Phase II Environmental Site Investigation

47th Street Site
57-00, 57-05, 57-57, and 58-20 47th Street
Maspeth, Queens, New York

Prepared for:

Prologis, L.P.
Pier 1, Bay 1
San Francisco, California

Prepared by:

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

Rebekah Diehl
Senior Staff Scientist

Alan R. Arico, LSRP
Senior Project Manager

Robert (Rory) S. Johnston, PE
Sr. Vice President

December 22, 2021
100965501

LANGAN

300 Kimball Drive Parsippany, NJ 07054 T: 973.560.4900 F: 973.560.4901 www.langan.com

New Jersey • New York • Connecticut • Pennsylvania • Washington, DC • Virginia • West Virginia • Ohio • Florida • Texas • Arizona • California
Abu Dhabi • Athens • Doha • Dubai • London • Panama

22 December 2021

Mr. Brett Richer
Prologis, L.P.
Director, Global Environmental and Engineering
Pier 1, Bay 1
San Francisco, CA 94111

Subject: Phase II Environmental Site Investigation
47th Street Site
Maspeth, Queens, New York
Langan Project No. 100965501

Dear Mr. Richer:

Langan Engineering and Environmental Services, Inc. (Langan) is submitting the enclosed *Phase II Environmental Site Investigation (ESI) for the 47th Street Site, Maspeth, Queens, New York*. Our scope of services for this project consisted of a geophysical survey and the collection and analysis of soil and groundwater samples.

We appreciate the opportunity to assist you with this project. If you have questions or need information clarified, please call Mr. Andrew Kerr at 510-333-9051 or Mr. Rory Johnston at (973) 560-4978.

Sincerely,

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.

Andrew Kerr, P.G. (Calif)
Associate

Robert (Rory) S. Johnston, P.E.
Sr. Principal/ Sr. Vice President

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

PHASE II ENVIRONMENTAL SITE INVESTIGATION
47th Street Site
57-00, 57-05, 57-57, and 58-20 47th Street
Maspeth, Queens, New York

1.0 INTRODUCTION

This Phase II Environmental Site Investigation (ESI) was performed for the properties located at 57-00, 57-05, 57-57, and 58-20 47th Street in Maspeth, Queens, New York, herein referred to as 'the 47th Street Site'. This Site is 3.8 acres in area and consists of four parcels of land with distinct uses. A site location map is provided as **Figure 1**.

The Site is currently vacant. The 57-00 47th Street parcel consists of a vacant former vehicle maintenance garage building with office space on the eastern end. The 58-20 47th Street parcel adjoins the 57-00 47th parcel and currently is vacant with a recycled concrete aggregate (RCA) surface and no permanent structures. The 57-05 47th Street parcel is developed with a vacant building that was recently used by a vehicle maintenance shop on the eastern end and as office space on the western end. The 57-57 47th Street parcel is developed with a vacant commercial building which was recently used as a delicatessen. The different portions of the Site will be referred to as the 57-00, 58-20, 57-05, and 57-57 parcels, consecutively.

The implemented scope of services included a geophysical survey and the completion of ten exploratory soil borings, eight of which were converted to temporary monitoring wells. Ten soil samples were collected from the ten borings and nine were analyzed. A groundwater sample was collected from each of the eight temporary monitoring wells and all eight were analyzed. Site configuration and sampling locations are included as **Figures 2 and 3.**

This summary report describes the scope of services conducted and the results of the investigation. Background information is presented below.

2.0 BACKGROUND

2.1 Phase I Environmental Site Assessment

Langan conducted a Phase I Environmental Site Assessment (ESA) for the Site in December 2021 (Langan, December 2021). Relevant information from this report is included as **Appendix D.** The

Phase I ESA identified the following Recognized Environmental Conditions (RECs), Historical REC (HREC), and Business Environmental Risks (BERs) in association with the Site:

REC 1 – Historical Site Use

Industrial/commercial operations at the Site date back to the 1800s and include an oil depot with petroleum bulk storage (circa 1914 to 1936), fertilizer/glue manufacturing (circa 1897 to 1914), and vehicle maintenance (circa 1982 to 2006). Various petroleum underground storage tanks (USTs have historically been located on three of the four parcels (UST records were not available for review for 58-20). UST-related leaks have been reported on two of the four parcels (on Parcels 57-00 and 57-57). Although these leaks are closed with the NYSDEC, closure reports were not available from NYSDEC for all of the reported incidents.

More recently, the 57-00 and 58-20 parcels formerly operated as a concrete recycling facility; the facility also accepted other demolition debris (circa 2004 and 2021). Additionally, a concrete laboratory historically operated on the 57-00 parcel (circa 2004 and 2021). Concrete testing laboratories historically have included chlorinated solvents in the operations..

REC 2 – Newtown Creek Superfund

The Newtown Creek is adjacent to the 57-00 and 58-20 parcel western property lines. The creek was added to the USEPA National Priority List in 2010 and remains as such. Former heavy industrial operations in the vicinity of Newtown Creek dating back to the 1800s have impacted the sediments and groundwater in the Creek.. A remedial investigation is currently underway for the Creek. Additionally, a focused feasibility study is currently being prepared regarding a combined sewer outfall long term control plan.

Newtown Creek has the potential to impact on-site soil and groundwater through tidal fluctuations and sediment deposition along the bank of the Creek.

REC 3 – On-Site Storm Water Vault & Oil/Water Separator

The geophysical survey associated with a Phase II Environmental Site Investigation prepared by Langan and dated July 2021 (the Langan July 2021 Phase II ESI) identified a potential oil/water separator and piping suggesting that the trench drains discharged to an on-site storm water vault on the southwestern end of the 57-00 parcel. Concrete slabs cover the storm water vault and

piping, therefore the presence of both the discharge piping and the vault could not a be field verified during the site reconnaissance.

REC 4 – Methyl Tert-Butyl Ether (MTBE) in Groundwater

During the Langan July 2021 Phase II ESI, methyl tert-butyl ether (MTBE) was detected in a groundwater sample collected from the northeastern corner of Parcel 57-05. MTBE is a gasoline additive (used since the 1980s) to aid in increasing octane and oxygen levels in gasoline to lower pollution emissions.

HREC 1- Closed Petroleum Spills

The Site has six NYSDEC reported spills which were all administratively closed. A summary of information provided in the Spills section of the EDR report is included below:

- NYSDEC Spill No. 94-11004 was reported November 17, 1994 due to the release of an unknown volume of gasoline. The spill was administratively closed on November 17, 1994. This incident occurred at the 57-00 parcel.
- NYSDEC Spill No. 97-09690 was reported November 20, 1997 after the release of an unknown volume of diesel fuel on soil. No further information regarding the spill was provided. The spill was administratively closed on January 8, 1998. This incident occurred at the 57-00 parcel.
- NYSDEC Spill No. 98-12248 was reported on January 4, 1999 after petroleum impacted soil was identified during the removal of a UST. Petroleum impacted soil was removed and endpoint samples were collected. The spill was remediated to NYSDEC satisfaction and was administratively closed on July 12, 2006. The incident occurred at the 57-57 parcel while under the Boro Lumber Company occupancy.
- NYSDEC Spill No. 07-09978 was reported after a UST failed a tank tightness test on December 18, 2007. The tank lines were re-tested and it was determined that the vent line failed due to a loose fitting. According to a NYSDEC obtained report, evidence of petroleum impacts to the subsurface were not identified by Larry E. Tyree Co., Inc. (the contracted environmental services provider of the Site occupant). The spill was administratively closed on December 28, 2007 following report submission by Larry E. Tyree Co. This incident occurred at the 57-00 parcel.
- NYSDEC Spill No. 08-08170 was reported October 21, 2008 after the report of an active release of petroleum substances and illegal storage and refueling of vehicles. A limited subsurface investigation was reportedly completed in 2009 that identified petroleum impacts in soils from surface grade to about eight feet below grade surface. About 381.04

tons of petroleum impacted soil was reportedly excavated and disposed of in 2010. Documentation of soil and groundwater samples collected post remediation reportedly confirmed that the spill was remediated to the satisfaction of the NYSDEC. The spill was administratively closed on October 27, 2012. This incident occurred at the 57-00 parcel.

- NYSDEC Spill No. 13-06438 was reported on September 19, 2013 after diesel impacted soil and pea gravel was identified in a tank vault during the removal of a 4,000-gallon UST. A closure report summarizing the remedial work and analytical data was reportedly prepared for NYSDEC. The spill was remediated to the satisfaction of the NYSDEC and the spill was administratively closed February 12, 2014. This incident occurred at the 57-00 parcel.

BER 1- Historic Fill

Previous report submittals contain reported field conditions identifying the presence of fill material on the Site. Field conditions identified historic fill material (i.e. brick, gravel, concrete, and wood) in soil borings completed as part of the Langan July 2021 Phase II ESI. Historic fill was also identified during other previous environmental investigations reviewed for this Phase I ESA. Laboratory results from soil and groundwater samples collected on the Site indicate the presence of typical historic fill constituents (i.e. polycyclic aromatic hydrocarbons [PAHs] and Metals).

Historical topographic maps indicate historic fill was deposited within the region sometime prior to the 1900s. Historical aerials depict a dark fill material spread onto lighter underlying soils on the 57-00 and 58-20 parcels in the early 1950s. Elevated PAHs and Metals pose a potential BER if future grading is planned, likely requiring a Soil Management Plan (SMP).

BER 2- Trench Drains & Oil/Water Separator

Trench drains were identified within the 57-00 and 57-05 parcel maintenance garage bays.

- Within the 57-00 parcel garage, trench drains were identified running along the northern and southern ends of the building. Metal plate-covered boxes were also identified near the trench drains on the northern and southern ends of the building. The representative for the property owner stated these boxes were associated with receiving liquids from the trench drains, however piping was not identified within these boxes during site reconnaissance. An oil/water separator was also observed near the trench drain along the southern side of the building. According to a geophysical report prepared as part of the Langan July 2021 Phase II ESI, the northern and southern trench drains appear to connect to a nearby storm drain in the southern parking area. This storm drain discharges to the on-site storm water vault.

- A trench drain connected to a slop sink was identified within a garage bay in the northern part of the building on the 57-05 parcel. The discharge location of this trench drain is unknown.

BER 3 - RCA Pile

During Langan's site reconnaissance on November 2, 2021, an approximate 1,000 cubic yard stockpile of recycled concrete aggregate (RCA) was observed on the northeastern portion of the 58-20 parcel. The stockpiled material appears related to the former concrete processing/recycling operations at the Site. The RCA pile is considered a BER since the source and environmental conditions of this material is unknown and it will need to be characterized and removed prior to Site redevelopment.

BER 4 - Administrative Consent Order

In April 2021, the NYSDEC imposed an administrative consent order (ACO) on the property. The ACO was imposed due to a tidal wetlands buffer requirement along Newtown Creek, which is western and adjacent to the 57-00 parcel. The ACO was filed with the property deed, and included provisions that structures cannot be erected on this area of Parcels 57-00 and 58-20. Additionally, a tidal wetland buffer vegetated area must be maintained by current and future occupants.

BER 5 – Asbestos Containing Materials (ACM), Lead-in-Paint and Mold

Asbestos and lead-in paint surveys were completed by Langan at the Site in November 2021, which identified confirmed and/or presumed ACM associated with the on-site buildings. Lead-in-paint was also identified red paint on the metal columns by the shutter doors on Parcel 57-00. A description of the asbestos and lead-in-paint survey results are presented in the *Hazardous Materials Survey Report* dated December 2021.

Langan observed indicators of mold during the Phase I ESA site reconnaissance on November 2, 2021. Potential mold was identified within buildings with damaged roofs on Parcels 57-00 and 57-05.

2.2 Prior Assessments

Phase I Environmental Site Assessment Report- July 21, 2021

Based on information provided by Prologis, a Phase I ESA was prepared by Langan on behalf of a party previously interested in the Site. Below is a summary of the RECs HRECs and de minimis condition identified during the July 21, 2021 Phase I ESA:

Two (2) Recognized Environmental Conditions (RECs) were identified on the Site.

- REC 1- Historical Use of Subject Property
- REC 2- Western-Adjoining Superfund Site (Newtown Creek)

One (1) Historical Recognized Environmental Conditions (HREC) was identified on the Site.

- HREC 1- Closed Spills on the Subject Property

One de minimis condition was identified during the site reconnaissance. The condition consisted of oil like staining identified throughout Lot 6 (Parcel 57-00). De minimis staining was identified in the interior warehouse space, near mechanic pits, in the vicinity of former ASTs, throughout the concrete paved parking area (south, east, and west of the building), beneath a parked excavator. This de minimis staining was also identified on Parcel 57-05 interior space, truck access bays, and exterior concrete paved parking areas. Surficial concrete cracks, joints, or exposed soil were not identified within stained areas.

Phase II Environmental Site Investigation Report- July 26, 2021

Based on information provided by Prologis, a Phase II ESI was prepared by Langan on behalf of a party previously interested in the Site. Below is a summation of the findings from the above referenced report. Relevant information from this report is included as **Appendix D.**

- A geophysical survey was conducted across the Site to clear soil borings/temporary well points; determine locations of underground utilities; and to attempt to identify subsurface anomalies, including those consistent with USTs.
    - 57-00 and 58-20 Parcels: Two UST graves were identified on the southeastern end of the parcel. Various underground utility lines, and drains were identified throughout the

parcels along with associated underground piping. A potential oil/water separator was identified within the southern end of the maintenance garage. The potential oil/water separator appears to be connected to piping leading to a nearby storm water drain which discharged to the on-site storm water vault.

  - 57-05 Parcel: Underground utility lines and underground storm sewer lines were identified throughout the parcel.

  - 57-57 Parcel: A water and sewer underground utility line was identified on this parcel.

- Eleven soil borings were completed on the Site. Four of these borings were converted to temporary groundwater monitoring wells. Soil and/or groundwater samples were collected from each sample location.

- Subsurface observations: Fill material consisting of fine-grained sand with varying amounts of fine gravel, silt, brick, wood, and concrete were identified at depths of four to sixteen feet below grade surface (bgs) on the Site. Petroleum-like odor and staining was identified within three locations (SB01, SB02, and SB04). Impacts were generally identified at or below the groundwater table; however, petroleum-related volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) were not detected above the Title 6 New York Codes, Rules and Regulations (6NYCRR) Part 375 Commercial Use (CU) and Industrial Use (IU) Soil Cleanup Objectives (SCOs) in the soil samples collected from these borings.

- Soil analytical results identified polycyclic aromatic hydrocarbons (PAHs), arsenic, lead, and mercury greater than their respective CU and IU SCOs.

- Groundwater analytical results identified VOCs, PAHs, and dissolved Metals (antimony, arsenic, iron, lead, magnesium, manganese, and sodium) above the NYSDEC Division of Water Technical and Operation Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (SGVs) for Class GA water (drinking water).

  - PAHs and Metals (i.e. anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, and ideno(1,2,3-cd)pyrene) were identified in groundwater at concentrations greater than their respective SGV.

  - Petroleum-related VOCs (i.e. 1,2-dichloropropane, isopropylbenzene, n-

propylbenzene) and MTBE were detected in groundwater at concentrations above their respective TOGS SGVs. MTBE was identified groundwater throughout the Site..

3.0 PHASE II EVALUATION

3.1 Scope and Timing

Langan completed the following scope of services:

- Further investigated the presence of potential subsurface utilities, USTs and/or subsurface structures and to clear proposed boring locations.
- Collected ten soil samples from ten exploratory soil borings advanced to a maximum depth of 18 feet bgs; and
- Collected eight groundwater samples from eight temporary wells.

The investigations were completed on 11 and 12 of November 2021. A summary of the analysis performed on soil and groundwater samples is presented in **Table 1** and **Table 2** respectively, and the location of the completed investigation points is shown on **Figures 2** and **3.**

3.2 Field Investigation Methods

The field investigation methods used to complete the Phase II ESI are summarized below. The activities are described in the general order of completion.

3.2.1 Pre-Investigative Tasks

The soil and groundwater sampling was completed after the following pre-investigative tasks:

- Lakewood Environmental Services, Corp. (Lakewood) submitted a New York State One Call ticket prior to the initiation of drilling activities. Utility mark outs were limited to public property (i.e. the street and sidewalk).
- Boreholes were marked out prior to drilling, for the purpose of utility clearance.

3.2.2 Geophysical Survey

Nova Geophysical Engineering Services (Nova) of Queens, New York conducted a geophysical survey on 11 November 2021, prior to the initiation of intrusive drilling activities. The survey was observed by Langan field staff and included the use of a Noggin 250 MHz ground penetrating radar (GPR) and

Radio Detection RD7100 electromagnetic (EM) utility locator. These instruments were utilized to attempt to locate potential subsurface utilities, USTs and/or subsurface structures and to clear proposed boring locations. Borings were relocated as necessary to avoid buried structures. The geophysical report prepared by Nova is included in **Appendix A**, with findings described below:

- 57-00 and 58-20 Parcels: Various underground utility lines, and drains with associated piping were identified throughout the parcels. A potential oil/water separator was identified within the southern end of the maintenance garage. The identified feature had piping connected to a nearby storm water drain, which connects to the on-site storm water vault.

- 57-05 Parcel: Two potential USTs were identified within the northeastern and northwestern portions of the parcel. A potential underground injection control (UIC) unit was also identified on the northern portion of the parcel. Underground utility and storm sewer lines were identified throughout the parcel.

- 57-57 Parcel: Water and sewer underground utility lines were identified on this parcel.

3.2.3 Exploratory Borings and Soil Sampling

The ten exploratory borings were drilled on 11 and 12 November 2021. Borings were advanced by Lakewood using a portable track-mounted Geoprobe 6610 DT direct push drill rig. The boreholes were advanced by hydraulically pushing a 2.0-inch diameter stainless steel sampler containing a 4 to 5-foot-long acetate macrocore sleeve into the subsurface. The boreholes were advanced to a depth between 15 and 18 feet bgs.

Soils were logged based on a modified Burmeister and Unified Soil Classification System (USCS) system. Completed logs for each soil boring are included in **Appendix B**. Soils retrieved from the acetate liners were screened for the presence of VOCs using a photo-ionization detector (PID) with a 10.6 eV bulb and calibrated with 100 parts per million (ppm) isobutylene reference gas. Elevated PID readings (ranging from 97 ppm to >500 ppm) in five of the ten soil borings (LB-4, LB-5, LB-6, LB-9, and LB-10), contained with the highest PID readings detected at or below groundwater.

Samples were collected by removing the soil in the acetate liner from the chosen sample depth and placing the soil into laboratory-provided containers. Sample jars were sealed and stored in a cooler with ice for transport to the analytical laboratory. Ten soil samples were collected at the Site, including:

- Four soil samples from borings on Parcel 57-00 (LB-1 to LB-4) that were analyzed for VOCs, SVOCs, Metals, and polychlorinated biphenyls (PCBs).
- Three soil samples from the interior of the structure on Parcel 57-00 (LB-5, LB-6, and LB 10) that were analyzed for VOCs, SVOCs, Metals, and PCBs.
    - The sample from boring LB-5 was placed on hold at the laboratory for all analyses and not analyzed considering soil boring LB-6 was located closer to the oil/water separator.
- Two soil samples from soil borings LB-7 and LB-8, completed on Parcel 57-05 in the estimated downgradient direction from the previously encountered MTBE area on Parcel 57-05; these samples were analyzed for VOC analysis. The soil sample from the soil boring (LB-9) located adjacent to and in an inferred downgradient from the UIC unit on Parcel 57-05, was also analyzed for VOC and SVOCs.
- One soil sample from soil boring LB-9 completed adjacent to a possible UST detected during the geophysical investigation on Parcel 57-05; the sample was analyzed for VOCs, SVOCs, Metals, and PCBs.

3.2.4 Temporary Well Installation & Groundwater Sampling

Eight borings were converted to temporary monitoring wells by installing 1-inch or 2-inch diameter poly-vinyl chloride (PVC) casing into select soil boreholes. The annular space around the temporary well was filled with No. 2 sand. The temporary well points were purged and groundwater samples were collected from each using dedicated, disposable 1.5-inch and 0.75-inch diameter weighted Teflon bailers and were collected into laboratory-supplied sample jars. Sample jars were secured in laboratory-provided, protective pouches, and stored in a cooler with ice for transport to the analytical laboratory.

The groundwater samples were collected at the Site on 12 November 2021, and analyzed for VOCs, SVOCs, and Metals. Since sample turbidity is generally high from groundwater collected from temporary well points; all groundwater samples were laboratory filtered, and analyzed for total and dissolved Metals. Exceptions included the samples from temporary well points LB-7 and LB-8, which were analyzed for VOCs only, and the sample from temporary well point LB-9, which was analyzed for VOCs and SVOCs.

