l	1.0	ND
4-Isopropyltoluene	1	ug/l	1.0	ND
4-Methyl-2-pentanone	1	ug/l	1.0	ND
Acetone	**1**	**ug/l**	**5.0**	**14**
Acrolein	1	ug/l	5.0	ND
Acrylonitrile	1	ug/l	1.0	ND
Benzene	1	ug/l	0.50	ND
Bromobenzene	1	ug/l	1.0	ND
Bromochloromethane	1	ug/l	1.0	ND
Bromodichloromethane	1	ug/l	1.0	ND
Bromoform	1	ug/l	1.0	ND
Bromomethane	1	ug/l	1.0	ND
Carbon disulfide	1	ug/l	1.0	ND
Carbon tetrachloride	1	ug/l	1.0	ND
Chlorobenzene	1	ug/l	1.0	ND
Chloroethane	1	ug/l	1.0	ND
Chloroform	1	ug/l	1.0	ND
Chloromethane	1	ug/l	1.0	ND
cis-1,2-Dichloroethene	**1**	**ug/l**	**1.0**	**250**
cis-1,3-Dichloropropene	1	ug/l	1.0	ND
Cyclohexane	1	ug/l	1.0	ND
Dibromochloromethane	1	ug/l	1.0	ND
Dibromomethane	1	ug/l	1.0	ND
Dichlorodifluoromethane	1	ug/l	1.0	ND
Ethylbenzene	1	ug/l	1.0	ND
Hexachlorobutadiene	1	ug/l	1.0	ND
Isopropylbenzene	1	ug/l	1.0	ND
m&p-Xylenes	1	ug/l	1.0	ND
Methyl Acetate	1	ug/l	1.0	ND
Methylcyclohexane	1	ug/l	1.0	ND
Methylene chloride	1	ug/l	1.0	ND
Methyl-t-butyl ether	1	ug/l	0.50	ND
n-Butylbenzene	1	ug/l	1.0	ND
n-Propylbenzene	1	ug/l	1.0	ND
o-Xylene	1	ug/l	1.0	ND
sec-Butylbenzene	1	ug/l	1.0	ND
Styrene	1	ug/l	1.0	ND
t-Butylbenzene	1	ug/l	1.0	ND
Tetrachloroethene	**1**	**ug/l**	**1.0**	**340**
Toluene	1	ug/l	1.0	ND
trans-1,2-Dichloroethene	**1**	**ug/l**	**1.0**	**1.0**
trans-1,3-Dichloropropene	1	ug/l	1.0	ND
trans-1,4-Dichloro-2-butene	1	ug/l	1.0	ND
Trichloroethene	**1**	**ug/l**	**1.0**	**58**
Trichlorofluoromethane	1	ug/l	1.0	ND
Vinyl chloride	**1**	**ug/l**	**1.0**	**2.8**
Xylenes (Total)	1	ug/l	1.0	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	29.51	30	79	111	98	
Dibromofluoromethane	29.97	30	73	131	100	
Bromofluorobenzene	30.26	30	82	112	101	
1,2-Dichloroethane-d4	31.40	30	78	128	105	

Sample ID: MW01_052418 F | **Collection Date: 5/24/2018**
Lab#: AD04413-002 | **Receipt Date: 5/24/2018**
Matrix: Aqueous

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	**1**	**ug/l**	**50**	**78**
Calcium	**1**	**ug/l**	**5000**	**84000**
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	**1**	**ug/l**	**5000**	**29000**
Manganese	**1**	**ug/l**	**40**	**2200**
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	**1**	**ug/l**	**5000**	**160000**
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	**1**	**ug/l**	**2.0**	**2.3**
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	**1**	**ug/l**	**2.0**	**3.3**
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: MW02_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-003 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	ug/l	0.56	ND
2,4-D	1	ug/l	0.56	ND
Dicamba	1	ug/l	0.56	ND
Silvex	1	ug/l	0.56	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	992.18	1000	31	151	99	
Dcaa-Surrogate	1049.70	1000	31	151	105	

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	ug/l	0.011	ND
Aldrin	1	ug/l	0.011	ND
Alpha-BHC	1	ug/l	0.011	ND
beta-BHC	1	ug/l	0.011	ND
Chlordane (Total)	1	ug/l	0.011	ND
delta-BHC	1	ug/l	0.011	ND
Dieldrin	1	ug/l	0.011	ND
Endosulfan I	1	ug/l	0.011	ND
Endosulfan II	1	ug/l	0.011	ND
Endosulfan Sulfate	1	ug/l	0.011	ND
Endrin	1	ug/l	0.011	ND
Endrin Aldehyde	1	ug/l	0.011	ND
Endrin Ketone	1	ug/l	0.011	ND
gamma-BHC	1	ug/l	0.011	ND
Heptachlor	1	ug/l	0.011	ND
Heptachlor Epoxide	1	ug/l	0.011	ND
Methoxychlor	1	ug/l	0.011	ND
p,p'-DDD	1	ug/l	0.011	ND
p,p'-DDE	1	ug/l	0.011	ND
p,p'-DDT	1	ug/l	0.011	ND
Toxaphene	1	ug/l	0.28	ND
y-Chlordane	1	ug/l	0.011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	67.67	100	39	132	68	
TCMX-Surrogate	71.80	100	39	132	72	
DCB-Surrogate	98.92	100	39	142	99	
DCB-Surrogate	102.64	100	39	142	103	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	ug/l	0.28	ND
Aroclor-1016	1	ug/l	0.28	ND
Aroclor-1221	1	ug/l	0.28	ND
Aroclor-1232	1	ug/l	0.28	ND
Aroclor-1242	1	ug/l	0.28	ND
Aroclor-1248	1	ug/l	0.28	ND
Aroclor-1254	1	ug/l	0.28	ND
Aroclor-1260	1	ug/l	0.28	ND
Aroclor-1262	1	ug/l	0.28	ND
Aroclor-1268	1	ug/l	0.28	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	74.62	100	39	132	75	
TCMX-Surrogate	75.43	100	39	132	75	
DCB-Surrogate	93.35	100	39	142	93	
DCB-Surrogate	101.55	100	39	142	102	

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	ug/l	2.0	ND
1,2,4,5-Tetrachlorobenzene	1	ug/l	2.0	ND

Sample ID: MW02_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-003 **Receipt Date: 5/24/2018**
Matrix: Aqueous

2,3,4,6-Tetrachlorophenol	1	ug/l	2.0	ND
2,4,5-Trichlorophenol	1	ug/l	2.0	ND
2,4,6-Trichlorophenol	1	ug/l	2.0	ND
2,4-Dichlorophenol	1	ug/l	0.50	ND
2,4-Dimethylphenol	1	ug/l	0.50	ND
2,4-Dinitrophenol	1	ug/l	10	ND
2,4-Dinitrotoluene	1	ug/l	2.0	ND
2,6-Dinitrotoluene	1	ug/l	2.0	ND
2-Chloronaphthalene	1	ug/l	2.0	ND
2-Chlorophenol	1	ug/l	2.0	ND
2-Methylnaphthalene	1	ug/l	2.0	ND
2-Methylphenol	1	ug/l	0.50	ND
2-Nitroaniline	1	ug/l	2.0	ND
2-Nitrophenol	1	ug/l	2.0	ND
3&4-Methylphenol	1	ug/l	0.50	ND
3,3'-Dichlorobenzidine	1	ug/l	2.0	ND
3-Nitroaniline	1	ug/l	2.0	ND
4,6-Dinitro-2-methylphenol	1	ug/l	10	ND
4-Bromophenyl-phenylether	1	ug/l	2.0	ND
4-Chloro-3-methylphenol	1	ug/l	2.0	ND
4-Chloroaniline	1	ug/l	0.50	ND
4-Chlorophenyl-phenylether	1	ug/l	2.0	ND
4-Nitroaniline	1	ug/l	2.0	ND
4-Nitrophenol	1	ug/l	2.0	ND
Acenaphthene	1	ug/l	2.0	ND
Acenaphthylene	1	ug/l	2.0	ND
Acetophenone	1	ug/l	2.0	ND
Anthracene	1	ug/l	2.0	ND
Atrazine	1	ug/l	2.0	ND
Benzaldehyde	1	ug/l	2.0	ND
Benzo[a]anthracene	1	ug/l	2.0	ND
Benzo[a]pyrene	1	ug/l	2.0	ND
Benzo[b]fluoranthene	1	ug/l	2.0	ND
Benzo[g,h,i]perylene	1	ug/l	2.0	ND
Benzo[k]fluoranthene	1	ug/l	2.0	ND
bis(2-Chloroethoxy)methane	1	ug/l	2.0	ND
bis(2-Chloroethyl)ether	1	ug/l	0.50	ND
bis(2-Chloroisopropyl)ether	1	ug/l	2.0	ND
bis(2-Ethylhexyl)phthalate	1	ug/l	2.0	ND
Butylbenzylphthalate	1	ug/l	2.0	ND
Caprolactam	1	ug/l	2.0	ND
Carbazole	1	ug/l	2.0	ND
Chrysene	1	ug/l	2.0	ND
Dibenzo[a,h]anthracene	1	ug/l	2.0	ND
Dibenzofuran	1	ug/l	0.50	ND
Diethylphthalate	1	ug/l	2.0	ND
Dimethylphthalate	1	ug/l	2.0	ND
Di-n-butylphthalate	1	ug/l	0.50	ND
Di-n-octylphthalate	1	ug/l	2.0	ND
Fluoranthene	1	ug/l	2.0	ND
Fluorene	1	ug/l	2.0	ND
Hexachlorobenzene	1	ug/l	2.0	ND
Hexachlorobutadiene	1	ug/l	2.0	ND
Hexachlorocyclopentadiene	1	ug/l	2.0	ND
Hexachloroethane	1	ug/l	2.0	ND
Indeno[1,2,3-cd]pyrene	1	ug/l	2.0	ND
Isophorone	1	ug/l	2.0	ND
Naphthalene	1	ug/l	0.50	ND
Nitrobenzene	1	ug/l	2.0	ND
N-Nitroso-di-n-propylamine	1	ug/l	0.50	ND
N-Nitrosodiphenylamine	1	ug/l	2.0	ND
Pentachlorophenol	1	ug/l	10	ND
Phenanthrene	1	ug/l	2.0	ND
Phenol	1	ug/l	2.0	ND
Pyrene	1	ug/l	2.0	ND

Sample ID: MW02_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-003 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	51.49	50	55	146	103	
Phenol-d5	42.37	100	27	115	42	
Nitrobenzene-d5	46.73	50	51	139	93	
2-Fluorophenol	59.45	100	29	113	59	
2-Fluorobiphenyl	46.43	50	53	129	93	
2,4,6-Tribromophenol	97.98	100	54	149	98	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**ug/l**	**200**	**7800**
Barium	**1**	**ug/l**	**50**	**110**
Calcium	**1**	**ug/l**	**5000**	**110000**
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	**1**	**ug/l**	**300**	**9800**
Magnesium	**1**	**ug/l**	**5000**	**37000**
Manganese	**1**	**ug/l**	**40**	**2800**
Nickel	1	ug/l	50	ND
Potassium	**1**	**ug/l**	**5000**	**6200**
Silver	1	ug/l	20	ND
Sodium	**1**	**ug/l**	**5000**	**130000**
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	**1**	**ug/l**	**2.0**	**2.6**
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	**1**	**ug/l**	**2.0**	**11**
Lead	**1**	**ug/l**	**3.0**	**4.9**
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	20	ug/l	20	ND
1,1,1-Trichloroethane	**20**	**ug/l**	**20**	**130**
1,1,2,2-Tetrachloroethane	20	ug/l	20	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	20	ug/l	20	ND
1,1,2-Trichloroethane	20	ug/l	20	ND
1,1-Dichloroethane	**20**	**ug/l**	**20**	**38**
1,1-Dichloroethene	**20**	**ug/l**	**20**	**65**
1,1-Dichloropropene	20	ug/l	20	ND
1,2,3-Trichlorobenzene	20	ug/l	20	ND
1,2,3-Trichloropropane	20	ug/l	20	ND
1,2,4,5-Tetramethylbenzene	20	ug/l	20	ND
1,2,4-Trichlorobenzene	20	ug/l	20	ND
1,2,4-Trimethylbenzene	20	ug/l	20	ND
1,2-Dibromo-3-chloropropane	20	ug/l	20	ND
1,2-Dibromoethane	20	ug/l	20	ND
1,2-Dichlorobenzene	20	ug/l	20	ND
1,2-Dichloroethane	20	ug/l	10	ND
1,2-Dichloropropane	20	ug/l	20	ND
1,3,5-Trimethylbenzene	20	ug/l	20	ND
1,3-Dichlorobenzene	20	ug/l	20	ND
1,3-Dichloropropane	20	ug/l	20	ND
1,4-Dichlorobenzene	20	ug/l	20	ND
1,4-Dioxane	20	ug/l	1000	ND
2,2-Dichloropropane	20	ug/l	20	ND
2-Butanone	20	ug/l	20	ND
2-Chlorotoluene	20	ug/l	20	ND
2-Hexanone	20	ug/l	20	ND
4-Chlorotoluene	20	ug/l	20	ND
4-Isopropyltoluene	20	ug/l	20	ND
4-Methyl-2-pentanone	20	ug/l	20	ND

Sample ID: MW02_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-003 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Acetone	20	ug/l	100	ND
Acrolein	20	ug/l	100	ND
Acrylonitrile	20	ug/l	20	ND
Benzene	20	ug/l	10	ND
Bromobenzene	20	ug/l	20	ND
Bromochloromethane	20	ug/l	20	ND
Bromodichloromethane	20	ug/l	20	ND
Bromoform	20	ug/l	20	ND
Bromomethane	20	ug/l	20	ND
Carbon disulfide	20	ug/l	20	ND
Carbon tetrachloride	20	ug/l	20	ND
Chlorobenzene	20	ug/l	20	ND
Chloroethane	20	ug/l	20	ND
Chloroform	20	ug/l	20	ND
Chloromethane	20	ug/l	20	ND
cis-1,2-Dichloroethene	**20**	**ug/l**	**20**	**320**
cis-1,3-Dichloropropene	20	ug/l	20	ND
Cyclohexane	20	ug/l	20	ND
Dibromochloromethane	20	ug/l	20	ND
Dibromomethane	20	ug/l	20	ND
Dichlorodifluoromethane	20	ug/l	20	ND
Ethylbenzene	20	ug/l	20	ND
Hexachlorobutadiene	20	ug/l	20	ND
Isopropylbenzene	20	ug/l	20	ND
m&p-Xylenes	20	ug/l	20	ND
Methyl Acetate	20	ug/l	20	ND
Methylcyclohexane	20	ug/l	20	ND
Methylene chloride	20	ug/l	20	ND
Methyl-t-butyl ether	20	ug/l	10	ND
n-Butylbenzene	20	ug/l	20	ND
n-Propylbenzene	20	ug/l	20	ND
o-Xylene	20	ug/l	20	ND
sec-Butylbenzene	20	ug/l	20	ND
Styrene	20	ug/l	20	ND
t-Butylbenzene	20	ug/l	20	ND
Tetrachloroethene	**20**	**ug/l**	**20**	**3700**
Toluene	20	ug/l	20	ND
trans-1,2-Dichloroethene	20	ug/l	20	ND
trans-1,3-Dichloropropene	20	ug/l	20	ND
trans-1,4-Dichloro-2-butene	20	ug/l	20	ND
Trichloroethene	**20**	**ug/l**	**20**	**420**
Trichlorofluoromethane	20	ug/l	20	ND
Vinyl chloride	20	ug/l	20	ND
Xylenes (Total)	20	ug/l	20	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	28.64	30	79	111	95	
Dibromofluoromethane	30.91	30	73	131	103	
Bromofluorobenzene	29.47	30	82	112	98	
1,2-Dichloroethane-d4	30.21	30	78	128	101	

Sample ID: MW02_052418 F | **Collection Date: 5/24/2018**
Lab#: AD04413-004 | **Receipt Date: 5/24/2018**
Matrix: Aqueous

