
REMEDIAL ACTION WORK PLAN ADDENDUM

for

**767 EAST 133rd STREET
Bronx, New York
NYSDEC BCP Site No. C203123**

Prepared for:

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LANGAN

**November 2021
Langan Project No. 170497202**

CERTIFICATION

I, Jason J. Hayes, certify that I am currently a New York State registered professional engineer as defined in 6 NYCRR Part 375 and that this Remedial Action Work Plan (RAWP) Addendum was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

JASON HAYES

NYS Professional Engineer

11/10/2021

Date



Signature

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.

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1.0 INTRODUCTION

The purpose of this Remedial Action Work Plan (RAWP) Addendum is to remove in-situ groundwater treatment as an element of the approved remedy at 767 East 133rd Street in the Bronx, New York (the “site”). This modification to the remedy presented in the RAWP is based on the cumulative results of five rounds of soil, groundwater and soil vapor investigations performed between May 2018 and January 2021, including the most recent supplemental May and August 2021 test pit, boring, and Membrane Interface Probe (MIP) investigations.

Data collected between May 2018 and January 2021 during the Brownfield Cleanup Program (BCP) Remedial Investigation (RI) and BCP eligibility investigations identified chlorinated volatile organic compounds (CVOCs) at concentrations above the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (SGV) for Class GA water in groundwater. CVOCs were not detected in any soil samples at concentrations indicative of an on-site source; in fact, no CVOCs were detected in soil above the Title 6 New York Codes, Rules and Regulations (NYCRR) Part 375 Unrestricted Use (UU) or Protection of Groundwater (PGW) Soil Cleanup Objectives (SCOs). Based on the data, the source of CVOCs in groundwater at the site was suspected to be off-site; however, NYSDEC requested additional testing to further evaluate the source of COVCs in groundwater at the site.

Langan attempted an off-site investigation as part of the BCP RI in December 2020 to identify an off-site source. Figure 1 shows possible sources of CVOc contamination both on- and off-site that helped to guide this investigation. The proposed off-site investigation included advancement of borings and completion of monitoring wells in the East 134th Street sidewalks outside of the potential sources identified in Figure 1. Due to lack of site access to investigate the off-site properties and the presence of utilities and shallow bedrock, Langan was unable to complete the investigation as planned and was only able to collect limited off-site data. For these reasons, the investigation was inconclusive regarding sources of CVOCs in groundwater. It was determined that further attempts to investigate off-site would likely be unsuccessful due to lack of access and subgrade drilling conditions.

Langan’s focus shifted to intensive on-site soil and groundwater investigation to further evaluate whether any on-site source(s) of CVOCs are present. Langan subsequently conducted a test pit and boring investigation in May 2021 and an intensive boring investigation using a membrane interface probe (MIP) in August 2021 to evaluate for a potential on-site source of CVOCs. In total, across five investigations, CVOCs were not detected above the Part 375 UU or PGW SCOs in 68 soil samples collected from the site (including quality assurance/quality control [QA/QC]). The

field observations, analytical soil data, and MIP measurements did not identify an on-site source of CVOCs.

2.0 PREVIOUS INVESTIGATION SUMMARY

The findings of the following previous investigations conducted at the site are summarized below:

- Office of Environmental Remediation (OER) Remedial Investigation, July 2018
- BCP Remedial Investigation, January 2021
- Test Pit and Soil Boring Investigation, May 2021
- Membrane Interface Probe Investigation, August 2021

Soil boring and monitoring well locations are shown on Figures 2 and 3, respectively. The findings of the OER and BCP Remedial Investigations, including laboratory reports, tabulated analytical data, and soil boring and groundwater sampling logs, are included in the NYSDEC-approved Remedial Investigation Report (RIR), dated July 20, 2021. Soil sampling results from the May and August 2021 investigations are summarized in Table 1, and groundwater sampling results from the May 2021 investigation are summarized in Table 2. Soil boring, test pit, and groundwater sampling logs and laboratory analytical reports from the May and August 2021 investigations are included in Appendices A, B, and C.

OER Remedial Investigation, July 2018

In May 2018, 9 soil borings and 5 monitoring wells were completed and 19 soil samples and 6 groundwater samples (including QA/QC samples) were collected as part of the RI performed under the New York City (NYC) Brownfield Jumpstart Program and the NYC Community Brownfield Planning Area Program. The depth to groundwater was between 0.47 feet below the cellar slab in the southeast part of the site to 9.56 feet below grade surface (bgs) in the northwest part of the site (el 3.59 to 5.54¹); groundwater flow direction was towards the south. CVOCs were detected at concentrations above the SGVs in groundwater samples collected from monitoring wells across the site, with the highest concentration near the western boundary of the site. Tetrachloroethene (PCE) concentrations ranged from non-detect in MW-03 to 3,700 micrograms per liter [µg/L] in MW-02, and trichloroethene (TCE) concentrations ranged from non-detect in MW-03 to 500 µg/L in MW-02 (sampled in December 2020). Odor, staining, and photoionization detector (PID) readings above background were not encountered when screening soil, and CVOCs were not detected above the UU or PGW SCOs in any soil samples.

¹ Elevations herein are referenced in North American Vertical Datum of 1988.

BCP Remedial Investigation, January 2021

Between August 2019 and January 2021, 9 additional soil borings and 3 additional monitoring wells were completed, including 1 soil boring and 1 monitoring well in the East 134th Street sidewalk, and 26 soil samples and 10 groundwater samples (including QA/QC samples) were collected as part of the BCP RI. The RI also included surveying of monitoring well elevations and synoptic groundwater gauging. The depth to groundwater was between 5.43 and 8.87 feet bgs (el. 4.60 to 7.51), and the groundwater flow direction was determined to be towards the south-southwest. Groundwater is likely perched on top of shallow bedrock beneath the East 134th Street sidewalk, and groundwater flow direction may be influenced by the shallow bedrock.

Similar to the July 2018 OER RI, CVOCs were detected at concentrations above the SGVs in groundwater samples collected from monitoring wells across the site. CVOc concentrations were generally highest in groundwater samples from MW-02 near the western boundary of the site. PCE concentrations ranged from non-detect in MW-10 and MW-16 to 1,900 µg/L in MW-18, and TCE concentrations ranged from non-detect in MW-10 and MW-16 to 280 µg/L in MW-18. Odor, staining, and PID readings above background were not encountered when screening soil, and CVOcs were not detected above the UU or PGW SCOs in any soil samples.

In December 2020 at the request of the NYSDEC, Langan attempted to complete an off-site groundwater investigation along the East 134th Street sidewalk near the northwestern and northeastern adjoining properties located at 740 and 753 East 134th Street. Eleven (11) borings were advanced to refusal between 5 and 12 feet bgs, which was estimated to be the top of weathered bedrock (Figure 2). Groundwater was only encountered at soil boring SB-19 in the sidewalk adjacent to the site. Additional boring attempts were precluded by the presence of underground utility lines beneath the sidewalk. One groundwater monitoring well (MW-19) was successfully installed on the northeastern adjoining East 134th Street sidewalk; a groundwater sample collected from the well did not contain CVOcs above the SGVs. Odors, staining, and a maximum PID reading of 675 parts per million (ppm) were encountered in soil samples collected from 5 to 6 feet bgs in two borings, SB-17 and SB-20, on the East 134th Street sidewalk about 70 feet from the northern corner of the site; however, the two associated soil samples did not contain CVOcs.

May 2021 Test Pit and Soil Boring Investigation

Sixteen (16) soil samples, including QA/QC samples, were collected from 4 test pits (TP03 through TP06) and 12 remedial design borings (RDB-01 through RDB-12) advanced on the western portion of the site between May 10 and 27, 2021. Additionally, five temporary monitoring wells were installed and sampled. The objective of the investigation was to evaluate potential on-site source(s) of CVOcs near the area containing the highest CVOc concentrations in site

groundwater, and to evaluate soil and bedrock conditions to inform the design of a hydraulic barrier wall.

The test pits were about 9 to 18 feet wide by 5 to 12 feet long and extended to depths between 10 and 12 feet bgs. The borings were advanced to about 12 feet bgs. Groundwater was observed at depths between 8 and 11 feet bgs. Odors, staining, and PID readings above background were not encountered when screening soil from the test pits or remedial design borings, and CVOCs were not detected above the UU or PGW SCOs in the soil samples.

Temporary monitoring wells (TMW-01, TMW-03, TMW-06, TMW-09, and TMW-11) were installed and groundwater samples were collected at the five well locations. CVOCs were detected at concentrations above the SGVs in each sample, with the highest PCE and TCE concentrations of 3,400 µg/l and 380 µg/l, respectively, in TMW-11, which was about 28 feet east of the western site boundary and 21 feet northeast of MW-02.

Soil boring and monitoring well locations are shown on Figures 2 and 3, respectively. Tables 1 and 2 summarize the soil and groundwater sampling analytical results from the May 2021 investigation, respectively. Soil boring and test pit logs are included in Appendix A, groundwater sampling logs are included in Appendix B, and laboratory analytical reports are included in Appendix C.

August 2021 Membrane Interface Probe Investigation

A membrane interface probe (MIP) investigation was conducted to identify and delineate the extent of any potential CVOC source material. Fifteen MIP borings (MIP01 through MIP15) were advanced in a gridded pattern using a direct-push drill rig affixed with a MIP system, and six soil samples were collected for comparison with the MIP data. The MIP system is an in situ soil and groundwater analysis methodology that includes a PID, flame ionization detector (FID), and halogenated-specific detector (XSD). The MIP system provides real-time soil measurements of electrical conductivity, soil permeability, and petroleum VOC and CVOC contamination, with the XSD targeting CVOCs. Pre- and post-response tests were conducted at each MIP location using a known concentration (2 ppm) of PCE to confirm the integrity of the system.

MIP borings were advanced to refusal (i.e., the estimated depth of weathered bedrock), which varied between about 9.5 feet bgs near the western site boundary and 26 feet bgs near the center of the site. MIP readings were continuously collected in each boring from both unsaturated and saturated soil. The XSD readings in unsaturated soil were between 0 and 1.5 microvolts (µV) $\times 10^5$, which was at about 7 feet bgs (slightly above the groundwater table) near the western site boundary in MIP01. XSD readings in saturated soil were between 0 and 1.4 µV $\times 10^5$, with the exception of a reading of about 6 µV $\times 10^5$ that was measured at about 9.5 feet bgs near the

western site boundary in MIP02, at the refusal depth. For comparison, a nearby soil sample collected about 4 feet north of MIP02 between 10 and 11 feet bgs (RDB-05) during the May 2021 investigation did not contain CVOCs above the UU or PGW SCOs.

An XSD reading between $0.1 \mu\text{V} \times 10^7$ and $1 \mu\text{V} \times 10^7$ may indicate the presence of dense non-aqueous phase liquid (DNAPL)². The maximum XSD reading at the site was about two orders of magnitude below the response threshold for DNAPL source material. XSD readings were lower in unsaturated soil than in saturated soil and increased with depth, reflecting the influence of CVOCs in groundwater. The highest XSD reading at each MIP location was typically in saturated soil near the refusal depth. XSD readings indicative of source material in unsaturated soil or DNAPL were not encountered.

Six confirmatory soil samples were collected from between 6 and 24 feet bgs from four borings (SB-MIP03, SB-MIP07, SB-MIP08 and SB-MIP10) located near corresponding MIP borings. The sampled borings were selected to provide additional data from previously unsampled locations and to correlate XSD readings with laboratory results. Odors, staining, and PID readings above background were not encountered when screening soils in the borings. CVOCs were not detected in any of the soil samples at concentrations above UU or PGW SCOs.

MIP boring locations are shown on Figure 4, and the MIP report and logs are included in Appendix D.

² The Interstate Technology & Regulatory Council Implementing Advanced Site Characterization Tools Team December 2019, *Implementing Advanced Site Characterization Tools*, page 171, accessed 8 September 2021 <https://asct-1.itrcweb.org/asct_full_12_15_19.pdf>

3.0 POTENTIAL OFF-SITE SOURCES

The only documented historical on-site operation that may have used CVOCs was a piano string manufacturer that occupied former Lot 56 on the southeastern portion of the site between about 1927 and 1976. The former facility was about 55 feet south of the location of the highest CVOC concentrations in groundwater (i.e., MW-02, sampled during the July 2018 OER RI). PCE was detected in a well within the footprint of the former facility at a concentration two orders of magnitude less than the highest concentrations observed in groundwater. These data do not indicate the historical piano string manufacturer was a source of CVOC impacts in groundwater at the site.

Groundwater elevations obtained during monitoring events between 2018 and 2020 indicated that the direction of groundwater flow varies between south and south-southwest. However, a historical survey of the area conducted in 1885 indicates that the local hydraulic gradient likely sloped south-southeast towards an inlet of the Bronx Kill located about 500 feet from the site³.

A geotechnical investigation conducted by Pillori Associates, Inc. in 2021 also indicates that the decomposed bedrock surface slopes from about 17 feet bgs near the northern corner of the site to 43 feet bgs in the Willow Avenue sidewalk in the southeastern portion of the site. Shallow, unconfined groundwater gradient typically follows bedrock topography, and properties located north and northwest of the site are therefore considered to be hydraulically upgradient. Appendix E includes the relevant section of Certified Copies of Important Maps appertaining to the 23rd and 24th Wards, City of New York, published by E. Robinson in 1888. Appendix F includes a boring location plan, cross-sections, and boring logs from Pillori's 2021 geotechnical investigation.

The following existing and historical facilities constitute potential off-site sources of CVOC contamination north and west of the site:

- Safe manufacturing company on western adjoining property at 740 East 134th Street (2009 to present⁴)
- Commercial dry cleaner with three solvent tanks and metal fabrication on northeastern adjoining property across East 134th Street at 755 East 134th Street (1968 to 2007)

³ Certified Copies of Important Maps appertaining to the 23th and 24th Wards, City of New York, published by E. Robinson in 1885

⁴ Dates provided in the bulleted list below are based on review of Google Street Viewer, Sanborn Fire Insurance Maps and observations made during visits to the site and surrounding area.

- Utility contractor staging yard about 50 feet north of the site across East 134th Street at 734 East 134th Street (1935 to present)
- Automotive repair garage about 85 feet north of the site at 704 East 135th Street (1935 to 2007)
- Machine shop about 85 feet west of the site at 739 East 133rd Street (1968 to 1969)
- Automotive repair garage about 100 feet west of the site at 728 East 134th Street (1968 to present)
- Machine shop about 105 feet north of the site at 710 East 135th Street (1935 to 1951)
- Machine assembly facility about 130 feet north of the site at 708 East 135th Street (1935 to 1951)

The area with the greatest groundwater impact is located near the western boundary of the site nearest the safe manufacturing company at 740 East 134th Street. However, other facilities, such as the commercial dry cleaner, the utility contractor staging yard, automotive repair garages, and machine shops/assembly facilities, are also located up-gradient of the safe manufacturing company and may be contributing sources

Based on the absence of a documented on-site CVOC during extensive investigations and the presence of multiple potential off-site CVOC sources located hydraulically up-gradient of the site, this RAWP amendment removes groundwater remediation as an element of the approved remedy for the site.

Even without site groundwater remediation, the remedy will be protective of human health and the environment through use of Institutional and Engineering Controls (IC/EC) and will minimize, to the extent feasible, migration of CVOCs in groundwater. The remedy includes measures that (1) prevent further migration of CVOC-impacted groundwater onto the site from properties to the north and west, (2) prevent potential migration of residual impacted groundwater from the site to the western adjoining residential properties, (3) prevent soil vapor intrusion within the new building, and (4) inhibit potential migration of residual impacted soil vapor from the site to the western adjoining residential properties. Although groundwater remediation is no longer a component of the remedy, the following IC/ECs presented in the RAWP will be implemented:

1. Installation of a hydraulic cutoff wall along the northern and western site boundaries to prevent CVOC-impacted groundwater flow across the site boundaries.
2. Installation of a soil vapor mitigation system that includes (i) an SMD system with a soil vapor barrier below the foundation slab and constructed with a 20-inch-thick vertical gas permeable aggregate layer to mitigate soil vapor intrusion into the proposed building, and

- (ii) an approximately 24-inch-wide horizontal gas permeable aggregate layer extending to about two feet above groundwater near the western site boundary to minimize soil vapor migration from the site toward the western adjoining residential properties.
- 3. Capping of the site with a 10-inch-thick concrete foundation slab, which directly overlies 36-inch-thick grade beams throughout the site to prevent direct contact with soil and CVOC-impacted groundwater.
- 4. Establishment of Institutional Controls (IC) that will prohibit potable use of groundwater at the site.

The design plans for the hydraulic cutoff wall and SMD system have been provided in a separate Remedial Design Memorandum

FIGURES



- LEGEND:
- APPROXIMATE SITE BOUNDARY
 - APPROXIMATE EXTENT OF HISTORICAL ON-SITE USE
 - APPROXIMATE EXTENT OF CURRENT AND/OR HISTORICAL OFF-SITE USE

- NOTES:
- BASEMAP OBTAINED FROM NYC OASIS MAP ON OCTOBER 17, 2017 AND LAND SURVEY, BY GERALD T. O'BUCKLEY, DATED APRIL, 6 2018.
 - PREVIOUS SOIL BORINGS, MONITORING WELLS AND SOIL VAPOR POINTS WERE COMPLETED AS PART OF A REMEDIAL INVESTIGATION PERFORMED BY LANGAN ON MAY 21, 2018 TO MAY 24, 2018.
 - ALL LOCATIONS ARE APPROXIMATE
 - CVOC = CHLORINATED VOLATILE ORGANIC COMPOUNDS

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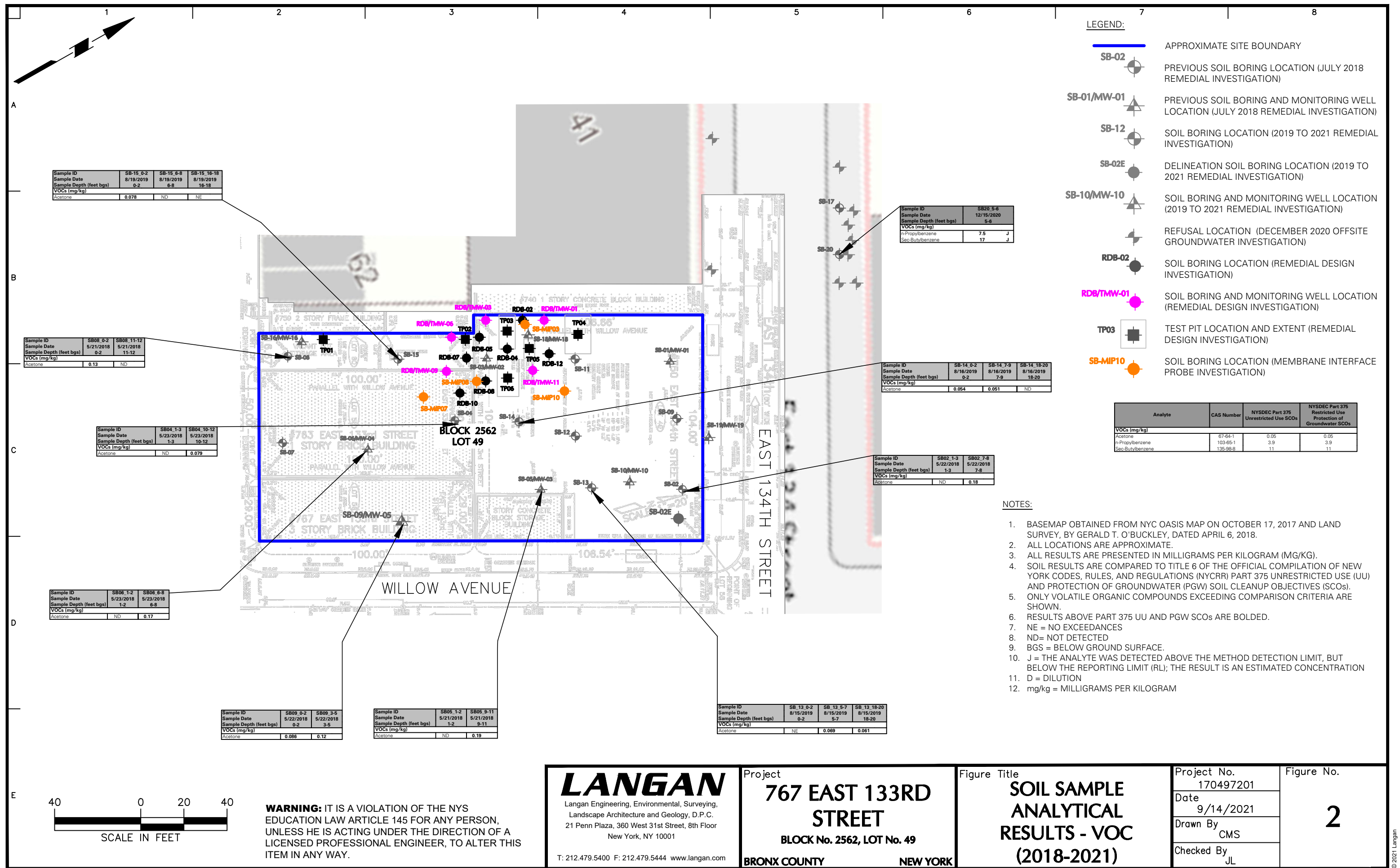
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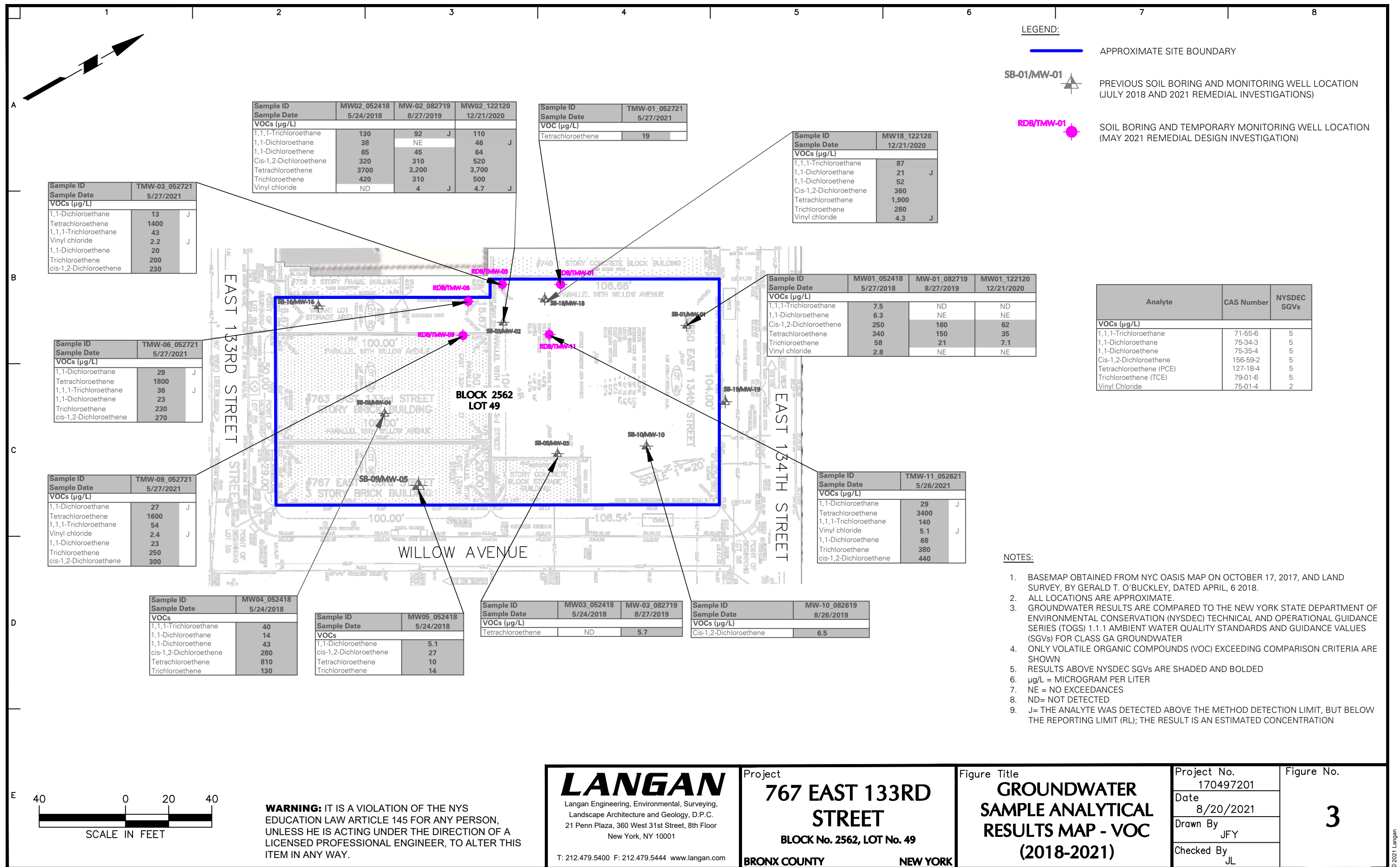
Project
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BLOCK No. 2562, LOT No. 49
BRONX COUNTY NEW YORK

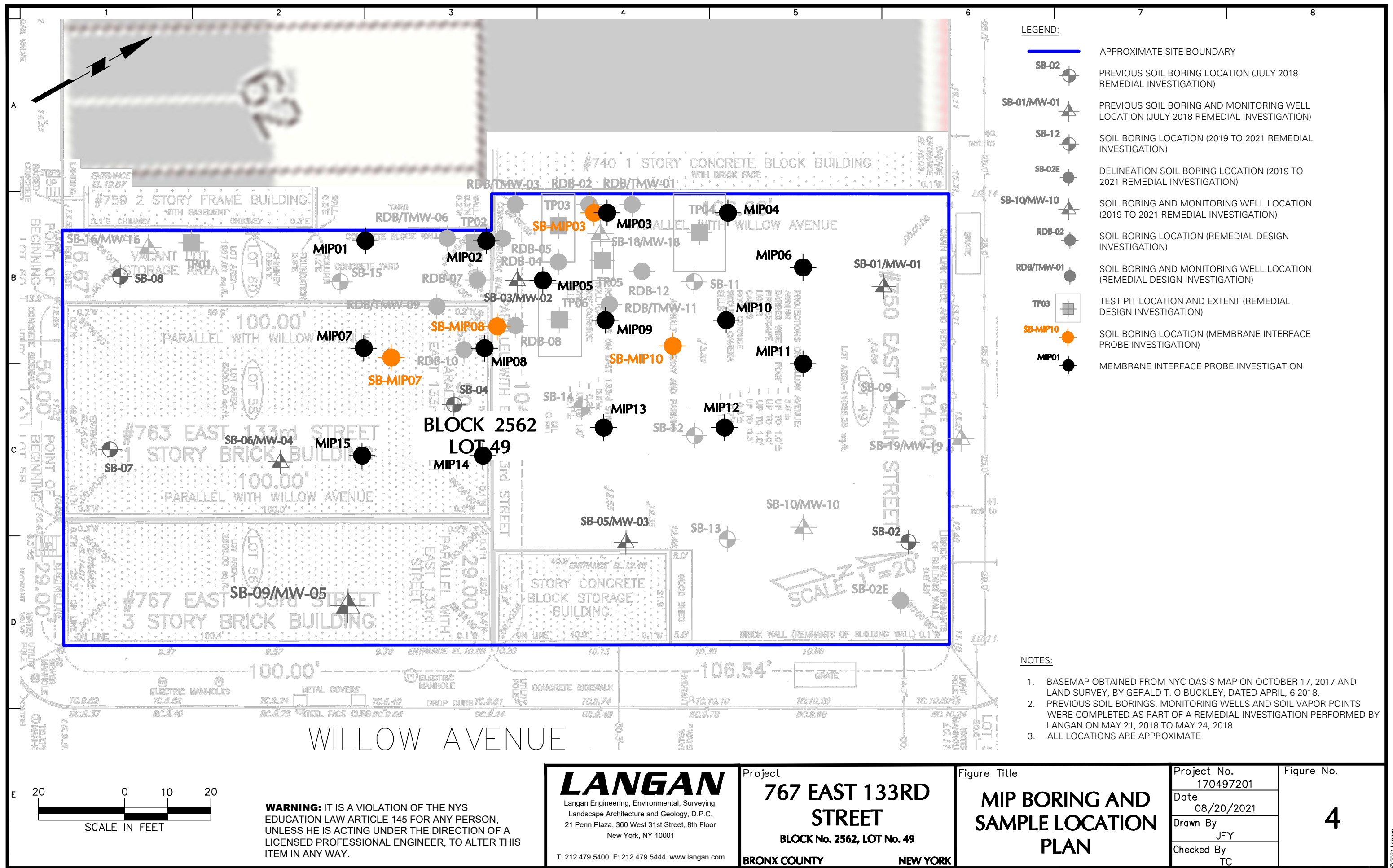
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POTENTIAL SOURCES OF CVOC CONTAMINATION

Project No. 170497201	1
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Figure No.







TABLES

Table 1
Soil Sample Analytical Results (May-August 2021)

767 East 133rd Street
Bronx, New York
NYSDEC BCP Site No.: C203123
Langan Project No.: 170497201

Sample ID	NYSDEC Part 375	RDB-01_7-8	RDB-02_8-9	RDB-03_9-10	RDB-04_8-9	RDB-05_10-11	RDB-06_8-9	RDB-07_9-10	RDB-08_9-10	RDB-09_9-10	RDB-10_8-9	RDB-11_9-10
Laboratory ID	Unrestricted Use	L2128064-01	L2128455-01	L2128064-02	L2128064-10	L2128064-03	L2128064-04	L2128064-05	L2128064-06	L2128064-07	L2128064-08	L2128064-09
Sample Date	and Protecion of	5/26/2021	5/27/2021	5/26/2021	5/26/2021	5/26/2021	5/26/2021	5/26/2021	5/26/2021	5/26/2021	5/26/2021	5/26/2021
Sample Depth (feet bgs)	Groundwater SCOs	7 to 8	8 to 9	9 to 10	8 to 9	10 to 11	8 to 9	9 to 10	9 to 10	9 to 10	8 to 9	9 to 10
Volatile Organic Compounds (mg/kg)												
1,1,1-Trichloroethane	0.68	0.0005 U	0.00057 U	0.00048 U	0.0005 U	0.00072 U	0.00054 U	0.001 U	0.00053 U	0.00099 U	0.00048 U	0.00053 U
1,1-Dichloroethane	0.27	0.00099 U	0.0011 U	0.00096 U	0.001 U	0.00098 U	0.00092 U	0.0015 U	0.001 U	0.0011 U	0.00097 U	0.0011 U
1,1-Dichloroethene	0.33	0.00099 U	0.0011 U	0.00096 U	0.001 U	0.00098 U	0.00092 U	0.00094 U	0.001 U	0.0011 U	0.00097 U	0.0011 U
cis-1,2-Dichloroethene	0.25	0.00099 U	0.0011 U	0.00096 U	0.001 U	0.0056 U	0.0045 U	0.038 U	0.001 U	0.0061 U	0.0014 U	0.0011 U
Tetrachloroethene	1.3	0.019 U	0.002 U	0.0042 U	0.0005 U	0.092 U	0.042 U	0.16 U	0.00053 U	0.0015 U	0.02 U	0.00053 U
Trichloroethene	0.47	0.0005 U	0.00057 U	0.00048 U	0.0005 U	0.0053 U	0.0034 U	0.0089 U	0.00053 U	0.00053 U	0.0021 U	0.00053 U
Vinyl chloride	0.02	0.00099 U	0.0011 U	0.00096 U	0.001 U	0.00098 U	0.00092 U	0.00094 U	0.001 U	0.0011 U	0.00097 U	0.0011 U

Sample ID	NYSDEC Part 375	RDB-12_9-10	DUP01_052721	TP03_051021_10	TP05_051021_10	TP06_051021_12	SB-MIP03_5-7	SB-MIP07_18-19	SB-MIP07_6-7	SB-MIP08_19-20	SB-MIP10_23-24	SB-MIP10_9-10
Laboratory ID	Unrestricted Use	L2128455-02	L2128455-03	L2124281-01	L2124281-02	L2124281-03	L2140976-01	L2141567-04	L2141567-03	L2140976-02	L2141567-02	L2141567-01
Sample Date	and Protecion of	5/27/2021	5/27/2021	5/10/2021	5/10/2021	5/10/2021	7/29/2021	8/3/2021	8/3/2021	7/29/2021	8/3/2021	8/3/2021
Sample Depth (feet bgs)	Groundwater SCOs	9 to 10	9 to 10	9 to 10	9 to 10	11 to 12	5 to 7	18 to 19	6 to 7	19 to 20	23 to 24	9 to 10
Volatile Organic Compounds (mg/kg)												
1,1,1-Trichloroethane	0.68	0.00048 U	0.00049 U	0.0027 U	0.00051 U	0.00049 U	0.00038 U	0.0086 U	0.00096 U	0.015 U	0.011 U	0.00066 U
1,1-Dichloroethane	0.27	0.00096 U	0.00099 U	0.0015 U	0.001 U	0.00098 U	0.00077 U	0.0027 U	0.0019 U	0.0033 U	0.0014 U	0.0013 U
1,1-Dichloroethene	0.33	0.00096 U	0.00099 U	0.0015 U	0.001 U	0.00098 U	0.00077 U	0.0036 U	0.0019 U	0.0069 U	0.003 U	0.0013 U
cis-1,2-Dichloroethene	0.25	0.0011 U	0.0009 J	0.023 U	0.001 U	0.00098 U	0.00077 U	0.089 U	0.00038 J	0.054 U	0.042 U	0.0013 U
Tetrachloroethene	1.3	0.00046 J	0.00019 J	0.13 U	0.00051 U	0.00049 U	0.0016 U	1 U	0.00096 U	0.3 U	0.16 U	0.00066 U
Trichloroethene	0.47	0.00048 U	0.00049 U	0.015 U	0.00051 U	0.00049 U	0.00038 U	0.099 U	0.00096 U	0.041 U	0.022 U	0.00066 U
Vinyl chloride	0.02	0.00096 U	0.00099 U	0.00098 U	0.001 U	0.00098 U	0.00077 U	0.00039 J	0.0026 U	0.0012 U	0.00083 U	0.0013 U

Notes:

1. 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 Unrestricted Use and Protection of Groundwater Soil Cleanup Objectives (SCO).
2. Soil sample were only analyzed for the seven chlorinated volatile organic compounds listed above.
3. No analytes results were detected above the Part 375 Unrestricted Use and Protection of Groundwater SCOs.
4. Analytical results with reporting limits (RL) above the lowest applicable criteria are italicized.
5. Sample DUP01_052721 is a duplicate sample of RDB-12_9-10.
6. bgs = below grade surface
7. mg/kg = milligrams per kilogram

Qualifiers:

- J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

Table 2
Groundwater Sample Analytical Results (May 2021)

767 East 133rd Street
Bronx, New York
NYSDEC BCP Site No.: C203123
Langan Project No.: 170497201

Sample ID Laboratory ID Sample Date	NYSDEC SGVs	TMW-01_052721 L2128455-06 5/27/2021	TMW-03_052721 L2128455-07 5/27/2021	TMW-06_052721 L2128455-05 5/27/2021	TMW-11_052621 L2128064-11 5/26/2021	TMW-09_052721 L2128455-04 5/27/2021
Volatile Organic Compounds (µg/L)						
1,1-Dichloroethane	5	2.5 U	13 J	29 J	29 J	27 J
Tetrachloroethene	5	19	1400	1800	3400	1600
1,1,1-Trichloroethane	5	2.5 U	43	36 J	140	54
Vinyl chloride	2	1 U	2.2 J	1.5 J	5.1 J	2.4 J
1,1-Dichloroethene	5	0.5 U	20	23	68	23
Trichloroethene	5	2.4	200	230	380	250
cis-1,2-Dichloroethene	5	4.4	230	270	440	300

Notes:

1. 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 (NYSDEC SGVs).
2. Groundwater sample were only analyzed for the seven chlorinated volatile organic compounds listed above.
3. Analytes detected with concentrations above NYSDEC SGVs are bolded.
4. µg/L = micrograms per liter

Qualifiers:

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

APPENDIX A

Soil Boring Logs and Test Pit Logs

Project 111 Willow Avenue				Project No. 170497201																																																																																																																																																										
Location 111 Willow Ave				Elevation and Datum N/A																																																																																																																																																										
Drilling Company Lakewood Environmental Services, Corp.				Date Started 5/26/21		Date Finished 6/2/21																																																																																																																																																								
Drilling Equipment Geoprobe 6610 DT				Completion Depth 12 ft		Rock Depth N/A																																																																																																																																																								
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End of boring at 12 feet bgs. Installed TMW-01 and screened from 6 to 14 feet bgs (refusal encountered at 14). After groundwater sampling was completed TMW-01 was removed and the soil boring was backfilled with clean cutting and patched with asphalt.

Project 111 Willow Avenue				Project No. 170497201			
Location 111 Willow Ave				Elevation and Datum N/A			
Drilling Company Lakewood Environmental Services, Corp.				Date Started 5/27/21		Date Finished 6/2/21	
Drilling Equipment Geoprobe 6610 DT				Completion Depth 12 ft		Rock Depth N/A	
Size and Type of Bit 2-inch Direct Push				Number of Samples 3		Undisturbed N/A	
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First 9		Completion N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		24 HR. N/A	
Sampler 4-foot acetate liner				Drilling Foreman Adam Hutchinson			
Sampler Hammer N/A				Field Engineer Tyler Zorn			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist BLU/in		PID Reading (ppm)
		R1: Light gray to dark gray medium SAND, some fine sand, some fine gravel, concrete (moist)[FILL]	0					0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
		R2A: Light gray to brown fine SAND, trace silt, trace sand (moist)[SP-SM]	4					0.0	Collect RDB-02_8-9
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
		R2B: Brown fine SAND, some silt (moist)[SP-SM]	5					0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
		R3: Tan to brown SILT, trace clay, trace fine sand (wet)[SP-SM]	8					0.0	End of boring at 12 feet bgs. Soil boring was backfilled with clean cutting and patched with asphalt.
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
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Project 111 Willow Avenue				Project No. 170497201																																																																																																							
Location 111 Willow Ave				Elevation and Datum N/A																																																																																																							
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Casing Diameter (in) N/A				Casing Depth (ft) N/A		Core N/A																																																																																																					
Casing Hammer N/A				Weight (lbs) N/A		Drop (in) N/A																																																																																																					
Sampler 4-foot acetate liner				Drilling Foreman Adam Hutchinson																																																																																																							
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MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data								Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)																																																																																															
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			R2B: Brown SILT, some fine sand, trace clay (moist)[SP-SM]	8	R-2B	Macrocore	36			0.0																																																																																																	
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End of boring at 12 feet bgs. Installed TMW-03 and screened from 8 to 15 feet bgs (refusal encountered at 15). After groundwater sampling was completed TMW-03 was removed and the soil boring was backfilled with clean cutting and patched with asphalt.

Project 111 Willow Avenue				Project No. 170497201			
Location 111 Willow Ave				Elevation and Datum N/A			
Drilling Company Lakewood Environmental Services, Corp.				Date Started 5/26/21		Date Finished 6/2/21	
Drilling Equipment Geoprobe 6610 DT				Completion Depth 12 ft		Rock Depth N/A	
Size and Type of Bit 2-inch Direct Push				Number of Samples 3		Undisturbed N/A	
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First 9.5		Core N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Completion N/A	
Sampler 4-foot acetate liner				Drilling Foreman Adam Hutchinson			
Sampler Hammer N/A				Field Engineer Tyler Zorn			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BLU/in	PID Reading (ppm)	
		R1: Brown medium SAND, some fine sand, trace fine gravel, brick, concrete (moist)[FILL]	0					0.0	Collect RDB-04_8-9
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
		R2: Brown fine SAND, trace silt, trace medium sand (moist)[SP-SM]	4					0.0	End of boring at 12 feet bgs. Soil boring was backfilled with clean cutting and patched with asphalt.
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
		R3: Brown to gray SILT, some fine sand, trace clay (wet)[SP-SM]	8					0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
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Project 111 Willow Avenue				Project No. 170497201			
Location 111 Willow Ave				Elevation and Datum N/A			
Drilling Company Lakewood Environmental Services, Corp.				Date Started 5/26/21		Date Finished 6/2/21	
Drilling Equipment Geoprobe 6610 DT				Completion Depth 12 ft		Rock Depth N/A	
Size and Type of Bit 2-inch Direct Push				Number of Samples 3		Undisturbed N/A	
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First 11		Core N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Completion N/A	
Sampler 4-foot acetate liner				Drilling Foreman Adam Hutchinson			
Sampler Hammer N/A				Field Engineer Tyler Zorn			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BLU/in	PID Reading (ppm)	
		R1: Gray medium SAND, some fine sand, some fine gravel, concrete (dry)[FILL]	0					0.0	Collect RDB-05_10-11 End of boring at 12 feet bgs. Soil boring was backfilled with clean cutting and patched with asphalt.
							0.0		
							0.0		
		R2: Brown to gray fine SAND, trace silt, trace medium sand (moist)[SP-SM]	2	R-1	Macrocore	12			
		R3A: Brown to gray fine SAND, trace silt, trace medium sand (moist)[SP-SM] R3B: Brown SILT, trace clay, trace fine sand (wet)[SP-SM]	4	R-2	Macrocore	16		0.0	
						0.0			
						0.0			
			8	R-3A				0.0	
			9					0.0	
			10					0.0	
		11	R-3B	Macrocore	20				
		12							
		13							
		14							
		15							

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Project 111 Willow Avenue				Project No. 170497201			
Location 111 Willow Ave				Elevation and Datum N/A			
Drilling Company Lakewood Environmental Services, Corp.				Date Started 5/26/21		Date Finished 6/2/21	
Drilling Equipment Geoprobe 6610 DT				Completion Depth 12 ft		Rock Depth N/A	
Size and Type of Bit 2-inch Direct Push				Number of Samples 3		Undisturbed N/A	
Casing Diameter (in) N/A				Casing Depth (ft) N/A		Core N/A	
Casing Hammer N/A				Weight (lbs) N/A		Drop (in) N/A	
Sampler 4-foot acetate liner				Drilling Foreman Adam Hutchinson			
Sampler Hammer N/A				Field Engineer Tyler Zorn			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist BLU/in	PID Reading (ppm)	
		R1: Light gray to brownish gray medium SAND, some fine sand, trace fine gravel, concrete, brick (moist)[FILL]	0					0.0	
								0.0	
								0.0	
		R2A: Light gray to brownish gray medium SAND, some fine sand, trace fine gravel, concrete, brick (moist)[FILL]	4					0.0	Collect RDB-07_9-10
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
		R2B: Brown fine SAND, some silt, trace medium sand (moist)[SP-SM]	5					0.0	End of boring at 12 feet bgs. Soil boring was backfilled with clean cutting and patched with asphalt.
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
		R3A: Brown fine SAND, some silt, trace medium sand (moist)[SP-SM]	8					0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
		R3B: Brown SILT, some clay, trace fine sand (wet)[SP-SM]	10					0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
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Project 111 Willow Avenue				Project No. 170497201			
Location 111 Willow Ave				Elevation and Datum N/A			
Drilling Company Lakewood Environmental Services, Corp.				Date Started 5/26/21		Date Finished 6/2/21	
Drilling Equipment Geoprobe 6610 DT				Completion Depth 12 ft		Rock Depth N/A	
Size and Type of Bit 2-inch Direct Push				Number of Samples 3		Undisturbed N/A	
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First ∇ 10		Core N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Completion N/A	
Sampler 4-foot acetate liner				Drilling Foreman Adam Hutchinson			
Sampler Hammer N/A				Field Engineer Tyler Zorn			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BLU6in	
	0	R1A: Gray medium SAND, some fine sand, trace fine gravel, concrete, brick (moist)[FILL]						
	1		R-1A				0.0	
	2			Macrocore	22		0.0	
	3		R-1B				0.0	
	4						0.0	
	5						0.0	
	6		R-2	Macrocore	38		0.0	
	7						0.0	
	8						0.0	
	9						0.0	
	10						0.0	
	11						0.0	
	12	R3B: Bluish gray CLAY, some silt (wet)[ML]					0.0	
	13		R-3A	Macrocore	46		0.0	
	14						0.0	
	15		R-3B				0.0	

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Collect RDB-08_9-10

End of boring at 12 feet bgs. Soil boring was backfilled with clean cutting and patched with asphalt.

Project	111 Willow Avenue	Project No.	170497201
Location	111 Willow Ave	Elevation and Datum	N/A
Drilling Company	Lakewood Environmental Services, Corp.	Date Started	5/26/21
Drilling Equipment	Geoprobe 6610 DT	Date Finished	6/2/21
Size and Type of Bit	2-inch Direct Push	Completion Depth	12 ft
Casing Diameter (in)	N/A	Disturbed	3
Casing Depth (ft)	N/A	Undisturbed	N/A
Casing Hammer	N/A	Core	N/A
Weight (lbs)	N/A	Number of Samples	3
Drop (in)	N/A	First	10
Sampler	4-foot acetate liner	Completion	N/A
Sampler Hammer	N/A	24 HR.	N/A
Weight (lbs)	N/A	Drilling Foreman	Adam Hutchinson
Drop (in)	N/A	Field Engineer	Tyler Zorn

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BLU6in	PID Reading (ppm)	
		R1: Brown to gray medium SAND, some fine sand, trace fine gravel, brick, concrete (moist)[FILL]	0					0.0	
			1					0.0	
			2	R-1	Macrocore	12			
			3						
		R2: Brown to gray fine SAND, trace silt, trace medium sand (moist)[SP-SM]	4					0.0	
			5					0.0	
			6	R-2	Macrocore	48		0.0	
			7					0.0	
		R3A: Brown to bluish gray SILT, trace clay, trace fine sand (wet)[SP-SM]	8					0.0	
			9	R-3A				0.0	
		R3B: Brown to bluish gray SILT, some clay (wet)[ML]	10					0.0	
			11	R-3B				0.0	
			12					0.0	
			13						
			14						
			15						

End of boring at 12 feet bgs. Installed TMW-09 9-10 and screened from 8 to 18 feet bgs. After groundwater sampling was completed TMW-09 was removed and the soil boring was backfilled with clean cutting and patched with asphalt.

Project 111 Willow Avenue				Project No. 170497201			
Location 111 Willow Ave				Elevation and Datum N/A			
Drilling Company Lakewood Environmental Services, Corp.				Date Started 5/26/21		Date Finished 6/2/21	
Drilling Equipment Geoprobe 6610 DT				Completion Depth 12 ft		Rock Depth N/A	
Size and Type of Bit 2-inch Direct Push				Number of Samples 3		Undisturbed N/A	
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First 9		Completion N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		24 HR. N/A	
Sampler 4-foot acetate liner				Drilling Foreman Adam Hutchinson			
Sampler Hammer N/A				Field Engineer Tyler Zorn			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist BLU/in	PID Reading (ppm)	
		R1: Light gray to brown medium SAND, some fine gravel, trace fine sand, concrete (moist)[FILL]	0					0.0	Collect RDB-10_8-9
								0.0	
								0.0	
		R2: Brown to dark gray fine SAND, trace medium sand, trace fine gravel, brick, concrete (moist)[FILL]	4					0.0	End of boring at 12 feet bgs. Soil boring was backfilled with clean cutting and patched with asphalt.
								0.0	
								0.0	
		R3A: Brown to dark gray fine SAND, trace silt (wet)[SP-SM]	8					0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
		R3B: Brown to bluish gray SILT, trace clay, trace fine sand (wet)[ML]	9					0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	
								0.0	

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Project	111 Willow Avenue	Project No.	170497201
Location	111 Willow Ave	Elevation and Datum	N/A
Drilling Company	Lakewood Environmental Services, Corp.	Date Started	5/26/21
Drilling Equipment	Geoprobe 6610 DT	Date Finished	6/2/21
Size and Type of Bit	2-inch Direct Push	Completion Depth	12 ft
Casing Diameter (in)	N/A	Disturbed	3
Casing Depth (ft)	N/A	Undisturbed	N/A
Casing Hammer	N/A	Core	N/A
Weight (lbs)	N/A	Number of Samples	3
Drop (in)	N/A	First	10
Sampler	4-foot acetate liner	Completion	N/A
Sampler Hammer	N/A	24 HR.	N/A
Weight (lbs)	N/A	Drilling Foreman	Adam Hutchinson
Drop (in)	N/A	Field Engineer	Tyler Zorn

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist	PID Reading (ppm)	
		R1: Gray to dark gray medium SAND, some fine sand, trace fine gravel, brick, concrete, glass (moist)[FILL]	0					0.0	
			1					0.0	
			2	R-1	Macrocore	20		0.0	
			3					0.0	
		R2A: Brown to gray medium SAND, some fine sand, trace fine gravel, brick (moist)[FILL]	4					0.0	
			5	R-2A				0.0	
		R2B: Brown fine SAND, trace silt (moist)[SP-SM]	6		Macrocore	36		0.0	
			7	R-2B				0.0	
		R3A: Dark brown to gray fine SAND, some silt, trace clay (moist)[SP-SM]	8					0.0	
			9	R-3A				0.0	
		R3B: Bluish gray to dark gray SILT, some clay, trace fine sand (wet)[SP-SM]	10		Macrocore	44		0.0	
			11	R-3B				0.0	
			12					0.0	
			13					0.0	
			14					0.0	
			15					0.0	

Collect RDB-11_9-10

End of boring at 12 feet bgs. Installed TMW-11 and screened from 8 to 18 feet bgs. After groundwater sampling was completed TMW-11 was removed and the soil boring was backfilled with clean cutting and patched with asphalt.

Project 111 Willow Avenue				Project No. 170497201			
Location 111 Willow Ave				Elevation and Datum N/A			
Drilling Company Lakewood Environmental Services, Corp.				Date Started 5/27/21		Date Finished 6/2/21	
Drilling Equipment Geoprobe 6610 DT				Completion Depth 12 ft		Rock Depth N/A	
Size and Type of Bit 2-inch Direct Push				Number of Samples 3		Undisturbed N/A	
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First 10		Core N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Completion N/A	
Sampler 4-foot acetate liner				Drilling Foreman Adam Hutchinson			
Sampler Hammer N/A				Field Engineer Tyler Zorn			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BLU/in	PID Reading (ppm)	
		R1: Light gray to brown medium SAND, some fine sand, trace fine gravel, brick, concrete (moist)[FILL]	0					0.0	
			1					0.0	
			2	R-1	Macrocore	12			
			3						
		R2: Brown to gray fine SAND, trace silt, trace medium sand (moist)[SP-SM]	4					0.0	
			5					0.0	
			6	R-2	Macrocore	8			
			7						
		R3A: Brown to gray fine SAND, trace silt, trace medium sand (moist)[SP-SM]	8					0.0	
			9	R-3A				0.0	
		R3B: Brown to gray SILT, trace clay, trace fine sand (wet)[SP-SM]	10			40		0.0	
			11	R-3B	Macrocore			0.0	
			12					0.0	
			13					0.0	
			14					0.0	
			15					0.0	



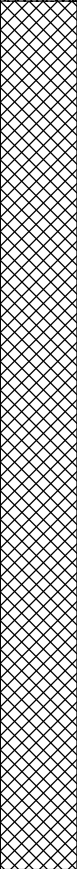
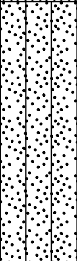
Collect RDB-12_9-10

End of boring at 12 feet bgs. Soil boring was backfilled with clean cutting and patched with asphalt.

LOG OF TEST PIT TP-01

Sheet 1 of 1

PROJECT NAME 111 Willow Avenue	PROJECT NUMBER 170497201	DATE 5/10/2021
LOCATION 767 East 133rd Street	ELEVATION	
EXCAVATION CONTRACTOR Xolle Demolition	DEPTH 5 ft	WATER LEVEL - First N/A ▽
EQUIPMENT Kobelco SK350 Excavator	FOREMAN	WATER LEVEL - Completion N/A ▼
		LANGAN PERSONNEL Farielle Brazier

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
   		Asphalt		0			Area: 8.5-feet-wide by 10.25-feet-long
		Concrete Slab	0				
		Dark brown fine SAND, some medium gravel, trace silt, brick, concrete, metal, fabric, wood planks, twigs, cobbles (dry) [FILL]	0	1	1	EXC	
		Orange brown fine SAND, some silt, trace fine gravel (dry) [SM]	0	4			
			0	5			
				6			


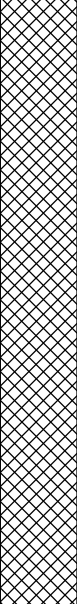

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LOG OF TEST PIT TP-02

Sheet 1 of 1

PROJECT NAME 111 Willow Avenue	PROJECT NUMBER 170497201	DATE 5/10/2021
LOCATION 767 East 133rd Street	ELEVATION	
EXCAVATION CONTRACTOR Xolle Demolition	DEPTH 3 ft	WATER LEVEL - First N/A ▽
EQUIPMENT Kobelco SK350 Excavator	FOREMAN	WATER LEVEL - Completion N/A ▼
		LANGAN PERSONNEL Farielle Brazier

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
		Asphalt	0	0	1	EXC	Area: 6.67-feet-wide by 5.33-feet-long
		Concrete Slab		0			
		Dark brown fine SAND, some medium gravel, trace silt, brick, cncrete, fabric, twigs (dry) [FILL]		0			
			0	1			
				2			
				3			
			0	4			
				5			
				6			



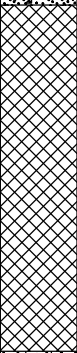
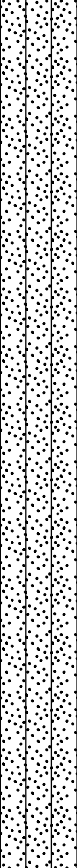
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LOG OF TEST PIT TP-03

Sheet 1 of 1

PROJECT NAME 111 Willow Avenue	PROJECT NUMBER 170497201	DATE 5/10/2021
LOCATION 767 East 133rd Street	ELEVATION	
EXCAVATION CONTRACTOR Xolle Demolition	DEPTH 10 ft	WATER LEVEL - First N/A ▽
EQUIPMENT Kobelco SK350 Excavator	FOREMAN	WATER LEVEL - Completion N/A ▼
		LANGAN PERSONNEL Farielle Brazier

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
   		Asphalt		0			Area: 15.83-feet-wide by 7.58-feet-long
		Concrete Slab	0				
		Dark Brown, gap graded F-m SAND, some medium gravel, trace silt, brick, metal, wood planks, branches, twigs, fabric (dry) [FILL]	0	1			
				2			
				3			
		Orange brown silty fine SAND, trace fine gravel (dry) [SM]	0	4			
				5	1	EXC	
				6			
				7			
				8			
				9			Collected sample TP03_051021_10 at 10-feet below grade surface
			0	10			
				11			
				12			


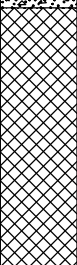
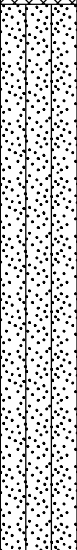
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LOG OF TEST PIT TP-04

Sheet 1 of 1

PROJECT NAME 111 Willow Avenue	PROJECT NUMBER 170497201	DATE 5/10/2021
LOCATION 767 East 133rd Street	ELEVATION	
EXCAVATION CONTRACTOR Xolle Demolition	DEPTH 11 ft	WATER LEVEL - First N/A ▽
EQUIPMENT Kobelco SK350 Excavator	FOREMAN	WATER LEVEL - Completion N/A ▼
		LANGAN PERSONNEL Farielle Brazier

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
		Asphalt	0	0	1	EXC	Area: 18-feet-wide by 12-feet-long
		Concrete Slab		1			
		Dark brown fine SAND, some fine gravel, trace silt, concrete, brick, metal, wood, fabric (dry) [FILL]	0	2			
				3			
				4			
				5			
				6			
				7			
				8			
				9			
				10			
				11			
				12			
				13			
				14			
				15			
				16			
				17			
				18			
				19			
		Orange brown to dark brown silty fine SAND, trace fine gravel (dry) [SM]	0	20			

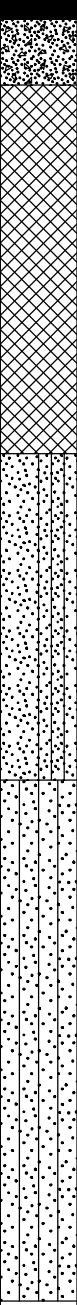
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LOG OF TEST PIT TP-05

Sheet 1 of 1

PROJECT NAME 111 Willow Avenue	PROJECT NUMBER 170497201	DATE 5/10/2021
LOCATION 767 East 133rd Street	ELEVATION	
EXCAVATION CONTRACTOR Xolle Demolition	DEPTH 10 ft	WATER LEVEL - First N/A ▽
EQUIPMENT Kobelco SK350 Excavator	FOREMAN	WATER LEVEL - Completion N/A ▼
		LANGAN PERSONNEL Farielle Brazier

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
		Asphalt		0			Area: 9-feet-wide by 5-feet-long
		Concrete Slab	0				
		Dark brown gap graded F-m SAND, some medium gravel, trace silt, brick, metals, twigs, branches, plastic (dry) [FILL]	0	1			
				2			
				3			
		Dark orange brown fine SAND, some silt, some fine gravel (dry) [SP-SM]	0	4			
				5	1	EXC	
		Dark gray sandy SILT (dry) [MLS]	0	6			
				7			
				8			
				9			Collected sample TP05_051021_10 at 10-feet below grade surface
				10			
				11			
				12			

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LOG OF TEST PIT TP-06

Sheet 1 of 1


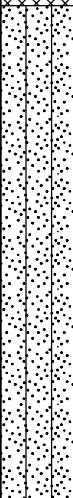
PROJECT NAME 111 Willow Avenue		PROJECT NUMBER 170497201		DATE 5/10/2021	
LOCATION 767 East 133rd Street		ELEVATION			
EXCAVATION CONTRACTOR Xolle Demolition		DEPTH 12 ft		WATER LEVEL - First 11 ft ▽	WATER LEVEL - Completion N/A ▼
EQUIPMENT Kobelco SK350 Excavator		FOREMAN			LANGAN PERSONNEL Farielle Brazier

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
		Asphalt		0			Area: 17-feet-wide by 10-feet-long
		Concrete Slab	0				
		Dark brown fine SAND, some medium gravel, trace silt, brick, concrete, metal, wood debris (dry) [FILL]	0	1			
		Concrete Footing	0	2			
				3			
				4			
		Dark brown fine SAND, some medium gravel, trace silt, brick (dry) [FILL]	0	5			
				6	1	EXC	
		Dark orange brown to gray fine SAND, some silt (dry) [SM]	0	7			
				8			
				9			
				10			
		Grayish black silty fine SAND (moist) [SM]					
		Grayish black silty fine SAND (WET) [SM]	▽	11			
			0	12			Collected sample TP06_051021_12 at 12-feet below grade surface
				13			
				14			
				15			
				16			
				17			
				18			
				19			
				20			

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Project 111 Willow Avenue				Project No. 170497201			
Location 111 Willow Ave				Elevation and Datum			
Drilling Company Lakewood Environmental Services, Corp.				Date Started 7/29/21		Date Finished 7/29/21	
Drilling Equipment Geoprobe 6610 DT				Completion Depth 13 ft		Rock Depth N/A	
Size and Type of Bit 2-in Direct Push				Number of Samples 1		Disturbed N/A	
Casing Diameter (in) 2in				Casing Depth (ft) N/A		Core N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Water Level (ft.) First 11	
Sampler ; Macrocore				Drilling Foreman Adam Hutchinson			
Sampler Hammer N/A				Field Engineer Farielle Brazier			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
				Number	Type	Recov. (in)	Penetr. resist. BLU6in	PID Reading (ppm)					
		R1A: Dark brown fine SAND, trace gravel, Asphalt (dry)[FILL]	0		Macrocore	27			0	Collected soil sample SB-MIP03_5-7			
		R1B: Brown fine SAND, some fine gravel, trace silt, Brick, metal (dry)[FILL]	1	R-1A					0				
			2						0				
			3						0				
			4	R-1B									
			R2A: Brown silty fine SAND (dry)[SM]	5		Macrocore	51				0	End of boring at 13 feet bgs. Soil boring was backfilled with clean cutting and patched with asphalt.	
				6									0
				7									0
				8	R-2A								0
			R2B: Orangish brown silty fine SAND, trace clay (moist)	9							0		
			10	R-2B					0				
		R3A: Orangish brown silty fine SAND, trace clay (moist)	11		Macrocore	36			0				
		R3B: Orangish brown silty fine SAND, trace clay, trace fine gravel (wet)	12	R-3A						0			
			13	R-3B						0			
				14									
			15										
			16										
			17										
			18										
			19										
			20										

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MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	PID Reading (ppm)	
		R1: Reddish brown to grayish brown sandy SILT (moist)[FILL]	0	R-1	Macrocore	36		0	Collected soil sample SB-MIP07_6-7
			1					0	
			2					0	
			3					0	
			4					0	
		R2: Light brown to dark gray clayey SILT (moist)	5	R-2	Macrocore	40			Collected soil sample SB-MIP07_6-7
			6						
			7					0	
			8					0	
			9					0	
		R3: Dark gray to light gray silty CLAY (moist)	10	R-3	Macrocore	42		0	Collected soil sample SB-MIP07_6-7
			11						
			12					0.2	
			13					0.3	
			14					0.2	
		R4: Dark gray to light tannish brown silty CLAY (wet)	15	R-4	Macrocore	24		0.4	Collected soil sample SB-MIP07_18-19
			16					0.7	
			17					0.7	
			18					0.3	
			19					0.2	
			20					0.3	End of boring at 19 feet bgs. Soil boring was backfilled with clean cutting and patched with asphalt.

Project 111 Willow Avenue			Project No. 170497201		
Location 111 Willow Ave			Elevation and Datum		
Drilling Company Lakewood Environmental Services, Corp.			Date Started 7/29/21		Date Finished 7/29/21
Drilling Equipment Geoprobe 6610 DT			Completion Depth 20 ft		Rock Depth N/A
Size and Type of Bit 2-in Direct Push			Number of Samples	Disturbed 1	Undisturbed N/A
Casing Diameter (in) 2in		Casing Depth (ft) N/A	Water Level (ft.) First 12	Completion N/A	24 HR. N/A
Casing Hammer N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman Adam Hutchinson		
Sampler ; Macrocore			Field Engineer Farielle Brazier		
Casing Hammer N/A	Weight (lbs) N/A	Drop (in) N/A			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist BLU/in	PID Reading (ppm)	
		R1A: Dark brown fine SAND, Asphalt (dry)[FILL]	0					0	
		R1B: Grayish white fine GRAVEL, Cement (dry)[FILL]	1	R-1A				0	
		R1C: Brown fine SAND, some silt, trace fine gravel, Brick (dry)[FILL]	2	R-1B				0	
			3		Macrocore	24			
		R2A: Brown fine SAND, some silt, trace fine gravel (dry)[SM]	5					0	
		R2B: Dark brown to grayish black silty fine SAND, trace gravel (moist)[SM]	6	R-1C					
			7		Macrocore	13			
			8	R-2A					
		R3A: Grayish brown fine SAND, some silt (wet)[SM]	10					0	
		R3B: Light brown to grayish fine SAND, trace clay, trace silt (moist)[SC]	11	R-2B				0	
			12		Macrocore	30			
			13	R-3A					
		R4A: Dark brown to olive silty fine SAND, trace clay, trace fine gravel (wet)[SM]	15					0	
		R4B: Light brown fine SAND, trace silt (wet)[SP-SM]	16	R-3B				0	
			17		Macrocore	40			
			18	R-4A				0	
			19					0	
			20	R-4B				4	
								7	

Collected soil sample SB-MIP08_19-20

End of boring at 20 feet bgs. Soil boring was backfilled with clean cutting and patched with asphalt.

