# SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION REPORT

for

# 3 North Castle Drive Armonk, New York 10504

Prepared for:

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#### **TABLE OF CONTENTS**

1.0		.1
2.0	BACKGROUND	.2
2.1	SITE LOCATION AND DESCRIPTION	.2
2.2	PREVIOUS ENVIRONMENTAL REPORTS	.2
2.3	GEOLOGY	.3
2.4	Hydrogeology	.3
3.0	FIELD INVESTIGATION	.5
3.1	GEOPHYSICAL SURVEY	
3.2	Soil Investigation and Sampling Methodology	.5
3.3	GROUNDWATER INVESTIGATION	
4.0	OBSERVATIONS AND RESULTS	
4.1	GEOPHYSICAL SURVEY	.7
4.2	SURFACE AND SUBSURFACE OBSERVATIONS	
4.3	SOIL SAMPLE ANALYTICAL RESULTS	.7
5.0	CONCLUSIONS	-
6.0	LIMITATIONS	10

#### FIGURES

- Figure 1 Site Location Map
- Figure 2 Soil Sample Location and Analytical Results Map

#### Tables

- Table 1Sample Collection Summary
- Table 2Soil Sample Analytical Results

#### APPENDICES

- Appendix A Geophysical Survey Report
- Appendix B Soil Boring Logs
- Appendix C Laboratory Analytical Reports

#### 1.0 INTRODUCTION

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) completed a Supplemental Environmental Site Investigation (ESI) on behalf of JCAL Development Group LLC for the property located at 3 North Castle Drive in Armonk, New York (the 'site'). The site is about 32.55 acres in area, is primarily vegetated and wooded, and is currently not developed. The central part of the site is under consideration for a proposed residential development (the Development Area). The easternmost portion of the site, characterized by a steep eastern slope and heavy vegetation, is located outside of the Development Area and is referred to as Area X. See Figure 2 for area depictions.

The objectives of the Supplemental ESI were to 1) evaluate the presence of metals and pesticide impacts in groundwater and the extent of arsenic impacts in soil as identified in the SESI Consulting Engineers (SESI) Phase II Environmental Site Assessment (ESA) report, dated March 2023; and 2) generate a data set that can be used to inform future management and/or community use of Area X.

The Supplemental ESI was implemented between June 20 and 22, 2023. The investigation included completion of a geophysical survey, advancement of soil borings, and collection of soil samples for laboratory analysis.

The report is organized as follows:

- Section 2.0: Describes the site background
- Section 3.0: Presents the Supplemental ESI methodology
- Section 4.0: Presents the findings of the Supplemental ESI
- Section 5.0: Presents conclusions based on the findings

#### 2.0 BACKGROUND

#### 2.1 Site Location and Description

The site is located at 3 North Castle Drive in Armonk, New York, and is identified as Section 108.03, Block 1, Lot 62.1on the Westchester County Tax Map. The site is about 32.55 acres in area and is currently a vacant lot that is comprised of overgrown vegetation and wooded areas. Remnants of former gravel roads are present throughout the site. The site historically operated as an orchard since at least 1949 through the early to mid-1960s; however, satellite imagery indicates partial use of the orchard may have continued through the 1970s or longer.

The site is bound to the north by Armonk Bedford Road (Route 22) followed by mixed-use residential, commercial, and institutional properties; to the east by commercial properties, public parks, and undeveloped forested land; to the south by commercial properties, public parks, and undeveloped forested land; and to the west by Armonk Bedford Road (Route 22) followed by mixed-use residential and commercial properties. According to the March 10, 2023 draft Grading Plan prepared by Alfonzetti Engineering, P.C., the elevation of the site ranges from about elevation<sup>1</sup> (el.) +534 in the southwestern part of the site to el. +402 in the eastern part of the site. The eastern portion of the site and the surrounding area slopes to the east-northeast. A Site Location Map is included as Figure 1.

#### 2.2 Previous Environmental Reports

The following previous report was reviewed, and findings related to the site are summarized below:

#### Limited Phase II ESA Report, prepared by SESI, dated March 2023

Between April and November 2022, SESI performed a series of geotechnical and environmental investigations at the site. These investigations were collectively summarized in a Limited Phase II ESA Report. The April 2022 geotechnical investigation was conducted to support the proposed site development as a residential subdivision and a hotel. The May 2022 environmental investigation was completed to evaluate subsurface impacts associated with historical agricultural use of the site. The November 2022 supplemental environmental investigation was completed to further delineate the extent of pesticide-related contamination in soil at the site. The investigations included the following activities:

- Excavation of twenty-one test pits and twenty-two rock probes;
- Performance of a geophysical survey prior to ground-intrusive activities to identify underground utilities and anomalies indicative of potential USTs and to mark out proposed sampling locations;
- Advancement of five soil borings and collection of five soil samples for laboratory analysis; and
- Advancement of twenty-eight borings and analysis of 50 soil samples for laboratory analysis.

<sup>&</sup>lt;sup>1</sup> Datum not provided but presumed to be North American Vertical Datum of 1988 (NAVD88).