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**ug/l**	**200**	**230**
Barium	**1**	**ug/l**	**50**	**94**
Calcium	**1**	**ug/l**	**5000**	**120000**
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	**1**	**ug/l**	**5000**	**38000**
Manganese	**1**	**ug/l**	**40**	**3000**
Nickel	1	ug/l	50	ND
Potassium	**1**	**ug/l**	**5000**	**5300**
Silver	1	ug/l	20	ND
Sodium	**1**	**ug/l**	**5000**	**140000**
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	**1**	**ug/l**	**2.0**	**9.1**
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: MW03_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-005 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	ug/l	0.50	ND
2,4-D	1	ug/l	0.50	ND
Dicamba	1	ug/l	0.50	ND
Silvex	1	ug/l	0.50	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	4277.39	1000	31	151	86	
Dcaa-Surrogate	5226.95	1000	31	151	105	

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	ug/l	0.010	ND
Aldrin	1	ug/l	0.010	ND
Alpha-BHC	1	ug/l	0.010	ND
beta-BHC	1	ug/l	0.010	ND
Chlordane (Total)	1	ug/l	0.010	ND
delta-BHC	1	ug/l	0.010	ND
Dieldrin	1	ug/l	0.010	ND
Endosulfan I	1	ug/l	0.010	ND
Endosulfan II	1	ug/l	0.010	ND
Endosulfan Sulfate	1	ug/l	0.010	ND
Endrin	1	ug/l	0.010	ND
Endrin Aldehyde	1	ug/l	0.010	ND
Endrin Ketone	1	ug/l	0.010	ND
gamma-BHC	1	ug/l	0.010	ND
Heptachlor	1	ug/l	0.010	ND
Heptachlor Epoxide	1	ug/l	0.010	ND
Methoxychlor	1	ug/l	0.010	ND
p,p'-DDD	1	ug/l	0.010	ND
p,p'-DDE	1	ug/l	0.010	ND
p,p'-DDT	1	ug/l	0.010	ND
Toxaphene	1	ug/l	0.25	ND
y-Chlordane	1	ug/l	0.010	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	49.67	100	39	132	50	
TCMX-Surrogate	54.21	100	39	132	54	
DCB-Surrogate	81.87	100	39	142	82	
DCB-Surrogate	85.10	100	39	142	85	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	ug/l	0.25	ND
Aroclor-1016	1	ug/l	0.25	ND
Aroclor-1221	1	ug/l	0.25	ND
Aroclor-1232	1	ug/l	0.25	ND
Aroclor-1242	1	ug/l	0.25	ND
Aroclor-1248	1	ug/l	0.25	ND
Aroclor-1254	1	ug/l	0.25	ND
Aroclor-1260	1	ug/l	0.25	ND
Aroclor-1262	1	ug/l	0.25	ND
Aroclor-1268	1	ug/l	0.25	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	59.80	100	39	132	60	
TCMX-Surrogate	61.83	100	39	132	62	
DCB-Surrogate	84.26	100	39	142	84	
DCB-Surrogate	92.60	100	39	142	93	

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	ug/l	2.0	ND
1,2,4,5-Tetrachlorobenzene	1	ug/l	2.0	ND

Sample ID: MW03_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-005 **Receipt Date: 5/24/2018**
Matrix: Aqueous

2,3,4,6-Tetrachlorophenol	1	ug/l	2.0	ND
2,4,5-Trichlorophenol	1	ug/l	2.0	ND
2,4,6-Trichlorophenol	1	ug/l	2.0	ND
2,4-Dichlorophenol	1	ug/l	0.50	ND
2,4-Dimethylphenol	1	ug/l	0.50	ND
2,4-Dinitrophenol	1	ug/l	10	ND
2,4-Dinitrotoluene	1	ug/l	2.0	ND
2,6-Dinitrotoluene	1	ug/l	2.0	ND
2-Chloronaphthalene	1	ug/l	2.0	ND
2-Chlorophenol	1	ug/l	2.0	ND
2-Methylnaphthalene	1	ug/l	2.0	ND
2-Methylphenol	1	ug/l	0.50	ND
2-Nitroaniline	1	ug/l	2.0	ND
2-Nitrophenol	1	ug/l	2.0	ND
3&4-Methylphenol	1	ug/l	0.50	ND
3,3'-Dichlorobenzidine	1	ug/l	2.0	ND
3-Nitroaniline	1	ug/l	2.0	ND
4,6-Dinitro-2-methylphenol	1	ug/l	10	ND
4-Bromophenyl-phenylether	1	ug/l	2.0	ND
4-Chloro-3-methylphenol	1	ug/l	2.0	ND
4-Chloroaniline	1	ug/l	0.50	ND
4-Chlorophenyl-phenylether	1	ug/l	2.0	ND
4-Nitroaniline	1	ug/l	2.0	ND
4-Nitrophenol	1	ug/l	2.0	ND
Acenaphthene	1	ug/l	2.0	ND
Acenaphthylene	1	ug/l	2.0	ND
Acetophenone	1	ug/l	2.0	ND
Anthracene	1	ug/l	2.0	ND
Atrazine	1	ug/l	2.0	ND
Benzaldehyde	1	ug/l	2.0	ND
Benzo[a]anthracene	1	ug/l	2.0	ND
Benzo[a]pyrene	1	ug/l	2.0	ND
Benzo[b]fluoranthene	1	ug/l	2.0	ND
Benzo[g,h,i]perylene	1	ug/l	2.0	ND
Benzo[k]fluoranthene	1	ug/l	2.0	ND
bis(2-Chloroethoxy)methane	1	ug/l	2.0	ND
bis(2-Chloroethyl)ether	1	ug/l	0.50	ND
bis(2-Chloroisopropyl)ether	1	ug/l	2.0	ND
bis(2-Ethylhexyl)phthalate	1	ug/l	2.0	ND
Butylbenzylphthalate	1	ug/l	2.0	ND
Caprolactam	1	ug/l	2.0	ND
Carbazole	1	ug/l	2.0	ND
Chrysene	1	ug/l	2.0	ND
Dibenzo[a,h]anthracene	1	ug/l	2.0	ND
Dibenzofuran	1	ug/l	0.50	ND
Diethylphthalate	1	ug/l	2.0	ND
Dimethylphthalate	1	ug/l	2.0	ND
Di-n-butylphthalate	1	ug/l	0.50	ND
Di-n-octylphthalate	1	ug/l	2.0	ND
Fluoranthene	1	ug/l	2.0	ND
Fluorene	1	ug/l	2.0	ND
Hexachlorobenzene	1	ug/l	2.0	ND
Hexachlorobutadiene	1	ug/l	2.0	ND
Hexachlorocyclopentadiene	1	ug/l	2.0	ND
Hexachloroethane	1	ug/l	2.0	ND
Indeno[1,2,3-cd]pyrene	1	ug/l	2.0	ND
Isophorone	1	ug/l	2.0	ND
Naphthalene	**1**	**ug/l**	**0.50**	**1.0**
Nitrobenzene	1	ug/l	2.0	ND
N-Nitroso-di-n-propylamine	1	ug/l	0.50	ND
N-Nitrosodiphenylamine	1	ug/l	2.0	ND
Pentachlorophenol	1	ug/l	10	ND
Phenanthrene	1	ug/l	2.0	ND
Phenol	1	ug/l	2.0	ND
Pyrene	1	ug/l	2.0	ND

Sample ID: MW03_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-005 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	40.40	50	55	146	81	
Phenol-d5	47.86	100	27	115	48	
Nitrobenzene-d5	38.40	50	51	139	77	
2-Fluorophenol	56.15	100	29	113	56	
2-Fluorobiphenyl	37.89	50	53	129	76	
2,4,6-Tribromophenol	80.49	100	54	149	80	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**ug/l**	**200**	**950**
Barium	**1**	**ug/l**	**50**	**130**
Calcium	**1**	**ug/l**	**5000**	**120000**
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	**1**	**ug/l**	**300**	**4800**
Magnesium	**1**	**ug/l**	**5000**	**42000**
Manganese	**1**	**ug/l**	**40**	**1100**
Nickel	1	ug/l	50	ND
Potassium	**1**	**ug/l**	**5000**	**10000**
Silver	1	ug/l	20	ND
Sodium	**1**	**ug/l**	**5000**	**150000**
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	**1**	**ug/l**	**2.0**	**2.1**
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,1-Trichloroethane	1	ug/l	1.0	ND
1,1,2,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	1.0	ND
1,1,2-Trichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethene	1	ug/l	1.0	ND
1,1-Dichloropropene	1	ug/l	1.0	ND
1,2,3-Trichlorobenzene	1	ug/l	1.0	ND
1,2,3-Trichloropropane	1	ug/l	1.0	ND
1,2,4,5-Tetramethylbenzene	1	ug/l	1.0	ND
1,2,4-Trichlorobenzene	1	ug/l	1.0	ND
1,2,4-Trimethylbenzene	1	ug/l	1.0	ND
1,2-Dibromo-3-chloropropane	1	ug/l	1.0	ND
1,2-Dibromoethane	1	ug/l	1.0	ND
1,2-Dichlorobenzene	1	ug/l	1.0	ND
1,2-Dichloroethane	1	ug/l	0.50	ND
1,2-Dichloropropane	1	ug/l	1.0	ND
1,3,5-Trimethylbenzene	1	ug/l	1.0	ND
1,3-Dichlorobenzene	1	ug/l	1.0	ND
1,3-Dichloropropane	1	ug/l	1.0	ND
1,4-Dichlorobenzene	1	ug/l	1.0	ND
1,4-Dioxane	1	ug/l	50	ND
2,2-Dichloropropane	1	ug/l	1.0	ND
2-Butanone	**1**	**ug/l**	**1.0**	**3.2**
2-Chlorotoluene	1	ug/l	1.0	ND
2-Hexanone	1	ug/l	1.0	ND
4-Chlorotoluene	1	ug/l	1.0	ND
4-Isopropyltoluene	1	ug/l	1.0	ND
4-Methyl-2-pentanone	1	ug/l	1.0	ND

Sample ID: MW03_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-005 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Acetone	**1**	**ug/l**	**5.0**	**45**
Acrolein	1	ug/l	5.0	ND
Acrylonitrile	1	ug/l	1.0	ND
Benzene	1	ug/l	0.50	ND
Bromobenzene	1	ug/l	1.0	ND
Bromochloromethane	1	ug/l	1.0	ND
Bromodichloromethane	1	ug/l	1.0	ND
Bromoform	1	ug/l	1.0	ND
Bromomethane	1	ug/l	1.0	ND
Carbon disulfide	1	ug/l	1.0	ND
Carbon tetrachloride	1	ug/l	1.0	ND
Chlorobenzene	1	ug/l	1.0	ND
Chloroethane	1	ug/l	1.0	ND
Chloroform	1	ug/l	1.0	ND
Chloromethane	1	ug/l	1.0	ND
cis-1,2-Dichloroethene	1	ug/l	1.0	ND
cis-1,3-Dichloropropene	1	ug/l	1.0	ND
Cyclohexane	1	ug/l	1.0	ND
Dibromochloromethane	1	ug/l	1.0	ND
Dibromomethane	1	ug/l	1.0	ND
Dichlorodifluoromethane	1	ug/l	1.0	ND
Ethylbenzene	1	ug/l	1.0	ND
Hexachlorobutadiene	1	ug/l	1.0	ND
Isopropylbenzene	1	ug/l	1.0	ND
m&p-Xylenes	1	ug/l	1.0	ND
Methyl Acetate	1	ug/l	1.0	ND
Methylcyclohexane	1	ug/l	1.0	ND
Methylene chloride	1	ug/l	1.0	ND
Methyl-t-butyl ether	1	ug/l	0.50	ND
n-Butylbenzene	1	ug/l	1.0	ND
n-Propylbenzene	1	ug/l	1.0	ND
o-Xylene	1	ug/l	1.0	ND
sec-Butylbenzene	1	ug/l	1.0	ND
Styrene	1	ug/l	1.0	ND
t-Butylbenzene	1	ug/l	1.0	ND
Tetrachloroethene	1	ug/l	1.0	ND
Toluene	1	ug/l	1.0	ND
trans-1,2-Dichloroethene	1	ug/l	1.0	ND
trans-1,3-Dichloropropene	1	ug/l	1.0	ND
trans-1,4-Dichloro-2-butene	1	ug/l	1.0	ND
Trichloroethene	1	ug/l	1.0	ND
Trichlorofluoromethane	1	ug/l	1.0	ND
Vinyl chloride	1	ug/l	1.0	ND
Xylenes (Total)	1	ug/l	1.0	ND

Surrogate	**Conc.**	**Spike**	**Low Limit**	**High Limit**	**Recovery**	**Flags**
Toluene-d8	28.85	30	79	111	96	
Dibromofluoromethane	31.51	30	73	131	105	
Bromofluorobenzene	29.84	30	82	112	99	
1,2-Dichloroethane-d4	31.11	30	78	128	104	

Sample ID: MW03_052418 F | **Collection Date: 5/24/2018**
Lab#: AD04413-006 | **Receipt Date: 5/24/2018**
Matrix: Aqueous

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	**1**	**ug/l**	**50**	**130**
Calcium	**1**	**ug/l**	**5000**	**130000**
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	**1**	**ug/l**	**300**	**2300**
Magnesium	**1**	**ug/l**	**5000**	**44000**
Manganese	**1**	**ug/l**	**40**	**1100**
Nickel	1	ug/l	50	ND
Potassium	**1**	**ug/l**	**5000**	**10000**
Silver	1	ug/l	20	ND
Sodium	**1**	**ug/l**	**5000**	**150000**
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: MW04_052418 U
Lab#: AD04413-007
Matrix: Aqueous

Collection Date: 5/24/2018
Receipt Date: 5/24/2018

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	ug/l	0.56	ND
2,4-D	1	ug/l	0.56	ND
Dicamba	1	ug/l	0.56	ND
Silvex	1	ug/l	0.56	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	865.30	1000	31	151	87	
Dcaa-Surrogate	922.07	1000	31	151	92	

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	ug/l	0.011	ND
Aldrin	1	ug/l	0.011	ND
Alpha-BHC	1	ug/l	0.011	ND
beta-BHC	1	ug/l	0.011	ND
Chlordane (Total)	1	ug/l	0.011	ND
delta-BHC	1	ug/l	0.011	ND
Dieldrin	1	ug/l	0.011	ND
Endosulfan I	1	ug/l	0.011	ND
Endosulfan II	1	ug/l	0.011	ND
Endosulfan Sulfate	1	ug/l	0.011	ND
Endrin	1	ug/l	0.011	ND
Endrin Aldehyde	1	ug/l	0.011	ND
Endrin Ketone	1	ug/l	0.011	ND
gamma-BHC	1	ug/l	0.011	ND
Heptachlor	1	ug/l	0.011	ND
Heptachlor Epoxide	1	ug/l	0.011	ND
Methoxychlor	1	ug/l	0.011	ND
p,p'-DDD	1	ug/l	0.011	ND
p,p'-DDE	1	ug/l	0.011	ND
p,p'-DDT	1	ug/l	0.011	ND
Toxaphene	1	ug/l	0.28	ND
y-Chlordane	1	ug/l	0.011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	59.96	100	39	132	60	
TCMX-Surrogate	64.25	100	39	132	64	
DCB-Surrogate	91.90	100	39	142	92	
DCB-Surrogate	96.57	100	39	142	97	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	ug/l	0.28	ND
Aroclor-1016	1	ug/l	0.28	ND
Aroclor-1221	1	ug/l	0.28	ND
Aroclor-1232	1	ug/l	0.28	ND
Aroclor-1242	1	ug/l	0.28	ND
Aroclor-1248	1	ug/l	0.28	ND
Aroclor-1254	1	ug/l	0.28	ND
Aroclor-1260	1	ug/l	0.28	ND
Aroclor-1262	1	ug/l	0.28	ND
Aroclor-1268	1	ug/l	0.28	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	71.63	100	39	132	72	
TCMX-Surrogate	67.46	100	39	132	67	
DCB-Surrogate	92.62	100	39	142	93	
DCB-Surrogate	102.68	100	39	142	103	

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	ug/l	2.0	ND
1,2,4,5-Tetrachlorobenzene	1	ug/l	2.0	ND

Sample ID: MW04_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-007 **Receipt Date: 5/24/2018**
Matrix: Aqueous