Project 111 Willow Avenue			Project No. 170497201		
Location 111 Willow Ave			Elevation and Datum		
Drilling Company Lakewood Environmental Services, Corp.			Date Started 8/3/21		Date Finished 8/23/21
Drilling Equipment Geoprobe 6610 DT			Completion Depth 24 ft		Rock Depth N/A
Size and Type of Bit 2-in Direct Push			Number of Samples	Disturbed 2	Undisturbed N/A
Casing Diameter (in) N/A		Casing Depth (ft) N/A	Water Level (ft.) First ▽	Completion ▽	24 HR. ▽
Casing Hammer N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman Adam Hutchinson		
Sampler 2-inch-diameter split spoon; Shelby Tube; Macrocore			Field Engineer Elsah Boak		
Sampler Hammer N/A	Weight (lbs) N/A	Drop (in) N/A			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist BLU/in	PID Reading (ppm)	
		R1: Reddish brown sandy GRAVEL (moist)[FILL]	0					0	
			1					0	
			2					0	
			3	R-1	Macrocore	18			
			4						
		R2: Light gray clayey SILT (moist)	5						
			6						
			7	R-2	Macrocore	24			
			8						
			9					0	
		R3: Dark gray CLAY (moist)	10					0	
			11					0	
			12	R-3	Macrocore	42		0	
			13					0	
			14					0	
		R4: Brownish gray to light brown silty CLAY (wet)	15					0	
			16						
			17	R-4	Macrocore	44		0	
			18					0	
			19					0	
			20					0	

Collected SB-MIP10_9-10

Project			111 Willow Avenue			Project No.			170497201		
Location			111 Willow Ave			Elevation and Datum					
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
				Number	Type	Recov. (in)	Penetr. resist BL/6in	PID Reading (ppm)			
		R5: Grayish tan SILT (wet)	20	R-5	Macrocore	42		0	Collected SB-MIP10_23-24		
	21		0								
	22		0								
	23		0								
	24		0								
			24					0	End of boring at 24 feet bgs. Soil boring was backfilled with clean cutting and patched with asphalt.		
	25										
	26										
	27										
	28										
	29										
	30										
	31										
	32										
	33										
	34										
	35										
	36										
	37										
	38										
	39										
	40										
	41										
	42										
	43										
	44										
	45										

APPENDIX B

Groundwater Sampling Logs

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

APPENDIX C

Laboratory Analytical Results



ANALYTICAL REPORT

Lab Number:	L2124281
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Stuart Knoop
Phone:	(212) 479-5400
Project Name:	111 WILLOW AVE
Project Number:	170497201
Report Date:	05/17/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2124281-01	TP03_051021_10	SOIL	BRONX, NY	05/10/21 10:40	05/10/21
L2124281-02	TP05_051021_10	SOIL	BRONX, NY	05/10/21 13:18	05/10/21
L2124281-03	TP06_051021_12	SOIL	BRONX, NY	05/10/21 13:49	05/10/21
L2124281-04	TB01_051021	WATER	BRONX, NY	05/10/21 00:00	05/10/21

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

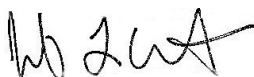
Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Jennifer L. Clements

Title: Technical Director/Representative

Date: 05/17/21

ORGANICS

VOLATILES

Project Name: 111 WILLOW AVE

Lab Number: L2124281

Project Number: 170497201

Report Date: 05/17/21

SAMPLE RESULTS

Lab ID: L2124281-01
 Client ID: TP03_051021_10
 Sample Location: BRONX, NY

Date Collected: 05/10/21 10:40
 Date Received: 05/10/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 05/16/21 19:28

Analyst: JC

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.9	2.2	1
1,1-Dichloroethane	1.5		ug/kg	0.98	0.14	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	0.98	0.22	1
1,2-Dichloropropane	ND		ug/kg	0.98	0.12	1
Dibromochloromethane	ND		ug/kg	0.98	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	0.98	0.26	1
Tetrachloroethene	130		ug/kg	0.49	0.19	1
Chlorobenzene	ND		ug/kg	0.49	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.9	0.68	1
1,2-Dichloroethane	ND		ug/kg	0.98	0.25	1
1,1,1-Trichloroethane	2.7		ug/kg	0.49	0.16	1
Bromodichloromethane	ND		ug/kg	0.49	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	0.98	0.27	1
cis-1,3-Dichloropropene	ND		ug/kg	0.49	0.15	1
1,3-Dichloropropene, Total	ND		ug/kg	0.49	0.15	1
1,1-Dichloropropene	ND		ug/kg	0.49	0.16	1
Bromoform	ND		ug/kg	3.9	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.49	0.16	1
Benzene	ND		ug/kg	0.49	0.16	1
Toluene	ND		ug/kg	0.98	0.53	1
Ethylbenzene	ND		ug/kg	0.98	0.14	1
Chloromethane	ND		ug/kg	3.9	0.91	1
Bromomethane	ND		ug/kg	2.0	0.57	1
Vinyl chloride	ND		ug/kg	0.98	0.33	1
Chloroethane	ND		ug/kg	2.0	0.44	1
1,1-Dichloroethene	1.5		ug/kg	0.98	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.13	1

Project Name: 111 WILLOW AVE**Lab Number:** L2124281**Project Number:** 170497201**Report Date:** 05/17/21**SAMPLE RESULTS**

Lab ID: L2124281-01
Client ID: TP03_051021_10
Sample Location: BRONX, NY

Date Collected: 05/10/21 10:40
Date Received: 05/10/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	15		ug/kg	0.49	0.13	1
1,2-Dichlorobenzene	0.14	J	ug/kg	2.0	0.14	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.20	1
p/m-Xylene	ND		ug/kg	2.0	0.55	1
o-Xylene	ND		ug/kg	0.98	0.28	1
Xylenes, Total	ND		ug/kg	0.98	0.28	1
cis-1,2-Dichloroethene	23		ug/kg	0.98	0.17	1
1,2-Dichloroethene, Total	23		ug/kg	0.98	0.13	1
Dibromomethane	ND		ug/kg	2.0	0.23	1
Styrene	ND		ug/kg	0.98	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.8	0.90	1
Acetone	ND		ug/kg	9.8	4.7	1
Carbon disulfide	ND		ug/kg	9.8	4.4	1
2-Butanone	ND		ug/kg	9.8	2.2	1
Vinyl acetate	ND		ug/kg	9.8	2.1	1
4-Methyl-2-pentanone	ND		ug/kg	9.8	1.2	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.12	1
2-Hexanone	ND		ug/kg	9.8	1.2	1
Bromochloromethane	ND		ug/kg	2.0	0.20	1
2,2-Dichloropropane	ND		ug/kg	2.0	0.20	1
1,2-Dibromoethane	ND		ug/kg	0.98	0.27	1
1,3-Dichloropropane	ND		ug/kg	2.0	0.16	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.49	0.13	1
Bromobenzene	ND		ug/kg	2.0	0.14	1
n-Butylbenzene	ND		ug/kg	0.98	0.16	1
sec-Butylbenzene	ND		ug/kg	0.98	0.14	1
tert-Butylbenzene	ND		ug/kg	2.0	0.12	1
o-Chlorotoluene	ND		ug/kg	2.0	0.19	1
p-Chlorotoluene	ND		ug/kg	2.0	0.10	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.9	0.98	1
Hexachlorobutadiene	ND		ug/kg	3.9	0.16	1
Isopropylbenzene	ND		ug/kg	0.98	0.11	1
p-Isopropyltoluene	ND		ug/kg	0.98	0.11	1
Naphthalene	ND		ug/kg	3.9	0.64	1
Acrylonitrile	ND		ug/kg	3.9	1.1	1

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

SAMPLE RESULTS

Lab ID: L2124281-01
Client ID: TP03_051021_10
Sample Location: BRONX, NY

Date Collected: 05/10/21 10:40
Date Received: 05/10/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	0.98	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33	1
1,4-Dioxane	ND		ug/kg	78	34.	1
p-Diethylbenzene	ND		ug/kg	2.0	0.17	1
p-Ethyltoluene	ND		ug/kg	2.0	0.38	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19	1
Ethyl ether	ND		ug/kg	2.0	0.33	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.9	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	105		70-130

Project Name: 111 WILLOW AVE**Lab Number:** L2124281**Project Number:** 170497201**Report Date:** 05/17/21**SAMPLE RESULTS**

Lab ID: L2124281-02
 Client ID: TP05_051021_10
 Sample Location: BRONX, NY

Date Collected: 05/10/21 13:18
 Date Received: 05/10/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 05/16/21 19:53
 Analyst: JC
 Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.1	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.15	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	1.0	0.24	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.13	1
Dibromochloromethane	ND		ug/kg	1.0	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27	1
Tetrachloroethene	ND		ug/kg	0.51	0.20	1
Chlorobenzene	ND		ug/kg	0.51	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.1	0.71	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.26	1
1,1,1-Trichloroethane	ND		ug/kg	0.51	0.17	1
Bromodichloromethane	ND		ug/kg	0.51	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.28	1
cis-1,3-Dichloropropene	ND		ug/kg	0.51	0.16	1
1,3-Dichloropropene, Total	ND		ug/kg	0.51	0.16	1
1,1-Dichloropropene	ND		ug/kg	0.51	0.16	1
Bromoform	ND		ug/kg	4.1	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.51	0.17	1
Benzene	ND		ug/kg	0.51	0.17	1
Toluene	ND		ug/kg	1.0	0.56	1
Ethylbenzene	ND		ug/kg	1.0	0.14	1
Chloromethane	ND		ug/kg	4.1	0.95	1
Bromomethane	ND		ug/kg	2.0	0.59	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
Chloroethane	ND		ug/kg	2.0	0.46	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1

Project Name: 111 WILLOW AVE

Lab Number: L2124281

Project Number: 170497201

Report Date: 05/17/21

SAMPLE RESULTS

Lab ID: L2124281-02
 Client ID: TP05_051021_10
 Sample Location: BRONX, NY

Date Collected: 05/10/21 13:18
 Date Received: 05/10/21
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.51	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.20	1
p/m-Xylene	ND		ug/kg	2.0	0.57	1
o-Xylene	ND		ug/kg	1.0	0.30	1
Xylenes, Total	ND		ug/kg	1.0	0.30	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1
Dibromomethane	ND		ug/kg	2.0	0.24	1
Styrene	ND		ug/kg	1.0	0.20	1
Dichlorodifluoromethane	ND		ug/kg	10	0.94	1
Acetone	51		ug/kg	10	4.9	1
Carbon disulfide	ND		ug/kg	10	4.6	1
2-Butanone	8.6	J	ug/kg	10	2.3	1
Vinyl acetate	ND		ug/kg	10	2.2	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.3	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13	1
2-Hexanone	ND		ug/kg	10	1.2	1
Bromochloromethane	ND		ug/kg	2.0	0.21	1
2,2-Dichloropropane	ND		ug/kg	2.0	0.21	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.28	1
1,3-Dichloropropane	ND		ug/kg	2.0	0.17	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.51	0.13	1
Bromobenzene	ND		ug/kg	2.0	0.15	1
n-Butylbenzene	ND		ug/kg	1.0	0.17	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
tert-Butylbenzene	ND		ug/kg	2.0	0.12	1
o-Chlorotoluene	ND		ug/kg	2.0	0.20	1
p-Chlorotoluene	ND		ug/kg	2.0	0.11	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.1	1.0	1
Hexachlorobutadiene	ND		ug/kg	4.1	0.17	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.11	1
Naphthalene	ND		ug/kg	4.1	0.66	1
Acrylonitrile	ND		ug/kg	4.1	1.2	1

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

SAMPLE RESULTS

Lab ID: L2124281-02
Client ID: TP05_051021_10
Sample Location: BRONX, NY

Date Collected: 05/10/21 13:18
Date Received: 05/10/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.0	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.33	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.28	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.20	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.34	1
1,4-Dioxane	ND		ug/kg	82	36.	1
p-Diethylbenzene	ND		ug/kg	2.0	0.18	1
p-Ethyltoluene	ND		ug/kg	2.0	0.39	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.20	1
Ethyl ether	ND		ug/kg	2.0	0.35	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.1	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	106		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

SAMPLE RESULTS

Lab ID: L2124281-03
Client ID: TP06_051021_12
Sample Location: BRONX, NY

Date Collected: 05/10/21 13:49
Date Received: 05/10/21
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 05/14/21 22:37
Analyst: MKS
Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.9	2.2	1
1,1-Dichloroethane	ND		ug/kg	0.98	0.14	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	0.98	0.23	1
1,2-Dichloropropane	ND		ug/kg	0.98	0.12	1
Dibromochloromethane	ND		ug/kg	0.98	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	0.98	0.26	1
Tetrachloroethene	ND		ug/kg	0.49	0.19	1
Chlorobenzene	ND		ug/kg	0.49	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.9	0.68	1
1,2-Dichloroethane	ND		ug/kg	0.98	0.25	1
1,1,1-Trichloroethane	ND		ug/kg	0.49	0.16	1
Bromodichloromethane	ND		ug/kg	0.49	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	0.98	0.27	1
cis-1,3-Dichloropropene	ND		ug/kg	0.49	0.16	1
1,3-Dichloropropene, Total	ND		ug/kg	0.49	0.16	1
1,1-Dichloropropene	ND		ug/kg	0.49	0.16	1
Bromoform	ND		ug/kg	3.9	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.49	0.16	1
Benzene	ND		ug/kg	0.49	0.16	1
Toluene	ND		ug/kg	0.98	0.54	1
Ethylbenzene	ND		ug/kg	0.98	0.14	1
Chloromethane	ND		ug/kg	3.9	0.92	1
Bromomethane	ND		ug/kg	2.0	0.57	1
Vinyl chloride	ND		ug/kg	0.98	0.33	1
Chloroethane	ND		ug/kg	2.0	0.44	1
1,1-Dichloroethene	ND		ug/kg	0.98	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1

Project Name: 111 WILLOW AVE**Lab Number:** L2124281**Project Number:** 170497201**Report Date:** 05/17/21**SAMPLE RESULTS**

Lab ID: L2124281-03
Client ID: TP06_051021_12
Sample Location: BRONX, NY

Date Collected: 05/10/21 13:49
Date Received: 05/10/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.49	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.20	1
p/m-Xylene	ND		ug/kg	2.0	0.55	1
o-Xylene	ND		ug/kg	0.98	0.29	1
Xylenes, Total	ND		ug/kg	0.98	0.29	1
cis-1,2-Dichloroethene	ND		ug/kg	0.98	0.17	1
1,2-Dichloroethene, Total	ND		ug/kg	0.98	0.14	1
Dibromomethane	ND		ug/kg	2.0	0.23	1
Styrene	ND		ug/kg	0.98	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.8	0.90	1
Acetone	16		ug/kg	9.8	4.7	1
Carbon disulfide	ND		ug/kg	9.8	4.5	1
2-Butanone	ND		ug/kg	9.8	2.2	1
Vinyl acetate	ND		ug/kg	9.8	2.1	1
4-Methyl-2-pentanone	ND		ug/kg	9.8	1.3	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.12	1
2-Hexanone	ND		ug/kg	9.8	1.2	1
Bromochloromethane	ND		ug/kg	2.0	0.20	1
2,2-Dichloropropane	ND		ug/kg	2.0	0.20	1
1,2-Dibromoethane	ND		ug/kg	0.98	0.28	1
1,3-Dichloropropane	ND		ug/kg	2.0	0.16	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.49	0.13	1
Bromobenzene	ND		ug/kg	2.0	0.14	1
n-Butylbenzene	ND		ug/kg	0.98	0.16	1
sec-Butylbenzene	ND		ug/kg	0.98	0.14	1
tert-Butylbenzene	ND		ug/kg	2.0	0.12	1
o-Chlorotoluene	ND		ug/kg	2.0	0.19	1
p-Chlorotoluene	ND		ug/kg	2.0	0.11	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	0.98	1
Hexachlorobutadiene	ND		ug/kg	3.9	0.17	1
Isopropylbenzene	ND		ug/kg	0.98	0.11	1
p-Isopropyltoluene	ND		ug/kg	0.98	0.11	1
Naphthalene	ND		ug/kg	3.9	0.64	1
Acrylonitrile	ND		ug/kg	3.9	1.1	1

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

SAMPLE RESULTS

Lab ID: L2124281-03
Client ID: TP06_051021_12
Sample Location: BRONX, NY

Date Collected: 05/10/21 13:49
Date Received: 05/10/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	0.98	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33	1
1,4-Dioxane	ND		ug/kg	79	35.	1
p-Diethylbenzene	ND		ug/kg	2.0	0.17	1
p-Ethyltoluene	ND		ug/kg	2.0	0.38	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19	1
Ethyl ether	ND		ug/kg	2.0	0.34	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.9	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	127		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	111		70-130

Project Name: 111 WILLOW AVE

Lab Number: L2124281

Project Number: 170497201

Report Date: 05/17/21

SAMPLE RESULTS

Lab ID: L2124281-04

Date Collected: 05/10/21 00:00

Client ID: TB01_051021

Date Received: 05/10/21

Sample Location: BRONX, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 05/12/21 13:59

Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 111 WILLOW AVE**Lab Number:** L2124281**Project Number:** 170497201**Report Date:** 05/17/21**SAMPLE RESULTS****Lab ID:** L2124281-04**Date Collected:** 05/10/21 00:00**Client ID:** TB01_051021**Date Received:** 05/10/21**Sample Location:** BRONX, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 111 WILLOW AVE

Lab Number: L2124281

Project Number: 170497201

Report Date: 05/17/21

SAMPLE RESULTS

Lab ID: L2124281-04

Date Collected: 05/10/21 00:00

Client ID: TB01_051021

Date Received: 05/10/21

Sample Location: BRONX, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	109		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 05/12/21 08:33
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG1497858-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 05/12/21 08:33
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG1497858-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 05/12/21 08:33
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG1497858-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	111		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 05/14/21 20:57
 Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 03 Batch: WG1499288-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	1.6	J	ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 05/14/21 20:57
 Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 03 Batch: WG1499288-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/14/21 20:57
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 03 Batch: WG1499288-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	80	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	120		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	104		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 05/16/21 17:20
 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-02 Batch: WG1499663-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	1.6	J	ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 05/16/21 17:20
 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-02 Batch: WG1499663-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	0.28	J	ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/16/21 17:20
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-02 Batch: WG1499663-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	80	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	105		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG1497858-3 WG1497858-4								
Methylene chloride	100		100		70-130	0		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	96		98		63-132	2		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	100		100		63-130	0		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	90		98		62-150	9		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	99		100		67-130	1		20
Bromodichloromethane	99		100		67-130	1		20
trans-1,3-Dichloropropene	84		84		70-130	0		20
cis-1,3-Dichloropropene	95		98		70-130	3		20
1,1-Dichloropropene	94		93		70-130	1		20
Bromoform	95		94		54-136	1		20
1,1,2,2-Tetrachloroethane	100		100		67-130	0		20
Benzene	99		96		70-130	3		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	97		110		64-130	13		20
Bromomethane	84		87		39-139	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG1497858-3 WG1497858-4								
Vinyl chloride	100		110		55-140	10		20
Chloroethane	100		110		55-138	10		20
1,1-Dichloroethene	110		110		61-145	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	97		98		70-130	1		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	85		88		63-130	3		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	99		98		70-130	1		20
1,2,3-Trichloropropane	94		95		64-130	1		20
Acrylonitrile	120		120		70-130	0		20
Styrene	100		100		70-130	0		20
Dichlorodifluoromethane	69		75		36-147	8		20
Acetone	99		98		58-148	1		20
Carbon disulfide	100		98		51-130	2		20
2-Butanone	110		100		63-138	10		20
Vinyl acetate	100		100		70-130	0		20
4-Methyl-2-pentanone	100		100		59-130	0		20
2-Hexanone	110		120		57-130	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG1497858-3 WG1497858-4								
Bromochloromethane	120		120		70-130	0		20
2,2-Dichloropropane	100		100		63-133	0		20
1,2-Dibromoethane	99		100		70-130	1		20
1,3-Dichloropropane	94		96		70-130	2		20
1,1,1,2-Tetrachloroethane	100		99		64-130	1		20
Bromobenzene	100		100		70-130	0		20
n-Butylbenzene	100		100		53-136	0		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	110		110		70-130	0		20
o-Chlorotoluene	100		100		70-130	0		20
p-Chlorotoluene	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	100		100		41-144	0		20
Hexachlorobutadiene	90		90		63-130	0		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	110		110		70-130	0		20
Naphthalene	110		110		70-130	0		20
n-Propylbenzene	100		100		69-130	0		20
1,2,3-Trichlorobenzene	98		100		70-130	2		20
1,2,4-Trichlorobenzene	96		95		70-130	1		20
1,3,5-Trimethylbenzene	100		99		64-130	1		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
1,4-Dioxane	152		172	Q	56-162	12		20
p-Diethylbenzene	110		110		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG1497858-3 WG1497858-4								
p-Ethyltoluene	100		99		70-130	1		20
1,2,4,5-Tetramethylbenzene	100		100		70-130	0		20
Ethyl ether	93		100		59-134	7		20
trans-1,4-Dichloro-2-butene	95		92		70-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		97		70-130
Toluene-d8	103		103		70-130
4-Bromofluorobenzene	102		100		70-130
Dibromofluoromethane	99		101		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 03 Batch: WG1499288-3 WG1499288-4								
Methylene chloride	117		114		70-130	3		30
1,1-Dichloroethane	124		120		70-130	3		30
Chloroform	111		107		70-130	4		30
Carbon tetrachloride	102		101		70-130	1		30
1,2-Dichloropropane	115		114		70-130	1		30
Dibromochloromethane	104		105		70-130	1		30
1,1,2-Trichloroethane	113		112		70-130	1		30
Tetrachloroethene	99		95		70-130	4		30
Chlorobenzene	103		102		70-130	1		30
Trichlorofluoromethane	137		126		70-139	8		30
1,2-Dichloroethane	123		120		70-130	2		30
1,1,1-Trichloroethane	109		106		70-130	3		30
Bromodichloromethane	111		111		70-130	0		30
trans-1,3-Dichloropropene	113		112		70-130	1		30
cis-1,3-Dichloropropene	109		109		70-130	0		30
1,1-Dichloropropene	118		115		70-130	3		30
Bromoform	91		96		70-130	5		30
1,1,2,2-Tetrachloroethane	107		109		70-130	2		30
Benzene	117		114		70-130	3		30
Toluene	109		107		70-130	2		30
Ethylbenzene	110		108		70-130	2		30
Chloromethane	186	Q	174	Q	52-130	7		30
Bromomethane	276	Q	253	Q	57-147	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 03 Batch: WG1499288-3 WG1499288-4								
Vinyl chloride	225	Q	202	Q	67-130	11		30
Chloroethane	257	Q	232	Q	50-151	10		30
1,1-Dichloroethene	126		123		65-135	2		30
trans-1,2-Dichloroethene	118		116		70-130	2		30
Trichloroethene	108		107		70-130	1		30
1,2-Dichlorobenzene	98		98		70-130	0		30
1,3-Dichlorobenzene	100		98		70-130	2		30
1,4-Dichlorobenzene	97		96		70-130	1		30
Methyl tert butyl ether	103		103		66-130	0		30
p/m-Xylene	109		106		70-130	3		30
o-Xylene	109		106		70-130	3		30
cis-1,2-Dichloroethene	113		112		70-130	1		30
Dibromomethane	110		111		70-130	1		30
Styrene	114		111		70-130	3		30
Dichlorodifluoromethane	172	Q	166	Q	30-146	4		30
Acetone	114		110		54-140	4		30
Carbon disulfide	145	Q	140	Q	59-130	4		30
2-Butanone	113		115		70-130	2		30
Vinyl acetate	128		129		70-130	1		30
4-Methyl-2-pentanone	98		99		70-130	1		30
1,2,3-Trichloropropane	108		110		68-130	2		30
2-Hexanone	98		100		70-130	2		30
Bromochloromethane	108		109		70-130	1		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 03 Batch: WG1499288-3 WG1499288-4								
2,2-Dichloropropane	108		106		70-130	2		30
1,2-Dibromoethane	111		113		70-130	2		30
1,3-Dichloropropane	114		114		69-130	0		30
1,1,1,2-Tetrachloroethane	101		100		70-130	1		30
Bromobenzene	94		94		70-130	0		30
n-Butylbenzene	112		109		70-130	3		30
sec-Butylbenzene	105		104		70-130	1		30
tert-Butylbenzene	100		98		70-130	2		30
o-Chlorotoluene	110		108		70-130	2		30
p-Chlorotoluene	110		108		70-130	2		30
1,2-Dibromo-3-chloropropane	79		81		68-130	3		30
Hexachlorobutadiene	86		84		67-130	2		30
Isopropylbenzene	100		100		70-130	0		30
p-Isopropyltoluene	101		100		70-130	1		30
Naphthalene	84		86		70-130	2		30
Acrylonitrile	119		124		70-130	4		30
n-Propylbenzene	107		106		70-130	1		30
1,2,3-Trichlorobenzene	86		84		70-130	2		30
1,2,4-Trichlorobenzene	86		84		70-130	2		30
1,3,5-Trimethylbenzene	103		102		70-130	1		30
1,2,4-Trimethylbenzene	106		103		70-130	3		30
1,4-Dioxane	90		87		65-136	3		30
p-Diethylbenzene	101		98		70-130	3		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 03 Batch: WG1499288-3 WG1499288-4								
p-Ethyltoluene	103		102		70-130	1		30
1,2,4,5-Tetramethylbenzene	96		95		70-130	1		30
Ethyl ether	123		122		67-130	1		30
trans-1,4-Dichloro-2-butene	119		118		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	113		110		70-130
Toluene-d8	104		103		70-130
4-Bromofluorobenzene	99		99		70-130
Dibromofluoromethane	98		98		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-02 Batch: WG1499663-3 WG1499663-4								
Methylene chloride	116		116		70-130	0		30
1,1-Dichloroethane	126		124		70-130	2		30
Chloroform	111		110		70-130	1		30
Carbon tetrachloride	102		101		70-130	1		30
1,2-Dichloropropane	117		117		70-130	0		30
Dibromochloromethane	102		106		70-130	4		30
1,1,2-Trichloroethane	111		114		70-130	3		30
Tetrachloroethene	97		98		70-130	1		30
Chlorobenzene	103		103		70-130	0		30
Trichlorofluoromethane	132		126		70-139	5		30
1,2-Dichloroethane	120		121		70-130	1		30
1,1,1-Trichloroethane	109		108		70-130	1		30
Bromodichloromethane	110		111		70-130	1		30
trans-1,3-Dichloropropene	111		114		70-130	3		30
cis-1,3-Dichloropropene	110		112		70-130	2		30
1,1-Dichloropropene	120		118		70-130	2		30
Bromoform	94		99		70-130	5		30
1,1,2,2-Tetrachloroethane	110		114		70-130	4		30
Benzene	117		116		70-130	1		30
Toluene	109		110		70-130	1		30
Ethylbenzene	111		110		70-130	1		30
Chloromethane	185	Q	180	Q	52-130	3		30
Bromomethane	233	Q	218	Q	57-147	7		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-02 Batch: WG1499663-3 WG1499663-4								
Vinyl chloride	216	Q	211	Q	67-130	2		30
Chloroethane	242	Q	238	Q	50-151	2		30
1,1-Dichloroethene	128		124		65-135	3		30
trans-1,2-Dichloroethene	119		117		70-130	2		30
Trichloroethene	109		109		70-130	0		30
1,2-Dichlorobenzene	98		99		70-130	1		30
1,3-Dichlorobenzene	100		100		70-130	0		30
1,4-Dichlorobenzene	98		98		70-130	0		30
Methyl tert butyl ether	105		104		66-130	1		30
p/m-Xylene	108		106		70-130	2		30
o-Xylene	109		106		70-130	3		30
cis-1,2-Dichloroethene	114		112		70-130	2		30
Dibromomethane	111		111		70-130	0		30
Styrene	111		109		70-130	2		30
Dichlorodifluoromethane	166	Q	162	Q	30-146	2		30
Acetone	116		114		54-140	2		30
Carbon disulfide	146	Q	144	Q	59-130	1		30
2-Butanone	118		119		70-130	1		30
Vinyl acetate	128		129		70-130	1		30
4-Methyl-2-pentanone	103		107		70-130	4		30
1,2,3-Trichloropropane	111		117		68-130	5		30
2-Hexanone	104		106		70-130	2		30
Bromochloromethane	107		107		70-130	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-02 Batch: WG1499663-3 WG1499663-4								
2,2-Dichloropropane	108		107		70-130	1		30
1,2-Dibromoethane	109		114		70-130	4		30
1,3-Dichloropropane	114		116		69-130	2		30
1,1,1,2-Tetrachloroethane	100		99		70-130	1		30
Bromobenzene	96		97		70-130	1		30
n-Butylbenzene	114		114		70-130	0		30
sec-Butylbenzene	108		108		70-130	0		30
tert-Butylbenzene	102		101		70-130	1		30
o-Chlorotoluene	112		112		70-130	0		30
p-Chlorotoluene	111		111		70-130	0		30
1,2-Dibromo-3-chloropropane	80		84		68-130	5		30
Hexachlorobutadiene	85		85		67-130	0		30
Isopropylbenzene	105		104		70-130	1		30
p-Isopropyltoluene	104		104		70-130	0		30
Naphthalene	88		92		70-130	4		30
Acrylonitrile	123		123		70-130	0		30
n-Propylbenzene	110		110		70-130	0		30
1,2,3-Trichlorobenzene	87		88		70-130	1		30
1,2,4-Trichlorobenzene	87		87		70-130	0		30
1,3,5-Trimethylbenzene	106		105		70-130	1		30
1,2,4-Trimethylbenzene	107		107		70-130	0		30
1,4-Dioxane	89		94		65-136	5		30
p-Diethylbenzene	103		102		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-02 Batch: WG1499663-3 WG1499663-4								
p-Ethyltoluene	107		106		70-130	1		30
1,2,4,5-Tetramethylbenzene	98		98		70-130	0		30
Ethyl ether	124		125		67-130	1		30
trans-1,4-Dichloro-2-butene	119		122		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	111		111		70-130
Toluene-d8	104		103		70-130
4-Bromofluorobenzene	105		103		70-130
Dibromofluoromethane	100		97		70-130

INORGANICS & MISCELLANEOUS

Project Name: 111 WILLOW AVE**Project Number:** 170497201**Lab Number:** L2124281**Report Date:** 05/17/21**SAMPLE RESULTS****Lab ID:** L2124281-01**Client ID:** TP03_051021_10**Sample Location:** BRONX, NY**Date Collected:** 05/10/21 10:40**Date Received:** 05/10/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.0		%	0.100	NA	1	-	05/12/21 12:28	121,2540G	RI



Project Name: 111 WILLOW AVE**Project Number:** 170497201**Lab Number:** L2124281**Report Date:** 05/17/21**SAMPLE RESULTS****Lab ID:** L2124281-02**Client ID:** TP05_051021_10**Sample Location:** BRONX, NY**Date Collected:** 05/10/21 13:18**Date Received:** 05/10/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.9		%	0.100	NA	1	-	05/12/21 12:28	121,2540G	RI



Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

SAMPLE RESULTS

Lab ID: L2124281-03

Client ID: TP06_051021_12

Sample Location: BRONX, NY

Date Collected: 05/10/21 13:49

Date Received: 05/10/21

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.4		%	0.100	NA	1	-	05/12/21 12:28	121,2540G	RI



Lab Duplicate Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2124281

Report Date: 05/17/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1497796-1 QC Sample: L2120474-01 Client ID: DUP Sample						
Solids, Total	90.8	91.1	%	0		20

Project Name: 111 WILLOW AVE**Lab Number:** L2124281**Project Number:** 170497201**Report Date:** 05/17/21**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2124281-01A	Vial MeOH preserved	A	NA		4.4	Y	Absent		NYTCL-8260HLW(14)
L2124281-01B	Vial water preserved	A	NA		4.4	Y	Absent	11-MAY-21 16:14	NYTCL-8260HLW(14)
L2124281-01C	Vial water preserved	A	NA		4.4	Y	Absent	11-MAY-21 16:14	NYTCL-8260HLW(14)
L2124281-01D	Plastic 2oz unpreserved for TS	A	NA		4.4	Y	Absent		TS(7)
L2124281-02A	Vial MeOH preserved	A	NA		4.4	Y	Absent		NYTCL-8260HLW(14)
L2124281-02B	Vial water preserved	A	NA		4.4	Y	Absent	11-MAY-21 16:14	NYTCL-8260HLW(14)
L2124281-02C	Vial water preserved	A	NA		4.4	Y	Absent	11-MAY-21 16:14	NYTCL-8260HLW(14)
L2124281-02D	Plastic 2oz unpreserved for TS	A	NA		4.4	Y	Absent		TS(7)
L2124281-03A	Vial MeOH preserved	A	NA		4.4	Y	Absent		NYTCL-8260HLW(14)
L2124281-03B	Vial water preserved	A	NA		4.4	Y	Absent	11-MAY-21 16:14	NYTCL-8260HLW(14)
L2124281-03C	Vial water preserved	A	NA		4.4	Y	Absent	11-MAY-21 16:14	NYTCL-8260HLW(14)
L2124281-03D	Plastic 2oz unpreserved for TS	A	NA		4.4	Y	Absent		TS(7)
L2124281-04A	Vial HCl preserved	A	NA		4.4	Y	Absent		NYTCL-8260(14)
L2124281-04B	Vial HCl preserved	A	NA		4.4	Y	Absent		NYTCL-8260(14)

Project Name: 111 WILLOW AVE
Project Number: 170497201

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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

Data Qualifiers

- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2124281
Report Date: 05/17/21

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 19

Published Date: 4/2/2021 1:14:23 PM

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

[illegible]



ANALYTICAL REPORT

Lab Number:	L2128064
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Stuart Knoop
Phone:	(212) 479-5400
Project Name:	111 WILLOW AVE
Project Number:	170497201
Report Date:	06/02/21

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2128064-01	RDB-01_7-8	SOIL	BRONX, NY	05/26/21 09:20	05/26/21
L2128064-02	RDB-03_9-10	SOIL	BRONX, NY	05/26/21 10:08	05/26/21
L2128064-03	RDB-05_10-11	SOIL	BRONX, NY	05/26/21 12:50	05/26/21
L2128064-04	RDB-06_8-9	SOIL	BRONX, NY	05/26/21 10:50	05/26/21
L2128064-05	RDB-07_9-10	SOIL	BRONX, NY	05/26/21 12:40	05/26/21
L2128064-06	RDB-08_9-10	SOIL	BRONX, NY	05/26/21 13:30	05/26/21
L2128064-07	RDB-09_9-10	SOIL	BRONX, NY	05/26/21 11:42	05/26/21
L2128064-08	RDB-10_8-9	SOIL	BRONX, NY	05/26/21 13:50	05/26/21
L2128064-09	RDB-11_9-10	SOIL	BRONX, NY	05/26/21 08:40	05/26/21
L2128064-10	RDB-04_8-9	SOIL	BRONX, NY	05/26/21 14:20	05/26/21
L2128064-11	TMW-11_052621	WATER	BRONX, NY	05/26/21 14:20	05/26/21
L2128064-12	FB01_052621	WATER	BRONX, NY	05/26/21 14:30	05/26/21
L2128064-13	TB01_052621	WATER	BRONX, NY	05/26/21 14:30	05/26/21

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2128064-10: A sample container identified as "RDB-04_8-9" for Total Solids was listed on the Chain of Custody, but not received. This was verified by the client. At the client's request, the Total Solids result reported is the average of the submitted samples.

Volatile Organics

L2128064-04, -05, -08, and -10: One or more of the internal standard and surrogate recoveries are outside the acceptance criteria; however, the internal standard and surrogates are within criteria for the target compounds; therefore, the results are reported.

L2128064-06: The internal standard (IS) response(s) for chlorobenzene-d5 (48%), and 1,4-dichlorobenzene-d4 (39%) were below the acceptance criteria; however, re-analysis achieved similar results: chlorobenzene-d5 (45%), and 1,4-dichlorobenzene-d4 (36%). The results of both analyses are reported.

L2128064-07: The internal standard (IS) response(s) for chlorobenzene-d5 (49%), and 1,4-dichlorobenzene-d4 (41%) were below the acceptance criteria; however, re-analysis achieved similar results: chlorobenzene-d5 (44%), and 1,4-dichlorobenzene-d4 (37%). The results of both analyses are reported.

L2128064-09: The internal standard (IS) response(s) for chlorobenzene-d5 (46%), and 1,4-dichlorobenzene-d4 (37%) were below the acceptance criteria; however, re-analysis achieved similar results: chlorobenzene-d5 (43%), and 1,4-dichlorobenzene-d4 (35%). The results of both analyses are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Cristin Walker

Title: Technical Director/Representative

Date: 06/02/21

ORGANICS

VOLATILES

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-01
Client ID: RDB-01_7-8
Sample Location: BRONX, NY

Date Collected: 05/26/21 09:20
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 08:46
Analyst: MV
Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	0.99	0.14	1
Tetrachloroethene	19		ug/kg	0.50	0.19	1
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.16	1
Vinyl chloride	ND		ug/kg	0.99	0.33	1
1,1-Dichloroethene	ND		ug/kg	0.99	0.24	1
Trichloroethene	ND		ug/kg	0.50	0.14	1
cis-1,2-Dichloroethene	ND		ug/kg	0.99	0.17	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	108		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-02
Client ID: RDB-03_9-10
Sample Location: BRONX, NY

Date Collected: 05/26/21 10:08
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 09:07
Analyst: MV
Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	0.96	0.14	1
Tetrachloroethene	4.2		ug/kg	0.48	0.19	1
1,1,1-Trichloroethane	ND		ug/kg	0.48	0.16	1
Vinyl chloride	ND		ug/kg	0.96	0.32	1
1,1-Dichloroethene	ND		ug/kg	0.96	0.23	1
Trichloroethene	ND		ug/kg	0.48	0.13	1
cis-1,2-Dichloroethene	ND		ug/kg	0.96	0.17	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	109		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-03
Client ID: RDB-05_10-11
Sample Location: BRONX, NY

Date Collected: 05/26/21 12:50
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 09:28
Analyst: MV
Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	0.98	0.14	1
Tetrachloroethene	92		ug/kg	0.49	0.19	1
1,1,1-Trichloroethane	0.72		ug/kg	0.49	0.16	1
Vinyl chloride	ND		ug/kg	0.98	0.33	1
1,1-Dichloroethene	ND		ug/kg	0.98	0.23	1
Trichloroethene	5.3		ug/kg	0.49	0.13	1
cis-1,2-Dichloroethene	5.6		ug/kg	0.98	0.17	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	103		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-04
Client ID: RDB-06_8-9
Sample Location: BRONX, NY

Date Collected: 05/26/21 10:50
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 09:49
Analyst: MV
Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	0.92	0.13	1
Tetrachloroethene	42		ug/kg	0.46	0.18	1
1,1,1-Trichloroethane	0.54		ug/kg	0.46	0.15	1
Vinyl chloride	ND		ug/kg	0.92	0.31	1
1,1-Dichloroethene	ND		ug/kg	0.92	0.22	1
Trichloroethene	3.4		ug/kg	0.46	0.13	1
cis-1,2-Dichloroethene	4.5		ug/kg	0.92	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	108		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-05
Client ID: RDB-07_9-10
Sample Location: BRONX, NY

Date Collected: 05/26/21 12:40
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 10:30
Analyst: MV
Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	1.5		ug/kg	0.94	0.14	1
Tetrachloroethene	160		ug/kg	0.47	0.18	1
1,1,1-Trichloroethane	1.0		ug/kg	0.47	0.16	1
Vinyl chloride	ND		ug/kg	0.94	0.32	1
1,1-Dichloroethene	ND		ug/kg	0.94	0.22	1
Trichloroethene	8.9		ug/kg	0.47	0.13	1
cis-1,2-Dichloroethene	38		ug/kg	0.94	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	101		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-06
Client ID: RDB-08_9-10
Sample Location: BRONX, NY

Date Collected: 05/26/21 13:30
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 10:51
Analyst: MV
Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.0	0.15	1
Tetrachloroethene	ND		ug/kg	0.53	0.21	1
1,1,1-Trichloroethane	ND		ug/kg	0.53	0.18	1
Vinyl chloride	ND		ug/kg	1.0	0.35	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.25	1
Trichloroethene	ND		ug/kg	0.53	0.14	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	115		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-06 R
 Client ID: RDB-08_9-10
 Sample Location: BRONX, NY

Date Collected: 05/26/21 13:30
 Date Received: 05/26/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 06/02/21 13:39
 Analyst: MKS
 Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.6	0.23	1
Tetrachloroethene	ND		ug/kg	0.78	0.31	1
1,1,1-Trichloroethane	ND		ug/kg	0.78	0.26	1
Vinyl chloride	ND		ug/kg	1.6	0.52	1
1,1-Dichloroethene	ND		ug/kg	1.6	0.37	1
Trichloroethene	ND		ug/kg	0.78	0.21	1
cis-1,2-Dichloroethene	ND		ug/kg	1.6	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	123		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	118		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-07
Client ID: RDB-09_9-10
Sample Location: BRONX, NY

Date Collected: 05/26/21 11:42
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 11:12
Analyst: MV
Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.1	0.16	1
Tetrachloroethene	1.5		ug/kg	0.53	0.21	1
1,1,1-Trichloroethane	0.99		ug/kg	0.53	0.18	1
Vinyl chloride	ND		ug/kg	1.1	0.36	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.25	1
Trichloroethene	ND		ug/kg	0.53	0.15	1
cis-1,2-Dichloroethene	6.1		ug/kg	1.1	0.19	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	111		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-07 R
Client ID: RDB-09_9-10
Sample Location: BRONX, NY

Date Collected: 05/26/21 11:42
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 13:59
Analyst: MKS
Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.2	0.17	1
Tetrachloroethene	0.67		ug/kg	0.60	0.23	1
1,1,1-Trichloroethane	ND		ug/kg	0.60	0.20	1
Vinyl chloride	ND		ug/kg	1.2	0.40	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.28	1
Trichloroethene	ND		ug/kg	0.60	0.16	1
cis-1,2-Dichloroethene	9.0		ug/kg	1.2	0.21	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	112		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-08
Client ID: RDB-10_8-9
Sample Location: BRONX, NY

Date Collected: 05/26/21 13:50
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 11:33
Analyst: MV
Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	0.97	0.14	1
Tetrachloroethene	20		ug/kg	0.48	0.19	1
1,1,1-Trichloroethane	ND		ug/kg	0.48	0.16	1
Vinyl chloride	ND		ug/kg	0.97	0.32	1
1,1-Dichloroethene	ND		ug/kg	0.97	0.23	1
Trichloroethene	2.1		ug/kg	0.48	0.13	1
cis-1,2-Dichloroethene	1.4		ug/kg	0.97	0.17	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	109		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-09
Client ID: RDB-11_9-10
Sample Location: BRONX, NY

Date Collected: 05/26/21 08:40
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 11:54
Analyst: MV
Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.1	0.15	1
Tetrachloroethene	ND		ug/kg	0.53	0.21	1
1,1,1-Trichloroethane	ND		ug/kg	0.53	0.18	1
Vinyl chloride	ND		ug/kg	1.1	0.36	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.25	1
Trichloroethene	ND		ug/kg	0.53	0.14	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.18	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	119		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-09 R
Client ID: RDB-11_9-10
Sample Location: BRONX, NY

Date Collected: 05/26/21 08:40
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 14:20
Analyst: MKS
Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.1	0.16	1
Tetrachloroethene	ND		ug/kg	0.56	0.22	1
1,1,1-Trichloroethane	ND		ug/kg	0.56	0.19	1
Vinyl chloride	ND		ug/kg	1.1	0.38	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.27	1
Trichloroethene	ND		ug/kg	0.56	0.15	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.20	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	112		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-10
Client ID: RDB-04_8-9
Sample Location: BRONX, NY

Date Collected: 05/26/21 14:20
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 14:41
Analyst: MKS
Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.0	0.14	1
Tetrachloroethene	ND		ug/kg	0.50	0.20	1
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.24	1
Trichloroethene	ND		ug/kg	0.50	0.14	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	149	Q	70-130
Dibromofluoromethane	115		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-11 D
Client ID: TMW-11_052621
Sample Location: BRONX, NY

Date Collected: 05/26/21 14:20
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/28/21 12:30
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	29	J	ug/l	50	14.	20
Tetrachloroethene	3400		ug/l	10	3.6	20
1,1,1-Trichloroethane	140		ug/l	50	14.	20
Vinyl chloride	5.1	J	ug/l	20	1.4	20
1,1-Dichloroethene	68		ug/l	10	3.4	20
Trichloroethene	380		ug/l	10	3.5	20
cis-1,2-Dichloroethene	440		ug/l	50	14.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	87		70-130
Dibromofluoromethane	107		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-12
Client ID: FB01_052621
Sample Location: BRONX, NY

Date Collected: 05/26/21 14:30
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/28/21 11:44
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	117		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-13
Client ID: TB01_052621
Sample Location: BRONX, NY

Date Collected: 05/26/21 14:30
Date Received: 05/26/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/28/21 12:07
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	119		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 05/28/21 08:38
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 11-13 Batch: WG1505015-5					
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Tetrachloroethene	ND		ug/l	0.50	0.18
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
1,1-Dichloroethene	ND		ug/l	0.50	0.17
Trichloroethene	ND		ug/l	0.50	0.18
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	116		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 06/02/21 08:25
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-10 Batch: WG1506462-5					
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Tetrachloroethene	ND		ug/kg	0.50	0.20
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Vinyl chloride	ND		ug/kg	1.0	0.34
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
Trichloroethene	ND		ug/kg	0.50	0.14
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	106		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128064

Report Date: 06/02/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 11-13 Batch: WG1505015-3 WG1505015-4								
1,1-Dichloroethane	99		97		70-130	2		20
Tetrachloroethene	100		100		70-130	0		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Vinyl chloride	92		90		55-140	2		20
1,1-Dichloroethene	100		100		61-145	0		20
Trichloroethene	94		96		70-130	2		20
cis-1,2-Dichloroethene	100		99		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		106		70-130
Toluene-d8	99		100		70-130
4-Bromofluorobenzene	93		90		70-130
Dibromofluoromethane	104		103		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128064

Report Date: 06/02/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-10 Batch: WG1506462-3 WG1506462-4								
1,1-Dichloroethane	90		90		70-130	0		30
Tetrachloroethene	92		92		70-130	0		30
1,1,1-Trichloroethane	94		91		70-130	3		30
Vinyl chloride	121		119		67-130	2		30
1,1-Dichloroethene	113		106		65-135	6		30
Trichloroethene	105		103		70-130	2		30
cis-1,2-Dichloroethene	105		105		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	90		90		70-130
Toluene-d8	95		97		70-130
4-Bromofluorobenzene	93		96		70-130
Dibromofluoromethane	96		95		70-130

INORGANICS & MISCELLANEOUS

Project Name: 111 WILLOW AVE**Project Number:** 170497201**Lab Number:** L2128064**Report Date:** 06/02/21**SAMPLE RESULTS****Lab ID:** L2128064-01**Client ID:** RDB-01_7-8**Sample Location:** BRONX, NY**Date Collected:** 05/26/21 09:20**Date Received:** 05/26/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.9		%	0.100	NA	1	-	05/27/21 22:58	121,2540G	TR



Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128064

Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-02

Client ID: RDB-03_9-10

Sample Location: BRONX, NY

Date Collected: 05/26/21 10:08

Date Received: 05/26/21

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.6		%	0.100	NA	1	-	05/27/21 22:58	121,2540G	TR



Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128064

Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-03

Client ID: RDB-05_10-11

Sample Location: BRONX, NY

Date Collected: 05/26/21 12:50

Date Received: 05/26/21

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.5		%	0.100	NA	1	-	05/27/21 22:58	121,2540G	TR



Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128064

Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-04

Client ID: RDB-06_8-9

Sample Location: BRONX, NY

Date Collected: 05/26/21 10:50

Date Received: 05/26/21

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.5		%	0.100	NA	1	-	05/27/21 22:58	121,2540G	TR



Project Name: 111 WILLOW AVE**Project Number:** 170497201**Lab Number:** L2128064**Report Date:** 06/02/21**SAMPLE RESULTS****Lab ID:** L2128064-05**Client ID:** RDB-07_9-10**Sample Location:** BRONX, NY**Date Collected:** 05/26/21 12:40**Date Received:** 05/26/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.9		%	0.100	NA	1	-	05/27/21 22:58	121,2540G	TR



Project Name: 111 WILLOW AVE**Project Number:** 170497201**Lab Number:** L2128064**Report Date:** 06/02/21**SAMPLE RESULTS****Lab ID:** L2128064-06**Client ID:** RDB-08_9-10**Sample Location:** BRONX, NY**Date Collected:** 05/26/21 13:30**Date Received:** 05/26/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.9		%	0.100	NA	1	-	05/27/21 22:58	121,2540G	TR



Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128064

Report Date: 06/02/21

SAMPLE RESULTS

Lab ID: L2128064-07

Client ID: RDB-09_9-10

Sample Location: BRONX, NY

Date Collected: 05/26/21 11:42

Date Received: 05/26/21

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	76.8		%	0.100	NA	1	-	05/27/21 22:58	121,2540G	TR



Project Name: 111 WILLOW AVE**Project Number:** 170497201**Lab Number:** L2128064**Report Date:** 06/02/21**SAMPLE RESULTS****Lab ID:** L2128064-08**Client ID:** RDB-10_8-9**Sample Location:** BRONX, NY**Date Collected:** 05/26/21 13:50**Date Received:** 05/26/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.6		%	0.100	NA	1	-	05/27/21 22:58	121,2540G	TR



Project Name: 111 WILLOW AVE**Project Number:** 170497201**Lab Number:** L2128064**Report Date:** 06/02/21**SAMPLE RESULTS****Lab ID:** L2128064-09**Client ID:** RDB-11_9-10**Sample Location:** BRONX, NY**Date Collected:** 05/26/21 08:40**Date Received:** 05/26/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.4		%	0.100	NA	1	-	05/27/21 22:58	121,2540G	TR



Project Name: 111 WILLOW AVE**Project Number:** 170497201**Lab Number:** L2128064**Report Date:** 06/02/21**SAMPLE RESULTS****Lab ID:** L2128064-10**Client ID:** RDB-04_8-9**Sample Location:** BRONX, NY**Date Collected:** 05/26/21 14:20**Date Received:** 05/26/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.5		%	0.100	NA	1	-		121,2540G	



Lab Duplicate Analysis
Batch Quality Control

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG1504743-1 QC Sample: L2126746-03 Client ID: DUP Sample						
Solids, Total	83.7	84.9	%	1		20

Project Name: 111 WILLOW AVE
Project Number: 170497201

Serial_No:06022116:19
Lab Number: L2128064
Report Date: 06/02/21

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2128064-01A	Vial MeOH preserved	A	NA		3.8	Y	Absent		NYTCL-8260HLW(14)
L2128064-01B	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-01C	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-01D	Plastic 2oz unpreserved for TS	A	NA		3.8	Y	Absent		TS(7)
L2128064-02A	Vial MeOH preserved	A	NA		3.8	Y	Absent		NYTCL-8260HLW(14)
L2128064-02B	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-02C	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-02D	Plastic 2oz unpreserved for TS	A	NA		3.8	Y	Absent		TS(7)
L2128064-03A	Vial MeOH preserved	A	NA		3.8	Y	Absent		NYTCL-8260HLW(14)
L2128064-03B	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-03C	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-03D	Plastic 2oz unpreserved for TS	A	NA		3.8	Y	Absent		TS(7)
L2128064-04A	Vial MeOH preserved	A	NA		3.8	Y	Absent		NYTCL-8260HLW(14)
L2128064-04B	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-04C	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-04D	Plastic 2oz unpreserved for TS	A	NA		3.8	Y	Absent		TS(7)
L2128064-05A	Vial MeOH preserved	A	NA		3.8	Y	Absent		NYTCL-8260HLW(14)
L2128064-05B	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-05C	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-05D	Plastic 2oz unpreserved for TS	A	NA		3.8	Y	Absent		TS(7)
L2128064-06A	Vial MeOH preserved	A	NA		3.8	Y	Absent		NYTCL-8260HLW(14)
L2128064-06B	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-06C	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)

Project Name: 111 WILLOW AVE
Project Number: 170497201

Serial_No:06022116:19
Lab Number: L2128064
Report Date: 06/02/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2128064-06D	Plastic 2oz unpreserved for TS	A	NA		3.8	Y	Absent		TS(7)
L2128064-07A	Vial MeOH preserved	A	NA		3.8	Y	Absent		NYTCL-8260HLW(14)
L2128064-07B	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-07C	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-07D	Plastic 2oz unpreserved for TS	A	NA		3.8	Y	Absent		TS(7)
L2128064-08A	Vial MeOH preserved	A	NA		3.8	Y	Absent		NYTCL-8260HLW(14)
L2128064-08B	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-08C	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-08D	Plastic 2oz unpreserved for TS	A	NA		3.8	Y	Absent		TS(7)
L2128064-09A	Vial MeOH preserved	A	NA		3.8	Y	Absent		NYTCL-8260HLW(14)
L2128064-09B	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-09C	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-09D	Plastic 2oz unpreserved for TS	A	NA		3.8	Y	Absent		TS(7)
L2128064-10A	Vial MeOH preserved	A	NA		3.8	Y	Absent		NYTCL-8260HLW(14)
L2128064-10B	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-10C	Vial water preserved	A	NA		3.8	Y	Absent	27-MAY-21 15:11	NYTCL-8260HLW(14)
L2128064-10D	Plastic 2oz unpreserved for TS	A	NA		3.8	Y	Absent		ARCHIVE()
L2128064-11A	Vial HCl preserved	A	NA		3.8	Y	Absent		NYTCL-8260(14)
L2128064-11B	Vial HCl preserved	A	NA		3.8	Y	Absent		NYTCL-8260(14)
L2128064-11C	Vial HCl preserved	A	NA		3.8	Y	Absent		NYTCL-8260(14)
L2128064-12A	Vial HCl preserved	A	NA		3.8	Y	Absent		NYTCL-8260(14)
L2128064-12B	Vial HCl preserved	A	NA		3.8	Y	Absent		NYTCL-8260(14)
L2128064-12C	Vial HCl preserved	A	NA		3.8	Y	Absent		NYTCL-8260(14)
L2128064-13A	Vial HCl preserved	A	NA		3.8	Y	Absent		NYTCL-8260(14)
L2128064-13B	Vial HCl preserved	A	NA		3.8	Y	Absent		NYTCL-8260(14)

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW AVE**Lab Number:** L2128064**Project Number:** 170497201**Report Date:** 06/02/21**Data Qualifiers**

- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128064
Report Date: 06/02/21

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water


EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.


EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

 NEW YORK CHAIN OF CUSTODY Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193 Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288		Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page <div style="border: 1px solid black; padding: 2px; display: inline-block;">1 of 2</div>		Date Rec'd in Lab <div style="font-size: 1.5em; font-family: cursive;">5/26/21</div>		ALPHA Job # <div style="font-size: 1.5em; font-family: cursive;">L2128067</div>																																																																																																																																																																						
		Project Information Project Name: <u>111 Willow Ave</u> Project Location: <u>Brant, NY</u> Project # <u>170497201</u> (Use Project name as Project #) <input type="checkbox"/>		Deliverables <input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input type="checkbox"/> EQuIS (1 File) <input type="checkbox"/> EQuIS (4 File) <input type="checkbox"/> Other		Billing Information <input checked="" type="checkbox"/> Same as Client Info PO #																																																																																																																																																																								
Client Information Client: <u>Langan</u> Address: <u>21 Penn Plaza, 16th W 31st St, 8th Fl, New York, NY 10011</u> Phone: <u>212-479-5400</u> Fax: Email: <u>sknoop@langan.com</u>		Project Manager: <u>Stuart Knoop</u> ALPHAQuote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		Regulatory Requirement <input type="checkbox"/> NY TOGS <input checked="" type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:																																																																																																																																																																								
These samples have been previously analyzed by Alpha <input type="checkbox"/> Other project specific requirements/comments: <div style="font-family: cursive; font-size: 1.2em;">please also email to jjanowitz@langan.com and data.management@langan.com</div>		ANALYSIS <div style="font-family: cursive; font-size: 0.8em;"> NY Part 375 VOCs* * (1,1,1-trichloroethane), (1,1-dichloroethane), (cis-1,2-dichloroethane), (PCE), (TCE), (vinyl chloride), (1,1-dichloroethene) </div>		Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)		Total Bottles																																																																																																																																																																								
Table Header <table border="1" style="width:100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th rowspan="2">ALPHA Lab ID (Lab Use Only)</th> <th rowspan="2">Sample ID</th> <th colspan="2">Collection</th> <th rowspan="2">Sample Matrix</th> <th rowspan="2">Sampler's Initials</th> <th colspan="7">ANALYSIS</th> <th rowspan="2">Sample Specific Comments</th> </tr> <tr> <th>Date</th> <th>Time</th> <th>NY Part 375 VOCs*</th> <th>(1,1,1-trichloroethane)</th> <th>(1,1-dichloroethane)</th> <th>(cis-1,2-dichloroethane)</th> <th>(PCE), (TCE)</th> <th>(vinyl chloride)</th> <th>(1,1-dichloroethene)</th> </tr> </thead> <tbody> <tr><td>28067-01</td><td>RDB-01-7-8</td><td>5/26/21</td><td>09:20</td><td>S</td><td>TM</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>* only run VOCs for listed analytes</td></tr> <tr><td>-02</td><td>RDB-03-9-10</td><td></td><td>10:08</td><td></td><td>TM</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>-03</td><td>RDB-05-10-11</td><td></td><td>12:50</td><td></td><td>TM</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>-04</td><td>RDB-06-8-9</td><td></td><td>10:50</td><td></td><td>TM</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>-05</td><td>RDB-07-9-10</td><td></td><td>12:40</td><td></td><td>TM</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>-06</td><td>RDB-08-9-10</td><td></td><td>13:30</td><td></td><td>TZ</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>-07</td><td>RDB-09-9-10</td><td></td><td>11:42</td><td></td><td>TM</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>-08</td><td>RDB-10-8-9</td><td></td><td>13:30</td><td></td><td>TZ</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>-09</td><td>RDB-11-9-10</td><td></td><td>08:40</td><td></td><td>TM</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>-10</td><td>RDB-04-8-9</td><td></td><td>14:20</td><td></td><td>TZ</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>		ALPHA Lab ID (Lab Use Only)	Sample ID	Collection				Sample Matrix	Sampler's Initials	ANALYSIS							Sample Specific Comments	Date	Time	NY Part 375 VOCs*	(1,1,1-trichloroethane)	(1,1-dichloroethane)	(cis-1,2-dichloroethane)	(PCE), (TCE)	(vinyl chloride)	(1,1-dichloroethene)	28067-01	RDB-01-7-8	5/26/21	09:20	S	TM	X								* only run VOCs for listed analytes	-02	RDB-03-9-10		10:08		TM	X									-03	RDB-05-10-11		12:50		TM	X									-04	RDB-06-8-9		10:50		TM	X									-05	RDB-07-9-10		12:40		TM	X									-06	RDB-08-9-10		13:30		TZ	X									-07	RDB-09-9-10		11:42		TM	X									-08	RDB-10-8-9		13:30		TZ	X									-09	RDB-11-9-10		08:40		TM	X									-10	RDB-04-8-9		14:20		TZ	X						
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Form No: 01-25 HC (rev. 30-Sept-2013)		Relinquished By: <div style="font-family: cursive; font-size: 1.2em;">Tyler Zorn</div>		Date/Time <div style="font-family: cursive; font-size: 1.2em;">5/26/21 15:45</div>		Received By: <div style="font-family: cursive; font-size: 1.2em;">Paul Maysella</div>		Date/Time <div style="font-family: cursive; font-size: 1.2em;">5/26/21 19:00</div>																																																																																																																																																																						

 NEW YORK CHAIN OF CUSTODY		Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page 2 of 2		Date Rec'd in Lab 5/26/21		ALPHA Job # L2128068	
Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193		Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288		Project Information Project Name: 111 Willow Ave Project Location: Brax, NY Project # 170497201 (Use Project name as Project #) <input type="checkbox"/>		Deliverables <input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input type="checkbox"/> EQulS (1 File) <input type="checkbox"/> EQulS (4 File) <input type="checkbox"/> Other		Billing Information <input type="checkbox"/> Same as Client Info PO #	
Client Information Client: Langan Address: 21 Penn Plaza, 360 W 31st St, 8th Fl, New York, NY 10011 Phone: 212-479-5400 Fax: Email: SKnoop@langan.com		Project Manager: Stuart Knoop ALPHAQuote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Rush (only if pre approved) <input type="checkbox"/>		Regulatory Requirement <input type="checkbox"/> NY TOGS <input checked="" type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:			
These samples have been previously analyzed by Alpha <input type="checkbox"/>		Other project specific requirements/comments: please also email jyanowitz@langan.com and data.management@langan.com		ANALYSIS NYC Part 375 VOCs (1,1,1-trichloroethene) (1,1-dichloroethene) (1,1-dichloroethane) (1,1,2-trichloroethene) (PCE), (TCE) (vinyl chloride)		Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)			
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials	
28068-11		TMW-11-052621		5/26/21 17:20		W		TM	
-12		FB01-052621		↓		↓		TZ	
-13		TB01-052621		↓		↓		↓	
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type		Preservative	
Form No: 01-25 HC (rev. 30-Sept-2013)		Relinquished By: Stuart Knoop		Date/Time: 5/26/21 15:45		Received By: John Mappala		Date/Time: 5/26/21 19:00	
Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)		Sample Specific Comments *only run VOCs for listed analytes		Total Bottles		5/26/21 23:43		5/26/21 23:43	



ANALYTICAL REPORT

Lab Number:	L2128455
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Stuart Knoop
Phone:	(212) 479-5400
Project Name:	111 WILLOW AVE
Project Number:	170497201
Report Date:	06/03/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2128455-01	RDB-02_8-9	SOIL	BRONX, NY	05/27/21 08:45	05/27/21
L2128455-02	RDB-12_9-10	SOIL	BRONX, NY	05/27/21 09:45	05/27/21
L2128455-03	DUP01_052721	SOIL	BRONX, NY	05/27/21 00:00	05/27/21
L2128455-04	TMW-09_052721	WATER	BRONX, NY	05/27/21 09:00	05/27/21
L2128455-05	TMW-06_052721	WATER	BRONX, NY	05/27/21 12:40	05/27/21
L2128455-06	TMW-01_052721	WATER	BRONX, NY	05/27/21 14:40	05/27/21
L2128455-07	TMW-03_052721	WATER	BRONX, NY	05/27/21 11:05	05/27/21
L2128455-08	FB01_052721	WATER	BRONX, NY	05/27/21 15:45	05/27/21
L2128455-09	TB01_052721	WATER	BRONX, NY	05/27/21 00:00	05/27/21

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

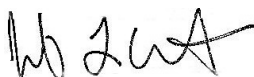
L2128455-03: The container for TS analysis was received empty. The TS result reported was specified by the client.