4.0 RESULTS

4.1 Observed Subsurface Conditions

Subsurface soils consisted of sand, soil, and fill material (i.e. brick, concrete, gravel, and sand); bedrock was not encountered during this ESI. Groundwater was encountered between about 8.5 to 11 feet bgs. Odors, staining, and/or elevated PID readings were identified in soil borings LB-5, LB-6, LB-8, LB 9, and LB-10 at depths ranging from 6 to 18 feet bgs. However, petroleum-related VOCs and SVOCs were not detected above CU and/or IU SCOs in soil samples collected from these borings.

4.2 Soil and Groundwater Quality

Laboratory results are summarize by media in **Tables 1 and 2**, with results above the regulatory criteria depicted in Figures 2 and 3. Evaluation and discussions of the collected data are presented below. The laboratory analytical reports are included for reference in **Appendix C.**

4.2.1 Soil Evaluation

Langan evaluated the soil analytical results relative to 6NYCRR Part 375 CU and IU SCOs. Compounds and Metals exceeding the CU and/or IU SCOs are summarized below. SCOs are listed in parentheses. Exceedances of IU SCOs are in **bold**.

VOCs

VOCs were not detected at concentrations above CU or IU SCOs.

SVOCs – SVOCs were detected in LB-1, LB-2 and LB-3 above the CU and/or IU SCOs as summarized below:

- Benzo(a)pyrene – **4.8 mg/kg** in LB-1; **1.3 mg/kg** in LB-2; **3.6 mg/kg** in LB-3 (CU SCO: 1 mg/kg; IU SCO: 1.1 mg/kg)
- Benzo(b)fluoranthene – 5.7 mg/kg in LB-1 (CU SCO: 5.6 mg/kg; IU SCO: 11 mg/kg)
- Dibenzo(a,h)anthracene – 0.92 mg/kg in LB-1; 0.67 mg/kg in LB-3 (CU SCO: 0.56 mg/kg; IU SCO: 1.1 mg/kg)

PCBs - PCBs were not detected at concentrations above CU and/or IU SCOs.

Metals – Metals were detected in LB-1, LB-2, LB-3, and LB-10 above their respective CU and/or IU SCOs as summarized below:

- Arsenic – **83 mg/kg** in LB-3; **1,900 mg/kg** in LB-10 (CU/IU SCO: 16 mg/kg)
- Barium – 1,400 mg/kg in LB-2 (CU SCO: 400 mg/kg; IU SCO:10,000 mg/kg)
- Copper – 580 mg/kg in LB-2 (CU SCO: 270 mg/kg; IU SCO: 10,000 mg/kg)
- Cyanide – 140 mg/kg in LB-10 (CU SCO: 27 mg/kg; 54 SCO: 10,000 mg/kg
- Lead – 1,800 mg/kg in LB-1 and LB-10 (CU SCO: 1,000 mg/kg)
- Mercury – 3.6 mg/kg in LB-2; **6.5 mg/kg** in LB-10 (CU SCO: 2.8 mg/kg)

4.2.2 Groundwater Evaluation

Langan evaluated the groundwater analytical results relative to the NYSDEC's TOGS SGVs for Class GA (drinking water).

VOCs - VOCs were detected in samples TW-1, TW-8, and TW-9 at concentrations above the NYSDEC TOGS SGVs and are summarized below. SGVs are listed in parentheses:

- Ethylbenzene – 8.6 micrograms per liter (µg/L) in TW-1 (SGV: 5 µg/L)
- Isopropylbenzene – 24 µg/L in TW-9 (SGV: 5 µg/L)
- Toluene – 60 µg/L in TW-8 (SGV: 5 µg/L)

SVOCs - SVOCs were detected in samples TW-1 and TW-2 at concentrations above the NYSDEC TOGS SGVs and are summarized below. SGVs are listed in parentheses:

- Acenaphthene– 53 µg/L in TW-1 (SGV: 20 µg/L)
- Anthracene– 73 µg/L in TW-1 (SGV: 50 µg/L)
- Benzo(a)anthracene – 63 µg/L in TW-1; 6.9 µg/L in TW- 2 (SGV: 0.002 µg/L)
- Benzo(a)pyrene – 43 µg/L in TW-1; 6.2 µg/L in TW-2 (SVG: 0 µg/L)
- Benzo(b)fluoranthene – 44 µg/L in TW-1; 7.3 µg/L in TW-2 (SGV: 0.002 µg/L)
- Benzo(k)fluoranthene – 10 µg/L in TW-1; 2.2 µg/L in TW-2 (SGV: 0.002 µg/L)
- Chrysene – 60 µg/L in TW-1; 5.2 µg/L in TW-2 (SGV: 0.002 µg/L)
- Fluoranthene – 110 µg/L in TW-1 (SGV: 50 µg/L)
- Fluorene – 55 µg/L in TW-1 (SGV: 50 µg/L)
- Indeno(1,2,3-cd)pyrene – 15 µg/L in TW-1; 3.2 µg/L in TW-2 (SGV: 0.002 µg/L)
- Naphthalene – 17 µg/L in TW-1 (SGV: 10 µg/L)
- Phenanthrene – 220 µg/L in TW-1 (SGV: 50 µg/L)

- Pyrene – 170 µg/L in TW-1 (SGV: 50 µg/L)

Total Metals – One or more of the following Metals were detected at concentrations above the NYSDEC TOGS SGVs in the unfiltered groundwater samples across the site:

- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Chromium
- Copper
- Iron
- Lead
- Magnesium
- Manganese
- Mercury
- Nickel
- Selenium
- Sodium
- Zinc

Dissolved Metals - Dissolved Metals were detected in filtered samples TW-1 through TW-4 and TW-6 at concentrations above the SGVs and are summarized below. SGVs are listed in parenthesis:

- Antimony – 3.3 µg/L in TW-4 to 8.3 µg/L in TW-6 (SGV: 3 µg/L)
- Arsenic – 45 µg/L was detected in in TW-3 (SGV: 3 µg/L)
- Iron – 650 µg/L in TW-1 (SGV: 300 µg/L)
- Manganese – 640 µg/L in TW-2 (SGV: 300 µg/L)
- Sodium – 25,000 µg/L in TW-6 to 310,000 µg/L in TW-4 (SGV: 20,000 µg/L);

5.0 FINDINGS

The following is a summary of Phase ESI II findings:

- Anomalies indicative of an UIC point and two USTs were identified during the geophysical survey on the northern, northeastern, and northwestern portions of Parcel 57-05, respectively. In addition, an OWS, storm and sanitary lines, and a storm water vault were detected on Parcel 57-00.
- Odors, staining, and/or elevated PID readings were identified in soil borings LB-5, LB-6, LB-8, LB-9, and LB-10 at depths ranging from 6 to 18 feet bgs. These observations were generally identified in soils at or below the groundwater table. However, petroleum-related VOCs and SVOCs were not detected above CU and/or IU SCOs in soil samples collected from these borings.

SOIL:

- VOCs were not measured in soil samples at concentrations greater than their respective CU or IU SCOs.
- SVOCs and Metals were detected in soil samples at a concentrations greater than their respective CU and/or IU SCOs.

GROUNDWATER:

- VOCs and SVOCs were detected in Site groundwater at concentrations greater than their respective NYSDEC TOGS SGVs. VOCs and select SVOCs detected above the NYSDEC TOGS SGVs are petroleum-related.
- Ethylbenzene and naphthalene were identified in temporary well point TW-1, installed along the southwestern portion of Parcel 57-00 at concentrations greater than their respective NYSDEC TOGS SGVs.
- Gasoline VOC related constituents MTBE, toluene, and isopropylbenzene were identified in groundwater on Parcel 57-05.
- Barium, beryllium, cadmium, total chromium, copper, lead, magnesium, mercury, nickel, selenium, and zinc were detected in total concentrations above the NYSDEC TOGS SGVs in the unfiltered samples and can be attributed to the suspended solids in the groundwater samples. These results correlate with high field-reported turbidity levels at each of the sample locations.
- Antimony, iron, manganese and sodium were detected at dissolved concentrations in filtered samples. These Metals are naturally-occurring and the detected concentrations are not indicative of groundwater contamination. Arsenic was identified in filtered temporary well sample TW-3 at concentrations exceeding the NYSDEC TOGS SGVs.

TABLES

Table 1
Soil Analytical Results Summary Table
Project # 100965501 - 47th Street Site, Maspeth, NY

Analyte	CAS Number	NYSDEC Part 375 Restricted Use Commercial SCOs	NYSDEC Part 375 Restricted Use Industrial SCOs	Location	LB-1	LB-2	LB-3	LB-4	LB-6	LB-7B-3W	LB-8	LB-9B-2N	LB-10
				Sample Name	LB-1 (7.5-8.0)	LB-2 (10.5-11.0)	LB-3 (6.0-6.5)	LB-4 (1.5-2.0)	LB-6 (16.5-17.0)	LB-7b-3W (8.5-9.0	LB-8 (7.5-8.0)	B-9b-2N (10.0-10.5	LB-10 (6.5-7.0)
				Sample Date	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021
				Sample Depth	7.5-8	10.5-11	6-6.5	1.5-2	16.5-17	8.5-9	7.5-8	10-10.5	6.5-7
				Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result
Volatile Organic Compounds													
1,1,1-Trichloroethane	71-55-6	500	1000	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
1,1-Dichloroethane	75-34-3	240	480	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
1,1-Dichloroethene	75-35-4	500	1000	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
1,2,4-Trimethylbenzene	95-63-6	190	380	mg/kg	<0.0013 U	<0.0017 U	<0.0015 U	0.0019	<0.091 UD	<0.0008 U	0.19	<1.3 UD	33 D
1,2-Dichlorobenzene	95-50-1	500	1000	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
1,2-Dichloroethane	107-06-2	30	60	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.058 UD	<0.0016 U	<0.0017 U	<0.85 UD	<1.3 UD
1,3,5-Trimethylbenzene (Mesitylen	108-67-8	190	380	mg/kg	<0.0013 U	<0.0017 U	<0.0015 U	<0.00097 U	<0.091 UD	<0.0008 U	0.18	1.8 D	21 D
1,3-Dichlorobenzene	541-73-1	280	560	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
1,4-Dichlorobenzene	106-46-7	130	250	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
1,4-Dioxane (P-Dioxane)	123-91-1	130	250	mg/kg	<0.13 U	<0.17 U	<0.15 U	<0.097 U	<4.6 UD	<0.08 U	<0.085 U	<66 UD	<100 UD
Acetone	67-64-1	500	1000	mg/kg	0.038	0.35	0.16	0.06	<0.46 UD	<0.008 U	0.05	17 D	35 D
Benzene	71-43-2	44	89	mg/kg	<0.0013 U	<0.0017 U	<0.0015 U	<0.00097 U	<0.046 UD	<0.0008 U	<0.00085 U	<0.66 UD	<1 UD
Carbon Tetrachloride	56-23-5	22	44	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
Chlorobenzene	108-90-7	500	1000	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
Chloroform	67-66-3	350	700	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.18 UD	<0.0016 U	<0.0017 U	<2.6 UD	<3.9 UD
Cis-1,2-Dichloroethene	156-59-2	500	1000	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
Ethylbenzene	100-41-4	390	780	mg/kg	<0.0013 U	<0.0017 U	<0.0015 U	<0.00097 U	<0.091 UD	<0.0008 U	<0.00085 U	2.5 D	14 D
M,P-Xylene	179601-23-1	NS	NS	mg/kg	<0.0016 U	<0.0021 U	<0.0018 U	<0.0012 U	<0.091 UD	<0.00096 U	0.0014	<1.3 UD	75 D
Methyl Ethyl Ketone (2-Butanone)	78-93-3	500	1000	mg/kg	0.0068	0.11	0.012	0.0061	<0.091 UD	<0.0016 U	0.011	<1.3 UD	<2 UD
Methylene Chloride	75-09-2	500	1000	mg/kg	0.0066	0.005	<0.003 U	0.0042	<0.091 UD	<0.0016 U	0.0028	<1.3 UD	<2 UD
n-Butylbenzene	104-51-8	500	1000	mg/kg	<0.0013 U	<0.0017 U	<0.0015 U	<0.00097 U	<0.091 UD	<0.0008 U	0.044	<1.3 UD	13 D
n-Propylbenzene	103-65-1	500	1000	mg/kg	<0.0013 U	<0.0017 U	<0.0015 U	<0.00097 U	<0.091 UD	<0.0008 U	<0.00085 U	1.9 D	11 D
o-Xylene (1,2-Dimethylbenzene)	95-47-6	NS	NS	mg/kg	<0.0013 U	<0.0017 U	<0.0015 U	<0.00097 U	<0.091 UD	<0.0008 U	0.0011	<1.3 UD	12 D
Sec-Butylbenzene	135-98-8	500	1000	mg/kg	<0.0013 U	<0.0017 U	<0.0015 U	<0.00097 U	<0.091 UD	<0.0008 U	0.08	<1.3 UD	<2 UD
T-Butylbenzene	98-06-6	500	1000	mg/kg	<0.0013 U	0.0062	<0.0015 U	<0.00097 U	<0.091 UD	<0.0008 U	<0.00085 U	<1.3 UD	<2 UD
Tert-Butyl Methyl Ether	1634-04-4	500	1000	mg/kg	<0.0013 U	<0.0017 U	<0.0015 U	<0.00097 U	<0.046 UD	<0.0008 U	<0.00085 U	<0.66 UD	<1 UD
Tetrachloroethene (PCE)	127-18-4	150	300	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
Toluene	108-88-3	500	1000	mg/kg	<0.0013 U	<0.0017 U	<0.0015 U	<0.00097 U	<0.091 UD	<0.0008 U	0.026	<1.3 UD	<2 UD
Total Xylenes	1330-20-7	500	1000	mg/kg	<0.0013 U	<0.0017 U	<0.0015 U	<0.00097 U	<0.091 UD	<0.0008 U	0.0025	<1.3 UD	87 D
Trans-1,2-Dichloroethene	156-60-5	500	1000	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
Trichloroethene (TCE)	79-01-6	200	400	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
Vinyl Chloride	75-01-4	13	27	mg/kg	<0.0026 U	<0.0035 U	<0.003 U	<0.0019 U	<0.091 UD	<0.0016 U	<0.0017 U	<1.3 UD	<2 UD
Semi-Volatile Organic Compounds													
2-Methylphenol (o-Cresol)	95-48-7	500	1000	mg/kg	<0.053 UD	<0.014 U	<0.058 UD	<0.011 U	<0.012 U	NA	NA	<0.011 U	51 D
4-Methylphenol (P-Cresol)	106-44-5	500	1000	mg/kg	<0.054 UD	0.017	0.064 D	<0.011 U	<0.012 U	NA	NA	<0.011 U	180 D
Acenaphthene	83-32-9	500	1000	mg/kg	1.3 D	0.066	0.49 D	0.071	0.16	NA	NA	<0.037 U	15 D
Acenaphthylene	208-96-8	500	1000	mg/kg	1.6 D	<0.048 U	0.21 D	<0.038 U	<0.04 U	NA	NA	<0.037 U	<10 UD
Anthracene	120-12-7	500	1000	mg/kg	2.4 D	0.26	1.4 D	0.13	<0.04 U	NA	NA	<0.037 U	19 D
Benzo(a)anthracene	56-55-3	5.6	11	mg/kg	4.8 D	1.4	4.2 D	0.37	<0.04 U	NA	NA	<0.037 U	<10 UD
Benzo(a)pyrene	50-32-8	**1**	1.1	mg/kg	**4.8 D**	**1.3**	**3.6 D**	0.31	<0.04 U	NA	NA	<0.037 U	<10 UD
Benzo(b)fluoranthene	205-99-2	**5.6**	11	mg/kg	**5.7 D**	1.8	4.8 D	0.42	<0.04 U	NA	NA	<0.037 U	<10 UD
Benzo(g,h,i)Perylene	191-24-2	500	1000	mg/kg	3.1 D	0.94	2.3 D	0.2	<0.04 U	NA	NA	<0.037 U	<10 UD
Benzo(k)fluoranthene	207-08-9	56	110	mg/kg	1.3 D	0.42	1.2 D	0.15	<0.04 U	NA	NA	<0.037 U	<10 UD
Chrysene	218-01-9	56	110	mg/kg	4.3 D	1.2	4.4 D	0.35	<0.04 U	NA	NA	<0.037 U	15 D
Dibenz(a,h)anthracene	53-70-3	**0.56**	1.1	mg/kg	**0.92 D**	0.22	**0.67 D**	0.049	<0.04 U	NA	NA	<0.037 U	<10 UD
Dibenzofuran	132-64-9	350	1000	mg/kg	0.43 D	0.044	0.32 D	0.036	0.023	NA	NA	<0.0093 U	4.8 D
Fluoranthene	206-44-0	500	1000	mg/kg	7.7 D	2.2	8 D	0.77	<0.04 U	NA	NA	<0.037 U	22 D
Fluorene	86-73-7	500	1000	mg/kg	1.1 D	0.062	0.55 D	0.057	<0.04 U	NA	NA	<0.037 U	40 D
Hexachlorobenzene	118-74-1	6	12	mg/kg	<0.19 UD	<0.048 U	<0.2 UD	<0.038 U	<0.04 U	NA	NA	<0.037 U	<10 UD
Indeno(1,2,3-cd)pyrene	193-39-5	5.6	11	mg/kg	2.7 D	0.79	2 D	0.18	<0.04 U	NA	NA	<0.037 U	<10 UD
Naphthalene	91-20-3	500	1000	mg/kg	0.59 D	0.086	0.3 D	0.034	<0.012 U	NA	NA	<0.011 U	140 D
Pentachlorophenol	87-86-5	6.7	55	mg/kg	<0.93 UD	<0.24 U	<1 UD	<0.19 U	<0.2 U	NA	NA	<0.18 U	<52 UD
Phenanthrene	85-01-8	500	1000	mg/kg	9.4 D	1	7.2 D	0.56	<0.04 U	NA	NA	<0.037 U	79 D
Phenol	108-95-2	500	1000	mg/kg	<0.19 UD	<0.048 U	0.23 D	<0.038 U	<0.04 U	NA	NA	<0.037 U	<10 UD
Pyrene	129-00-0	500	1000	mg/kg	10 D	2.2	8.9 D	0.66	0.11	NA	NA	<0.037 U	<10 UD

Table 1
Soil Analytical Results Summary Table
Project # 100965501 - 47th Street Site, Maspeth, NY