2,3,4,6-Tetrachlorophenol	1	ug/l	2.0	ND
2,4,5-Trichlorophenol	1	ug/l	2.0	ND
2,4,6-Trichlorophenol	1	ug/l	2.0	ND
2,4-Dichlorophenol	1	ug/l	0.50	ND
2,4-Dimethylphenol	1	ug/l	0.50	ND
2,4-Dinitrophenol	1	ug/l	10	ND
2,4-Dinitrotoluene	1	ug/l	2.0	ND
2,6-Dinitrotoluene	1	ug/l	2.0	ND
2-Chloronaphthalene	1	ug/l	2.0	ND
2-Chlorophenol	1	ug/l	2.0	ND
2-Methylnaphthalene	1	ug/l	2.0	ND
2-Methylphenol	1	ug/l	0.50	ND
2-Nitroaniline	1	ug/l	2.0	ND
2-Nitrophenol	1	ug/l	2.0	ND
3&4-Methylphenol	1	ug/l	0.50	ND
3,3'-Dichlorobenzidine	1	ug/l	2.0	ND
3-Nitroaniline	1	ug/l	2.0	ND
4,6-Dinitro-2-methylphenol	1	ug/l	10	ND
4-Bromophenyl-phenylether	1	ug/l	2.0	ND
4-Chloro-3-methylphenol	1	ug/l	2.0	ND
4-Chloroaniline	1	ug/l	0.50	ND
4-Chlorophenyl-phenylether	1	ug/l	2.0	ND
4-Nitroaniline	1	ug/l	2.0	ND
4-Nitrophenol	1	ug/l	2.0	ND
Acenaphthene	1	ug/l	2.0	ND
Acenaphthylene	1	ug/l	2.0	ND
Acetophenone	1	ug/l	2.0	ND
Anthracene	1	ug/l	2.0	ND
Atrazine	1	ug/l	2.0	ND
Benzaldehyde	1	ug/l	2.0	ND
Benzo[a]anthracene	1	ug/l	2.0	ND
Benzo[a]pyrene	1	ug/l	2.0	ND
Benzo[b]fluoranthene	1	ug/l	2.0	ND
Benzo[g,h,i]perylene	1	ug/l	2.0	ND
Benzo[k]fluoranthene	1	ug/l	2.0	ND
bis(2-Chloroethoxy)methane	1	ug/l	2.0	ND
bis(2-Chloroethyl)ether	1	ug/l	0.50	ND
bis(2-Chloroisopropyl)ether	1	ug/l	2.0	ND
bis(2-Ethylhexyl)phthalate	1	ug/l	2.0	ND
Butylbenzylphthalate	1	ug/l	2.0	ND
Caprolactam	1	ug/l	2.0	ND
Carbazole	1	ug/l	2.0	ND
Chrysene	1	ug/l	2.0	ND
Dibenzo[a,h]anthracene	1	ug/l	2.0	ND
Dibenzofuran	1	ug/l	0.50	ND
Diethylphthalate	1	ug/l	2.0	ND
Dimethylphthalate	1	ug/l	2.0	ND
Di-n-butylphthalate	1	ug/l	0.50	ND
Di-n-octylphthalate	1	ug/l	2.0	ND
Fluoranthene	1	ug/l	2.0	ND
Fluorene	1	ug/l	2.0	ND
Hexachlorobenzene	1	ug/l	2.0	ND
Hexachlorobutadiene	1	ug/l	2.0	ND
Hexachlorocyclopentadiene	1	ug/l	2.0	ND
Hexachloroethane	1	ug/l	2.0	ND
Indeno[1,2,3-cd]pyrene	1	ug/l	2.0	ND
Isophorone	1	ug/l	2.0	ND
Naphthalene	1	ug/l	0.50	ND
Nitrobenzene	1	ug/l	2.0	ND
N-Nitroso-di-n-propylamine	1	ug/l	0.50	ND
N-Nitrosodiphenylamine	1	ug/l	2.0	ND
Pentachlorophenol	1	ug/l	10	ND
Phenanthrene	1	ug/l	2.0	ND
Phenol	1	ug/l	2.0	ND
Pyrene	1	ug/l	2.0	ND

Sample ID: MW04_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-007 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	45.67	50	55	146	91	
Phenol-d5	36.15	100	27	115	36	
Nitrobenzene-d5	43.68	50	51	139	87	
2-Fluorophenol	51.16	100	29	113	51	
2-Fluorobiphenyl	43.61	50	53	129	87	
2,4,6-Tribromophenol	88.04	100	54	149	88	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**ug/l**	**200**	**38000**
Barium	**1**	**ug/l**	**50**	**220**
Calcium	**1**	**ug/l**	**5000**	**48000**
Chromium	**1**	**ug/l**	**50**	**67**
Copper	**1**	**ug/l**	**50**	**67**
Iron	**1**	**ug/l**	**300**	**53000**
Magnesium	**1**	**ug/l**	**5000**	**37000**
Manganese	**1**	**ug/l**	**40**	**3500**
Nickel	**1**	**ug/l**	**50**	**82**
Potassium	**1**	**ug/l**	**5000**	**12000**
Silver	1	ug/l	20	ND
Sodium	**1**	**ug/l**	**5000**	**150000**
Vanadium	**1**	**ug/l**	**50**	**80**
Zinc	**1**	**ug/l**	**50**	**130**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	**1**	**ug/l**	**2.0**	**13**
Beryllium	**1**	**ug/l**	**1.0**	**1.8**
Cadmium	1	ug/l	2.0	ND
Cobalt	**1**	**ug/l**	**2.0**	**53**
Lead	**1**	**ug/l**	**3.0**	**21**
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	5	ug/l	5.0	ND
1,1,1-Trichloroethane	**5**	**ug/l**	**5.0**	**40**
1,1,2,2-Tetrachloroethane	5	ug/l	5.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ug/l	5.0	ND
1,1,2-Trichloroethane	5	ug/l	5.0	ND
1,1-Dichloroethane	**5**	**ug/l**	**5.0**	**14**
1,1-Dichloroethene	**5**	**ug/l**	**5.0**	**43**
1,1-Dichloropropene	5	ug/l	5.0	ND
1,2,3-Trichlorobenzene	5	ug/l	5.0	ND
1,2,3-Trichloropropane	5	ug/l	5.0	ND
1,2,4,5-Tetramethylbenzene	5	ug/l	5.0	ND
1,2,4-Trichlorobenzene	5	ug/l	5.0	ND
1,2,4-Trimethylbenzene	5	ug/l	5.0	ND
1,2-Dibromo-3-chloropropane	5	ug/l	5.0	ND
1,2-Dibromoethane	5	ug/l	5.0	ND
1,2-Dichlorobenzene	5	ug/l	5.0	ND
1,2-Dichloroethane	5	ug/l	2.5	ND
1,2-Dichloropropane	5	ug/l	5.0	ND
1,3,5-Trimethylbenzene	5	ug/l	5.0	ND
1,3-Dichlorobenzene	5	ug/l	5.0	ND
1,3-Dichloropropane	5	ug/l	5.0	ND
1,4-Dichlorobenzene	5	ug/l	5.0	ND
1,4-Dioxane	5	ug/l	250	ND
2,2-Dichloropropane	5	ug/l	5.0	ND
2-Butanone	5	ug/l	5.0	ND
2-Chlorotoluene	5	ug/l	5.0	ND
2-Hexanone	5	ug/l	5.0	ND
4-Chlorotoluene	5	ug/l	5.0	ND
4-Isopropyltoluene	5	ug/l	5.0	ND
4-Methyl-2-pentanone	5	ug/l	5.0	ND

Sample ID: MW04_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-007 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Acetone	5	ug/l	25	ND
Acrolein	5	ug/l	25	ND
Acrylonitrile	5	ug/l	5.0	ND
Benzene	5	ug/l	2.5	ND
Bromobenzene	5	ug/l	5.0	ND
Bromochloromethane	5	ug/l	5.0	ND
Bromodichloromethane	5	ug/l	5.0	ND
Bromoform	5	ug/l	5.0	ND
Bromomethane	5	ug/l	5.0	ND
Carbon disulfide	5	ug/l	5.0	ND
Carbon tetrachloride	5	ug/l	5.0	ND
Chlorobenzene	5	ug/l	5.0	ND
Chloroethane	5	ug/l	5.0	ND
Chloroform	5	ug/l	5.0	ND
Chloromethane	5	ug/l	5.0	ND
cis-1,2-Dichloroethene	**5**	**ug/l**	**5.0**	**280**
cis-1,3-Dichloropropene	5	ug/l	5.0	ND
Cyclohexane	5	ug/l	5.0	ND
Dibromochloromethane	5	ug/l	5.0	ND
Dibromomethane	5	ug/l	5.0	ND
Dichlorodifluoromethane	5	ug/l	5.0	ND
Ethylbenzene	5	ug/l	5.0	ND
Hexachlorobutadiene	5	ug/l	5.0	ND
Isopropylbenzene	5	ug/l	5.0	ND
m&p-Xylenes	5	ug/l	5.0	ND
Methyl Acetate	5	ug/l	5.0	ND
Methylcyclohexane	5	ug/l	5.0	ND
Methylene chloride	5	ug/l	5.0	ND
Methyl-t-butyl ether	5	ug/l	2.5	ND
n-Butylbenzene	5	ug/l	5.0	ND
n-Propylbenzene	5	ug/l	5.0	ND
o-Xylene	5	ug/l	5.0	ND
sec-Butylbenzene	5	ug/l	5.0	ND
Styrene	5	ug/l	5.0	ND
t-Butylbenzene	5	ug/l	5.0	ND
Tetrachloroethene	**5**	**ug/l**	**5.0**	**810**
Toluene	5	ug/l	5.0	ND
trans-1,2-Dichloroethene	5	ug/l	5.0	ND
trans-1,3-Dichloropropene	5	ug/l	5.0	ND
trans-1,4-Dichloro-2-butene	5	ug/l	5.0	ND
Trichloroethene	**5**	**ug/l**	**5.0**	**130**
Trichlorofluoromethane	5	ug/l	5.0	ND
Vinyl chloride	5	ug/l	5.0	ND
Xylenes (Total)	5	ug/l	5.0	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	28.57	30	79	111	95	
Dibromofluoromethane	30.58	30	73	131	102	
Bromofluorobenzene	30.36	30	82	112	101	
1,2-Dichloroethane-d4	29.86	30	78	128	100	

Sample ID: MW04_052418 F | **Collection Date: 5/24/2018**
Lab#: AD04413-008 | **Receipt Date: 5/24/2018**
Matrix: Aqueous

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	**1**	**ug/l**	**5000**	**47000**
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	**1**	**ug/l**	**300**	**870**
Magnesium	**1**	**ug/l**	**5000**	**32000**
Manganese	**1**	**ug/l**	**40**	**2200**
Nickel	1	ug/l	50	ND
Potassium	**1**	**ug/l**	**5000**	**10000**
Silver	1	ug/l	20	ND
Sodium	**1**	**ug/l**	**5000**	**190000**
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	**1**	**ug/l**	**2.0**	**2.1**
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	**1**	**ug/l**	**2.0**	**36**
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: MW05_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-009 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	ug/l	0.56	ND
2,4-D	1	ug/l	0.56	ND
Dicamba	1	ug/l	0.56	ND
Silvex	1	ug/l	0.56	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1042.46	1000	31	151	104	
Dcaa-Surrogate	1173.60	1000	31	151	117	

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	ug/l	0.011	ND
Aldrin	1	ug/l	0.011	ND
Alpha-BHC	1	ug/l	0.011	ND
beta-BHC	1	ug/l	0.011	ND
Chlordane (Total)	1	ug/l	0.011	ND
delta-BHC	1	ug/l	0.011	ND
Dieldrin	1	ug/l	0.011	ND
Endosulfan I	1	ug/l	0.011	ND
Endosulfan II	1	ug/l	0.011	ND
Endosulfan Sulfate	1	ug/l	0.011	ND
Endrin	1	ug/l	0.011	ND
Endrin Aldehyde	1	ug/l	0.011	ND
Endrin Ketone	1	ug/l	0.011	ND
gamma-BHC	1	ug/l	0.011	ND
Heptachlor	1	ug/l	0.011	ND
Heptachlor Epoxide	1	ug/l	0.011	ND
Methoxychlor	1	ug/l	0.011	ND
p,p'-DDD	1	ug/l	0.011	ND
p,p'-DDE	1	ug/l	0.011	ND
p,p'-DDT	1	ug/l	0.011	ND
Toxaphene	1	ug/l	0.28	ND
y-Chlordane	1	ug/l	0.011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	41.91	100	39	132	42	
TCMX-Surrogate	47.58	100	39	132	48	
DCB-Surrogate	55.76	100	39	142	56	
DCB-Surrogate	58.09	100	39	142	58	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	ug/l	0.28	ND
Aroclor-1016	1	ug/l	0.28	ND
Aroclor-1221	1	ug/l	0.28	ND
Aroclor-1232	1	ug/l	0.28	ND
Aroclor-1242	1	ug/l	0.28	ND
Aroclor-1248	1	ug/l	0.28	ND
Aroclor-1254	1	ug/l	0.28	ND
Aroclor-1260	1	ug/l	0.28	ND
Aroclor-1262	1	ug/l	0.28	ND
Aroclor-1268	1	ug/l	0.28	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	53.29	100	39	132	53	
TCMX-Surrogate	47.49	100	39	132	47	
DCB-Surrogate	60.30	100	39	142	60	
DCB-Surrogate	65.09	100	39	142	65	

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	ug/l	2.2	ND
1,2,4,5-Tetrachlorobenzene	1	ug/l	2.2	ND

Sample ID: MW05_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-009 **Receipt Date: 5/24/2018**
Matrix: Aqueous

2,3,4,6-Tetrachlorophenol	1	ug/l	2.2	ND
2,4,5-Trichlorophenol	1	ug/l	2.2	ND
2,4,6-Trichlorophenol	1	ug/l	2.2	ND
2,4-Dichlorophenol	1	ug/l	0.56	ND
2,4-Dimethylphenol	1	ug/l	0.56	ND
2,4-Dinitrophenol	1	ug/l	11	ND
2,4-Dinitrotoluene	1	ug/l	2.2	ND
2,6-Dinitrotoluene	1	ug/l	2.2	ND
2-Chloronaphthalene	1	ug/l	2.2	ND
2-Chlorophenol	1	ug/l	2.2	ND
2-Methylnaphthalene	1	ug/l	2.2	ND
2-Methylphenol	1	ug/l	0.56	ND
2-Nitroaniline	1	ug/l	2.2	ND
2-Nitrophenol	1	ug/l	2.2	ND
3&4-Methylphenol	1	ug/l	0.56	ND
3,3'-Dichlorobenzidine	1	ug/l	2.2	ND
3-Nitroaniline	1	ug/l	2.2	ND
4,6-Dinitro-2-methylphenol	1	ug/l	11	ND
4-Bromophenyl-phenylether	1	ug/l	2.2	ND
4-Chloro-3-methylphenol	1	ug/l	2.2	ND
4-Chloroaniline	1	ug/l	0.56	ND
4-Chlorophenyl-phenylether	1	ug/l	2.2	ND
4-Nitroaniline	1	ug/l	2.2	ND
4-Nitrophenol	1	ug/l	2.2	ND
Acenaphthene	1	ug/l	2.2	ND
Acenaphthylene	1	ug/l	2.2	ND
Acetophenone	1	ug/l	2.2	ND
Anthracene	1	ug/l	2.2	ND
Atrazine	1	ug/l	2.2	ND
Benzaldehyde	1	ug/l	2.2	ND
Benzo[a]anthracene	1	ug/l	2.2	ND
Benzo[a]pyrene	1	ug/l	2.2	ND
Benzo[b]fluoranthene	1	ug/l	2.2	ND
Benzo[g,h,i]perylene	1	ug/l	2.2	ND
Benzo[k]fluoranthene	1	ug/l	2.2	ND
bis(2-Chloroethoxy)methane	1	ug/l	2.2	ND
bis(2-Chloroethyl)ether	1	ug/l	0.56	ND
bis(2-Chloroisopropyl)ether	1	ug/l	2.2	ND
bis(2-Ethylhexyl)phthalate	1	ug/l	2.2	ND
Butylbenzylphthalate	1	ug/l	2.2	ND
Caprolactam	1	ug/l	2.2	ND
Carbazole	1	ug/l	2.2	ND
Chrysene	1	ug/l	2.2	ND
Dibenzo[a,h]anthracene	1	ug/l	2.2	ND
Dibenzofuran	1	ug/l	0.56	ND
Diethylphthalate	1	ug/l	2.2	ND
Dimethylphthalate	1	ug/l	2.2	ND
Di-n-butylphthalate	1	ug/l	0.56	ND
Di-n-octylphthalate	1	ug/l	2.2	ND
Fluoranthene	1	ug/l	2.2	ND
Fluorene	1	ug/l	2.2	ND
Hexachlorobenzene	1	ug/l	2.2	ND
Hexachlorobutadiene	1	ug/l	2.2	ND
Hexachlorocyclopentadiene	1	ug/l	2.2	ND
Hexachloroethane	1	ug/l	2.2	ND
Indeno[1,2,3-cd]pyrene	1	ug/l	2.2	ND
Isophorone	1	ug/l	2.2	ND
Naphthalene	1	ug/l	0.56	ND
Nitrobenzene	1	ug/l	2.2	ND
N-Nitroso-di-n-propylamine	1	ug/l	0.56	ND
N-Nitrosodiphenylamine	1	ug/l	2.2	ND
Pentachlorophenol	1	ug/l	11	ND
Phenanthrene	1	ug/l	2.2	ND
Phenol	1	ug/l	2.2	ND
Pyrene	1	ug/l	2.2	ND