Dissolved Metals

L2128455-07: The dissolved results are greater than the total results. The sample containers were verified as being labeled correctly by the laboratory.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Jennifer L Clements

Title: Technical Director/Representative

Date: 06/03/21

ORGANICS

VOLATILES

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

SAMPLE RESULTS

Lab ID: L2128455-01
Client ID: RDB-02_8-9
Sample Location: BRONX, NY

Date Collected: 05/27/21 08:45
Date Received: 05/27/21
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/03/21 09:47
Analyst: MKS
Percent Solids: 78%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.1	0.16	1
Tetrachloroethene	2.0		ug/kg	0.57	0.22	1
1,1,1-Trichloroethane	ND		ug/kg	0.57	0.19	1
Vinyl chloride	ND		ug/kg	1.1	0.38	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.27	1
Trichloroethene	ND		ug/kg	0.57	0.16	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.20	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	115		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

SAMPLE RESULTS

Lab ID: L2128455-02
Client ID: RDB-12_9-10
Sample Location: BRONX, NY

Date Collected: 05/27/21 09:45
Date Received: 05/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 16:44
Analyst: JC
Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	0.96	0.14	1
Tetrachloroethene	0.46	J	ug/kg	0.48	0.19	1
1,1,1-Trichloroethane	ND		ug/kg	0.48	0.16	1
Vinyl chloride	ND		ug/kg	0.96	0.32	1
1,1-Dichloroethene	ND		ug/kg	0.96	0.23	1
Trichloroethene	ND		ug/kg	0.48	0.13	1
cis-1,2-Dichloroethene	1.1		ug/kg	0.96	0.17	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	104		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

SAMPLE RESULTS

Lab ID: L2128455-03
Client ID: DUP01_052721
Sample Location: BRONX, NY

Date Collected: 05/27/21 00:00
Date Received: 05/27/21
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/02/21 17:09
Analyst: JC
Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	0.99	0.14	1
Tetrachloroethene	0.19	J	ug/kg	0.49	0.19	1
1,1,1-Trichloroethane	ND		ug/kg	0.49	0.16	1
Vinyl chloride	ND		ug/kg	0.99	0.33	1
1,1-Dichloroethene	ND		ug/kg	0.99	0.23	1
Trichloroethene	ND		ug/kg	0.49	0.14	1
cis-1,2-Dichloroethene	0.90	J	ug/kg	0.99	0.17	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	105		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

SAMPLE RESULTS

Lab ID: L2128455-04 D
Client ID: TMW-09_052721
Sample Location: BRONX, NY

Date Collected: 05/27/21 09:00
Date Received: 05/27/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/01/21 13:27
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	27	J	ug/l	50	14.	20
Tetrachloroethene	1600		ug/l	10	3.6	20
1,1,1-Trichloroethane	54		ug/l	50	14.	20
Vinyl chloride	2.4	J	ug/l	20	1.4	20
1,1-Dichloroethene	23		ug/l	10	3.4	20
Trichloroethene	250		ug/l	10	3.5	20
cis-1,2-Dichloroethene	300		ug/l	50	14.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	92		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

SAMPLE RESULTS

Lab ID: L2128455-05 D
Client ID: TMW-06_052721
Sample Location: BRONX, NY

Date Collected: 05/27/21 12:40
Date Received: 05/27/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/01/21 13:50
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	29	J	ug/l	50	14.	20
Tetrachloroethene	1800		ug/l	10	3.6	20
1,1,1-Trichloroethane	36	J	ug/l	50	14.	20
Vinyl chloride	1.5	J	ug/l	20	1.4	20
1,1-Dichloroethene	23		ug/l	10	3.4	20
Trichloroethene	230		ug/l	10	3.5	20
cis-1,2-Dichloroethene	270		ug/l	50	14.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	113		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	93		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

SAMPLE RESULTS

Lab ID: L2128455-06
Client ID: TMW-01_052721
Sample Location: BRONX, NY

Date Collected: 05/27/21 14:40
Date Received: 05/27/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/01/21 12:17
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Tetrachloroethene	19		ug/l	0.50	0.18	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Trichloroethene	2.4		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	4.4		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	113		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	94		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

SAMPLE RESULTS

Lab ID: L2128455-07 D
Client ID: TMW-03_052721
Sample Location: BRONX, NY

Date Collected: 05/27/21 11:05
Date Received: 05/27/21
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/01/21 14:13
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	13	J	ug/l	25	7.0	10
Tetrachloroethene	1400		ug/l	5.0	1.8	10
1,1,1-Trichloroethane	43		ug/l	25	7.0	10
Vinyl chloride	2.2	J	ug/l	10	0.71	10
1,1-Dichloroethene	20		ug/l	5.0	1.7	10
Trichloroethene	200		ug/l	5.0	1.8	10
cis-1,2-Dichloroethene	230		ug/l	25	7.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	113		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	94		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

SAMPLE RESULTS

Lab ID: L2128455-08
Client ID: FB01_052721
Sample Location: BRONX, NY

Date Collected: 05/27/21 15:45
Date Received: 05/27/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/01/21 12:41
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	113		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	94		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

SAMPLE RESULTS

Lab ID: L2128455-09
Client ID: TB01_052721
Sample Location: BRONX, NY

Date Collected: 05/27/21 00:00
Date Received: 05/27/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/01/21 13:04
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	113		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	94		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 06/01/21 11:08
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04-09 Batch: WG1506689-5					
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Tetrachloroethene	ND		ug/l	0.50	0.18
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
1,1-Dichloroethene	ND		ug/l	0.50	0.17
Trichloroethene	ND		ug/l	0.50	0.18
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	113		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	94		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 06/02/21 15:54
 Analyst: KTD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02-03 Batch: WG1507012-5					
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Tetrachloroethene	ND		ug/kg	0.50	0.20
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Vinyl chloride	ND		ug/kg	1.0	0.34
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
Trichloroethene	ND		ug/kg	0.50	0.14
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	100		70-130

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 06/03/21 08:53
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1507188-5					
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Tetrachloroethene	ND		ug/kg	0.50	0.20
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Vinyl chloride	ND		ug/kg	1.0	0.34
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
Trichloroethene	ND		ug/kg	0.50	0.14
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	89		70-130
Dibromofluoromethane	117		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128455

Report Date: 06/03/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04-09 Batch: WG1506689-3 WG1506689-4								
1,1-Dichloroethane	97		98		70-130	1		20
Tetrachloroethene	88		89		70-130	1		20
1,1,1-Trichloroethane	84		86		67-130	2		20
Vinyl chloride	90		93		55-140	3		20
1,1-Dichloroethene	82		84		61-145	2		20
Trichloroethene	84		85		70-130	1		20
cis-1,2-Dichloroethene	84		86		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	112		111		70-130
Toluene-d8	113		113		70-130
4-Bromofluorobenzene	116		116		70-130
Dibromofluoromethane	95		94		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128455

Report Date: 06/03/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02-03 Batch: WG1507012-3 WG1507012-4								
1,1-Dichloroethane	110		109		70-130	1		30
Tetrachloroethene	104		103		70-130	1		30
1,1,1-Trichloroethane	100		100		70-130	0		30
Vinyl chloride	79		77		67-130	3		30
1,1-Dichloroethene	108		105		65-135	3		30
Trichloroethene	100		101		70-130	1		30
cis-1,2-Dichloroethene	104		104		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	94		98		70-130
Toluene-d8	98		99		70-130
4-Bromofluorobenzene	104		98		70-130
Dibromofluoromethane	98		98		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128455

Report Date: 06/03/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1507188-3 WG1507188-4								
1,1-Dichloroethane	81		77		70-130	5		30
Tetrachloroethene	91		90		70-130	1		30
1,1,1-Trichloroethane	99		97		70-130	2		30
Vinyl chloride	74		72		67-130	3		30
1,1-Dichloroethene	89		86		65-135	3		30
Trichloroethene	94		90		70-130	4		30
cis-1,2-Dichloroethene	92		90		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		93		70-130
Toluene-d8	94		94		70-130
4-Bromofluorobenzene	88		90		70-130
Dibromofluoromethane	107		106		70-130

Matrix Spike Analysis**Batch Quality Control****Project Name:** 111 WILLOW AVE**Project Number:** 170497201**Lab Number:** L2128455**Report Date:** 06/03/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1507188-6 WG1507188-7 QC Sample: L2128455-01 Client ID: RDB-02_8-9												
1,1-Dichloroethane	ND	104	77	74		60	53	Q	70-130	25		30
Tetrachloroethene	2.0	104	91	86		68	58	Q	70-130	29		30
1,1,1-Trichloroethane	ND	104	100	97		76	66	Q	70-130	29		30
Vinyl chloride	ND	104	75	72		60	53	Q	67-130	22		30
1,1-Dichloroethene	ND	104	92	89		69	61	Q	65-135	29		30
Trichloroethene	ND	104	90	87		67	59	Q	70-130	30		30
cis-1,2-Dichloroethene	ND	104	85	81		66	58	Q	70-130	25		30

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		99		70-130
4-Bromofluorobenzene	89		89		70-130
Dibromofluoromethane	107		107		70-130
Toluene-d8	92		93		70-130

METALS

Project Name: 111 WILLOW AVE**Lab Number:** L2128455**Project Number:** 170497201**Report Date:** 06/03/21**SAMPLE RESULTS**

Lab ID: L2128455-07

Date Collected: 05/27/21 11:05

Client ID: TMW-03_052721

Date Received: 05/27/21

Sample Location: BRONX, NY

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Iron, Total	11.2		mg/l	0.0500	0.0191	1	06/01/21 12:25	06/03/21 16:57	EPA 3005A	1,6020B	CD
Manganese, Total	2.007		mg/l	0.00100	0.00044	1	06/01/21 12:25	06/03/21 16:57	EPA 3005A	1,6020B	CD
Dissolved Metals - Mansfield Lab											
Iron, Dissolved	24.8		mg/l	0.0500	0.0191	1	06/01/21 16:25	06/03/21 17:56	EPA 3005A	1,6020B	CD
Manganese, Dissolved	2.603		mg/l	0.00100	0.00044	1	06/01/21 16:25	06/03/21 17:56	EPA 3005A	1,6020B	CD



Project Name: 111 WILLOW AVE

Lab Number: L2128455

Project Number: 170497201

Report Date: 06/03/21

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 07 Batch: WG1505996-1										
Iron, Total	ND		mg/l	0.0500	0.0191	1	06/01/21 12:25	06/03/21 16:16	1,6020B	CD
Manganese, Total	ND		mg/l	0.00100	0.00044	1	06/01/21 12:25	06/03/21 16:16	1,6020B	CD

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 07 Batch: WG1506005-1										
Iron, Dissolved	ND		mg/l	0.0500	0.0191	1	06/01/21 16:25	06/03/21 16:21	1,6020B	CD
Manganese, Dissolved	ND		mg/l	0.00100	0.00044	1	06/01/21 16:25	06/03/21 16:21	1,6020B	CD

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128455

Report Date: 06/03/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 07 Batch: WG1505996-2								
Iron, Total	105		-		80-120	-		
Manganese, Total	104		-		80-120	-		
Dissolved Metals - Mansfield Lab Associated sample(s): 07 Batch: WG1506005-2								
Iron, Dissolved	118		-		80-120	-		
Manganese, Dissolved	104		-		80-120	-		

Matrix Spike Analysis Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128455

Report Date: 06/03/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 07 QC Batch ID: WG1505996-3 QC Sample: L2128260-01 Client ID: MS Sample												
Iron, Total	0.666	1	1.74	107		-	-		75-125	-		20
Manganese, Total	0.00998	0.5	0.5440	107		-	-		75-125	-		20
Dissolved Metals - Mansfield Lab Associated sample(s): 07 QC Batch ID: WG1506005-3 WG1506005-4 QC Sample: L2126412-04 Client ID: MS Sample												
Iron, Dissolved	0.0268J	1	1.20	120		1.18	118		75-125	2		20
Manganese, Dissolved	0.02267	0.5	0.5594	107		0.5569	107		75-125	0		20

Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2128455
Report Date: 06/03/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 07 QC Batch ID: WG1505996-4 QC Sample: L2128260-01 Client ID: DUP Sample						
Iron, Total	0.666	0.669	mg/l	0		20
Manganese, Total	0.00998	0.00968	mg/l	3		20

INORGANICS & MISCELLANEOUS

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128455

Report Date: 06/03/21

SAMPLE RESULTS

Lab ID: L2128455-01

Client ID: RDB-02_8-9

Sample Location: BRONX, NY

Date Collected: 05/27/21 08:45

Date Received: 05/27/21

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.0		%	0.100	NA	1	-	05/29/21 10:57	121,2540G	RI



Project Name: 111 WILLOW AVE**Project Number:** 170497201**Lab Number:** L2128455**Report Date:** 06/03/21**SAMPLE RESULTS****Lab ID:** L2128455-02**Client ID:** RDB-12_9-10**Sample Location:** BRONX, NY**Date Collected:** 05/27/21 09:45**Date Received:** 05/27/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.0		%	0.100	NA	1	-	05/29/21 10:57	121,2540G	RI



Project Name: 111 WILLOW AVE**Project Number:** 170497201**Lab Number:** L2128455**Report Date:** 06/03/21**SAMPLE RESULTS****Lab ID:** L2128455-03**Client ID:** DUP01_052721**Sample Location:** BRONX, NY**Date Collected:** 05/27/21 00:00**Date Received:** 05/27/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.5		%	0.100	NA	1	-		121,2540G	



Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

SAMPLE RESULTS

Lab ID: L2128455-07
Client ID: TMW-03_052721
Sample Location: BRONX, NY

Date Collected: 05/27/21 11:05
Date Received: 05/27/21
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	209.		mg CaCO3/L	2.00	NA	1	-	06/01/21 10:21	121,2320B	JB
Nitrogen, Nitrate	9.71		mg/l	0.500	0.114	5	-	05/29/21 04:27	121,4500NO3-F	MR
Sulfate	93.		mg/l	50	6.8	5	06/02/21 11:27	06/02/21 11:27	1,9038	JB
Chemical Oxygen Demand	47.		mg/l	20	6.0	1	06/01/21 19:10	06/01/21 22:05	44,410.4	TL
Total Organic Carbon	2.5		mg/l	0.50	0.11	1	-	05/29/21 04:49	1,9060A	DW



Project Name: 111 WILLOW AVE

Lab Number: L2128455

Project Number: 170497201

Report Date: 06/03/21

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 07 Batch: WG1505203-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.022	1	-	05/29/21 04:49	121,4500NO3-F	MR
General Chemistry - Westborough Lab for sample(s): 07 Batch: WG1505235-1										
Total Organic Carbon	ND		mg/l	0.50	0.11	1	-	05/29/21 04:49	1,9060A	DW
General Chemistry - Westborough Lab for sample(s): 07 Batch: WG1505948-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	06/01/21 10:21	121,2320B	JB
General Chemistry - Westborough Lab for sample(s): 07 Batch: WG1506041-1										
Sulfate	ND		mg/l	10	1.4	1	06/02/21 11:27	06/02/21 11:27	1,9038	JB
General Chemistry - Westborough Lab for sample(s): 07 Batch: WG1506219-1										
Chemical Oxygen Demand	ND		mg/l	20	6.0	1	06/01/21 19:10	06/01/21 22:03	44,410.4	TL

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

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Report Date: 06/03/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 07 Batch: WG1505203-2								
Nitrogen, Nitrate	93		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 07 Batch: WG1505235-2								
Total Organic Carbon	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 07 Batch: WG1505948-2								
Alkalinity, Total	105		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 07 Batch: WG1506041-2								
Sulfate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 07 Batch: WG1506219-2								
Chemical Oxygen Demand	99		-		90-110	-		

Matrix Spike Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128455

Report Date: 06/03/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 07 QC Batch ID: WG1505203-4 QC Sample: L2128640-01 Client ID: MS Sample												
Nitrogen, Nitrate	1.31	4	5.66	109		-	-		83-113	-		17
General Chemistry - Westborough Lab Associated sample(s): 07 QC Batch ID: WG1505235-4 QC Sample: L2128729-01 Client ID: MS Sample												
Total Organic Carbon	13.	16	30	104		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 07 QC Batch ID: WG1505948-4 QC Sample: L2127542-01 Client ID: MS Sample												
Alkalinity, Total	49.9	100	154	104		-	-		86-116	-		10
General Chemistry - Westborough Lab Associated sample(s): 07 QC Batch ID: WG1506041-4 QC Sample: L2128102-01 Client ID: MS Sample												
Sulfate	14.	40	51	92		-	-		55-147	-		14
General Chemistry - Westborough Lab Associated sample(s): 07 QC Batch ID: WG1506219-3 QC Sample: L2126192-04 Client ID: MS Sample												
Chemical Oxygen Demand	ND	238	260	108		-	-		90-110	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE

Project Number: 170497201

Lab Number: L2128455

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Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 07 QC Batch ID: WG1505203-3 QC Sample: L2128640-01 Client ID: DUP Sample						
Nitrogen, Nitrate	1.31	1.33	mg/l	2		17
General Chemistry - Westborough Lab Associated sample(s): 07 QC Batch ID: WG1505235-3 QC Sample: L2128729-01 Client ID: DUP Sample						
Total Organic Carbon	13.	14	mg/l	7		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1505257-1 QC Sample: L2128455-01 Client ID: RDB-02_8-9						
Solids, Total	78.0	78.9	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 07 QC Batch ID: WG1505948-3 QC Sample: L2127542-01 Client ID: DUP Sample						
Alkalinity, Total	49.9	50.3	mg CaCO3/L	1		10
General Chemistry - Westborough Lab Associated sample(s): 07 QC Batch ID: WG1506041-3 QC Sample: L2128102-01 Client ID: DUP Sample						
Sulfate	14.	13	mg/l	7		14
General Chemistry - Westborough Lab Associated sample(s): 07 QC Batch ID: WG1506219-4 QC Sample: L2126192-04 Client ID: DUP Sample						
Chemical Oxygen Demand	ND	ND	mg/l	NC		20

Project Name: 111 WILLOW AVE**Lab Number:** L2128455**Project Number:** 170497201**Report Date:** 06/03/21**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
C	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2128455-01A	Vial MeOH preserved	C	NA		2.8	Y	Absent		NYTCL-8260HLW(14)
L2128455-01A1	Vial MeOH preserved	C	NA		2.8	Y	Absent		NYTCL-8260HLW(14)
L2128455-01A2	Vial MeOH preserved	C	NA		2.8	Y	Absent		NYTCL-8260HLW(14)
L2128455-01B	Vial water preserved	C	NA		2.8	Y	Absent	28-MAY-21 22:42	NYTCL-8260HLW(14)
L2128455-01B1	Vial water preserved	C	NA		2.8	Y	Absent	28-MAY-21 22:42	NYTCL-8260HLW(14)
L2128455-01B2	Vial water preserved	C	NA		2.8	Y	Absent	28-MAY-21 22:42	NYTCL-8260HLW(14)
L2128455-01C	Vial water preserved	C	NA		2.8	Y	Absent	28-MAY-21 22:42	NYTCL-8260HLW(14)
L2128455-01C1	Vial water preserved	C	NA		2.8	Y	Absent	28-MAY-21 22:42	NYTCL-8260HLW(14)
L2128455-01C2	Vial water preserved	C	NA		2.8	Y	Absent	28-MAY-21 22:42	NYTCL-8260HLW(14)
L2128455-01D	Plastic 2oz unpreserved for TS	C	NA		2.8	Y	Absent		TS(7)
L2128455-01D1	Plastic 2oz unpreserved for TS	C	NA		2.8	Y	Absent		TS(7)
L2128455-02A	Vial MeOH preserved	C	NA		2.8	Y	Absent		NYTCL-8260HLW(14)
L2128455-02B	Vial water preserved	C	NA		2.8	Y	Absent	28-MAY-21 22:42	NYTCL-8260HLW(14)
L2128455-02C	Vial water preserved	C	NA		2.8	Y	Absent	28-MAY-21 22:42	NYTCL-8260HLW(14)
L2128455-02D	Plastic 2oz unpreserved for TS	C	NA		2.8	Y	Absent		TS(7)
L2128455-03A	Vial MeOH preserved	C	NA		2.8	Y	Absent		NYTCL-8260HLW(14)
L2128455-03B	Vial water preserved	C	NA		2.8	Y	Absent	28-MAY-21 22:42	NYTCL-8260HLW(14)
L2128455-03C	Vial water preserved	C	NA		2.8	Y	Absent	28-MAY-21 22:42	NYTCL-8260HLW(14)
L2128455-03D	Plastic 2oz unpreserved for TS	C	NA		2.8	Y	Absent		ARCHIVE()
L2128455-04A	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-04B	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-04C	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-05A	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)

Project Name: 111 WILLOW AVE
Project Number: 170497201

Serial_No:06032119:04
Lab Number: L2128455
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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2128455-05B	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-05C	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-06A	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-06B	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-06C	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-07A	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-07B	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-07C	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-07D	Vial H2SO4 preserved	C	NA		2.8	Y	Absent		TOC-9060(28)
L2128455-07E	Vial H2SO4 preserved	C	NA		2.8	Y	Absent		TOC-9060(28)
L2128455-07F	Vial H2SO4 preserved	C	NA		2.8	Y	Absent		TOC-9060(28)
L2128455-07G	Plastic 250ml unpreserved/No Headspace	C	NA		2.8	Y	Absent		ALK-T-2320(14)
L2128455-07H	Plastic 250ml unpreserved	C	7	7	2.8	Y	Absent		SO4-9038(28),NO3-4500(2)
L2128455-07I	Plastic 250ml HNO3 preserved	C	<2	<2	2.8	Y	Absent		MN-6020S(180),FE-6020S(180)
L2128455-07J	Plastic 250ml HNO3 preserved	C	<2	<2	2.8	Y	Absent		FE-6020T(180),MN-6020T(180)
L2128455-07K	Plastic 250ml H2SO4 preserved	C	<2	<2	2.8	Y	Absent		COD-410(28)
L2128455-08A	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-08B	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-08C	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-09A	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)
L2128455-09B	Vial HCl preserved	C	NA		2.8	Y	Absent		NYTCL-8260(14)

Container Comments

L2128455-03D Received empty

Project Name: 111 WILLOW AVE
Project Number: 170497201

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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW AVE
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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW AVE
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Data Qualifiers

- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW AVE
Project Number: 170497201

Lab Number: L2128455
Report Date: 06/03/21

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 19

Published Date: 4/2/2021 1:14:23 PM

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Certification Information**The following analytes are not included in our Primary NELAP Scope of Accreditation:****Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,


3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B**The following analytes are included in our Massachusetts DEP Scope of Accreditation****Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

 NEW YORK CHAIN OF CUSTODY		Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page 1 of 1		Date Rec'd in Lab 5/28/21		ALPHA Job # L2128455					
Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193		Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288		Project Information Project Name: 111 Willow Ave Project Location: Bronx, NY Project # 170487201 (Use Project name as Project #) <input type="checkbox"/>		Deliverables <input type="checkbox"/> ASP-A <input type="checkbox"/> EQulS (1 File) <input type="checkbox"/> Other		Billing Information <input checked="" type="checkbox"/> ASP-B <input type="checkbox"/> EQulS (4 File) <input checked="" type="checkbox"/> Same as Client Info PO #					
Client Information Client: Langan Address: 21 Penn Plaza, 3rd W 35th St., 8th Fl., New York, NY 10001 Phone: 212-479-5400 Fax: Email: S.Knoop@langan.com		Project Manager: Stuart Knoop ALPHAQuote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		Regulatory Requirement <input type="checkbox"/> NY TOGS <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		<input checked="" type="checkbox"/> NY Part 375 <input type="checkbox"/> NY CP-51 <input type="checkbox"/> Other		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:					
These samples have been previously analyzed by Alpha <input type="checkbox"/> Other project specific requirements/comments: please also email to datamangement@langan.com and jyanowitz@langan.com						ANALYSIS MC Part 375 VOCs * (1,1,1-trichloroethane) (1,1-dichloroethane) (1,1,1-dichloroethane) cis-1,2-dichloroethane (PCE), (TOE), (vinyl chloride) Total/dissolved Fe, and Mn **		Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)					
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials		ANALYSIS		Sample Specific Comments	
28455-01		RDB-02-8-9		05/27/21 8:45		S		TZ		X		run MS/MSD	
-02		RDB-12-9-10		05/27/21 9:45		↓		↓		X		*only run VOCs for listed analytes	
-03		DUP01-052721		↓		↓		↓		X			
-04		TMW-09-052721		9:00		W		↓		X			
-05		TMW-06-052721		12:40		↓		↓		X		** also run for sulfate, nitrate,	
-06		TMW-01-052721		14:40		↓		↓		X		X TOC, COD, and alkalinity	
-07		TMW-03-052721		11:05		↓		↓		X			
-08		FBO1-052721		15:45		↓		↓		X			
-09		TBO1-052721		↓		↓		↓		X			
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type		Preservative		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)			
Relinquished By: TUGAN Zoran Tykhonov [Signature]		Date/Time 5/27/21 11:00 5/27/21 1:40 5/28/21 01:30		Received By: [Signature] [Signature] [Signature]		Date/Time 5/27/21 11:00 5/27/21 2:40 5/28/21 01:30							



ANALYTICAL REPORT

Lab Number:	L2140976
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Stuart Knoop
Phone:	(212) 479-5400
Project Name:	111 WILLOW AVE/767 E. 133RD ST
Project Number:	170497201
Report Date:	08/10/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2140976-01	SB-MIP03_5-7	SOIL	BRONX, NY	07/29/21 12:00	07/30/21
L2140976-02	SB-MIP08_19-20	SOIL	BRONX, NY	07/29/21 12:45	07/30/21

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

Case Narrative (continued)

Report Submission

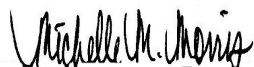
August 10, 2021: This final report includes the results of the Volatile Organics analysis performed on L2140976-02.

August 06, 2021: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Michelle M. Morris

Title: Technical Director/Representative

Date: 08/10/21

ORGANICS

VOLATILES

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

SAMPLE RESULTS

Lab ID: L2140976-01
Client ID: SB-MIP03_5-7
Sample Location: BRONX, NY

Date Collected: 07/29/21 12:00
Date Received: 07/30/21
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 08/04/21 22:20
Analyst: JC
Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	3.8	1.8	1
1,1-Dichloroethane	ND		ug/kg	0.77	0.11	1
Chloroform	ND		ug/kg	1.2	0.11	1
Carbon tetrachloride	ND		ug/kg	0.77	0.18	1
1,2-Dichloropropane	ND		ug/kg	0.77	0.10	1
Dibromochloromethane	ND		ug/kg	0.77	0.11	1
1,1,2-Trichloroethane	ND		ug/kg	0.77	0.20	1
Tetrachloroethene	1.6		ug/kg	0.38	0.15	1
Chlorobenzene	ND		ug/kg	0.38	0.10	1
Trichlorofluoromethane	ND		ug/kg	3.1	0.53	1
1,2-Dichloroethane	ND		ug/kg	0.77	0.20	1
1,1,1-Trichloroethane	ND		ug/kg	0.38	0.13	1
Bromodichloromethane	ND		ug/kg	0.38	0.08	1
trans-1,3-Dichloropropene	ND		ug/kg	0.77	0.21	1
cis-1,3-Dichloropropene	ND		ug/kg	0.38	0.12	1
1,3-Dichloropropene, Total	ND		ug/kg	0.38	0.12	1
1,1-Dichloropropene	ND		ug/kg	0.38	0.12	1
Bromoform	ND		ug/kg	3.1	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.38	0.13	1
Benzene	ND		ug/kg	0.38	0.13	1
Toluene	ND		ug/kg	0.77	0.42	1
Ethylbenzene	ND		ug/kg	0.77	0.11	1
Chloromethane	ND		ug/kg	3.1	0.72	1
Bromomethane	ND		ug/kg	1.5	0.45	1
Vinyl chloride	ND		ug/kg	0.77	0.26	1
Chloroethane	ND		ug/kg	1.5	0.35	1
1,1-Dichloroethene	ND		ug/kg	0.77	0.18	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	0.10	1

Project Name: 111 WILLOW AVE/767 E. 133RD ST**Lab Number:** L2140976**Project Number:** 170497201**Report Date:** 08/10/21**SAMPLE RESULTS**

Lab ID: L2140976-01
 Client ID: SB-MIP03_5-7
 Sample Location: BRONX, NY

Date Collected: 07/29/21 12:00
 Date Received: 07/30/21
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.38	0.10	1
1,2-Dichlorobenzene	ND		ug/kg	1.5	0.11	1
1,3-Dichlorobenzene	ND		ug/kg	1.5	0.11	1
1,4-Dichlorobenzene	ND		ug/kg	1.5	0.13	1
Methyl tert butyl ether	ND		ug/kg	1.5	0.15	1
p/m-Xylene	ND		ug/kg	1.5	0.43	1
o-Xylene	ND		ug/kg	0.77	0.22	1
Xylenes, Total	ND		ug/kg	0.77	0.22	1
cis-1,2-Dichloroethene	ND		ug/kg	0.77	0.13	1
1,2-Dichloroethene, Total	ND		ug/kg	0.77	0.10	1
Dibromomethane	ND		ug/kg	1.5	0.18	1
Styrene	ND		ug/kg	0.77	0.15	1
Dichlorodifluoromethane	ND		ug/kg	7.7	0.70	1
Acetone	ND		ug/kg	7.7	3.7	1
Carbon disulfide	ND		ug/kg	7.7	3.5	1
2-Butanone	ND		ug/kg	7.7	1.7	1
Vinyl acetate	ND		ug/kg	7.7	1.6	1
4-Methyl-2-pentanone	ND		ug/kg	7.7	0.98	1
1,2,3-Trichloropropane	ND		ug/kg	1.5	0.10	1
2-Hexanone	ND		ug/kg	7.7	0.90	1
Bromochloromethane	ND		ug/kg	1.5	0.16	1
2,2-Dichloropropane	ND		ug/kg	1.5	0.16	1
1,2-Dibromoethane	ND		ug/kg	0.77	0.21	1
1,3-Dichloropropane	ND		ug/kg	1.5	0.13	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.38	0.10	1
Bromobenzene	ND		ug/kg	1.5	0.11	1
n-Butylbenzene	ND		ug/kg	0.77	0.13	1
sec-Butylbenzene	ND		ug/kg	0.77	0.11	1
tert-Butylbenzene	ND		ug/kg	1.5	0.09	1
o-Chlorotoluene	ND		ug/kg	1.5	0.15	1
p-Chlorotoluene	ND		ug/kg	1.5	0.08	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.3	0.77	1
Hexachlorobutadiene	ND		ug/kg	3.1	0.13	1
Isopropylbenzene	ND		ug/kg	0.77	0.08	1
p-Isopropyltoluene	ND		ug/kg	0.77	0.08	1
Naphthalene	ND		ug/kg	3.1	0.50	1
Acrylonitrile	ND		ug/kg	3.1	0.88	1

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

SAMPLE RESULTS

Lab ID: L2140976-01
Client ID: SB-MIP03_5-7
Sample Location: BRONX, NY

Date Collected: 07/29/21 12:00
Date Received: 07/30/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	0.77	0.13	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.5	0.25	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.5	0.21	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.5	0.15	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.5	0.26	1
1,4-Dioxane	ND		ug/kg	61	27.	1
p-Diethylbenzene	ND		ug/kg	1.5	0.14	1
p-Ethyltoluene	ND		ug/kg	1.5	0.29	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	1.5	0.15	1
Ethyl ether	ND		ug/kg	1.5	0.26	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	3.8	1.1	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	103		70-130

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

SAMPLE RESULTS

Lab ID: L2140976-02
Client ID: SB-MIP08_19-20
Sample Location: BRONX, NY

Date Collected: 07/29/21 12:45
Date Received: 07/30/21
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 08/06/21 12:33
Analyst: JC
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.8	2.7	1
1,1-Dichloroethane	3.3		ug/kg	1.2	0.17	1
Chloroform	ND		ug/kg	1.8	0.16	1
Carbon tetrachloride	ND		ug/kg	1.2	0.27	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.14	1
Dibromochloromethane	ND		ug/kg	1.2	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.31	1
Tetrachloroethene	300		ug/kg	0.58	0.23	1
Chlorobenzene	ND		ug/kg	0.58	0.15	1
Trichlorofluoromethane	ND		ug/kg	4.7	0.81	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.30	1
1,1,1-Trichloroethane	15		ug/kg	0.58	0.19	1
Bromodichloromethane	ND		ug/kg	0.58	0.13	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.32	1
cis-1,3-Dichloropropene	ND		ug/kg	0.58	0.18	1
1,3-Dichloropropene, Total	ND		ug/kg	0.58	0.18	1
1,1-Dichloropropene	ND		ug/kg	0.58	0.18	1
Bromoform	ND		ug/kg	4.7	0.29	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.58	0.19	1
Benzene	ND		ug/kg	0.58	0.19	1
Toluene	ND		ug/kg	1.2	0.63	1
Ethylbenzene	ND		ug/kg	1.2	0.16	1
Chloromethane	ND		ug/kg	4.7	1.1	1
Bromomethane	ND		ug/kg	2.3	0.68	1
Vinyl chloride	1.2		ug/kg	1.2	0.39	1
Chloroethane	ND		ug/kg	2.3	0.53	1
1,1-Dichloroethene	6.9		ug/kg	1.2	0.28	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.16	1

Project Name: 111 WILLOW AVE/767 E. 133RD ST**Lab Number:** L2140976**Project Number:** 170497201**Report Date:** 08/10/21**SAMPLE RESULTS**

Lab ID: L2140976-02
Client ID: SB-MIP08_19-20
Sample Location: BRONX, NY

Date Collected: 07/29/21 12:45
Date Received: 07/30/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	41		ug/kg	0.58	0.16	1
1,2-Dichlorobenzene	ND		ug/kg	2.3	0.17	1
1,3-Dichlorobenzene	ND		ug/kg	2.3	0.17	1
1,4-Dichlorobenzene	ND		ug/kg	2.3	0.20	1
Methyl tert butyl ether	ND		ug/kg	2.3	0.23	1
p/m-Xylene	ND		ug/kg	2.3	0.65	1
o-Xylene	ND		ug/kg	1.2	0.34	1
Xylenes, Total	ND		ug/kg	1.2	0.34	1
cis-1,2-Dichloroethene	54		ug/kg	1.2	0.20	1
1,2-Dichloroethene, Total	54		ug/kg	1.2	0.16	1
Dibromomethane	ND		ug/kg	2.3	0.28	1
Styrene	ND		ug/kg	1.2	0.23	1
Dichlorodifluoromethane	ND		ug/kg	12	1.1	1
Acetone	ND		ug/kg	12	5.6	1
Carbon disulfide	ND		ug/kg	12	5.3	1
2-Butanone	ND		ug/kg	12	2.6	1
Vinyl acetate	ND		ug/kg	12	2.5	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.5	1
1,2,3-Trichloropropane	ND		ug/kg	2.3	0.15	1
2-Hexanone	ND		ug/kg	12	1.4	1
Bromochloromethane	ND		ug/kg	2.3	0.24	1
2,2-Dichloropropane	ND		ug/kg	2.3	0.24	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.32	1
1,3-Dichloropropane	ND		ug/kg	2.3	0.19	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.58	0.15	1
Bromobenzene	ND		ug/kg	2.3	0.17	1
n-Butylbenzene	ND		ug/kg	1.2	0.19	1
sec-Butylbenzene	ND		ug/kg	1.2	0.17	1
tert-Butylbenzene	ND		ug/kg	2.3	0.14	1
o-Chlorotoluene	ND		ug/kg	2.3	0.22	1
p-Chlorotoluene	ND		ug/kg	2.3	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.5	1.2	1
Hexachlorobutadiene	ND		ug/kg	4.7	0.20	1
Isopropylbenzene	ND		ug/kg	1.2	0.13	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.13	1
Naphthalene	ND		ug/kg	4.7	0.76	1
Acrylonitrile	ND		ug/kg	4.7	1.3	1

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

SAMPLE RESULTS

Lab ID: L2140976-02
Client ID: SB-MIP08_19-20
Sample Location: BRONX, NY

Date Collected: 07/29/21 12:45
Date Received: 07/30/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.2	0.20	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.3	0.38	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.3	0.32	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.3	0.22	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.3	0.39	1
1,4-Dioxane	ND		ug/kg	93	41.	1
p-Diethylbenzene	ND		ug/kg	2.3	0.21	1
p-Ethyltoluene	ND		ug/kg	2.3	0.45	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.3	0.22	1
Ethyl ether	ND		ug/kg	2.3	0.40	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.8	1.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	98		70-130

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 08/04/21 18:52
 Analyst: KTD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1531865-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	0.14	J	ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 08/04/21 18:52
 Analyst: KTD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1531865-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/04/21 18:52
Analyst: KTD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1531865-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	80	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	101		70-130

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 08/06/21 06:31
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02 Batch: WG1532257-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 08/06/21 06:31
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02 Batch: WG1532257-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/06/21 06:31
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02 Batch: WG1532257-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	80	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	91		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	93		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE/767 E. 133RD ST

Project Number: 170497201

Lab Number: L2140976

Report Date: 08/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1531865-3 WG1531865-4								
Methylene chloride	97		93		70-130	4		30
1,1-Dichloroethane	103		99		70-130	4		30
Chloroform	91		91		70-130	0		30
Carbon tetrachloride	98		94		70-130	4		30
1,2-Dichloropropane	99		97		70-130	2		30
Dibromochloromethane	96		94		70-130	2		30
1,1,2-Trichloroethane	100		97		70-130	3		30
Tetrachloroethene	103		97		70-130	6		30
Chlorobenzene	98		94		70-130	4		30
Trichlorofluoromethane	118		112		70-139	5		30
1,2-Dichloroethane	96		95		70-130	1		30
1,1,1-Trichloroethane	99		95		70-130	4		30
Bromodichloromethane	94		93		70-130	1		30
trans-1,3-Dichloropropene	103		100		70-130	3		30
cis-1,3-Dichloropropene	98		96		70-130	2		30
1,1-Dichloropropene	99		96		70-130	3		30
Bromoform	85		84		70-130	1		30
1,1,2,2-Tetrachloroethane	98		99		70-130	1		30
Benzene	97		93		70-130	4		30
Toluene	99		94		70-130	5		30
Ethylbenzene	101		96		70-130	5		30
Chloromethane	136	Q	126		52-130	8		30
Bromomethane	128		119		57-147	7		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1531865-3 WG1531865-4								
Vinyl chloride	133	Q	124		67-130	7		30
Chloroethane	112		110		50-151	2		30
1,1-Dichloroethene	104		99		65-135	5		30
trans-1,2-Dichloroethene	101		96		70-130	5		30
Trichloroethene	96		93		70-130	3		30
1,2-Dichlorobenzene	95		93		70-130	2		30
1,3-Dichlorobenzene	96		93		70-130	3		30
1,4-Dichlorobenzene	96		93		70-130	3		30
Methyl tert butyl ether	94		93		66-130	1		30
p/m-Xylene	100		96		70-130	4		30
o-Xylene	99		95		70-130	4		30
cis-1,2-Dichloroethene	98		95		70-130	3		30
Dibromomethane	91		90		70-130	1		30
Styrene	99		96		70-130	3		30
Dichlorodifluoromethane	213	Q	199	Q	30-146	7		30
Acetone	92		90		54-140	2		30
Carbon disulfide	104		100		59-130	4		30
2-Butanone	93		90		70-130	3		30
Vinyl acetate	109		108		70-130	1		30
4-Methyl-2-pentanone	84		82		70-130	2		30
1,2,3-Trichloropropane	93		93		68-130	0		30
2-Hexanone	91		90		70-130	1		30
Bromochloromethane	96		92		70-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE/767 E. 133RD ST

Project Number: 170497201

Lab Number: L2140976

Report Date: 08/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1531865-3 WG1531865-4								
2,2-Dichloropropane	100		94		70-130	6		30
1,2-Dibromoethane	100		96		70-130	4		30
1,3-Dichloropropane	99		95		69-130	4		30
1,1,1,2-Tetrachloroethane	98		96		70-130	2		30
Bromobenzene	92		90		70-130	2		30
n-Butylbenzene	104		100		70-130	4		30
sec-Butylbenzene	101		97		70-130	4		30
tert-Butylbenzene	100		97		70-130	3		30
o-Chlorotoluene	98		95		70-130	3		30
p-Chlorotoluene	100		96		70-130	4		30
1,2-Dibromo-3-chloropropane	82		82		68-130	0		30
Hexachlorobutadiene	98		94		67-130	4		30
Isopropylbenzene	102		99		70-130	3		30
p-Isopropyltoluene	101		96		70-130	5		30
Naphthalene	92		90		70-130	2		30
Acrylonitrile	95		94		70-130	1		30
n-Propylbenzene	101		97		70-130	4		30
1,2,3-Trichlorobenzene	95		92		70-130	3		30
1,2,4-Trichlorobenzene	99		94		70-130	5		30
1,3,5-Trimethylbenzene	100		97		70-130	3		30
1,2,4-Trimethylbenzene	99		97		70-130	2		30
1,4-Dioxane	89		90		65-136	1		30
p-Diethylbenzene	101		97		70-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE/767 E. 133RD ST

Project Number: 170497201

Lab Number: L2140976

Report Date: 08/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1531865-3 WG1531865-4								
p-Ethyltoluene	99		96		70-130	3		30
1,2,4,5-Tetramethylbenzene	99		95		70-130	4		30
Ethyl ether	103		102		67-130	1		30
trans-1,4-Dichloro-2-butene	102		100		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		98		70-130
Toluene-d8	103		102		70-130
4-Bromofluorobenzene	100		100		70-130
Dibromofluoromethane	97		98		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE/767 E. 133RD ST

Project Number: 170497201

Lab Number: L2140976

Report Date: 08/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02 Batch: WG1532257-3 WG1532257-4								
Methylene chloride	86		87		70-130	1		30
1,1-Dichloroethane	90		91		70-130	1		30
Chloroform	94		94		70-130	0		30
Carbon tetrachloride	97		97		70-130	0		30
1,2-Dichloropropane	91		93		70-130	2		30
Dibromochloromethane	105		106		70-130	1		30
1,1,2-Trichloroethane	100		101		70-130	1		30
Tetrachloroethene	110		110		70-130	0		30
Chlorobenzene	105		106		70-130	1		30
Trichlorofluoromethane	105		101		70-139	4		30
1,2-Dichloroethane	95		95		70-130	0		30
1,1,1-Trichloroethane	97		96		70-130	1		30
Bromodichloromethane	96		96		70-130	0		30
trans-1,3-Dichloropropene	100		102		70-130	2		30
cis-1,3-Dichloropropene	99		98		70-130	1		30
1,1-Dichloropropene	94		96		70-130	2		30
Bromoform	102		104		70-130	2		30
1,1,2,2-Tetrachloroethane	98		100		70-130	2		30
Benzene	93		93		70-130	0		30
Toluene	98		98		70-130	0		30
Ethylbenzene	102		102		70-130	0		30
Chloromethane	64		66		52-130	3		30
Bromomethane	95		93		57-147	2		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02 Batch: WG1532257-3 WG1532257-4								
Vinyl chloride	82		84		67-130	2		30
Chloroethane	97		95		50-151	2		30
1,1-Dichloroethene	88		90		65-135	2		30
trans-1,2-Dichloroethene	93		94		70-130	1		30
Trichloroethene	98		97		70-130	1		30
1,2-Dichlorobenzene	110		111		70-130	1		30
1,3-Dichlorobenzene	114		114		70-130	0		30
1,4-Dichlorobenzene	110		112		70-130	2		30
Methyl tert butyl ether	89		89		66-130	0		30
p/m-Xylene	107		106		70-130	1		30
o-Xylene	108		107		70-130	1		30
cis-1,2-Dichloroethene	95		97		70-130	2		30
Dibromomethane	100		100		70-130	0		30
Styrene	110		109		70-130	1		30
Dichlorodifluoromethane	62		62		30-146	0		30
Acetone	83		86		54-140	4		30
Carbon disulfide	76		77		59-130	1		30
2-Butanone	68	Q	69	Q	70-130	1		30
Vinyl acetate	84		86		70-130	2		30
4-Methyl-2-pentanone	85		88		70-130	3		30
1,2,3-Trichloropropane	96		98		68-130	2		30
2-Hexanone	83		86		70-130	4		30
Bromochloromethane	102		102		70-130	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW AVE/767 E. 133RD ST

Project Number: 170497201

Lab Number: L2140976

Report Date: 08/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02 Batch: WG1532257-3 WG1532257-4								
2,2-Dichloropropane	95		94		70-130	1		30
1,2-Dibromoethane	97		97		70-130	0		30
1,3-Dichloropropane	98		98		69-130	0		30
1,1,1,2-Tetrachloroethane	106		105		70-130	1		30
Bromobenzene	109		109		70-130	0		30
n-Butylbenzene	110		110		70-130	0		30
sec-Butylbenzene	105		106		70-130	1		30
tert-Butylbenzene	105		106		70-130	1		30
o-Chlorotoluene	83		84		70-130	1		30
p-Chlorotoluene	101		102		70-130	1		30
1,2-Dibromo-3-chloropropane	88		91		68-130	3		30
Hexachlorobutadiene	114		115		67-130	1		30
Isopropylbenzene	104		104		70-130	0		30
p-Isopropyltoluene	110		110		70-130	0		30
Naphthalene	105		108		70-130	3		30
Acrylonitrile	77		81		70-130	5		30
n-Propylbenzene	104		105		70-130	1		30
1,2,3-Trichlorobenzene	116		118		70-130	2		30
1,2,4-Trichlorobenzene	122		124		70-130	2		30
1,3,5-Trimethylbenzene	103		105		70-130	2		30
1,2,4-Trimethylbenzene	105		105		70-130	0		30
1,4-Dioxane	79		81		65-136	3		30
p-Diethylbenzene	112		113		70-130	1		30

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 111 WILLOW AVE/767 E. 133RD ST**Lab Number:** L2140976**Project Number:** 170497201**Report Date:** 08/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02 Batch: WG1532257-3 WG1532257-4								
p-Ethyltoluene	106		107		70-130	1		30
1,2,4,5-Tetramethylbenzene	111		113		70-130	2		30
Ethyl ether	88		89		67-130	1		30
trans-1,4-Dichloro-2-butene	95		97		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		95		70-130
Toluene-d8	98		98		70-130
4-Bromofluorobenzene	90		91		70-130
Dibromofluoromethane	96		96		70-130

INORGANICS & MISCELLANEOUS

Project Name: 111 WILLOW AVE/767 E. 133RD ST**Project Number:** 170497201**Lab Number:** L2140976**Report Date:** 08/10/21**SAMPLE RESULTS****Lab ID:** L2140976-01**Client ID:** SB-MIP03_5-7**Sample Location:** BRONX, NY**Date Collected:** 07/29/21 12:00**Date Received:** 07/30/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.9		%	0.100	NA	1	-	08/03/21 12:38	121,2540G	RI



Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

SAMPLE RESULTS

Lab ID: L2140976-02
Client ID: SB-MIP08_19-20
Sample Location: BRONX, NY

Date Collected: 07/29/21 12:45
Date Received: 07/30/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.3		%	0.100	NA	1	-	08/05/21 11:52	121,2540G	RI



Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2140976
Report Date: 08/10/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1530918-1 QC Sample: L2141287-01 Client ID: DUP Sample						
Solids, Total	85.4	86.5	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1531807-1 QC Sample: L2141574-01 Client ID: DUP Sample						
Solids, Total	89.8	90.5	%	1		20

Project Name: 111 WILLOW AVE/767 E. 133RD ST**Lab Number:** L2140976**Project Number:** 170497201**Report Date:** 08/10/21**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2140976-01A	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2140976-01B	Vial water preserved	A	NA		2.1	Y	Absent	30-JUL-21 23:27	NYTCL-8260HLW(14)
L2140976-01C	Vial water preserved	A	NA		2.1	Y	Absent	30-JUL-21 23:27	NYTCL-8260HLW(14)
L2140976-01D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)
L2140976-02A	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2140976-02B	Vial water preserved	A	NA		2.1	Y	Absent	30-JUL-21 23:27	NYTCL-8260HLW(14)
L2140976-02C	Vial water preserved	A	NA		2.1	Y	Absent	30-JUL-21 23:27	NYTCL-8260HLW(14)
L2140976-02D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)

Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
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Data Qualifiers

- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW AVE/767 E. 133RD ST
Project Number: 170497201

Lab Number: L2140976
Report Date: 08/10/21

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.

ID No.:17873

Facility: **Company-wide**

Revision 19

Department: **Quality Assurance**

Published Date: 4/2/2021 1:14:23 PM

Title: **Certificate/Approval Program Summary**

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B


The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

 NEW JERSEY CHAIN OF CUSTODY		Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page <u>1</u> of <u>1</u>		Date Rec'd in Lab <u>7/30/21</u>		ALPHA Job # <u>L2140976</u>				
		Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193		Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288		Project Information Project Name: <u>111 Willow Ave / 767 E 133rd St</u> Project Location: <u>BRONX, NY</u> Project # <u>170497201</u> (Use Project name as Project #) <input type="checkbox"/>		Deliverables <input type="checkbox"/> NJ Full / Reduced <input type="checkbox"/> EQuIS (1 File) <input type="checkbox"/> EQuIS (4 File) <input type="checkbox"/> Other		Billing Information <input checked="" type="checkbox"/> Same as Client Info PO #		
Client Information Client: <u>Langan DPC</u> Address: <u>360 W 31st St 8th Fl</u> <u>NY, NY</u> Phone: <u>212-479-5400</u> Fax: <u></u> Email: <u>J.Yanowitz@langan.com</u>		Project Manager: <u>Stuart Knopp</u> ALPHAQuote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		Regulatory Requirement <input type="checkbox"/> SRS Residential/Non Residential <input type="checkbox"/> SRS Impact to Groundwater <input type="checkbox"/> NJ Ground Water Quality Standards <input type="checkbox"/> NJ IGW SPLP Leachate Criteria <input type="checkbox"/> Other		Site Information Is this site impacted by Petroleum? Yes <input type="checkbox"/> Petroleum Product:						
These samples have been previously analyzed by Alpha <input type="checkbox"/>		For EPH, selection is REQUIRED: <input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2		For VOC, selection is REQUIRED: <input type="checkbox"/> 1,4-Dioxane <input type="checkbox"/> 8011		Other project specific requirements/comments: Please specify Metals or TAL.		ANALYSIS		Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)		Total Bottles
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials				
<u>40976-01</u>		<u>SB-MIP03-5-7</u>		<u>7/31/2021 12:00</u>		<u>Soil</u>		<u>FB</u>		<u>X</u>		
<u>-02</u>		<u>SB-MIP05-19-20</u>		<u>7/30/2021 12:45</u>		<u>Soil</u>		<u>FB</u>		<u>X</u>		
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type		Preservative		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)		
Relinquished By:		Date/Time		Received By:		Date/Time						
<u>Farielle Brazier</u>		<u>7/30/2021 1047</u>		<u>M. L. Kene</u>		<u>7/30/21 1047</u>						
<u>Paul Mazzella</u>		<u>7/30/21 1320</u>		<u>Paul Mazzella</u>		<u>7/30/21 1047</u>						
<u>Paul Mazzella</u>		<u>7/30/21 2202</u>		<u>Paul Mazzella</u>		<u>7/30/21 1212</u>						



ANALYTICAL REPORT

Lab Number:	L2141567
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Stuart Knoop
Phone:	(212) 479-5400
Project Name:	111 WILLOW
Project Number:	170497201
Report Date:	08/09/21

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: 111 WILLOW
Project Number: 170497201

Lab Number: L2141567
Report Date: 08/09/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2141567-01	SB-MIP10_9-10	SOIL	BRONX, NY	08/03/21 12:00	08/04/21
L2141567-02	SB-MIP10_23-24	SOIL	BRONX, NY	08/03/21 12:01	08/04/21
L2141567-03	SB-MIP07_6-7	SOIL	BRONX, NY	08/03/21 13:00	08/04/21
L2141567-04	SB-MIP07_18-19	SOIL	BRONX, NY	08/03/21 13:01	08/04/21

Project Name: 111 WILLOW
Project Number: 170497201

Lab Number: L2141567
Report Date: 08/09/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: 111 WILLOW
Project Number: 170497201

Lab Number: L2141567
Report Date: 08/09/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L2141567-04: The sample was analyzed as a High Level Methanol in order to quantitate results within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial Low Level analysis. The results of both analyses are reported. Differences were noted between the results of the analyses which have been attributed to vial discrepancies.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Cristin Walker

Title: Technical Director/Representative

Date: 08/09/21

ORGANICS

VOLATILES

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-01
 Client ID: SB-MIP10_9-10
 Sample Location: BRONX, NY

Date Collected: 08/03/21 12:00
 Date Received: 08/04/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 08/06/21 10:49
 Analyst: JC
 Percent Solids: 74%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	6.6	3.0	1
1,1-Dichloroethane	ND		ug/kg	1.3	0.19	1
Chloroform	ND		ug/kg	2.0	0.18	1
Carbon tetrachloride	ND		ug/kg	1.3	0.30	1
1,2-Dichloropropane	ND		ug/kg	1.3	0.16	1
Dibromochloromethane	ND		ug/kg	1.3	0.18	1
1,1,2-Trichloroethane	ND		ug/kg	1.3	0.35	1
Tetrachloroethene	ND		ug/kg	0.66	0.26	1
Chlorobenzene	ND		ug/kg	0.66	0.17	1
Trichlorofluoromethane	ND		ug/kg	5.3	0.92	1
1,2-Dichloroethane	ND		ug/kg	1.3	0.34	1
1,1,1-Trichloroethane	ND		ug/kg	0.66	0.22	1
Bromodichloromethane	ND		ug/kg	0.66	0.14	1
trans-1,3-Dichloropropene	ND		ug/kg	1.3	0.36	1
cis-1,3-Dichloropropene	ND		ug/kg	0.66	0.21	1
1,3-Dichloropropene, Total	ND		ug/kg	0.66	0.21	1
1,1-Dichloropropene	ND		ug/kg	0.66	0.21	1
Bromoform	ND		ug/kg	5.3	0.33	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.66	0.22	1
Benzene	ND		ug/kg	0.66	0.22	1
Toluene	ND		ug/kg	1.3	0.72	1
Ethylbenzene	ND		ug/kg	1.3	0.19	1
Chloromethane	ND		ug/kg	5.3	1.2	1
Bromomethane	ND		ug/kg	2.6	0.77	1
Vinyl chloride	ND		ug/kg	1.3	0.44	1
Chloroethane	ND		ug/kg	2.6	0.60	1
1,1-Dichloroethene	ND		ug/kg	1.3	0.32	1
trans-1,2-Dichloroethene	ND		ug/kg	2.0	0.18	1

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-01
 Client ID: SB-MIP10_9-10
 Sample Location: BRONX, NY

Date Collected: 08/03/21 12:00
 Date Received: 08/04/21
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.66	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	2.6	0.19	1
1,3-Dichlorobenzene	ND		ug/kg	2.6	0.20	1
1,4-Dichlorobenzene	ND		ug/kg	2.6	0.23	1
Methyl tert butyl ether	ND		ug/kg	2.6	0.27	1
p/m-Xylene	ND		ug/kg	2.6	0.74	1
o-Xylene	ND		ug/kg	1.3	0.39	1
Xylenes, Total	ND		ug/kg	1.3	0.39	1
cis-1,2-Dichloroethene	ND		ug/kg	1.3	0.23	1
1,2-Dichloroethene, Total	ND		ug/kg	1.3	0.18	1
Dibromomethane	ND		ug/kg	2.6	0.32	1
Styrene	ND		ug/kg	1.3	0.26	1
Dichlorodifluoromethane	ND		ug/kg	13	1.2	1
Acetone	61		ug/kg	13	6.4	1
Carbon disulfide	ND		ug/kg	13	6.0	1
2-Butanone	9.4	J	ug/kg	13	2.9	1
Vinyl acetate	ND		ug/kg	13	2.8	1
4-Methyl-2-pentanone	ND		ug/kg	13	1.7	1
1,2,3-Trichloropropane	ND		ug/kg	2.6	0.17	1
2-Hexanone	ND		ug/kg	13	1.6	1
Bromochloromethane	ND		ug/kg	2.6	0.27	1
2,2-Dichloropropane	ND		ug/kg	2.6	0.27	1
1,2-Dibromoethane	ND		ug/kg	1.3	0.37	1
1,3-Dichloropropane	ND		ug/kg	2.6	0.22	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.66	0.18	1
Bromobenzene	ND		ug/kg	2.6	0.19	1
n-Butylbenzene	ND		ug/kg	1.3	0.22	1
sec-Butylbenzene	ND		ug/kg	1.3	0.19	1
tert-Butylbenzene	ND		ug/kg	2.6	0.16	1
o-Chlorotoluene	ND		ug/kg	2.6	0.25	1
p-Chlorotoluene	ND		ug/kg	2.6	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.0	1.3	1
Hexachlorobutadiene	ND		ug/kg	5.3	0.22	1
Isopropylbenzene	ND		ug/kg	1.3	0.14	1
p-Isopropyltoluene	ND		ug/kg	1.3	0.14	1
Naphthalene	ND		ug/kg	5.3	0.86	1
Acrylonitrile	ND		ug/kg	5.3	1.5	1

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-01
 Client ID: SB-MIP10_9-10
 Sample Location: BRONX, NY

Date Collected: 08/03/21 12:00
 Date Received: 08/04/21
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.3	0.23	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.6	0.43	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.6	0.36	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.6	0.26	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.6	0.44	1
1,4-Dioxane	ND		ug/kg	110	46.	1
p-Diethylbenzene	ND		ug/kg	2.6	0.23	1
p-Ethyltoluene	ND		ug/kg	2.6	0.51	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.6	0.25	1
Ethyl ether	ND		ug/kg	2.6	0.45	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.6	1.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	99		70-130

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-02
 Client ID: SB-MIP10_23-24
 Sample Location: BRONX, NY

Date Collected: 08/03/21 12:01
 Date Received: 08/04/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 08/06/21 11:15

Analyst: JC

Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.2	1.9	1
1,1-Dichloroethane	1.4		ug/kg	0.83	0.12	1
Chloroform	0.13	J	ug/kg	1.2	0.12	1
Carbon tetrachloride	ND		ug/kg	0.83	0.19	1
1,2-Dichloropropane	ND		ug/kg	0.83	0.10	1
Dibromochloromethane	ND		ug/kg	0.83	0.12	1
1,1,2-Trichloroethane	ND		ug/kg	0.83	0.22	1
Tetrachloroethene	160		ug/kg	0.42	0.16	1
Chlorobenzene	ND		ug/kg	0.42	0.10	1
Trichlorofluoromethane	ND		ug/kg	3.3	0.58	1
1,2-Dichloroethane	ND		ug/kg	0.83	0.21	1
1,1,1-Trichloroethane	11		ug/kg	0.42	0.14	1
Bromodichloromethane	ND		ug/kg	0.42	0.09	1
trans-1,3-Dichloropropene	ND		ug/kg	0.83	0.23	1
cis-1,3-Dichloropropene	ND		ug/kg	0.42	0.13	1
1,3-Dichloropropene, Total	ND		ug/kg	0.42	0.13	1
1,1-Dichloropropene	ND		ug/kg	0.42	0.13	1
Bromoform	ND		ug/kg	3.3	0.20	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.42	0.14	1
Benzene	ND		ug/kg	0.42	0.14	1
Toluene	ND		ug/kg	0.83	0.45	1
Ethylbenzene	ND		ug/kg	0.83	0.12	1
Chloromethane	ND		ug/kg	3.3	0.77	1
Bromomethane	ND		ug/kg	1.7	0.48	1
Vinyl chloride	ND		ug/kg	0.83	0.28	1
Chloroethane	ND		ug/kg	1.7	0.38	1
1,1-Dichloroethene	3.0		ug/kg	0.83	0.20	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	0.11	1

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-02
 Client ID: SB-MIP10_23-24
 Sample Location: BRONX, NY

Date Collected: 08/03/21 12:01
 Date Received: 08/04/21
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	22		ug/kg	0.42	0.11	1
1,2-Dichlorobenzene	ND		ug/kg	1.7	0.12	1
1,3-Dichlorobenzene	ND		ug/kg	1.7	0.12	1
1,4-Dichlorobenzene	ND		ug/kg	1.7	0.14	1
Methyl tert butyl ether	ND		ug/kg	1.7	0.17	1
p/m-Xylene	ND		ug/kg	1.7	0.46	1
o-Xylene	ND		ug/kg	0.83	0.24	1
Xylenes, Total	ND		ug/kg	0.83	0.24	1
cis-1,2-Dichloroethene	42		ug/kg	0.83	0.14	1
1,2-Dichloroethene, Total	42		ug/kg	0.83	0.11	1
Dibromomethane	ND		ug/kg	1.7	0.20	1
Styrene	ND		ug/kg	0.83	0.16	1
Dichlorodifluoromethane	ND		ug/kg	8.3	0.76	1
Acetone	ND		ug/kg	8.3	4.0	1
Carbon disulfide	ND		ug/kg	8.3	3.8	1
2-Butanone	ND		ug/kg	8.3	1.8	1
Vinyl acetate	ND		ug/kg	8.3	1.8	1
4-Methyl-2-pentanone	ND		ug/kg	8.3	1.1	1
1,2,3-Trichloropropane	ND		ug/kg	1.7	0.10	1
2-Hexanone	ND		ug/kg	8.3	0.98	1
Bromochloromethane	ND		ug/kg	1.7	0.17	1
2,2-Dichloropropane	ND		ug/kg	1.7	0.17	1
1,2-Dibromoethane	ND		ug/kg	0.83	0.23	1
1,3-Dichloropropane	ND		ug/kg	1.7	0.14	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.42	0.11	1
Bromobenzene	ND		ug/kg	1.7	0.12	1
n-Butylbenzene	ND		ug/kg	0.83	0.14	1
sec-Butylbenzene	ND		ug/kg	0.83	0.12	1
tert-Butylbenzene	ND		ug/kg	1.7	0.10	1
o-Chlorotoluene	ND		ug/kg	1.7	0.16	1
p-Chlorotoluene	ND		ug/kg	1.7	0.09	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.5	0.83	1
Hexachlorobutadiene	ND		ug/kg	3.3	0.14	1
Isopropylbenzene	ND		ug/kg	0.83	0.09	1
p-Isopropyltoluene	ND		ug/kg	0.83	0.09	1
Naphthalene	ND		ug/kg	3.3	0.54	1
Acrylonitrile	ND		ug/kg	3.3	0.96	1

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-02
 Client ID: SB-MIP10_23-24
 Sample Location: BRONX, NY

Date Collected: 08/03/21 12:01
 Date Received: 08/04/21
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	0.83	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.7	0.27	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.7	0.23	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.7	0.16	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.7	0.28	1
1,4-Dioxane	ND		ug/kg	66	29.	1
p-Diethylbenzene	ND		ug/kg	1.7	0.15	1
p-Ethyltoluene	ND		ug/kg	1.7	0.32	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	1.7	0.16	1
Ethyl ether	ND		ug/kg	1.7	0.28	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.2	1.2	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	98		70-130

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-03
 Client ID: SB-MIP07_6-7
 Sample Location: BRONX, NY

Date Collected: 08/03/21 13:00
 Date Received: 08/04/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 08/06/21 11:41
 Analyst: JC
 Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	9.6	4.4	1
1,1-Dichloroethane	ND		ug/kg	1.9	0.28	1
Chloroform	ND		ug/kg	2.9	0.27	1
Carbon tetrachloride	ND		ug/kg	1.9	0.44	1
1,2-Dichloropropane	ND		ug/kg	1.9	0.24	1
Dibromochloromethane	ND		ug/kg	1.9	0.27	1
1,1,2-Trichloroethane	ND		ug/kg	1.9	0.51	1
Tetrachloroethene	ND		ug/kg	0.96	0.38	1
Chlorobenzene	ND		ug/kg	0.96	0.24	1
Trichlorofluoromethane	ND		ug/kg	7.7	1.3	1
1,2-Dichloroethane	ND		ug/kg	1.9	0.49	1
1,1,1-Trichloroethane	ND		ug/kg	0.96	0.32	1
Bromodichloromethane	ND		ug/kg	0.96	0.21	1
trans-1,3-Dichloropropene	ND		ug/kg	1.9	0.52	1
cis-1,3-Dichloropropene	ND		ug/kg	0.96	0.30	1
1,3-Dichloropropene, Total	ND		ug/kg	0.96	0.30	1
1,1-Dichloropropene	ND		ug/kg	0.96	0.30	1
Bromoform	ND		ug/kg	7.7	0.47	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.96	0.32	1
Benzene	ND		ug/kg	0.96	0.32	1
Toluene	ND		ug/kg	1.9	1.0	1
Ethylbenzene	ND		ug/kg	1.9	0.27	1
Chloromethane	ND		ug/kg	7.7	1.8	1
Bromomethane	ND		ug/kg	3.8	1.1	1
Vinyl chloride	2.6		ug/kg	1.9	0.64	1
Chloroethane	ND		ug/kg	3.8	0.87	1
1,1-Dichloroethene	ND		ug/kg	1.9	0.46	1
trans-1,2-Dichloroethene	ND		ug/kg	2.9	0.26	1