Analyte	CAS Number	NYSDEC Part 375 Restricted Use Commercial SCOs	NYSDEC Part 375 Restricted Use Industrial SCOs	Location	LB-1	LB-2	LB-3	LB-4	LB-6	LB-7B-3W	LB-8	LB-9B-2N	LB-10
				Sample Name	LB-1 (7.5-8.0)	LB-2 (10.5-11.0)	LB-3 (6.0-6.5)	LB-4 (1.5-2.0)	LB-6 (16.5-17.0)	LB-7b-3W (8.5-9.0	LB-8 (7.5-8.0)	B-9b-2N (10.0-10.5	LB-10 (6.5-7.0)
				Sample Date	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021
				Sample Depth	7.5-8	10.5-11	6-6.5	1.5-2	16.5-17	8.5-9	7.5-8	10-10.5	6.5-7
				Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result
Polychlorinated Biphenyl													
PCB-1016 (Aroclor 1016)	12674-11-2	NS	NS	mg/kg	<0.028 U	<0.036 U	<0.03 U	<0.028 U	<0.03 U	NA	NA	<0.027 U	<0.18 UD
PCB-1221 (Aroclor 1221)	11104-28-2	NS	NS	mg/kg	<0.028 U	<0.036 U	<0.03 U	<0.028 U	<0.03 U	NA	NA	<0.027 U	<0.18 UD
PCB-1232 (Aroclor 1232)	11141-16-5	NS	NS	mg/kg	<0.028 U	<0.036 U	<0.03 U	<0.028 U	<0.03 U	NA	NA	<0.027 U	<0.18 UD
PCB-1242 (Aroclor 1242)	53469-21-9	NS	NS	mg/kg	<0.028 U	<0.036 U	<0.03 U	<0.028 U	<0.03 U	NA	NA	<0.027 U	<0.18 UD
PCB-1248 (Aroclor 1248)	12672-29-6	NS	NS	mg/kg	<0.028 U	<0.036 U	<0.03 U	<0.028 U	<0.03 U	NA	NA	<0.027 U	<0.18 UD
PCB-1254 (Aroclor 1254)	11097-69-1	NS	NS	mg/kg	<0.028 U	<0.036 U	<0.03 U	0.12	<0.03 U	NA	NA	<0.027 U	<0.18 UD
PCB-1260 (Aroclor 1260)	11096-82-5	NS	NS	mg/kg	<0.028 U	<0.036 U	<0.03 U	<0.028 U	<0.03 U	NA	NA	<0.027 U	<0.18 UD
PCB-1262 (Aroclor 1262)	37324-23-5	NS	NS	mg/kg	<0.028 U	<0.036 U	<0.03 U	<0.028 U	<0.03 U	NA	NA	<0.027 U	<0.18 UD
PCB-1268 (Aroclor 1268)	11100-14-4	NS	NS	mg/kg	<0.028 U	<0.036 U	<0.03 U	<0.028 U	<0.03 U	NA	NA	<0.027 U	<0.18 UD
Total PCBs	1336-36-3	1	25	mg/kg	<0.028 U	<0.036 U	<0.03 U	0.12	<0.03 U	NA	NA	<0.027 U	<0.18 UD
Metals													
Arsenic	7440-38-2	**16**	16	mg/kg	5.4	9.3	**83**	4.6	0.95	NA	NA	7.5	**1,900 D**
Barium	7440-39-3	**400**	10000	mg/kg	190	**1,400**	160	90	20	NA	NA	52	30
Beryllium	7440-41-7	590	2700	mg/kg	0.31	1.2	0.27	0.35	<0.24 U	NA	NA	0.42	<0.29 U
Cadmium	7440-43-9	9.3	60	mg/kg	<0.44 U	1.7	<0.49 U	<0.45 U	<0.48 U	NA	NA	<0.44 U	4.7
Chromium, Hexavalent	18540-29-9	400	800	mg/kg	<0.89 U	<1.2 U	<0.98 U	<0.91 U	<0.96 U	NA	NA	<0.88 U	<1.1 U
Chromium, Total	7440-47-3	NS	NS	mg/kg	13	34	11	15	8.9	NA	NA	22	<7.1 U
Chromium, Trivalent	16065-83-1	1500	6800	mg/kg	13	34	11	15	8.9	NA	NA	22	<7.1 U
Copper	7440-50-8	**270**	10000	mg/kg	69	**580**	84	21	8.2	NA	NA	23	140
Cyanide	57-12-5	**27**	10000	mg/kg	0.36	<0.35 U	<0.29 U	0.65	0.36	NA	NA	<0.26 U	**140 D**
Lead	7439-92-1	**1000**	3900	mg/kg	270	**1,800 D**	770	71	<6 U	NA	NA	16	**1,800 D**
Manganese	7439-96-5	10000	10000	mg/kg	240	180	230	200	210	NA	NA	2,000 D	27
Mercury	7439-97-6	**2.8**	5.7	mg/kg	0.98	**3.6**	1.4	0.2	<0.1 U	NA	NA	<0.092 U	**6.5 D**
Nickel	7440-02-0	310	10000	mg/kg	16	43	11	11	9.1	NA	NA	16	<7.1 U
Selenium	7782-49-2	1500	6800	mg/kg	<2.2 U	6.1	7.2	<2.3 U	<2.4 U	NA	NA	<2.2 U	67
Silver	7440-22-4	1500	6800	mg/kg	<0.22 U	0.72	0.78	<0.23 U	<0.24 U	NA	NA	<0.22 U	0.46
Zinc	7440-66-6	10000	10000	mg/kg	210	1,700 D	70	84	20	NA	NA	33	120
General Chemistry													
Oxidation-Reduction Potential	ORP	NS	NS	mV	180	190	-59	-24	60	NA	NA	61	130
Ph	PH	NS	NS	pH UNITS	8.6	7.3	11	12	8	NA	NA	7	4.1
Solids, Percent	SOLID	NS	NS	Percent	90	69	82	88	83	92	93	91	70
Temperature	TEMP	NS	NS	deg C	22	22	22	22	22	NA	NA	22	22

Notes:
CAS - Chemical Abstract Service
NS - No standard
mg/kg - milligram per kilogram
NA - Not analyzed
RL - Reporting limit
<RL - Not detected
Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Restricted Use Commercial, and Restricted Criterion comparisons for 3- & 4-methylphenol (m&p cresol) are provided for reference. Promulgated SCOs are for 3-methylphenol (m-cresol) and 4-methylphenol (p-cresol).

Qualifiers:
D - The concentration reported is a result of a diluted sample.
J - The analyte was detected above the method detection limit (MDL), but below the reporting limit (RL); therefore, the result is an estimated concentration.
U - The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.

Exceedance Summary:
10 - Result exceeds Restricted Use Commercial SCOs
10 - Result exceeds Restricted Use Industrial SCOs

Table 2
Groundwater Analytical Results Summary Table
Project # 100965501 - 47th Street Site, Maspeth, NY

Analyte	CAS Number	NYSDEC SGVs	Location	TW-1	TW-1	TW-2	TW-2	TW-3	TW-3	TW-4	TW-4	TW-6	TW-6	TW-7	TW-8	TW-9
			Sample Name	LB-1\TW-1 F	LB-1\TW-1 U	LB-2\TW-2 F	LB-2\TW-2 U	LB-3\TW-3 F	LB-3\TW-3 U	LB-4\TW-4 F	LB-4\TW-4 U	LB-6\TW-6 F	LB-6\TW-6 U	LB-7\TW-7	LB-8\TW-8	LB-9\TW-9
			Sample Date	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021
			Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Volatile Organic Compounds																
1,1,1-Trichloroethane	71-55-6	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,1,2,2-Tetrachloroethane	79-34-5	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,1,2-Trichloroethane	79-00-5	1	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,1-Dichloroethane	75-34-3	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,1-Dichloroethene	75-35-4	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,2,3-Trichlorobenzene	87-61-6	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,2,4-Trichlorobenzene	120-82-1	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,2-Dibromo-3-Chloropropane	96-12-8	0.04	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	0.0006	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,2-Dichlorobenzene	95-50-1	3	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,2-Dichloroethane	107-06-2	0.6	ug/l	NA	<0.64 U	NA	<0.64 U	NA	<0.64 U	NA	<0.64 U	NA	<0.64 U	<0.64 U	<0.64 U	<6.4 UD
1,2-Dichloropropane	78-87-5	1	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,3-Dichlorobenzene	541-73-1	3	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,4-Dichlorobenzene	106-46-7	3	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
1,4-Dioxane (P-Dioxane)	123-91-1	NS	ug/l	NA	<50 U	NA	<50 U	NA	<50 U	NA	<50 U	NA	<50 U	<50 U	<50 U	<500 UD
2-Hexanone (MBK)	591-78-6	50	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Acetone	67-64-1	50	ug/l	NA	<5 U	NA	<5 U	NA	<5 U	NA	<5 U	NA	12	5.3	12	<50 UD
Benzene	71-43-2	1	ug/l	NA	0.95	NA	<0.5 U	NA	<0.5 U	NA	<0.5 U	NA	<0.5 U	<0.5 U	<0.5 U	<5 UD
Bromochloromethane	74-97-5	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Bromodichloromethane	75-27-4	50	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Bromoform	75-25-2	50	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Bromomethane	74-83-9	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Carbon Disulfide	75-15-0	60	ug/l	NA	1.5	NA	<1 U	NA	<1 U	NA	<1 U	NA	1.5	<1 U	1.6	<10 UD
Carbon Tetrachloride	56-23-5	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Chlorobenzene	108-90-7	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Chloroethane	75-00-3	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Chloroform	67-66-3	7	ug/l	NA	<2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	<2 U	<2 U	<2 U	<20 UD
Chloromethane	74-87-3	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Cis-1,2-Dichloroethene	156-59-2	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Cis-1,3-Dichloropropene	10061-01-5	0.4	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Cyclohexane	110-82-7	NS	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Dibromochloromethane	124-48-1	50	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Dichlorodifluoromethane	75-71-8	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Ethylbenzene	100-41-4	**5**	ug/l	NA	**8.6**	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Isopropylbenzene (Cumene)	98-82-8	**5**	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	**24 D**
M,P-Xylene	179601-23-1	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Methyl Acetate	79-20-9	NS	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Methyl Ethyl Ketone (2-Butanone)	78-93-3	50	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	1.6	<10 UD
Methyl Isobutyl Ketone (4-Methyl-2-Pentanon	108-10-1	NS	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Methylcyclohexane	108-87-2	NS	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	3	2,900 D
Methylene Chloride	75-09-2	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
o-Xylene (1,2-Dimethylbenzene)	95-47-6	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Styrene	100-42-5	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Tert-Butyl Methyl Ether	1634-04-4	10	ug/l	NA	5.9	NA	2.4	NA	4.4	NA	0.55	NA	<0.5 U	1.4	<0.5 U	<5 UD
Tetrachloroethene (PCE)	127-18-4	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Toluene	108-88-3	**5**	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	**60**	<10 UD
Total Xylenes	1330-20-7	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Trans-1,2-Dichloroethene	156-60-5	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Trans-1,3-Dichloropropene	10061-02-6	0.4	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Trichloroethene (TCE)	79-01-6	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Trichlorofluoromethane	75-69-4	5	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD
Vinyl Chloride	75-01-4	2	ug/l	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	NA	<1 U	<1 U	<1 U	<10 UD

Table 2
Groundwater Analytical Results Summary Table
Project # 100965501 - 47th Street Site, Maspeth, NY

Analyte	CAS Number	NYSDEC SGVs	Location	TW-1	TW-1	TW-2	TW-2	TW-3	TW-3	TW-4	TW-4	TW-6	TW-6	TW-7	TW-8	TW-9
			Sample Name	LB-1\TW-1 F	LB-1\TW-1 U	LB-2\TW-2 F	LB-2\TW-2 U	LB-3\TW-3 F	LB-3\TW-3 U	LB-4\TW-4 F	LB-4\TW-4 U	LB-6\TW-6 F	LB-6\TW-6 U	LB-7\TW-7	LB-8\TW-8	LB-9\TW-9
			Sample Date	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021
			Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Semi-Volatile Organic Compounds																
1,2,4,5-Tetrachlorobenzene	95-94-3	5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
1,4-Dioxane (P-Dioxane)	123-91-1	NS	ug/l	NA	<0.5 U	NA	<0.56 U	NA	<0.5 U	NA	<0.5 U	NA	<0.5 U	NA	NA	<0.56 U
2,3,4,6-Tetrachlorophenol	58-90-2	NS	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
2,4,5-Trichlorophenol	95-95-4	NS	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
2,4,6-Trichlorophenol	88-06-2	NS	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
2,4-Dichlorophenol	120-83-2	1	ug/l	NA	<0.5 U	NA	<0.56 U	NA	<0.5 U	NA	<0.5 U	NA	<0.5 U	NA	NA	<0.56 U
2,4-Dimethylphenol	105-67-9	1	ug/l	NA	<0.55 U	NA	<0.61 U	NA	<0.55 U	NA	<0.55 U	NA	<0.55 U	NA	NA	<0.61 U
2,4-Dinitrophenol	51-28-5	1	ug/l	NA	<10 U	NA	<11 U	NA	<10 U	NA	<10 U	NA	<10 U	NA	NA	<11 U
2,4-Dinitrotoluene	121-14-2	5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
2,6-Dinitrotoluene	606-20-2	5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
2-Chloronaphthalene	91-58-7	10	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
2-Chlorophenol	95-57-8	NS	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
2-Methylnaphthalene	91-57-6	NS	ug/l	NA	20	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
2-Methylphenol (o-Cresol)	95-48-7	NS	ug/l	NA	<0.5 U	NA	<0.56 U	NA	<0.5 U	NA	<0.5 U	NA	<0.5 U	NA	NA	<0.56 U
2-Nitroaniline	88-74-4	5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
2-Nitrophenol	88-75-5	NS	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
3,3'-Dichlorobenzidine	91-94-1	5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
3-Nitroaniline	99-09-2	5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
4,6-Dinitro-2-Methylphenol	534-52-1	NS	ug/l	NA	<10 U	NA	<11 U	NA	<10 U	NA	<10 U	NA	<10 U	NA	NA	<11 U
4-Bromophenyl Phenyl Ether	101-55-3	NS	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
4-Chloro-3-Methylphenol	59-50-7	NS	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
4-Chloroaniline	106-47-8	5	ug/l	NA	<0.5 U	NA	<0.56 U	NA	<0.5 U	NA	<0.5 U	NA	<0.5 U	NA	NA	<0.56 U
4-Chlorophenyl Phenyl Ether	7005-72-3	NS	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
4-Methylphenol (P-Cresol)	106-44-5	NS	ug/l	NA	<0.5 U	NA	<0.56 U	NA	<0.5 U	NA	<0.5 U	NA	<0.5 U	NA	NA	<0.56 U
4-Nitroaniline	100-01-6	5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
4-Nitrophenol	100-02-7	NS	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Acenaphthene	83-32-9	**20**	ug/l	NA	**53**	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	3.5	NA	NA	<2.2 U
Acenaphthylene	208-96-8	NS	ug/l	NA	19	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Acetophenone	98-86-2	NS	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Anthracene	120-12-7	**50**	ug/l	NA	**73**	NA	3	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Atrazine	1912-24-9	7.5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Benzaldehyde	100-52-7	NS	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Benzo(a)anthracene	56-55-3	**0.002**	ug/l	NA	**63**	NA	**6.9**	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Benzo(a)pyrene	50-32-8	**0**	ug/l	NA	**43**	NA	**6.2**	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Benzo(b)fluoranthene	205-99-2	**0.002**	ug/l	NA	**44**	NA	**7.3**	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Benzo(g,h,i)Perylene	191-24-2	NS	ug/l	NA	18	NA	4.3	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Benzo(k)fluoranthene	207-08-9	**0.002**	ug/l	NA	**10**	NA	**2.2**	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Benzyl Butyl Phthalate	85-68-7	50	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Biphenyl (Diphenyl)	92-52-4	5	ug/l	NA	3.7	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Bis(2-chloroethoxy) methane	111-91-1	5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Bis(2-chloroethyl) ether (2-chloroethyl ether)	111-44-4	1	ug/l	NA	<0.5 U	NA	<0.56 U	NA	<0.5 U	NA	<0.5 U	NA	<0.5 U	NA	NA	<0.56 U
Bis(2-chloroisopropyl) ether	108-60-1	5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Bis(2-ethylhexyl) phthalate	117-81-7	5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	2.6
Caprolactam	105-60-2	NS	ug/l	NA	<2 U	NA	13	NA	13	NA	<2 U	NA	25	NA	NA	<2.2 U
Carbazole	86-74-8	NS	ug/l	NA	2.6	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Chrysene	218-01-9	**0.002**	ug/l	NA	**60**	NA	**5.2**	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Dibenz(a,h)anthracene	53-70-3	NS	ug/l	NA	5.5	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Dibenzofuran	132-64-9	NS	ug/l	NA	4.8	NA	<0.76 U	NA	<0.68 U	NA	<0.68 U	NA	<0.68 U	NA	NA	<0.76 U
Dibutyl phthalate	84-74-2	50	ug/l	NA	<1.1 U	NA	<1.2 U	NA	<1.1 U	NA	<1.1 U	NA	<1.1 U	NA	NA	<1.2 U
Diethyl phthalate	84-66-2	50	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Dimethyl phthalate	131-11-3	50	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Dioctyl phthalate	117-84-0	50	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Fluoranthene	206-44-0	**50**	ug/l	NA	**110**	NA	12	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U

Table 2
Groundwater Analytical Results Summary Table
Project # 100965501 - 47th Street Site, Maspeth, NY

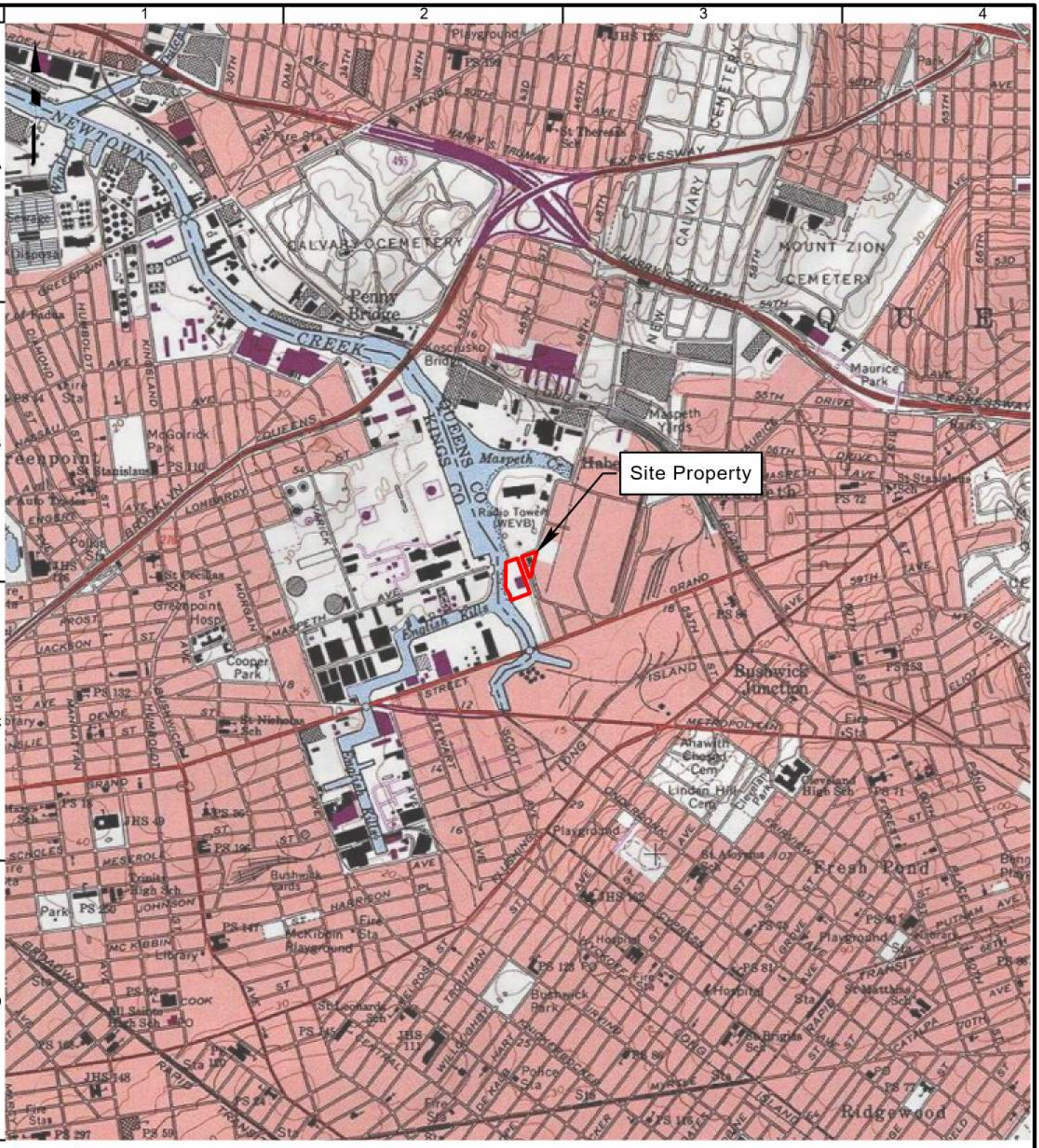
Analyte	CAS Number	NYSDEC SGVs	Location	TW-1	TW-1	TW-2	TW-2	TW-3	TW-3	TW-4	TW-4	TW-6	TW-6	TW-7	TW-8	TW-9
			Sample Name	LB-1\TW-1 F	LB-1\TW-1 U	LB-2\TW-2 F	LB-2\TW-2 U	LB-3\TW-3 F	LB-3\TW-3 U	LB-4\TW-4 F	LB-4\TW-4 U	LB-6\TW-6 F	LB-6\TW-6 U	LB-7\TW-7	LB-8\TW-8	LB-9\TW-9
			Sample Date	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021	11/12/2021
			Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Fluorene	86-73-7	**50**	ug/l	NA	**55**	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Hexachlorobenzene	118-74-1	0.04	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Hexachlorobutadiene	87-68-3	0.5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Hexachlorocyclopentadiene	77-47-4	5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Hexachloroethane	67-72-1	5	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Indeno(1,2,3-cd)pyrene	193-39-5	**0.002**	ug/l	NA	**15**	NA	**3.3**	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Isophorone	78-59-1	50	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Naphthalene	91-20-3	**10**	ug/l	NA	**17**	NA	1.3	NA	<0.5 U	NA	<0.5 U	NA	0.66	NA	NA	1.7
Nitrobenzene	98-95-3	0.4	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
n-Nitrosodi-N-Propylamine	621-64-7	NS	ug/l	NA	<0.64 U	NA	<0.71 U	NA	<0.64 U	NA	<0.64 U	NA	<0.64 U	NA	NA	<0.71 U
n-Nitrosodiphenylamine	86-30-6	50	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Pentachlorophenol	87-86-5	1	ug/l	NA	<10 U	NA	<11 U	NA	<10 U	NA	<10 U	NA	<10 U	NA	NA	<11 U
Phenanthrene	85-01-8	**50**	ug/l	NA	**220 D**	NA	10	NA	<2 U	NA	<2 U	NA	2	NA	NA	<2.2 U
Phenol	108-95-2	1	ug/l	NA	<2 U	NA	<2.2 U	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Pyrene	129-00-0	**50**	ug/l	NA	**170**	NA	13	NA	<2 U	NA	<2 U	NA	<2 U	NA	NA	<2.2 U
Metals																
Aluminum	7429-90-5	NS	ug/l	<200 U	14,000	<200 U	37,000	<200 U	35,000	<200 U	55,000	<200 U	56,000	NA	NA	NA
Antimony	7440-36-0	**3**	ug/l	**5.2**	**7**	**4**	**15**	**5.9**	**22**	**3.3**	**6.3**	**8.3**	**5.5**	NA	NA	NA
Arsenic	7440-38-2	**25**	ug/l	24	**72**	4.2	**81**	**45**	**340**	5.3	**54**	3.3	**26**	NA	NA	NA
Barium	7440-39-3	**1000**	ug/l	<50 U	460	74	1,000	85	**2,300**	58	1,000	<50 U	730	NA	NA	NA
Beryllium	7440-41-7	**3**	ug/l	<1 U	<1 U	<1 U	**4.3 D**	<1 U	<5 UD	<1 U	<4 UD	<1 U	**5.1 D**	NA	NA	NA
Cadmium	7440-43-9	**5**	ug/l	<2 U	2.4	<2 U	**10**	<2 U	2.8	<2 U	<2 U	<2 U	<2 U	NA	NA	NA
Calcium	7440-70-2	NS	ug/l	56,000	92,000	270,000	630,000 D	290,000	1,100,000 D	160,000	780,000 D	76,000	190,000	NA	NA	NA
Chromium, Total	7440-47-3	**50**	ug/l	<50 U	**100**	<50 U	**190**	<50 U	**190**	<50 U	**210**	<50 U	**320**	NA	NA	NA
Cobalt	7440-48-4	NS	ug/l	<2 U	11	2.4	94	<2 U	33	<2 U	33	<2 U	59	NA	NA	NA
Copper	7440-50-8	**200**	ug/l	<50 U	**240**	<50 U	**940 D**	<50 U	**1,300 D**	<50 U	**460 D**	<50 U	100	NA	NA	NA
Iron	7439-89-6	**300**	ug/l	<300 U	**54,000**	**650**	**130,000**	<300 U	**120,000**	<300 U	**140,000**	<300 U	**210,000**	NA	NA	NA
Lead	7439-92-1	**25**	ug/l	<3 U	**420**	<3 U	**4,400 D**	<3 U	**6,600 D**	<3 U	**1,100**	<3 U	**560**	NA	NA	NA
Magnesium	7439-95-4	**35000**	ug/l	9,600	17,000	21,000	**63,000**	<5,000 U	**55,000**	15,000	**46,000**	<5,000 U	24,000	NA	NA	NA
Manganese	7439-96-5	**300**	ug/l	<40 U	**400**	**640**	**2,600**	<40 U	**1,500**	81	**3,600**	<40 U	**4,300**	NA	NA	NA
Mercury	7439-97-6	**0.7**	ug/l	<0.5 U	**1.2**	<0.5 U	**320 D**	<0.5 U	**19**	<0.5 U	**4.5**	<0.5 U	<0.5 U	NA	NA	NA
Nickel	7440-02-0	**100**	ug/l	<50 U	<50 U	<50 U	**150**	<50 U	94	<50 U	89	<50 U	**110**	NA	NA	NA
Potassium	7440-09-7	NS	ug/l	21,000	23,000	18,000	23,000	72,000	79,000	74,000	84,000	14,000	21,000	NA	NA	NA
Selenium	7782-49-2	**10**	ug/l	<10 U	<10 U	<10 U	**15**	<10 U	**28**	<10 U	<10 U	<10 U	**18**	NA	NA	NA
Silver	7440-22-4	50	ug/l	<1 U	<1 U	<1 U	1.9	<1 U	4.4	<1 U	<1 U	<1 U	<1 U	NA	NA	NA
Sodium	7440-23-5	**20000**	ug/l	**93,000**	**94,000**	**95,000**	**100,000**	**160,000**	**160,000**	**310,000**	**310,000**	**25,000**	**27,000**	NA	NA	NA
Thallium	7440-28-0	0.5	ug/l	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	NA	NA	NA
Vanadium	7440-62-2	NS	ug/l	<50 U	<50 U	<50 U	150	<50 U	120	<50 U	160	<50 U	310	NA	NA	NA
Zinc	7440-66-6	**2000**	ug/l	<50 U	830	<50 U	**4,900**	<50 U	840	<50 U	880	<50 U	650	NA	NA	NA