Sample ID: MW05_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-009 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	37.92	50	55	146	76	
Phenol-d5	37.34	100	27	115	37	
Nitrobenzene-d5	34.95	50	51	139	70	
2-Fluorophenol	47.39	100	29	113	47	
2-Fluorobiphenyl	34.02	50	53	129	68	
2,4,6-Tribromophenol	75.11	100	54	149	75	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**ug/l**	**200**	**3100**
Barium	**1**	**ug/l**	**50**	**88**
Calcium	**1**	**ug/l**	**5000**	**52000**
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	**1**	**ug/l**	**300**	**9900**
Magnesium	**1**	**ug/l**	**5000**	**51000**
Manganese	**1**	**ug/l**	**40**	**990**
Nickel	1	ug/l	50	ND
Potassium	**1**	**ug/l**	**5000**	**27000**
Silver	1	ug/l	20	ND
Sodium	**1**	**ug/l**	**5000**	**450000**
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	**1**	**ug/l**	**2.0**	**4.4**
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	**1**	**ug/l**	**2.0**	**2.7**
Lead	**1**	**ug/l**	**3.0**	**4.5**
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,1-Trichloroethane	1	ug/l	1.0	ND
1,1,2,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	1.0	ND
1,1,2-Trichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethane	**1**	**ug/l**	**1.0**	**4.4**
1,1-Dichloroethene	**1**	**ug/l**	**1.0**	**5.1**
1,1-Dichloropropene	1	ug/l	1.0	ND
1,2,3-Trichlorobenzene	1	ug/l	1.0	ND
1,2,3-Trichloropropane	1	ug/l	1.0	ND
1,2,4,5-Tetramethylbenzene	1	ug/l	1.0	ND
1,2,4-Trichlorobenzene	1	ug/l	1.0	ND
1,2,4-Trimethylbenzene	1	ug/l	1.0	ND
1,2-Dibromo-3-chloropropane	1	ug/l	1.0	ND
1,2-Dibromoethane	1	ug/l	1.0	ND
1,2-Dichlorobenzene	1	ug/l	1.0	ND
1,2-Dichloroethane	1	ug/l	0.50	ND
1,2-Dichloropropane	1	ug/l	1.0	ND
1,3,5-Trimethylbenzene	1	ug/l	1.0	ND
1,3-Dichlorobenzene	1	ug/l	1.0	ND
1,3-Dichloropropane	1	ug/l	1.0	ND
1,4-Dichlorobenzene	1	ug/l	1.0	ND
1,4-Dioxane	1	ug/l	50	ND
2,2-Dichloropropane	1	ug/l	1.0	ND
2-Butanone	1	ug/l	1.0	ND
2-Chlorotoluene	1	ug/l	1.0	ND
2-Hexanone	1	ug/l	1.0	ND
4-Chlorotoluene	1	ug/l	1.0	ND
4-Isopropyltoluene	1	ug/l	1.0	ND
4-Methyl-2-pentanone	1	ug/l	1.0	ND

Sample ID: MW05_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-009 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Acetone	**1**	**ug/l**	**5.0**	**13**
Acrolein	1	ug/l	5.0	ND
Acrylonitrile	1	ug/l	1.0	ND
Benzene	1	ug/l	0.50	ND
Bromobenzene	1	ug/l	1.0	ND
Bromochloromethane	1	ug/l	1.0	ND
Bromodichloromethane	1	ug/l	1.0	ND
Bromoform	1	ug/l	1.0	ND
Bromomethane	1	ug/l	1.0	ND
Carbon disulfide	1	ug/l	1.0	ND
Carbon tetrachloride	1	ug/l	1.0	ND
Chlorobenzene	1	ug/l	1.0	ND
Chloroethane	1	ug/l	1.0	ND
Chloroform	1	ug/l	1.0	ND
Chloromethane	1	ug/l	1.0	ND
cis-1,2-Dichloroethene	**1**	**ug/l**	**1.0**	**27**
cis-1,3-Dichloropropene	1	ug/l	1.0	ND
Cyclohexane	1	ug/l	1.0	ND
Dibromochloromethane	1	ug/l	1.0	ND
Dibromomethane	1	ug/l	1.0	ND
Dichlorodifluoromethane	1	ug/l	1.0	ND
Ethylbenzene	1	ug/l	1.0	ND
Hexachlorobutadiene	1	ug/l	1.0	ND
Isopropylbenzene	1	ug/l	1.0	ND
m&p-Xylenes	1	ug/l	1.0	ND
Methyl Acetate	1	ug/l	1.0	ND
Methylcyclohexane	1	ug/l	1.0	ND
Methylene chloride	1	ug/l	1.0	ND
Methyl-t-butyl ether	1	ug/l	0.50	ND
n-Butylbenzene	1	ug/l	1.0	ND
n-Propylbenzene	1	ug/l	1.0	ND
o-Xylene	1	ug/l	1.0	ND
sec-Butylbenzene	1	ug/l	1.0	ND
Styrene	1	ug/l	1.0	ND
t-Butylbenzene	1	ug/l	1.0	ND
Tetrachloroethene	**1**	**ug/l**	**1.0**	**10**
Toluene	1	ug/l	1.0	ND
trans-1,2-Dichloroethene	**1**	**ug/l**	**1.0**	**2.0**
trans-1,3-Dichloropropene	1	ug/l	1.0	ND
trans-1,4-Dichloro-2-butene	1	ug/l	1.0	ND
Trichloroethene	**1**	**ug/l**	**1.0**	**14**
Trichlorofluoromethane	1	ug/l	1.0	ND
Vinyl chloride	**1**	**ug/l**	**1.0**	**1.2**
Xylenes (Total)	1	ug/l	1.0	ND

Surrogate	**Conc.**	**Spike**	**Low Limit**	**High Limit**	**Recovery**	**Flags**
Toluene-d8	28.96	30	79	111	97	
Dibromofluoromethane	31.14	30	73	131	104	
Bromofluorobenzene	29.68	30	82	112	99	
1,2-Dichloroethane-d4	29.84	30	78	128	99	

Sample ID: MW05_052418 F | **Collection Date: 5/24/2018**
Lab#: AD04413-010 | **Receipt Date: 5/24/2018**
Matrix: Aqueous

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**ug/l**	**200**	**340**
Barium	**1**	**ug/l**	**50**	**71**
Calcium	**1**	**ug/l**	**5000**	**67000**
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	**1**	**ug/l**	**300**	**3200**
Magnesium	**1**	**ug/l**	**5000**	**56000**
Manganese	**1**	**ug/l**	**40**	**1300**
Nickel	1	ug/l	50	ND
Potassium	**1**	**ug/l**	**5000**	**33000**
Silver	1	ug/l	20	ND
Sodium	**1**	**ug/l**	**5000**	**520000**
Vanadium	1	ug/l	50	ND
Zinc	**1**	**ug/l**	**50**	**62**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	**1**	**ug/l**	**2.0**	**3.2**
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: TB01_052418 **Collection Date: 5/24/2018**
Lab#: AD04413-011 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,1-Trichloroethane	1	ug/l	1.0	ND
1,1,2,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	1.0	ND
1,1,2-Trichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethene	1	ug/l	1.0	ND
1,1-Dichloropropene	1	ug/l	1.0	ND
1,2,3-Trichlorobenzene	1	ug/l	1.0	ND
1,2,3-Trichloropropane	1	ug/l	1.0	ND
1,2,4,5-Tetramethylbenzene	1	ug/l	1.0	ND
1,2,4-Trichlorobenzene	1	ug/l	1.0	ND
1,2,4-Trimethylbenzene	1	ug/l	1.0	ND
1,2-Dibromo-3-chloropropane	1	ug/l	1.0	ND
1,2-Dibromoethane	1	ug/l	1.0	ND
1,2-Dichlorobenzene	1	ug/l	1.0	ND
1,2-Dichloroethane	1	ug/l	0.50	ND
1,2-Dichloropropane	1	ug/l	1.0	ND
1,3,5-Trimethylbenzene	1	ug/l	1.0	ND
1,3-Dichlorobenzene	1	ug/l	1.0	ND
1,3-Dichloropropane	1	ug/l	1.0	ND
1,4-Dichlorobenzene	1	ug/l	1.0	ND
1,4-Dioxane	1	ug/l	50	ND
2,2-Dichloropropane	1	ug/l	1.0	ND
2-Butanone	1	ug/l	1.0	ND
2-Chlorotoluene	1	ug/l	1.0	ND
2-Hexanone	1	ug/l	1.0	ND
4-Chlorotoluene	1	ug/l	1.0	ND
4-Isopropyltoluene	1	ug/l	1.0	ND
4-Methyl-2-pentanone	1	ug/l	1.0	ND
Acetone	1	ug/l	5.0	ND
Acrolein	1	ug/l	5.0	ND
Acrylonitrile	1	ug/l	1.0	ND
Benzene	1	ug/l	0.50	ND
Bromobenzene	1	ug/l	1.0	ND
Bromochloromethane	1	ug/l	1.0	ND
Bromodichloromethane	1	ug/l	1.0	ND
Bromoform	1	ug/l	1.0	ND
Bromomethane	1	ug/l	1.0	ND
Carbon disulfide	1	ug/l	1.0	ND
Carbon tetrachloride	1	ug/l	1.0	ND
Chlorobenzene	1	ug/l	1.0	ND
Chloroethane	1	ug/l	1.0	ND
Chloroform	1	ug/l	1.0	ND
Chloromethane	1	ug/l	1.0	ND
cis-1,2-Dichloroethene	1	ug/l	1.0	ND
cis-1,3-Dichloropropene	1	ug/l	1.0	ND
Cyclohexane	1	ug/l	1.0	ND
Dibromochloromethane	1	ug/l	1.0	ND
Dibromomethane	1	ug/l	1.0	ND
Dichlorodifluoromethane	1	ug/l	1.0	ND
Ethylbenzene	1	ug/l	1.0	ND
Hexachlorobutadiene	1	ug/l	1.0	ND
Isopropylbenzene	1	ug/l	1.0	ND
m&p-Xylenes	1	ug/l	1.0	ND
Methyl Acetate	1	ug/l	1.0	ND
Methylcyclohexane	1	ug/l	1.0	ND
Methylene chloride	1	ug/l	1.0	ND
Methyl-t-butyl ether	1	ug/l	0.50	ND
n-Butylbenzene	1	ug/l	1.0	ND
n-Propylbenzene	1	ug/l	1.0	ND
o-Xylene	1	ug/l	1.0	ND
sec-Butylbenzene	1	ug/l	1.0	ND
Styrene	1	ug/l	1.0	ND
t-Butylbenzene	1	ug/l	1.0	ND
Tetrachloroethene	1	ug/l	1.0	ND

Sample ID: TB01_052418 **Collection Date:** 5/24/2018
Lab#: AD04413-011 **Receipt Date:** 5/24/2018
Matrix: Aqueous

Toluene	1	ug/l	1.0		ND
trans-1,2-Dichloroethene	1	ug/l	1.0		ND
trans-1,3-Dichloropropene	1	ug/l	1.0		ND
trans-1,4-Dichloro-2-butene	1	ug/l	1.0		ND
Trichloroethene	1	ug/l	1.0		ND
Trichlorofluoromethane	1	ug/l	1.0		ND
Vinyl chloride	1	ug/l	1.0		ND
Xylenes (Total)	1	ug/l	1.0		ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	28.38	30	79	111	95	
Dibromofluoromethane	31.28	30	73	131	104	
Bromofluorobenzene	29.69	30	82	112	99	
1,2-Dichloroethane-d4	30.12	30	78	128	100	

Sample ID: FB01_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-012 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	ug/l	0.53	ND
2,4-D	1	ug/l	0.53	ND
Dicamba	1	ug/l	0.53	ND
Silvex	1	ug/l	0.53	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	1143.55	1000	31	151	114	
Dcaa-Surrogate	1209.18	1000	31	151	121	

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	ug/l	0.010	ND
Aldrin	1	ug/l	0.010	ND
Alpha-BHC	1	ug/l	0.010	ND
beta-BHC	1	ug/l	0.010	ND
Chlordane (Total)	1	ug/l	0.010	ND
delta-BHC	1	ug/l	0.010	ND
Dieldrin	1	ug/l	0.010	ND
Endosulfan I	1	ug/l	0.010	ND
Endosulfan II	1	ug/l	0.010	ND
Endosulfan Sulfate	1	ug/l	0.010	ND
Endrin	1	ug/l	0.010	ND
Endrin Aldehyde	1	ug/l	0.010	ND
Endrin Ketone	1	ug/l	0.010	ND
gamma-BHC	1	ug/l	0.010	ND
Heptachlor	1	ug/l	0.010	ND
Heptachlor Epoxide	1	ug/l	0.010	ND
Methoxychlor	1	ug/l	0.010	ND
p,p'-DDD	1	ug/l	0.010	ND
p,p'-DDE	1	ug/l	0.010	ND
p,p'-DDT	1	ug/l	0.010	ND
Toxaphene	1	ug/l	0.25	ND
y-Chlordane	1	ug/l	0.010	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	75.02	100	39	132	75	
TCMX-Surrogate	86.56	100	39	132	87	
DCB-Surrogate	96.19	100	39	142	96	
DCB-Surrogate	99.73	100	39	142	100	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	ug/l	0.25	ND
Aroclor-1016	1	ug/l	0.25	ND
Aroclor-1221	1	ug/l	0.25	ND
Aroclor-1232	1	ug/l	0.25	ND
Aroclor-1242	1	ug/l	0.25	ND
Aroclor-1248	1	ug/l	0.25	ND
Aroclor-1254	1	ug/l	0.25	ND
Aroclor-1260	1	ug/l	0.25	ND
Aroclor-1262	1	ug/l	0.25	ND
Aroclor-1268	1	ug/l	0.25	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	80.12	100	39	132	80	
TCMX-Surrogate	86.76	100	39	132	87	
DCB-Surrogate	94.77	100	39	142	95	
DCB-Surrogate	104.25	100	39	142	104	

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	ug/l	2.0	ND
1,2,4,5-Tetrachlorobenzene	1	ug/l	2.0	ND

Sample ID: FB01_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-012 **Receipt Date: 5/24/2018**
Matrix: Aqueous