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-03

Date Collected: 08/03/21 13:00

Client ID: SB-MIP07_6-7

Date Received: 08/04/21

Sample Location: BRONX, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.96	0.26	1
1,2-Dichlorobenzene	ND		ug/kg	3.8	0.28	1
1,3-Dichlorobenzene	ND		ug/kg	3.8	0.28	1
1,4-Dichlorobenzene	ND		ug/kg	3.8	0.33	1
Methyl tert butyl ether	ND		ug/kg	3.8	0.39	1
p/m-Xylene	ND		ug/kg	3.8	1.1	1
o-Xylene	ND		ug/kg	1.9	0.56	1
Xylenes, Total	ND		ug/kg	1.9	0.56	1
cis-1,2-Dichloroethene	0.38	J	ug/kg	1.9	0.34	1
1,2-Dichloroethene, Total	0.38	J	ug/kg	1.9	0.26	1
Dibromomethane	ND		ug/kg	3.8	0.46	1
Styrene	ND		ug/kg	1.9	0.38	1
Dichlorodifluoromethane	ND		ug/kg	19	1.8	1
Acetone	190		ug/kg	19	9.2	1
Carbon disulfide	ND		ug/kg	19	8.8	1
2-Butanone	28		ug/kg	19	4.3	1
Vinyl acetate	ND		ug/kg	19	4.1	1
4-Methyl-2-pentanone	ND		ug/kg	19	2.5	1
1,2,3-Trichloropropane	ND		ug/kg	3.8	0.24	1
2-Hexanone	ND		ug/kg	19	2.3	1
Bromochloromethane	ND		ug/kg	3.8	0.39	1
2,2-Dichloropropane	ND		ug/kg	3.8	0.39	1
1,2-Dibromoethane	ND		ug/kg	1.9	0.54	1
1,3-Dichloropropane	ND		ug/kg	3.8	0.32	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.96	0.25	1
Bromobenzene	ND		ug/kg	3.8	0.28	1
n-Butylbenzene	ND		ug/kg	1.9	0.32	1
sec-Butylbenzene	ND		ug/kg	1.9	0.28	1
tert-Butylbenzene	ND		ug/kg	3.8	0.23	1
o-Chlorotoluene	ND		ug/kg	3.8	0.37	1
p-Chlorotoluene	ND		ug/kg	3.8	0.21	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.8	1.9	1
Hexachlorobutadiene	ND		ug/kg	7.7	0.32	1
Isopropylbenzene	ND		ug/kg	1.9	0.21	1
p-Isopropyltoluene	ND		ug/kg	1.9	0.21	1
Naphthalene	ND		ug/kg	7.7	1.2	1
Acrylonitrile	ND		ug/kg	7.7	2.2	1

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-03

Date Collected: 08/03/21 13:00

Client ID: SB-MIP07_6-7

Date Received: 08/04/21

Sample Location: BRONX, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.9	0.33	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.8	0.62	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.8	0.52	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.8	0.37	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.8	0.64	1
1,4-Dioxane	ND		ug/kg	150	68.	1
p-Diethylbenzene	ND		ug/kg	3.8	0.34	1
p-Ethyltoluene	ND		ug/kg	3.8	0.74	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.8	0.37	1
Ethyl ether	ND		ug/kg	3.8	0.66	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	9.6	2.7	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	100		70-130

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-04
 Client ID: SB-MIP07_18-19
 Sample Location: BRONX, NY

Date Collected: 08/03/21 13:01
 Date Received: 08/04/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 08/06/21 12:07
 Analyst: JC
 Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.8	2.2	1
1,1-Dichloroethane	2.7		ug/kg	0.97	0.14	1
Chloroform	ND		ug/kg	1.4	0.14	1
Carbon tetrachloride	ND		ug/kg	0.97	0.22	1
1,2-Dichloropropane	ND		ug/kg	0.97	0.12	1
Dibromochloromethane	ND		ug/kg	0.97	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	0.97	0.26	1
Tetrachloroethene	310	E	ug/kg	0.48	0.19	1
Chlorobenzene	ND		ug/kg	0.48	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.9	0.67	1
1,2-Dichloroethane	ND		ug/kg	0.97	0.25	1
1,1,1-Trichloroethane	8.6		ug/kg	0.48	0.16	1
Bromodichloromethane	ND		ug/kg	0.48	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.97	0.26	1
cis-1,3-Dichloropropene	ND		ug/kg	0.48	0.15	1
1,3-Dichloropropene, Total	ND		ug/kg	0.48	0.15	1
1,1-Dichloropropene	ND		ug/kg	0.48	0.15	1
Bromoform	ND		ug/kg	3.9	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.48	0.16	1
Benzene	ND		ug/kg	0.48	0.16	1
Toluene	ND		ug/kg	0.97	0.52	1
Ethylbenzene	ND		ug/kg	0.97	0.14	1
Chloromethane	ND		ug/kg	3.9	0.90	1
Bromomethane	ND		ug/kg	1.9	0.56	1
Vinyl chloride	0.39	J	ug/kg	0.97	0.32	1
Chloroethane	ND		ug/kg	1.9	0.44	1
1,1-Dichloroethene	3.6		ug/kg	0.97	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.13	1

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-04
 Client ID: SB-MIP07_18-19
 Sample Location: BRONX, NY

Date Collected: 08/03/21 13:01
 Date Received: 08/04/21
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	35		ug/kg	0.48	0.13	1
1,2-Dichlorobenzene	0.30	J	ug/kg	1.9	0.14	1
1,3-Dichlorobenzene	ND		ug/kg	1.9	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	1.9	0.16	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.19	1
p/m-Xylene	ND		ug/kg	1.9	0.54	1
o-Xylene	ND		ug/kg	0.97	0.28	1
Xylenes, Total	ND		ug/kg	0.97	0.28	1
cis-1,2-Dichloroethene	39		ug/kg	0.97	0.17	1
1,2-Dichloroethene, Total	39		ug/kg	0.97	0.13	1
Dibromomethane	ND		ug/kg	1.9	0.23	1
Styrene	ND		ug/kg	0.97	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.7	0.88	1
Acetone	ND		ug/kg	9.7	4.6	1
Carbon disulfide	ND		ug/kg	9.7	4.4	1
2-Butanone	ND		ug/kg	9.7	2.1	1
Vinyl acetate	ND		ug/kg	9.7	2.1	1
4-Methyl-2-pentanone	ND		ug/kg	9.7	1.2	1
1,2,3-Trichloropropane	ND		ug/kg	1.9	0.12	1
2-Hexanone	ND		ug/kg	9.7	1.1	1
Bromochloromethane	ND		ug/kg	1.9	0.20	1
2,2-Dichloropropane	ND		ug/kg	1.9	0.20	1
1,2-Dibromoethane	ND		ug/kg	0.97	0.27	1
1,3-Dichloropropane	ND		ug/kg	1.9	0.16	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.48	0.13	1
Bromobenzene	ND		ug/kg	1.9	0.14	1
n-Butylbenzene	ND		ug/kg	0.97	0.16	1
sec-Butylbenzene	ND		ug/kg	0.97	0.14	1
tert-Butylbenzene	ND		ug/kg	1.9	0.11	1
o-Chlorotoluene	ND		ug/kg	1.9	0.18	1
p-Chlorotoluene	ND		ug/kg	1.9	0.10	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.9	0.96	1
Hexachlorobutadiene	ND		ug/kg	3.9	0.16	1
Isopropylbenzene	ND		ug/kg	0.97	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.97	0.10	1
Naphthalene	ND		ug/kg	3.9	0.63	1
Acrylonitrile	ND		ug/kg	3.9	1.1	1

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-04

Date Collected: 08/03/21 13:01

Client ID: SB-MIP07_18-19

Date Received: 08/04/21

Sample Location: BRONX, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	0.97	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.9	0.31	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.9	0.26	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.9	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.9	0.32	1
1,4-Dioxane	ND		ug/kg	77	34.	1
p-Diethylbenzene	ND		ug/kg	1.9	0.17	1
p-Ethyltoluene	ND		ug/kg	1.9	0.37	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	1.9	0.18	1
Ethyl ether	ND		ug/kg	1.9	0.33	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.8	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	95		70-130

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-04
 Client ID: SB-MIP07_18-19
 Sample Location: BRONX, NY

Date Collected: 08/03/21 13:01
 Date Received: 08/04/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 08/07/21 11:34
 Analyst: AJK
 Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Methylene chloride	ND		ug/kg	280	130	1
1,1-Dichloroethane	ND		ug/kg	57	8.2	1
Chloroform	8.6	J	ug/kg	85	8.0	1
Carbon tetrachloride	ND		ug/kg	57	13.	1
1,2-Dichloropropane	ND		ug/kg	57	7.1	1
Dibromochloromethane	ND		ug/kg	57	8.0	1
1,1,2-Trichloroethane	ND		ug/kg	57	15.	1
Tetrachloroethene	1000		ug/kg	28	11.	1
Chlorobenzene	ND		ug/kg	28	7.2	1
Trichlorofluoromethane	ND		ug/kg	230	40.	1
1,2-Dichloroethane	ND		ug/kg	57	15.	1
1,1,1-Trichloroethane	23	J	ug/kg	28	9.5	1
Bromodichloromethane	ND		ug/kg	28	6.2	1
trans-1,3-Dichloropropene	ND		ug/kg	57	16.	1
cis-1,3-Dichloropropene	ND		ug/kg	28	9.0	1
1,3-Dichloropropene, Total	ND		ug/kg	28	9.0	1
1,1-Dichloropropene	ND		ug/kg	28	9.0	1
Bromoform	ND		ug/kg	230	14.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	28	9.4	1
Benzene	ND		ug/kg	28	9.4	1
Toluene	ND		ug/kg	57	31.	1
Ethylbenzene	ND		ug/kg	57	8.0	1
Chloromethane	ND		ug/kg	230	53.	1
Bromomethane	ND		ug/kg	110	33.	1
Vinyl chloride	ND		ug/kg	57	19.	1
Chloroethane	ND		ug/kg	110	26.	1
1,1-Dichloroethene	ND		ug/kg	57	14.	1
trans-1,2-Dichloroethene	ND		ug/kg	85	7.8	1

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-04
 Client ID: SB-MIP07_18-19
 Sample Location: BRONX, NY

Date Collected: 08/03/21 13:01
 Date Received: 08/04/21
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Trichloroethene	99		ug/kg	28	7.8	1
1,2-Dichlorobenzene	ND		ug/kg	110	8.2	1
1,3-Dichlorobenzene	ND		ug/kg	110	8.4	1
1,4-Dichlorobenzene	ND		ug/kg	110	9.7	1
Methyl tert butyl ether	ND		ug/kg	110	11.	1
p/m-Xylene	ND		ug/kg	110	32.	1
o-Xylene	ND		ug/kg	57	16.	1
Xylenes, Total	ND		ug/kg	57	16.	1
cis-1,2-Dichloroethene	89		ug/kg	57	10.	1
1,2-Dichloroethene, Total	89		ug/kg	57	7.8	1
Dibromomethane	ND		ug/kg	110	14.	1
Styrene	ND		ug/kg	57	11.	1
Dichlorodifluoromethane	ND		ug/kg	570	52.	1
Acetone	ND		ug/kg	570	270	1
Carbon disulfide	ND		ug/kg	570	260	1
2-Butanone	ND		ug/kg	570	130	1
Vinyl acetate	ND		ug/kg	570	120	1
4-Methyl-2-pentanone	ND		ug/kg	570	73.	1
1,2,3-Trichloropropane	ND		ug/kg	110	7.2	1
2-Hexanone	ND		ug/kg	570	67.	1
Bromochloromethane	ND		ug/kg	110	12.	1
2,2-Dichloropropane	ND		ug/kg	110	12.	1
1,2-Dibromoethane	ND		ug/kg	57	16.	1
1,3-Dichloropropane	ND		ug/kg	110	9.5	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	28	7.5	1
Bromobenzene	ND		ug/kg	110	8.2	1
n-Butylbenzene	ND		ug/kg	57	9.5	1
sec-Butylbenzene	ND		ug/kg	57	8.3	1
tert-Butylbenzene	ND		ug/kg	110	6.7	1
o-Chlorotoluene	ND		ug/kg	110	11.	1
p-Chlorotoluene	ND		ug/kg	110	6.2	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	170	57.	1
Hexachlorobutadiene	ND		ug/kg	230	9.6	1
Isopropylbenzene	ND		ug/kg	57	6.2	1
p-Isopropyltoluene	ND		ug/kg	57	6.2	1
Naphthalene	ND		ug/kg	230	37.	1
Acrylonitrile	ND		ug/kg	230	66.	1

Project Name: 111 WILLOW

Lab Number: L2141567

Project Number: 170497201

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-04

Date Collected: 08/03/21 13:01

Client ID: SB-MIP07_18-19

Date Received: 08/04/21

Sample Location: BRONX, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
n-Propylbenzene	ND		ug/kg	57	9.7	1
1,2,3-Trichlorobenzene	ND		ug/kg	110	18.	1
1,2,4-Trichlorobenzene	ND		ug/kg	110	15.	1
1,3,5-Trimethylbenzene	ND		ug/kg	110	11.	1
1,2,4-Trimethylbenzene	ND		ug/kg	110	19.	1
1,4-Dioxane	ND		ug/kg	4600	2000	1
p-Diethylbenzene	ND		ug/kg	110	10.	1
p-Ethyltoluene	ND		ug/kg	110	22.	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	110	11.	1
Ethyl ether	ND		ug/kg	110	19.	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	280	81.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	96		70-130

Project Name: 111 WILLOW
Project Number: 170497201

Lab Number: L2141567
Report Date: 08/09/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 08/06/21 06:31
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-04 Batch: WG1532257-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 111 WILLOW
Project Number: 170497201

Lab Number: L2141567
Report Date: 08/09/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 08/06/21 06:31
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-04 Batch: WG1532257-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 111 WILLOW
Project Number: 170497201

Lab Number: L2141567
Report Date: 08/09/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/06/21 06:31
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-04 Batch: WG1532257-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	80	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	91		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	93		70-130

Project Name: 111 WILLOW
Project Number: 170497201

Lab Number: L2141567
Report Date: 08/09/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 08/07/21 09:24
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 04 Batch: WG1532784-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
1,2-Dichloropropane	ND		ug/kg	50	6.2
Dibromochloromethane	ND		ug/kg	50	7.0
1,1,2-Trichloroethane	ND		ug/kg	50	13.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
Trichlorofluoromethane	ND		ug/kg	200	35.
1,2-Dichloroethane	ND		ug/kg	50	13.
1,1,1-Trichloroethane	ND		ug/kg	25	8.4
Bromodichloromethane	ND		ug/kg	25	5.4
trans-1,3-Dichloropropene	ND		ug/kg	50	14.
cis-1,3-Dichloropropene	ND		ug/kg	25	7.9
1,3-Dichloropropene, Total	ND		ug/kg	25	7.9
1,1-Dichloropropene	ND		ug/kg	25	8.0
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	8.3
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	ND		ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8

Project Name: 111 WILLOW
Project Number: 170497201

Lab Number: L2141567
Report Date: 08/09/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/07/21 09:24
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 04 Batch: WG1532784-5					
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8
Dibromomethane	ND		ug/kg	100	12.
Styrene	ND		ug/kg	50	9.8
Dichlorodifluoromethane	ND		ug/kg	500	46.
Acetone	ND		ug/kg	500	240
Carbon disulfide	ND		ug/kg	500	230
2-Butanone	ND		ug/kg	500	110
Vinyl acetate	ND		ug/kg	500	110
4-Methyl-2-pentanone	ND		ug/kg	500	64.
1,2,3-Trichloropropane	ND		ug/kg	100	6.4
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
2,2-Dichloropropane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,3-Dichloropropane	ND		ug/kg	100	8.4
1,1,1,2-Tetrachloroethane	ND		ug/kg	25	6.6
Bromobenzene	ND		ug/kg	100	7.2
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
o-Chlorotoluene	ND		ug/kg	100	9.6

Project Name: 111 WILLOW
Project Number: 170497201

Lab Number: L2141567
Report Date: 08/09/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/07/21 09:24
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 04 Batch: WG1532784-5					
p-Chlorotoluene	ND		ug/kg	100	5.4
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Hexachlorobutadiene	ND		ug/kg	200	8.4
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	ND		ug/kg	200	32.
Acrylonitrile	ND		ug/kg	200	58.
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.
1,4-Dioxane	ND		ug/kg	4000	1800
p-Diethylbenzene	ND		ug/kg	100	8.8
p-Ethyltoluene	ND		ug/kg	100	19.
1,2,4,5-Tetramethylbenzene	ND		ug/kg	100	9.6
Ethyl ether	ND		ug/kg	100	17.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	71.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	95		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW

Project Number: 170497201

Lab Number: L2141567

Report Date: 08/09/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-04 Batch: WG1532257-3 WG1532257-4								
Methylene chloride	86		87		70-130	1		30
1,1-Dichloroethane	90		91		70-130	1		30
Chloroform	94		94		70-130	0		30
Carbon tetrachloride	97		97		70-130	0		30
1,2-Dichloropropane	91		93		70-130	2		30
Dibromochloromethane	105		106		70-130	1		30
1,1,2-Trichloroethane	100		101		70-130	1		30
Tetrachloroethene	110		110		70-130	0		30
Chlorobenzene	105		106		70-130	1		30
Trichlorofluoromethane	105		101		70-139	4		30
1,2-Dichloroethane	95		95		70-130	0		30
1,1,1-Trichloroethane	97		96		70-130	1		30
Bromodichloromethane	96		96		70-130	0		30
trans-1,3-Dichloropropene	100		102		70-130	2		30
cis-1,3-Dichloropropene	99		98		70-130	1		30
1,1-Dichloropropene	94		96		70-130	2		30
Bromoform	102		104		70-130	2		30
1,1,2,2-Tetrachloroethane	98		100		70-130	2		30
Benzene	93		93		70-130	0		30
Toluene	98		98		70-130	0		30
Ethylbenzene	102		102		70-130	0		30
Chloromethane	64		66		52-130	3		30
Bromomethane	95		93		57-147	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW

Project Number: 170497201

Lab Number: L2141567

Report Date: 08/09/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-04 Batch: WG1532257-3 WG1532257-4								
Vinyl chloride	82		84		67-130	2		30
Chloroethane	97		95		50-151	2		30
1,1-Dichloroethene	88		90		65-135	2		30
trans-1,2-Dichloroethene	93		94		70-130	1		30
Trichloroethene	98		97		70-130	1		30
1,2-Dichlorobenzene	110		111		70-130	1		30
1,3-Dichlorobenzene	114		114		70-130	0		30
1,4-Dichlorobenzene	110		112		70-130	2		30
Methyl tert butyl ether	89		89		66-130	0		30
p/m-Xylene	107		106		70-130	1		30
o-Xylene	108		107		70-130	1		30
cis-1,2-Dichloroethene	95		97		70-130	2		30
Dibromomethane	100		100		70-130	0		30
Styrene	110		109		70-130	1		30
Dichlorodifluoromethane	62		62		30-146	0		30
Acetone	83		86		54-140	4		30
Carbon disulfide	76		77		59-130	1		30
2-Butanone	68	Q	69	Q	70-130	1		30
Vinyl acetate	84		86		70-130	2		30
4-Methyl-2-pentanone	85		88		70-130	3		30
1,2,3-Trichloropropane	96		98		68-130	2		30
2-Hexanone	83		86		70-130	4		30
Bromochloromethane	102		102		70-130	0		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 111 WILLOW

Project Number: 170497201

Lab Number: L2141567

Report Date: 08/09/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-04 Batch: WG1532257-3 WG1532257-4								
2,2-Dichloropropane	95		94		70-130	1		30
1,2-Dibromoethane	97		97		70-130	0		30
1,3-Dichloropropane	98		98		69-130	0		30
1,1,1,2-Tetrachloroethane	106		105		70-130	1		30
Bromobenzene	109		109		70-130	0		30
n-Butylbenzene	110		110		70-130	0		30
sec-Butylbenzene	105		106		70-130	1		30
tert-Butylbenzene	105		106		70-130	1		30
o-Chlorotoluene	83		84		70-130	1		30
p-Chlorotoluene	101		102		70-130	1		30
1,2-Dibromo-3-chloropropane	88		91		68-130	3		30
Hexachlorobutadiene	114		115		67-130	1		30
Isopropylbenzene	104		104		70-130	0		30
p-Isopropyltoluene	110		110		70-130	0		30
Naphthalene	105		108		70-130	3		30
Acrylonitrile	77		81		70-130	5		30
n-Propylbenzene	104		105		70-130	1		30
1,2,3-Trichlorobenzene	116		118		70-130	2		30
1,2,4-Trichlorobenzene	122		124		70-130	2		30
1,3,5-Trimethylbenzene	103		105		70-130	2		30
1,2,4-Trimethylbenzene	105		105		70-130	0		30
1,4-Dioxane	79		81		65-136	3		30
p-Diethylbenzene	112		113		70-130	1		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 111 WILLOW

Project Number: 170497201

Lab Number: L2141567

Report Date: 08/09/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-04 Batch: WG1532257-3 WG1532257-4								
p-Ethyltoluene	106		107		70-130	1		30
1,2,4,5-Tetramethylbenzene	111		113		70-130	2		30
Ethyl ether	88		89		67-130	1		30
trans-1,4-Dichloro-2-butene	95		97		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		95		70-130
Toluene-d8	98		98		70-130
4-Bromofluorobenzene	90		91		70-130
Dibromofluoromethane	96		96		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW

Project Number: 170497201

Lab Number: L2141567

Report Date: 08/09/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 04 Batch: WG1532784-3 WG1532784-4								
Methylene chloride	84		81		70-130	4		30
1,1-Dichloroethane	90		87		70-130	3		30
Chloroform	88		90		70-130	2		30
Carbon tetrachloride	101		96		70-130	5		30
1,2-Dichloropropane	90		88		70-130	2		30
Dibromochloromethane	106		105		70-130	1		30
1,1,2-Trichloroethane	99		99		70-130	0		30
Tetrachloroethene	110		104		70-130	6		30
Chlorobenzene	103		99		70-130	4		30
Trichlorofluoromethane	119		108		70-139	10		30
1,2-Dichloroethane	96		94		70-130	2		30
1,1,1-Trichloroethane	98		94		70-130	4		30
Bromodichloromethane	97		94		70-130	3		30
trans-1,3-Dichloropropene	98		98		70-130	0		30
cis-1,3-Dichloropropene	97		95		70-130	2		30
1,1-Dichloropropene	97		92		70-130	5		30
Bromoform	107		107		70-130	0		30
1,1,2,2-Tetrachloroethane	100		100		70-130	0		30
Benzene	92		88		70-130	4		30
Toluene	95		92		70-130	3		30
Ethylbenzene	101		97		70-130	4		30
Chloromethane	66		64		52-130	3		30
Bromomethane	106		98		57-147	8		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW

Project Number: 170497201

Lab Number: L2141567

Report Date: 08/09/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 04 Batch: WG1532784-3 WG1532784-4								
Vinyl chloride	88		84		67-130	5		30
Chloroethane	110		101		50-151	9		30
1,1-Dichloroethene	91		87		65-135	4		30
trans-1,2-Dichloroethene	94		89		70-130	5		30
Trichloroethene	98		94		70-130	4		30
1,2-Dichlorobenzene	110		107		70-130	3		30
1,3-Dichlorobenzene	113		109		70-130	4		30
1,4-Dichlorobenzene	110		106		70-130	4		30
Methyl tert butyl ether	87		87		66-130	0		30
p/m-Xylene	106		101		70-130	5		30
o-Xylene	106		103		70-130	3		30
cis-1,2-Dichloroethene	94		90		70-130	4		30
Dibromomethane	98		98		70-130	0		30
Styrene	108		105		70-130	3		30
Dichlorodifluoromethane	64		62		30-146	3		30
Acetone	89		92		54-140	3		30
Carbon disulfide	79		75		59-130	5		30
2-Butanone	63	Q	66	Q	70-130	5		30
Vinyl acetate	85		85		70-130	0		30
4-Methyl-2-pentanone	89		90		70-130	1		30
1,2,3-Trichloropropane	99		100		68-130	1		30
2-Hexanone	86		90		70-130	5		30
Bromochloromethane	100		98		70-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 111 WILLOW

Project Number: 170497201

Lab Number: L2141567

Report Date: 08/09/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 04 Batch: WG1532784-3 WG1532784-4								
2,2-Dichloropropane	97		92		70-130	5		30
1,2-Dibromoethane	95		94		70-130	1		30
1,3-Dichloropropane	96		96		69-130	0		30
1,1,1,2-Tetrachloroethane	106		102		70-130	4		30
Bromobenzene	105		104		70-130	1		30
n-Butylbenzene	110		106		70-130	4		30
sec-Butylbenzene	106		102		70-130	4		30
tert-Butylbenzene	105		101		70-130	4		30
o-Chlorotoluene	99		99		70-130	0		30
p-Chlorotoluene	99		96		70-130	3		30
1,2-Dibromo-3-chloropropane	94		94		68-130	0		30
Hexachlorobutadiene	109		105		67-130	4		30
Isopropylbenzene	102		99		70-130	3		30
p-Isopropyltoluene	110		107		70-130	3		30
Naphthalene	105		106		70-130	1		30
Acrylonitrile	80		79		70-130	1		30
n-Propylbenzene	103		100		70-130	3		30
1,2,3-Trichlorobenzene	115		114		70-130	1		30
1,2,4-Trichlorobenzene	119		116		70-130	3		30
1,3,5-Trimethylbenzene	103		99		70-130	4		30
1,2,4-Trimethylbenzene	104		100		70-130	4		30
1,4-Dioxane	91		94		65-136	3		30
p-Diethylbenzene	113		108		70-130	5		30

Lab Control Sample Analysis

Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 04 Batch: WG1532784-3 WG1532784-4								
p-Ethyltoluene	105		102		70-130	3		30
1,2,4,5-Tetramethylbenzene	110		106		70-130	4		30
Ethyl ether	87		85		67-130	2		30
trans-1,4-Dichloro-2-butene	101		102		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		99		70-130
Toluene-d8	97		99		70-130
4-Bromofluorobenzene	89		89		70-130
Dibromofluoromethane	99		98		70-130

INORGANICS & MISCELLANEOUS

Project Name: 111 WILLOW

Project Number: 170497201

Lab Number: L2141567

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-01

Client ID: SB-MIP10_9-10

Sample Location: BRONX, NY

Date Collected: 08/03/21 12:00

Date Received: 08/04/21

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.9		%	0.100	NA	1	-	08/05/21 09:53	121,2540G	RI



Project Name: 111 WILLOW

Project Number: 170497201

Lab Number: L2141567

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-02

Client ID: SB-MIP10_23-24

Sample Location: BRONX, NY

Date Collected: 08/03/21 12:01

Date Received: 08/04/21

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.8		%	0.100	NA	1	-	08/05/21 09:53	121,2540G	RI



Project Name: 111 WILLOW

Project Number: 170497201

Lab Number: L2141567

Report Date: 08/09/21

SAMPLE RESULTS

Lab ID: L2141567-03

Client ID: SB-MIP07_6-7

Sample Location: BRONX, NY

Date Collected: 08/03/21 13:00

Date Received: 08/04/21

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.5		%	0.100	NA	1	-	08/05/21 09:53	121,2540G	RI



Project Name: 111 WILLOW**Project Number:** 170497201**Lab Number:** L2141567**Report Date:** 08/09/21**SAMPLE RESULTS****Lab ID:** L2141567-04**Client ID:** SB-MIP07_18-19**Sample Location:** BRONX, NY**Date Collected:** 08/03/21 13:01**Date Received:** 08/04/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.7		%	0.100	NA	1	-	08/05/21 09:53	121,2540G	RI



Lab Duplicate Analysis
*Batch Quality Control***Project Name:** 111 WILLOW**Project Number:** 170497201**Lab Number:** L2141567**Report Date:** 08/09/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1531734-1 QC Sample: L2141567-01 Client ID: SB-MIP10_9-10						
Solids, Total	73.9	69.3	%	6		20

Project Name: 111 WILLOW**Lab Number:** L2141567**Project Number:** 170497201**Report Date:** 08/09/21**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2141567-01A	Vial MeOH preserved	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2141567-01B	Vial water preserved	A	NA		4.2	Y	Absent	05-AUG-21 00:36	NYTCL-8260HLW(14)
L2141567-01C	Vial water preserved	A	NA		4.2	Y	Absent	05-AUG-21 00:36	NYTCL-8260HLW(14)
L2141567-01D	Plastic 120ml unpreserved	A	NA		4.2	Y	Absent		TS(7)
L2141567-02A	Vial MeOH preserved	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2141567-02B	Vial water preserved	A	NA		4.2	Y	Absent	05-AUG-21 00:36	NYTCL-8260HLW(14)
L2141567-02C	Vial water preserved	A	NA		4.2	Y	Absent	05-AUG-21 00:36	NYTCL-8260HLW(14)
L2141567-02D	Plastic 120ml unpreserved	A	NA		4.2	Y	Absent		TS(7)
L2141567-03A	Vial MeOH preserved	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14)
L2141567-03B	Vial water preserved	A	NA		4.2	Y	Absent	05-AUG-21 00:36	NYTCL-8260HLW(14)
L2141567-03C	Vial water preserved	A	NA		4.2	Y	Absent	05-AUG-21 00:36	NYTCL-8260HLW(14)
L2141567-03D	Plastic 120ml unpreserved	A	NA		4.2	Y	Absent		TS(7)
L2141567-04A	Vial MeOH preserved	A	NA		4.2	Y	Absent		NYTCL-8260HLW(14),NYTCL-8260H(14)
L2141567-04B	Vial water preserved	A	NA		4.2	Y	Absent	05-AUG-21 00:36	NYTCL-8260HLW(14),NYTCL-8260H(14)
L2141567-04C	Vial water preserved	A	NA		4.2	Y	Absent	05-AUG-21 00:36	NYTCL-8260HLW(14),NYTCL-8260H(14)
L2141567-04D	Plastic 120ml unpreserved	A	NA		4.2	Y	Absent		TS(7)

Project Name: 111 WILLOW
Project Number: 170497201

Lab Number: L2141567
Report Date: 08/09/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW
Project Number: 170497201

Lab Number: L2141567
Report Date: 08/09/21

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW**Lab Number:** L2141567**Project Number:** 170497201**Report Date:** 08/09/21**Data Qualifiers**

- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: 111 WILLOW
Project Number: 170497201

Lab Number: L2141567
Report Date: 08/09/21

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 19

Published Date: 4/2/2021 1:14:23 PM

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

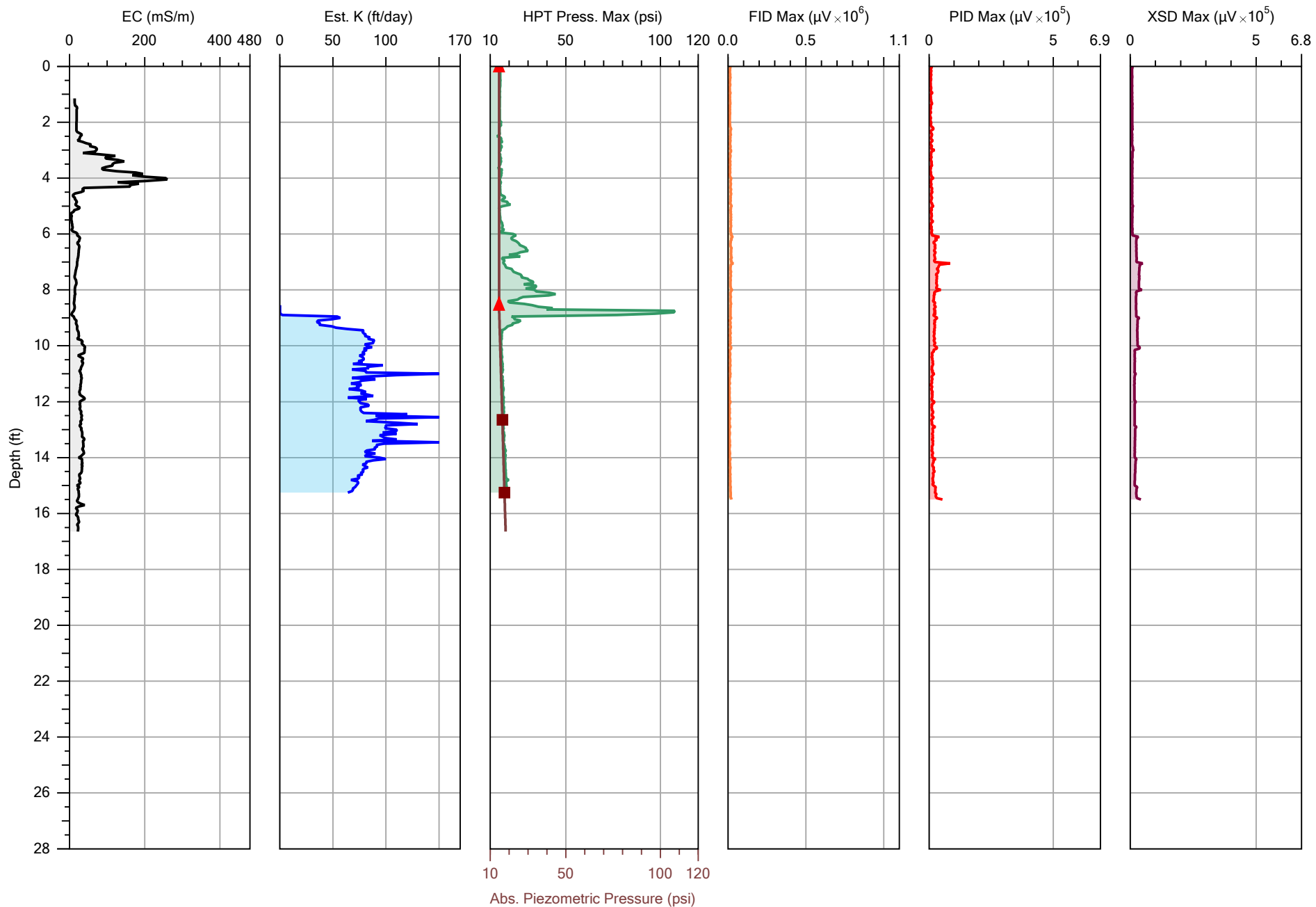
For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2141567

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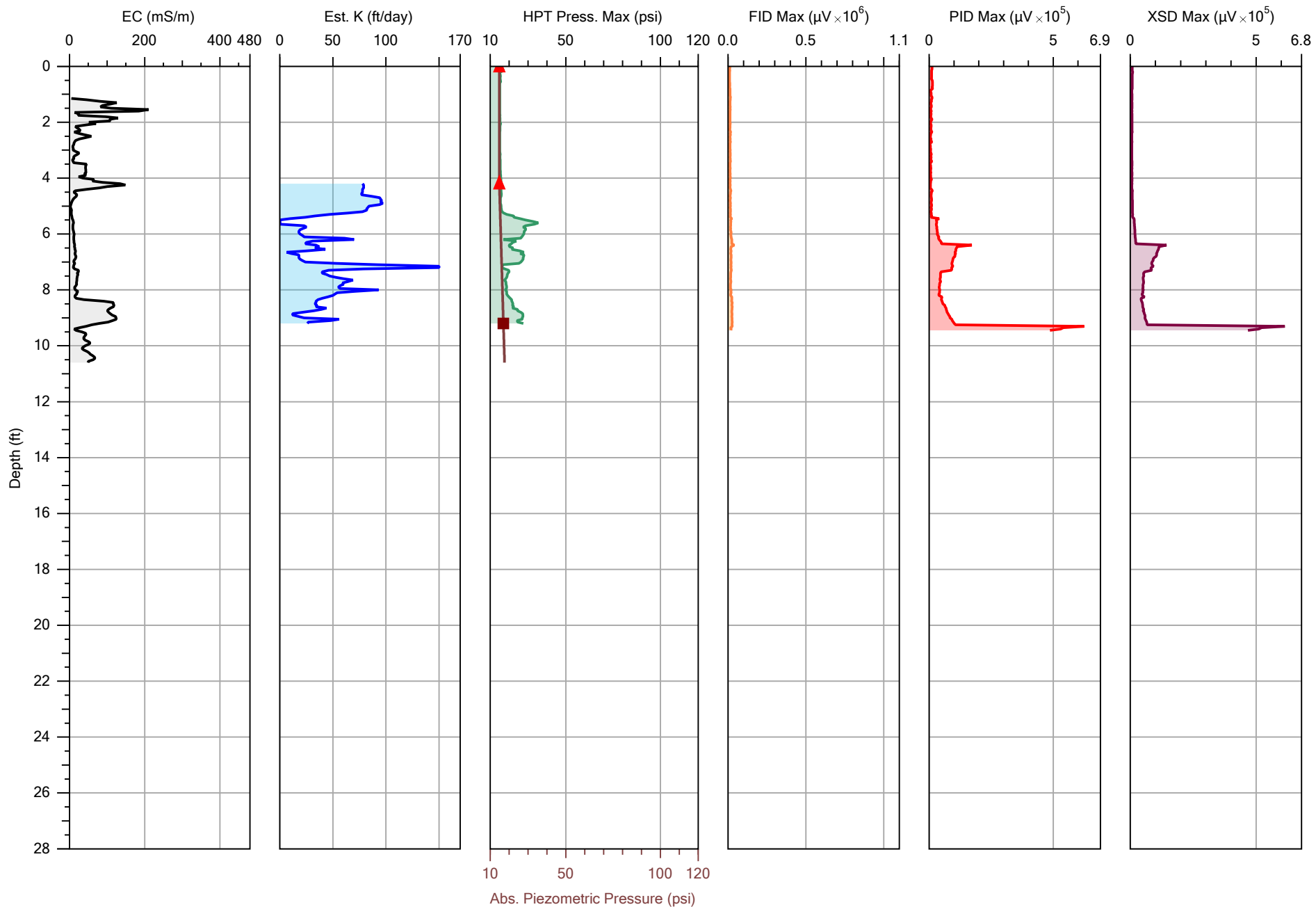
APPENDIX D

MIP Report and Logs



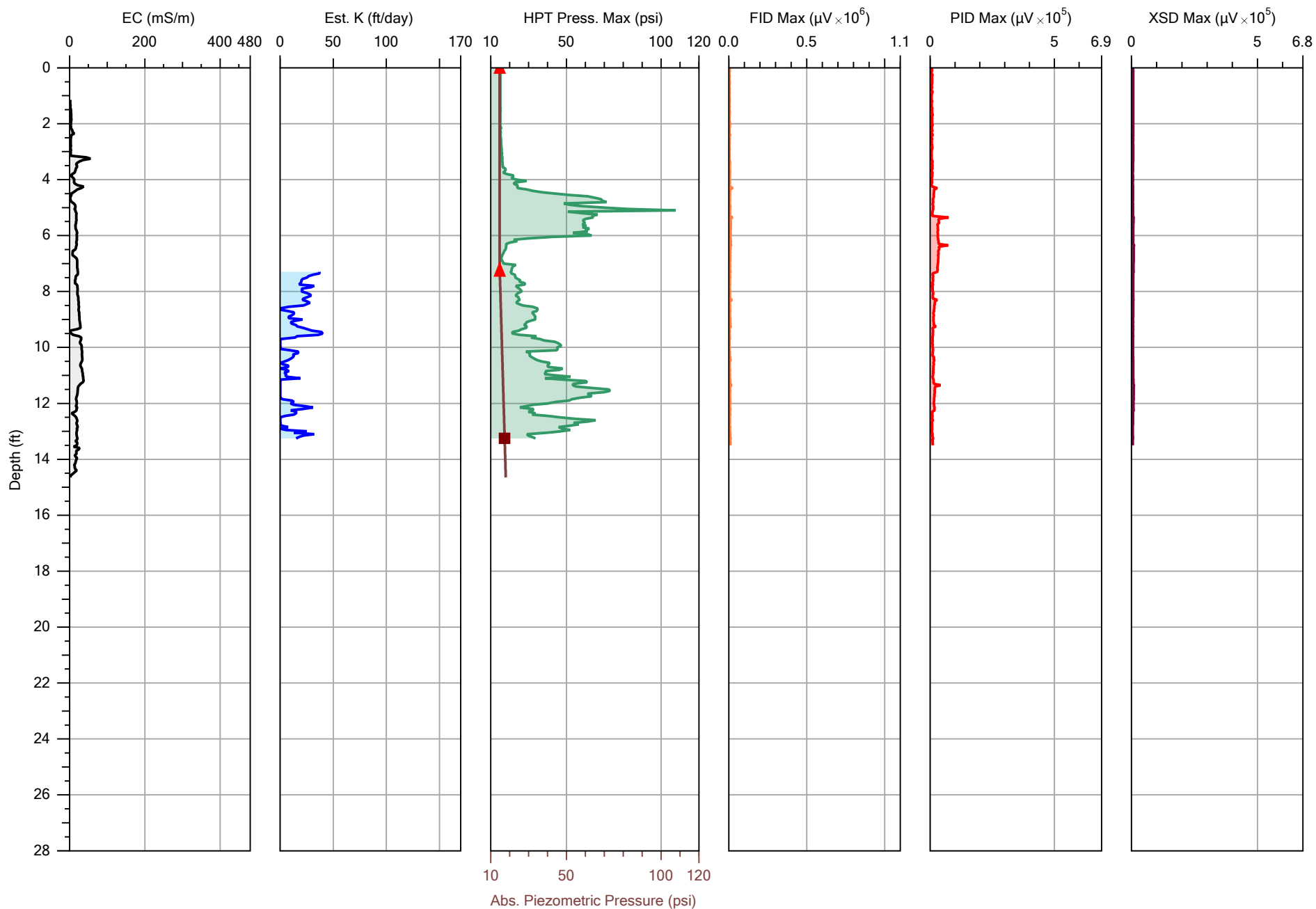
S₂ C₂ inc.

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Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/29/2021
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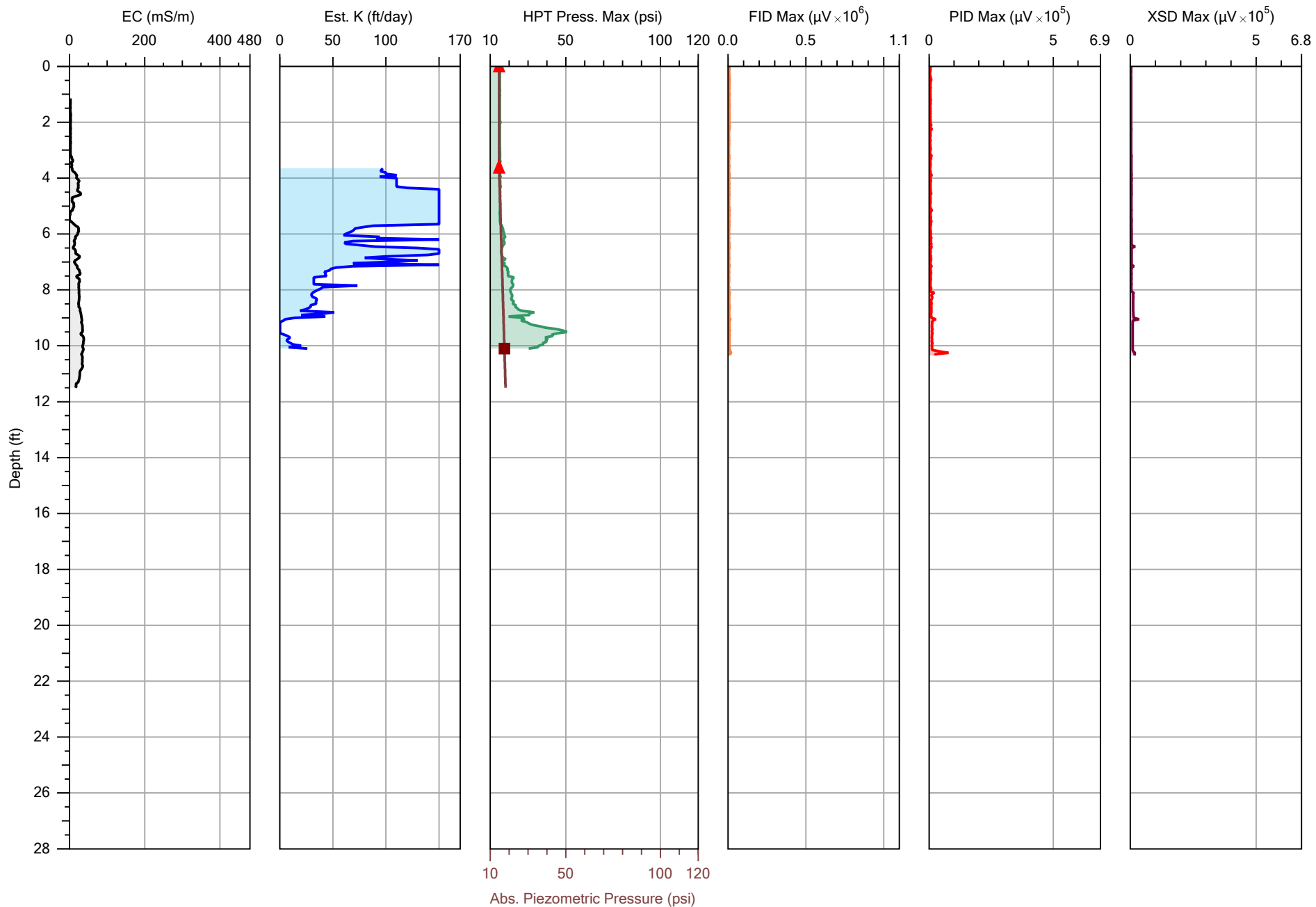
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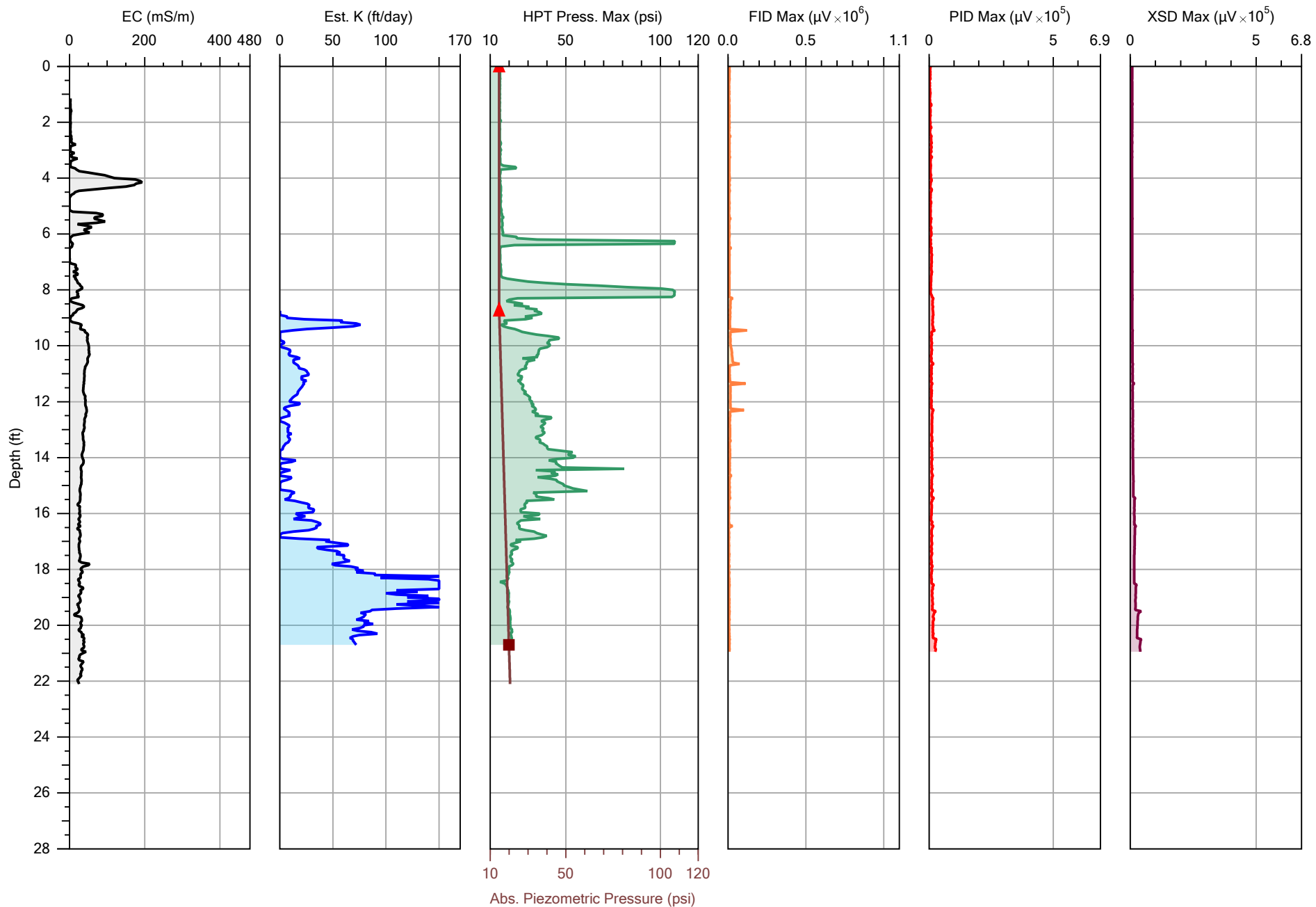
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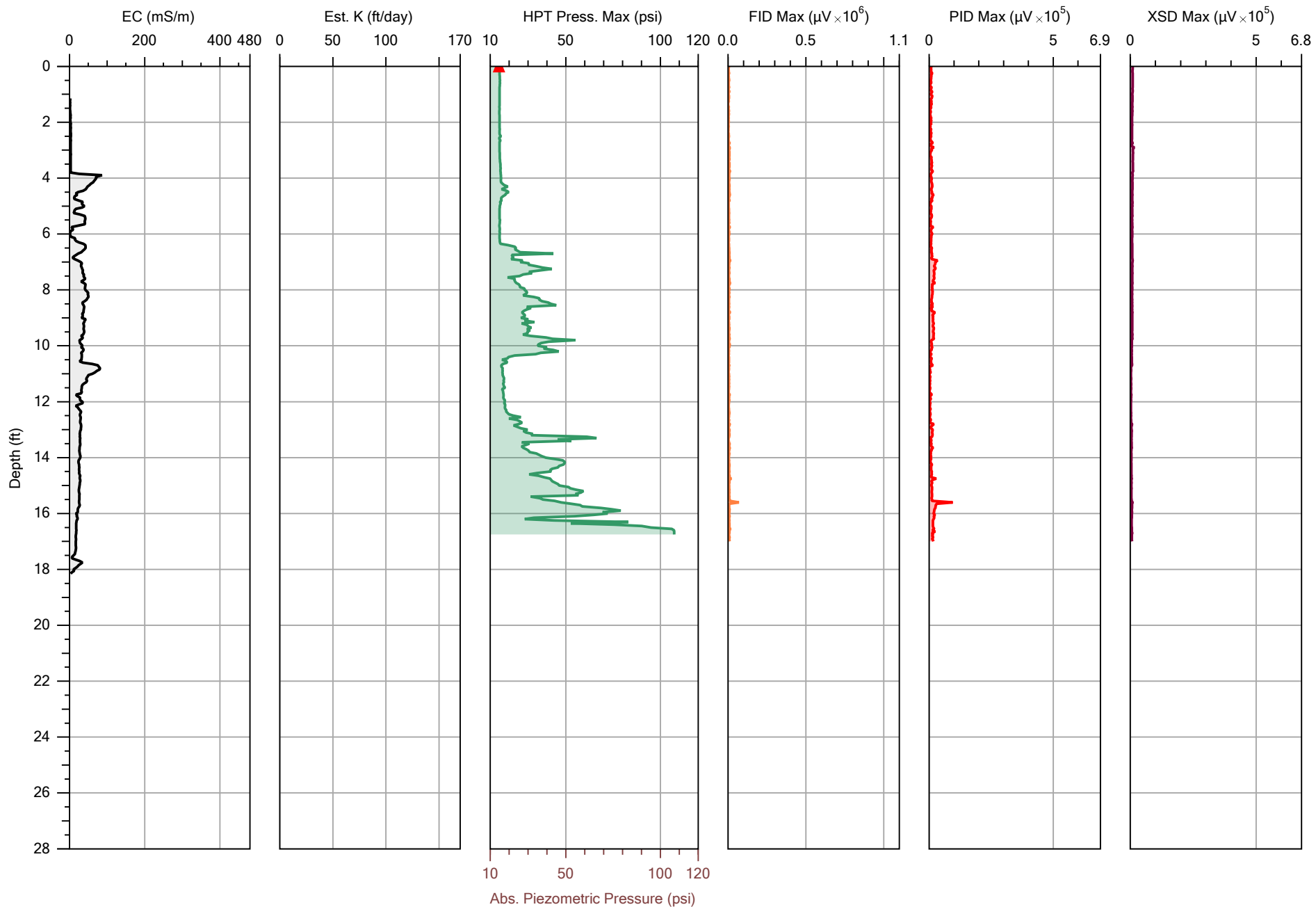
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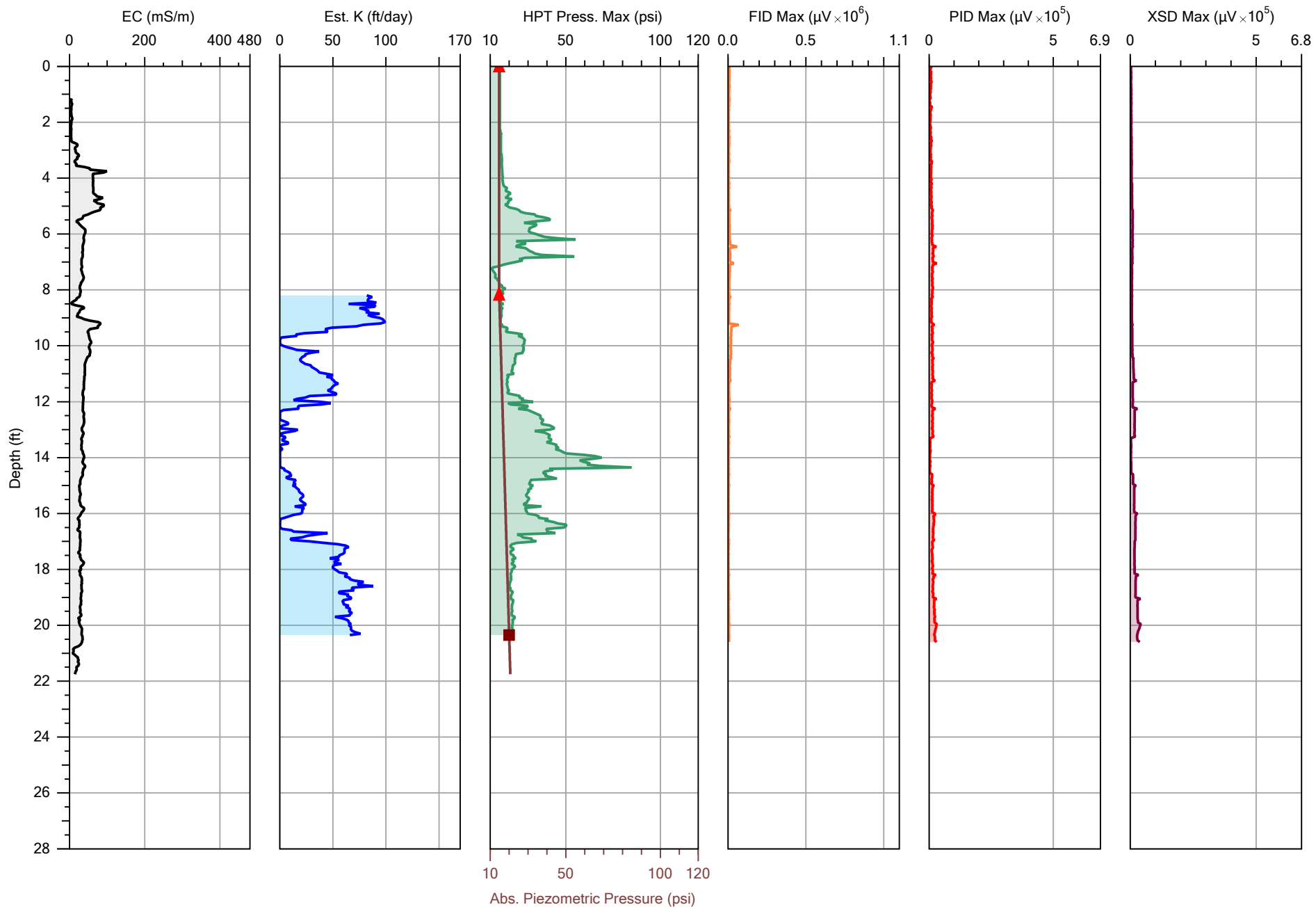
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			Location:
			MIP-05



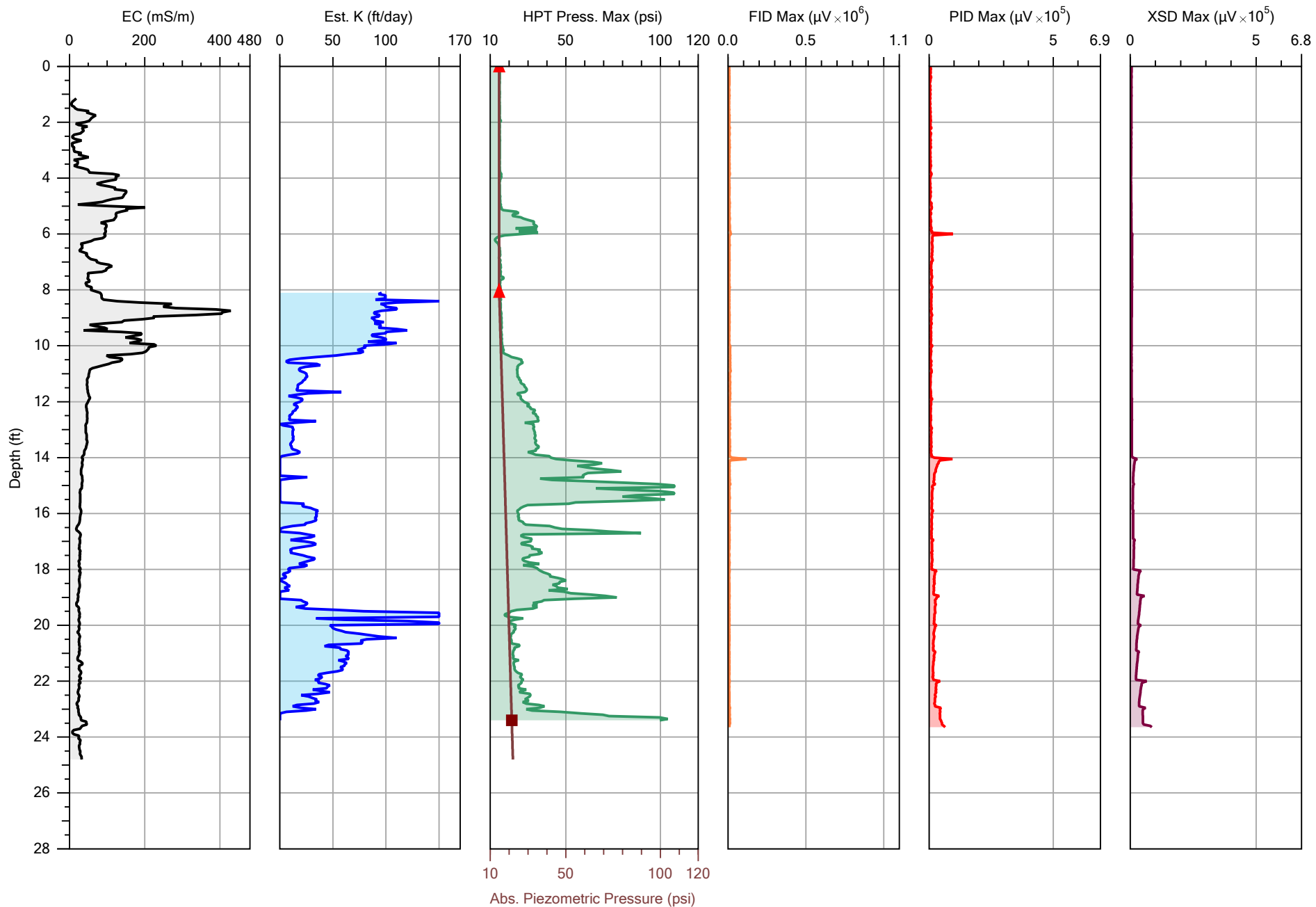
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Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/29/2021
			Location:
			MIP-06



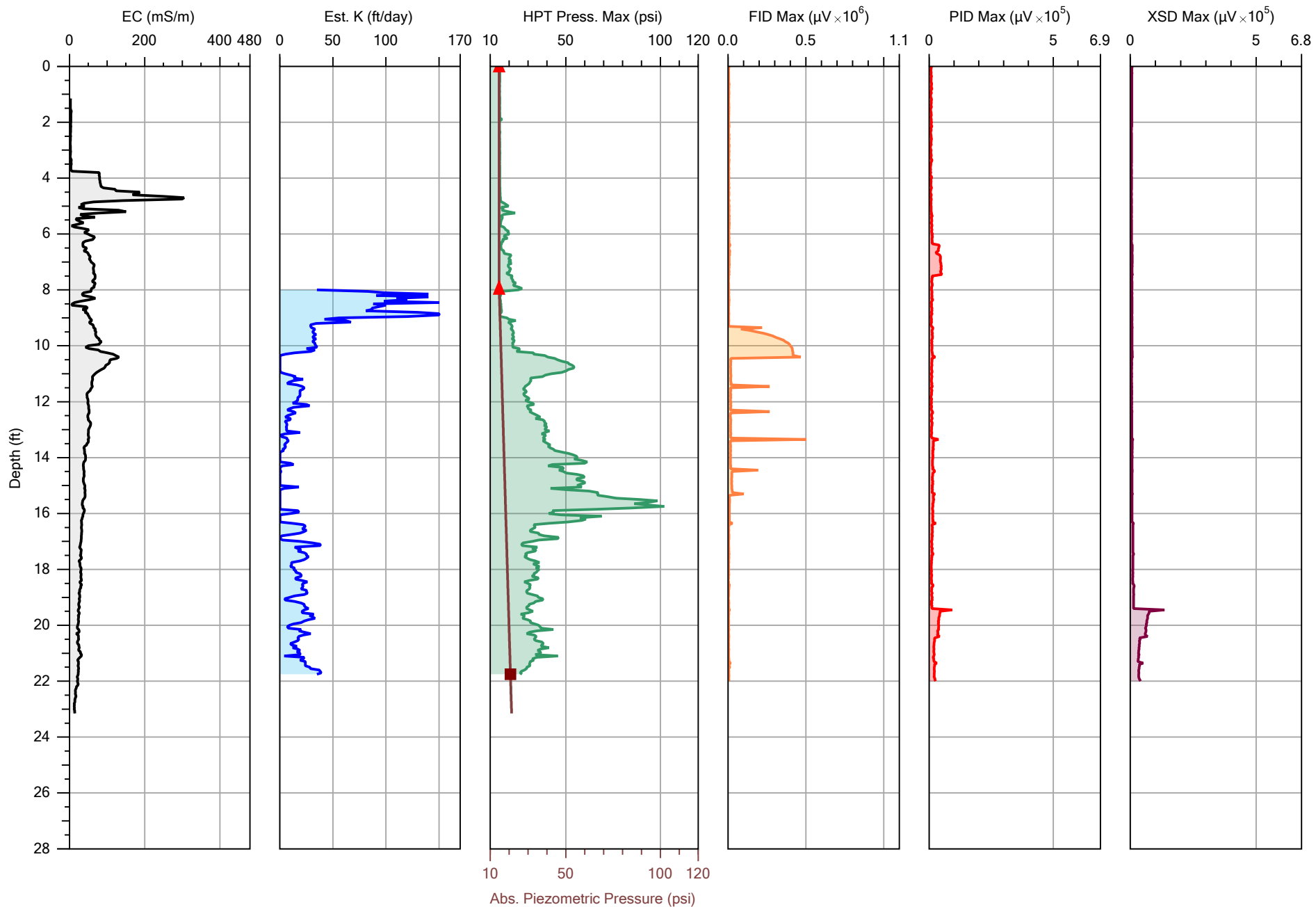
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Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-07