Notes:
CAS - Chemical Abstract Service
NS - No standard
ug/l - microgram per liter
NA - Not analyzed
RL - Reporting limit
<RL - Not detected
Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 703.5 and the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA Water (herein collectively referenced as "NYSDEC SGVs").

Qualifiers:
D - The concentration reported is a result of a diluted sample.
U - The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the

Exceedance Summary:
10 - Result exceeds NYSDEC SGVs

FIGURES



Legend

Site Property

2,000 0 2,000

SCALE IN FEET

Notes:

1. Basemap adapted from United States Geological Survey (USGS) 7.5-Minute Series Topographical Maps, Brooklyn, New York, Quadrangle, Dated 2019.

LANGAN

21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001-2727
T: 212.479.5400 F: 212.479.5444 www.langan.com

Langan Engineering & Environmental Services, Inc.
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
Langan International LLC

Collectively known as Langan

Project

47th Street Site

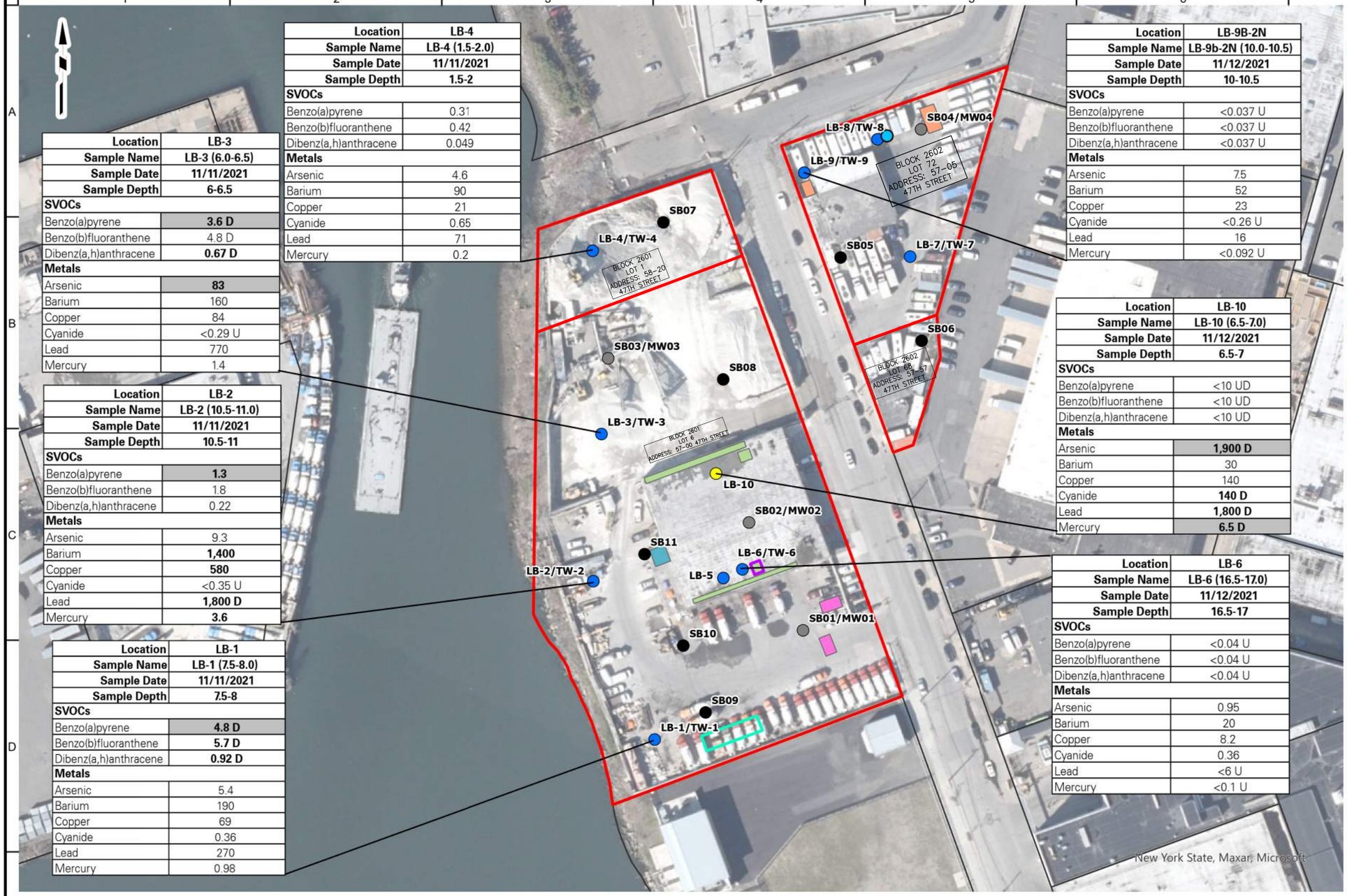
BLOCK Nos. 2601, 2602, 2603,
LOT Nos. 1, 6, 72, 68

QUEENS NEW YORK

Figure Title

USGS SITE LOCATION MAP

Project No. 100965501	Figure No. 1
Date 11/18/2021	
Scale 1"=2,000'	
Drawn By IHB	
Submission Date	Sheet 1 of 3



Location	LB-4
Sample Name	LB-4 (1.5-2.0)
Sample Date	11/11/2021
Sample Depth	1.5-2
SVOCs	
Benzo(a)pyrene	0.31
Benzo(b)fluoranthene	0.42
Dibenz(a,h)anthracene	0.049
Metals	
Arsenic	4.6
Barium	90
Copper	21
Cyanide	0.65
Lead	71
Mercury	0.2

Location	LB-3
Sample Name	LB-3 (6.0-6.5)
Sample Date	11/11/2021
Sample Depth	6-6.5
SVOCs	
Benzo(a)pyrene	**3.6 D**
Benzo(b)fluoranthene	4.8 D
Dibenz(a,h)anthracene	**0.67 D**
Metals	
Arsenic	**83**
Barium	160
Copper	84
Cyanide	<0.29 U
Lead	770
Mercury	1.4

Location	LB-2
Sample Name	LB-2 (10.5-11.0)
Sample Date	11/11/2021
Sample Depth	10.5-11
SVOCs	
Benzo(a)pyrene	**1.3**
Benzo(b)fluoranthene	1.8
Dibenz(a,h)anthracene	0.22
Metals	
Arsenic	9.3
Barium	**1,400**
Copper	**580**
Cyanide	<0.35 U
Lead	**1,800 D**
Mercury	**3.6**

Location	LB-1
Sample Name	LB-1 (7.5-8.0)
Sample Date	11/11/2021
Sample Depth	7.5-8
SVOCs	
Benzo(a)pyrene	**4.8 D**
Benzo(b)fluoranthene	**5.7 D**
Dibenz(a,h)anthracene	**0.92 D**
Metals	
Arsenic	5.4
Barium	190
Copper	69
Cyanide	0.36
Lead	270
Mercury	0.98

Location	LB-9B-2N
Sample Name	LB-9b-2N (10.0-10.5)
Sample Date	11/12/2021
Sample Depth	10-10.5
SVOCs	
Benzo(a)pyrene	<0.037 U
Benzo(b)fluoranthene	<0.037 U
Dibenz(a,h)anthracene	<0.037 U
Metals	
Arsenic	7.5
Barium	52
Copper	23
Cyanide	<0.26 U
Lead	16
Mercury	<0.092 U

Location	LB-10
Sample Name	LB-10 (6.5-7.0)
Sample Date	11/12/2021
Sample Depth	6.5-7
SVOCs	
Benzo(a)pyrene	<10 UD
Benzo(b)fluoranthene	<10 UD
Dibenz(a,h)anthracene	<10 UD
Metals	
Arsenic	**1,900 D**
Barium	30
Copper	140
Cyanide	**140 D**
Lead	**1,800 D**
Mercury	**6.5 D**

Location	LB-6
Sample Name	LB-6 (16.5-17.0)
Sample Date	11/12/2021
Sample Depth	16.5-17
SVOCs	
Benzo(a)pyrene	<0.04 U
Benzo(b)fluoranthene	<0.04 U
Dibenz(a,h)anthracene	<0.04 U
Metals	
Arsenic	0.95
Barium	20
Copper	8.2
Cyanide	0.36
Lead	<6 U
Mercury	<0.1 U

Legend

- Subject Property
- Tax Parcels
- Previous Soil Boring Location (July 2021)
- Previous Soil Boring/ Temporary Monitoring Well Location (July 2021)
- Soil Boring Location (November 2021)
- Soil Boring / Temporary Well Point Location (November 2021)
- Potential Underground Injection Control Unit
- Concrete stockpile
- Pits and Sumps
- Stormwater infiltration basins
- AST Room
- Floor Trenches and Pits
- Oil Water Separator
- UST Grave
- Potential UST Location

Exceedance Summary:

10 - Result exceeds Restricted Use Commercial SCOs

10 - Result exceeds Restricted Use Industrial SCOs

Analyte	NYSDEC Part 375 Restricted Use Commercial SCOs	NYSDEC Part 375 Restricted Use Industrial SCOs
SVOCs		
Benzo(a)pyrene	1	1.1
Benzo(b)fluoranthene	5.6	11
Dibenz(a,h)anthracene	0.56	1.1
Metals		
Arsenic	16	16
Barium	400	10000
Copper	270	10000
Cyanide	27	10000
Lead	1000	3900
Mercury	2.8	5.7

NOTES:
1. WORLD IMAGERY BASEMAP PROVIDED THROUGH LANGAN'S SUBSCRIPTION TO ESRI'S ARCGIS SOFTWARE LICENSING.
2. ALL SITE FEATURES ARE APPROXIMATE.

100 0 100
SCALE IN FEET

LANGAN
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

Project
47th Street Site
BLOCK Nos. 2601, 2602, 2603,
LOT Nos. 1, 6, 72, 68
QUEENS NEW YORK

Figure Title
SOIL SAMPLING LOCATION AND RESULTS PLAN

Project No. 100965501
Date 12/1/2021
Scale 1"=100'
Drawn By IHB
Figure No. 2
Sheet 1 of 1

Path: \\langan.com\data\NYC\data7\170686701\Project Data\ArcGIS\APRX\170686701\170686701.aprx Date: 12/1/2021 User: ibaker Time: 12:32 PM

Location	TW-3	TW-3
Sample Name	LB-3\TW-3 F	LB-3\TW-3 U
Sample Date	11/12/2021	11/12/2021
VOCs		
Ethylbenzene	NA	<1 U
Isopropylbenzene (Cumene)	NA	<1 U
Toluene	NA	<1 U
SVOCs		
Acenaphthene	NA	<2 U
Anthracene	NA	<2 U
Benzo(a)anthracene	NA	<2 U
Benzo(a)pyrene	NA	<2 U
Benzo(b)fluoranthene	NA	<2 U
Benzo(k)fluoranthene	NA	<2 U
Chrysene	NA	<2 U
Fluoranthene	NA	<2 U
Fluorene	NA	<2 U
Indeno(1,2,3-cd)pyrene	NA	<2 U
Naphthalene	NA	<0.5 U
Phenanthrene	NA	<2 U
Pyrene	NA	<2 U
Metals		
Antimony	**5.9**	**22**
Arsenic	**45**	**340**
Barium	85	**2,300**
Beryllium	<1 U	<5 UD
Cadmium	<2 U	2.8
Chromium, Total	<50 U	**190**
Copper	<50 U	**1,300 D**
Iron	<300 U	**120,000**
Lead	<3 U	**6,600 D**
Magnesium	<5,000 U	**55,000**
Manganese	<40 U	**1,500**
Mercury	<0.5 U	**19**
Nickel	<50 U	94
Selenium	<10 U	**28**
Sodium	**160,000**	**160,000**
Zinc	<50 U	840

Location	TW-4	TW-4
Sample Name	LB-4\TW-4 F	LB-4\TW-4 U
Sample Date	11/12/2021	11/12/2021
VOCs		
Ethylbenzene	NA	<1 U
Isopropylbenzene (Cumene)	NA	<1 U
Toluene	NA	<1 U
SVOCs		
Acenaphthene	NA	<2 U
Anthracene	NA	<2 U
Benzo(a)anthracene	NA	<2 U
Benzo(a)pyrene	NA	<2 U
Benzo(b)fluoranthene	NA	<2 U
Benzo(k)fluoranthene	NA	<2 U
Chrysene	NA	<2 U
Fluoranthene	NA	<2 U
Fluorene	NA	<2 U
Indeno(1,2,3-cd)pyrene	NA	<2 U
Naphthalene	NA	<0.5 U
Phenanthrene	NA	<2 U
Pyrene	NA	<2 U
Metals		
Antimony	**3.3**	**6.3**
Arsenic	5.3	**54**
Barium	58	1,000
Beryllium	<1 U	<4 UD
Cadmium	<2 U	<2 U
Chromium, Total	<50 U	**210**
Copper	<50 U	**460 D**
Iron	<300 U	**140,000**
Lead	<3 U	**1,100**
Magnesium	15,000	**46,000**
Manganese	81	**3,600**
Mercury	<0.5 U	**4.5**
Nickel	<50 U	89
Selenium	<10 U	<10 U
Sodium	**310,000**	**310,000**
Zinc	<50 U	880

Location	TW-2	TW-2
Sample Name	LB-2\TW-2 F	LB-2\TW-2 U
Sample Date	11/12/2021	11/12/2021
VOCs		
Ethylbenzene	NA	<1 U
Isopropylbenzene (Cumene)	NA	<1 U
Toluene	NA	<1 U
SVOCs		
Acenaphthene	NA	<2.2 U
Anthracene	NA	3
Benzo(a)anthracene	NA	**6.9**
Benzo(a)pyrene	NA	**6.2**
Benzo(b)fluoranthene	NA	**7.3**
Benzo(k)fluoranthene	NA	**2.2**
Chrysene	NA	**5.2**
Fluoranthene	NA	12
Fluorene	NA	<2.2 U
Indeno(1,2,3-cd)pyrene	NA	**3.3**
Naphthalene	NA	1.3
Phenanthrene	NA	10
Pyrene	NA	13
Metals		
Antimony	**4**	**15**
Arsenic	4.2	**81**
Barium	74	1,000
Beryllium	<1 U	**4.3 D**
Cadmium	<2 U	**10**
Chromium, Total	<50 U	**190**
Copper	<50 U	**940 D**
Iron	**650**	**130,000**
Lead	<3 U	**4,400 D**
Magnesium	21,000	**63,000**
Manganese	**640**	**2,600**
Mercury	<0.5 U	**320 D**
Nickel	<50 U	**150**
Selenium	<10 U	**15**
Sodium	**95,000**	**100,000**
Zinc	<50 U	**4,900**

Location	TW-1	TW-1
Sample Name	LB-1\TW-1 F	LB-1\TW-1 U
Sample Date	11/12/2021	11/12/2021
VOCs		
Ethylbenzene	NA	**8.6**
Isopropylbenzene (Cumene)	NA	<1 U
Toluene	NA	<1 U
SVOCs		
Acenaphthene	NA	**53**
Anthracene	NA	**73**
Benzo(a)anthracene	NA	**63**
Benzo(a)pyrene	NA	**43**
Benzo(b)fluoranthene	NA	**44**
Benzo(k)fluoranthene	NA	**10**
Chrysene	NA	**60**
Fluoranthene	NA	**110**
Fluorene	NA	**55**
Indeno(1,2,3-cd)pyrene	NA	**15**
Naphthalene	NA	**17**
Phenanthrene	NA	**220 D**
Pyrene	NA	**170**
Metals		
Antimony	**5.2**	**7**
Arsenic	24	**72**
Barium	<50 J	460
Beryllium	<1 U	<1 U
Cadmium	<2 U	2.4
Chromium, Total	<50 J	**100**
Copper	<50 J	**240**
Iron	<300 U	**54,000**
Lead	<3 U	**420**
Magnesium	9,800	17,000
Manganese	<40 J	**400**
Mercury	<0.5 U	**1.2**
Nickel	<50 J	<50 U
Selenium	<10 U	<10 U
Sodium	**93,000**	**94,000**
Zinc	<50 J	830