2,3,4,6-Tetrachlorophenol	1	ug/l	2.0	ND
2,4,5-Trichlorophenol	1	ug/l	2.0	ND
2,4,6-Trichlorophenol	1	ug/l	2.0	ND
2,4-Dichlorophenol	1	ug/l	0.50	ND
2,4-Dimethylphenol	1	ug/l	0.50	ND
2,4-Dinitrophenol	1	ug/l	10	ND
2,4-Dinitrotoluene	1	ug/l	2.0	ND
2,6-Dinitrotoluene	1	ug/l	2.0	ND
2-Chloronaphthalene	1	ug/l	2.0	ND
2-Chlorophenol	1	ug/l	2.0	ND
2-Methylnaphthalene	1	ug/l	2.0	ND
2-Methylphenol	1	ug/l	0.50	ND
2-Nitroaniline	1	ug/l	2.0	ND
2-Nitrophenol	1	ug/l	2.0	ND
3&4-Methylphenol	1	ug/l	0.50	ND
3,3'-Dichlorobenzidine	1	ug/l	2.0	ND
3-Nitroaniline	1	ug/l	2.0	ND
4,6-Dinitro-2-methylphenol	1	ug/l	10	ND
4-Bromophenyl-phenylether	1	ug/l	2.0	ND
4-Chloro-3-methylphenol	1	ug/l	2.0	ND
4-Chloroaniline	1	ug/l	0.50	ND
4-Chlorophenyl-phenylether	1	ug/l	2.0	ND
4-Nitroaniline	1	ug/l	2.0	ND
4-Nitrophenol	1	ug/l	2.0	ND
Acenaphthene	1	ug/l	2.0	ND
Acenaphthylene	1	ug/l	2.0	ND
Acetophenone	1	ug/l	2.0	ND
Anthracene	1	ug/l	2.0	ND
Atrazine	1	ug/l	2.0	ND
Benzaldehyde	1	ug/l	2.0	ND
Benzo[a]anthracene	1	ug/l	2.0	ND
Benzo[a]pyrene	1	ug/l	2.0	ND
Benzo[b]fluoranthene	1	ug/l	2.0	ND
Benzo[g,h,i]perylene	1	ug/l	2.0	ND
Benzo[k]fluoranthene	1	ug/l	2.0	ND
bis(2-Chloroethoxy)methane	1	ug/l	2.0	ND
bis(2-Chloroethyl)ether	1	ug/l	0.50	ND
bis(2-Chloroisopropyl)ether	1	ug/l	2.0	ND
bis(2-Ethylhexyl)phthalate	1	ug/l	2.0	ND
Butylbenzylphthalate	1	ug/l	2.0	ND
Caprolactam	1	ug/l	2.0	ND
Carbazole	1	ug/l	2.0	ND
Chrysene	1	ug/l	2.0	ND
Dibenzo[a,h]anthracene	1	ug/l	2.0	ND
Dibenzofuran	1	ug/l	0.50	ND
Diethylphthalate	1	ug/l	2.0	ND
Dimethylphthalate	1	ug/l	2.0	ND
Di-n-butylphthalate	1	ug/l	0.50	ND
Di-n-octylphthalate	1	ug/l	2.0	ND
Fluoranthene	1	ug/l	2.0	ND
Fluorene	1	ug/l	2.0	ND
Hexachlorobenzene	1	ug/l	2.0	ND
Hexachlorobutadiene	1	ug/l	2.0	ND
Hexachlorocyclopentadiene	1	ug/l	2.0	ND
Hexachloroethane	1	ug/l	2.0	ND
Indeno[1,2,3-cd]pyrene	1	ug/l	2.0	ND
Isophorone	1	ug/l	2.0	ND
Naphthalene	1	ug/l	0.50	ND
Nitrobenzene	1	ug/l	2.0	ND
N-Nitroso-di-n-propylamine	1	ug/l	0.50	ND
N-Nitrosodiphenylamine	1	ug/l	2.0	ND
Pentachlorophenol	1	ug/l	10	ND
Phenanthrene	1	ug/l	2.0	ND
Phenol	1	ug/l	2.0	ND
Pyrene	1	ug/l	2.0	ND

Sample ID: FB01_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-012 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	54.35	50	55	146	109	
Phenol-d5	36.09	100	27	115	36	
Nitrobenzene-d5	47.49	50	51	139	95	
2-Fluorophenol	52.55	100	29	113	53	
2-Fluorobiphenyl	44.87	50	53	129	90	
2,4,6-Tribromophenol	95.06	100	54	149	95	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	ND
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	ND
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	ND
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,1-Trichloroethane	1	ug/l	1.0	ND
1,1,2,2-Tetrachloroethane	1	ug/l	1.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ug/l	1.0	ND
1,1,2-Trichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethane	1	ug/l	1.0	ND
1,1-Dichloroethene	1	ug/l	1.0	ND
1,1-Dichloropropene	1	ug/l	1.0	ND
1,2,3-Trichlorobenzene	1	ug/l	1.0	ND
1,2,3-Trichloropropane	1	ug/l	1.0	ND
1,2,4,5-Tetramethylbenzene	1	ug/l	1.0	ND
1,2,4-Trichlorobenzene	1	ug/l	1.0	ND
1,2,4-Trimethylbenzene	1	ug/l	1.0	ND
1,2-Dibromo-3-chloropropane	1	ug/l	1.0	ND
1,2-Dibromoethane	1	ug/l	1.0	ND
1,2-Dichlorobenzene	1	ug/l	1.0	ND
1,2-Dichloroethane	1	ug/l	0.50	ND
1,2-Dichloropropane	1	ug/l	1.0	ND
1,3,5-Trimethylbenzene	1	ug/l	1.0	ND
1,3-Dichlorobenzene	1	ug/l	1.0	ND
1,3-Dichloropropane	1	ug/l	1.0	ND
1,4-Dichlorobenzene	1	ug/l	1.0	ND
1,4-Dioxane	1	ug/l	50	ND
2,2-Dichloropropane	1	ug/l	1.0	ND
2-Butanone	1	ug/l	1.0	ND
2-Chlorotoluene	1	ug/l	1.0	ND
2-Hexanone	1	ug/l	1.0	ND
4-Chlorotoluene	1	ug/l	1.0	ND
4-Isopropyltoluene	1	ug/l	1.0	ND
4-Methyl-2-pentanone	1	ug/l	1.0	ND

Sample ID: FB01_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-012 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Acetone	1	ug/l	5.0	ND
Acrolein	1	ug/l	5.0	ND
Acrylonitrile	1	ug/l	1.0	ND
Benzene	1	ug/l	0.50	ND
Bromobenzene	1	ug/l	1.0	ND
Bromochloromethane	1	ug/l	1.0	ND
Bromodichloromethane	1	ug/l	1.0	ND
Bromoform	1	ug/l	1.0	ND
Bromomethane	1	ug/l	1.0	ND
Carbon disulfide	1	ug/l	1.0	ND
Carbon tetrachloride	1	ug/l	1.0	ND
Chlorobenzene	1	ug/l	1.0	ND
Chloroethane	1	ug/l	1.0	ND
Chloroform	1	ug/l	1.0	ND
Chloromethane	1	ug/l	1.0	ND
cis-1,2-Dichloroethene	1	ug/l	1.0	ND
cis-1,3-Dichloropropene	1	ug/l	1.0	ND
Cyclohexane	1	ug/l	1.0	ND
Dibromochloromethane	1	ug/l	1.0	ND
Dibromomethane	1	ug/l	1.0	ND
Dichlorodifluoromethane	1	ug/l	1.0	ND
Ethylbenzene	1	ug/l	1.0	ND
Hexachlorobutadiene	1	ug/l	1.0	ND
Isopropylbenzene	1	ug/l	1.0	ND
m&p-Xylenes	1	ug/l	1.0	ND
Methyl Acetate	1	ug/l	1.0	ND
Methylcyclohexane	1	ug/l	1.0	ND
Methylene chloride	1	ug/l	1.0	ND
Methyl-t-butyl ether	1	ug/l	0.50	ND
n-Butylbenzene	1	ug/l	1.0	ND
n-Propylbenzene	1	ug/l	1.0	ND
o-Xylene	1	ug/l	1.0	ND
sec-Butylbenzene	1	ug/l	1.0	ND
Styrene	1	ug/l	1.0	ND
t-Butylbenzene	1	ug/l	1.0	ND
Tetrachloroethene	1	ug/l	1.0	ND
Toluene	1	ug/l	1.0	ND
trans-1,2-Dichloroethene	1	ug/l	1.0	ND
trans-1,3-Dichloropropene	1	ug/l	1.0	ND
trans-1,4-Dichloro-2-butene	1	ug/l	1.0	ND
Trichloroethene	1	ug/l	1.0	ND
Trichlorofluoromethane	1	ug/l	1.0	ND
Vinyl chloride	1	ug/l	1.0	ND
Xylenes (Total)	1	ug/l	1.0	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	28.80	30	79	111	96	
Dibromofluoromethane	30.89	30	73	131	103	
Bromofluorobenzene	29.73	30	82	112	99	
1,2-Dichloroethane-d4	30.36	30	78	128	101	

Sample ID: FB01_052418 F | **Collection Date: 5/24/2018**
Lab#: AD04413-013 | **Receipt Date: 5/24/2018**
Matrix: Aqueous

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	1	ug/l	5000	ND
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	1	ug/l	300	ND
Magnesium	1	ug/l	5000	ND
Manganese	1	ug/l	40	ND
Nickel	1	ug/l	50	ND
Potassium	1	ug/l	5000	ND
Silver	1	ug/l	20	ND
Sodium	1	ug/l	5000	ND
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	1	ug/l	2.0	ND
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Sample ID: GWDUP01_052418 U
Lab#: AD04413-014
Matrix: Aqueous

Collection Date: 5/24/2018
Receipt Date: 5/24/2018

Chlorinated Herbicides 8151

Analyte	DF	Units	RL	Result
2,4,5-T	1	ug/l	0.56	ND
2,4-D	1	ug/l	0.56	ND
Dicamba	1	ug/l	0.56	ND
Silvex	1	ug/l	0.56	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Dcaa-Surrogate	892.22	1000	31	151	89	
Dcaa-Surrogate	961.34	1000	31	151	96	

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

Organochlorine Pesticides 8081

Analyte	DF	Units	RL	Result
a-Chlordane	1	ug/l	0.011	ND
Aldrin	1	ug/l	0.011	ND
Alpha-BHC	1	ug/l	0.011	ND
beta-BHC	1	ug/l	0.011	ND
Chlordane (Total)	1	ug/l	0.011	ND
delta-BHC	1	ug/l	0.011	ND
Dieldrin	1	ug/l	0.011	ND
Endosulfan I	1	ug/l	0.011	ND
Endosulfan II	1	ug/l	0.011	ND
Endosulfan Sulfate	1	ug/l	0.011	ND
Endrin	1	ug/l	0.011	ND
Endrin Aldehyde	1	ug/l	0.011	ND
Endrin Ketone	1	ug/l	0.011	ND
gamma-BHC	1	ug/l	0.011	ND
Heptachlor	1	ug/l	0.011	ND
Heptachlor Epoxide	1	ug/l	0.011	ND
Methoxychlor	1	ug/l	0.011	ND
p,p'-DDD	1	ug/l	0.011	ND
p,p'-DDE	1	ug/l	0.011	ND
p,p'-DDT	1	ug/l	0.011	ND
Toxaphene	1	ug/l	0.28	ND
y-Chlordane	1	ug/l	0.011	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	65.93	100	39	132	66	
TCMX-Surrogate	71.10	100	39	132	71	
DCB-Surrogate	85.81	100	39	142	86	
DCB-Surrogate	89.07	100	39	142	89	

PCB 8082

Analyte	DF	Units	RL	Result
Aroclor (Total)	1	ug/l	0.28	ND
Aroclor-1016	1	ug/l	0.28	ND
Aroclor-1221	1	ug/l	0.28	ND
Aroclor-1232	1	ug/l	0.28	ND
Aroclor-1242	1	ug/l	0.28	ND
Aroclor-1248	1	ug/l	0.28	ND
Aroclor-1254	1	ug/l	0.28	ND
Aroclor-1260	1	ug/l	0.28	ND
Aroclor-1262	1	ug/l	0.28	ND
Aroclor-1268	1	ug/l	0.28	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
TCMX-Surrogate	71.24	100	39	132	71	
TCMX-Surrogate	73.86	100	39	132	74	
DCB-Surrogate	82.15	100	39	142	82	
DCB-Surrogate	90.09	100	39	142	90	

Semivolatile Organics (no search) 8270

Analyte	DF	Units	RL	Result
1,1'-Biphenyl	1	ug/l	2.0	ND
1,2,4,5-Tetrachlorobenzene	1	ug/l	2.0	ND

Sample ID: GWDUP01_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-014 **Receipt Date: 5/24/2018**
Matrix: Aqueous

2,3,4,6-Tetrachlorophenol	1	ug/l	2.0	ND
2,4,5-Trichlorophenol	1	ug/l	2.0	ND
2,4,6-Trichlorophenol	1	ug/l	2.0	ND
2,4-Dichlorophenol	1	ug/l	0.50	ND
2,4-Dimethylphenol	1	ug/l	0.50	ND
2,4-Dinitrophenol	1	ug/l	10	ND
2,4-Dinitrotoluene	1	ug/l	2.0	ND
2,6-Dinitrotoluene	1	ug/l	2.0	ND
2-Chloronaphthalene	1	ug/l	2.0	ND
2-Chlorophenol	1	ug/l	2.0	ND
2-Methylnaphthalene	1	ug/l	2.0	ND
2-Methylphenol	1	ug/l	0.50	ND
2-Nitroaniline	1	ug/l	2.0	ND
2-Nitrophenol	1	ug/l	2.0	ND
3&4-Methylphenol	1	ug/l	0.50	ND
3,3'-Dichlorobenzidine	1	ug/l	2.0	ND
3-Nitroaniline	1	ug/l	2.0	ND
4,6-Dinitro-2-methylphenol	1	ug/l	10	ND
4-Bromophenyl-phenylether	1	ug/l	2.0	ND
4-Chloro-3-methylphenol	1	ug/l	2.0	ND
4-Chloroaniline	1	ug/l	0.50	ND
4-Chlorophenyl-phenylether	1	ug/l	2.0	ND
4-Nitroaniline	1	ug/l	2.0	ND
4-Nitrophenol	1	ug/l	2.0	ND
Acenaphthene	1	ug/l	2.0	ND
Acenaphthylene	1	ug/l	2.0	ND
Acetophenone	1	ug/l	2.0	ND
Anthracene	1	ug/l	2.0	ND
Atrazine	1	ug/l	2.0	ND
Benzaldehyde	1	ug/l	2.0	ND
Benzo[a]anthracene	1	ug/l	2.0	ND
Benzo[a]pyrene	1	ug/l	2.0	ND
Benzo[b]fluoranthene	1	ug/l	2.0	ND
Benzo[g,h,i]perylene	1	ug/l	2.0	ND
Benzo[k]fluoranthene	1	ug/l	2.0	ND
bis(2-Chloroethoxy)methane	1	ug/l	2.0	ND
bis(2-Chloroethyl)ether	1	ug/l	0.50	ND
bis(2-Chloroisopropyl)ether	1	ug/l	2.0	ND
bis(2-Ethylhexyl)phthalate	1	ug/l	2.0	ND
Butylbenzylphthalate	1	ug/l	2.0	ND
Caprolactam	1	ug/l	2.0	ND
Carbazole	1	ug/l	2.0	ND
Chrysene	1	ug/l	2.0	ND
Dibenzo[a,h]anthracene	1	ug/l	2.0	ND
Dibenzofuran	1	ug/l	0.50	ND
Diethylphthalate	1	ug/l	2.0	ND
Dimethylphthalate	1	ug/l	2.0	ND
Di-n-butylphthalate	1	ug/l	0.50	ND
Di-n-octylphthalate	1	ug/l	2.0	ND
Fluoranthene	1	ug/l	2.0	ND
Fluorene	1	ug/l	2.0	ND
Hexachlorobenzene	1	ug/l	2.0	ND
Hexachlorobutadiene	1	ug/l	2.0	ND
Hexachlorocyclopentadiene	1	ug/l	2.0	ND
Hexachloroethane	1	ug/l	2.0	ND
Indeno[1,2,3-cd]pyrene	1	ug/l	2.0	ND
Isophorone	1	ug/l	2.0	ND
Naphthalene	1	ug/l	0.50	ND
Nitrobenzene	1	ug/l	2.0	ND
N-Nitroso-di-n-propylamine	1	ug/l	0.50	ND
N-Nitrosodiphenylamine	1	ug/l	2.0	ND
Pentachlorophenol	1	ug/l	10	ND
Phenanthrene	1	ug/l	2.0	ND
Phenol	1	ug/l	2.0	ND
Pyrene	1	ug/l	2.0	ND

Sample ID: GWDUP01_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-014 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Terphenyl-d14	39.03	50	55	146	78	
Phenol-d5	45.80	100	27	115	46	
Nitrobenzene-d5	33.57	50	51	139	67	
2-Fluorophenol	53.98	100	29	113	54	
2-Fluorobiphenyl	34.21	50	53	129	68	
2,4,6-Tribromophenol	74.15	100	54	149	74	