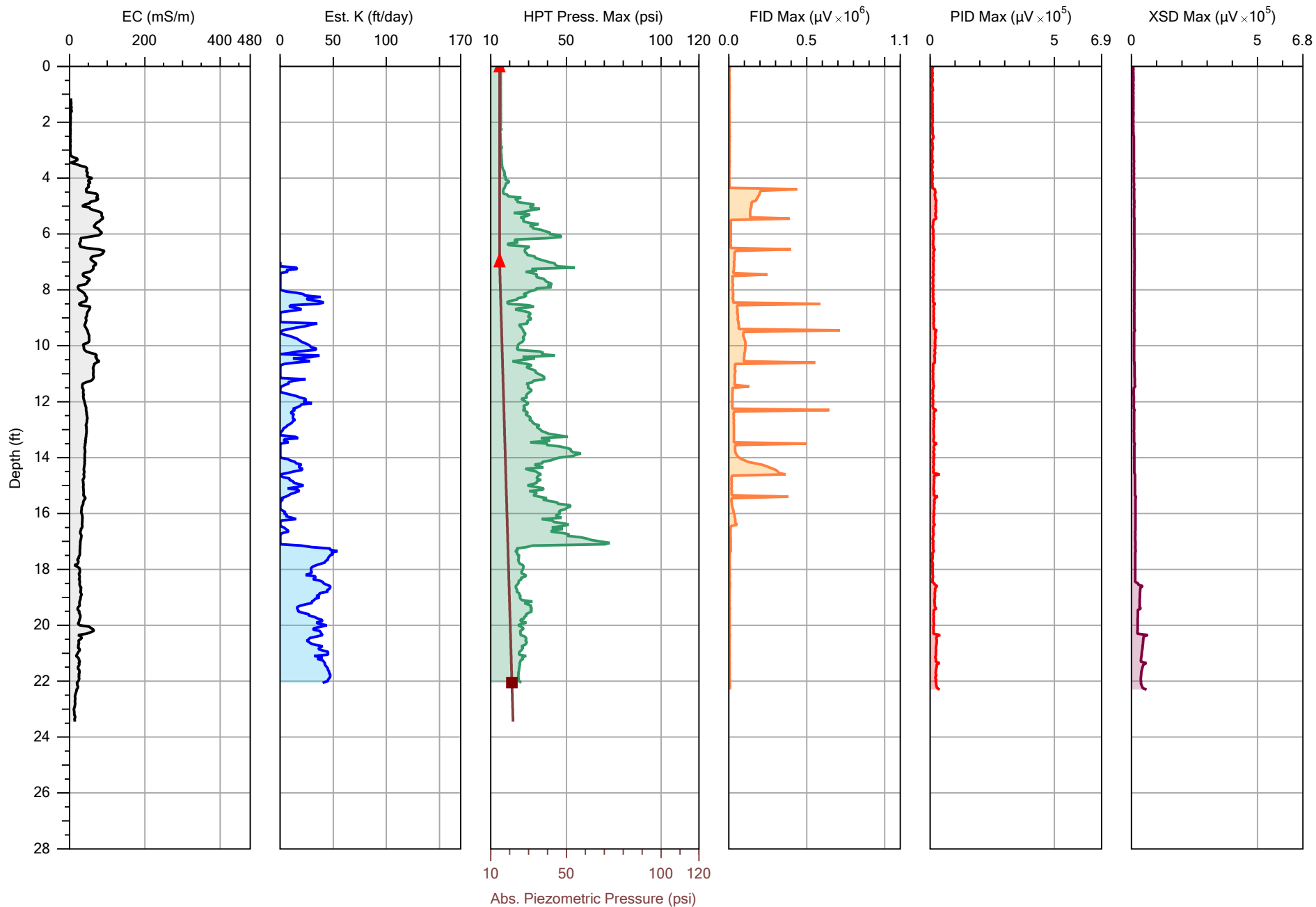
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Project ID:		Client:	Date:
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			Location:
			MIP-08



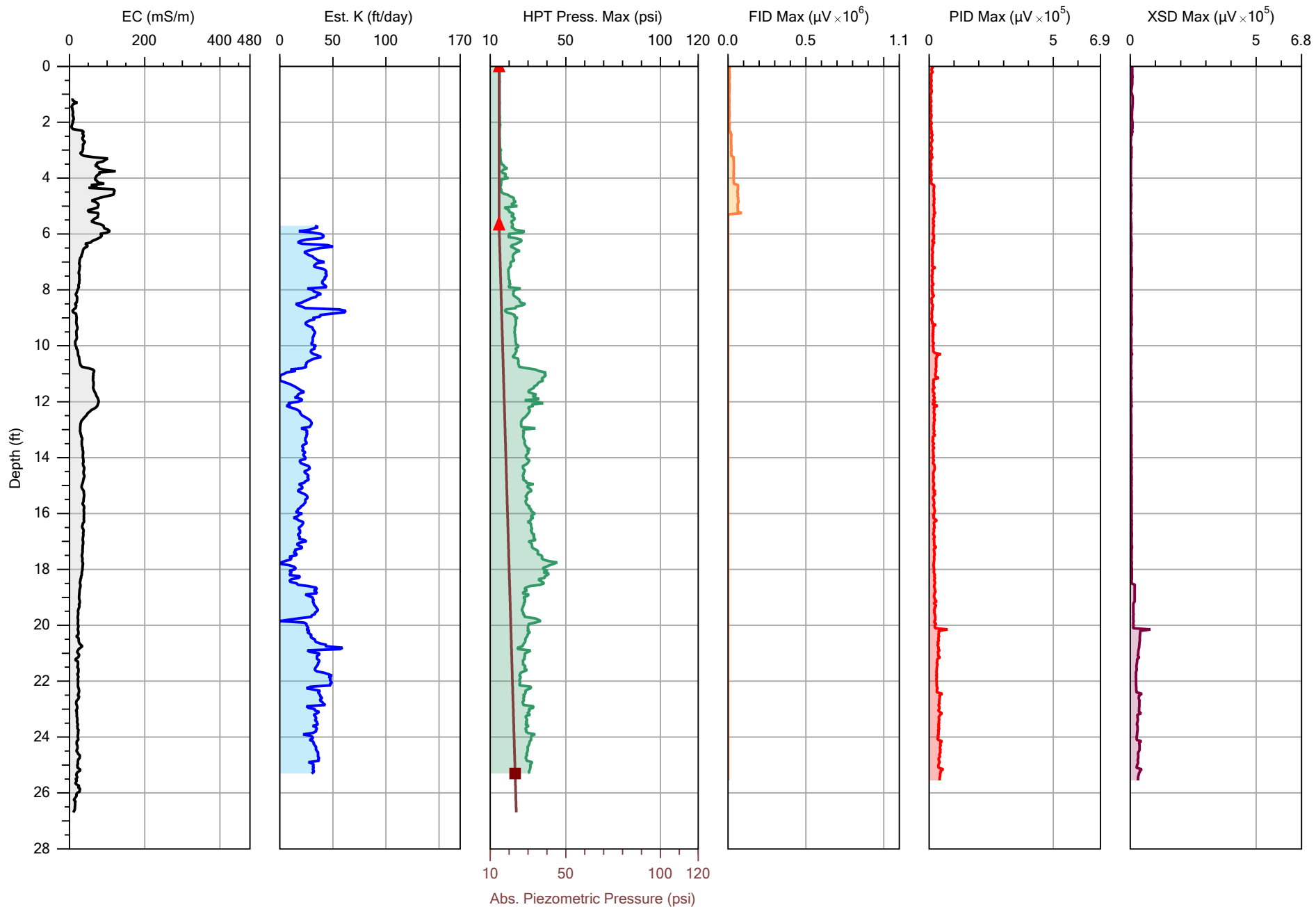
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			Location:
			MIP-09



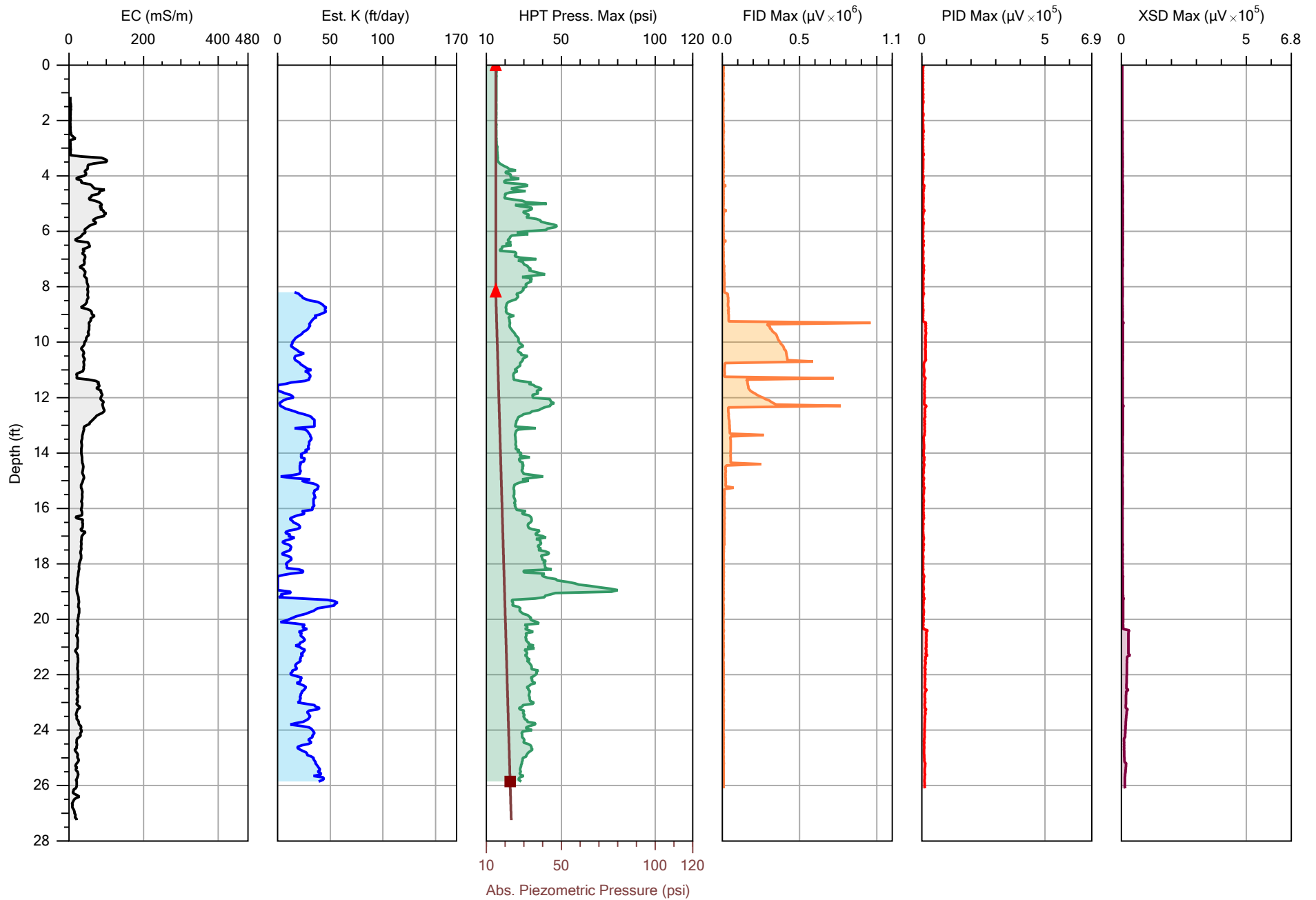
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Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/29/2021
			Location:
			MIP-10



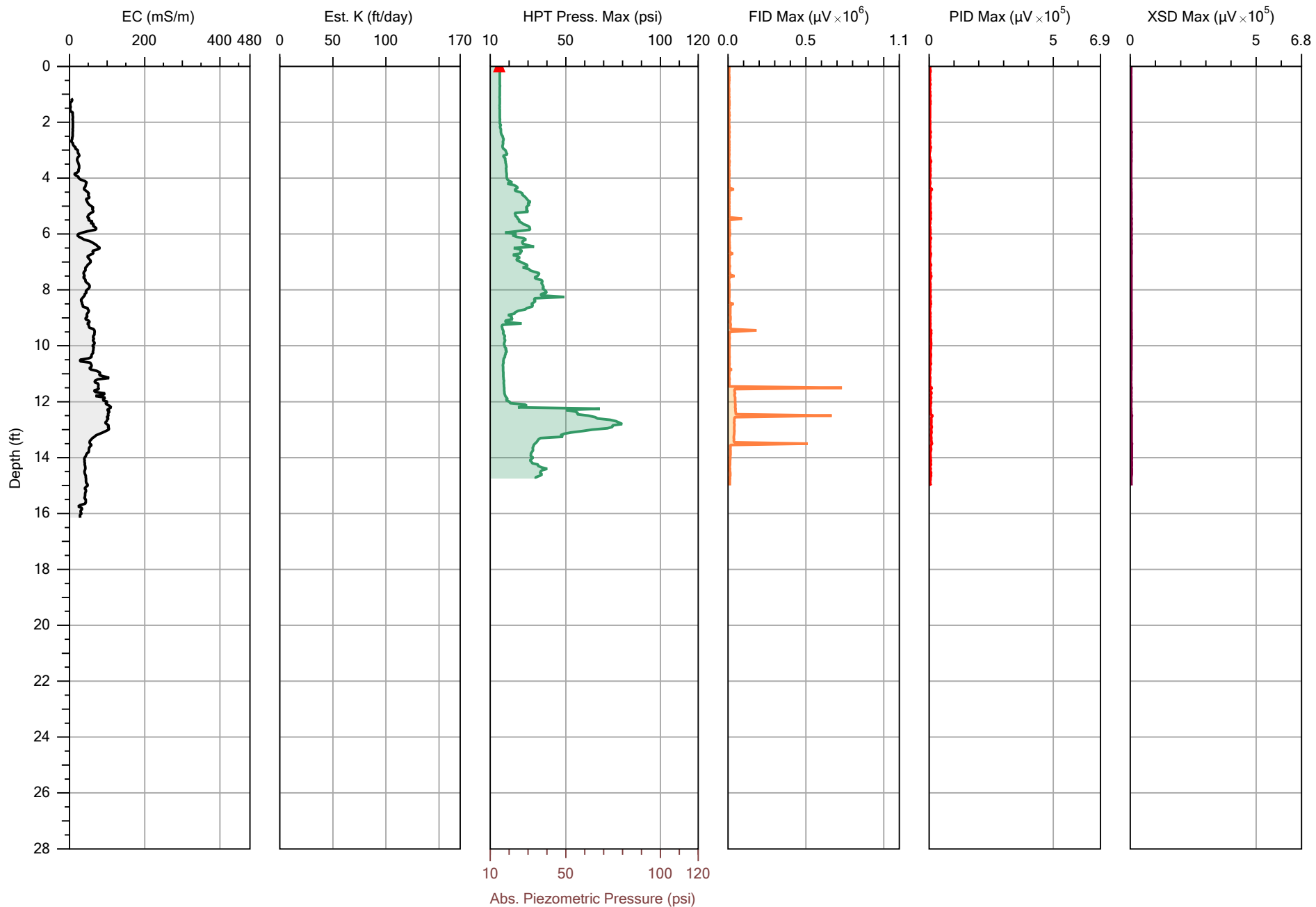
S₂ C₂ inc.

Company:	S2C2	Operator:	TK	File:	MIP-11.MHP
Project ID:	767 East 133rd Street	Client:	Langan	Date:	7/29/2021
				Location:	MIP-11



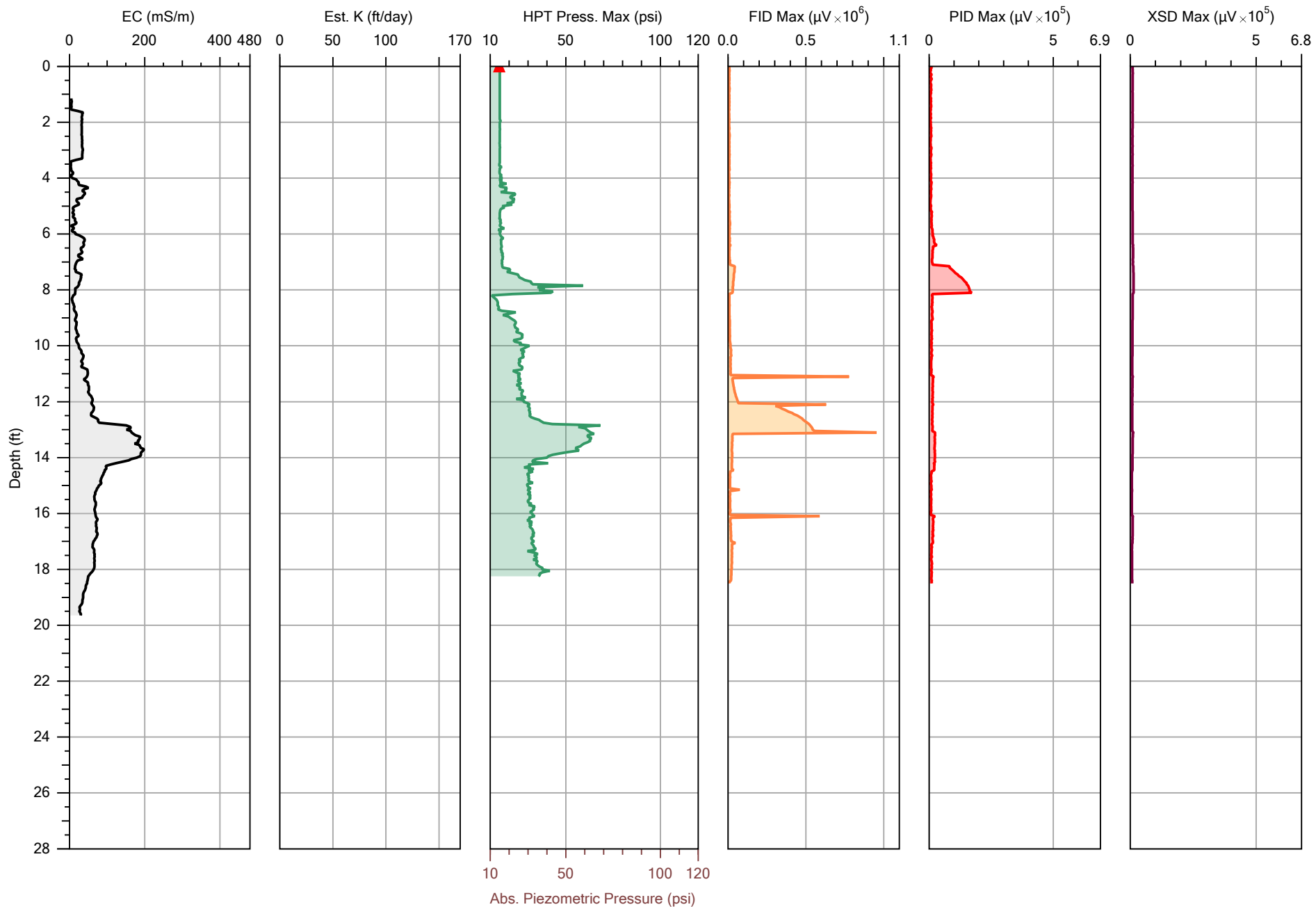
S₂ C₂ inc.

Company:		Operator:	File:
S2C2		TK	MIP-12.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	8/3/2021
			Location:
			MIP-12



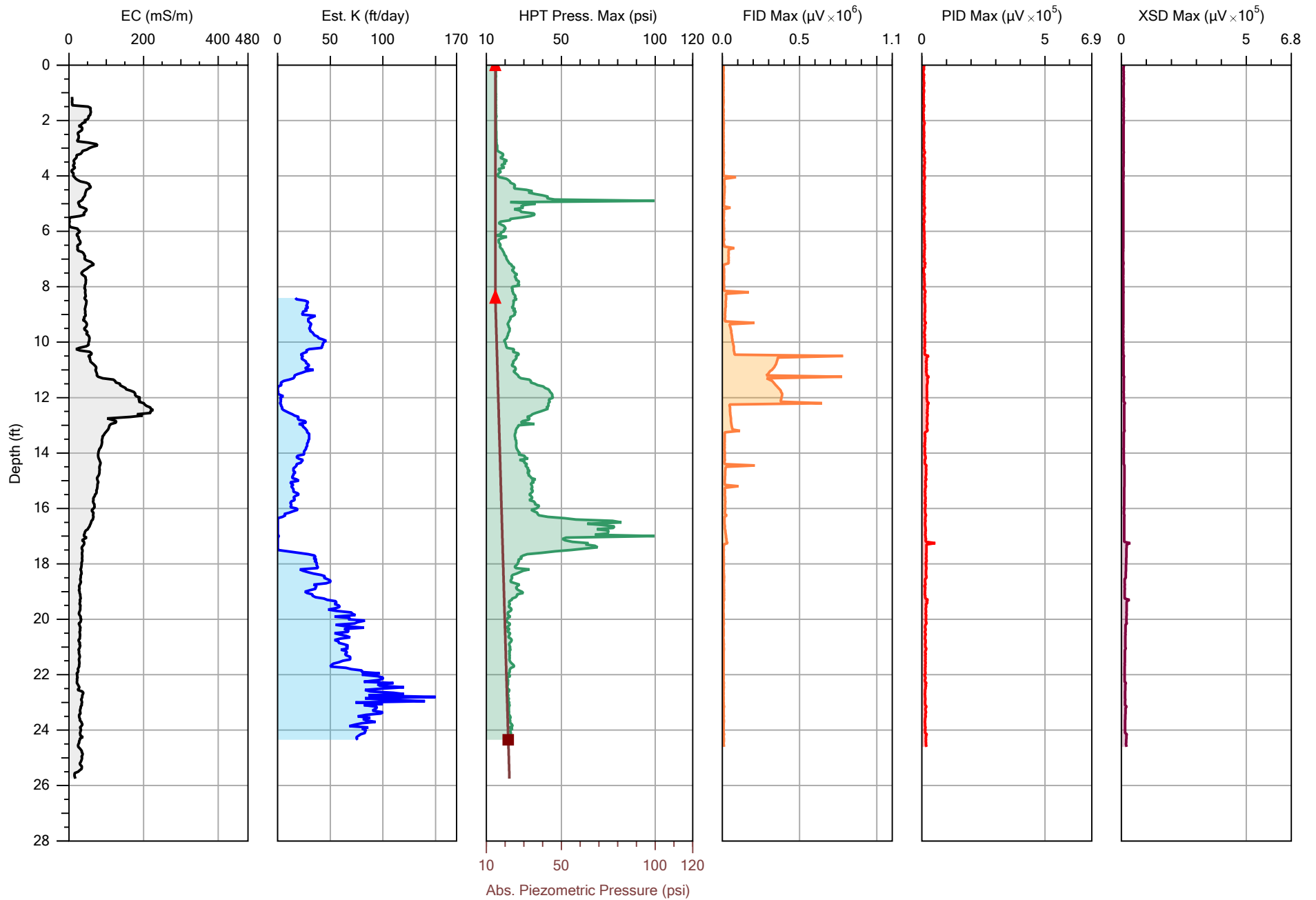
S₂ C₂ inc.

Company:	S2C2	Operator:	TK	File:	MIP-13.MHP
Project ID:	767 East 133rd Street	Client:	Langan	Date:	8/3/2021
				Location:	MIP-13



S₂ C₂ inc.

Company:	S2C2	Operator:	TK	File:	MIP-14.MHP
Project ID:	767 East 133rd Street	Client:	Langan	Date:	8/3/2021
				Location:	MIP-14



S₂ C₂ inc.

Company:		Operator:	File:
S2C2		TK	MIP-15.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	8/3/2021
			Location:
			MIP-15



Streamlined Site Characterization & Closure

**High-Resolution Subsurface Characterization
Using the Combination Membrane Interface Probe-Hydraulic
Profiling Tool (MiHPT)**

767 East 133rd Street
Block 2562, Lot 49
Bronx, New York 10454

August 10, 2021

PREPARED FOR

Langan Engineering and Environmental Services
21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001

PREPARED BY

S2C2, Inc.
5 Johnson Drive, Suite 12
Raritan, New Jersey 08869
(908) 253-3200
www.s2c2inc.com

S2C2 inc.

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Appendix A: MiHPT Logs

Introduction/Objectives

Langan Engineering and Environmental Services (Langan) contracted S2C2 Inc. (S2C2) to conduct a High-Resolution Site Characterization (HRSC) of subsurface chlorinated volatile organic compound (cVOC) impacts on the property located at 767 East 133rd Street, Bronx, New York (Site). Previous investigations conducted at the Site revealed the presence of dissolved cVOCs in soil and groundwater. The HRSC program was accomplished with the application of Geoprobe®'s combination Membrane Interface-Hydraulic Profiling Tool (MiHPT) and electrical conductivity (EC) technologies. Field work was conducted over two days from July 28 to August 3, 2021.

Equipment Description

The MIP coupled with an EC sensor provides continuous stratigraphic information of the soil as well as a semi-quantitative indicator of total VOC concentrations. The MIP is effective in both saturated and unsaturated materials to detect VOCs in the gaseous, sorbed, dissolved, or free phases. The membrane of the MIP acts as an interface between the VOCs present in the subsurface and gas phase detectors located at the ground surface. The membrane is semi-permeable and is comprised of a thin film polymer impregnated into a stainless-steel screen for support. The membrane is approximately 6.35 millimeters (mm) in diameter and is placed in a heated block attached to the probe. This block is heated to approximately 120 degrees Centigrade (°C) and is raised at the leading edge to help protect the membrane from damage when being pushed through the geologic matrix. Heating the block helps accelerate diffusion of the VOCs through the membrane. Diffusion occurs due to a concentration gradient between the impacted matrix and the clean carrier gas (e.g., nitrogen) behind the membrane. A constant gas flow of 30-45 milliliters per minute (mL/min) sweeps behind the membrane and carries the diffused VOCs to the gas phase detectors at the ground surface via a trunkline. Travel time from the membrane interface to the detector(s) is approximately 45-90 seconds (depending on the length of the trunkline, flow rate, and ambient air temperature).

The HPT system uses a sensitive, downhole transducer to measure the pressure response of the sub-surface to a constant, monitored injection of clean water. As the probe is advanced at 20 millimeters per second (mm/s), water is injected through a stainless-steel screen on the side of the probe at a flow rate of approximately 200-300 mL/min. Injection pressure is monitored and plotted with depth along with the injection flow rate. A low pressure is indicative of higher subsurface permeability while high pressure is indicative of lower permeability. Once the HPT probe has been advanced below the water table, dissipation testing can be performed to estimate the static water level and provide an estimate of hydraulic conductivity (Est. K). The operator will pause advancement of the probe and shut-off the flow of water to the HPT probe. The HPT pressure will then dissipate and once it has stabilized, the operator will return water flow to the HPT and continue advancement of the probe. Upon completion of the log, the operator can utilize equations integrated in the Geoprobe® Direct Image Viewer software to calculate static water level, depth of water table, and Est K. in feet per day (ft/day). To refine the precision of the calculations, multiple dissipation tests can be run in the same log.

The EC sensor of the MiHPT probe consists of an electric dipole near the lead-end of the probe

that sends a current into the soil formation which is measured along with the voltage that results. The conductivity is a ratio of current to voltage times a constant and is read in milli-Siemens per meter (mS/m). The electrical conductivity of consolidated soils and sediments is a function of grain size. Other factors that influence conductivity are chemical composition, moisture content and salinity of pore fluids (brines), but grain size is the dominant factor. In general, coarse-grained soils such as gravel and coarse sands have the lowest values (typically 0-20 mS/m) and clay has the greatest values (typically greater than 80 mS/m).

S2C2 used a MH6534 MiHPT probe, FI6000 field instrument, K6300 HPT flow module, MP6500 MIP controller coupled with a Hewlett-Packard 5890 gas chromatograph and a field laptop with Direct Image Acquisition software to log all MiHPT data. S2C2 utilized three detectors during this project: a Flame Ionization Detector (FID), a Photo-Ionization Detector (PID) and a Halogen-Specific Detector (XSD). The FID/PID detect total VOCs with the PID more sensitive to aromatic compounds. The XSD only detects halogen-containing hydrocarbons (i.e., chlorinated VOCs). Typical MIP configurations will generally have a detectable response in the presence of VOCs at concentrations as low as 250 parts per billion (ppb) to 1 part per million (ppm). Output from the detectors was displayed on the field laptop in real-time, displaying: conductivity, push-rate, detector response, carrier gas pressure and flow and temperature data. These data were viewed continuously during each MIP logging run and digitally recorded. S2C2 utilized a custom support vehicle with all the MiHPT componentry to conduct the field work.

MiHPT Quality Assurance and Quality Control

S2C2 follows a strict quality assurance/quality control (QA/QC) program following Geoprobe®'s MIP Standard Operating Procedure (SOP) Technical Bulletin No. MK 3010, revised January 2015. Accordingly, S2C2 performs a response test before and after each MIP location. The response test is an important quality control test in that it tests the integrity of the complete system. S2C2 performs the response test by preparing a known concentration of a standard in water and then exposing the membrane to that solution. After 45 seconds of exposure, the solution is removed from the membrane and the maximum MIP response is measured. The standards used for this investigation was tetrachloroethene at a concentration of 2 mg/L (ppm). Performing a response test before and after each run measures the integrity of the system and checks for degradation of the membrane. If the post-run results are not similar to pre-run results, then corrective action (replacement of membrane, checking for leaks in the system) may be necessary. Some degradation of the membrane is expected, and replacement of the membrane is considered a routine maintenance task. Without adhering to these QA/QC checks, MIP data from one hole cannot accurately be compared to MIP data from other locations. It should be noted that these response tests are not conducted to calibrate the MIP system nor to build a calibration curve but rather as an overall check on the system. For this and other reasons (matrix effects, varying response of different compounds, system settings, etc.) the MIP response cannot be reliably used to predict resulting soil or groundwater concentrations for individual compounds and therefore remains a semi-quantitative tool. For this project, all the pre-test responses were within expected ranges for the XSD detector. A histogram of pre- and post-test responses for the XSD detector is provided in Figure 1.

To check the EC dipole, an EC dipole tester configured with high and low EC materials on either

end is applied across the EC dipole and the isolated steel body of the probe. If the EC response is within +/- 5% of the target value, the EC test is passed. If either the high or low EC test fails, corrective action (typically opening the probe and reconnecting the EC wires) must be taken.

S2C2 also follows a strict QA/QC program following Geoprobe®'s HPT SOP Technical Bulletin No. MK 3137, prepared January 2015. S2C2 performs a transducer response test before and after each HPT location. The response test is an important quality control test in that it tests the integrity of the complete system. S2C2 performs the response test by inserting the HPT probe into the HPT reference tube with the valve open and the water pump running. The pressure is captured in this scenario. Then the valve is closed, and the reference tube is filled until water runs out of the top. Again, this pressure is captured by the Direct Image Acquisition software. The pump is then shut off and pressure is captured. The valve is then opened, and the water is drained. Once the water is at equilibrium, the pressure is captured. Ideally, the pressure difference observed between the upper and lower water level both with and without flow is 0.217 pounds per square inch (psi). If the pressure differences deviate significantly from this value, then corrective action (i.e., replacing the screen or transducer) may be necessary. Without adhering to these QA/QC checks, static water level and Est. K cannot be accurately calculated.

Summary of Field Investigation

The field investigation consisted of logging a total of 15 MiHPT borings. All borings were advanced to refusal, defined as the slowing of the push rate to less than 1 ft/min over an interval of a few inches. The average total depth of MiHPT borings was approximately 19 feet below ground surface (ft bgs) with a minimum of 9.45 ft bgs and a maximum of 26.1 ft bgs.

Figure 2 displays the approximate locations of all MiHPT borings.

Direct Sensing Log Interpretation

Each MiHPT log has the following six graphs of data displayed with depth:

- EC is on the left and is displayed in mS/m. Coarse-grained materials generally have lower EC values while higher values indicate finer-grained materials.
- Next is Est. K given in ft/day. Only locations with successful dissipation tests are included in a log of Est. K. There is no data above the water table.
- The next graph is the HPT transducer pressure maximum overlaid with the absolute piezometric pressure graph, both in psi. An increase in HPT pressure indicates lower permeability while lower HPT pressures near the piezometric pressure graph indicate higher permeability zones. The piezometric pressure graph is only present for locations with successful dissipation tests. The red triangle plotted on the piezometric pressure graph is the estimate of the water table.
- The next three graphs display the FID, PID and XSD signals, respectively, in microvolts (uV). The MIP response is dependent on many factors including: lithologic properties, chemical constituents, and the concentration within the formation. MIP response also varies as a result of membrane degradation. The MIP response provides a gross semi-quantitative response to VOCs in the subsurface

and can be correlated to known concentrations of specific VOCs in the subsurface by comparing soil and/or groundwater confirmation sampling results to the MIP response. If successful dissipation tests were run for the location, corrected HPT pressure is displayed. This is simply the piezometric pressure subtracted from the raw HPT pressure.

MiHPT direct-sensing logs are provided in Appendix A of this report and include the following:

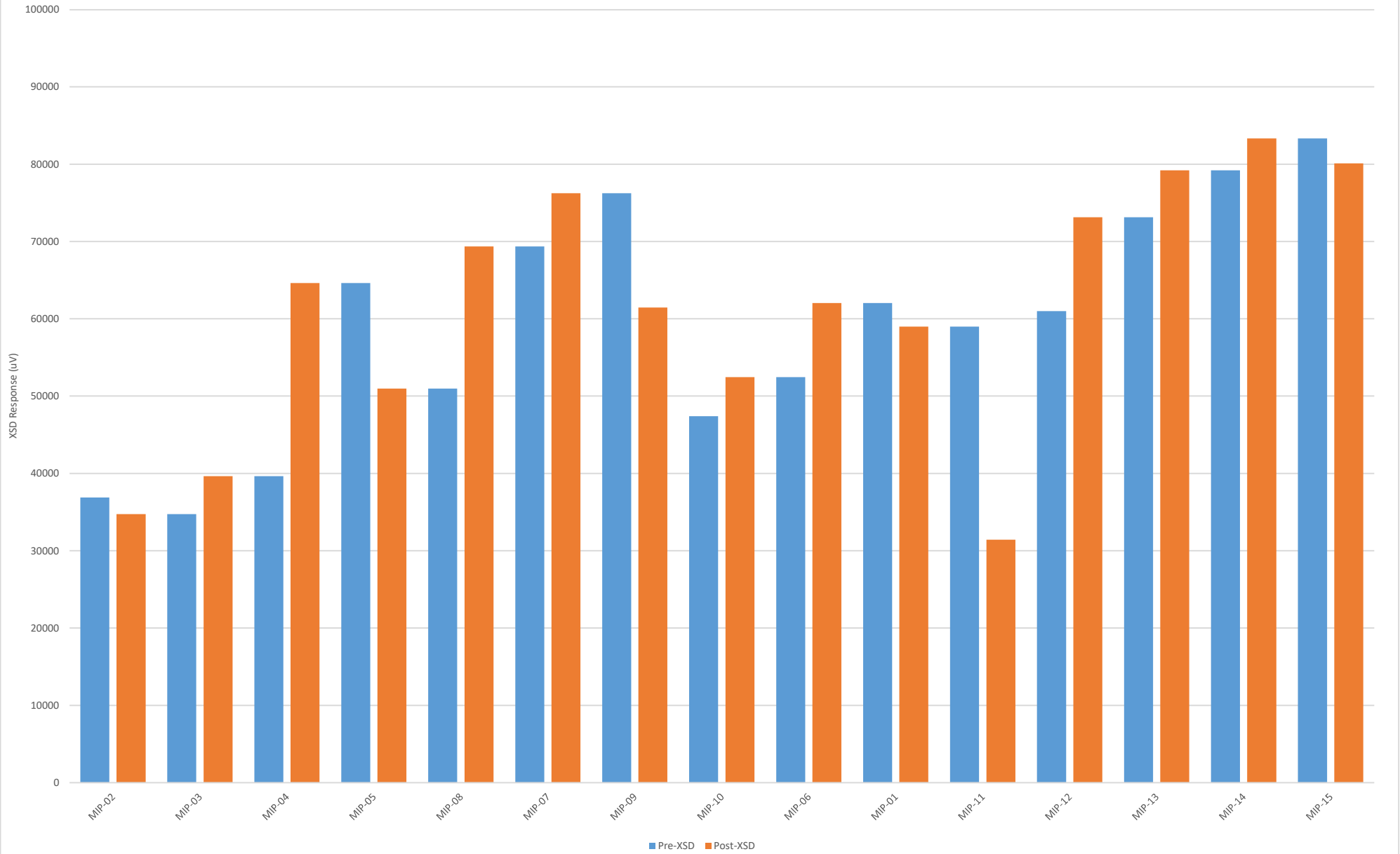
- Best-Fit Scale
- Scaled Alike
- Scaled Alike (1e5 uV Detector Scale)

S2C2 recommends reviewing the scaled alike logs for log-to-log comparison and the best-fit scale logs for comparison of impacts within individual borings.

In addition to the provided logs, Geoprobe®'s Direct Image Viewer Software can be used to evaluate all direct-sensing logs and is available at <https://geoprobe.com/downloads/direct-image-viewer-32>. A user tutorial can also be downloaded at <http://geoprobe.com/di-viewer-technical-documents> and provides users an overview of available features. This software package automatically opens and displays all types of Geoprobe® direct-image logs and can display single logs or multiple logs in either cross-section or overlay formats. The software also allows for printing and exporting of log graphics for use in many applications.

Figures

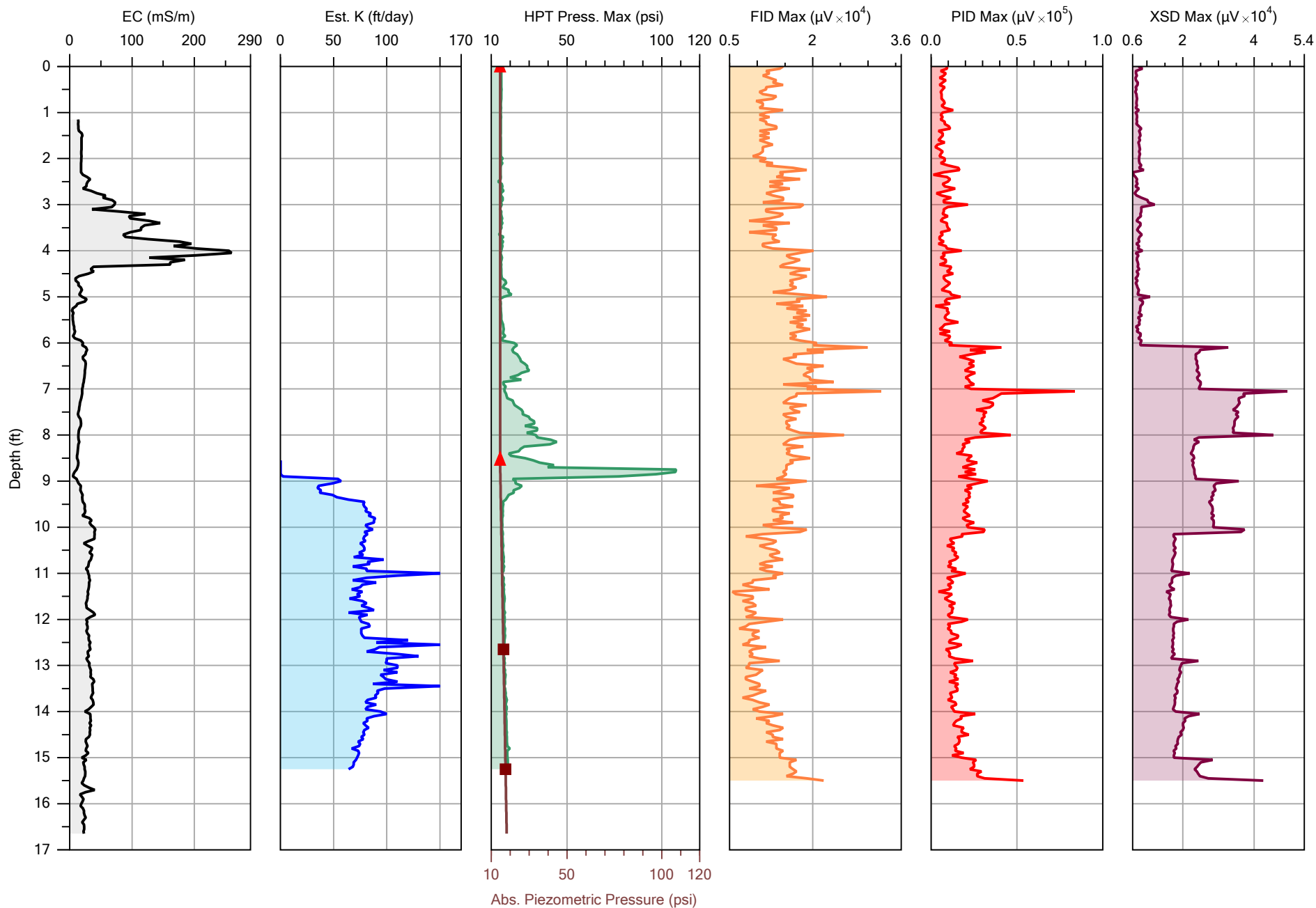
Figure 1: XSD Pre and Post Response Tests (2 ppm PCE)





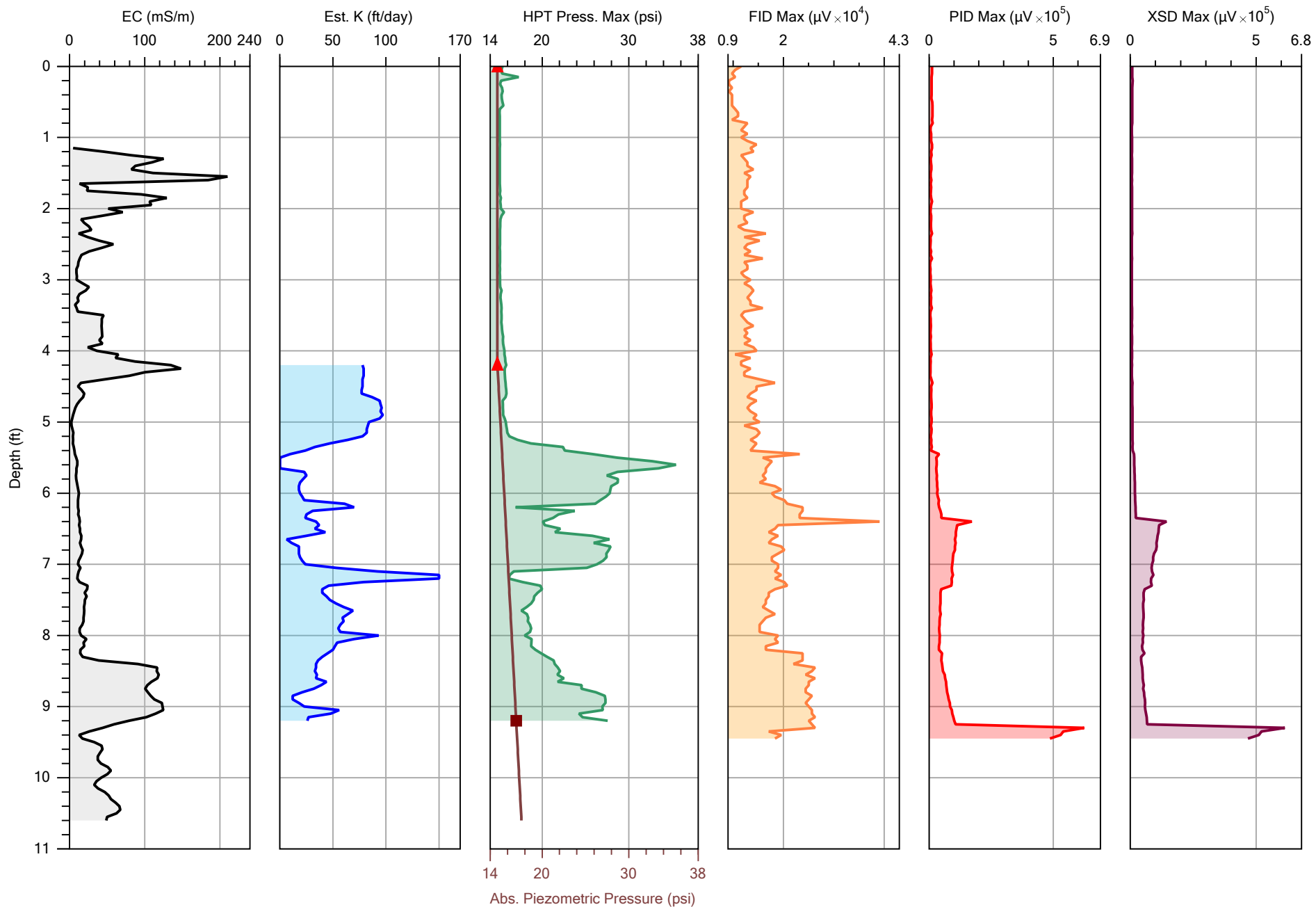
S ₂ C ₂ inc.	
767 East 133rd Street Bronx, New York	
MiHPT Locations	
FIGURE	2
SCALE	1:220

Appendix A: MiHPT Logs (Best-Fit)



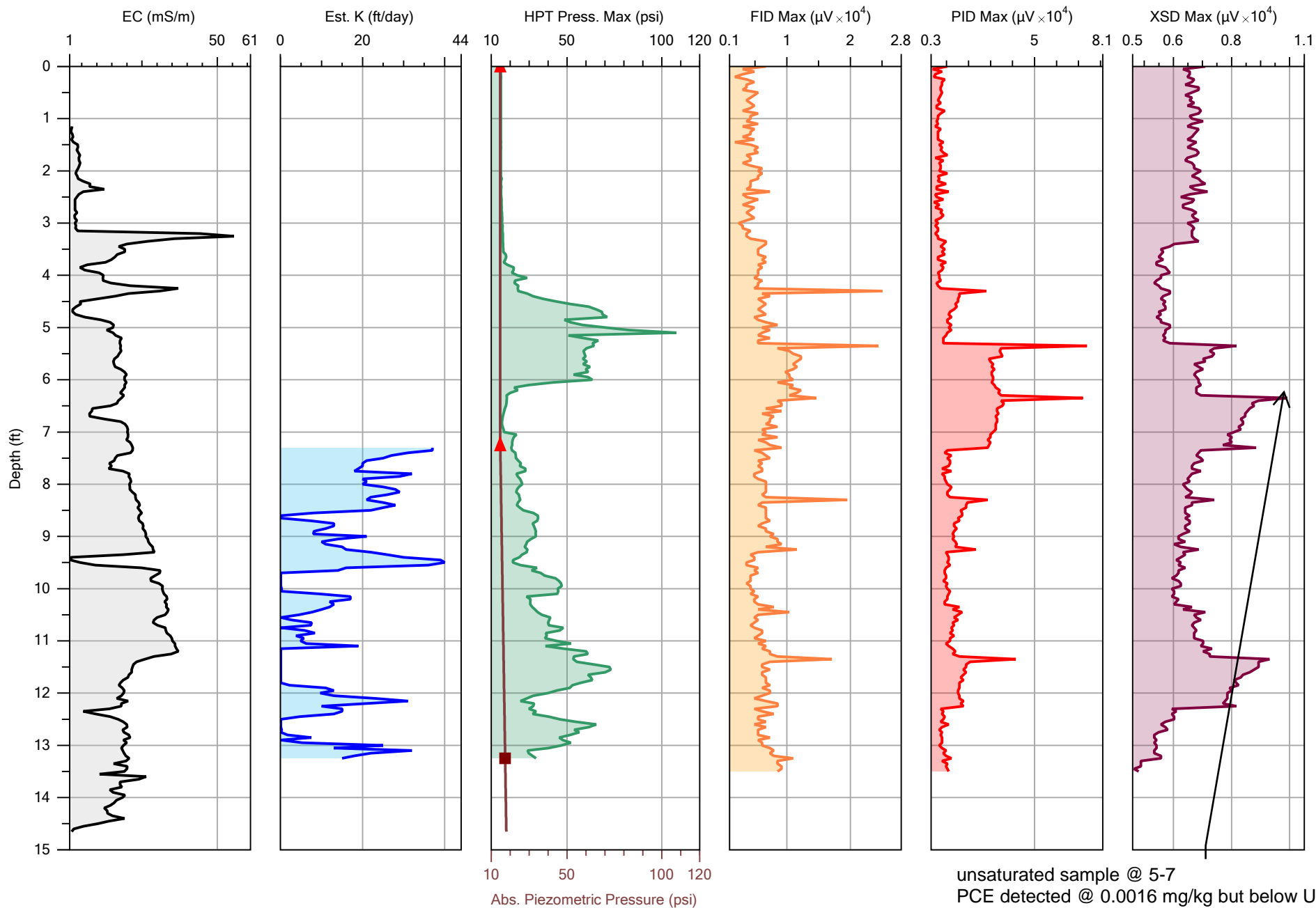
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Project ID:	767 East 133rd Street	Client:	Langan	Date:	7/29/2021
				Location:	MIP-01



S₂ C₂ inc.

Company:		Operator:	File:
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Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-02

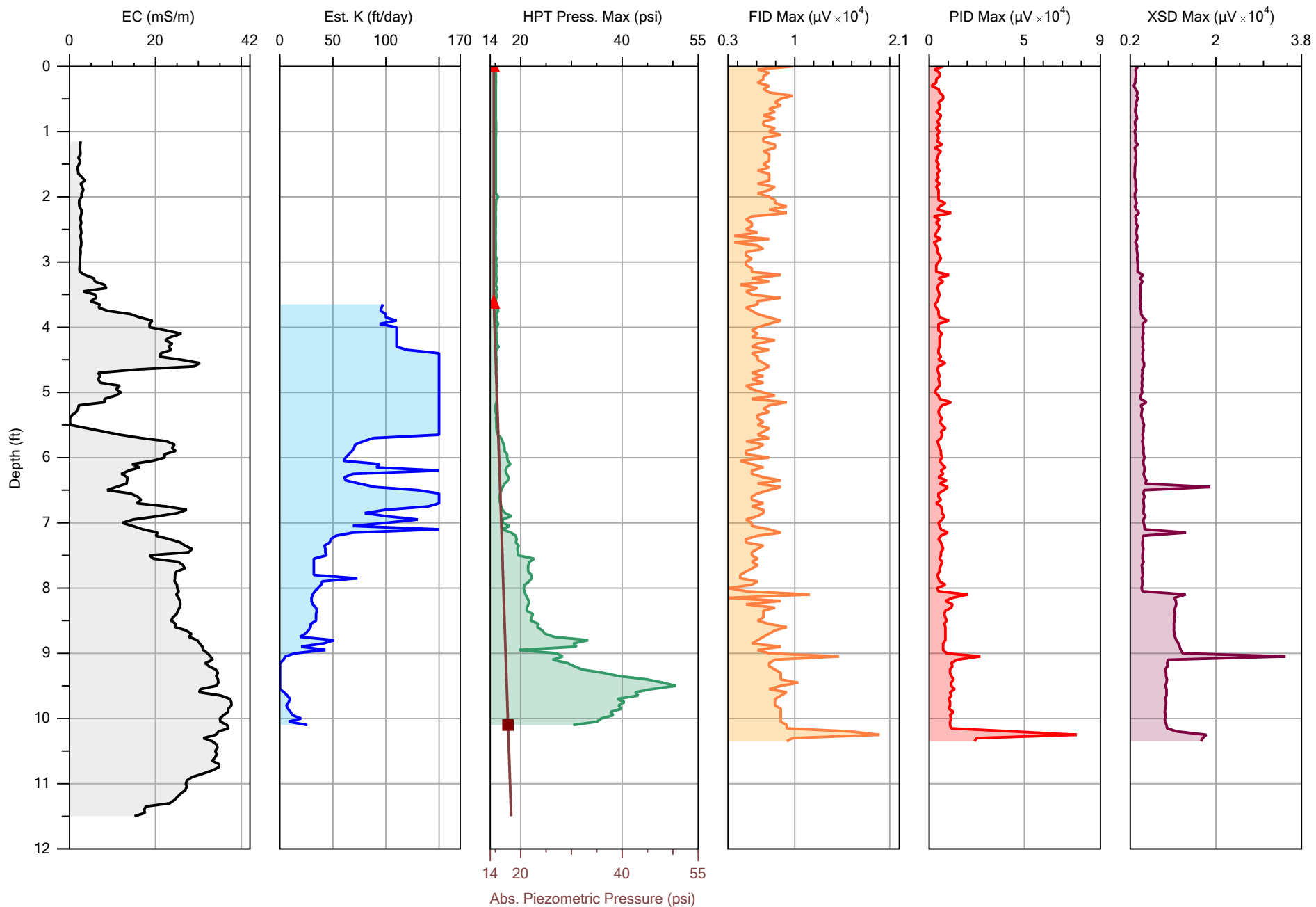


S₂ C₂ inc.

Company: S2C2
Project ID: 767 East 133rd Street

Operator: TK
Client: Langan

File:	MIP-03.MHP
Date:	7/28/2021
Location:	MIP-03

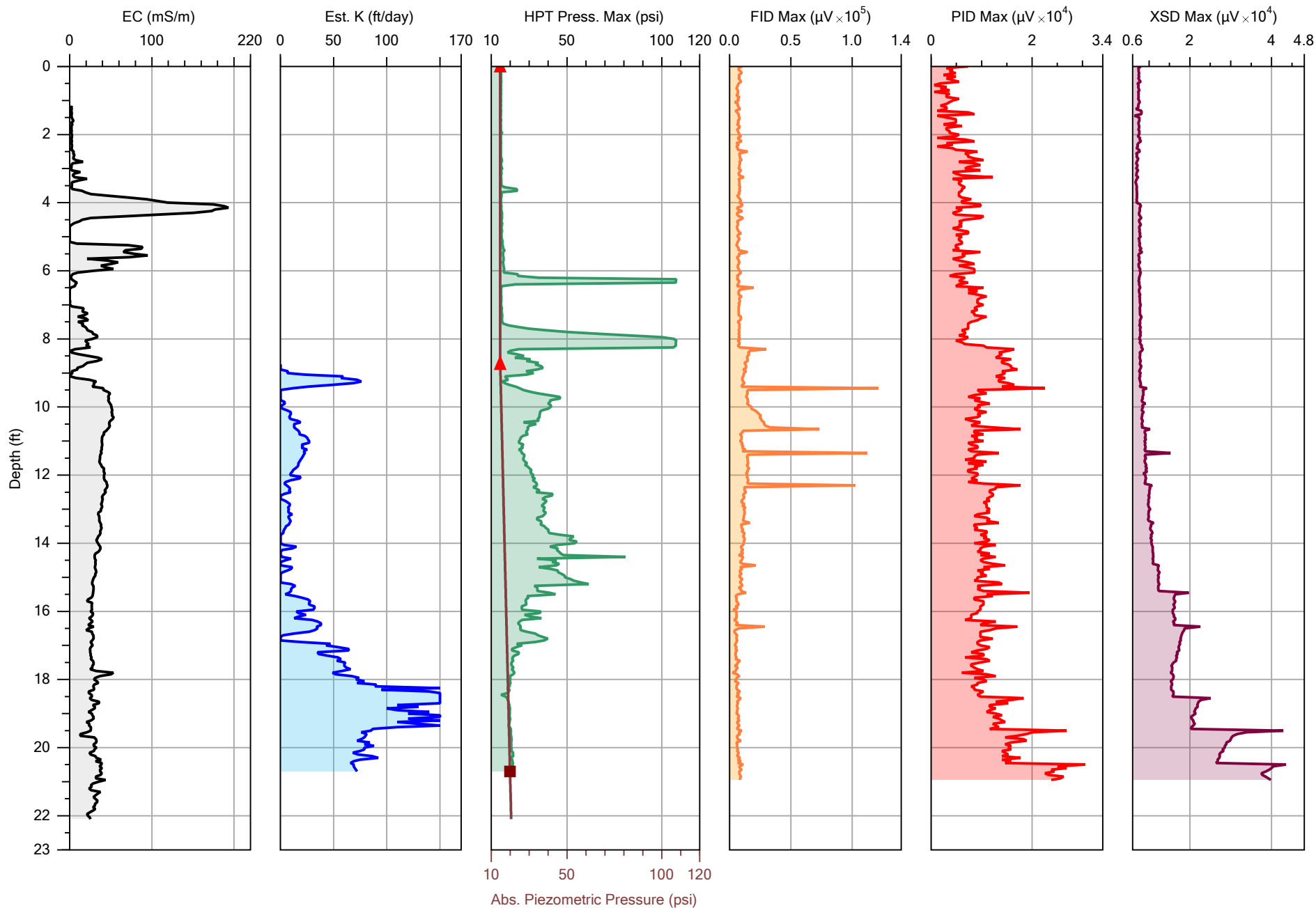


S₂ C₂ inc.

Company: S2C2
Project ID: 767 East 133rd Street

Operator: TK
Client: Langan

File:	MIP-04.MHP
Date:	7/28/2021
Location:	MIP-04

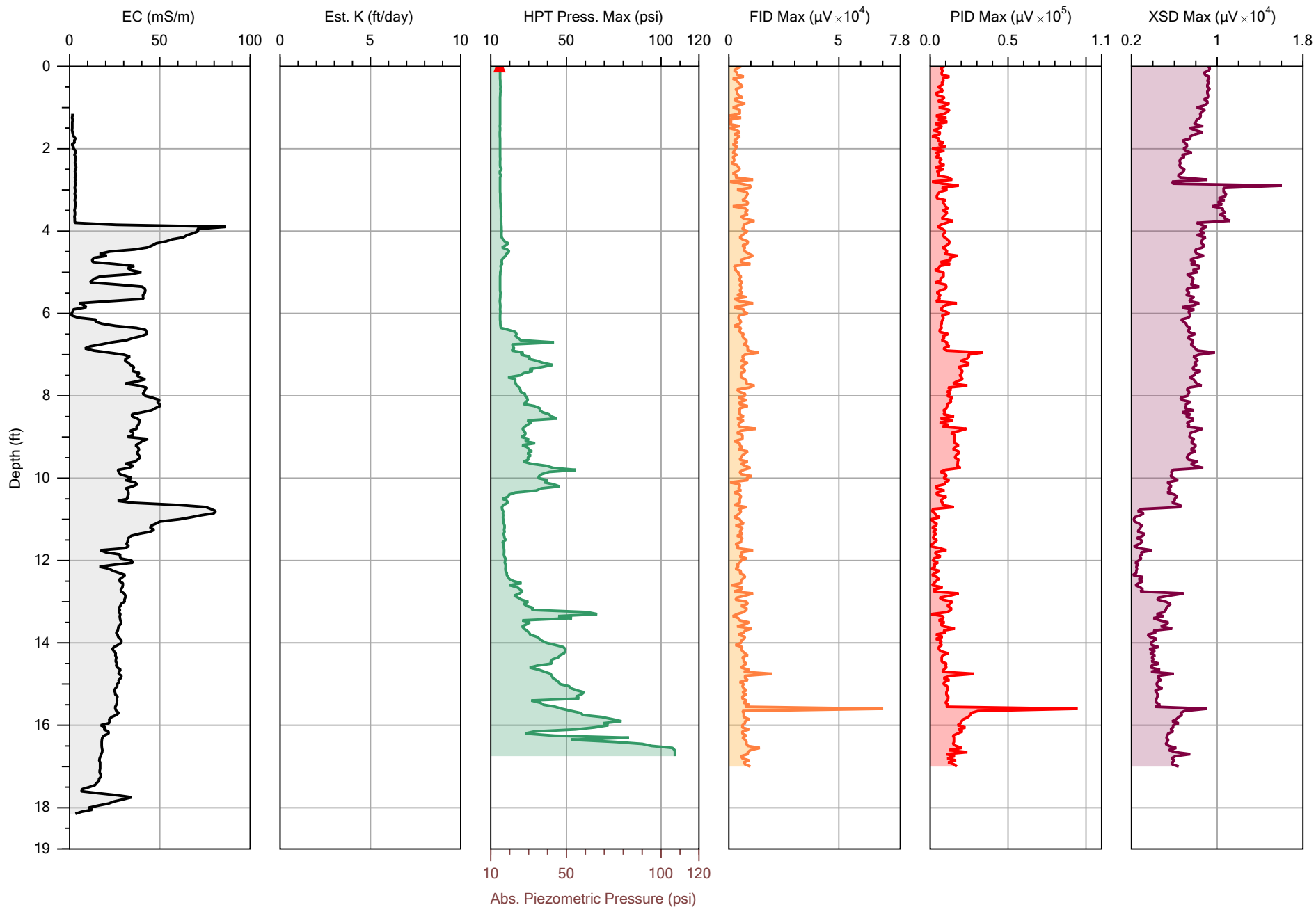


S₂ C₂ inc.

Company: S2C2
Project ID: 767 East 133rd Street

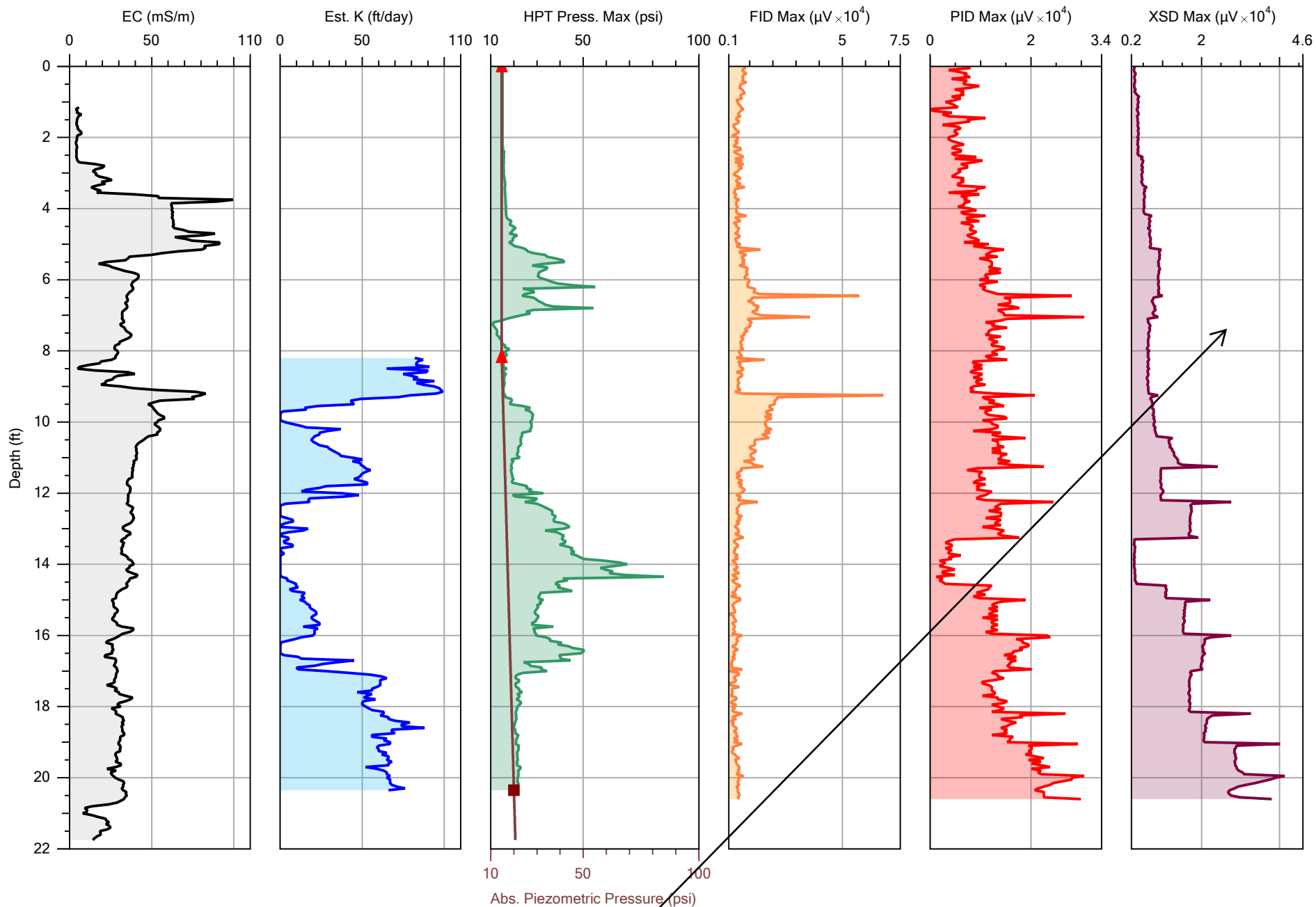
Operator: TK
Client: Langan

File:	MIP-05.MHP
Date:	7/28/2021
Location:	MIP-05



S₂ C₂ inc.