Location	TW-8
Sample Name	LB-8\TW-8
Sample Date	11/12/2021
VOCs	
Ethylbenzene	<1 U
Isopropylbenzene (Cumene)	<1 U
Toluene	**60**

Location	TW-9
Sample Name	LB-9\TW-9
Sample Date	11/12/2021
VOCs	
Ethylbenzene	<10 UD
Isopropylbenzene (Cumene)	**24 D**
Toluene	<10 UD
SVOCs	
Acenaphthene	<2.2 U
Anthracene	<2.2 U
Benzo(a)anthracene	<2.2 U
Benzo(a)pyrene	<2.2 U
Benzo(b)fluoranthene	<2.2 U
Benzo(k)fluoranthene	<2.2 U
Chrysene	<2.2 U
Fluoranthene	<2.2 U
Fluorene	<2.2 U
Indeno(1,2,3-cd)pyrene	<2.2 U
Naphthalene	1.7
Phenanthrene	<2.2 U
Pyrene	<2.2 U

Location	TW-7
Sample Name	LB-7\TW-7
Sample Date	11/12/2021
VOCs	
Ethylbenzene	<1 U
Isopropylbenzene (Cumene)	<1 U
Toluene	<1 U

Location	TW-6	TW-6
Sample Name	LB-6\TW-6 F	LB-6\TW-6 U
Sample Date	11/12/2021	11/12/2021
VOCs		
Ethylbenzene	NA	<1 U
Isopropylbenzene (Cumene)	NA	<1 U
Toluene	NA	<1 U
SVOCs		
Acenaphthene	NA	3.5
Anthracene	NA	<2 U
Benzo(a)anthracene	NA	<2 U
Benzo(a)pyrene	NA	<2 U
Benzo(b)fluoranthene	NA	<2 U
Benzo(k)fluoranthene	NA	<2 U
Chrysene	NA	<2 U
Fluoranthene	NA	<2 U
Fluorene	NA	<2 U
Indeno(1,2,3-cd)pyrene	NA	<2 U
Naphthalene	NA	0.66
Phenanthrene	NA	2
Pyrene	NA	<2 U
Metals		
Antimony	**8.3**	**5.5**
Arsenic	3.3	**26**
Barium	<50 U	730
Beryllium	<1 U	**5.1 D**
Cadmium	<2 U	<2 U
Chromium, Total	<50 U	**320**
Copper	<50 U	100
Iron	<300 U	**210,000**
Lead	<3 U	**560**
Magnesium	<5,000 U	24,000
Manganese	<40 U	**4,300**
Mercury	<0.5 U	<0.5 U
Nickel	<50 U	**110**
Selenium	<10 U	**18**
Sodium	**25,000**	**27,000**
Zinc	<50 U	650

Legend

- Subject Property
- Tax Parcels
- Stormwater infiltration basins
- AST Room
- Floor Trenches and Pits
- Oil Water Separator
- UST Grave
- Potential UST Location
- Previous Soil Boring Location (July 2021)
- Previous Soil Boring/ Temporary Monitoring Well Location (July 2021)
- Soil Boring Location (November 2021)
- Soil Boring / Temporary Well Point Location (November 2021)
- Potential Underground Injection Control Unit

Analyte	NYSDEC SGVs
VOCs	
Ethylbenzene	5
Isopropylbenzene (Cumene)	5
Toluene	5
SVOCs	
Acenaphthene	20
Anthracene	50
Benzo(a)anthracene	0.002
Benzo(a)pyrene	0
Benzo(b)fluoranthene	0.002
Benzo(k)fluoranthene	0.002
Chrysene	0.002
Fluoranthene	50
Fluorene	50
Indeno(1,2,3-cd)pyrene	0.002
Naphthalene	10
Phenanthrene	50
Pyrene	50
Metals	
Antimony	3
Arsenic	25
Barium	1000
Beryllium	3
Cadmium	5
Chromium, Total	50
Copper	200
Iron	300
Lead	25
Magnesium	35000
Manganese	300
Mercury	0.7
Nickel	100
Selenium	10
Sodium	20000
Zinc	2000

Exceedance Summary:

10 - Result exceeds NYSDEC SGVs

NOTES:
1. WORLD IMAGERY BASEMAP PROVIDED THROUGH LANGAN'S SUBSCRIPTION TO ESRI'S ARCGIS SOFTWARE LICENSING.
2. ALL SITE FEATURES ARE APPROXIMATE.

100 0 100
SCALE IN FEET

LANGAN
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

Project
47th Street Site
BLOCK Nos. 2601, 2602, 2603,
LOT Nos. 1, 6, 72, 68
QUEENS NEW YORK

Figure Title
GROUNDWATER SAMPLING LOCATION AND RESULTS PLAN

Project No. 100965501
Date 12/1/2021
Scale 1"=100'
Drawn By IHB
Figure No. 3
Sheet 1 of 1

Path: \\langan.com\data\NYC\data7\170686701\Project Data\ArcGIS\APRX\170686701\170686701.aprx Date: 12/1/2021 User: ibaker Time: 12:22 PM

APPENDIX A

Geophysical Report - NOVA

GEOPHYSICAL ENGINEERING SURVEY REPORT

Industrial Properties
58-20 47th Street,
Maspeth, Queens 11378

NOVA PROJECT NUMBER:
21-2455

DATED:
November 16, 2021

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)
www.nova-gsi.com

NOVA GEOPHYSICAL SERVICES

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

November 16, 2021

Alan Arico
Senior Project Manager
LANGAN
Phone: 973.560.4900 Fax: 973.560.4901
300 Kimball Drive, 4th Floor
Parsippany, NJ 07054-2172
Direct: 973.560.4613
Mobile: 973.524.8124
Email: aarico@langan.com

Re: Geophysical Engineering Survey (GES) Report
Industrial Site
58-20 47th Street,
Maspeth, Queens 11378

Dear Mr. Arico.

Nova Geophysical Services (NOVA) is pleased to provide the findings of the geophysical engineering survey (GES) at the above referenced project site: 58-20 47th Street, Maspeth, Queens 11378 (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 locate and identify utilities, underground storage tanks and other substructures on November 9th, 2021. This report and attachments also include findings from a previous survey that was performed at the site on July 7th, 2021.

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 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

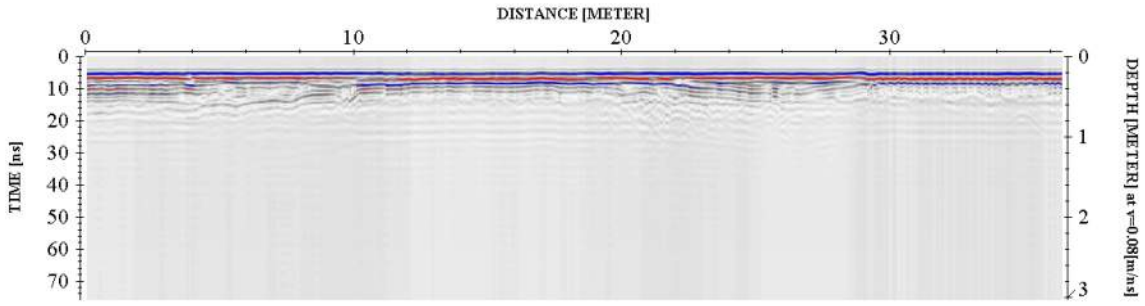
The project site was screened using GPR to search the specified area and inspected for reflections, which could be indicative of substructures and utilities within the subsurface. An EM utility locator was used to help determine the locations of utilities within the survey area.

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.

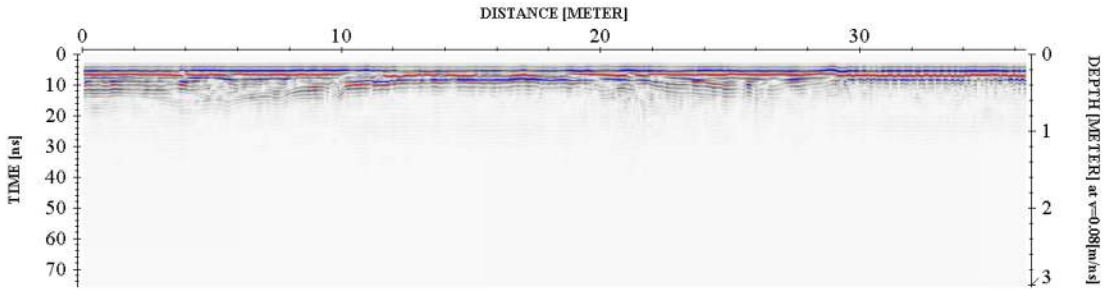
DATA PROCESSING

To improve the quality of the results and to better identify anomalies NOVA processed the collected data. The processing workflow is briefly described in this section.

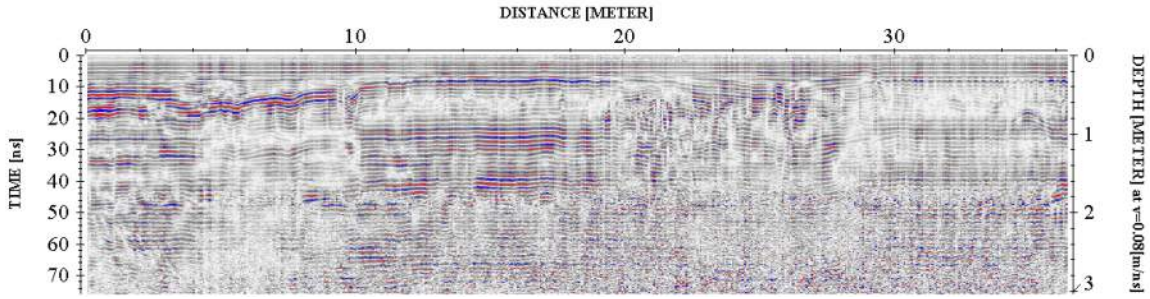
Step 1. Import Raw RAMAC data to standard processing format



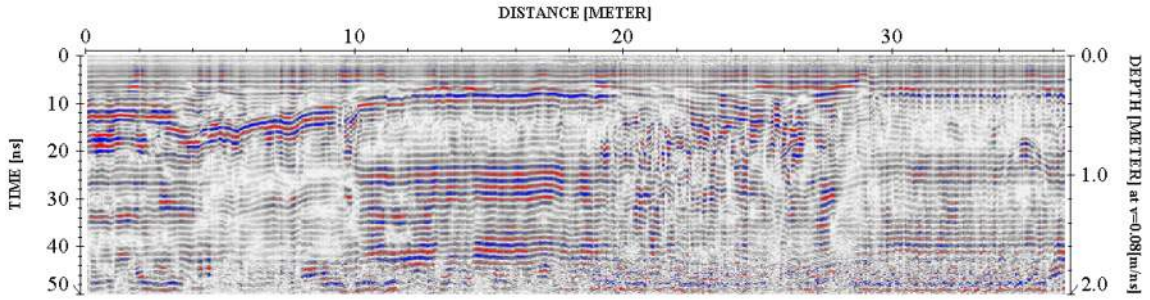
Step 2. Remove instrument noise *(dewow)*



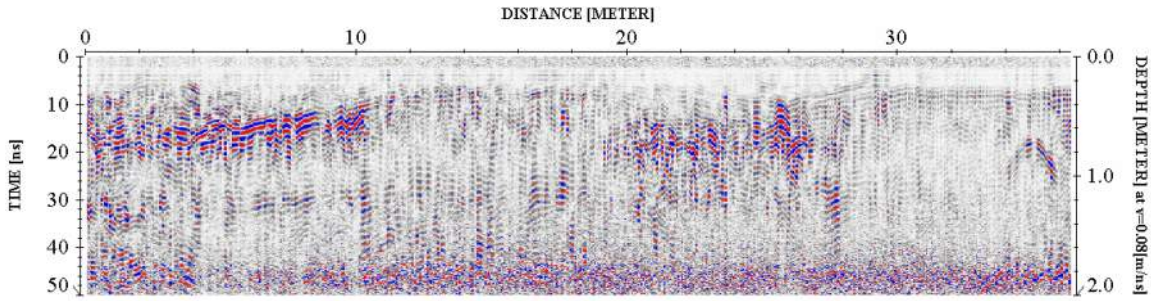
Step 3. Correct for attenuation losses *(energy decay function)*



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: Clear

Temperature: 55° F

Surface: Concrete, Gravel,

Survey Parameters: A GPR grid scan was conducted within the survey areas as shown on the survey plan. The approximate line spacing of the grid survey was approximately 6'. Additional GPR data was collected over features of interest and in the vicinity of proposed boring locations. An EM utility locator was used in conjunction with the GPR throughout the surveyed areas.

Limitations: The geophysical noise level at the site was high due to being in an urban environment, reinforced concrete within the surveyed areas and the presence of gravel.

RESULTS

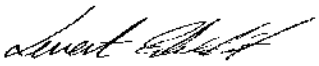
The results of the geophysical engineering survey (GES) identified the following at the project site:

- Anomalies resembling potential subsurface utilities (such as sewer, water, electric, drainage, telecom, and gas) along with related structures (such as an oil water separator and drains) were identified during the GES. The approximate locations are shown in the survey plan.
- NOVA identified a suspected aboveground storage tank (AST) vault (AST removed prior to GES). A second AST was also identified within the survey area. Two additional sets of vent pipe and fill port were identified and are suspected to be related to two previously removed ASTs. Shown in the survey plan.
- Two large geophysical anomalies resembling potential underground storage tank (UST) graves along with associated lines were identified. Two more large geophysical anomalies resembling potential existing USTs were also identified. Shown in the survey plan.
- All cleared boring locations are shown in the survey plan.

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

Sincerely,

NOVA Geophysical Services



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

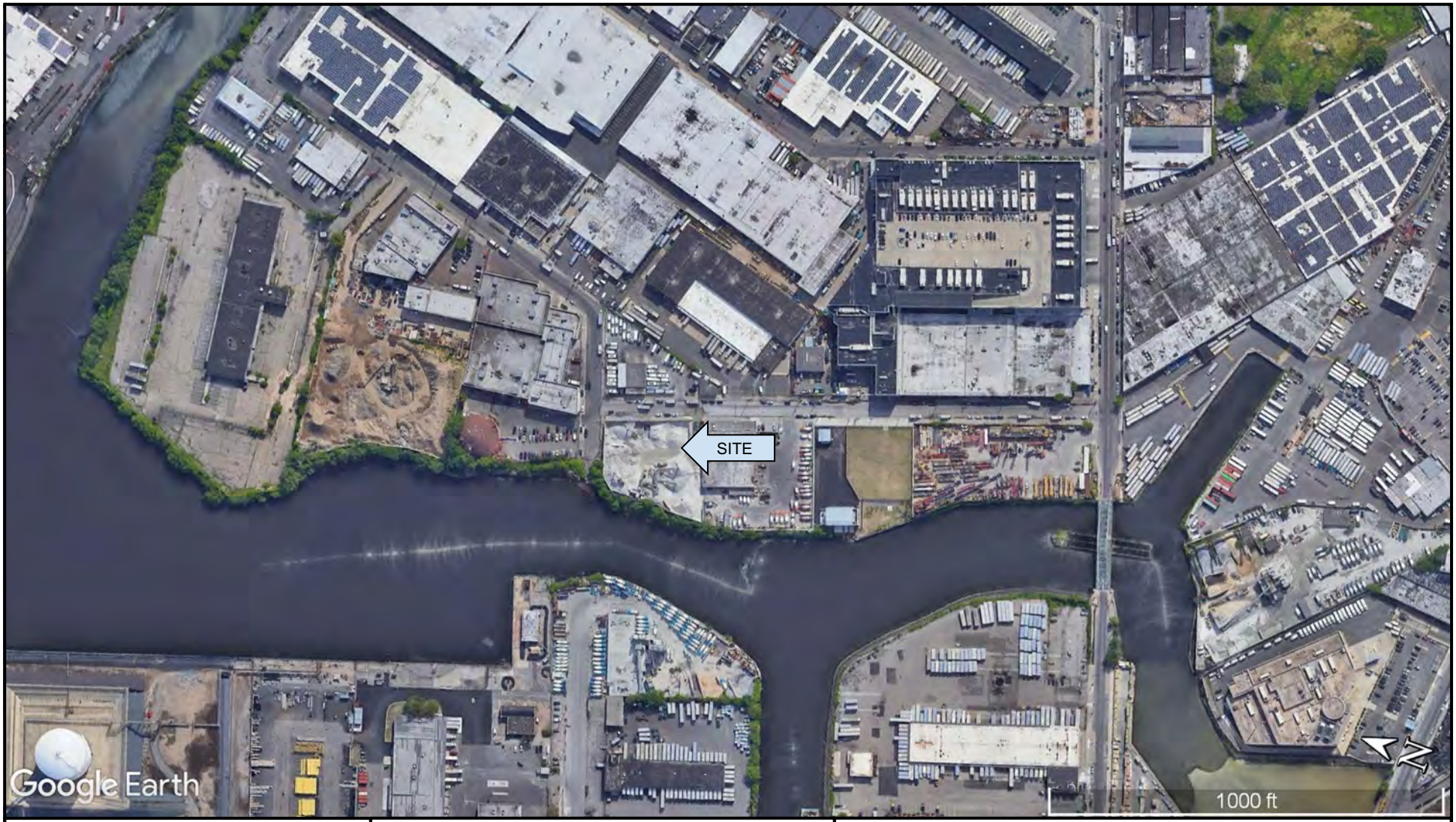
Project Engineer

Attachments:

Location Map

Survey Plan

Geophysical Images

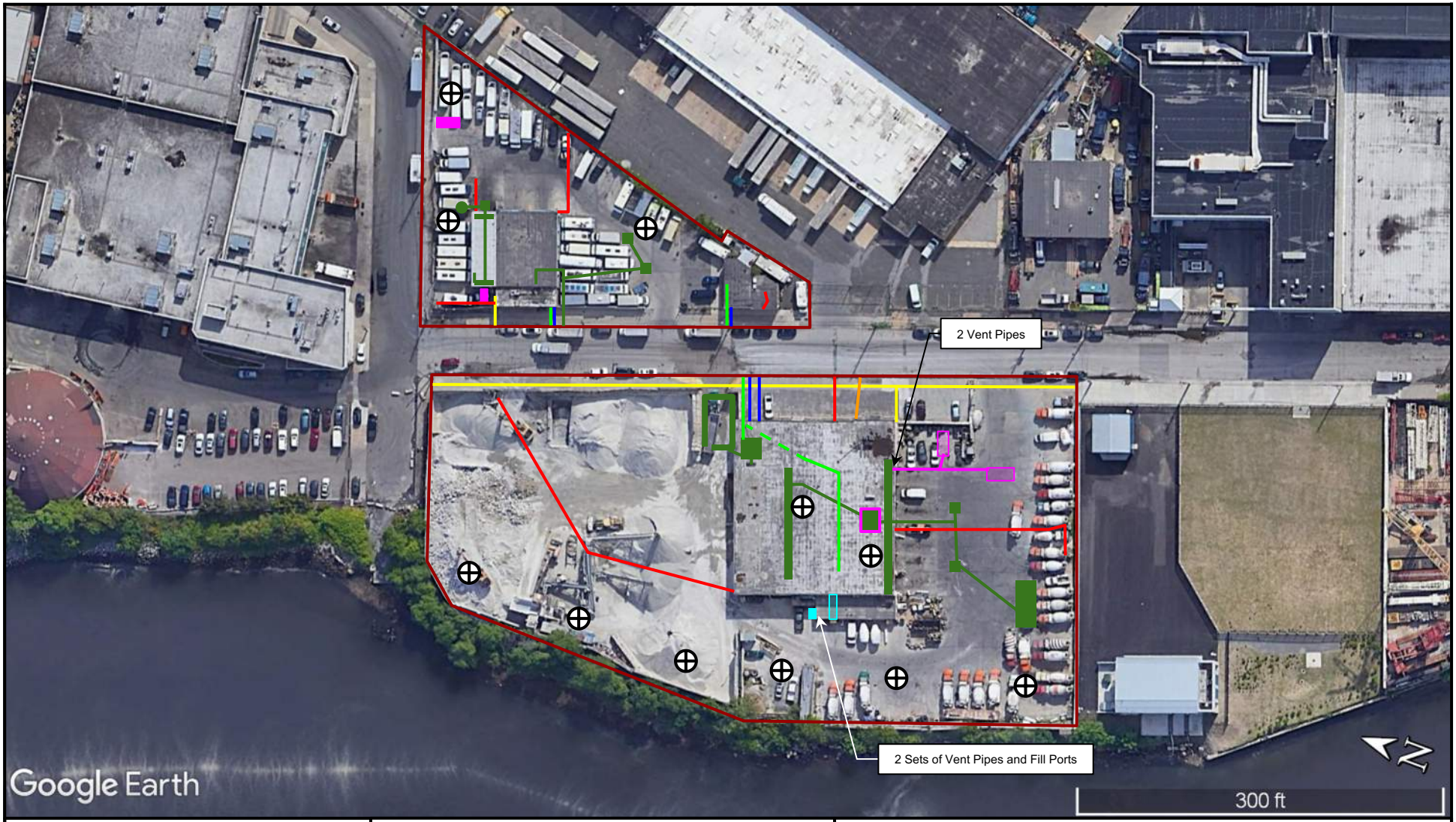


NOVA
Geophysical Services
Subsurface Mapping Solutions
56-01 Marathon Parkway, # 765
Douglaston, New York 11362
Phone (347) 556-7787 * Fax (718) 261-1527
www.novagsi.com