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	**1**	**ug/l**	**200**	**100000**
Barium	**1**	**ug/l**	**50**	**410**
Calcium	**1**	**ug/l**	**5000**	**52000**
Chromium	**1**	**ug/l**	**50**	**180**
Copper	**1**	**ug/l**	**50**	**170**
Iron	**1**	**ug/l**	**300**	**140000**
Magnesium	**1**	**ug/l**	**5000**	**59000**
Manganese	**1**	**ug/l**	**40**	**4300**
Nickel	**1**	**ug/l**	**50**	**170**
Potassium	**1**	**ug/l**	**5000**	**18000**
Silver	1	ug/l	20	ND
Sodium	**1**	**ug/l**	**5000**	**160000**
Vanadium	**1**	**ug/l**	**50**	**200**
Zinc	**1**	**ug/l**	**50**	**360**

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	**1**	**ug/l**	**2.0**	**35**
Beryllium	**2**	**ug/l**	**2.0**	**4.3**
Cadmium	1	ug/l	2.0	ND
Cobalt	**2**	**ug/l**	**4.0**	**93**
Lead	**1**	**ug/l**	**3.0**	**64**
Selenium	**1**	**ug/l**	**10**	**12**
Thallium	1	ug/l	2.0	ND

Volatile Organics (no search) 8260

Analyte	DF	Units	RL	Result
1,1,1,2-Tetrachloroethane	5	ug/l	5.0	ND
1,1,1-Trichloroethane	**5**	**ug/l**	**5.0**	**41**
1,1,2,2-Tetrachloroethane	5	ug/l	5.0	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ug/l	5.0	ND
1,1,2-Trichloroethane	5	ug/l	5.0	ND
1,1-Dichloroethane	**5**	**ug/l**	**5.0**	**14**
1,1-Dichloroethene	**5**	**ug/l**	**5.0**	**44**
1,1-Dichloropropene	5	ug/l	5.0	ND
1,2,3-Trichlorobenzene	5	ug/l	5.0	ND
1,2,3-Trichloropropane	5	ug/l	5.0	ND
1,2,4,5-Tetramethylbenzene	5	ug/l	5.0	ND
1,2,4-Trichlorobenzene	5	ug/l	5.0	ND
1,2,4-Trimethylbenzene	5	ug/l	5.0	ND
1,2-Dibromo-3-chloropropane	5	ug/l	5.0	ND
1,2-Dibromoethane	5	ug/l	5.0	ND
1,2-Dichlorobenzene	5	ug/l	5.0	ND
1,2-Dichloroethane	5	ug/l	2.5	ND
1,2-Dichloropropane	5	ug/l	5.0	ND
1,3,5-Trimethylbenzene	5	ug/l	5.0	ND
1,3-Dichlorobenzene	5	ug/l	5.0	ND
1,3-Dichloropropane	5	ug/l	5.0	ND
1,4-Dichlorobenzene	5	ug/l	5.0	ND
1,4-Dioxane	5	ug/l	250	ND
2,2-Dichloropropane	5	ug/l	5.0	ND
2-Butanone	5	ug/l	5.0	ND
2-Chlorotoluene	5	ug/l	5.0	ND
2-Hexanone	5	ug/l	5.0	ND
4-Chlorotoluene	5	ug/l	5.0	ND
4-Isopropyltoluene	5	ug/l	5.0	ND
4-Methyl-2-pentanone	5	ug/l	5.0	ND

Sample ID: GWDUP01_052418 U **Collection Date: 5/24/2018**
Lab#: AD04413-014 **Receipt Date: 5/24/2018**
Matrix: Aqueous

Acetone	5	ug/l	25	ND
Acrolein	5	ug/l	25	ND
Acrylonitrile	5	ug/l	5.0	ND
Benzene	5	ug/l	2.5	ND
Bromobenzene	5	ug/l	5.0	ND
Bromochloromethane	5	ug/l	5.0	ND
Bromodichloromethane	5	ug/l	5.0	ND
Bromoform	5	ug/l	5.0	ND
Bromomethane	5	ug/l	5.0	ND
Carbon disulfide	5	ug/l	5.0	ND
Carbon tetrachloride	5	ug/l	5.0	ND
Chlorobenzene	5	ug/l	5.0	ND
Chloroethane	5	ug/l	5.0	ND
Chloroform	5	ug/l	5.0	ND
Chloromethane	5	ug/l	5.0	ND
cis-1,2-Dichloroethene	**5**	**ug/l**	**5.0**	**280**
cis-1,3-Dichloropropene	5	ug/l	5.0	ND
Cyclohexane	5	ug/l	5.0	ND
Dibromochloromethane	5	ug/l	5.0	ND
Dibromomethane	5	ug/l	5.0	ND
Dichlorodifluoromethane	5	ug/l	5.0	ND
Ethylbenzene	5	ug/l	5.0	ND
Hexachlorobutadiene	5	ug/l	5.0	ND
Isopropylbenzene	5	ug/l	5.0	ND
m&p-Xylenes	5	ug/l	5.0	ND
Methyl Acetate	5	ug/l	5.0	ND
Methylcyclohexane	5	ug/l	5.0	ND
Methylene chloride	5	ug/l	5.0	ND
Methyl-t-butyl ether	5	ug/l	2.5	ND
n-Butylbenzene	5	ug/l	5.0	ND
n-Propylbenzene	5	ug/l	5.0	ND
o-Xylene	5	ug/l	5.0	ND
sec-Butylbenzene	5	ug/l	5.0	ND
Styrene	5	ug/l	5.0	ND
t-Butylbenzene	5	ug/l	5.0	ND
Tetrachloroethene	**5**	**ug/l**	**5.0**	**790**
Toluene	5	ug/l	5.0	ND
trans-1,2-Dichloroethene	5	ug/l	5.0	ND
trans-1,3-Dichloropropene	5	ug/l	5.0	ND
trans-1,4-Dichloro-2-butene	5	ug/l	5.0	ND
Trichloroethene	**5**	**ug/l**	**5.0**	**130**
Trichlorofluoromethane	5	ug/l	5.0	ND
Vinyl chloride	**5**	**ug/l**	**5.0**	**5.6**
Xylenes (Total)	5	ug/l	5.0	ND

Surrogate	Conc.	Spike	Low Limit	High Limit	Recovery	Flags
Toluene-d8	28.56	30	79	111	95	
Dibromofluoromethane	30.79	30	73	131	103	
Bromofluorobenzene	30.53	30	82	112	102	
1,2-Dichloroethane-d4	29.89	30	78	128	100	

Sample ID: GWDUP01_052418 F | **Collection Date: 5/24/2018**
Lab#: AD04413-015 | **Receipt Date: 5/24/2018**
Matrix: Aqueous

Mercury (Water) 7470A

Analyte	DF	Units	RL	Result
Mercury	1	ug/l	0.50	ND

TAL Metals 6010

Analyte	DF	Units	RL	Result
Aluminum	1	ug/l	200	ND
Barium	1	ug/l	50	ND
Calcium	**1**	**ug/l**	**5000**	**48000**
Chromium	1	ug/l	50	ND
Copper	1	ug/l	50	ND
Iron	**1**	**ug/l**	**300**	**370**
Magnesium	**1**	**ug/l**	**5000**	**32000**
Manganese	**1**	**ug/l**	**40**	**2200**
Nickel	1	ug/l	50	ND
Potassium	**1**	**ug/l**	**5000**	**9300**
Silver	1	ug/l	20	ND
Sodium	**1**	**ug/l**	**5000**	**180000**
Vanadium	1	ug/l	50	ND
Zinc	1	ug/l	50	ND

TAL Metals 6020

Analyte	DF	Units	RL	Result
Antimony	1	ug/l	3.0	ND
Arsenic	1	ug/l	2.0	ND
Beryllium	1	ug/l	1.0	ND
Cadmium	1	ug/l	2.0	ND
Cobalt	**1**	**ug/l**	**2.0**	**35**
Lead	1	ug/l	3.0	ND
Selenium	1	ug/l	10	ND
Thallium	1	ug/l	2.0	ND

Hampton-Clarke, Inc. (WBE/DBE/SBE)

175 Route 46 West and 2 Madison Road, Fairfield, New Jersey 07004
Ph: 800-426-9992 | 973-244-9770 Fax: 973-244-9787 | 973-439-1458
Service Center: 137-D Gaither Drive, Mount Laurel, New Jersey 08054
Ph (Service Center): 856-780-6057 Fax: 856-780-6056

Hampton-Clarke WBE/DBE/SBE 800-426-9992
A Women-Owned, Disadvantaged, Small Business Enterprise

NELAC/NJ #07071 | PA #68-00463 | NY #11408 | CT #PH-0671 | KY #90124 | DE HSCA Approved

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 8052515

3) Reporting Requirements (Please Circle)

Turnaround	Report Type	Electronic Data Deliv.
When Available:	Summary	NJ Hazsite
1 Business Day (100%)*	Results + QC (Waste)	Excel Reg. NJ / NY / PA
2 Business Days (75%)*	Reduced:	EnviroData
3 Business Days (50%)*	[ ] NJ [ ] NY	EQuIS:
4 Business Days (35%)*	[ ] PA [ ] Other	[ ] 4-File [ ] EZ
5 Business Days (25%)	NJ Full / NY ASP CatB	[ ] NYDEC
8 Business Days (Stand.)	NY ASP CatA	[ ] Region 2 or 5
Other:		Other:

* Expedited TAT Not Always Available. Please Check with Lab.

Customer Information

1a) Customer: Langan
Address: 360 W 31st St 8th Fl NY NY 10001
1b) Email/Cell/Fax/Ph: 212 479-5400
1c) Send Invoice to: tchow@langan.com
1d) Send Report to: tchow@langan.com

Project Information

2a) Project: 111 Willow
2b) Project Mgr: Tyler Chow
2c) Project Location (City/State): Bronx, NY
2d) Quote/PO # (If Applicable):

FOR LAB USE ONLY

Batch # A804413

===> Check If Contingent ===>

<=== Check If Contingent <===

Matrix Codes
DW - Drinking Water; S - Soil; A - Air; GW - Ground Water; SL - Sludge; WW - Waste Water; OL - Oil; OT - Other (please specify under item 9, Comments)

Lab Sample #	4) Customer Sample ID	5) Matrix	6) Sample Date	6) Sample Time	Sample Type: Composite (C)	Sample Type: Grab (G)	7) Analysis: VOCs	SVOCs, PCBs	Pest/Herb	Metals (Total and Mobility)	8) # of Bottles: None	MeOH	En Core	NaOH	HCl	H2SO4	HNO3	Other:	9) Comments
001/002	MW01_052418	GW	5/24/18	14:10			✓	✓	✓	✓									
003/004	MW02_052418	GW	5/24/18	13:23			✓	✓	✓	✓									
005/006	MW03_052418	GW	5/24/18	14:35			✓	✓	✓	✓									
007/008	MW04_052418	GW	5/24/18	11:11			✓	✓	✓	✓									
009/010	MW05_052418	GW	5/24/18	14:00			✓	✓	✓	✓									
011	TB01_052418	OT	5/24/18				✓												Trip Blank
012/013	FB01_052418	OT	5/24/18				✓	✓	✓	✓									Field Blank
014/015	GWDUP01_052418	GW	5/24/18	00:00			✓	✓	✓	✓									

10) Relinquished by:	Accepted by:	Date	Time
		5/24/18	16:23
		5/24/18	18:51

11) Sampler (print name): Date:

Additional Notes

Comments, Notes, Special Requirements, HAZARDS

Indicate if low-level methods required to meet current groundwater standards (SPLP for soil):
- [ ] BN or BNA (8270D SIM)
- [ ] VOC (8260C SIM or 8011)
- [ ] SPLP (BN, BNA, Metals)
- [ ] 1,4 Dioxane

For NJ LSRP projects, indicate which standards need to be met:
- [ ] NJDEP GWQS
- [ ] NJDEP SRS
- [ ] NJDEP SPLP
- [ ] Other (specify):

Check if applicable:
- [ ] Project-Specific Reporting Limits
- [ ] High Contaminant Concentrations
- [ ] NJ LSRP Project (also check boxes above/right)

Cooler Temperature: 3.1, 4.0, 2.9 / 2.4, 2.0, 3.9, 2.7

Please note NUMBERED items. If not completed your analytical work may be delayed.
A fee of $5/sample will be assessed for storage should sample not be activated for any analysis.