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Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/29/2021
			Location:
			MIP-06

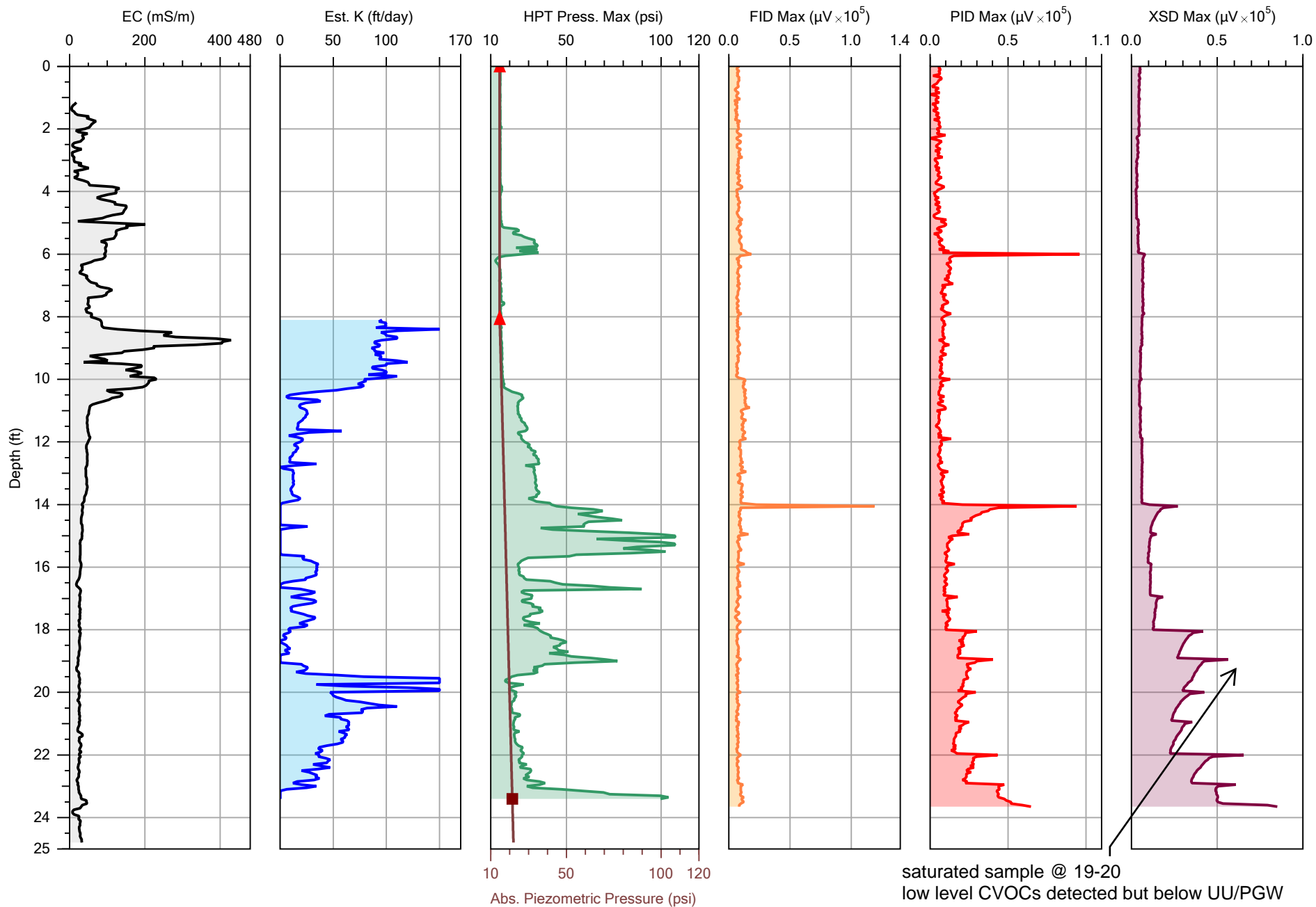


unsaturated sample @ 6-7
vinyl chloride, cis-1,2-DCE, 1,2-DCE, detected but below UU/PGW

saturated sample @ 18-19
low level CVOCs detected but below UU/PGW

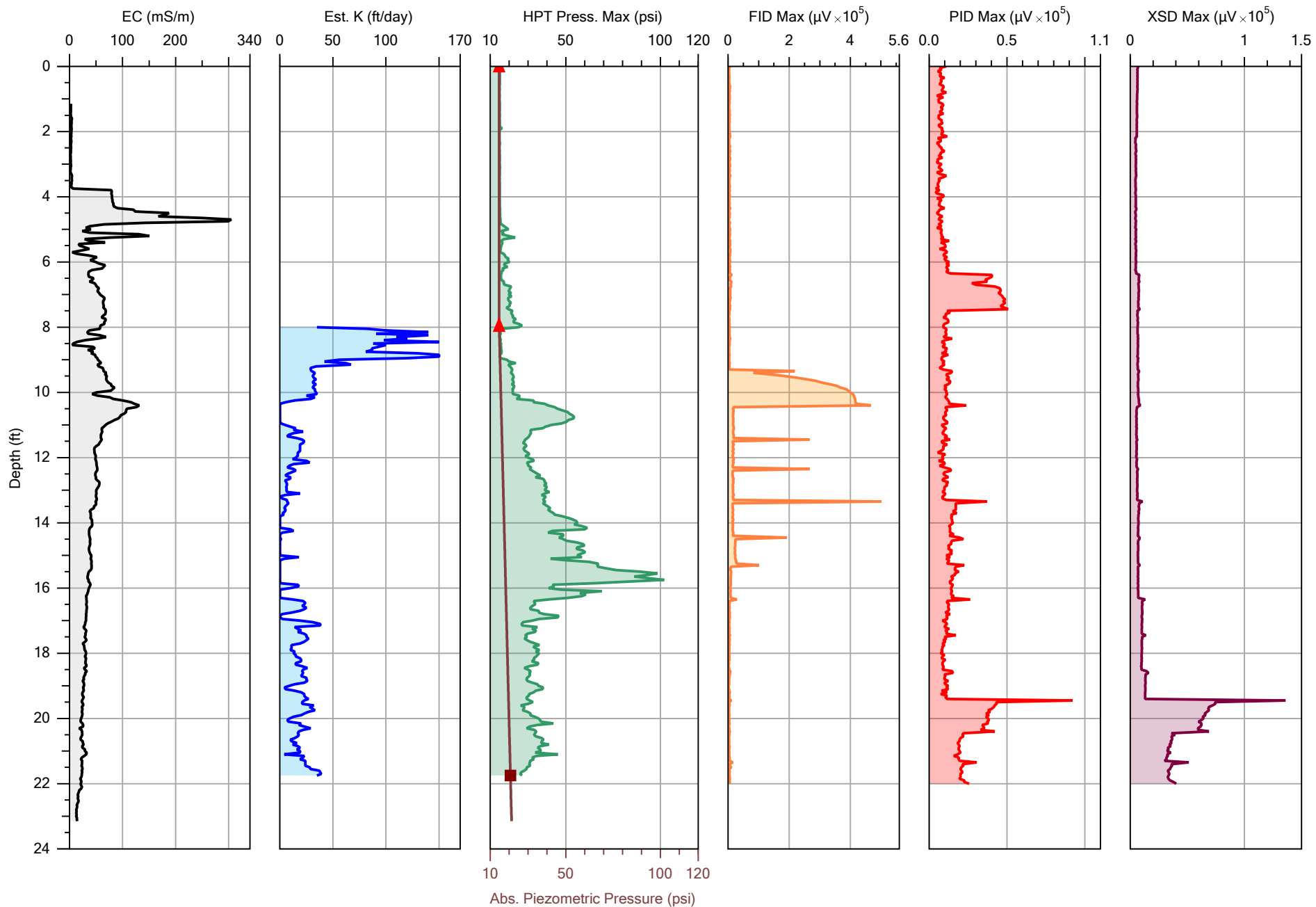
S₂C₂ inc.

Company:	S2C2	Operator:	TK	File:	MIP-07.MHP
Project ID:	767 East 133rd Street	Client:	Langan	Date:	7/28/2021
				Location:	MIP-07



S₂ C₂ inc.

Company:	S2C2	Operator:	TK	File:	MIP-08.MHP
Project ID:	767 East 133rd Street	Client:	Langan	Date:	7/28/2021
				Location:	MIP-08

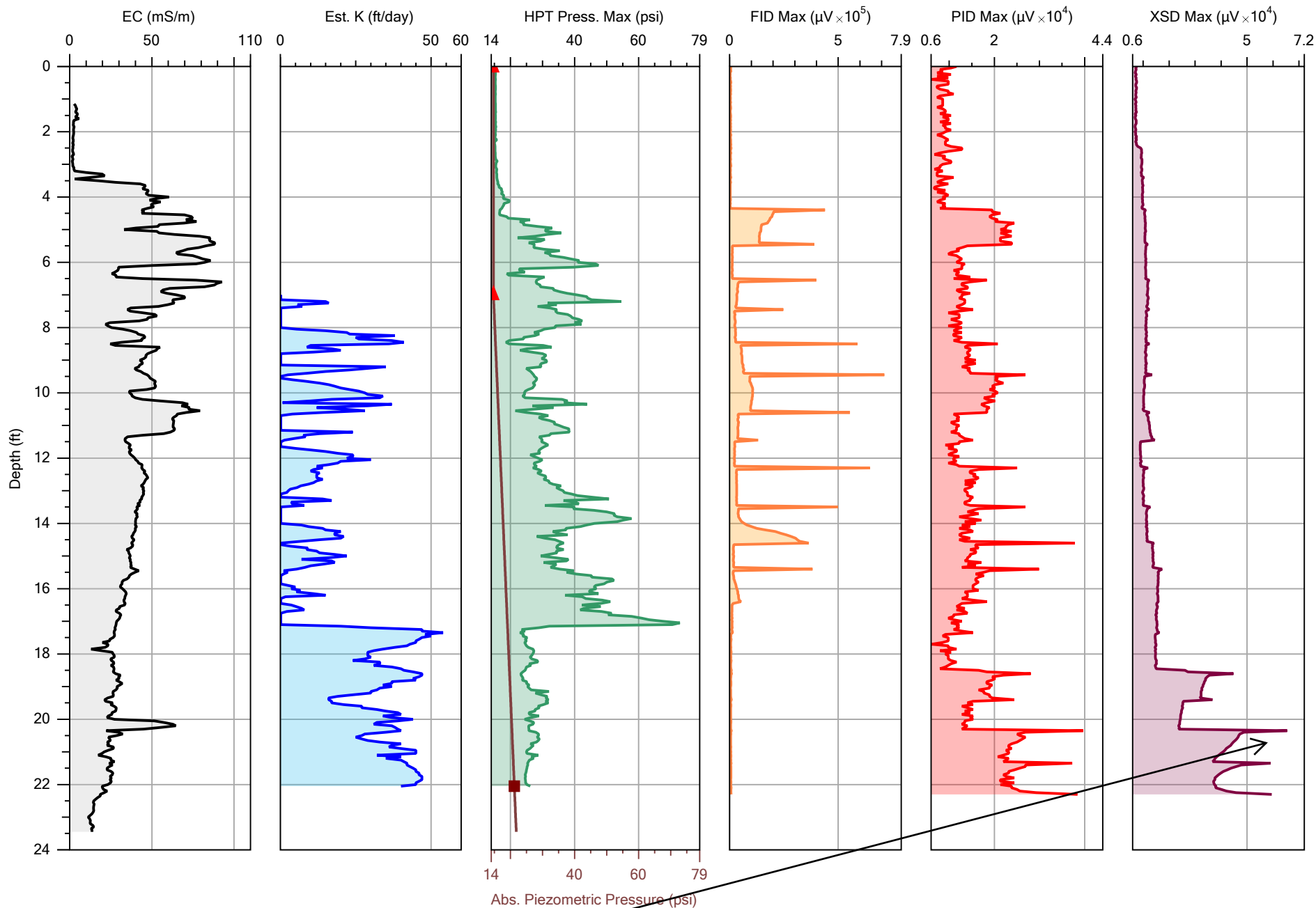


S₂ C₂ inc.

Company: S2C2
Project ID: 767 East 133rd Street

Operator: TK
Client: Langan

File:	MIP-09.MHP
Date:	7/28/2021
Location:	MIP-09



unsaturated sample @ 9-10
no CVOCs detected

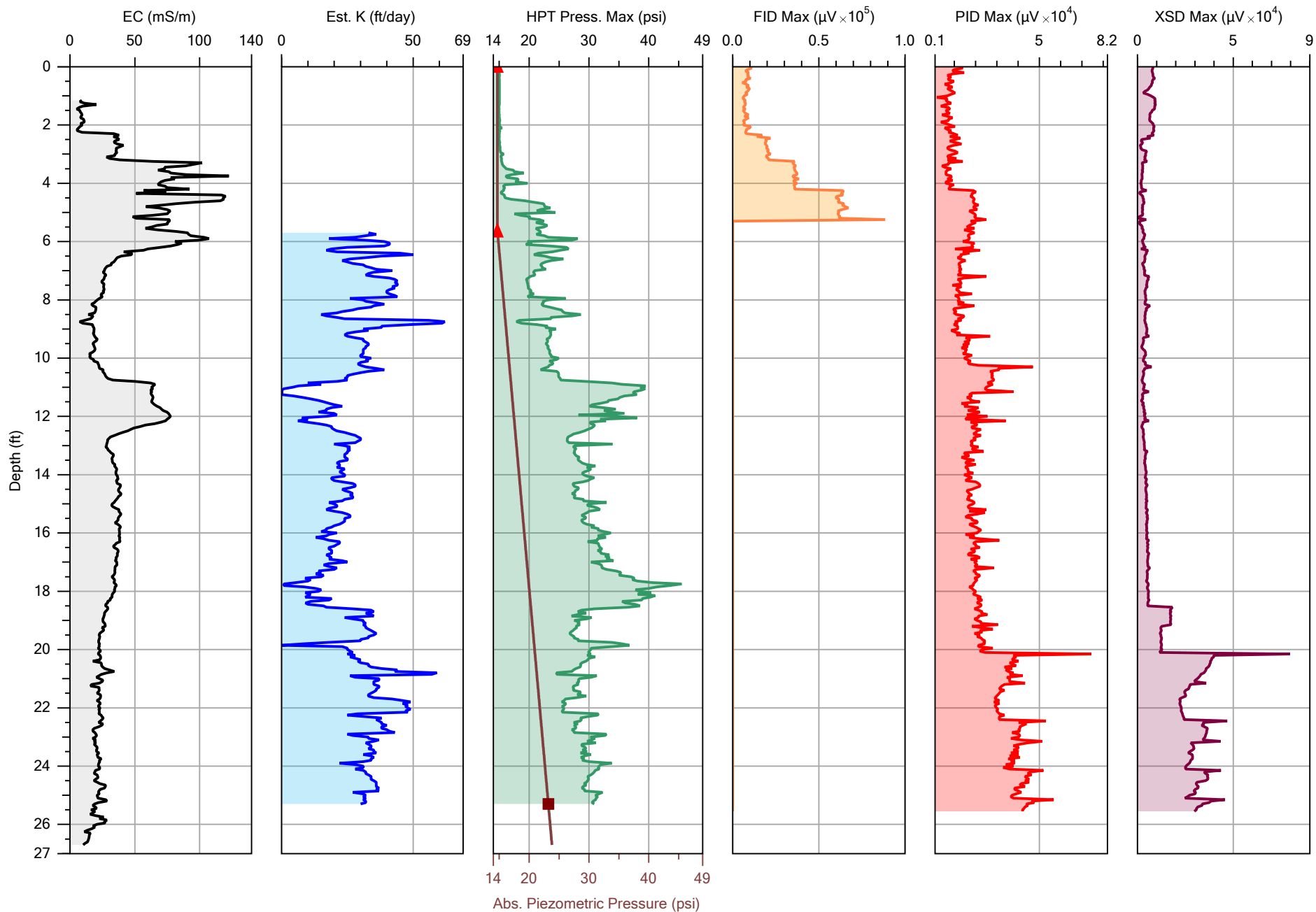
saturated sample @ 23-24
low level CVOCs detected but below UU/PGW

S₂C₂ inc.

Company: S2C2
Project ID: 767 East 133rd Street

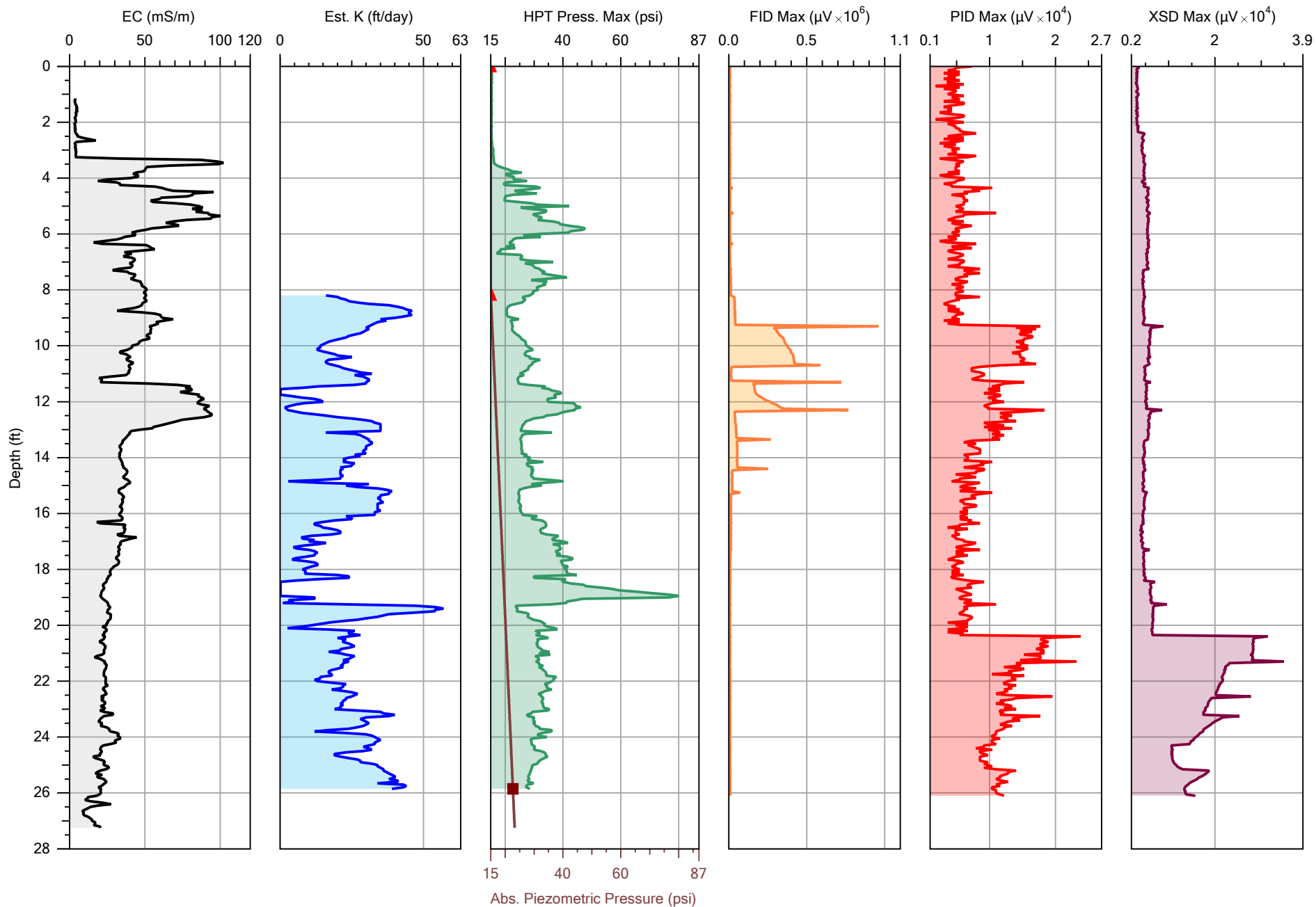
Operator: TK
Client: Langan

File: MIP-10.MHP
Date: 7/29/2021
Location: MIP-10



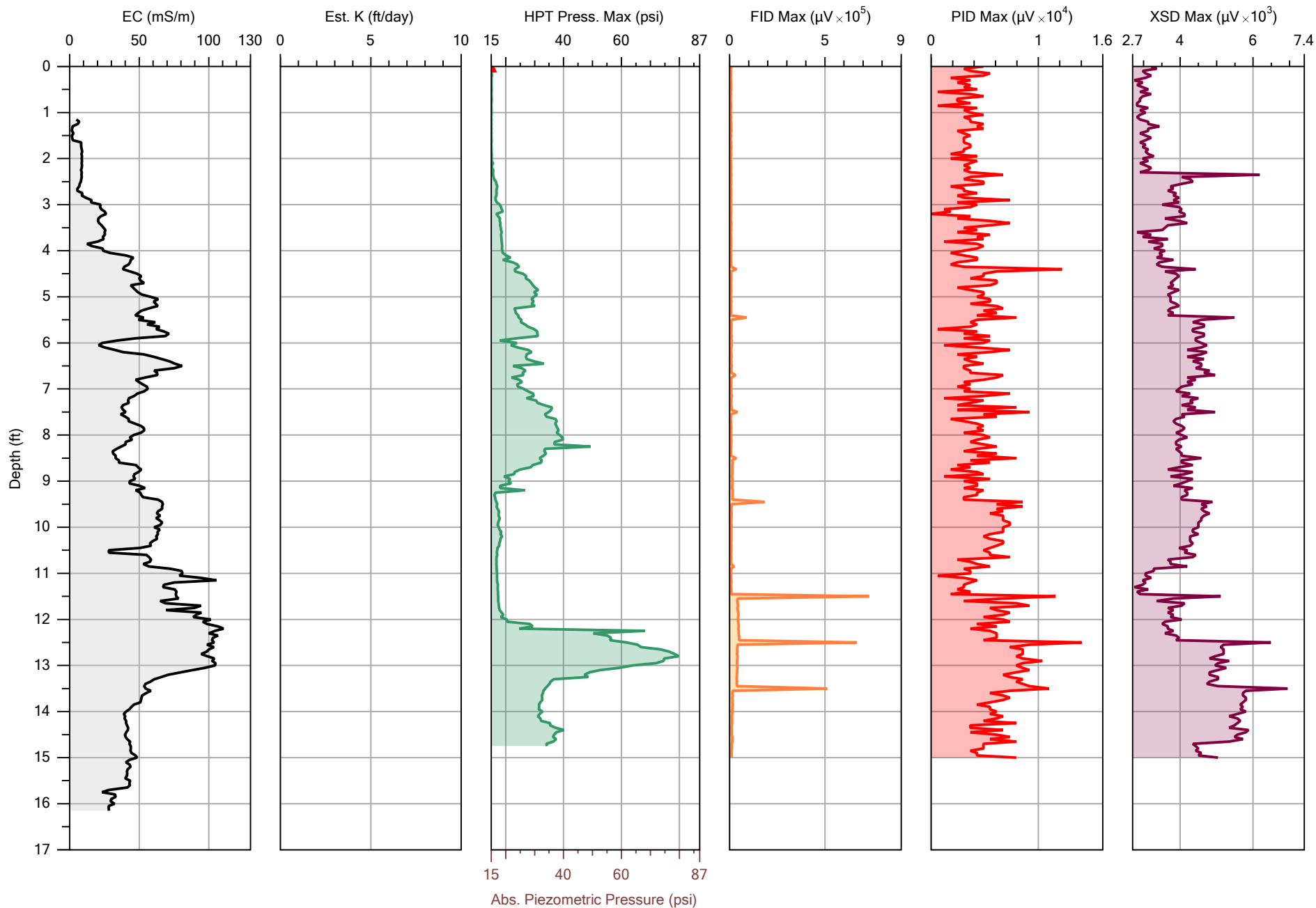
S₂ C₂ inc.

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S2C2		TK	MIP-11.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/29/2021
			Location:
			MIP-11



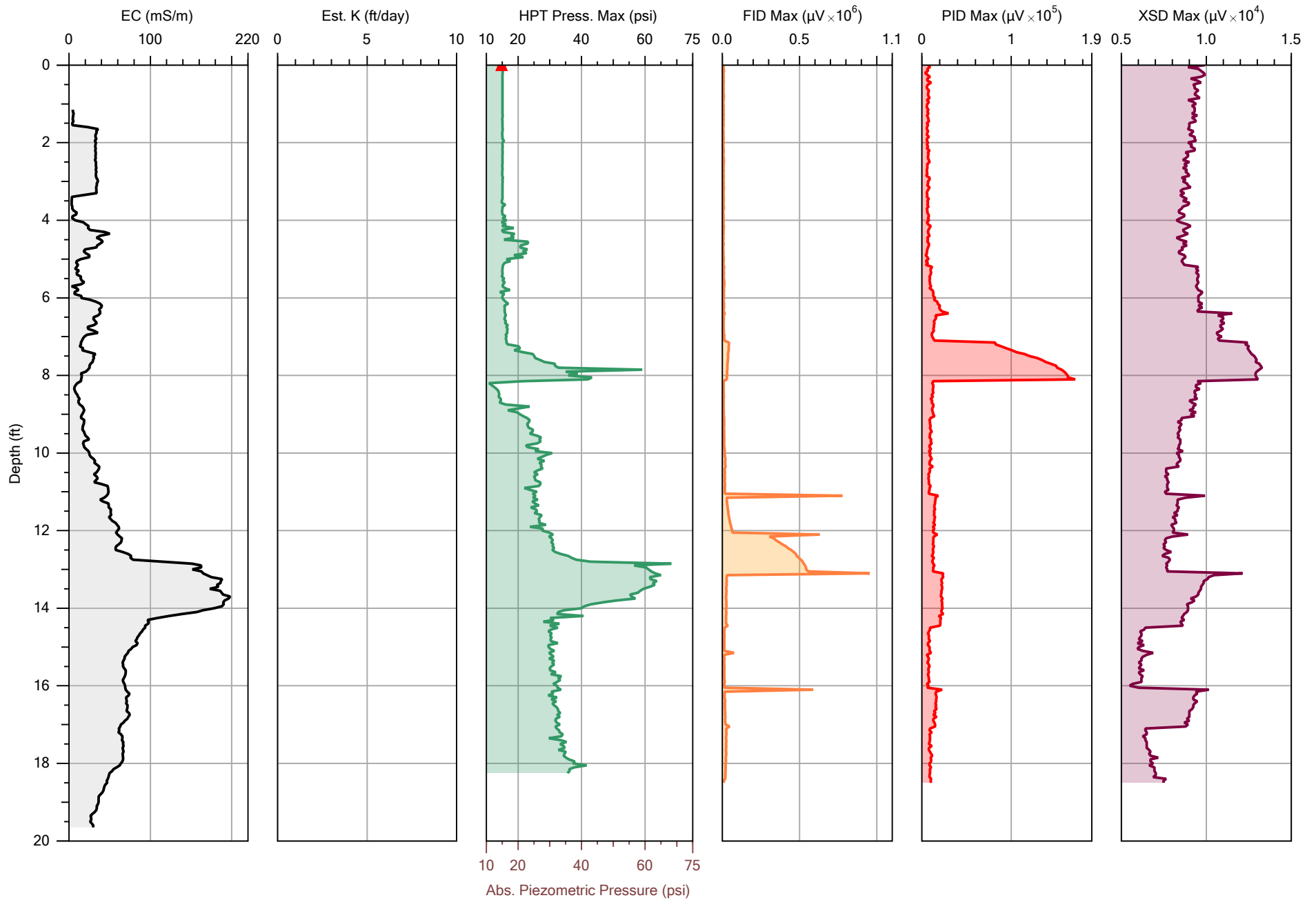
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Project ID:		Client:	Date:
767 East 133rd Street		Langan	8/3/2021
			Location:
			MIP-12



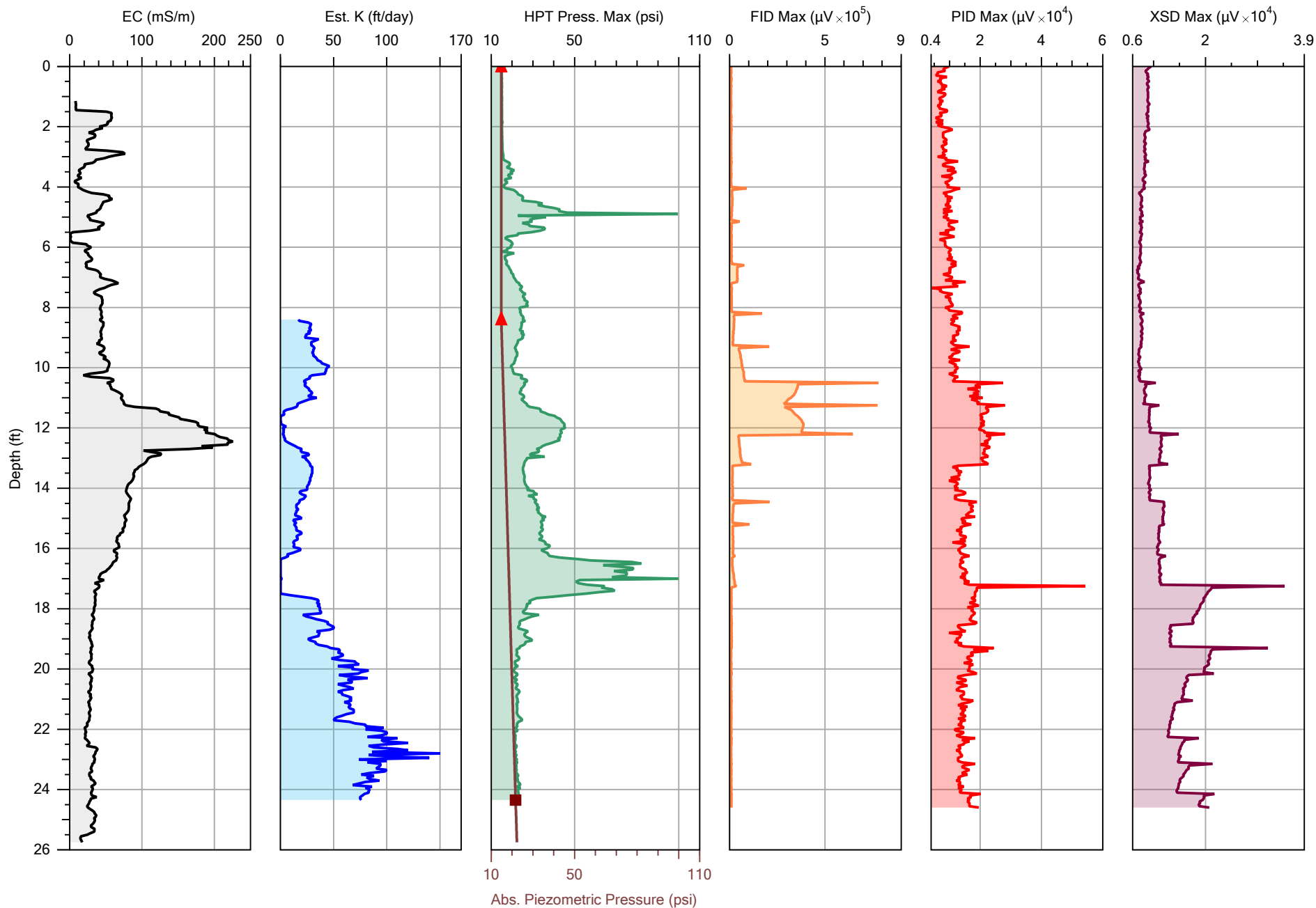
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Project ID:	767 East 133rd Street	Client:	Langan	Date:	8/3/2021
				Location:	MIP-13



S₂ C₂ inc.

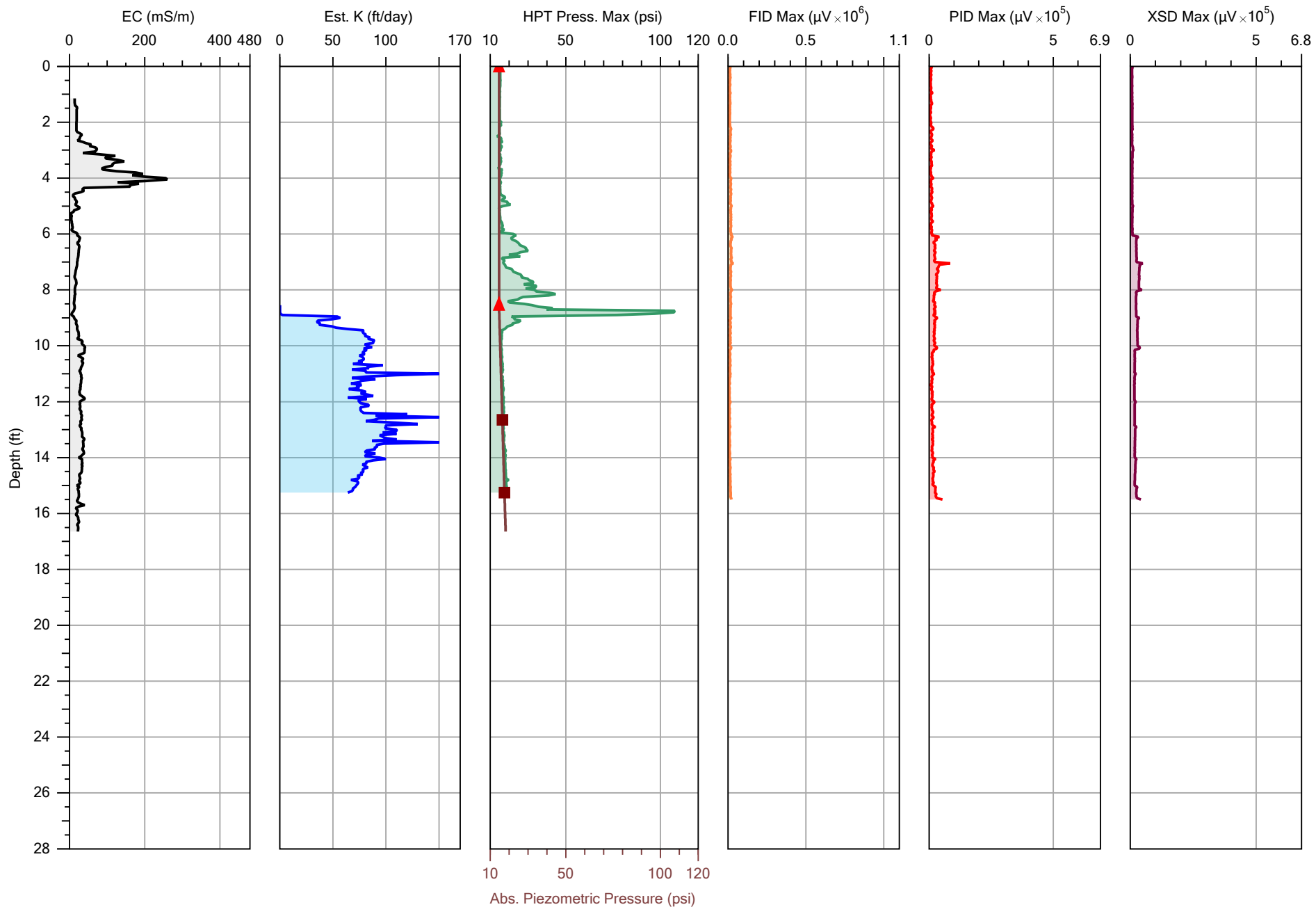
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S₂ C₂ inc.

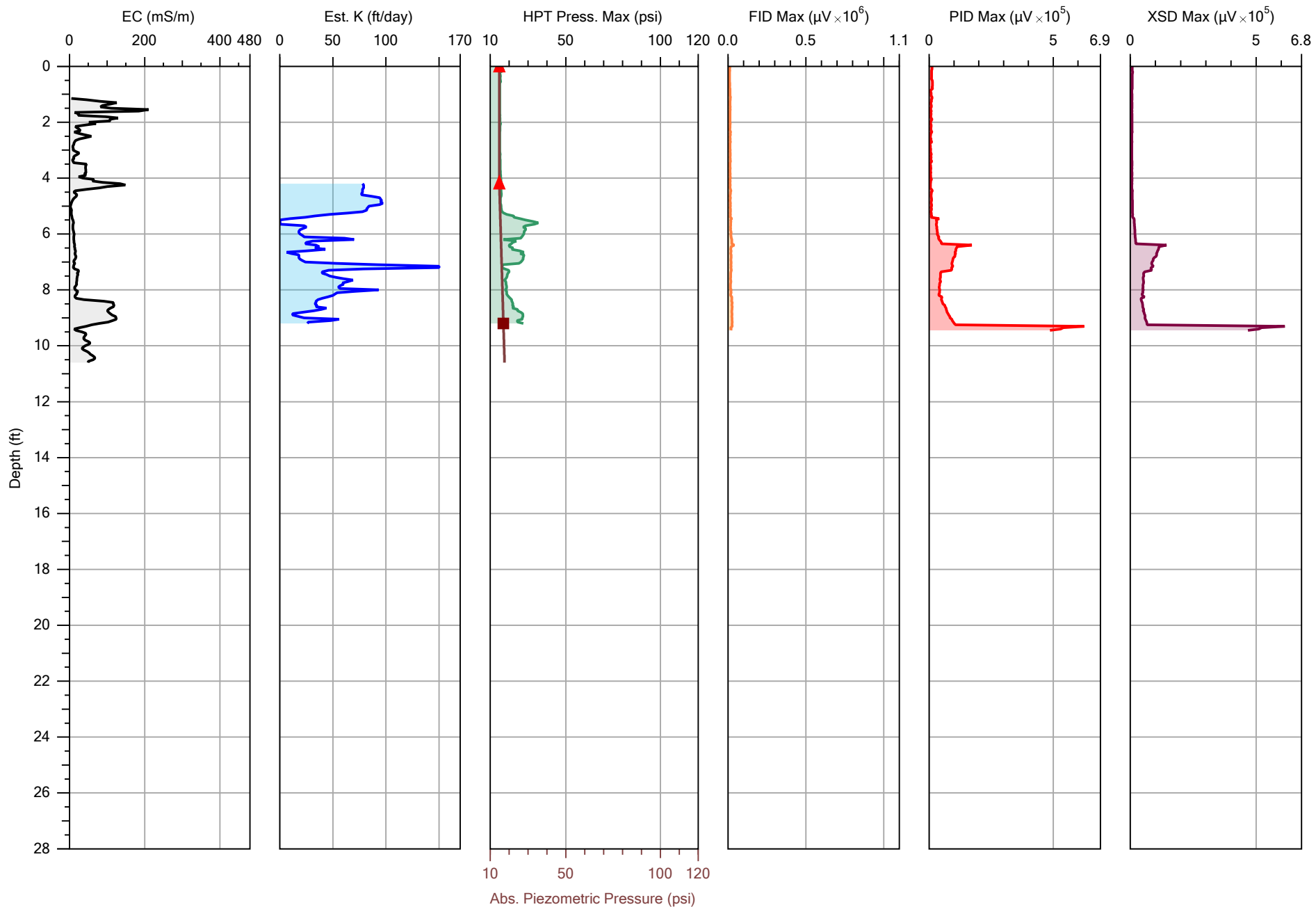
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Appendix A: MiHPT Logs (Scaled Alike)



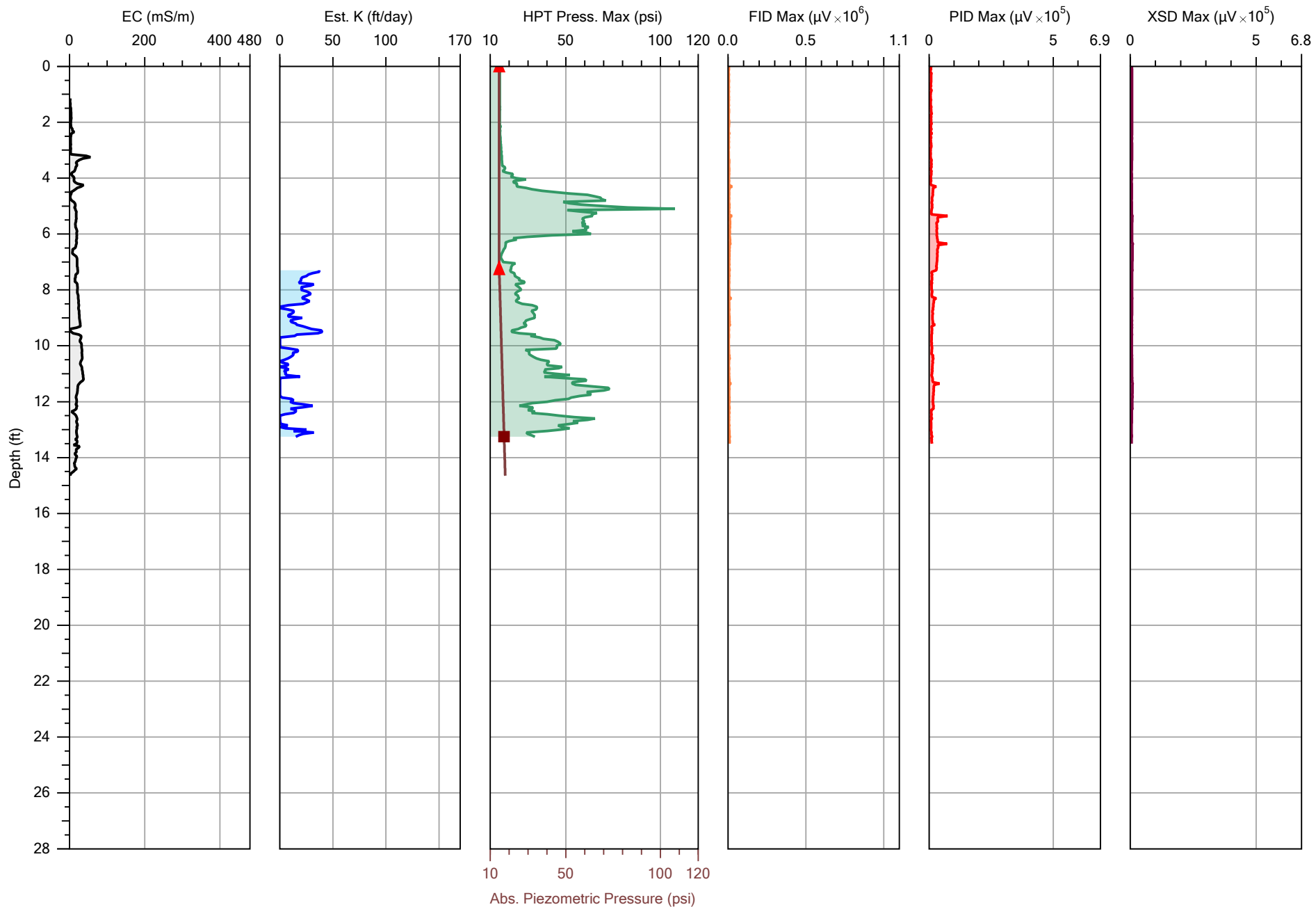
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767 East 133rd Street		Langan	7/29/2021
			Location:
			MIP-01



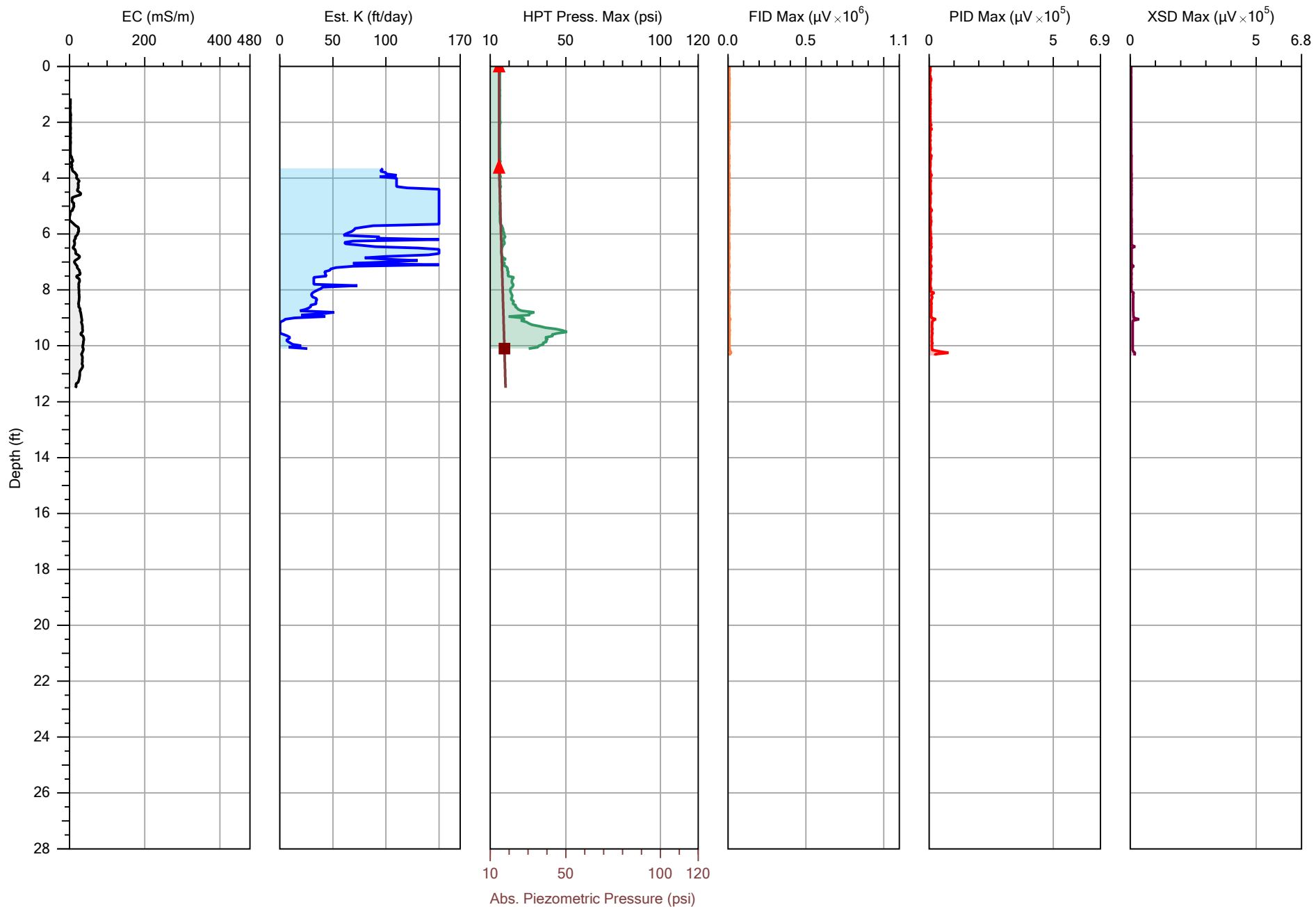
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767 East 133rd Street		Langan	7/28/2021
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			MIP-02



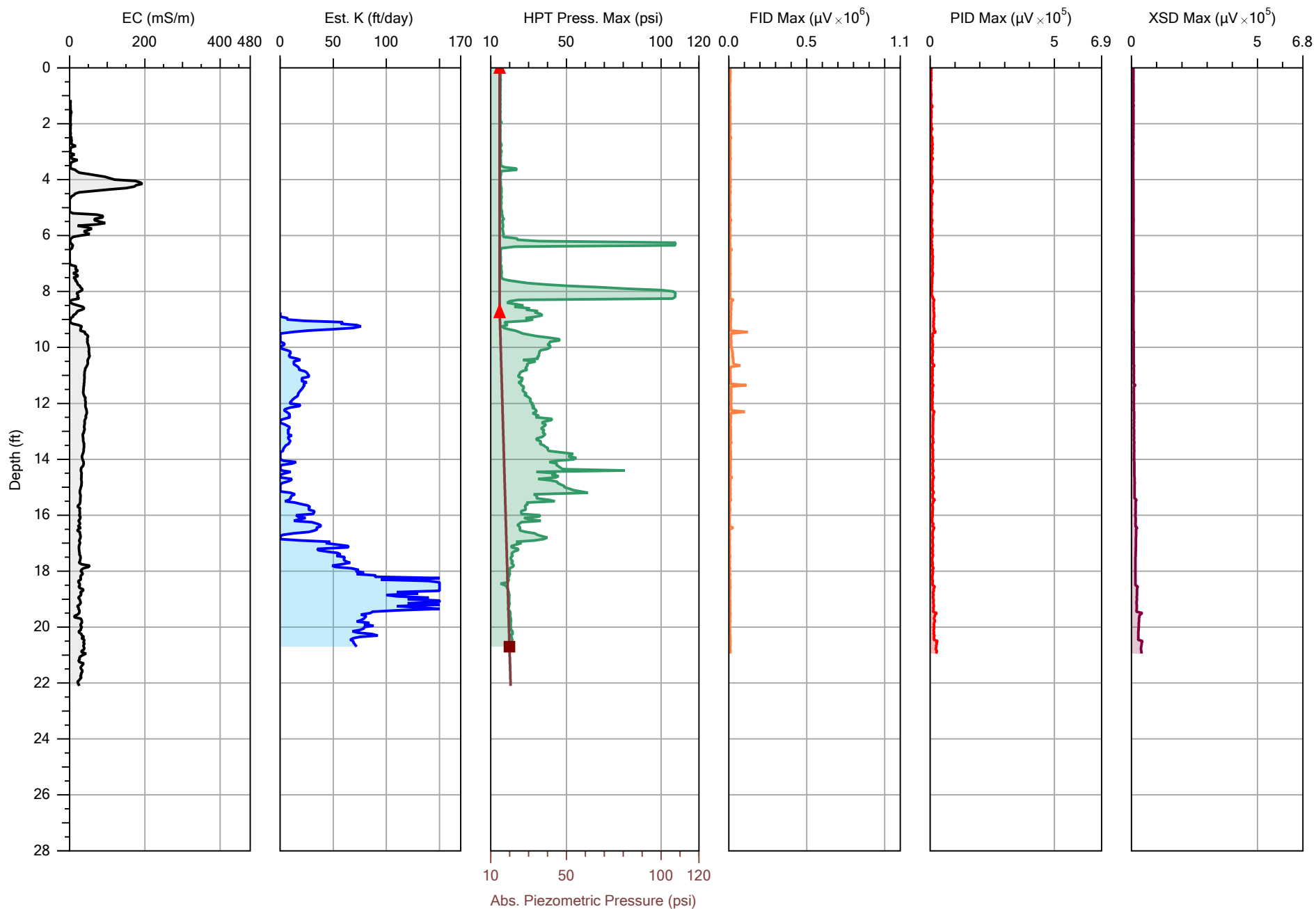
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			Location:
			MIP-03



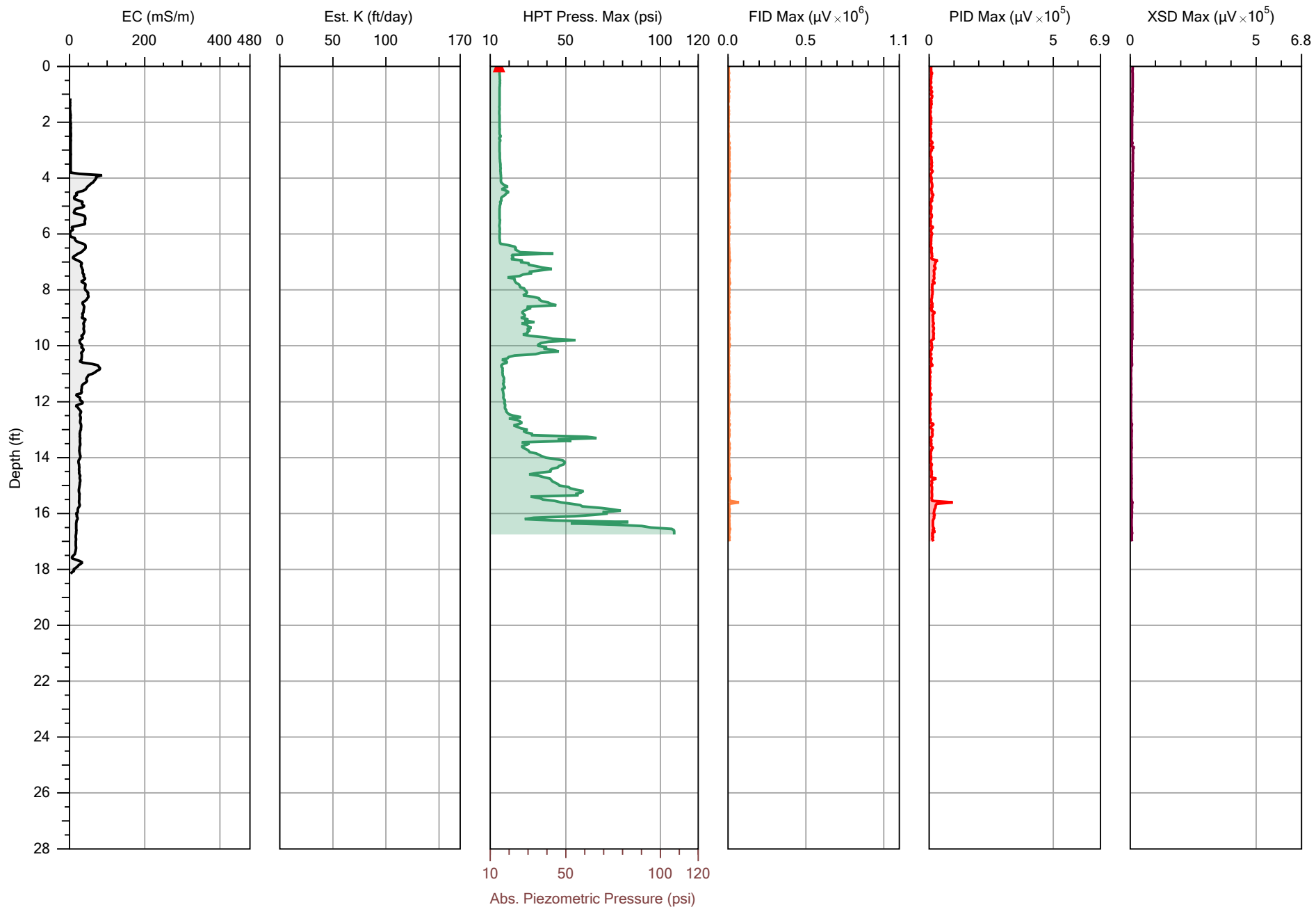
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			Location:
			MIP-04



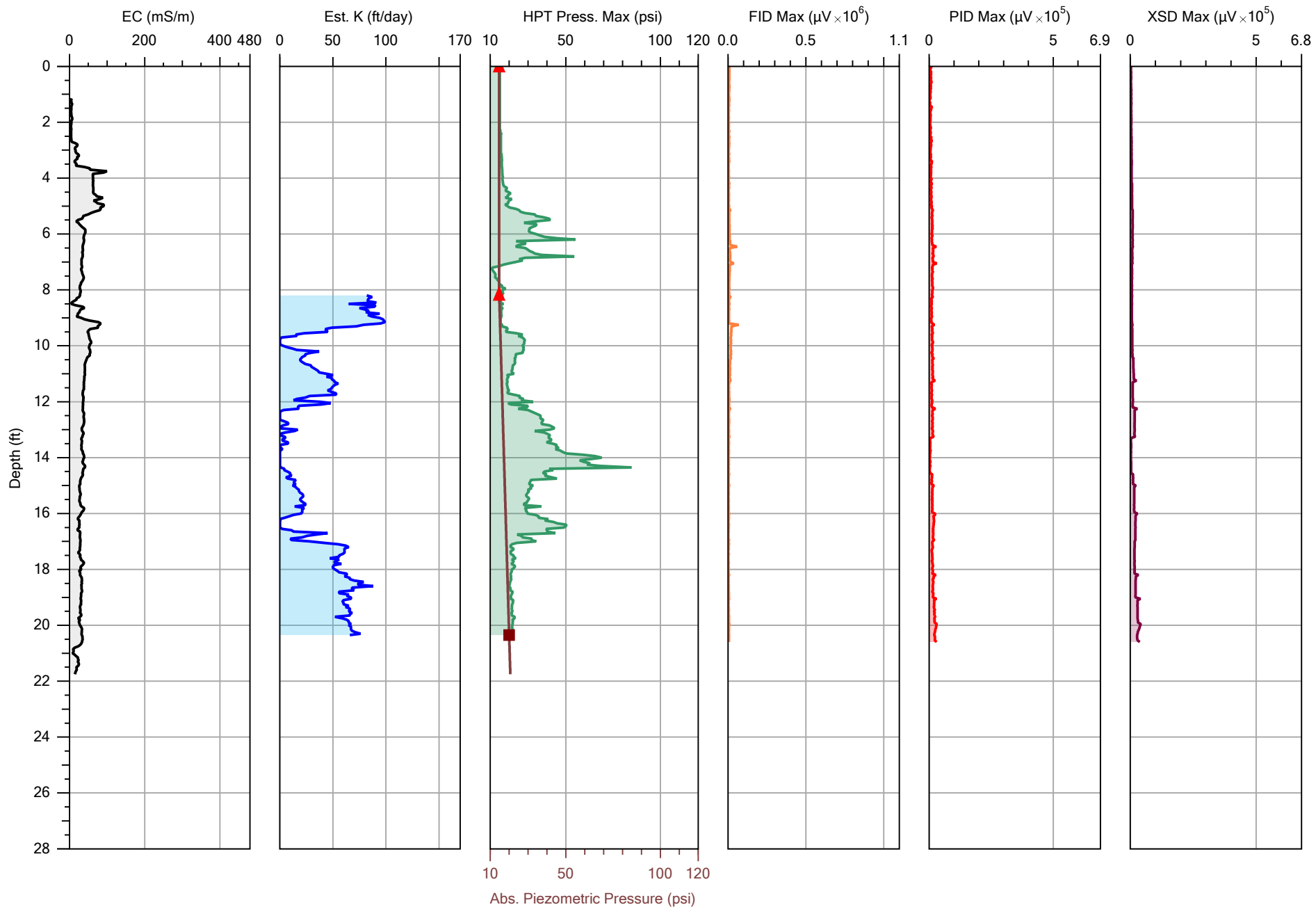
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Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-05



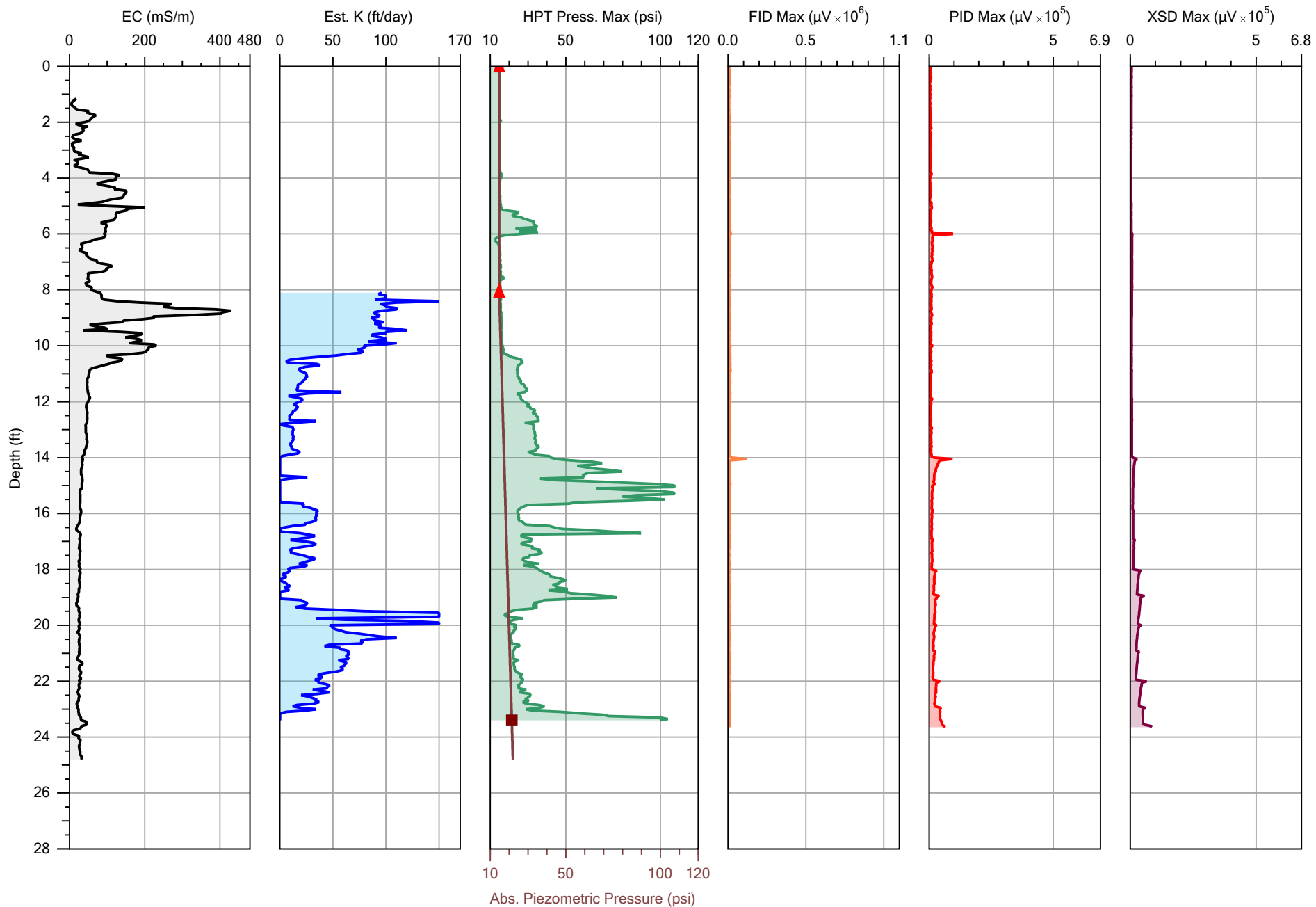
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Company:		Operator:	File:
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Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/29/2021
			Location:
			MIP-06



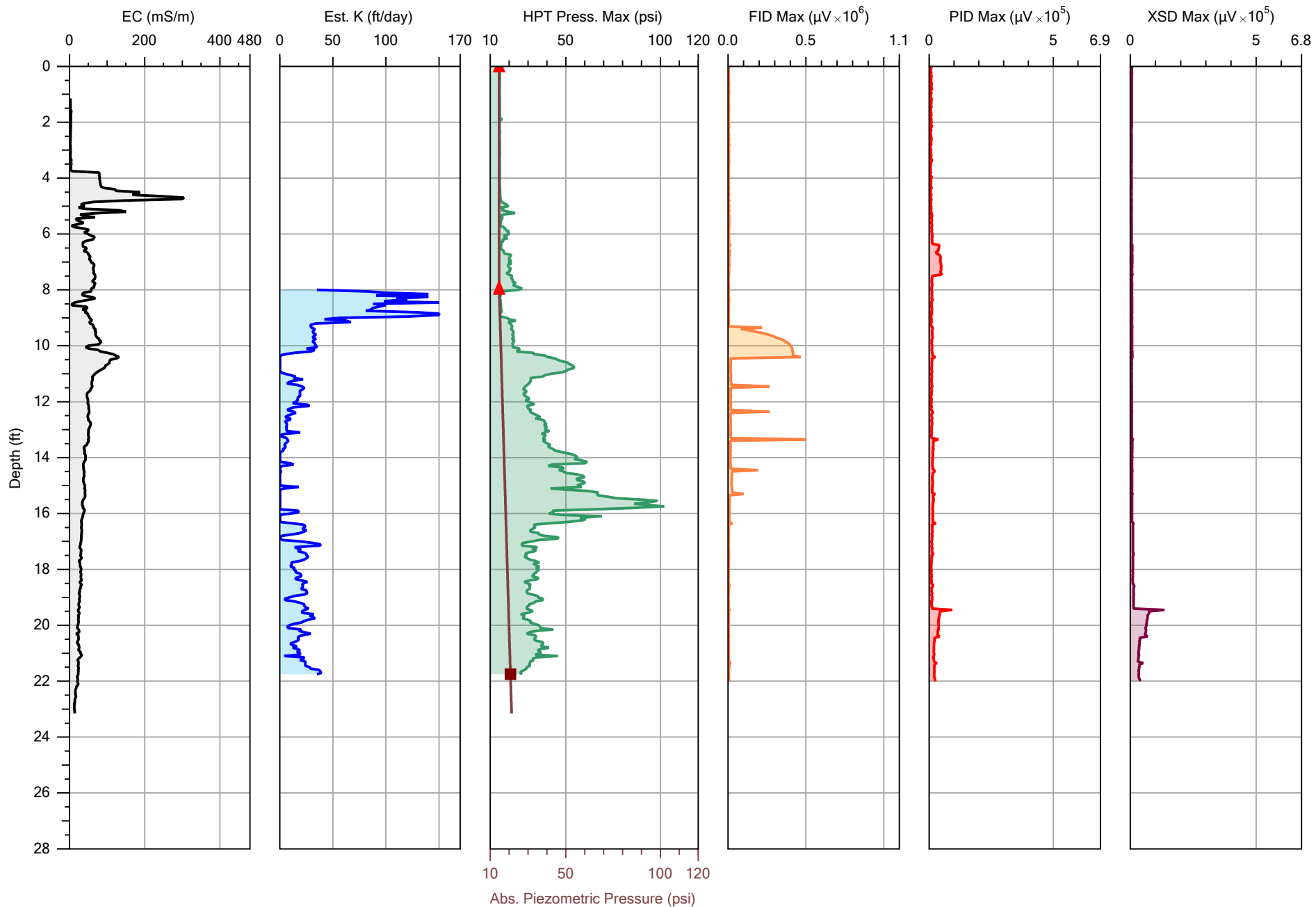
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Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-07