LOCATION MAP

SITE:	**Industrial Site** 58-20 47th Street , Maspeth, New York 11238
CLIENT:	Langan
DATE:	November 11th, 2021
AUTH:	Chris Steinley

LEGEND



NOVA
Geophysical Services
Subsurface Mapping Solutions
56-01 Marathon Parkway, # 765
Douglaston, New York 11362
Phone (347) 556-7787 * Fax (718) 261-1527
www.novagsi.com

SURVEY PLAN

SITE:	**Industrial Site** 58-20 47th Street , Maspeth, New York 11238
CLIENT:	Langan
DATE:	November 11th, 2021
AUTH:	Chris Steinley

LEGEND

- Survey Area
- Sewer
- Water
- Gas
- Electric
- Telecom
- Oil-Water Separator
- Drainage Structure
- UST Grave
- AST Vault
- AST
- Drain
- UST Existing
- Boring

GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

GEOPHYSICAL IMAGES

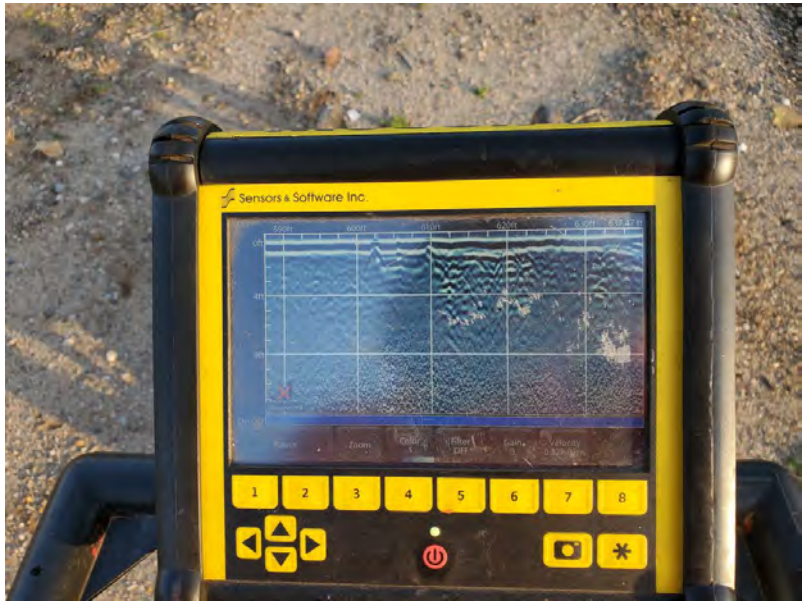
Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021



GEOPHYSICAL IMAGES

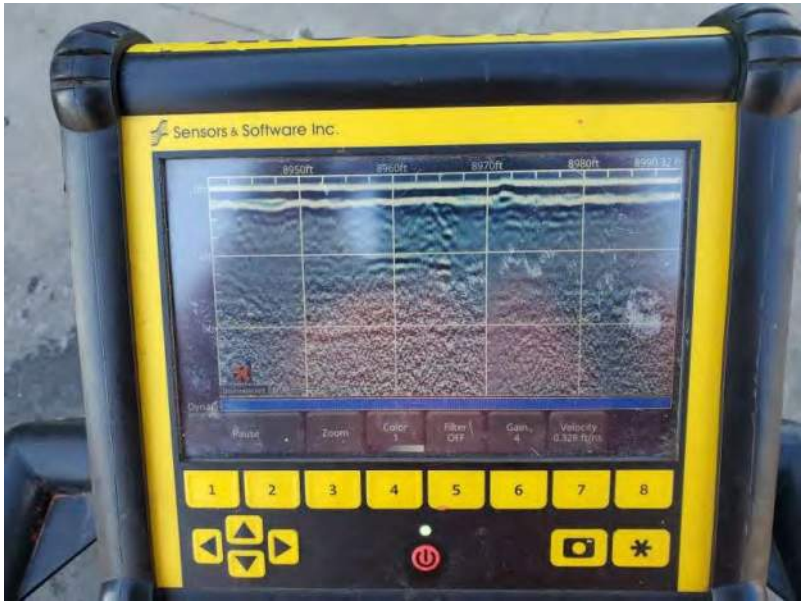
Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

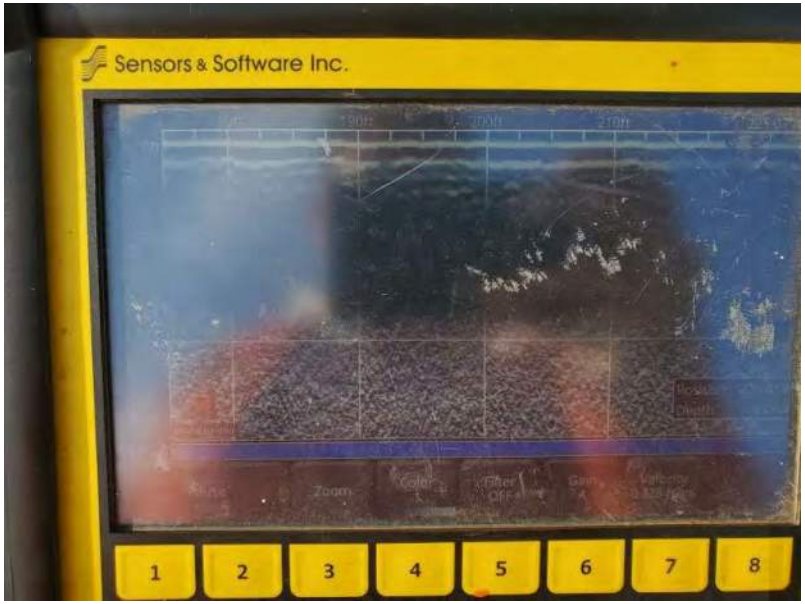
GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021



GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

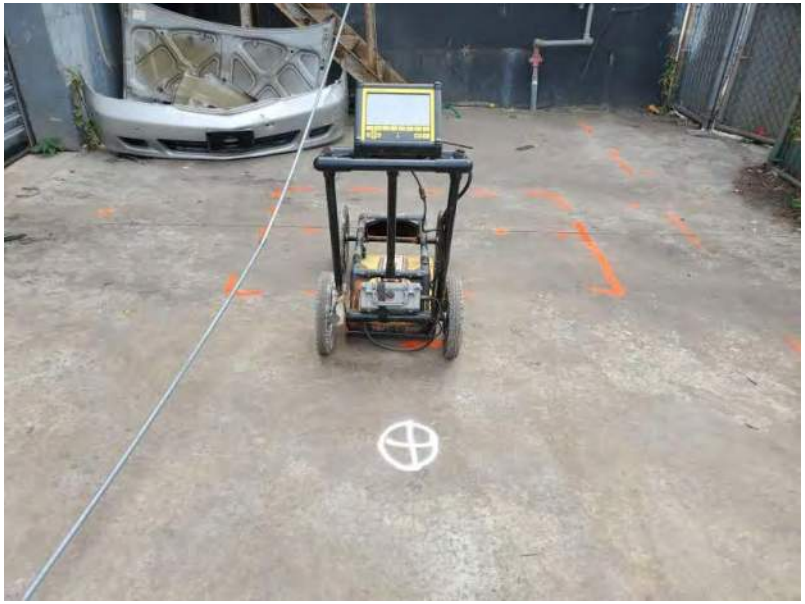


GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

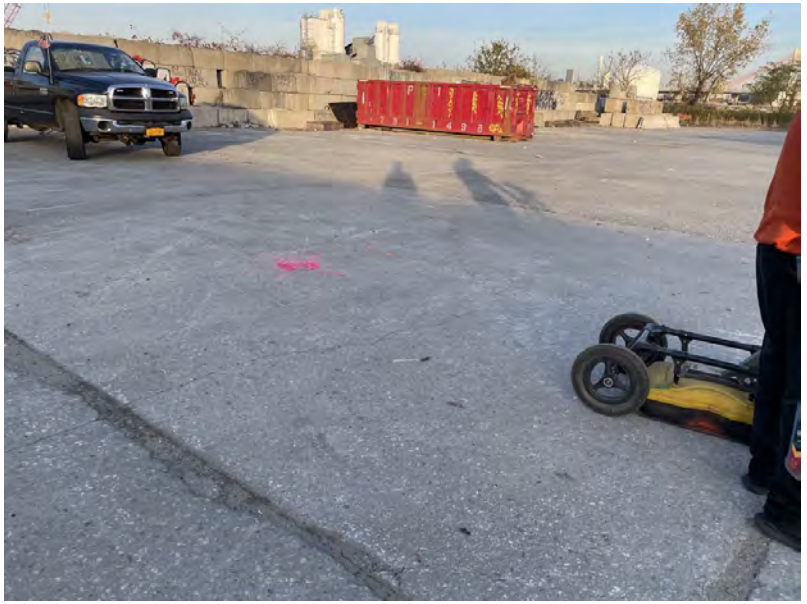
GEOPHYSICAL IMAGES

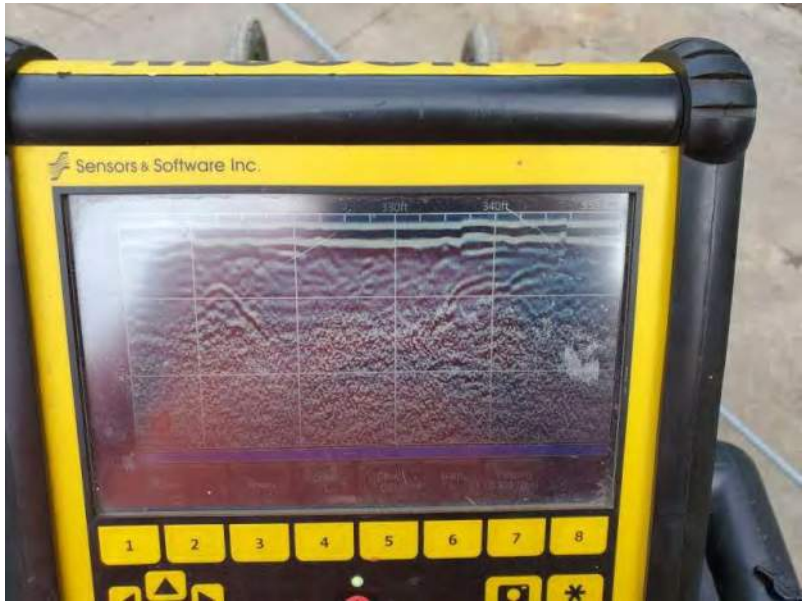
Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

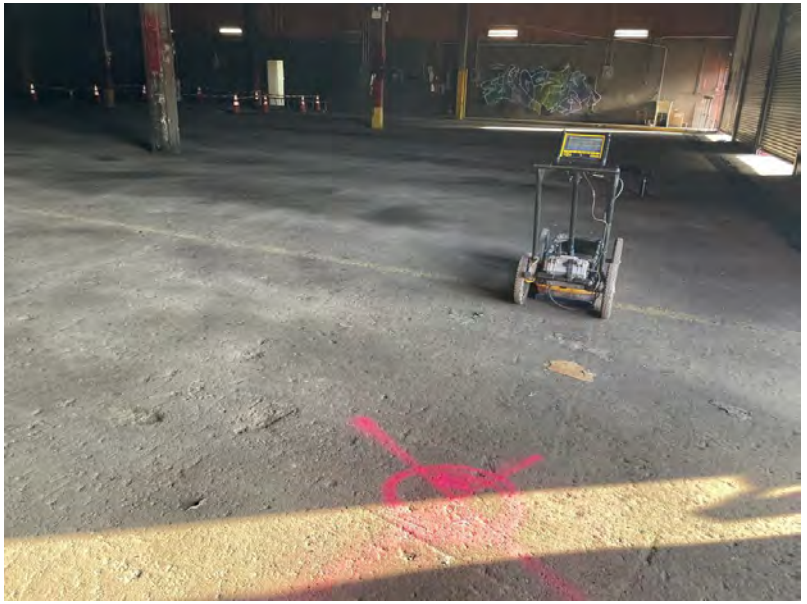


GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

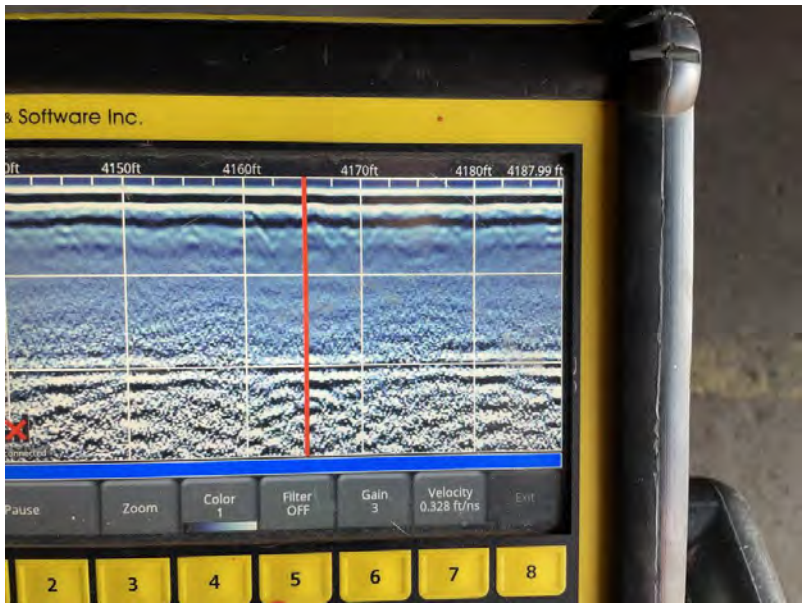


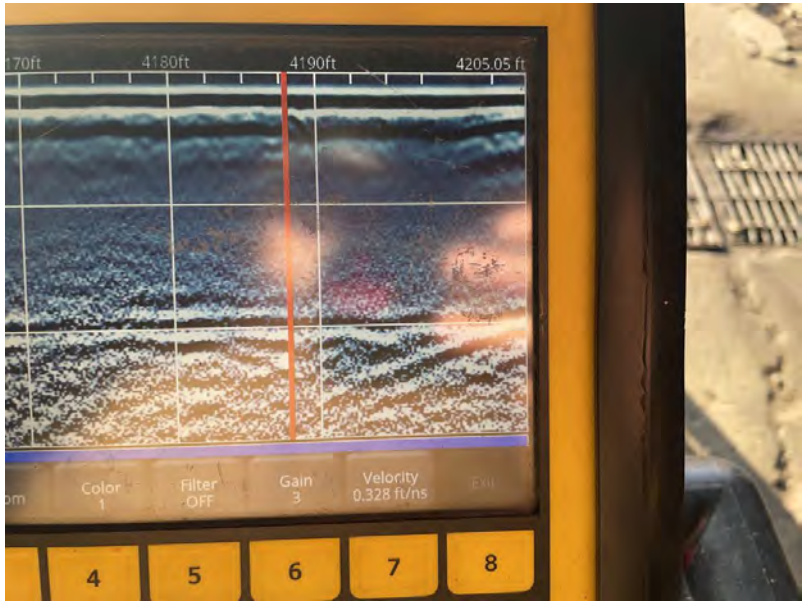


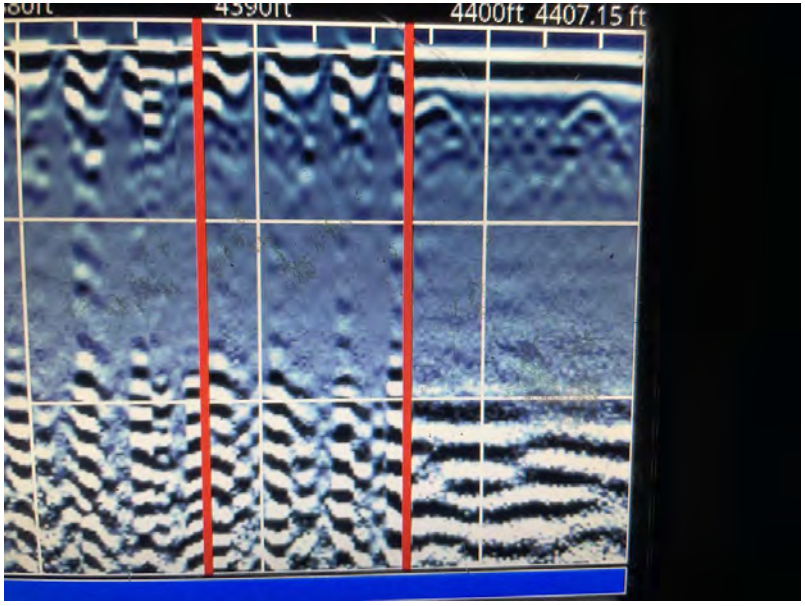


GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

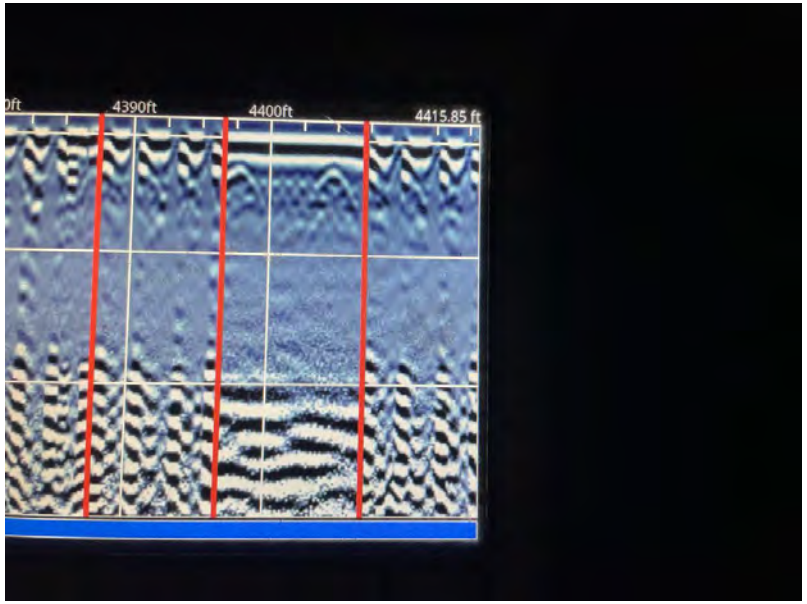






GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021



GEOPHYSICAL IMAGES

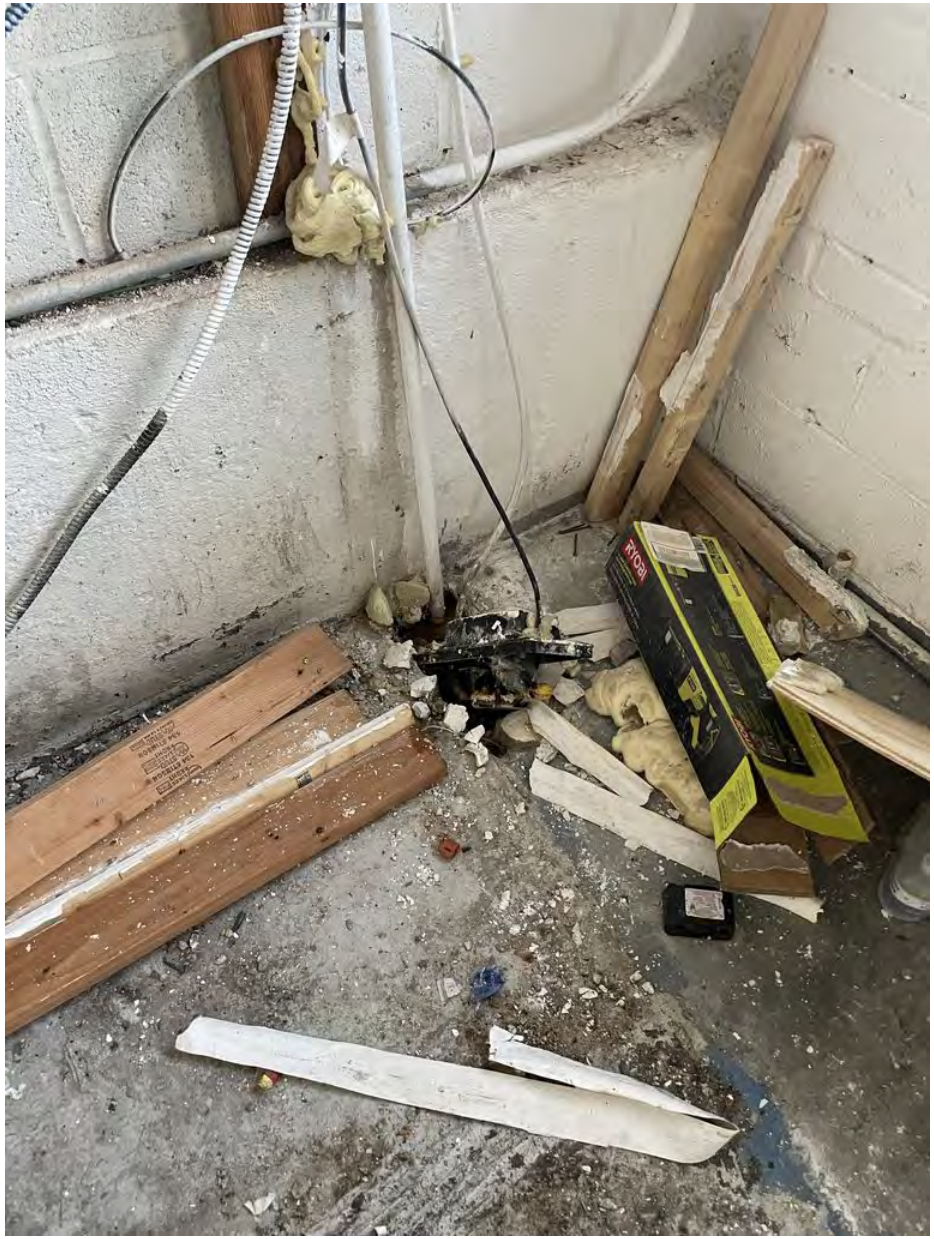
Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