Internal use: sampling plan (check box) HC [ ] or client [ ] FSP#

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-001
Lab Order:	C1805056	**Tag Number:**	1180,175
Project:	8052406	**Collection Date:**	5/22/2018
Lab ID:	C1805056-001A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	7.9	0.82		ug/m3	1	5/29/2018 11:43:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	5/29/2018 11:43:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	5/29/2018 11:43:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	5/29/2018 11:43:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	5/29/2018 11:43:00 PM
1,2,3-Trimethylbenzene	1.0	0.74		ug/m3	1	5/29/2018 11:43:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	5/29/2018 11:43:00 PM
1,2,4-Trimethylbenzene	3.1	0.74		ug/m3	1	5/29/2018 11:43:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	5/29/2018 11:43:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/29/2018 11:43:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	5/29/2018 11:43:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	5/29/2018 11:43:00 PM
1,3,5-Trimethylbenzene	2.6	0.74		ug/m3	1	5/29/2018 11:43:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	5/29/2018 11:43:00 PM
1,3-Dichlorobenzene	15	9.0		ug/m3	10	5/30/2018 11:59:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/29/2018 11:43:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	5/29/2018 11:43:00 PM
2,2,4-trimethylpentane	24	7.0		ug/m3	10	5/30/2018 11:59:00 AM
2-Chlorotoluene	< 0.78	0.78		ug/m3	1	5/29/2018 11:43:00 PM
4-ethyltoluene	0.74	0.74		ug/m3	1	5/29/2018 11:43:00 PM
Acetone	2200	1200		ug/m3	1620	5/31/2018 3:26:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	5/29/2018 11:43:00 PM
Benzene	5.9	0.48		ug/m3	1	5/29/2018 11:43:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	5/29/2018 11:43:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	5/29/2018 11:43:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	5/29/2018 11:43:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	5/29/2018 11:43:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	5/29/2018 11:43:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	5/29/2018 11:43:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	5/29/2018 11:43:00 PM
Chloroethane	0.34	0.40	J	ug/m3	1	5/29/2018 11:43:00 PM
Chloroform	9.5	0.73		ug/m3	1	5/29/2018 11:43:00 PM
Chloromethane	1.1	0.31		ug/m3	1	5/29/2018 11:43:00 PM
cis-1,2-Dichloroethene	2.0	0.59		ug/m3	1	5/29/2018 11:43:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/29/2018 11:43:00 PM
Cyclohexane	4.2	0.52		ug/m3	1	5/29/2018 11:43:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	5/29/2018 11:43:00 PM
Ethanol	2000	450		ug/m3	810	5/31/2018 2:48:00 AM
Ethyl acetate	4.6	0.90		ug/m3	1	5/29/2018 11:43:00 PM
Ethylbenzene	1.5	0.65		ug/m3	1	5/29/2018 11:43:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-001
Lab Order:	C1805056	**Tag Number:**	1180,175
Project:	8052406	**Collection Date:**	5/22/2018
Lab ID:	C1805056-001A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
Freon 11	2.2	0.84		ug/m3	1	5/29/2018 11:43:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	5/29/2018 11:43:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	5/29/2018 11:43:00 PM
Freon 12	2.0	0.74		ug/m3	1	5/29/2018 11:43:00 PM
Heptane	16	0.61		ug/m3	1	5/29/2018 11:43:00 PM
Heptane	16	6.1		ug/m3	10	5/30/2018 11:59:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	5/29/2018 11:43:00 PM
Hexane	18	5.3		ug/m3	10	5/30/2018 11:59:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	5/29/2018 11:43:00 PM
m&p-Xylene	3.7	1.3		ug/m3	1	5/29/2018 11:43:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	5/29/2018 11:43:00 PM
Methyl Ethyl Ketone	2000	710		ug/m3	810	5/31/2018 2:48:00 AM
Methyl Isobutyl Ketone	1.8	1.2		ug/m3	1	5/29/2018 11:43:00 PM
Methyl methacrylate	0.82	0.61		ug/m3	1	5/29/2018 11:43:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	5/29/2018 11:43:00 PM
Methylene chloride	7.0	0.52		ug/m3	1	5/29/2018 11:43:00 PM
Naphthalene	3.1	0.79		ug/m3	1	5/29/2018 11:43:00 PM
o-Xylene	1.4	0.65		ug/m3	1	5/29/2018 11:43:00 PM
Propylene	< 0.26	0.26		ug/m3	1	5/29/2018 11:43:00 PM
Styrene	1.3	0.64		ug/m3	1	5/29/2018 11:43:00 PM
t-Butyl alcohol	32	9.1		ug/m3	10	5/30/2018 11:59:00 AM
Tetrachloroethylene	160	10		ug/m3	10	5/30/2018 11:59:00 AM
Tetrahydrofuran	1500	350		ug/m3	810	5/31/2018 2:48:00 AM
Toluene	22	5.7		ug/m3	10	5/30/2018 11:59:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	5/29/2018 11:43:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/29/2018 11:43:00 PM
Trichloroethene	8.4	0.81		ug/m3	1	5/29/2018 11:43:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	5/29/2018 11:43:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	5/29/2018 11:43:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	5/29/2018 11:43:00 PM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-002
Lab Order:	C1805056	**Tag Number:**	1188,1157
Project:	8052406	**Collection Date:**	5/22/2018
Lab ID:	C1805056-002A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	5/30/2018 12:24:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	5/30/2018 12:24:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	5/30/2018 12:24:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	5/30/2018 12:24:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 12:24:00 AM
1,2,3-Trimethylbenzene	< 0.74	0.74		ug/m3	1	5/30/2018 12:24:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	5/30/2018 12:24:00 AM
1,2,4-Trimethylbenzene	1.6	0.74		ug/m3	1	5/30/2018 12:24:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	5/30/2018 12:24:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 12:24:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	5/30/2018 12:24:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	5/30/2018 12:24:00 AM
1,3,5-Trimethylbenzene	0.84	0.74		ug/m3	1	5/30/2018 12:24:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	5/30/2018 12:24:00 AM
1,3-Dichlorobenzene	1.6	0.90		ug/m3	1	5/30/2018 12:24:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 12:24:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	5/30/2018 12:24:00 AM
2,2,4-trimethylpentane	5.3	0.70		ug/m3	1	5/30/2018 12:24:00 AM
2-Chlorotoluene	< 0.78	0.78		ug/m3	1	5/30/2018 12:24:00 AM
4-ethyltoluene	0.59	0.74	J	ug/m3	1	5/30/2018 12:24:00 AM
Acetone	340	190		ug/m3	270	5/31/2018 4:44:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	5/30/2018 12:24:00 AM
Benzene	4.6	0.48		ug/m3	1	5/30/2018 12:24:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	5/30/2018 12:24:00 AM
Bromodichloromethane	1.9	1.0		ug/m3	1	5/30/2018 12:24:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	5/30/2018 12:24:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	5/30/2018 12:24:00 AM
Carbon disulfide	4.5	0.47		ug/m3	1	5/30/2018 12:24:00 AM
Carbon tetrachloride	0.75	0.94	J	ug/m3	1	5/30/2018 12:24:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	5/30/2018 12:24:00 AM
Chloroethane	0.90	0.40		ug/m3	1	5/30/2018 12:24:00 AM
Chloroform	320	20		ug/m3	27	5/31/2018 4:06:00 AM
Chloromethane	1.7	0.31		ug/m3	1	5/30/2018 12:24:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 12:24:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/30/2018 12:24:00 AM
Cyclohexane	2.5	0.52		ug/m3	1	5/30/2018 12:24:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	5/30/2018 12:24:00 AM
Ethanol	140	150	J	ug/m3	270	5/31/2018 4:44:00 AM
Ethyl acetate	10	9.0		ug/m3	10	5/30/2018 12:36:00 PM
Ethylbenzene	2.7	0.65		ug/m3	1	5/30/2018 12:24:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-002
Lab Order:	C1805056	**Tag Number:**	1188,1157
Project:	8052406	**Collection Date:**	5/22/2018
Lab ID:	C1805056-002A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
Freon 11	1.3	0.84		ug/m3	1	5/30/2018 12:24:00 AM
Freon 113	2.8	1.1		ug/m3	1	5/30/2018 12:24:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	5/30/2018 12:24:00 AM
Freon 12	2.1	0.74		ug/m3	1	5/30/2018 12:24:00 AM
Heptane	6.2	0.61		ug/m3	1	5/30/2018 12:24:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	5/30/2018 12:24:00 AM
Hexane	9.2	5.3		ug/m3	10	5/30/2018 12:36:00 PM
Isopropyl alcohol	14	3.7		ug/m3	10	5/30/2018 12:36:00 PM
m&p-Xylene	8.2	1.3		ug/m3	1	5/30/2018 12:24:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	5/30/2018 12:24:00 AM
Methyl Ethyl Ketone	65	24		ug/m3	27	5/31/2018 4:06:00 AM
Methyl Isobutyl Ketone	1.8	1.2		ug/m3	1	5/30/2018 12:24:00 AM
Methyl methacrylate	< 0.61	0.61		ug/m3	1	5/30/2018 12:24:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	5/30/2018 12:24:00 AM
Methylene chloride	6.2	0.52		ug/m3	1	5/30/2018 12:24:00 AM
Naphthalene	0.58	0.79	J	ug/m3	1	5/30/2018 12:24:00 AM
o-Xylene	2.4	0.65		ug/m3	1	5/30/2018 12:24:00 AM
Propylene	< 0.26	0.26		ug/m3	1	5/30/2018 12:24:00 AM
Styrene	0.72	0.64		ug/m3	1	5/30/2018 12:24:00 AM
t-Butyl alcohol	28	9.1		ug/m3	10	5/30/2018 12:36:00 PM
Tetrachloroethylene	2.1	1.0		ug/m3	1	5/30/2018 12:24:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	5/30/2018 12:24:00 AM
Toluene	27	5.7		ug/m3	10	5/30/2018 12:36:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 12:24:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/30/2018 12:24:00 AM
Trichloroethene	0.86	0.81		ug/m3	1	5/30/2018 12:24:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	5/30/2018 12:24:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	5/30/2018 12:24:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	5/30/2018 12:24:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-003
Lab Order:	C1805056	**Tag Number:**	327,155
Project:	8052406	**Collection Date:**	5/22/2018
Lab ID:	C1805056-003A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	8.9	0.82		ug/m3	1	5/30/2018 1:07:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	5/30/2018 1:07:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	5/30/2018 1:07:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	5/30/2018 1:07:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 1:07:00 AM
1,2,3-Trimethylbenzene	< 0.74	0.74		ug/m3	1	5/30/2018 1:07:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	5/30/2018 1:07:00 AM
1,2,4-Trimethylbenzene	1.3	0.74		ug/m3	1	5/30/2018 1:07:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	5/30/2018 1:07:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 1:07:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	5/30/2018 1:07:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	5/30/2018 1:07:00 AM
1,3,5-Trimethylbenzene	0.64	0.74	J	ug/m3	1	5/30/2018 1:07:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	5/30/2018 1:07:00 AM
1,3-Dichlorobenzene	1.5	0.90		ug/m3	1	5/30/2018 1:07:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 1:07:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	5/30/2018 1:07:00 AM
2,2,4-trimethylpentane	13	7.0		ug/m3	10	5/30/2018 1:14:00 PM
2-Chlorotoluene	< 0.78	0.78		ug/m3	1	5/30/2018 1:07:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	5/30/2018 1:07:00 AM
Acetone	2000	570		ug/m3	810	5/31/2018 6:02:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	5/30/2018 1:07:00 AM
Benzene	3.2	0.48		ug/m3	1	5/30/2018 1:07:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	5/30/2018 1:07:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	5/30/2018 1:07:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	5/30/2018 1:07:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	5/30/2018 1:07:00 AM
Carbon disulfide	6.4	0.47		ug/m3	1	5/30/2018 1:07:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	5/30/2018 1:07:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	5/30/2018 1:07:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	5/30/2018 1:07:00 AM
Chloroform	21	7.3		ug/m3	10	5/30/2018 1:14:00 PM
Chloromethane	0.54	0.31		ug/m3	1	5/30/2018 1:07:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 1:07:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/30/2018 1:07:00 AM
Cyclohexane	3.3	0.52		ug/m3	1	5/30/2018 1:07:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	5/30/2018 1:07:00 AM
Ethanol	240	45		ug/m3	81	5/31/2018 5:24:00 AM
Ethyl acetate	10	9.0		ug/m3	10	5/30/2018 1:14:00 PM
Ethylbenzene	2.3	0.65		ug/m3	1	5/30/2018 1:07:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-003
Lab Order:	C1805056	**Tag Number:**	327,155
Project:	8052406	**Collection Date:**	5/22/2018
Lab ID:	C1805056-003A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
Freon 11	1.5	0.84		ug/m3	1	5/30/2018 1:07:00 AM
Freon 113	2.8	1.1		ug/m3	1	5/30/2018 1:07:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	5/30/2018 1:07:00 AM
Freon 12	2.0	0.74		ug/m3	1	5/30/2018 1:07:00 AM
Heptane	17	6.1		ug/m3	10	5/30/2018 1:14:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	5/30/2018 1:07:00 AM
Hexane	21	5.3		ug/m3	10	5/30/2018 1:14:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	5/30/2018 1:07:00 AM
m&p-Xylene	6.8	1.3		ug/m3	1	5/30/2018 1:07:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	5/30/2018 1:07:00 AM
Methyl Ethyl Ketone	320	71		ug/m3	81	5/31/2018 5:24:00 AM
Methyl Isobutyl Ketone	2.1	1.2		ug/m3	1	5/30/2018 1:07:00 AM
Methyl methacrylate	0.94	0.61		ug/m3	1	5/30/2018 1:07:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	5/30/2018 1:07:00 AM
Methylene chloride	3.6	0.52		ug/m3	1	5/30/2018 1:07:00 AM
Naphthalene	< 0.79	0.79		ug/m3	1	5/30/2018 1:07:00 AM
o-Xylene	2.1	0.65		ug/m3	1	5/30/2018 1:07:00 AM
Propylene	< 0.26	0.26		ug/m3	1	5/30/2018 1:07:00 AM
Styrene	0.60	0.64	J	ug/m3	1	5/30/2018 1:07:00 AM
t-Butyl alcohol	35	9.1		ug/m3	10	5/30/2018 1:14:00 PM
Tetrachloroethylene	2.8	1.0		ug/m3	1	5/30/2018 1:07:00 AM
Tetrahydrofuran	56	4.4		ug/m3	10	5/30/2018 1:14:00 PM
Toluene	27	5.7		ug/m3	10	5/30/2018 1:14:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 1:07:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/30/2018 1:07:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	5/30/2018 1:07:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	5/30/2018 1:07:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	5/30/2018 1:07:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	5/30/2018 1:07:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-004
Lab Order:	C1805056	**Tag Number:**	1175,265
Project:	8052406	**Collection Date:**	5/22/2018
Lab ID:	C1805056-004A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	5/30/2018 1:48:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	5/30/2018 1:48:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	5/30/2018 1:48:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	5/30/2018 1:48:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 1:48:00 AM
1,2,3-Trimethylbenzene	< 0.74	0.74		ug/m3	1	5/30/2018 1:48:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	5/30/2018 1:48:00 AM
1,2,4-Trimethylbenzene	1.4	0.74		ug/m3	1	5/30/2018 1:48:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	5/30/2018 1:48:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 1:48:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	5/30/2018 1:48:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	5/30/2018 1:48:00 AM
1,3,5-Trimethylbenzene	0.64	0.74	J	ug/m3	1	5/30/2018 1:48:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	5/30/2018 1:48:00 AM
1,3-Dichlorobenzene	1.7	0.90		ug/m3	1	5/30/2018 1:48:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 1:48:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	5/30/2018 1:48:00 AM
2,2,4-trimethylpentane	5.7	0.70		ug/m3	1	5/30/2018 1:48:00 AM
2-Chlorotoluene	< 0.78	0.78		ug/m3	1	5/30/2018 1:48:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	5/30/2018 1:48:00 AM
Acetone	600	190		ug/m3	270	5/31/2018 7:20:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	5/30/2018 1:48:00 AM
Benzene	2.9	0.48		ug/m3	1	5/30/2018 1:48:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	5/30/2018 1:48:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	5/30/2018 1:48:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	5/30/2018 1:48:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	5/30/2018 1:48:00 AM
Carbon disulfide	210	120		ug/m3	270	5/31/2018 7:20:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	5/30/2018 1:48:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	5/30/2018 1:48:00 AM
Chloroethane	0.71	0.40		ug/m3	1	5/30/2018 1:48:00 AM
Chloroform	2.1	0.73		ug/m3	1	5/30/2018 1:48:00 AM
Chloromethane	2.9	0.31		ug/m3	1	5/30/2018 1:48:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 1:48:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/30/2018 1:48:00 AM
Cyclohexane	3.8	0.52		ug/m3	1	5/30/2018 1:48:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	5/30/2018 1:48:00 AM
Ethanol	320	150		ug/m3	270	5/31/2018 7:20:00 AM
Ethyl acetate	13	9.0		ug/m3	10	5/30/2018 1:51:00 PM
Ethylbenzene	2.2	0.65		ug/m3	1	5/30/2018 1:48:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-004
Lab Order:	C1805056	**Tag Number:**	1175,265
Project:	8052406	**Collection Date:**	5/22/2018
Lab ID:	C1805056-004A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
Freon 11	1.8	0.84		ug/m3	1	5/30/2018 1:48:00 AM
Freon 113	2.8	1.1		ug/m3	1	5/30/2018 1:48:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	5/30/2018 1:48:00 AM
Freon 12	< 0.74	0.74		ug/m3	1	5/30/2018 1:48:00 AM
Heptane	4.5	0.61		ug/m3	1	5/30/2018 1:48:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	5/30/2018 1:48:00 AM
Hexane	21	5.3		ug/m3	10	5/30/2018 1:51:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	5/30/2018 1:48:00 AM
m&p-Xylene	7.3	1.3		ug/m3	1	5/30/2018 1:48:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	5/30/2018 1:48:00 AM
Methyl Ethyl Ketone	51	8.8		ug/m3	10	5/30/2018 1:51:00 PM
Methyl Isobutyl Ketone	2.0	1.2		ug/m3	1	5/30/2018 1:48:00 AM
Methyl methacrylate	< 0.61	0.61		ug/m3	1	5/30/2018 1:48:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	5/30/2018 1:48:00 AM
Methylene chloride	4.9	0.52		ug/m3	1	5/30/2018 1:48:00 AM
Naphthalene	< 0.79	0.79		ug/m3	1	5/30/2018 1:48:00 AM
o-Xylene	2.1	0.65		ug/m3	1	5/30/2018 1:48:00 AM
Propylene	< 0.26	0.26		ug/m3	1	5/30/2018 1:48:00 AM
Styrene	0.51	0.64	J	ug/m3	1	5/30/2018 1:48:00 AM
t-Butyl alcohol	27	9.1		ug/m3	10	5/30/2018 1:51:00 PM
Tetrachloroethylene	3.8	1.0		ug/m3	1	5/30/2018 1:48:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	5/30/2018 1:48:00 AM
Toluene	26	5.7		ug/m3	10	5/30/2018 1:51:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 1:48:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/30/2018 1:48:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	5/30/2018 1:48:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	5/30/2018 1:48:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	5/30/2018 1:48:00 AM
Vinyl chloride	3.7	0.38		ug/m3	1	5/30/2018 1:48:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-006
Lab Order:	C1805056	**Tag Number:**	248,279
Project:	8052406	**Collection Date:**	5/23/2018
Lab ID:	C1805056-006A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	1.7	0.82		ug/m3	1	5/30/2018 2:30:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	5/30/2018 2:30:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	5/30/2018 2:30:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	5/30/2018 2:30:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 2:30:00 AM
1,2,3-Trimethylbenzene	0.54	0.74	J	ug/m3	1	5/30/2018 2:30:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	5/30/2018 2:30:00 AM
1,2,4-Trimethylbenzene	2.1	0.74		ug/m3	1	5/30/2018 2:30:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	5/30/2018 2:30:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 2:30:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	5/30/2018 2:30:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	5/30/2018 2:30:00 AM
1,3,5-Trimethylbenzene	1.1	0.74		ug/m3	1	5/30/2018 2:30:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	5/30/2018 2:30:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 2:30:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 2:30:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	5/30/2018 2:30:00 AM
2,2,4-trimethylpentane	4.6	0.70		ug/m3	1	5/30/2018 2:30:00 AM
2-Chlorotoluene	< 0.78	0.78		ug/m3	1	5/30/2018 2:30:00 AM
4-ethyltoluene	0.59	0.74	J	ug/m3	1	5/30/2018 2:30:00 AM
Acetone	71	64		ug/m3	90	5/31/2018 9:16:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	5/30/2018 2:30:00 AM
Benzene	2.3	0.48		ug/m3	1	5/30/2018 2:30:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	5/30/2018 2:30:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	5/30/2018 2:30:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	5/30/2018 2:30:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	5/30/2018 2:30:00 AM
Carbon disulfide	23	4.4		ug/m3	9	5/31/2018 8:39:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	5/30/2018 2:30:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	5/30/2018 2:30:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	5/30/2018 2:30:00 AM
Chloroform	1.2	0.73		ug/m3	1	5/30/2018 2:30:00 AM
Chloromethane	0.41	0.31		ug/m3	1	5/30/2018 2:30:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 2:30:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/30/2018 2:30:00 AM
Cyclohexane	3.2	0.52		ug/m3	1	5/30/2018 2:30:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	5/30/2018 2:30:00 AM
Ethanol	110	51		ug/m3	90	5/31/2018 9:16:00 PM
Ethyl acetate	11	7.9		ug/m3	9	5/31/2018 8:39:00 PM
Ethylbenzene	1.7	0.65		ug/m3	1	5/30/2018 2:30:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-006
Lab Order:	C1805056	**Tag Number:**	248,279
Project:	8052406	**Collection Date:**	5/23/2018
Lab ID:	C1805056-006A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
Freon 11	1.3	0.84		ug/m3	1	5/30/2018 2:30:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	5/30/2018 2:30:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	5/30/2018 2:30:00 AM
Freon 12	2.3	0.74		ug/m3	1	5/30/2018 2:30:00 AM
Heptane	6.8	0.61		ug/m3	1	5/30/2018 2:30:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	5/30/2018 2:30:00 AM
Hexane	7.3	4.9		ug/m3	9	5/31/2018 8:39:00 PM
Isopropyl alcohol	9.1	3.4		ug/m3	9	5/31/2018 8:39:00 PM
m&p-Xylene	5.5	1.3		ug/m3	1	5/30/2018 2:30:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	5/30/2018 2:30:00 AM
Methyl Ethyl Ketone	29	8.0		ug/m3	9	5/31/2018 8:39:00 PM
Methyl Isobutyl Ketone	1.7	1.2		ug/m3	1	5/30/2018 2:30:00 AM
Methyl methacrylate	< 0.61	0.61		ug/m3	1	5/30/2018 2:30:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	5/30/2018 2:30:00 AM
Methylene chloride	18	4.9		ug/m3	9	5/31/2018 8:39:00 PM
Naphthalene	0.58	0.79	J	ug/m3	1	5/30/2018 2:30:00 AM
o-Xylene	1.9	0.65		ug/m3	1	5/30/2018 2:30:00 AM
Propylene	< 0.26	0.26		ug/m3	1	5/30/2018 2:30:00 AM
Styrene	0.68	0.64		ug/m3	1	5/30/2018 2:30:00 AM
t-Butyl alcohol	2.4	0.91		ug/m3	1	5/30/2018 2:30:00 AM
Tetrachloroethylene	5.1	1.0		ug/m3	1	5/30/2018 2:30:00 AM
Tetrahydrofuran	5.5	0.44		ug/m3	1	5/30/2018 2:30:00 AM
Toluene	21	5.3		ug/m3	9	5/31/2018 8:39:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 2:30:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/30/2018 2:30:00 AM
Trichloroethene	1.5	0.81		ug/m3	1	5/30/2018 2:30:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	5/30/2018 2:30:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	5/30/2018 2:30:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	5/30/2018 2:30:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-007
Lab Order:	C1805056	**Tag Number:**	136,466
Project:	8052406	**Collection Date:**	5/23/2018
Lab ID:	C1805056-007A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	5/30/2018 3:10:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	5/30/2018 3:10:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	5/30/2018 3:10:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	5/30/2018 3:10:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 3:10:00 AM
1,2,3-Trimethylbenzene	< 0.74	0.74		ug/m3	1	5/30/2018 3:10:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	5/30/2018 3:10:00 AM
1,2,4-Trimethylbenzene	1.4	0.74		ug/m3	1	5/30/2018 3:10:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	5/30/2018 3:10:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 3:10:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	5/30/2018 3:10:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	5/30/2018 3:10:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	5/30/2018 3:10:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	5/30/2018 3:10:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 3:10:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 3:10:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	5/30/2018 3:10:00 AM
2,2,4-trimethylpentane	6.9	0.70		ug/m3	1	5/30/2018 3:10:00 AM
2-Chlorotoluene	< 0.78	0.78		ug/m3	1	5/30/2018 3:10:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	5/30/2018 3:10:00 AM
Acetone	85	64		ug/m3	90	5/31/2018 10:34:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	5/30/2018 3:10:00 AM
Benzene	10	4.5		ug/m3	9	5/31/2018 9:56:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	5/30/2018 3:10:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	5/30/2018 3:10:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	5/30/2018 3:10:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	5/30/2018 3:10:00 AM
Carbon disulfide	4.3	0.47		ug/m3	1	5/30/2018 3:10:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	5/30/2018 3:10:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	5/30/2018 3:10:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	5/30/2018 3:10:00 AM
Chloroform	1.7	0.73		ug/m3	1	5/30/2018 3:10:00 AM
Chloromethane	1.1	0.31		ug/m3	1	5/30/2018 3:10:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 3:10:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/30/2018 3:10:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	5/30/2018 3:10:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	5/30/2018 3:10:00 AM
Ethanol	100	51		ug/m3	90	5/31/2018 10:34:00 PM
Ethyl acetate	6.9	0.90		ug/m3	1	5/30/2018 3:10:00 AM
Ethylbenzene	1.7	0.65		ug/m3	1	5/30/2018 3:10:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-007
Lab Order:	C1805056	**Tag Number:**	136,466
Project:	8052406	**Collection Date:**	5/23/2018
Lab ID:	C1805056-007A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
Freon 11	1.1	0.84		ug/m3	1	5/30/2018 3:10:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	5/30/2018 3:10:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	5/30/2018 3:10:00 AM
Freon 12	2.1	0.74		ug/m3	1	5/30/2018 3:10:00 AM
Heptane	10	5.7		ug/m3	9	5/31/2018 9:56:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	5/30/2018 3:10:00 AM
Hexane	7.6	0.53		ug/m3	1	5/30/2018 3:10:00 AM
Isopropyl alcohol	4.5	0.37		ug/m3	1	5/30/2018 3:10:00 AM
m&p-Xylene	6.0	1.3		ug/m3	1	5/30/2018 3:10:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	5/30/2018 3:10:00 AM
Methyl Ethyl Ketone	96	80		ug/m3	90	5/31/2018 10:34:00 PM
Methyl Isobutyl Ketone	1.9	1.2		ug/m3	1	5/30/2018 3:10:00 AM
Methyl methacrylate	0.74	0.61		ug/m3	1	5/30/2018 3:10:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	5/30/2018 3:10:00 AM
Methylene chloride	2.2	0.52		ug/m3	1	5/30/2018 3:10:00 AM
Naphthalene	< 0.79	0.79		ug/m3	1	5/30/2018 3:10:00 AM
o-Xylene	2.0	0.65		ug/m3	1	5/30/2018 3:10:00 AM
Propylene	< 0.26	0.26		ug/m3	1	5/30/2018 3:10:00 AM
Styrene	0.51	0.64	J	ug/m3	1	5/30/2018 3:10:00 AM
t-Butyl alcohol	3.2	0.91		ug/m3	1	5/30/2018 3:10:00 AM
Tetrachloroethylene	3.5	1.0		ug/m3	1	5/30/2018 3:10:00 AM
Tetrahydrofuran	61	4.1		ug/m3	9	5/31/2018 9:56:00 PM
Toluene	30	5.3		ug/m3	9	5/31/2018 9:56:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 3:10:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/30/2018 3:10:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	5/30/2018 3:10:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	5/30/2018 3:10:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	5/30/2018 3:10:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	5/30/2018 3:10:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-008
Lab Order:	C1805056	**Tag Number:**	471,382
Project:	8052406	**Collection Date:**	5/23/2018
Lab ID:	C1805056-008A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	5/30/2018 3:52:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	5/30/2018 3:52:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	5/30/2018 3:52:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	5/30/2018 3:52:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 3:52:00 AM
1,2,3-Trimethylbenzene	0.54	0.74	J	ug/m3	1	5/30/2018 3:52:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	5/30/2018 3:52:00 AM
1,2,4-Trimethylbenzene	1.7	0.74		ug/m3	1	5/30/2018 3:52:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	5/30/2018 3:52:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 3:52:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	5/30/2018 3:52:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	5/30/2018 3:52:00 AM
1,3,5-Trimethylbenzene	1.1	0.74		ug/m3	1	5/30/2018 3:52:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	5/30/2018 3:52:00 AM
1,3-Dichlorobenzene	1.7	0.90		ug/m3	1	5/30/2018 3:52:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	5/30/2018 3:52:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	5/30/2018 3:52:00 AM
2,2,4-trimethylpentane	2.9	0.70		ug/m3	1	5/30/2018 3:52:00 AM
2-Chlorotoluene	< 0.78	0.78		ug/m3	1	5/30/2018 3:52:00 AM
4-ethyltoluene	0.54	0.74	J	ug/m3	1	5/30/2018 3:52:00 AM
Acetone	760	190		ug/m3	270	5/31/2018 11:51:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	5/30/2018 3:52:00 AM
Benzene	2.9	0.48		ug/m3	1	5/30/2018 3:52:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	5/30/2018 3:52:00 AM
Bromodichloromethane	35	10		ug/m3	10	5/30/2018 2:30:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	5/30/2018 3:52:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	5/30/2018 3:52:00 AM
Carbon disulfide	9.0	4.7		ug/m3	10	5/30/2018 2:30:00 PM
Carbon tetrachloride	2.4	0.94		ug/m3	1	5/30/2018 3:52:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	5/30/2018 3:52:00 AM
Chloroethane	0.61	0.40		ug/m3	1	5/30/2018 3:52:00 AM
Chloroform	710	200		ug/m3	270	5/31/2018 11:51:00 PM
Chloromethane	1.3	0.31		ug/m3	1	5/30/2018 3:52:00 AM
cis-1,2-Dichloroethene	2.9	0.59		ug/m3	1	5/30/2018 3:52:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/30/2018 3:52:00 AM
Cyclohexane	1.1	0.52		ug/m3	1	5/30/2018 3:52:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	5/30/2018 3:52:00 AM
Ethanol	160	150		ug/m3	270	5/31/2018 11:51:00 PM
Ethyl acetate	9.4	9.0		ug/m3	10	5/30/2018 2:30:00 PM
Ethylbenzene	2.3	0.65		ug/m3	1	5/30/2018 3:52:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *06-Jun-18*