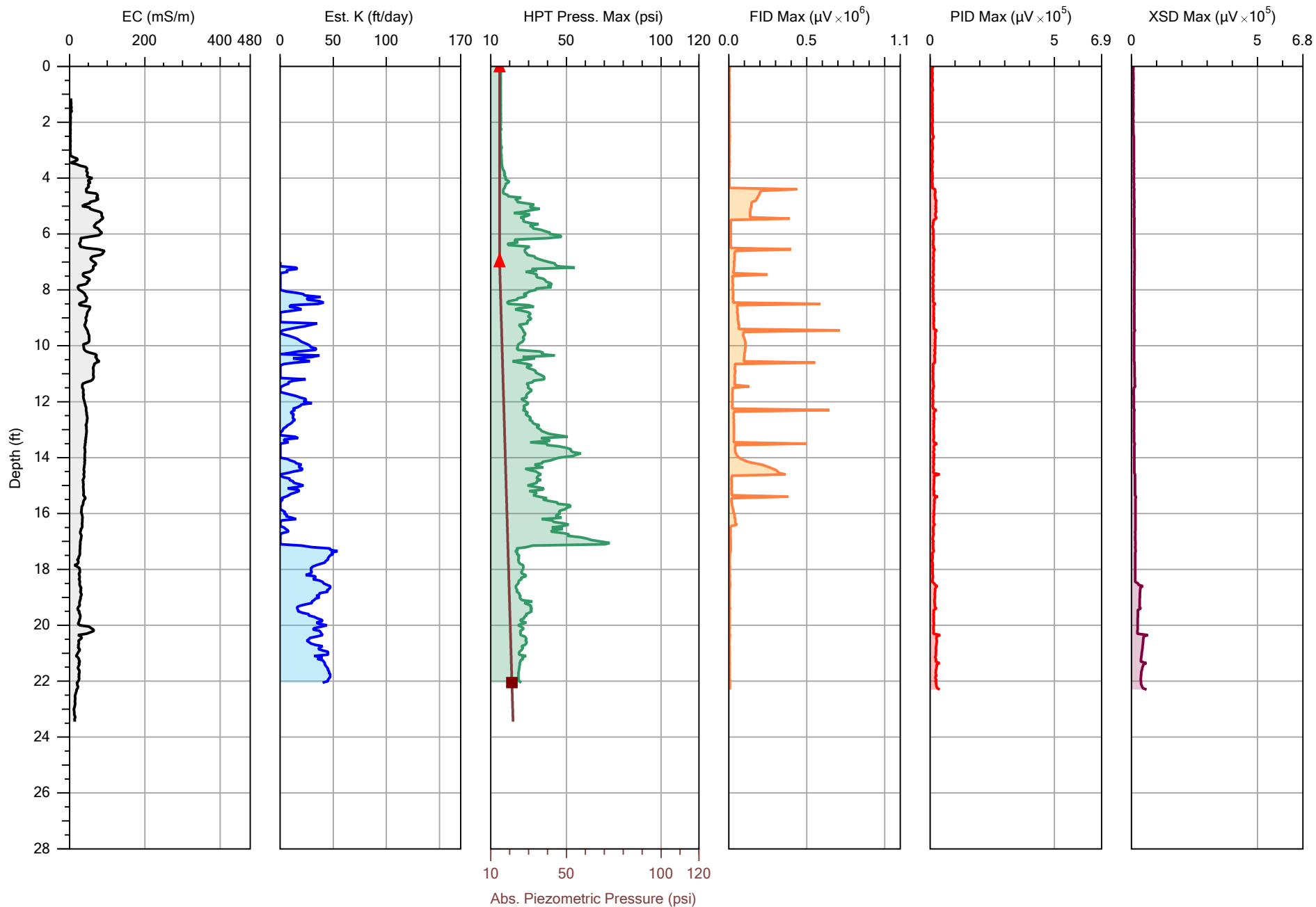
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Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-08



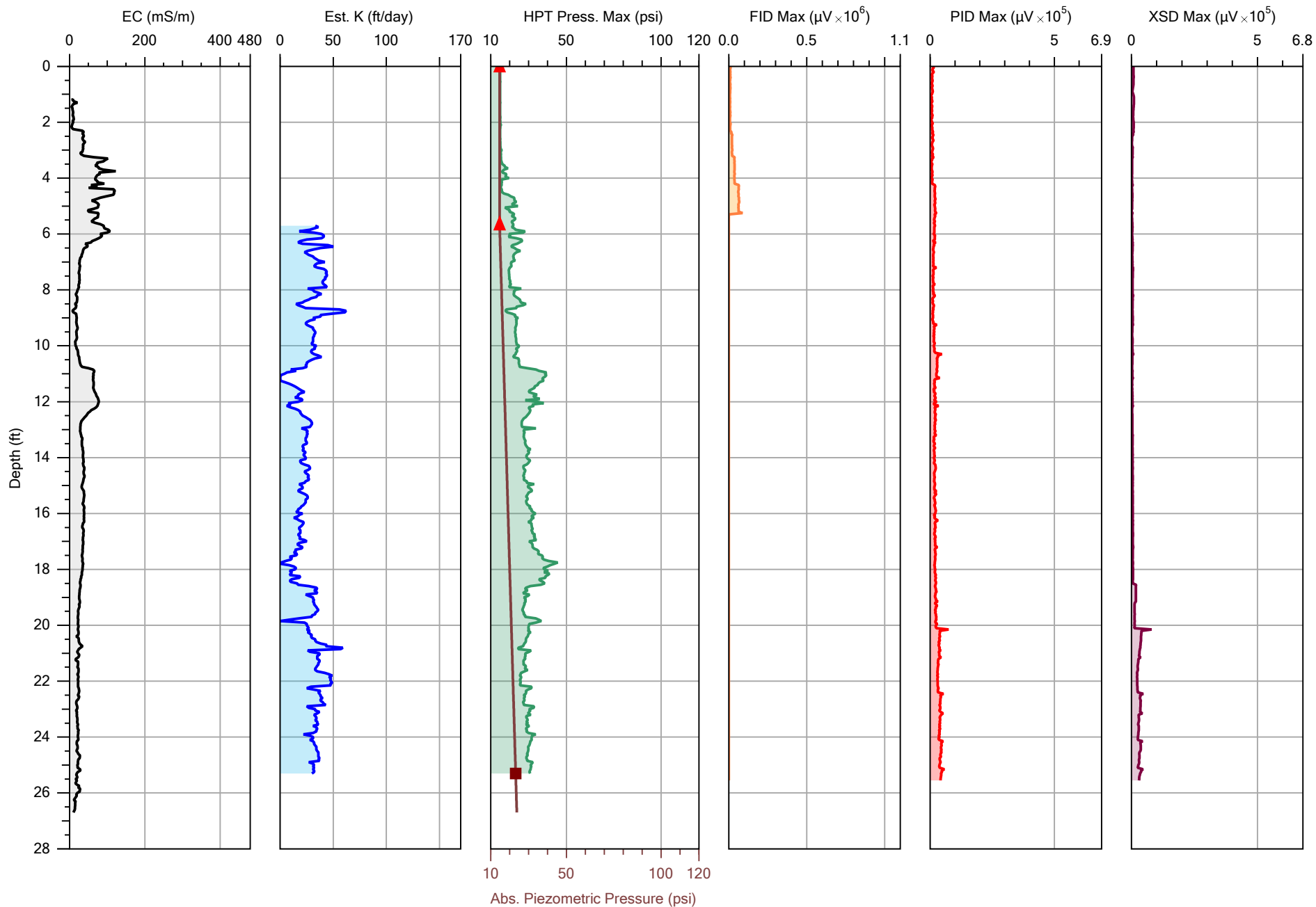
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Company:		Operator:	File:
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Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-09



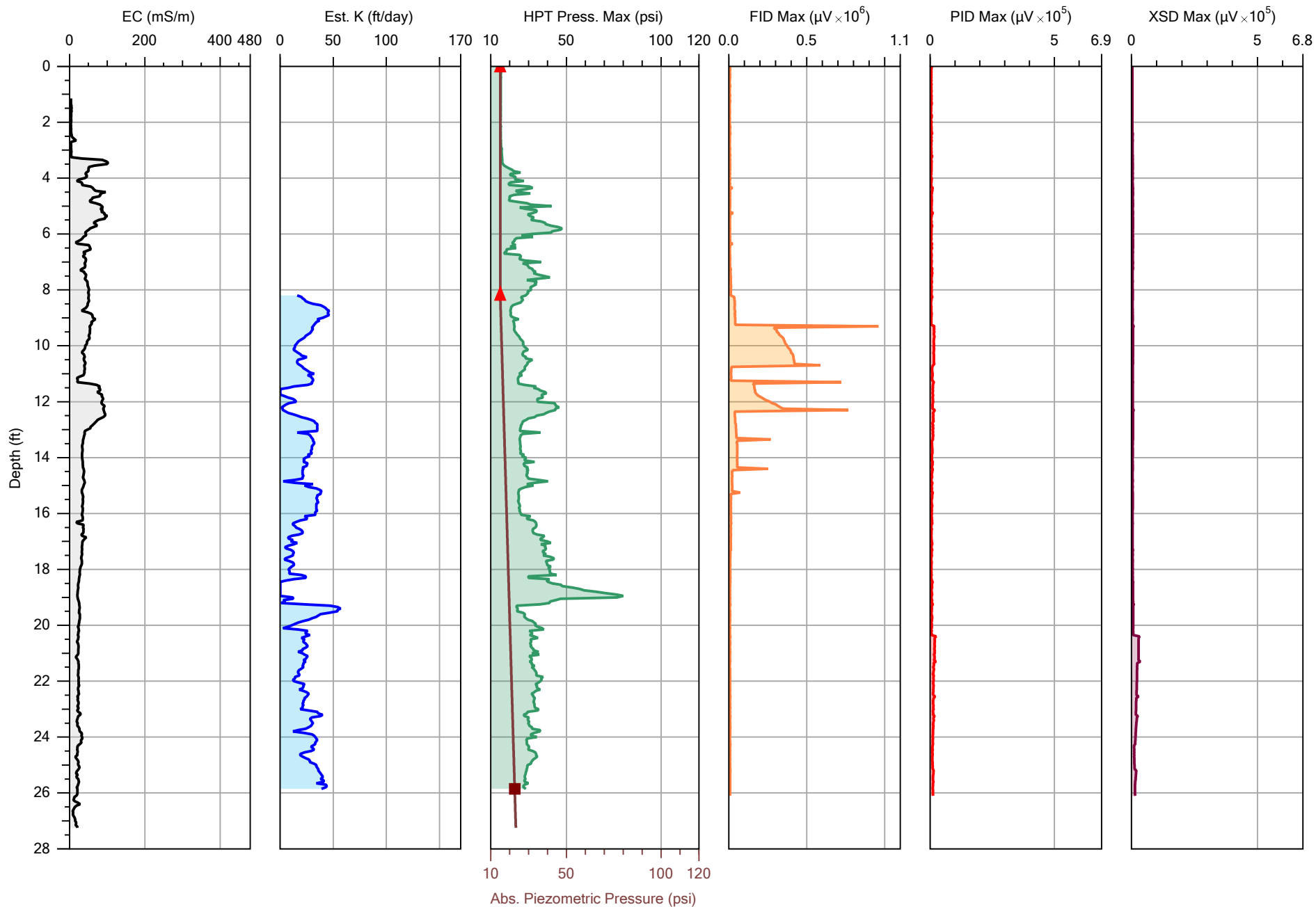
S₂ C₂ inc.

Company:		Operator:	File:
S2C2		TK	MIP-10.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/29/2021
			Location:
			MIP-10



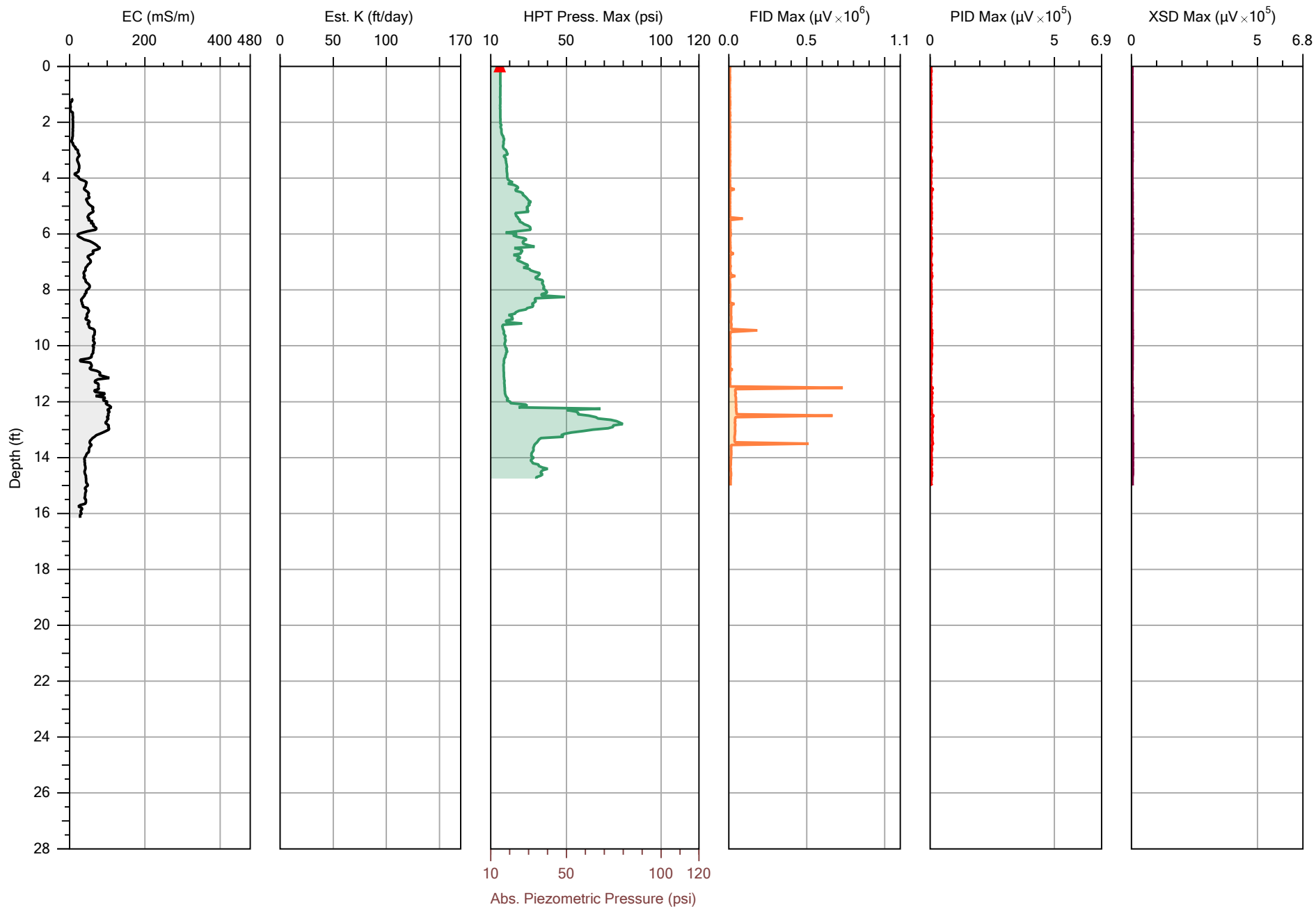
S₂ C₂ inc.

Company:	S2C2	Operator:	TK	File:	MIP-11.MHP
Project ID:	767 East 133rd Street	Client:	Langan	Date:	7/29/2021
				Location:	MIP-11



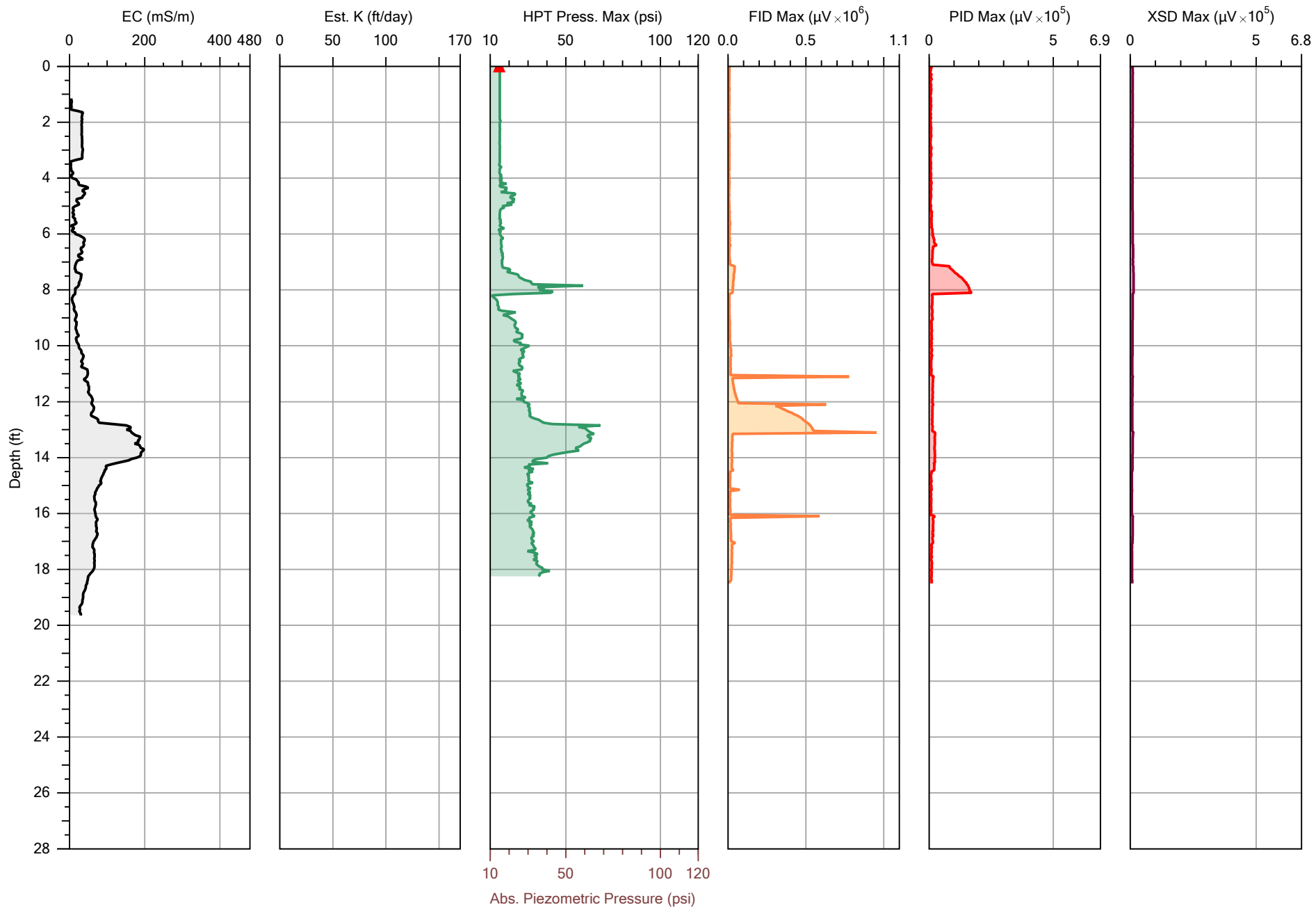
S₂ C₂ inc.

Company:		Operator:	File:
S2C2		TK	MIP-12.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	8/3/2021
			Location:
			MIP-12



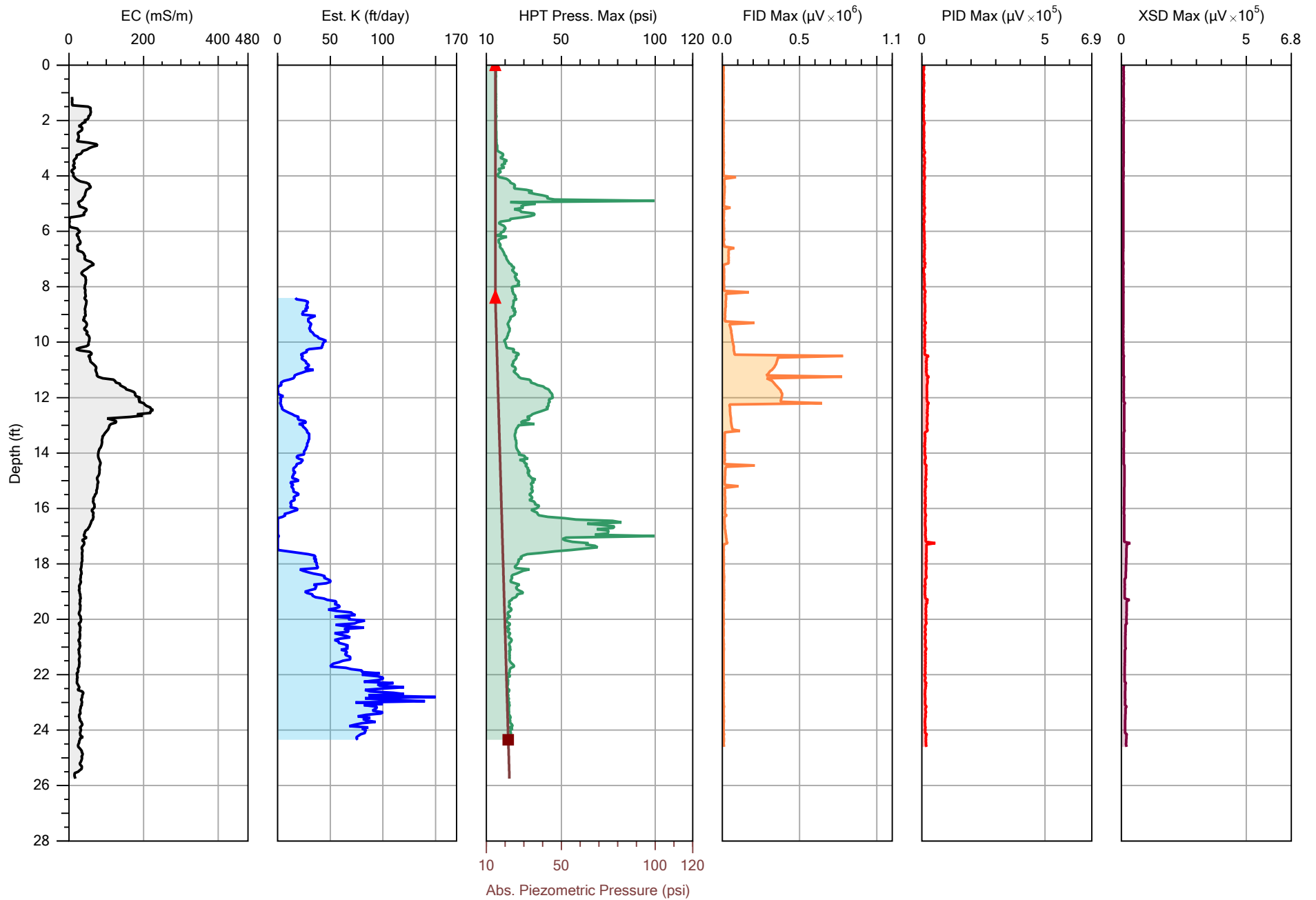
S₂ C₂ inc.

Company:	S2C2	Operator:	TK	File:	MIP-13.MHP
Project ID:	767 East 133rd Street	Client:	Langan	Date:	8/3/2021
				Location:	MIP-13



S₂ C₂ inc.

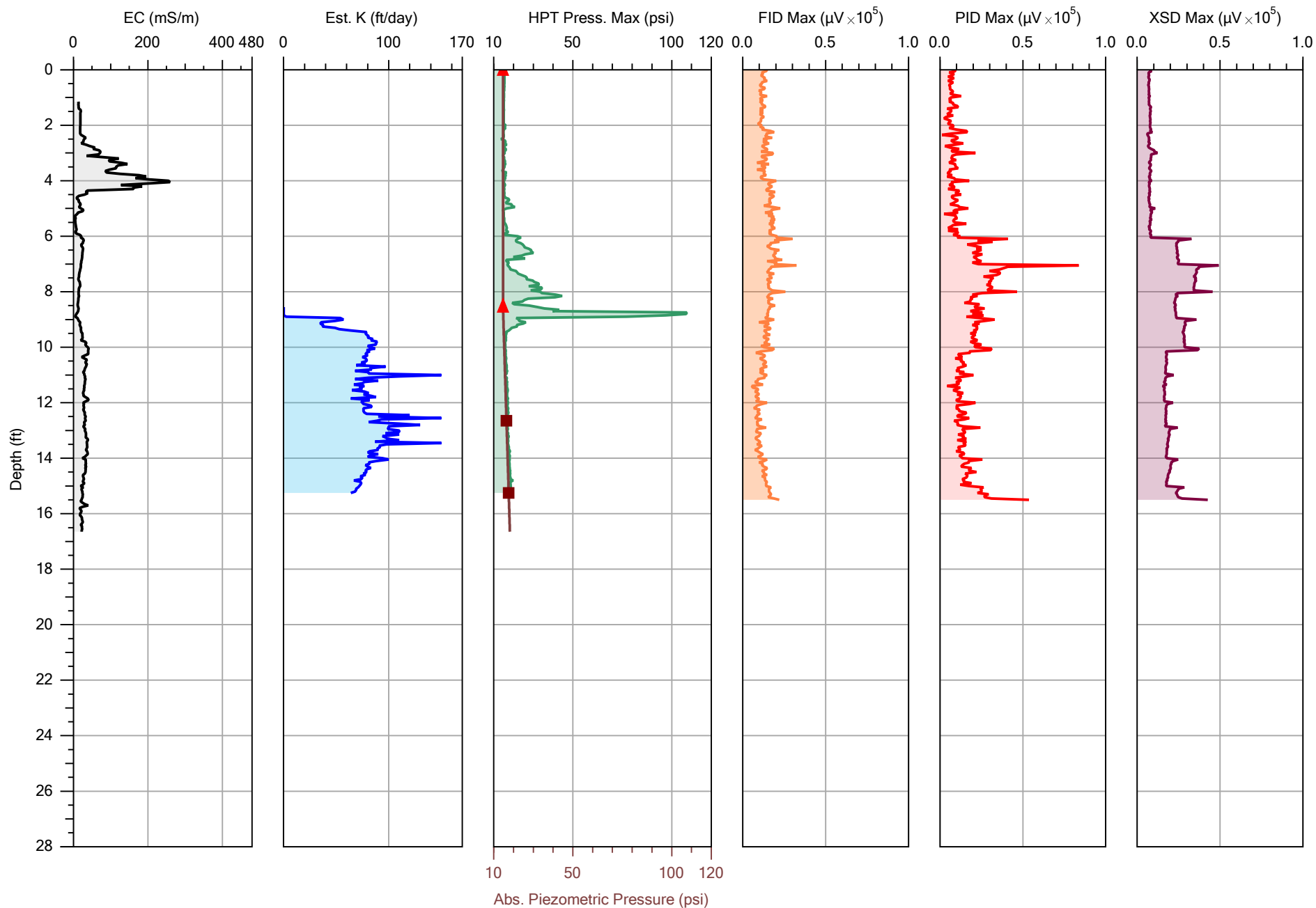
Company:	S2C2	Operator:	TK	File:	MIP-14.MHP
Project ID:	767 East 133rd Street	Client:	Langan	Date:	8/3/2021
				Location:	MIP-14



S₂ C₂ inc.

Company:		Operator:	File:
S2C2		TK	MIP-15.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	8/3/2021
			Location:
			MIP-15

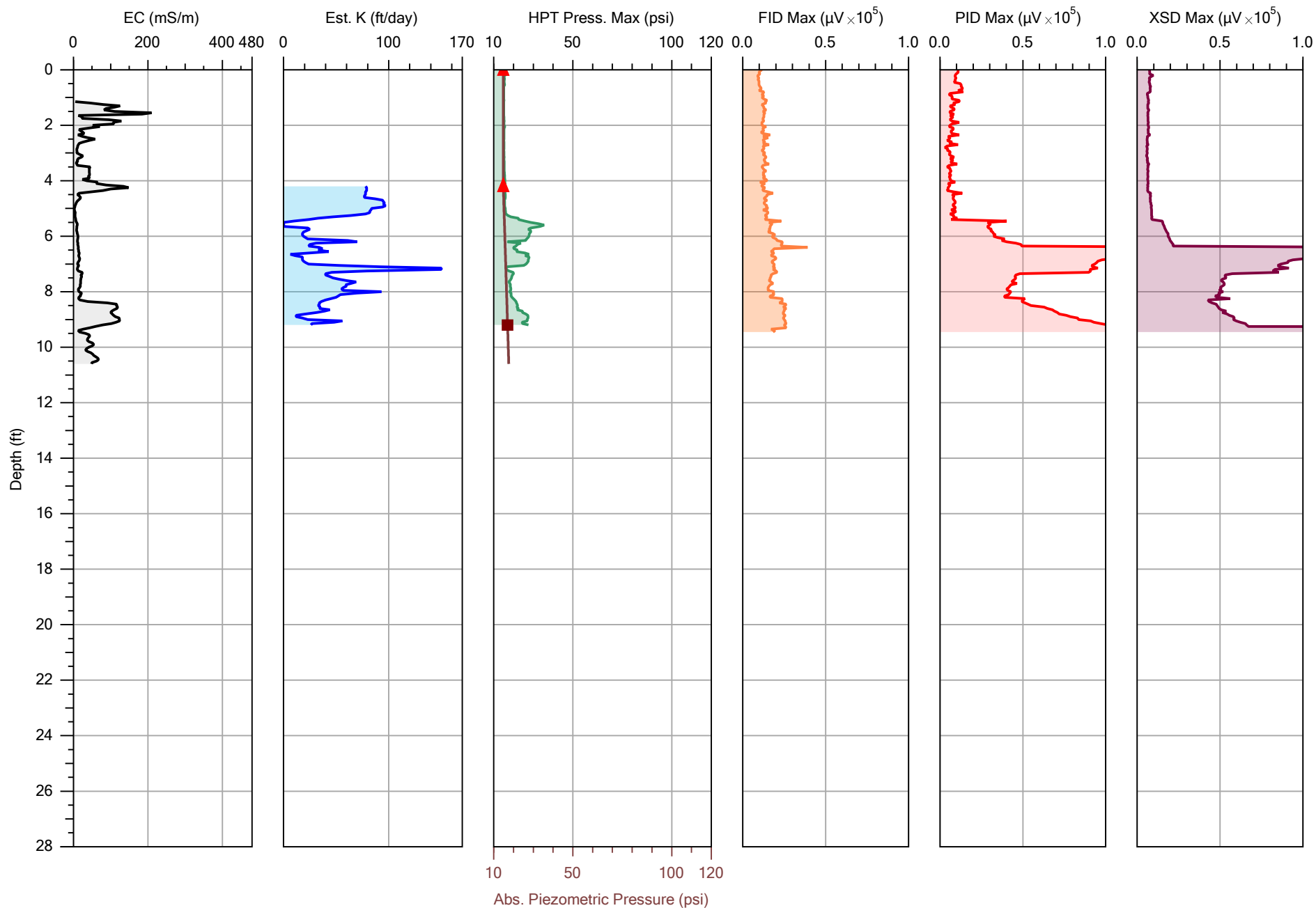
Appendix A: MiHPT Logs
(Scaled Alike $1e5$ uV Detector Scale)



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

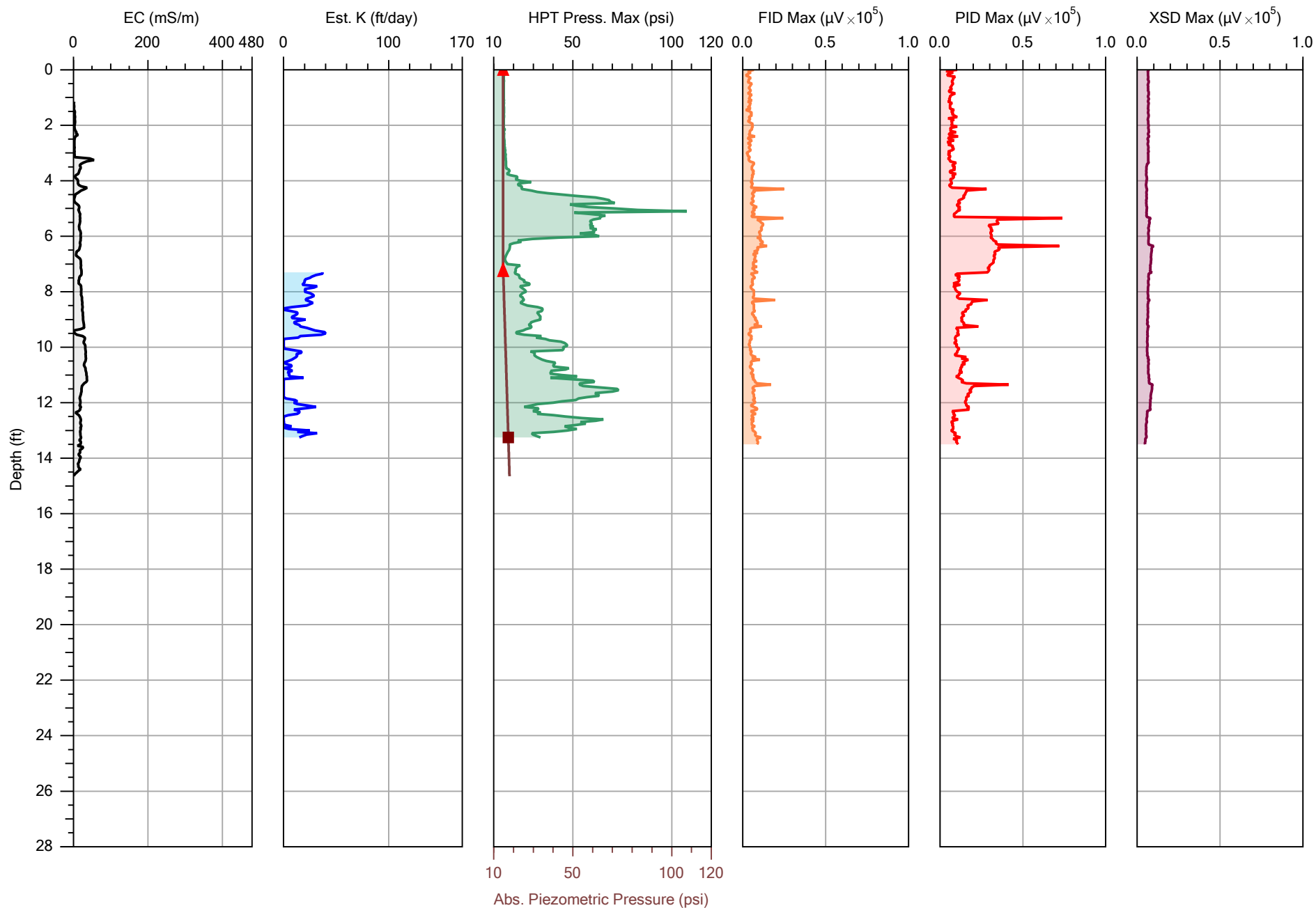
Company:		Operator:	File:
S2C2		TK	MIP-01.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/29/2021
			Location:
			MIP-01



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

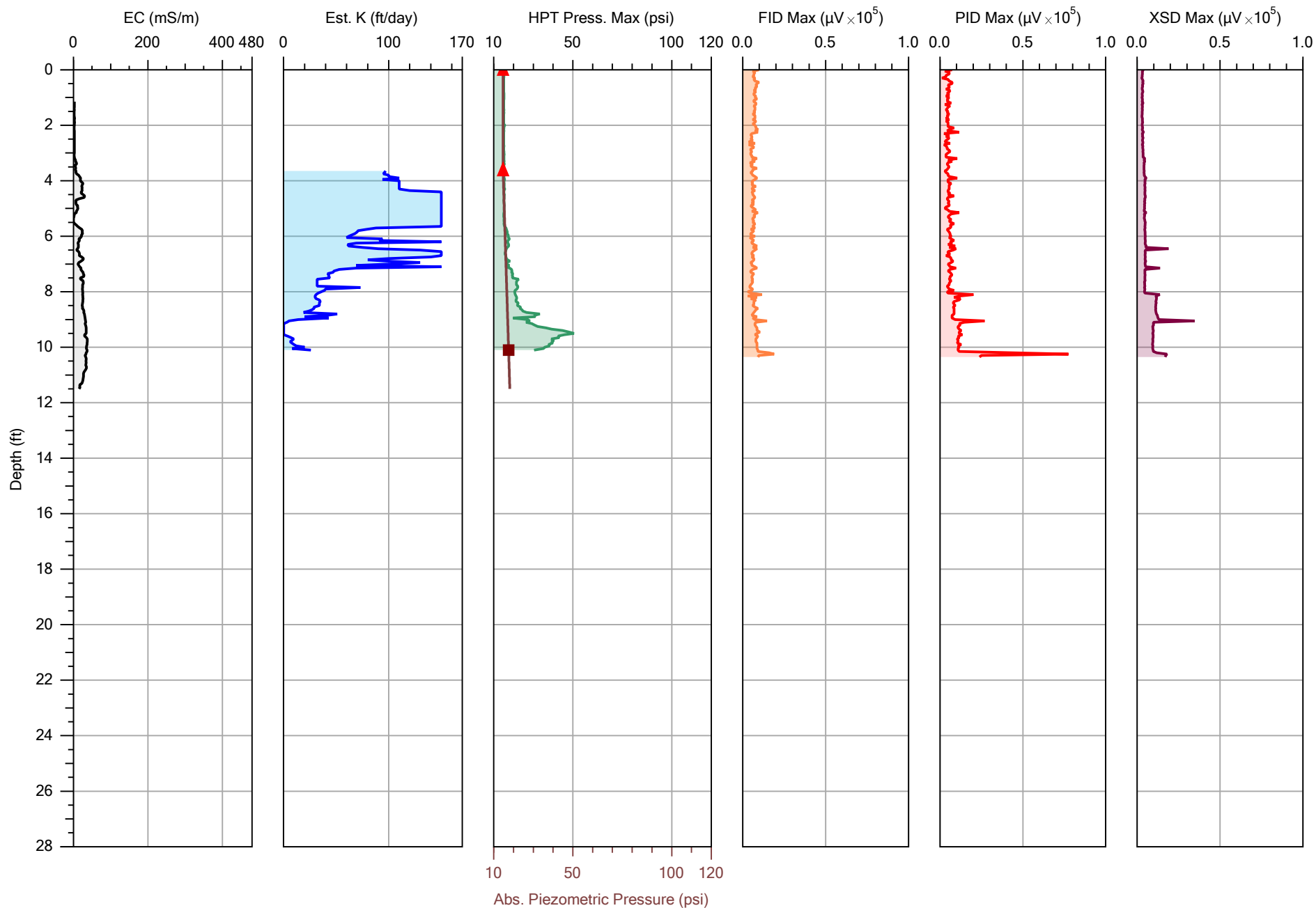
Company:		Operator:	File:
S2C2		TK	MIP-02.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-02



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

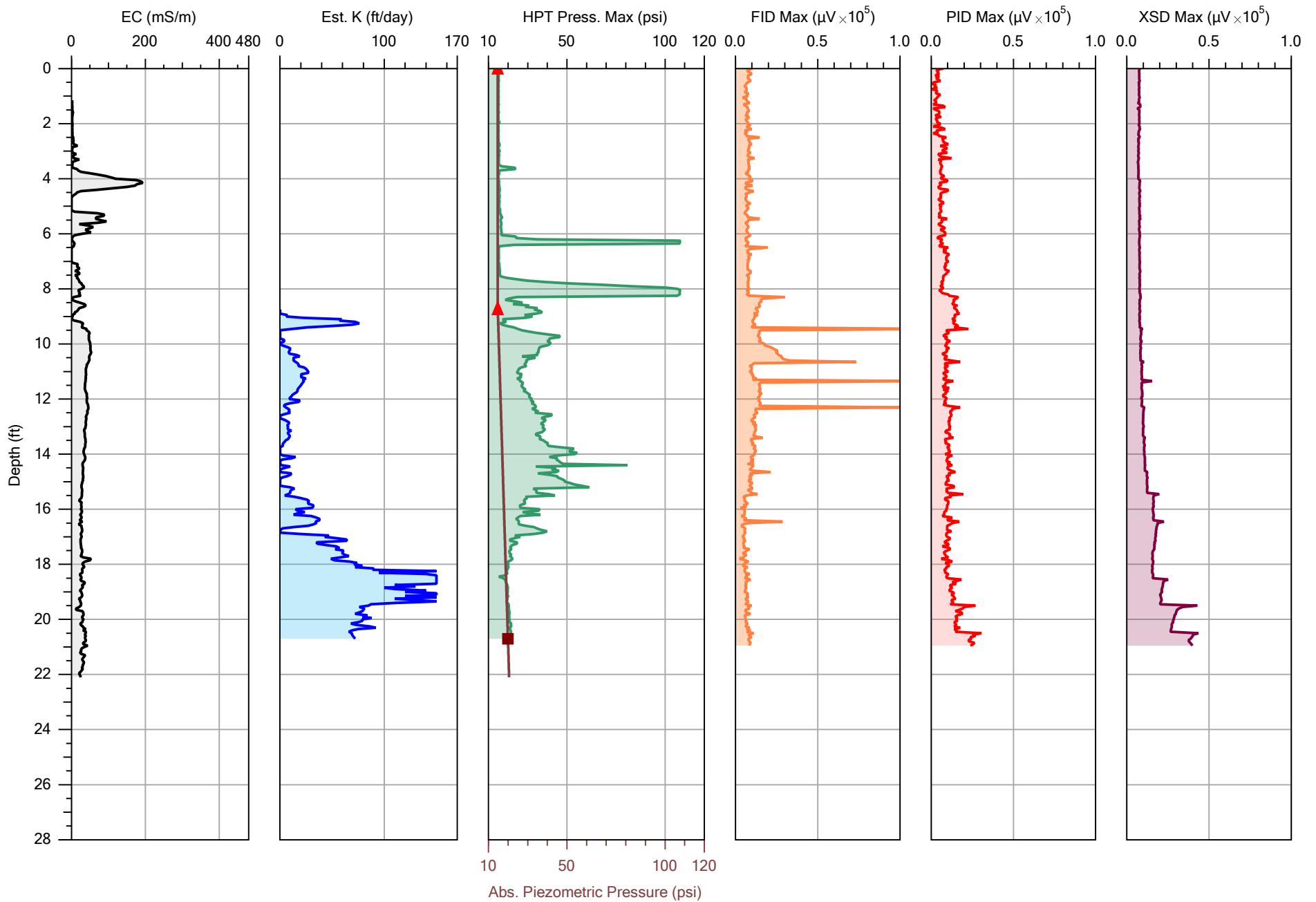
Company:		Operator:	File:
S2C2		TK	MIP-03.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-03



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

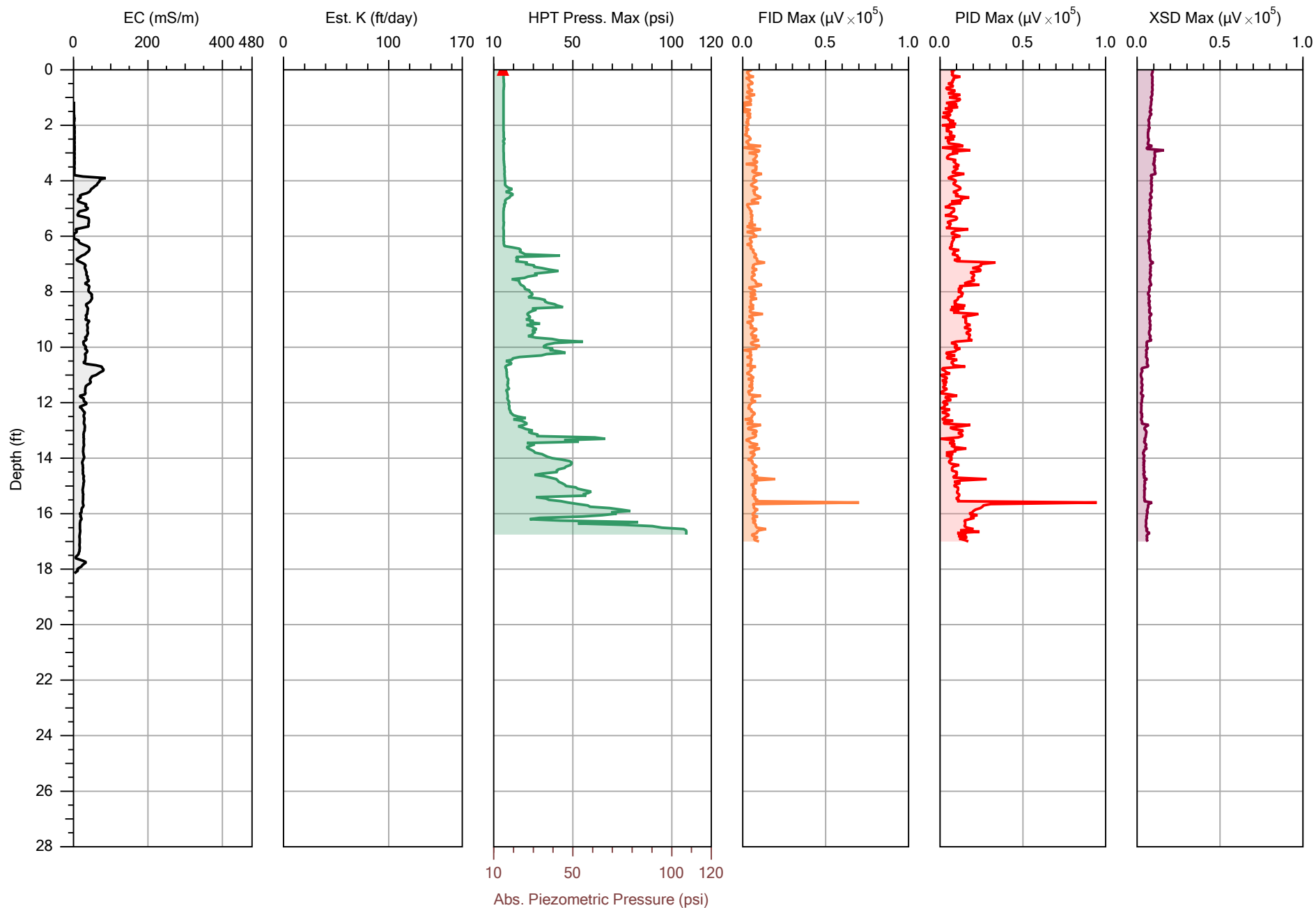
Company:		Operator:	File:
S2C2		TK	MIP-04.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-04



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

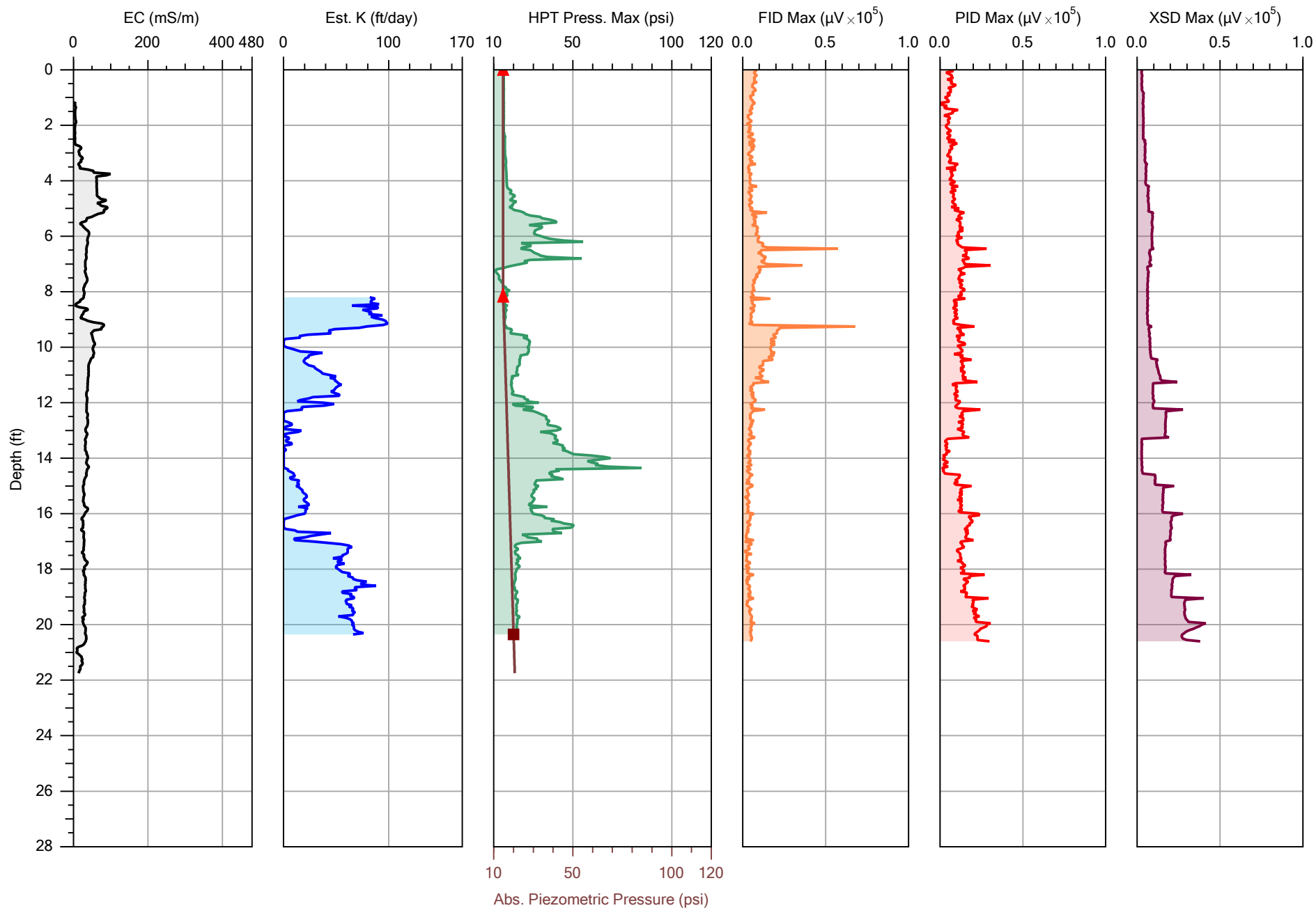
Company:		Operator:	File:
S2C2		TK	MIP-05.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-05



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

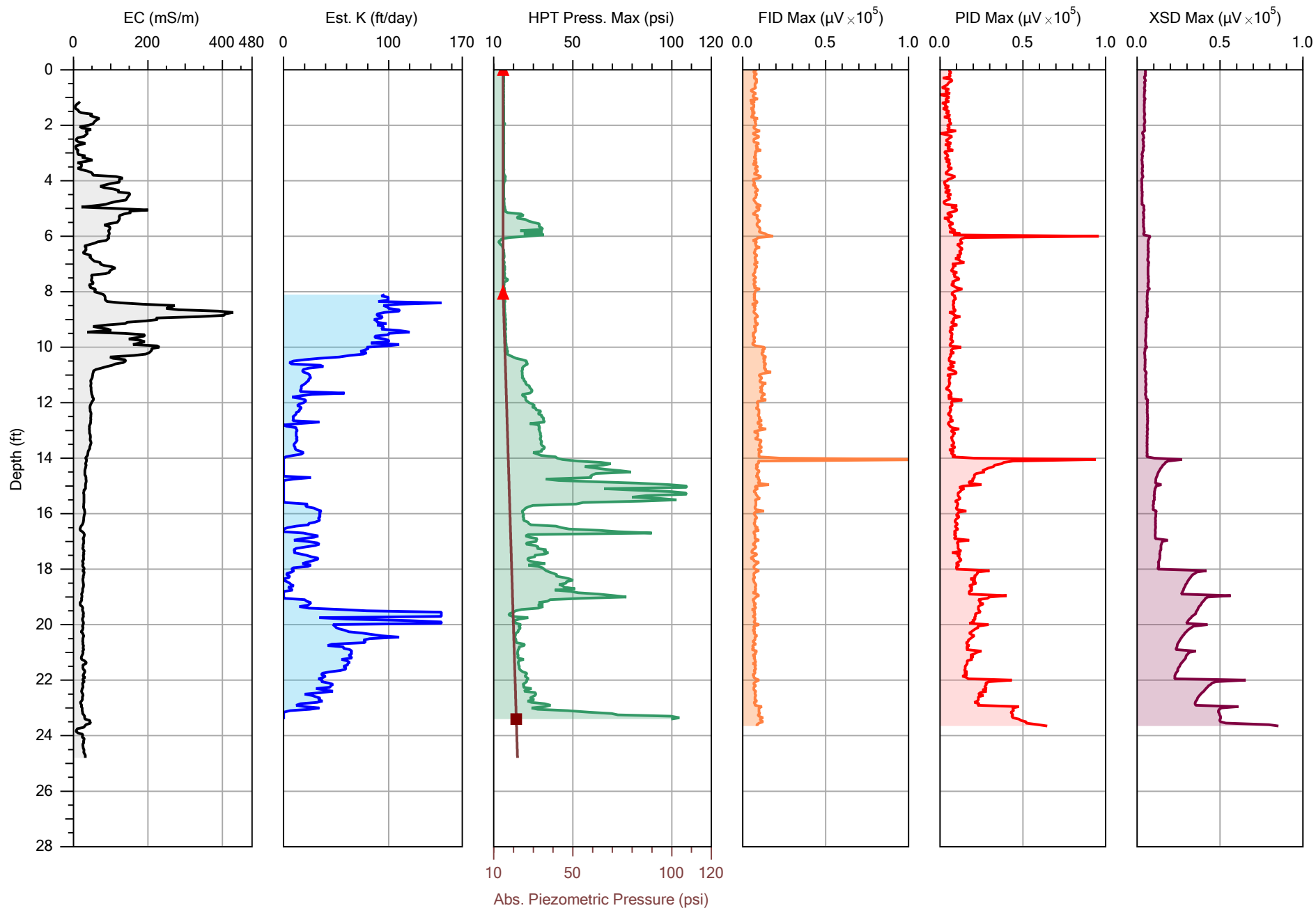
Company:		Operator:	File:
S2C2		TK	MIP-06.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/29/2021
			Location:
			MIP-06



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

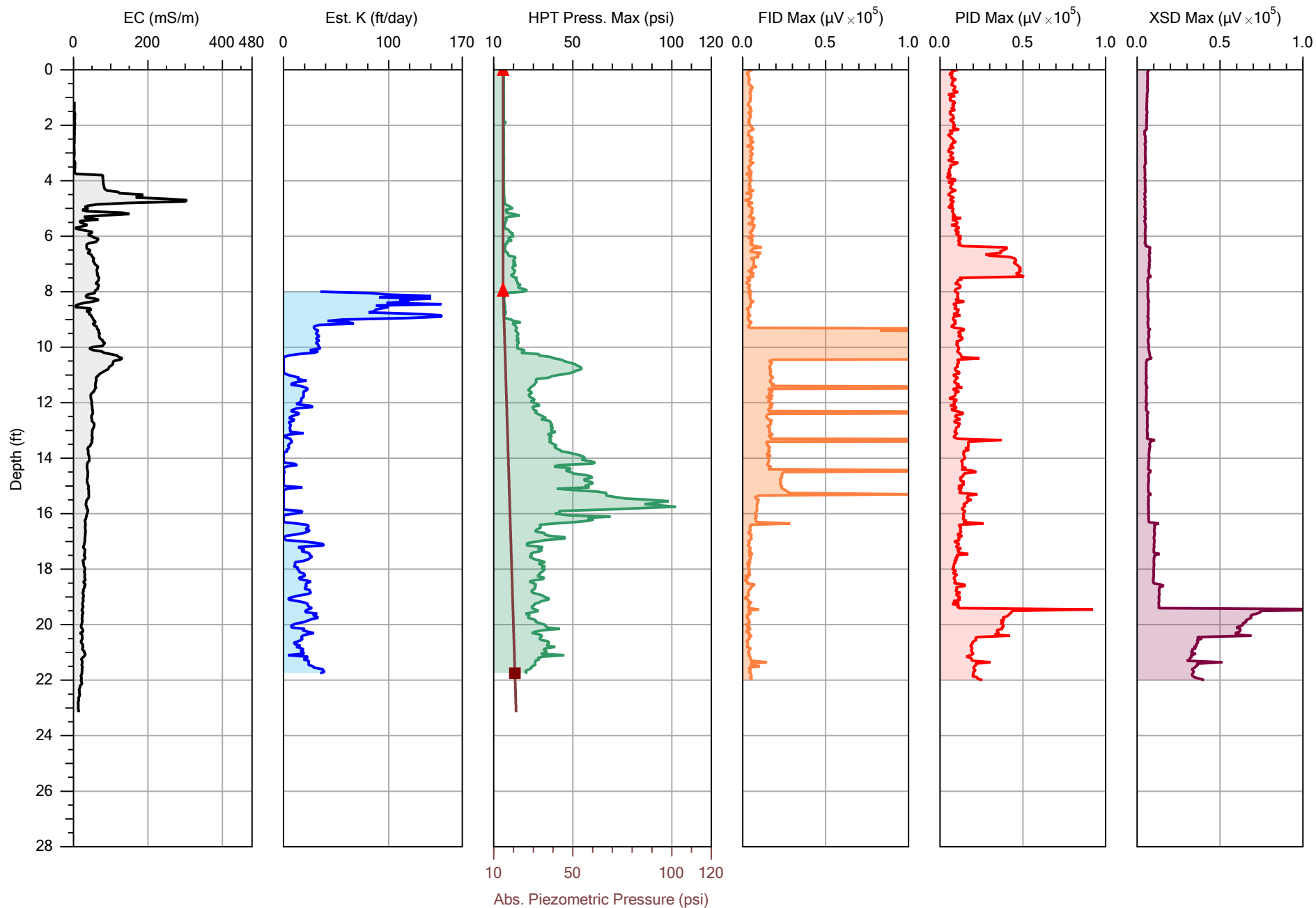
Company:		Operator:	File:
S2C2		TK	MIP-07.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-07



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

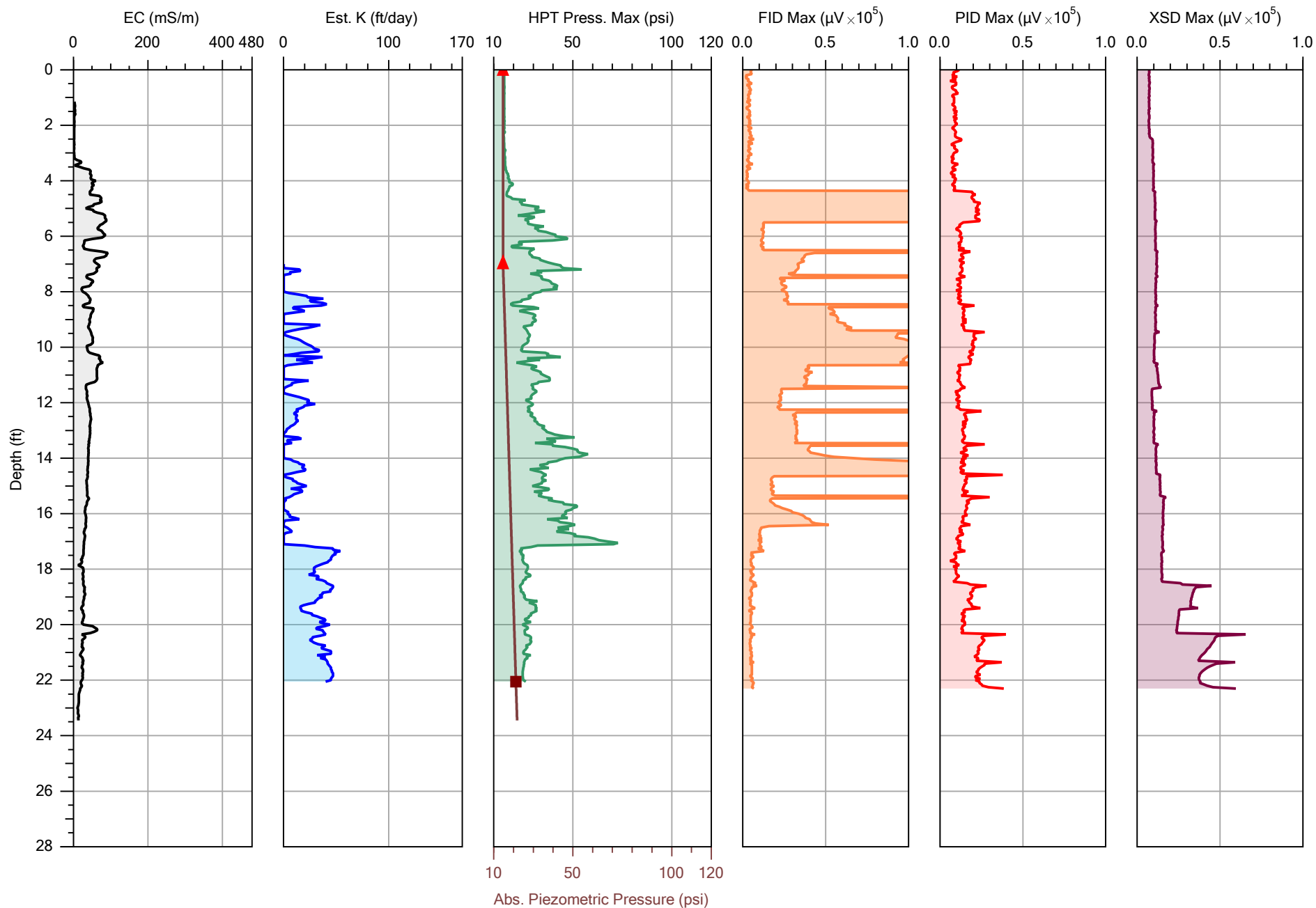
Company:		Operator:	File:
S2C2		TK	MIP-08.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-08



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

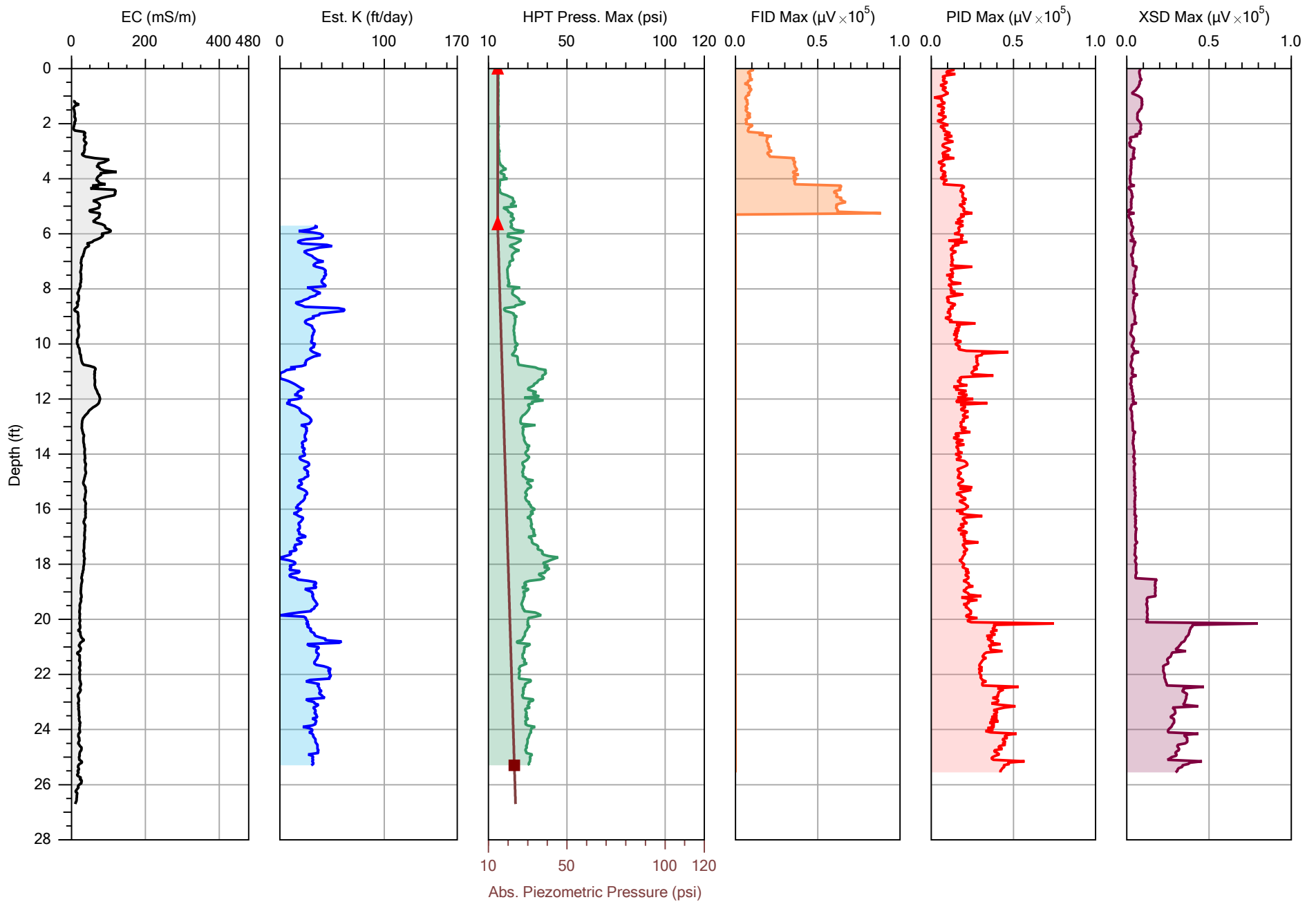
Company:		Operator:	File:
S2C2		TK	MIP-09.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/28/2021
			Location:
			MIP-09