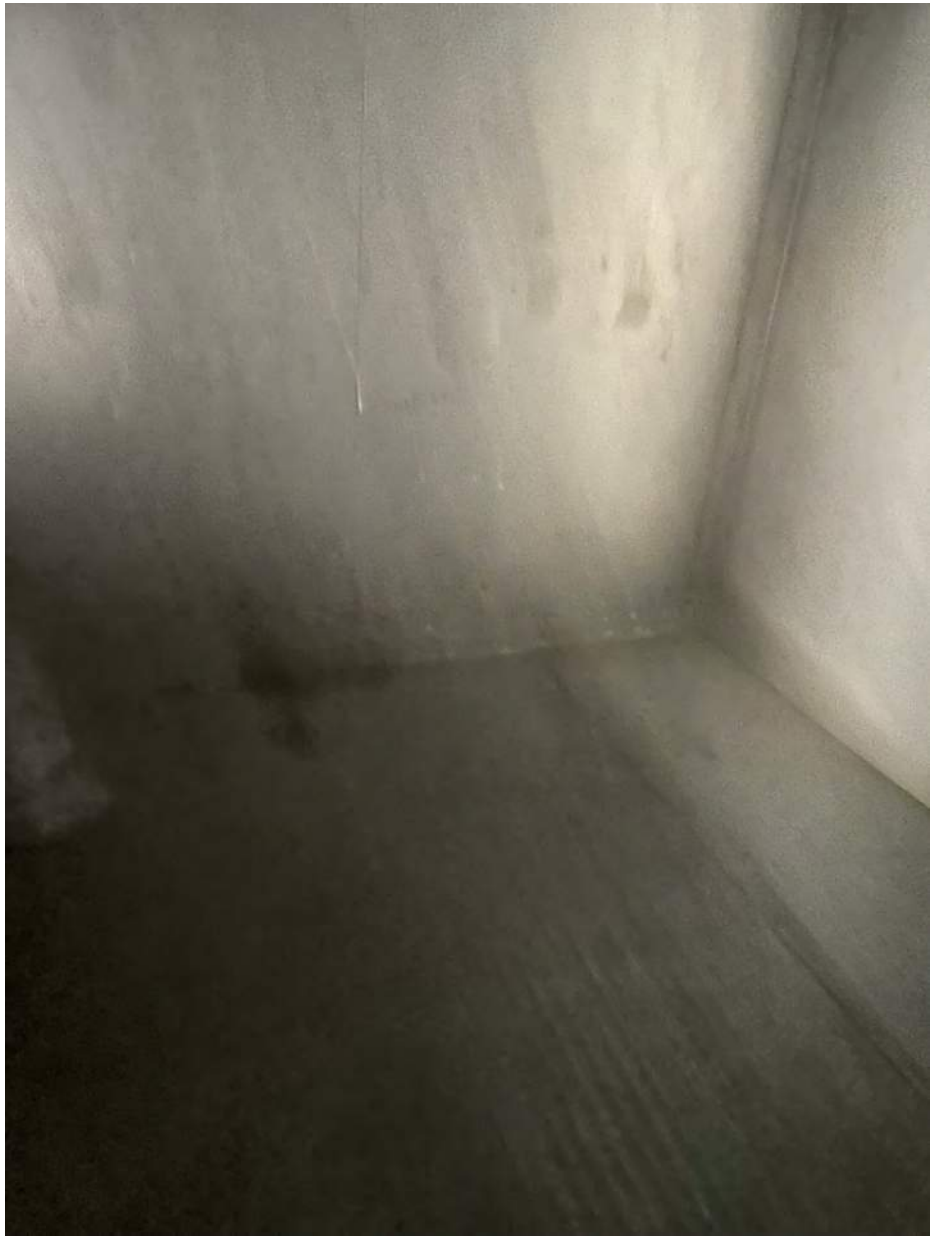


GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

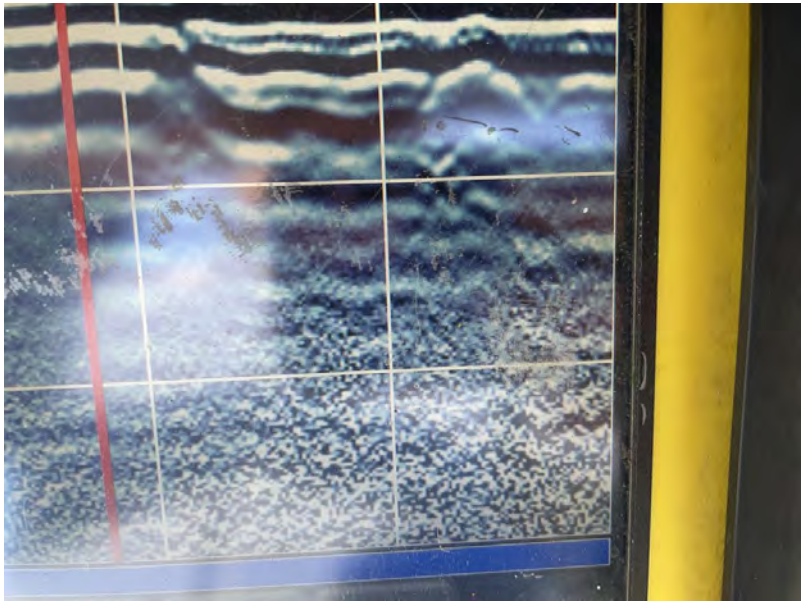
GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021



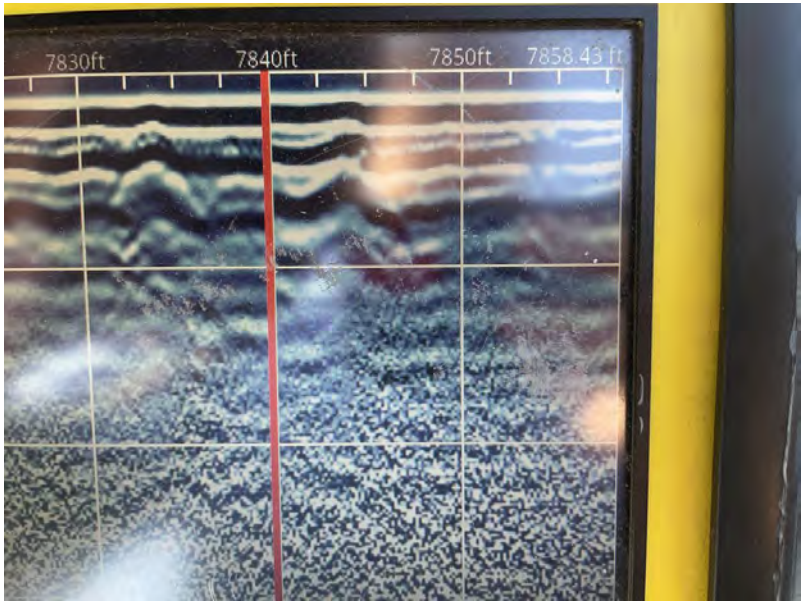
GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021



GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021



GEOPHYSICAL IMAGES

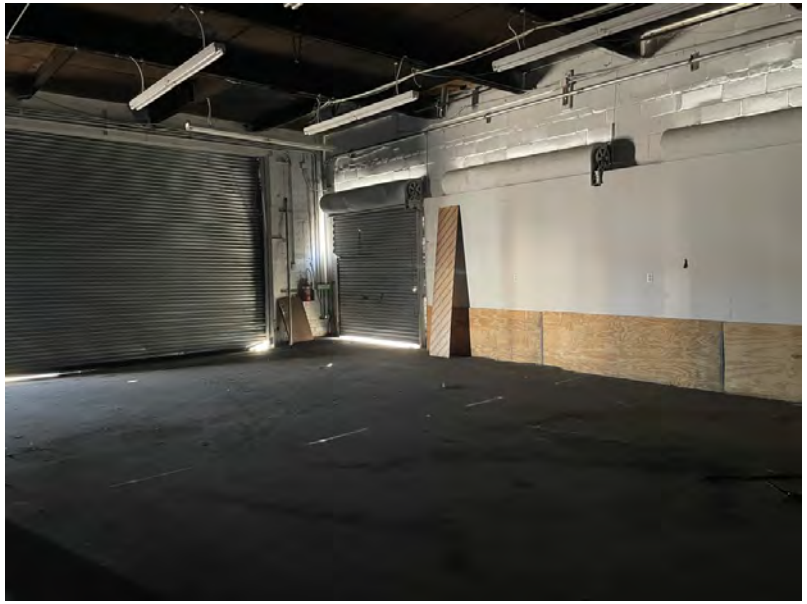
Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021

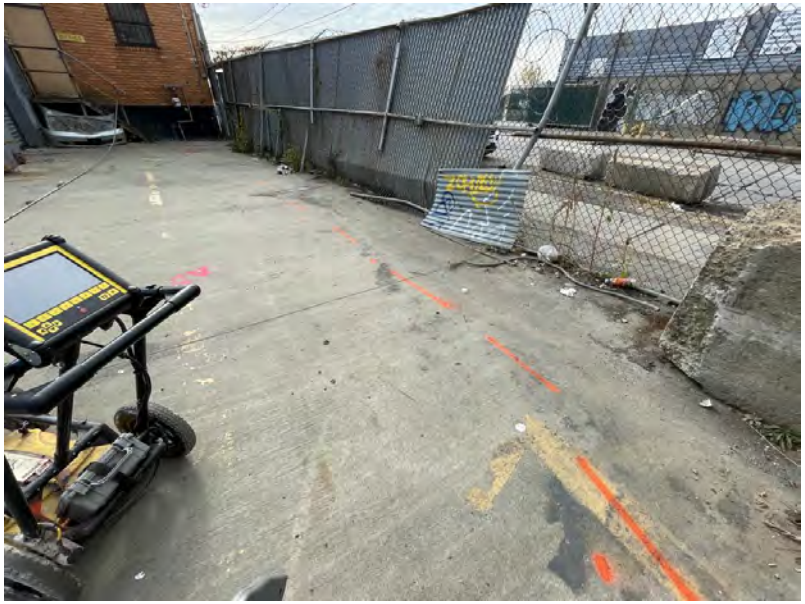
GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021



GEOPHYSICAL IMAGES

Industrial Site
58-20 47th Street,
Maspeth, New York 11238
November 11th, 2021



APPENDIX B

Soil Boring Logs

LANGAN

Log of Boring **LB-1** Sheet 1 of 1

Project: 57-00 47th Street Maspeth	Project No.: 100965501
Location: Maspeth, NY	Elevation and Datum: NA
Drilling Company: Lakewood Environmental Services	Date Started: 11/11/21 / Date Finished: 11/11/21
Drilling Equipment: Geoprobe 6610 DT	Completion Depth: 16 ft / Rock Depth: NA
Size and Type of Bit: 2" Direct Push	Number of Samples: Disturbed NA / Undisturbed NA / Core NA
Casing Diameter (in): NA / Casing Depth (ft): NA	Water Level (ft.): First ▽ / Completion ▼ NA / 24 HR. ▼
Casing Hammer: NA / Weight (lbs): NA / Drop (in): NA	Drilling Foreman: Adam Hutchinson
Sampler: 4' Macrocore 2" diameter	Field Engineer: Salvatore D'Alia
Sampler Hammer: NA / Weight (lbs): NA / Drop (in): NA	

Material Symbol	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	CONCRETE Aprox. 4-inchs thick	0	M-1A				0	Started Drilling at 11/11/2021 8:05 AM
	Light brown medium SAND, some fine gravel (dry)[FILL]	1					0	
		2		Macrocore	20		0	
		3	M-1B				0	
	White fine-medium SAND, some fine gravel (dry)[FILL]	4					0	
		5	M-2A				0	
	Dark brown medium-fine SAND, trace brick, trace silt (dry)[FILL]	6		Macrocore	14		0	
		7	M-2B				0	
	Dark brown medium-fine SAND, trace brick, trace silt (dry)[FILL]	8					0	8:40 AM - Collect grab sample from 7.5'-8.0'
		9					0	
		10	M-3A	Macrocore	33		0	
	Dark brown to black SILT, trace clay, trace organics (wet)[Pt]	11	M-3B				0	Bottom of boring at 11/11/2021 9:03 AM 2" Temporary well installed Screen installed from 5'-15' Riser from 0'-5'
	Dark brown to black SILT, trace clay, trace organics (wet)[Pt]	12					0	
		13	M-4A				0	Once the temporary well was sampled the PVC piping was removed, the boring was backfilled with any remaining drill cuttings, and then finished with fast setting high strength concrete to match the existing concrete pavement.
	Brown SILT, some sand (wet)[ML]	14		Macrocore	33		0	
		15	M-4B				0	
		16					0	
		17						
		18						
		19						
		20						

LANGAN

Log of Boring **LB-2** Sheet 1 of 1

Project: 57-00 47th Street Maspeth	Project No.: 100965501
Location: Maspeth, NY	Elevation and Datum: NA
Drilling Company: Lakewood Environmental Services	Date Started: 11/11/21 — Date Finished: 11/11/21
Drilling Equipment: Geoprobe 6610 DT	Completion Depth: 16 ft — Rock Depth: NA
Size and Type of Bit: 2" Direct Push	Number of Samples: Disturbed NA — Undisturbed NA — Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ — Completion ▼ NA — 24 HR. ▼
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Adam Hutchinson
Sampler: 4' Macrocore 2" diameter	Field Engineer: Salvatore D'Alia
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Sample Description	Depth Scale	Sample Number	Sample Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	Gray medium-fine SAND, trace silt, trace fine gravel (dry)[FILL]	0					0	Started Drilling at 11/11/2021 9:04 AM
	Brown to red medium-fine SAND, some brick (moist)[FILL]	1	M-1A				0	
			M-1B	Macrocore	35		0	
	Brown to black medium-fine SAND, some brick (moist)[FILL]	2					0	
		3	M-1C				0	
	Brown to black medium-fine SAND, some brick, some silt (moist)[FILL]	4					0	
		5	M-2A				0	
	Brown to black medium-fine SAND, trace brick, trace silt (moist)[FILL]	6		Macrocore	44		0	
			M-2B				0	
	Brown medium SAND (moist)[SP]	7					0	
			M-2C				0	
	Brown medium SAND (moist)[SP]	8					0	
		9	M-3A				0	
	Black to dark brown silty fine SAND, glass fragments, Burned wood (moist)[FILL]	10		Macrocore	28		0	
			M-3B				0	9:30 AM - Collect grab sample from 10.5'-11.0'
	Brown to grayish brown silty coarse-fine SAND (wet)[SM]	11					0.3	
			M-3C				0.1	
	Brown to grayish brown silty coarse-fine SAND (wet)[SM]	12					0	
		13					0	
							0	
		14					0	
			M-4A	Macrocore	21		0	
		15					0	
	Dark gray CLAY (moist)[CH]						0	Bottom of boring at 11/11/2021 10:31 AM
		16	M-4B					2" Temporary well installed to Screen installed from 5'-15' Riser from 0'-5' Once the temporary well was sampled the PVC piping was removed, the boring was backfilled with any remaining drill cuttings to grade.
		17						
		18						
		19						
		20						

LANGAN

Log of Boring **LB-3** Sheet 1 of 1

Project: 57-00 47th Street Maspeth	Project No.: 100965501
Location: Maspeth, NY	Elevation and Datum: NA
Drilling Company: Lakewood Environmental Services	Date Started: 11/11/21 — Date Finished: 11/11/21
Drilling Equipment: Geoprobe 6610 DT	Completion Depth: 16 ft — Rock Depth: NA
Size and Type of Bit: 2" Direct Push	Number of Samples: Disturbed NA, Undisturbed NA, Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ — Completion ▼ NA — 24 HR. ▼
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Adam Hutchinson
Sampler: 4' Macrocore 2" diameter	Field Engineer: Salvatore D'Alia
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	Reddish brown to brown coarse-medium SAND, some brick (dry)[FILL]	0					0	Started Drilling at 11/11/2021 10:31 AM
		1					0	
		2	M-1A	Macrocore	35		0	
	CONCRETE Aprox. 2-feet thick	3					0	
		4	M-1B				0.4	
	Dark brown to black silty medium-fine SAND, some gravel (moist)[FILL]	5	M-2A				0.2	
		6	M-2B	Macrocore	34		0	10:50 AM - Collect grab sample from 6.0'-6.5'
	Dark brown to black silty medium-fine SAND, wood fragments (wet)[FILL]	7	M-2C				0.1	
	Dark brown to black medium-fine SAND, trace silt, wood fragments (wet)[FILL]	8					0	
		9					0	
		10	M-3	Macrocore	20		0	
		11					0	
		12					0	
	Dark brown to black medium-fine SAND, trace silt, wood fragments (wet)[FILL]	13					0	
		14	M-4A	Macrocore	30		0	
	Dark gray CLAY, trace organics (moist)[CH]	15	M-4B				0.3	
		16					0.3	Bottom of boring at 11/11/2021 11:22 AM
		17					0.2	2" Temporary well installed to Screen installed from 5'-15' Riser from 0'-5' Once the temporary well was sampled the PVC piping was removed, the boring was backfilled with any remaining drill cuttings to grade.
		18						
		19						
		20						

LANGAN

Log of Boring **LB-4** Sheet 1 of 1

Project: 57-00 47th Street Maspeth	Project No.: 100965501
Location: Maspeth, NY	Elevation and Datum: NA
Drilling Company: Lakewood Environmental Services	Date Started: 11/11/21 — Date Finished: 11/11/21
Drilling Equipment: Geoprobe 6610 DT	Completion Depth: 16 ft — Rock Depth: NA
Size and Type of Bit: 2" Direct Push	Number of Samples: Disturbed NA, Undisturbed NA, Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ — Completion ▼ NA — 24 HR. ▼
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Adam Hutchinson
Sampler: 4' Macrocore 2" diameter	Field Engineer: Salvatore D'Alia
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	Dark brown to brownish red medium-fine SAND, trace silt, brick fragments (moist)[FILL]	0–4	M-1	Macrocore	36		0, 0, 0, 0.1, 0.1, 0.1, 0, 0	Started Drilling at 11/11/2021 12:25 PM 1:00 PM - Collect grab sample from 1.5'-2.0'
	Dark brown to brownish red medium-fine SAND, some fine gravel, trace glass, trace silt, brick fragments (moist)[FILL]	4–8	M-2	Macrocore	46		0.2, 0.2, 0.2, 0.2, 0.2, 0.2, 0.2, 0.2	
	Dark brown to brownish red medium-fine SAND, some fine gravel, trace glass, trace silt, brick fragments (moist)[FILL]	8–9	M-3A	Macrocore	46		0.2	
	Dark brown fine SAND, trace silt (wet)[SP]	9–12	M-3B	Macrocore	46		0.2, 0.2, 0.2, 0.2, 0.2, 0.2, 0.1	
	Dark brown fine SAND, trace silt (wet)[SP]	12–15	M-4A	Macrocore	46		0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1	
	Dark brown to black fine SAND, trace silt (wet)[SP]	15–16	M-4B	Macrocore	46		97	Bottom of boring at 11/11/2021 1:14 PM. 2" Temporary well installed Screen installed from 5'-15' Riser from 0'-5'
		16–20						