CLIENT:	Hampton-Clarke, Inc./ Veritech	**Client Sample ID:**	AD04376-008
Lab Order:	C1805056	**Tag Number:**	471,382
Project:	8052406	**Collection Date:**	5/23/2018
Lab ID:	C1805056-008A	**Matrix:**	

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ ADDITIONAL CMPDS BY METHOD TO		**TO-15**				Analyst: **RJP**
Freon 11	1.5	0.84		ug/m3	1	5/30/2018 3:52:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	5/30/2018 3:52:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	5/30/2018 3:52:00 AM
Freon 12	2.3	0.74		ug/m3	1	5/30/2018 3:52:00 AM
Heptane	5.5	0.61		ug/m3	1	5/30/2018 3:52:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	5/30/2018 3:52:00 AM
Hexane	4.0	0.53		ug/m3	1	5/30/2018 3:52:00 AM
Isopropyl alcohol	16	3.7		ug/m3	10	5/30/2018 2:30:00 PM
m&p-Xylene	7.7	1.3		ug/m3	1	5/30/2018 3:52:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	5/30/2018 3:52:00 AM
Methyl Ethyl Ketone	29	8.8		ug/m3	10	5/30/2018 2:30:00 PM
Methyl Isobutyl Ketone	2.6	1.2		ug/m3	1	5/30/2018 3:52:00 AM
Methyl methacrylate	< 0.61	0.61		ug/m3	1	5/30/2018 3:52:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	5/30/2018 3:52:00 AM
Methylene chloride	3.3	0.52		ug/m3	1	5/30/2018 3:52:00 AM
Naphthalene	0.84	0.79		ug/m3	1	5/30/2018 3:52:00 AM
o-Xylene	2.5	0.65		ug/m3	1	5/30/2018 3:52:00 AM
Propylene	< 0.26	0.26		ug/m3	1	5/30/2018 3:52:00 AM
Styrene	0.60	0.64	J	ug/m3	1	5/30/2018 3:52:00 AM
t-Butyl alcohol	13	9.1		ug/m3	10	5/30/2018 2:30:00 PM
Tetrachloroethylene	2.4	1.0		ug/m3	1	5/30/2018 3:52:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	5/30/2018 3:52:00 AM
Toluene	32	5.7		ug/m3	10	5/30/2018 2:30:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	5/30/2018 3:52:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	5/30/2018 3:52:00 AM
Trichloroethene	1.4	0.81		ug/m3	1	5/30/2018 3:52:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	5/30/2018 3:52:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	5/30/2018 3:52:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	5/30/2018 3:52:00 AM

Qualifiers:

**	Quantitation Limit	.	Results reported are not blank corrected
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S	Spike Recovery outside accepted recovery limits		

A004376

805406**

Centek Labs - Chain of Custody

Centek Laboratories
Air Quality Testing...It's a Core
www.CentekLabs.com

143 Midler Park Drive
Syracuse, NY 13206
315-431-9730
www.CentekLabs.com

Vapor Intrusion & IAQ

Site Name: 111 Willow
Project: 170497201
PO#:
Quote # Q-SP
Canister Order #: 7218

Detection Limit	Report Level
☐ 5ppbv	☐ Level I
☑ 1ug/M3	☐ Level II
☐ 1ug/M3 + 0.2 NYS	☒ Cat "B" Like
☐	☐

TAT Turnaround Time:	Check One	Rush TAT Surcharge %	Due Date:
5 Business Days	☑	0%	
4 Business Days	☐	25%	
3 Business Days	☐	50%	
2 Business Days	☐	75%	
*Next Day by 5pm	☐	100%	
*Next Day by Noon	☐	150%	
*Same Day	☐	200%	

Company: Langan

Report to:
Address: 360 W 31st St 8th Fl NY NY
City, State, Zip 10001
Email: tchow@langan.com
Phone: 212 479-5400

Company:
Check Here If Same: ☒

Invoice to:
Address:
City, State, Zip
Email:
Phone:

*For Same and Next Day TAT Please Notify Lab

Sample ID	Date Sampled	Canister Number	Regulator Number	Analysis Request	Field Vacuum Start / Stop	Labs Vacuum** Rec'd/Analysis	Comments
SV07_052118	5/21/18	1180	175	TO-15 MS 5/24/18 Park Garrett -	30 16.1	/	
SV01_052218	5/22/18	1188	1157		30 15	/	
SV03_052218	5/22/18	327	155		30 17.9	/	
SV04_052218	5/22/18	1175	265		30 16.5	/	
SV08_052218	5/22/18	229	1187		30 129	/	potential gauge issue?
SV05_052318	5/23/18	248	279		27.8 14.9	/	
SV06_052318	5/23/18	136	1166		30 14.79	/	
SV02_052318	5/23/18	471	382		30 19.9	/	
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Chain of Custody	Print Name	Signature	Date/Time
Sampled by:	Kevin Garrett		5/23/18 1545
Relinquished by:	Kevin Garrett		5/23/18 15:45
Received at Lab by:		5/23/18 1545	

Courier: CIRCLE ONE
FedEx UPS Pickup/Dropoff

**For LAB USE ONLY
Work Order # _____

*** By signing Centek Labs Chain of Custody, you are accepting Centek Labs Terms and Conditions listed on the reverse side.