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

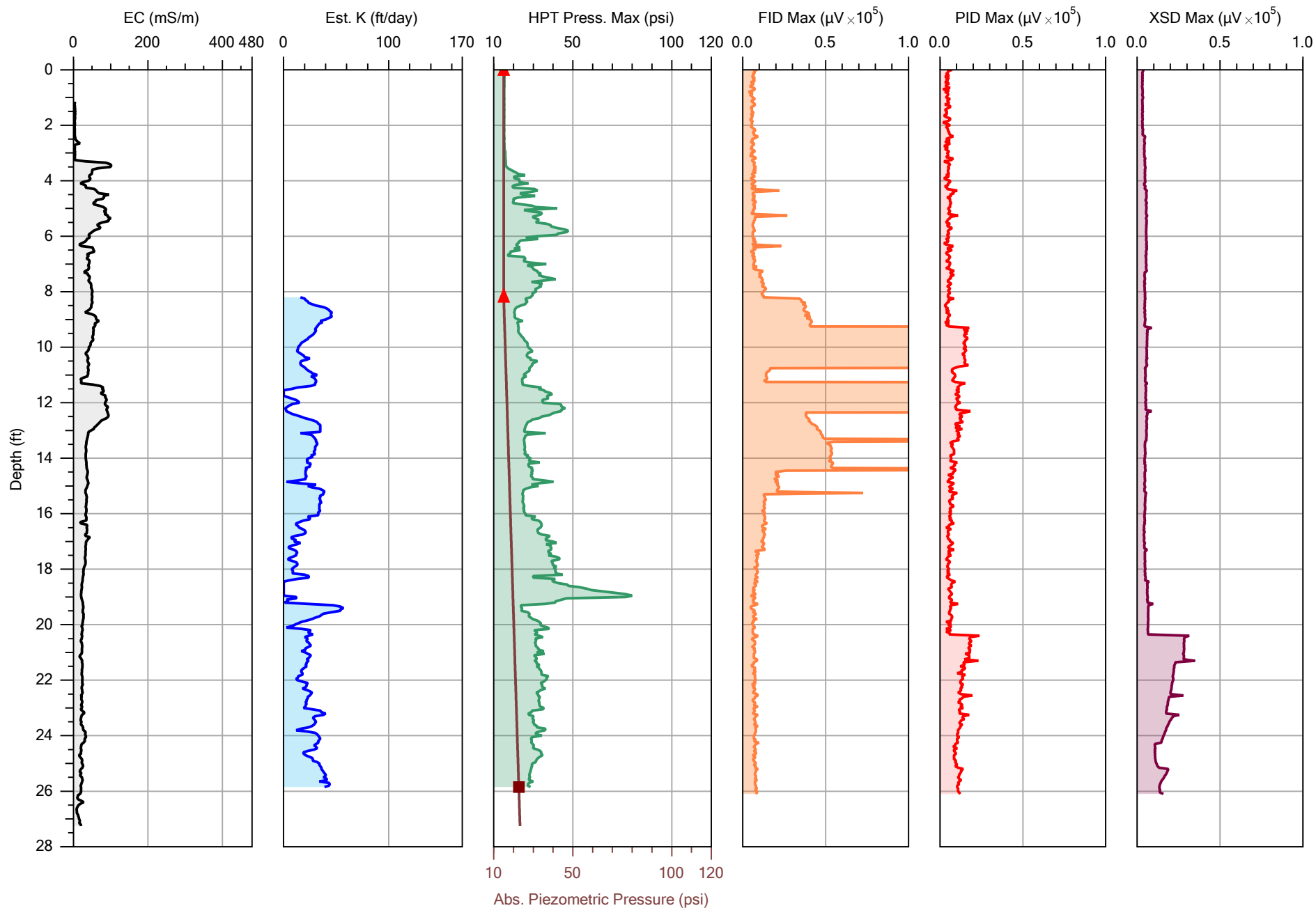
Company:		Operator:	File:
S2C2		TK	MIP-10.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/29/2021
			Location:
			MIP-10



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

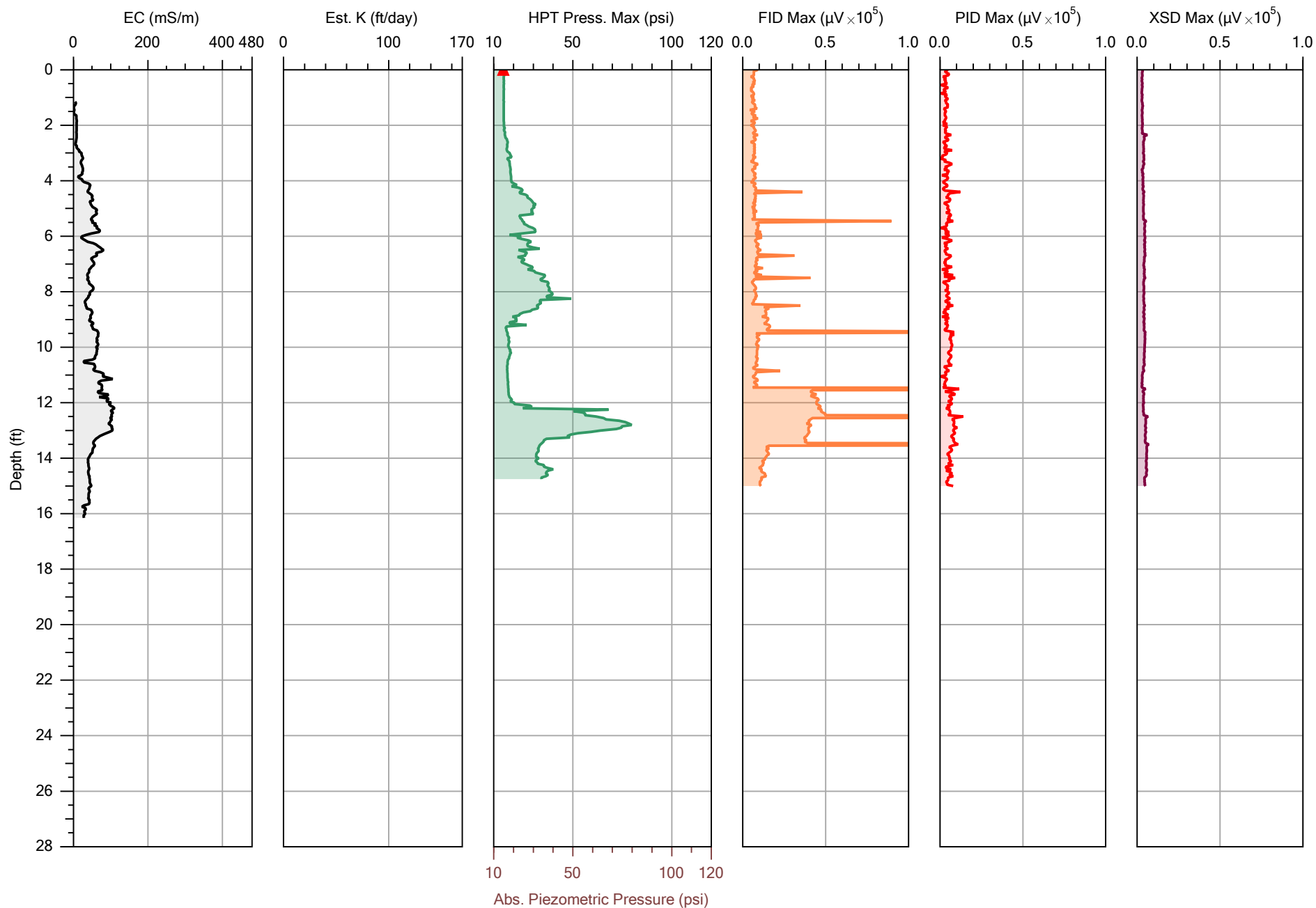
Company:		Operator:	File:
S2C2		TK	MIP-11.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	7/29/2021
			Location:
			MIP-11



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

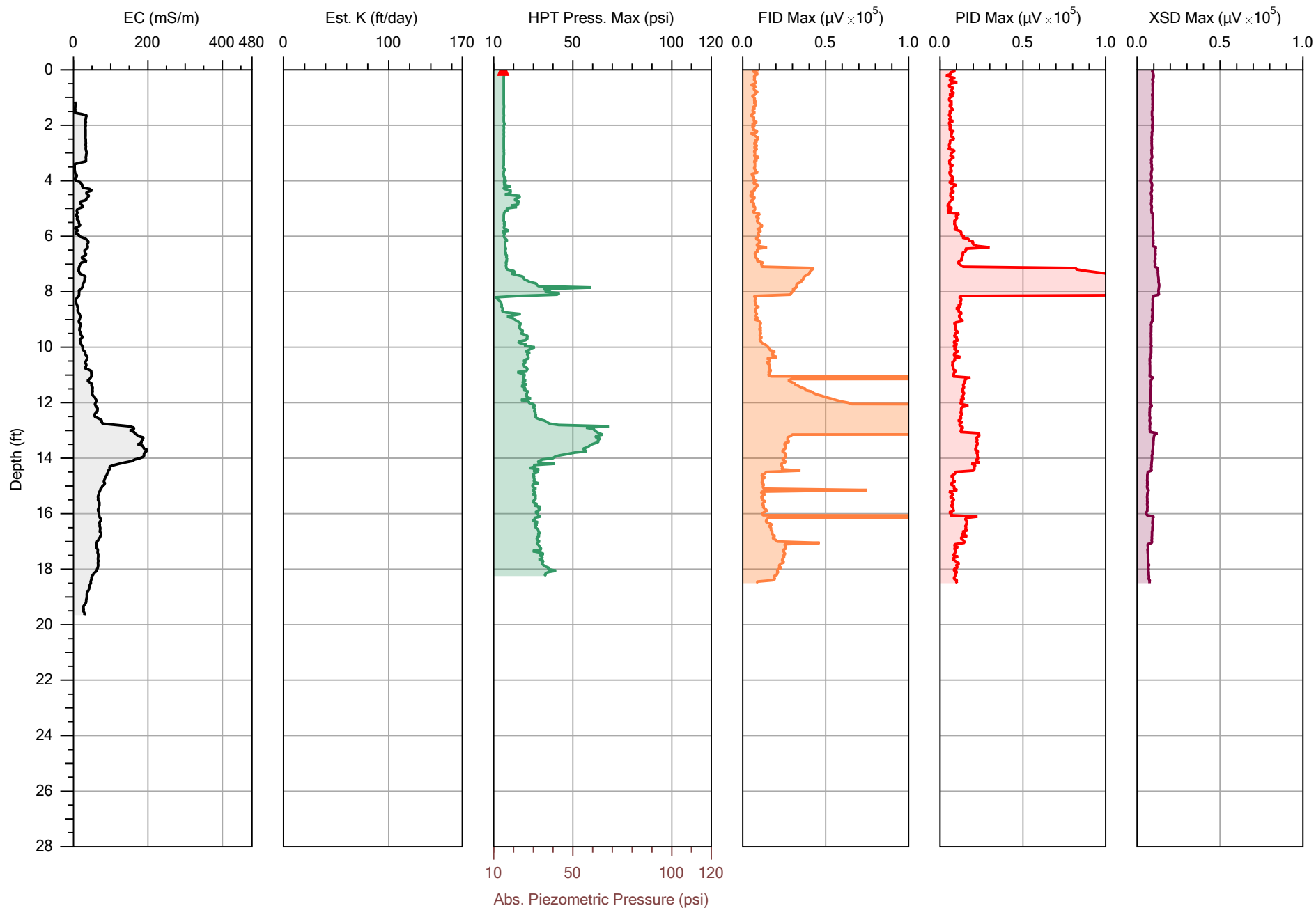
Company:		Operator:	File:
S2C2		TK	MIP-12.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	8/3/2021
			Location:
			MIP-12



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

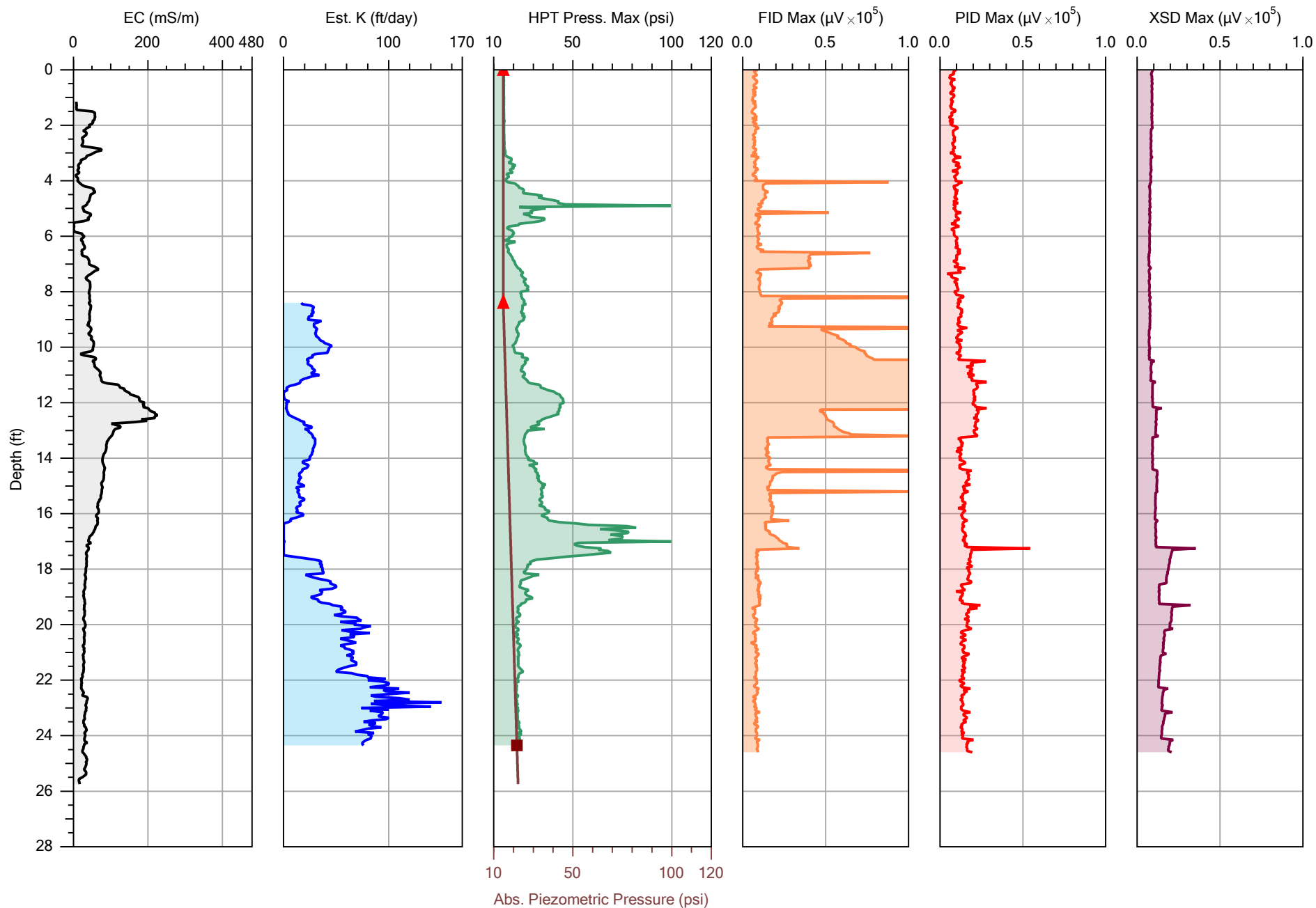
Company:		Operator:	File:
S2C2		TK	MIP-13.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	8/3/2021
			Location:
			MIP-13



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

Company:		Operator:	File:
S2C2		TK	MIP-14.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	8/3/2021
			Location:
			MIP-14



S₂C₂ inc.

Direct-Push • Direct-Sensing • Data Visualization

Company:		Operator:	File:
S2C2		TK	MIP-15.MHP
Project ID:		Client:	Date:
767 East 133rd Street		Langan	8/3/2021
			Location:
			MIP-15

APPENDIX E

*Excerpt from Certified Copies of Important Maps
appertaining to the 23rd and 24th Wards, City of New
York, published by E. Robinson in 1888*

T W E N T Y F O U R T H W A R D

EXPLANATIONS.

- Brick Buildings
- Stone
- Wood
- Iron
- Brick Buildings with Stone front
- " " " Iron
- Wood " " Brick
- " " covered with Iron
- Brick Slates or sheets
- Wood " " "
- Streets paved with Belgian Block
- " Mac Adamized
- " open but not paved
- " projected but not open

- Water mains with size
- Sewers
- Old Farm lines
- Map No. 38 W.P. Number of old farm map
- Plot at White Plains
- Old Water courses
- Block dimensions and width of streets
- Lot numbers
- Lot dimensions
- 217 Block numbers
- House numbers
- Elevations of the streets above High water
- Fire Hydrants
- 20 Adjoining Plates
- Railroad Tracks



Outline and Index Map
OF THE
23RD WARD
CITY OF NEW YORK.

Scale 800 feet per inch.

NOTE: THESE LINES AND FIGURES ON THE MAP CORRESPOND WITH AND REFER TO THE PLATES IN THE ATLAS.

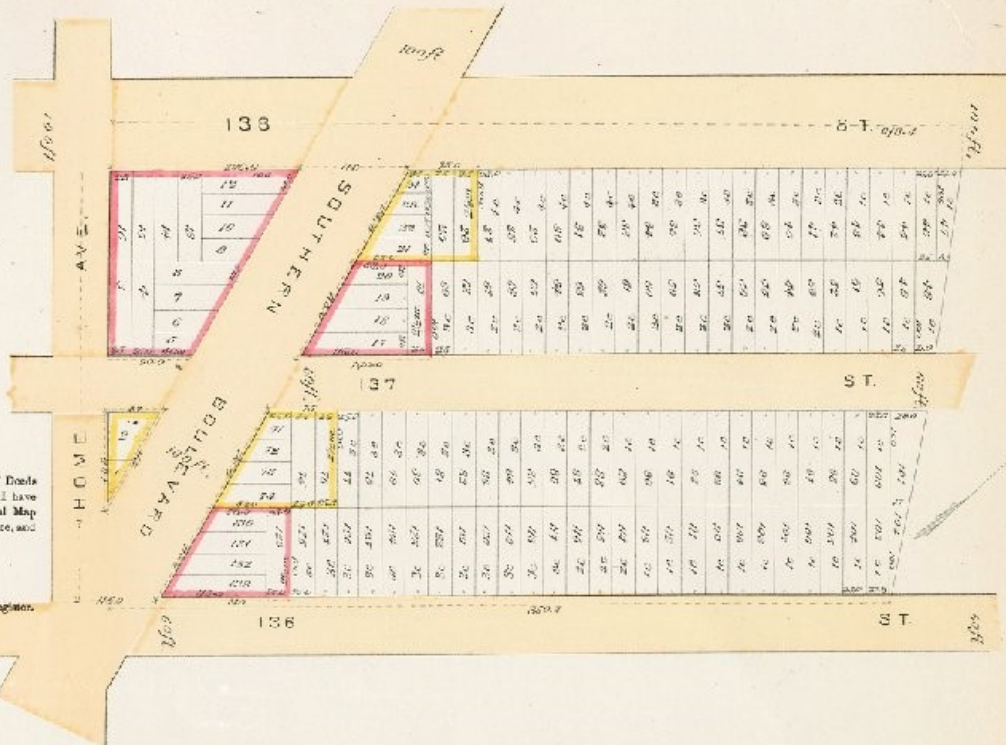
MAP No. 554.

Filed in Westchester County Register's Office, March 25th, 1888.
 S. S. Marshall, Register.
 Map of lot "A" 33rd and part of "A" 34th at WILTON,
 supplementary to J. C. Buckhout's map of
 Wilton, Port Morris, and Port Morris,
 Westchester County, State of New York, of
 July 19th, 1861, lately sold by W. H. Green,
 Esq., to John Joseph Abraham, Esq., both
 of the city of New York. March 10th, 1888.
 J. C. Buckhout, D. K. and Surveyor.



State of New York,
 County of Westchester.
 I, Joseph O. Miller, Register of Deeds
 in and for said county, do hereby certify that I have
 compared the foregoing Map with the original Map
 No. 554 on file in this office, and
 that the same is a correct copy thereof.
 Witness my hand and official
 Seal the 4th day of September, 1888.

Joseph O. Miller, Register.



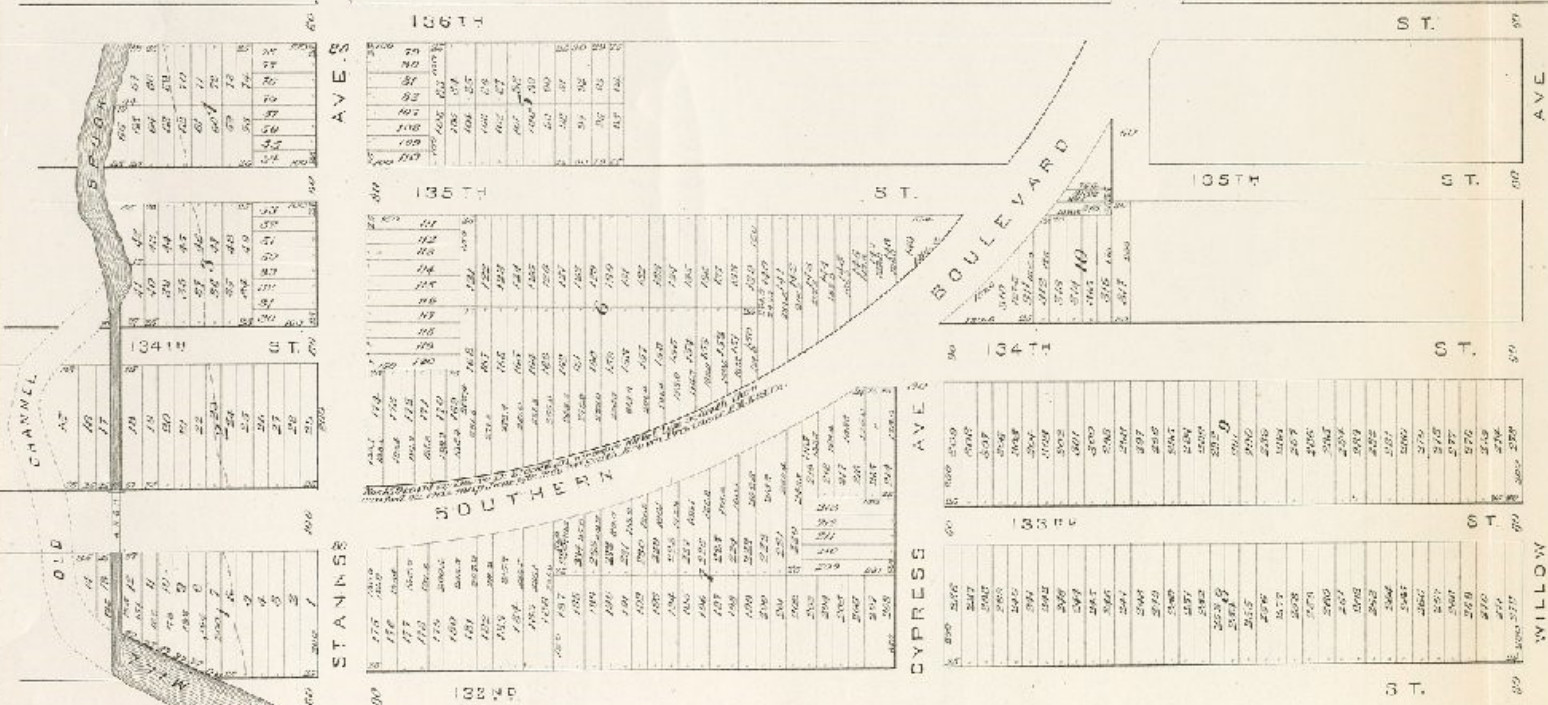
MAP No. 495.

01374. 82.
 Filed in the office of the Register of Westchester County, October 14th, 1888.
 Stephen H. Marshall, Register.
 Map "A" of real estate situated in the
 town of Haverham, and county of Westchester,
 belonging to the Port Morris Land
 and Improvement Company.
 October 1st, 1888.
 Scale of this map 100 feet to an inch.
 This copy reduced to 100 feet to an inch.
 All dimensions given in feet and decimals.



State of New York,
 County of Westchester.
 I, Joseph O. Miller, Register of Deeds
 in and for said county, do hereby certify that I have
 compared the foregoing Map with the original Map
 No. 495 on file in this office, and
 that the same is a correct copy thereof.
 Witness my hand and official
 Seal the 4th day of September, 1888.

Joseph O. Miller, Register.



Entered according to Act of Congress, in the Year 1888, by E. Robinson, in the Office of the Librarian of Congress at Washington, D.C.

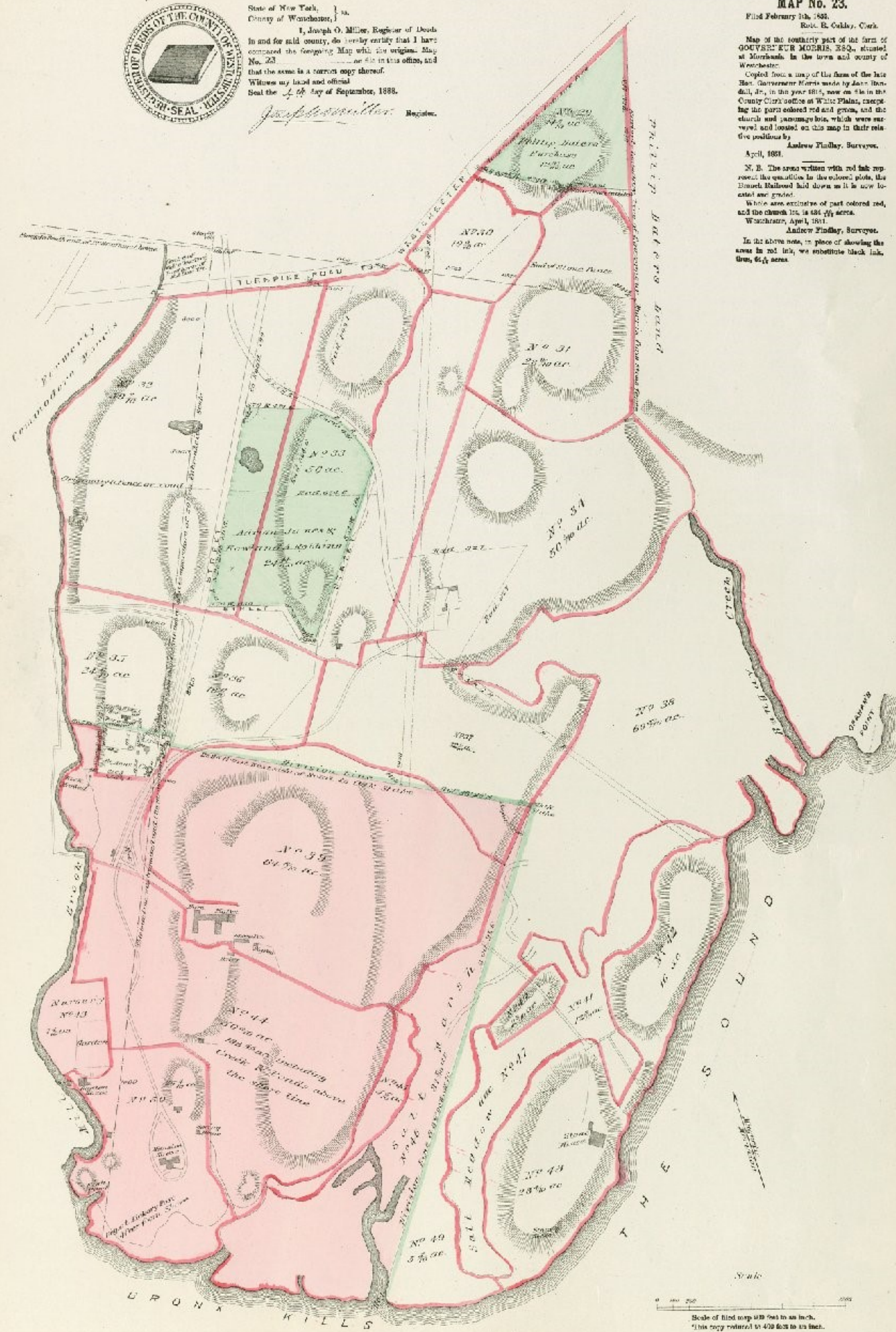
MAP No. 23.

Filed February 10th, 1888.
 R. B. Calkins, Clerk.
 Map of the southern part of the farm of
 GOVERNOR MORRIS, 280, situated
 at Morristown, in the town and county of
 Westchester.
 Copied from a map of the farm of the late
 Hon. Governor Morris made by John H. H. H.
 H., in the year 1814, now on file in the
 County Clerk's Office at White Plains, except
 the part colored red and green, and the
 church and parsonage lots, which were
 surveyed and located on this map in their
 original positions by
 Andrew Finckley, Surveyor.
 April, 1888.
 N. B. The areas within red ink represent
 the quantities in the colored plots, the
 Dutch Railroad laid down as it is now
 located and graded.
 Where areas extensive of part colored red,
 and the church lot is 144 1/2 acres.
 Westchester, April 1, 1888.
 Andrew Finckley, Surveyor.
 In the above note, in place of showing the
 areas in red ink, we substitute black ink,
 thus, 64 1/2 acres.



State of New York,
 County of Westchester.
 I, Joseph O. Miller, Register of Deeds
 in and for said county, do hereby certify that I have
 compared the foregoing Map with the original Map
 No. 23 on file in this office, and
 that the same is a correct copy thereof.
 Witness my hand and official
 Seal the 4th day of September, 1888.

Joseph O. Miller, Register.

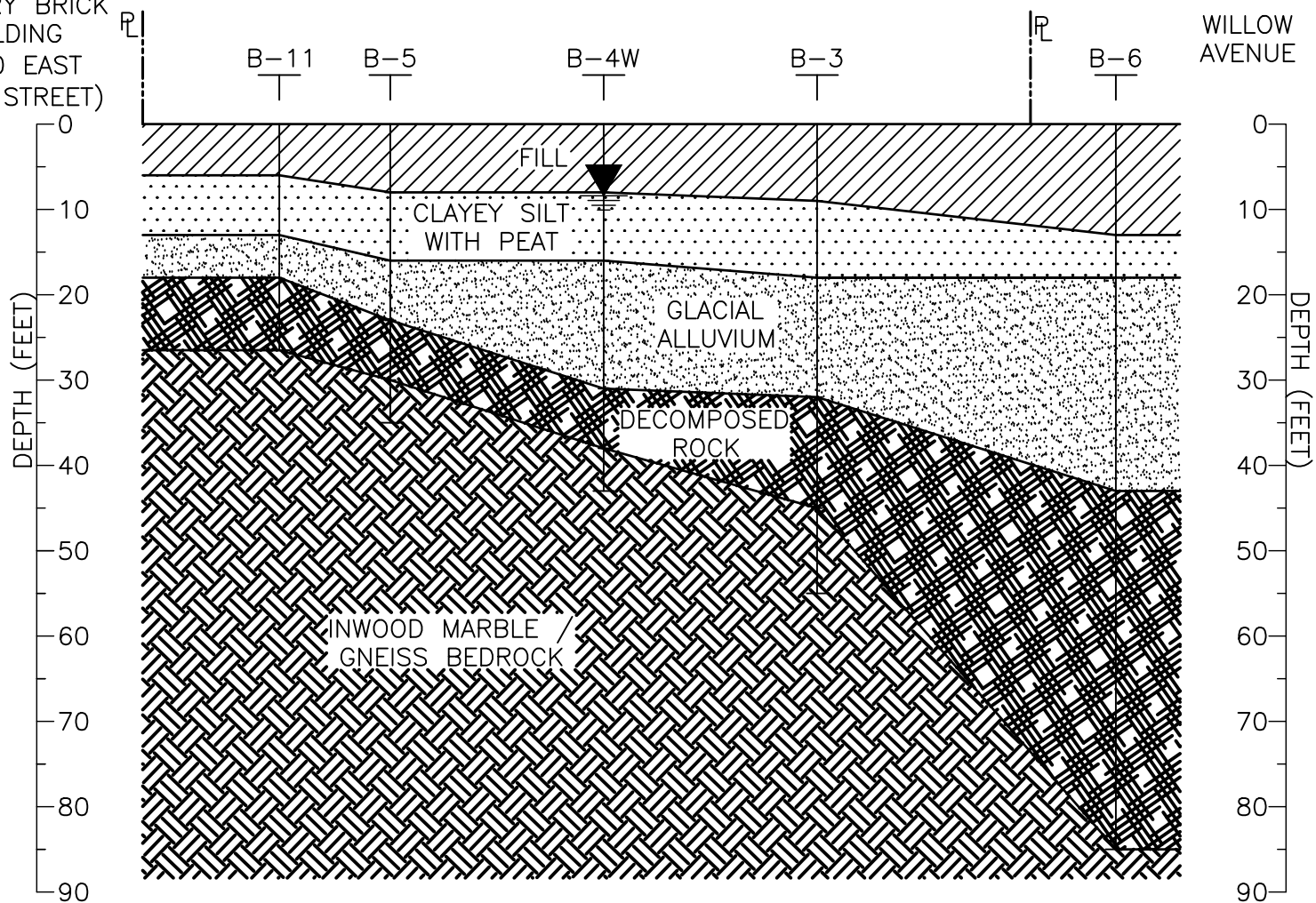


Scale of this map 100 feet to an inch.
 This copy reduced to 100 feet to an inch.

APPENDIX F

*Geotechnical boring location plan, cross-sections, and
boring logs*

EXISTING
1-STORY BRICK
BUILDING
(#740 EAST
134TH STREET)



SUBSURFACE SECTION A-A

SCALE: 1" = 20'

Title:

SECTION A-A

Project:

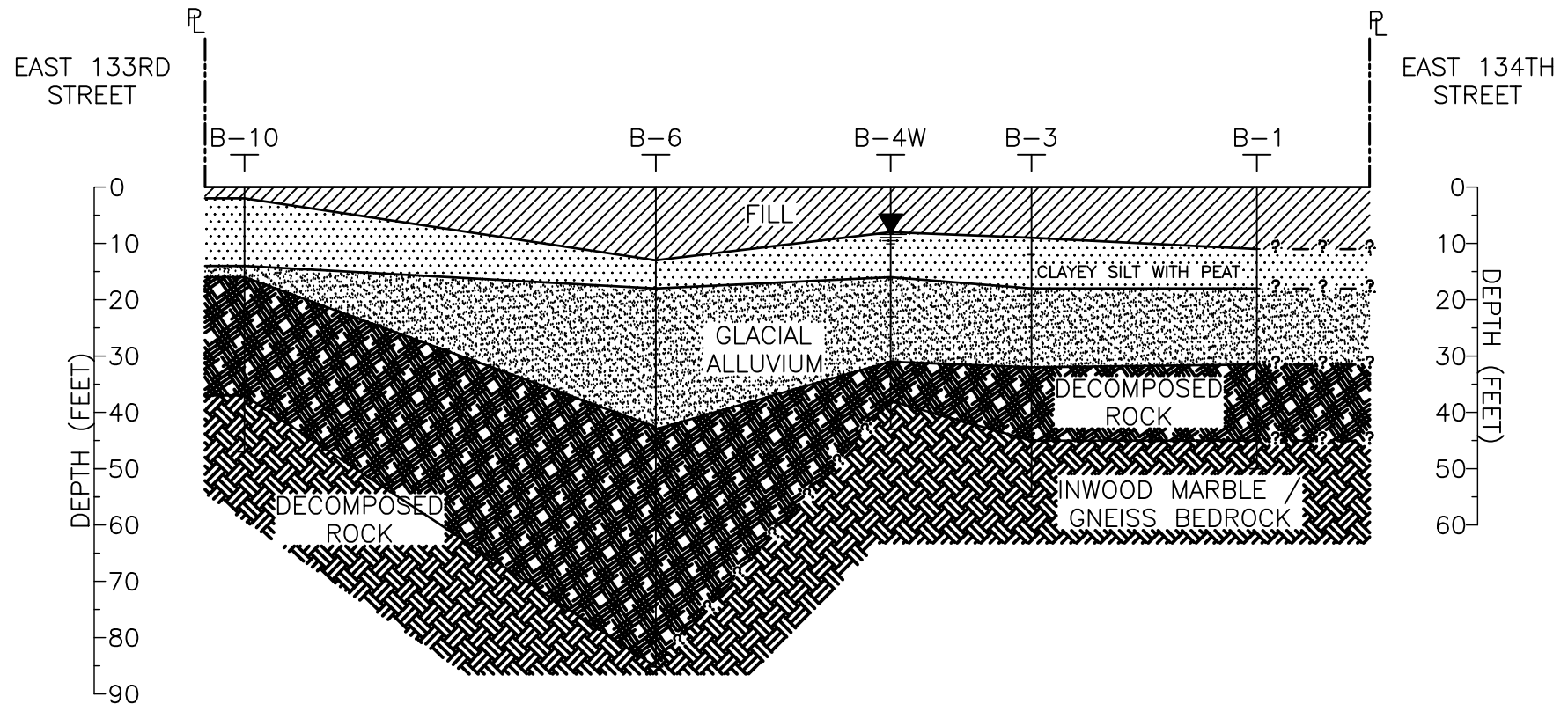
111 WILLOW AVENUE
BRONX, NEW YORK

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

Date: 06/08/2021

Job No.: 170309

Dwg
No. 2



SUBSURFACE SECTION B-B

SCALE: 1" = 30'

Title: SECTION B-B		
Project: 111 WILLOW AVENUE BRONX, NEW YORK		
PILLORI ASSOCIATES, P.A. <i>Geotechnical Engineering</i> 71 Route 35, Laurence Harbor, NJ 08879 333 Meadowlands Parkway, Suite 102 Secaucus, NJ 07094	Date: 06/08/2021	Dwg No. 3
	Job No.: 170309	

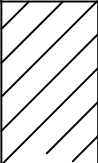
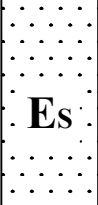



Project: **111 Willow Avenue**
Bronx, New York
 Date: 10-30-2017 to 10-31-2017
 Contractor: Warren George, Inc.

Boring No.: B-1

Sheet: 1 of 1

Ground El: NA

Groundwater Depth: NA

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

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

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

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

Project: **111 Willow Avenue**
Bronx, New York

Date: 11-01-2017 to 11-02-2017

Contractor: Warren George, Inc.

Boring No.: B-3

Sheet: 1 of 2

Ground El: NA

Groundwater Depth: NA

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

Project: **111 Willow Avenue**
Bronx, New York

Date: 11-01-2017 to 11-02-2017

Contractor: Warren George, Inc.

Boring No.: B-3

Sheet: 2 of 2

Ground El: NA

Groundwater Depth: NA

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

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

Boring No.: B-4W

Sheet: 1 of 1

Ground El: NA

Groundwater Depth: 8'-5"

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

Project: **111 Willow Avenue**
Bronx, New York

Date: 11-03-2017

Contractor: Warren George, Inc.

Boring No.: B-5

Sheet: 1 of 1

Ground El: NA

Groundwater Depth: NA

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

Project: **111 Willow Avenue**
Bronx, New York

Date: 11-06-2017 to 11-07-2017

Contractor: Warren George, Inc.

Boring No.: B-6

Sheet: 1 of 2

Ground El: NA

Groundwater Depth: NA

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

Project: **111 Willow Avenue**
Bronx, New York

Date: 11-06-2017 to 11-07-2017


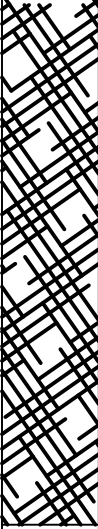
Contractor: Warren George, Inc.

Boring No.: B-6

Sheet: 2 of 2

Ground El: NA

Groundwater Depth: NA

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

Project: **111 Willow Avenue**
Bronx, New York

Date: 5-26-2021 to 5-27-2021

Contractor: Warren George, Inc.

Boring No.: B-7

Sheet: 1 of 1

Ground El: NA

Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification	
	Number	Blows / 6"	Strata		Depth	Elevation
				6" Concrete Slab		
	S-1	1-2-50-25	F	Coarse to fine Gravel and coarse to fine Sand with concrete and brick fragments and residual soil	FILL (7)	7'-0"
5	S-2	6-8-17-60				
	S-3	10-100/5"				
	S-4	2-2-3-4	Es	Tan brown Silt and fine Sand	MH (6)	10'-0"
10	S-5	3-4-5-9	GA	Brown coarse to fine Sand, some Silt, little medium to fine Gravel	SM (6)	18'-0"
15	S-6	7-3-4-6				
20	S-7	5-50/3"	DR	No Recovery	GW (2a)	25'-0"
25	R-1	RUN = 60" 25'-30' REC = 79% RQD = 18%	R	Fordham Gneiss bedrock, hard to soft, highly weathered, medium to closely jointed	(1c)	30'-0"
30						
35						
40						
45						
50						

Project: **111 Willow Avenue**
Bronx, New York

Date: 5-28-2021 to 6-1-2021

Contractor: Warren George, Inc.

Boring No.: B-8

Sheet: 1 of 1

Ground El: NA

Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification	
	Number	Blows / 6"	Strata		Depth	Elevation
				6" Concrete Slab		
	S-1	8-7-5-7	F	Gray coarse to fine Sand and medium to fine Gravel with wood and concrete fragments	FILL (7)	
5	S-2	9-18-12-5			5'-0"	
	S-3	7-4-5-8	Es	Brown coarse to fine Sand, some Silt, little medium to fine Gravel	MH (6)	
	S-4	7-7-4-3				
10	S-5	1-1-4-4		Gray Silt, some fine Sand with trace black peat roots		13'-0"
15	S-6	6-6-7-7	GA	Tan coarse to fine Sand, little medium to fine Gravel, little Silt	SM (3b)	
20	S-7	10-51-100/5"				21'-6"
25	S-8	100/2"	DR	Decomposed Gneiss bedrock	GW (2a)	
					27'-0"	
30	R-1	RUN = 60" 27'-32' REC = 88% RQD = 15%		Fordham Gneiss bedrock, hard, highly weathered, closely jointed	(1c)	
35	R-2	RUN = 60" 32'-37' REC = 98% RQD = 92%	R	Fordham Gneiss bedrock, hard, weathered, widely jointed	(1a)	
					37'-0"	
40						
45						
50						

Project: **111 Willow Avenue**
Bronx, New York

Date: 5-27-2021 to 5-28-2021

Contractor: Warren George, Inc.

Boring No.: B-9

Sheet: 1 of 1

Ground El: NA

Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification	
	Number	Blows / 6"	Strata		Depth	Elevation
	S-1	4-5-50/0"	F	Gray brown coarse to fine Sand, some Silt, little medium to fine Gravel with brick fragments	FILL (7)	6'-0"
5	S-2	6-7-5-5				
	S-3	7-7-6-8	Es	Black gray Silt, some medium to fine Sand, little medium to fine Gravel, trace peat roots Brown gray Silt, little coarse to fine Sand, little fine Gravel Cored boulder 10'-13'	MH (6)	18'-0"
10	S-4	5-3-3-3				
15	S-5	5-7-7-12				
20	S-6	14-13-8-12	GA	Brown fine Sand, some Silt Brown medium to fine Gravel, some coarse to fine Sand, trace Silt	SM (3b)	23'-0"
25	S-7	100/4"	DR	Residual soil No recovery	GW (2a)	31'-0"
30	S-8	100/2"				
35	R-1	RUN = 60" 31'-36' REC = 100% RQD = 37%	R	Inwood Marble bedrock, medium hard, weathered, medium to closely jointed	(1c)	36'-0"
40						
45						
50						

Project: **111 Willow Avenue**
Bronx, New York

Date: 6-1-2021 to 6-2-2021

Contractor: Warren George, Inc.

Boring No.: B-10

Sheet: 1 of 1

Ground El: NA

Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification	
	Number	Blows / 6"	Strata		Depth	Elevation
	S-1	5-6-6-5	F	Tan coarse to fine Sand, little Silt, little medium to fine Gravel with brick fragments	FILL	
	S-2	3-4-6-6		Tan coarse to fine Sand, some Silt, little coarse to fine Gravel	(7)	
5	S-3	8-8-8-9		Gray medium to fine Sand, some Silt, trace fine Gravel		
			Es		MH	
10	S-4	1-1-3-2		Gray medium to fine Sand, some Silt with peat roots	(6)	
					14'-0"	
15	S-5	4-3-4-55	GA	Tan coarse to fine Sand, little Silt, some medium to fine Gravel	SM	
					16'-0" (3b)	
20	S-6	57-100/4"		Drilled boulder 17'-20'		
25	S-7	22-100/3"				
			DR			
30	S-8	42-79-100/3"		Residual soil	GW	
					(2a)	
35	S-9	100/2"				
					37'-0"	
40	R-1	RUN = 60" 37'-42' REC = 55% RQD = 28%		Inwood Marble bedrock, medium hard, weathered, medium to closely jointed	(1c)	
			R			
45	R-2	RUN = 60" 42'-47' REC = 100% RQD = 88%		Inwood Marble bedrock, hard, slightly weathered, widely jointed	(1a)	
					47'-0"	
50						

Project: **111 Willow Avenue**
Bronx, New York

Date: 6-3-2021


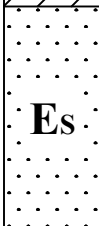
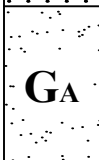

Contractor: Warren George, Inc.

Boring No.: B-11

Sheet: 1 of 1

Ground El: NA

Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification			
	Number	Blows / 6"	Strata		Depth	Elevation		
5	S-1	1-2-3-2	 F	Brown coarse to fine Sand, little Silt, little medium to fine Gravel with asphalt fragments	FILL (7)	6'-0"		
	S-2	2-2-9-7		Tan coarse to fine Sand and Silt				
	S-3	2-2-2-1						
10	S-4	2-1-2-1	 Es	Gray Silt and fine Sand, trace organic roots	MH (6)	13'-0"		
	S-5	1-1-2-6						
15	S-6	11-7-3-3	 GA	Tan coarse to fine Sand, little Silt, little medium to fine Gravel	SM (3b)	18'-0"		
20	S-7	100/4"	 DR	Decomposed rock	GW (2a)	26'-6"		
25	S-7	100/2"						
30								
35								
40								
45								
50								

Project: **111 Willow Avenue**
Bronx, New York

Date: 6-2-2021 to 6-3-2021

Contractor: Warren George, Inc.

Boring No.: B-12

Sheet: 1 of 1

Ground El: NA

Groundwater Depth: NA

Depth Feet	SAMPLES			SOIL DESCRIPTION	Classification	
	Number	Blows / 6"	Strata		Depth	Elevation
				6" Asphalt		
	S-1	10-6-4-7	F	Gray coarse to fine Sand, little Silt, fine Gravel	FILL (7)	
	S-2	7-2-3-5		Gray coarse to fine Sand, trace Silt, some		
	S-3	6-4-3-3		medium to fine Gravel		6'-0"
5						
	S-4	3-3-5-7	GA	Brown medium to fine Sand, little Silt, little	SM (6)	
	S-5	3-3-5-11		medium to fine Gravel		
10						13'-0"
	S-6	20-14-19-100/3"		Tan coarse to fine Sand, some Silt, trace fine	SM (3b)	
15				Gravel		17'-0"
	S-7	100/1"	DR	Decomposed Rock	GW (2a)	
20						
	S-7	61-100/2"				27'-0"
25						
	R-1	RUN = 60" 25'-30' REC = 79% RQD = 18%	R	Forhdam Gneiss bedrock, hard to soft, weathered, closely to widely jointed	(1c)	32'-0"
30						
35						
40						
45						
50						

Project: 767 East 133rd Street
Bronx, New York

Date: 5/10/2021

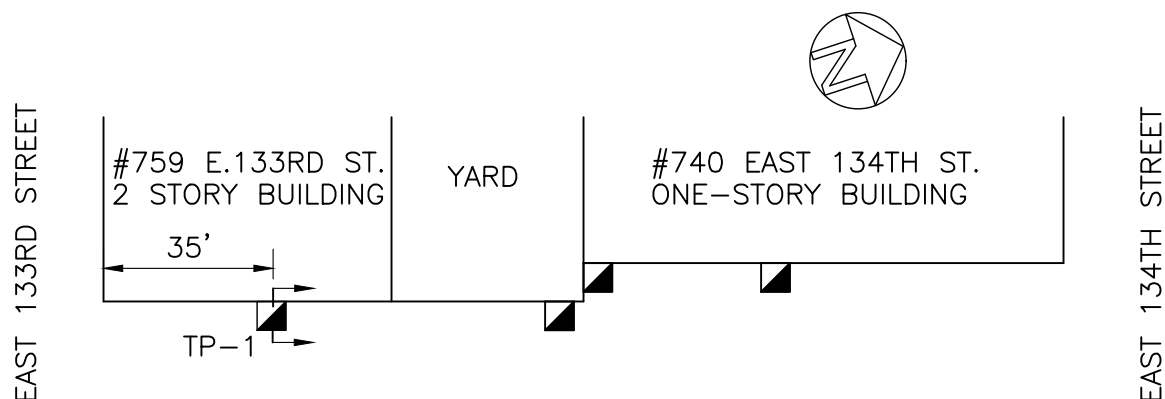
Contractor: Demolition Contractor

Test Pit No.: TP-1

Sheet: 1 of 1

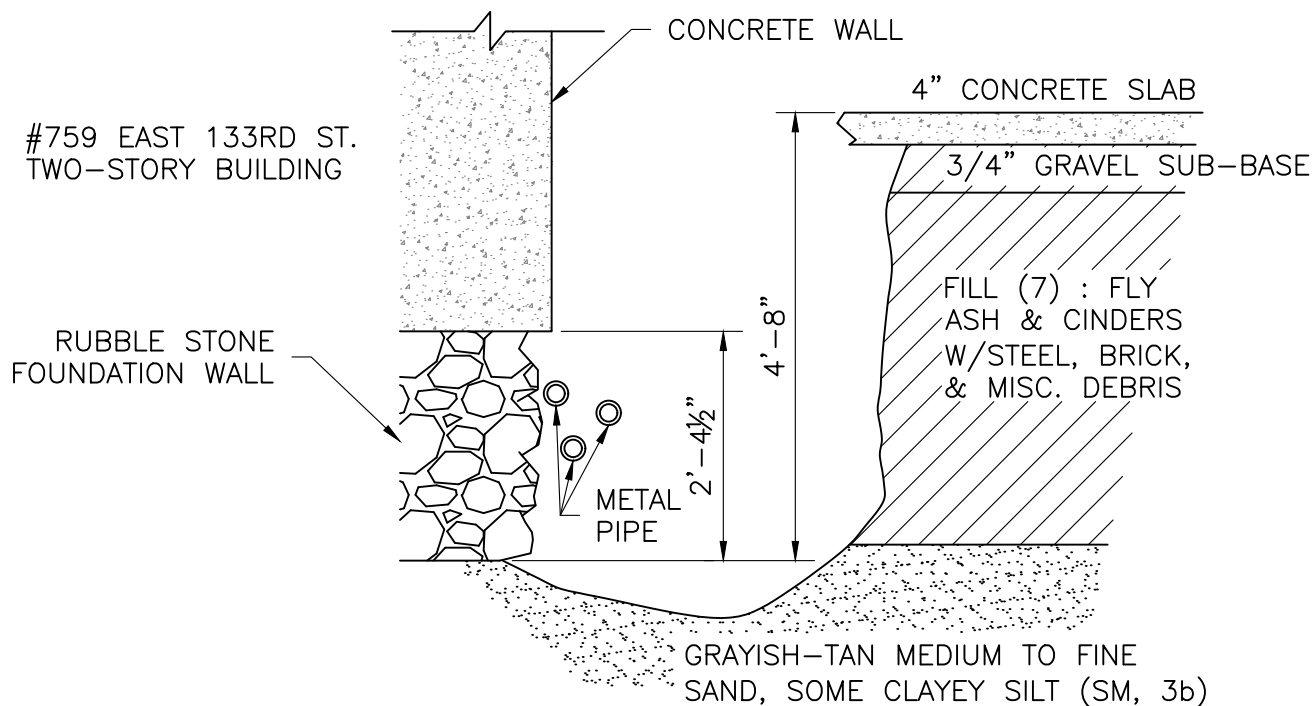
Ground El: 0.0

Groundwater Depth: NA



LOCATION PLAN

SCALE: NTS



SECTION LOOKING EAST

SCALE: NTS

Project: 767 East 133rd Street
Bronx, New York

Date: 5/10/2021

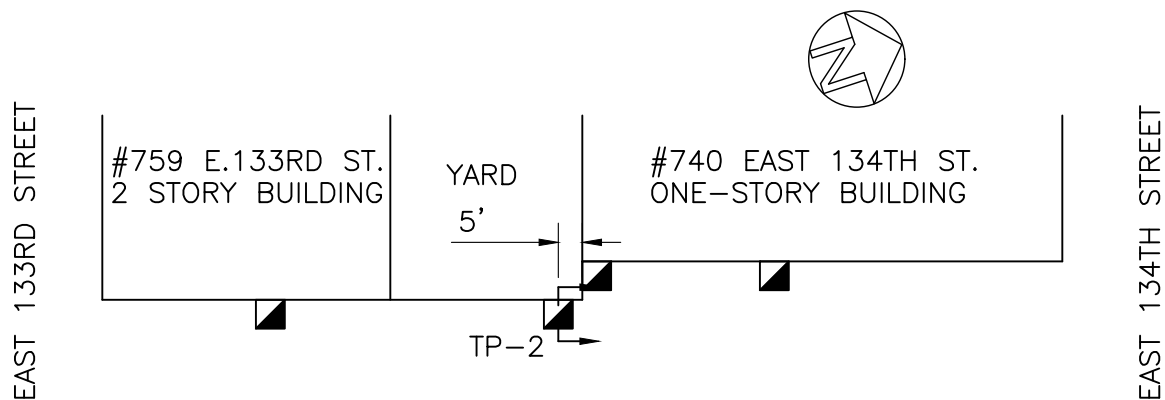
Contractor: Demolition Contractor

Test Pit No.: TP-2

Sheet: 1 of 1

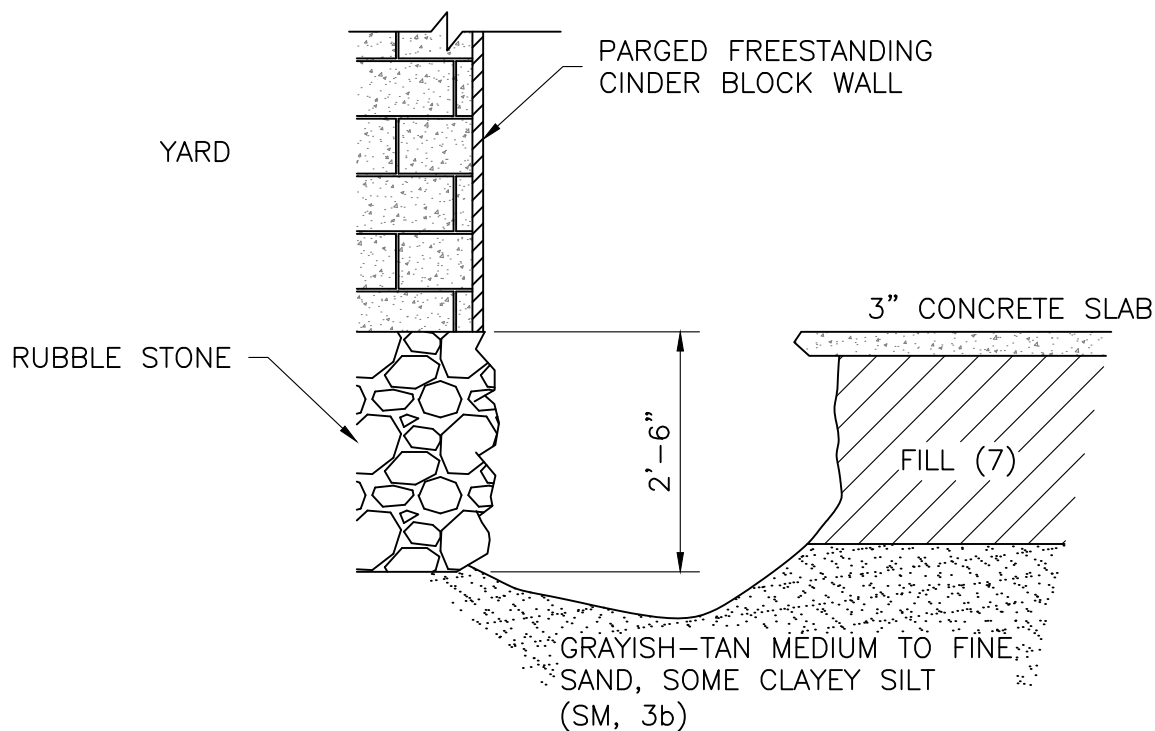
Ground El: 0.0

Groundwater Depth: NA



LOCATION PLAN

SCALE: NTS



SECTION LOOKING EAST

SCALE: NTS

Project: 767 East 133rd Street
Bronx, New York

Date: 5/10/2021

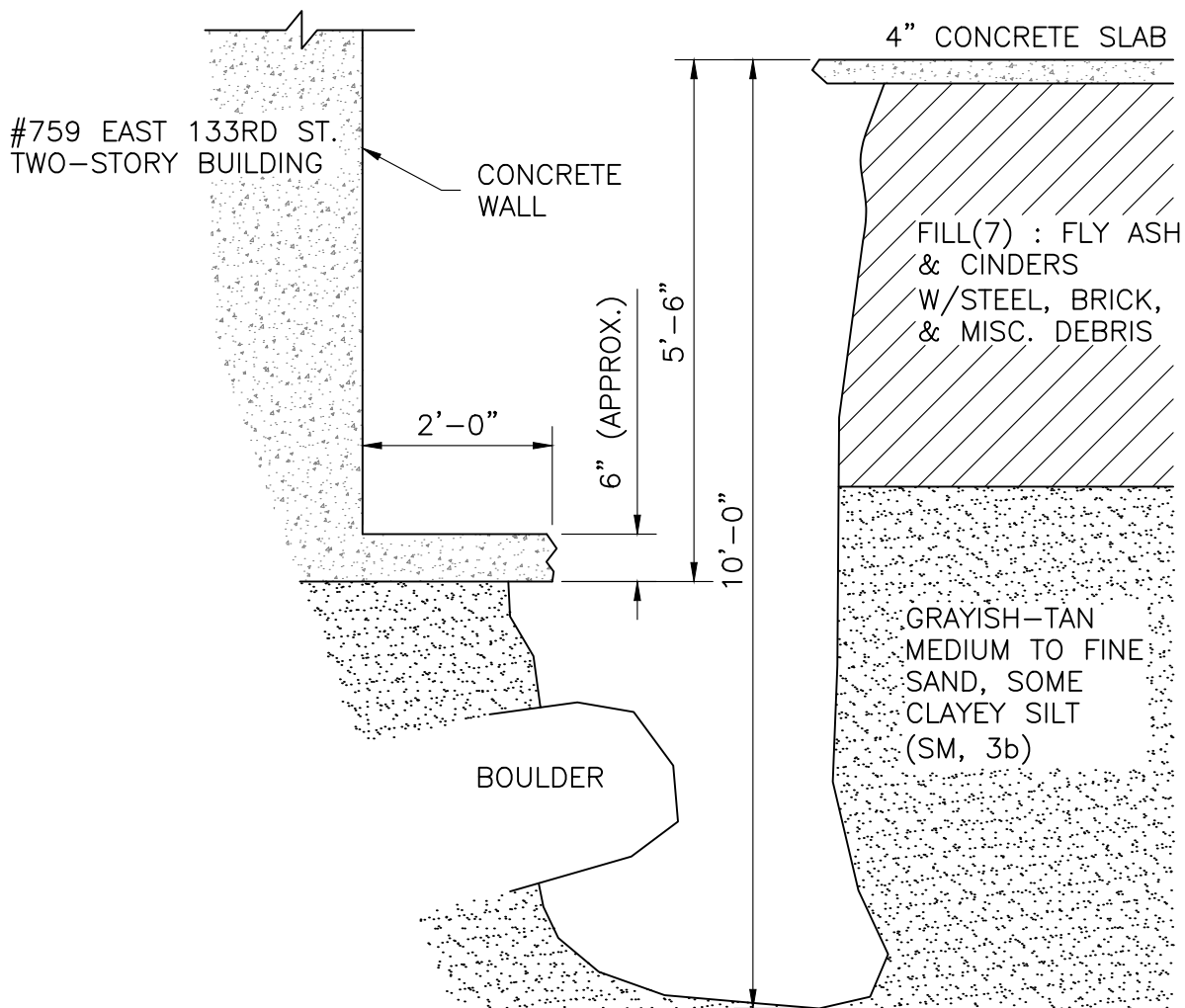
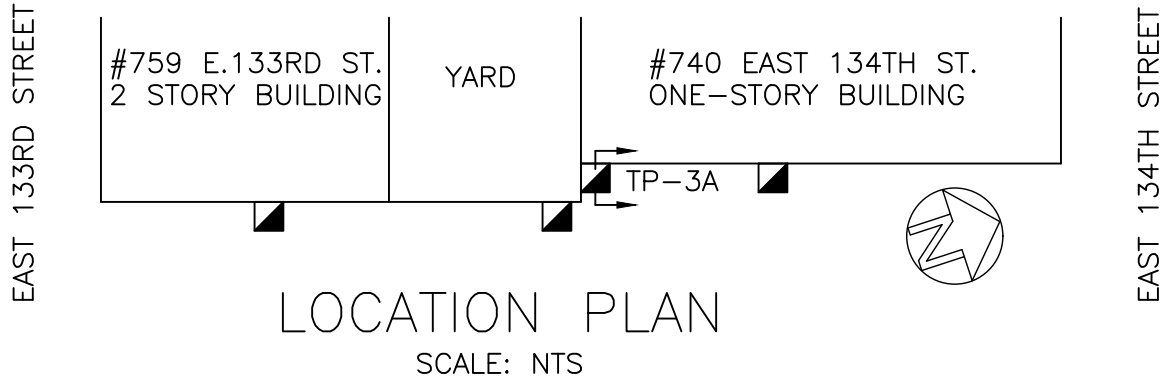
Contractor: Demolition Contractor

Test Pit No.: TP-3a

Sheet: 1 of 1

Ground El: 0.0

Groundwater Depth: NA



Project: 767 East 133rd Street
Bronx, New York

Date: 5/10/2021

Contractor: Demolition Contractor

Test Pit No.: TP-4

Sheet: 1 of 1

Ground El: 0.0

Groundwater Depth: NA