LANGAN

Log of Boring **LB-5** Sheet 1 of 1

Project: 57-00 47th Street Maspeth	Project No.: 100965501
Location: Maspeth, NY	Elevation and Datum: NA
Drilling Company: Lakewood Environmental Services	Date Started: 11/11/21 — Date Finished: 11/12/21
Drilling Equipment: Geoprobe 6610 DT	Completion Depth: 16 ft — Rock Depth: NA
Size and Type of Bit: 2" Direct Push	Number of Samples: Disturbed NA — Undisturbed NA — Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ — Completion ▼ NA — 24 HR. ▼
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Adam Hutchinson
Sampler: 4' Macrocore 2" diameter	Field Engineer: Salvatore D'Alia
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	CONCRETE Aprox. 3-inchs thick	0	M-1A				0	Started Drilling at 11/11/2021 1:20 PM
	Gray to black medium-fine GRAVEL (dry)[FILL]		M-1B				0	
	Brown to black silty fine-medium SAND, brick fragments (moist)[FILL]	1					0.1	
		2		Macrocore	38		0.4	
							0.4	
		3	M-1C				0.4	
							23	
	Dark brown fine-medium SAND, brick (dry)[FILL]		M-1D				0.6	
	Dark brown to brown fine-medium SAND, trace brick, trace silt (moist)[FILL]	4					0.2	
							0.6	
		5					0.2	
							0.2	
		6	M-2	Macrocore	30		0.2	
							0.2	
		7					0.2	
							0.2	
	Dark brown to brown silty fine-medium SAND, trace brick (moist)[FILL]	8					0	
							0	
		9					0	
							0	
		10	M-3	Macrocore	41		0	
							0	
		11					0	
							0	
	Gray to dark gray medium-fine SAND, trace silt (wet)[SP]	12					0.4	
							1	
		13					1	
							1.6	
		14	M-4	Macrocore	46		2.7	
							26	
		15					500	2:00 PM - Collect grab sample from 15'-15.5'
							500	
		16						Bottom of boring at 11/12/2021 7:38 AM
		17						Once completed the boring was backfilled with any remaining drill cuttings, and then finished with fast setting high strength concrete to match the existing concrete pavement.
		18						
		19						
		20						

LANGAN

Log of Boring **LB-6** Sheet 1 of 1

Project: 57-00 47th Street Maspeth	Project No.: 100965501
Location: Maspeth, NY	Elevation and Datum: NA
Drilling Company: Lakewood Environmental Services	Date Started: 11/12/21 / Date Finished: 11/12/21
Drilling Equipment: Geoprobe 6610 DT	Completion Depth: 18 ft / Rock Depth: NA
Size and Type of Bit: 2" Direct Push	Number of Samples: Disturbed NA / Undisturbed NA / Core NA
Casing Diameter (in): NA / Casing Depth (ft): NA	Water Level (ft.): First ▽ / Completion ▼ NA / 24 HR. ▼
Casing Hammer: NA / Weight (lbs): NA / Drop (in): NA	Drilling Foreman: Adam Hutchinson
Sampler: 5' Macrocore 2" diameter	Field Engineer: Salvatore D'Alia
Sampler Hammer: NA / Weight (lbs): NA / Drop (in): NA	

Material Symbol	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	CONCRETE Aprox. 6-inchs thick	0	M-1A				0	Started Drilling at 11/12/2021 7:39 AM
	Gray medium-fine GRAVEL (dry)[FILL]		M-1B				0	
	Dark gray to black SAND, trace silt (moist)[FILL]	1					0	
		2	M-1C	Macrocore	36		0.1	
							0.1	
		3					0.2	
							0.4	
	White fine-coarse SAND, concrete (dry)[FILL]	4	M-1D				0.4	
	Brown fine-coarse SAND, brick (dry)[FILL]						0	
		5	M-1E				0	
	Grayish brown silty SAND (moist)[SP]						0	
		6					0	
							0	
		7	M-2	Macrocore	36		0	
							0	
		8					0	
							0	
		9					0	
							0	
	Dark gray medium-fine SAND, trace silt, light odor and stains (wet)[SP]	10					0	
							0	
		11					0	
							0	
		12	M-3	Macrocore	50		0	8:10 AM - Collect grab sample from 16.5'-17.0' Bottom of boring at 11/12/2021 8:40 AM. 2" Temporary well installed Screen installed from 8'-18' Riser from 0'-8'
							0	
		13					0	
							0	
		14					0	
							0	
	Dark gray medium-fine SAND, trace silt, light odor and stains (wet)[SP]	15					57	Once the temporary well was sampled the PVC piping was removed, the boring was backfilled with any remaining drill cuttings, and then finished with fast setting high strength concrete to match the existing concrete pavement.
							500	
		16					500	
			M-4	Macrocore	47		500	
		17					54	
							17	
		18						
		19						
		20						

\\LANGAN.COM\DATA\PAR\DATA5\100965501\PROJECT DATA_DISCIPLINE\ENVIRONMENTAL\GINTLOGS\100965501_ENTERPRISE.GPJ ... 11/29/2021 12:56:37 PM ... Report: Log - LANGAN

LANGAN

Log of Boring **LB-7a** Sheet 1 of 1

Project: 57-00 47th Street Maspeth	Project No.: 100965501
Location: Maspeth, NY	Elevation and Datum: NA
Drilling Company: Lakewood Environmental Services	Date Started: 11/12/21 — Date Finished: 11/12/21
Drilling Equipment: Geoprobe 6610 DT	Completion Depth: 7 ft — Rock Depth: NA
Size and Type of Bit: 2" Direct Push	Number of Samples: Disturbed NA, Undisturbed NA, Core NA
Casing Diameter (in): NA — Casing Depth (ft): NA	Water Level (ft.): First ▽ — Completion ▼ NA — 24 HR. ▼
Casing Hammer: NA — Weight (lbs): NA — Drop (in): NA	Drilling Foreman: Adam Hutchinson
Sampler: 5' Macrocore 2" diameter	Field Engineer: Salvatore D'Alia
Sampler Hammer: NA — Weight (lbs): NA — Drop (in): NA	

Material Symbol	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)
	CONCRETE Aprox. 8-inchs thick	0					0
	Brown gravelly SAND, trace brick, trace concrete (dry)[FILL]	1	M-1A				0
		2	M-1B	Macrocore	33		0
	Brown medium SAND, some silt (moist)[FILL]	3					0
		4	M-1C				0.4
	Brown medium SAND, some silt (moist)[FILL]	5					0
		6	M-2A	Macrocore	18		0
	Brown to gray coarse-fine SAND (moist)[FILL]	7	M-2B				0
		8					
		9					
		10					
		11					
		12					
		13					
		14					
		15					
		16					
		17					
		18					
		19					
		20					

Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)

Started Drilling at 11/12/2021 8:40 AM

Bottom of boring at 11/12/2021 8:46 AM. Refusal encountered at 7.0ft. Possibly metal

Once completed the boring was backfilled with any remaining drill cuttings, and then finished with fast setting high strength concrete to match the existing concrete pavement.

LANGAN

Log of Boring **LB-7b-w3** Sheet 1 of 1

Project: 57-00 47th Street Maspeth	Project No.: 100965501
Location: Maspeth, NY	Elevation and Datum: NA
Drilling Company: Lakewood Environmental Services	Date Started: 11/12/21 / Date Finished: 11/12/21
Drilling Equipment: Geoprobe 6610 DT	Completion Depth: 18 ft / Rock Depth: NA
Size and Type of Bit: 2" Direct Push	Number of Samples: Disturbed NA / Undisturbed NA / Core NA
Casing Diameter (in): NA / Casing Depth (ft): NA	Water Level (ft.): First ▽ / Completion ▼ NA / 24 HR. ▼
Casing Hammer: NA / Weight (lbs): NA / Drop (in): NA	Drilling Foreman: Adam Hutchinson
Sampler: 5' Macrocore 2" diameter	Field Engineer: Salvatore D'Alia
Sampler Hammer: NA / Weight (lbs): NA / Drop (in): NA	

Material Symbol	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	CONCRETE Aprox. 8-inchs thick	0					0	Started Drilling at 11/12/2021 8:46 AM
	Brown gravelly SAND, trace brick (moist)[FILL]	1	M-1A				0	
		2					0	
		3	M-1B	Macrocore	35		0	
	Brown gravelly coarse-fine SAND, trace silt (moist)[FILL]	4	M-1C				0	
	Brown gravelly coarse-fine SAND, trace silt (moist)[FILL]	5					0	
		6					0	
		7	M-2A				0	
	Gray medium-fine angular GRAVEL (dry)[FILL]	8		Macrocore	27		0	
		9	M-2B				0	10:00 AM - Collect grab sample from 8.5'-9.0' ~ 6" above saturated soils.
	Gray to dark fine GRAVEL, some coarse sand (wet)[FILL]	10					0	
		11					0	
		12					0	
		13	M-3	Macrocore	19		0	Bottom of boring at 11/12/2021 10:08 AM. 2" Temporary well installed Screen installed from 8'-18' Riser from 0'-8'
		14					0	
	Gray to dark gray fine GRAVEL, some coarse sand (wet)[FILL]	15					0	
		16					0	Once the temporary well was sampled the PVC piping was removed, the boring was backfilled with any remaining drill cuttings, and then finished with fast setting high strength concrete to match the existing concrete pavement.
		17	M-4	Macrocore	26		0	
		18					0	
		19						
		20						

LANGAN

Log of Boring **LB-8** Sheet 1 of 1

Project: 57-00 47th Street Maspeth	Project No.: 100965501
Location: Maspeth, NY	Elevation and Datum: NA
Drilling Company: Lakewood Environmental Services	Date Started: 11/12/21 / Date Finished: 11/12/21
Drilling Equipment: Geoprobe 6610 DT	Completion Depth: 15 ft / Rock Depth: NA
Size and Type of Bit: 2" Direct Push	Number of Samples: Disturbed NA / Undisturbed NA / Core NA
Casing Diameter (in): NA / Casing Depth (ft): NA	Water Level (ft.): First ▽ / Completion ▼ NA / 24 HR. ▼
Casing Hammer: NA / Weight (lbs): NA / Drop (in): NA	Drilling Foreman: Adam Hutchinson
Sampler: 5' Macrocore 2" diameter	Field Engineer: Salvatore D'Alia
Sampler Hammer: NA / Weight (lbs): NA / Drop (in): NA	

Material Symbol	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	CONCRETE Aprox. 6-inchs thick	0	M-1A				0	Started Drilling at 11/12/2021 10:09 AM
	White fine-medium GRAVEL, some sand, rca (dry)[FILL]		M-1B				0	
	Grayish brown coarse-fine SAND (moist)[FILL]	1					0	
		2		Macrocore	30		0	
		3					0	
		4	M-1C				0	
							0	
	Grayish brown medium-fine SAND, odor mild (moist)[FILL]	5					0	
		6					0	
		7	M-2A	Macrocore	39		0	
		8					57	10:30 AM - Collect grab sample from 7.5'-8.0' ~ 6" above groundwater.
	Grayish brown coarse-fine SAND, trace brick, concrete lenses, odor mild (moist)[FILL]						12	
		9	M-2B				5.7	
							4.8	
	Grayish brown coarse-fine SAND, odor mild (moist)[FILL]	10					4.2	
		11	M-3	Macrocore	37		0.5	
		12					0.5	
		13					0.4	
		14					0.4	
		15					0.4	
		16					0.4	
		17					0.4	
		18					0.4	
		19					0.4	
		20					0.4	
							5	Bottom of boring at 11/12/2021 10:44 AM 2" Temporary well installed Screen installed from 5'-15' Riser from 0'-5' Once the temporary well was sampled the PVC piping was removed, the boring was backfilled with any remaining drill cuttings, and then finished with fast setting high strength concrete to match the existing concrete pavement.

\\LANGAN.COM\DATA\PAR\DATA5\100965501\PROJECT DATA_DISCIPLINE\ENVIRONMENTAL\GINTLOGS\100965501_ENTERPRISE.GPJ ... 11/29/2021 12:56:47 PM ... Report: Log - LANGAN

LANGAN

Log of Boring **LB-9a** Sheet 1 of 1

Project: 57-00 47th Street Maspeth	Project No.: 100965501
Location: Maspeth, NY	Elevation and Datum: NA
Drilling Company: Lakewood Environmental Services	Date Started: 11/12/21 / Date Finished: 11/12/21
Drilling Equipment: Geoprobe 6610 DT	Completion Depth: 11.5 ft / Rock Depth: NA
Size and Type of Bit: 2" Direct Push	Number of Samples: Disturbed NA / Undisturbed NA / Core NA
Casing Diameter (in): NA / Casing Depth (ft): NA	Water Level (ft.): First ▽ / Completion ▼ NA / 24 HR. ▼
Casing Hammer: NA / Weight (lbs): NA / Drop (in): NA	Drilling Foreman: Adam Hutchinson
Sampler: 5' Macrocore 2" diameter	Field Engineer: Salvatore D'Alia
Sampler Hammer: NA / Weight (lbs): NA / Drop (in): NA	

Material Symbol	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	CONCRETE Aprox. 8-inchs thick	0	M-1A					Started Drilling at 11/12/2021 10:51 AM
	Gray fine-medium angular GRAVEL, some m-f sand, rca (dry)[FILL]	1	M-1B					
	Reddish brown silty SAND, some fine gravel, rca (moist)[FILL]	2		Macrocore	22			
		3						
		4	M-1C					
	Reddish brown silty SAND, some fine gravel, brick lenses, rca (moist)[FILL]	5					0	
		6					0	
		7					0	
		8	M-2A	Macrocore	36		0	
	Light gray medium-fine angular GRAVEL (dry)[FILL]	9	M-2B				0	
	Light grayish brown silty medium-fine SAND, some f-m gravel, trace brick (moist)[FILL]		M-2C				7.4	
	Light grayish brown silty medium-fine SAND, some f-m gravel (moist)[FILL]	10					0	
	Light grayish brown medium-fine angular GRAVEL, some f-m gravel (moist)[FILL]	11	M-3A	Macrocore	18		0	
			M-3B				0	
		12						Bottom of boring at 11/12/2021 11:23 AM. Refusal encountered at 11.5ft
		13						
		14						Once completed the boring was backfilled with any remaining drill cuttings, and then finished with fast setting high strength concrete to match the existing concrete pavement.
		15						
		16						
		17						
		18						
		19						
		20						

LANGAN

Log of Boring **LB-9b-n2** Sheet 1 of 2

Project: 57-00 47th Street Maspeth	Project No.: 100965501
Location: Maspeth, NY	Elevation and Datum: NA
Drilling Company: Lakewood Environmental Services	Date Started: 11/12/21 / Date Finished: 11/12/21
Drilling Equipment: Geoprobe 6610 DT	Completion Depth: 18 ft / Rock Depth: NA
Size and Type of Bit: 2" Direct Push	Number of Samples: Disturbed NA / Undisturbed NA / Core NA
Casing Diameter (in): NA / Casing Depth (ft): NA	Water Level (ft.): First ▽ / Completion ▼ NA / 24 HR. ▼
Casing Hammer: NA / Weight (lbs): NA / Drop (in): NA	Drilling Foreman: Adam Hutchinson
Sampler: 5' Macrocore 2" diameter	Field Engineer: Salvatore D'Alia
Sampler Hammer: NA / Weight (lbs): NA / Drop (in): NA	

Material Symbol	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	CONCRETE Aprox. 8-inchs thick	0	M-1A				0	Started Drilling at 11/12/2021 11:24 AM
	Gray medium-fine angular GRAVEL, some m-f sand, rcq (dry)[FILL]	1	M-1B				0	
	Reddish brown silty SAND, trace fine gravel (moist)[FILL]	2		Macrocore	33		0	
		3					0	
		4	M-1C				0	
		5					0	
	Reddish brown silty SAND, trace fine gravel (moist)[FILL]	6					1.4	
		7					1.3	
		8	M-2A	Macrocore	41		0.4	
		9					0.4	
	Gray medium-coarse angular GRAVEL (dry)[FILL]						0.3	
	Mottled grayish brown silty medium-fine SAND (moist)[FILL]		M-2B				0.3	
	Gray SAND, some fine gravel (moist)[FILL]	10	M-2C				0.3	
	Brown medium-fine SAND, some silt (moist)[FILL]						1.4	
	Brown silty medium-fine SAND (moist)[FILL]	11	M-3A				34	
	Brown silty medium-fine SAND, some fine gravel, brick fragments (moist)[FILL]		M-3B				500	
		12	M-3C				500	
							500	
		13	M-3D	Macrocore	57		183	
							22	
		14					13	
	Brown silty medium-fine SAND (moist)[SM]						9	
		15	M-3E				10	
	Brown to black silty medium-fine SAND, trace fine gravel (wet)[SM]						8.2	
		16	M-4A				6.5	10:30 AM - Collect grab sample from 14.0'-14.5'
	Gray to black CLAY (wet)[CH]						290	Bottom of boring at 11/12/2021 2:08 PM
		17	M-4B	Macrocore	19		130	2" Temporary well installed
							10	Screen installed from 4'-14'
	Dark brown medium SAND [SP]						10	Riser from 0'-4'
		18	M-4C				10	
		19						Once the temporary well was sampled the PVC piping was removed, the boring was backfilled with any remaining drill cuttings, and then finished with fast setting high strength concrete to match the existing concrete
		20						

LANGAN

Log of Boring **LB-10** Sheet 1 of 1

Project: 57-00 47th Street Maspeth	Project No.: 100965501
Location: Maspeth, NY	Elevation and Datum: NA
Drilling Company: Lakewood Environmental Services	Date Started: 11/12/21 / Date Finished: 11/12/21
Drilling Equipment: Geoprobe 6610 DT	Completion Depth: 15 ft / Rock Depth: NA
Size and Type of Bit: 2" Direct Push	Number of Samples: Disturbed NA / Undisturbed NA / Core NA
Casing Diameter (in): NA / Casing Depth (ft): NA	Water Level (ft.): First ▽ / Completion ▼ NA / 24 HR. ▼
Casing Hammer: NA / Weight (lbs): NA / Drop (in): NA	Drilling Foreman: Adam Hutchinson
Sampler: 4' Macrocore 2" diameter	Field Engineer: Salvatore D'Alia
Sampler Hammer: NA / Weight (lbs): NA / Drop (in): NA	

Material Symbol	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
	CONCRETE Aprox. 13-inchs thick	0					0	Started Drilling at 11/12/2021 2:09 PM
	White to black fine-medium SAND, some fine gravel (moist)[FILL]	1	M-1A				0	
		2					0	
		3	M-1B	Macrocore	28		0	
		4					1.6	
	Brown silty SAND, trace brick (moist)[FILL]		M-1C				1.3	
		5					2.3	
	Brown silty SAND, trace brick (moist)[FILL]		M-2A				0.8	
		6					0.9	
	Black silty SAND, trace brick, burning odor, burned wood (moist)[FILL]	7	M-2B	Macrocore	51		1	
							1.2	
	Brown medium SAND, banding (moist)[SP]	8					13.5	
							500	2:30 PM - Collect grab sample from 6.5'-7.0'
		9	M-2C				59	
							22.4	
	Gray to black medium SAND, Same as lb6 (wet)[SP]	10					10.7	
							1.5	
		11					12	
							1	
		12	M-3	Macrocore	43		7.3	
							5.4	
		13					2.1	
							1.9	
		14					1.2	
							0.9	
		15					0.9	Bottom of boring at 11/12/2021 2:50 PM
							0.9	
		16					13.3	Once completed the boring was backfilled with any remaining drill cuttings, and then finished with fast setting high strength concrete to match the existing concrete pavement.
							500	
		17						
		18						
		19						
		20						