Field observations from the investigations are summarized below:

- A layer of topsoil was observed from grade surface to depths up to one foot below grade surface (bgs) across the site. The surficial topsoil was underlain by native soil, consisting of fine- to coarse-grained sand with varying amounts of silt, gravel, and isolated layers of fine-grained soil. Bedrock was encountered at depths between 1.5 to 12 feet bgs. Bedrock outcrops, cobbles, and boulders were observed at surface grade across the site.
- Groundwater was not encountered during the environmental and geotechnical investigations; however, water seepage was observed at several geotechnical test pit locations between 4 and 7 feet bgs, correlating to approximate site elevations of el. +506 and el.<sup>1</sup> +475. Suspected groundwater was observed in several rock probe borings at depths between 17 and 20 feet bgs, correlating to approximate site elevations of el. +460 and el. +472, respectively.

Pesticides (4,4-DDD; 4,4-DDE; 4,4-DDT; and dieldrin) and metals (arsenic and lead) were detected in soil at concentrations exceeding the Title 6 of the New York Codes, Rules, and Regulations (6 NYCRR) Part 375 Unrestricted Use (UU) and/or Restricted Use Restricted-Residential (RURR) Soil Cleanup Objectives (SCO). Pesticide and metal detections were located centrally to the Development Area.

#### 2.3 Geology

According to the New York State Geological Survey Surficial Geologic Map of New York and Geologic Map of New York, Lower Hudson Sheets, the site is underlain by metamorphic rocks of sedimentary and volcanic origin of the Fordham Gneiss formation.

During the Supplemental ESI, the subsurface lithology was generally observed to consist of native soils comprised of silt, fine sand, or silty sand with varying amounts of silt, fine sands, organic matter, rootlets, and fine gravel. Bedrock was encountered at various depths between 1.5 and 11 feet bgs. Bedrock outcrops at grade surface were observed throughout the site.

#### 2.4 Hydrogeology

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

True groundwater was not encountered during the Supplemental ESI nor during the previous investigations conducted by SESI; however, water seepage was observed at several geotechnical test pit locations (SESI) between 4 and 7 feet bgs, correlating to approximate site elevations of el. +506 and el. +475. Further, suspected groundwater was observed in several

<sup>&</sup>lt;sup>1</sup> Datum not provided but presumed to be North American Vertical Datum of 1988 (NAVD88).

rock probe borings (SESI) at depths between 17 and 20 feet bgs, correlating to approximate site elevations of el. +460 and el. +472, respectively.

Regional groundwater is inferred to flow to the east toward the Wampus River; however, the groundwater flow onsite is likely influenced by bedrock depth and characteristics (i.e., fracture density and porosity). Groundwater flow was not evaluated as part of this Supplemental ESI.

#### 3.0 FIELD INVESTIGATION

The Supplemental ESI was implemented between June 20 and 22, 2023 and consisted of a geophysical survey in areas of proposed sampling, installation of 16 soil borings, advancement of 17 borings to investigate groundwater, and collection and laboratory analysis of 42 grab soil samples. A sample summary is provided in Table 1.

#### 3.1 Geophysical Survey

Nova Geophysical Services, Inc. of Douglaston, New York conducted a geophysical survey under Langan observation on June 20, 2023 using ground-penetrating radar and electromagnetic detection equipment to clear proposed sample locations and attempt to identify underground storage tanks (UST), utilities, and/or subsurface anomalies. The entirety of the site was not surveyed, rather, the survey was conducted in areas of planned borings only. A copy of the geophysical survey report is included in Appendix A.

#### 3.2 Soil Investigation and Sampling Methodology

Four areas were selected for metals delineation based on RURR exceedances of arsenic detected in samples during the May and November 2022 subsurface investigations by SESI. The four delineation areas, with corresponding SESI boring names, are as follows:

- Area 1 SS-14
- Area 2 SS-13 and SS-20
- Area 3 SS-30
- Area 4 SS-31

Sixteen soil borings (SB13A, SB13B, SB14A through SB14D, SB30A through SB30E, and SB31A through SB31E) were advanced by Langan field personnel between June 20 and 22, 2023. Soil boring locations and the four delineation areas are shown on Figure 2.

The soil borings were advanced using a hand auger to up to 2 feet bgs. Recovered soil was placed on dedicated plastic sheeting. Recovered soil was screened with a photoionization detector (PID) equipped with a 10.6 electron volt lamp, inspected for visual and olfactory evidence of contamination, and classified by Langan field personnel. The soil boring logs are provided in Appendix B.

Up to 4 grab soil samples were collected from each of the 16 borings for laboratory analysis. Soil samples were collected from 6-inch intervals to a depth of 2 feet bgs. Soil samples were collected into laboratory-supplied batch-certified clean glassware and submitted to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory (York Analytical Laboratories Inc. [York] of Stratford, Connecticut [ELAP ID #10854]) via courier service under standard chain-of-custody protocol. Soil samples were analyzed for arsenic by United States Environmental Protection Agency (USEPA) Method 6010.

#### **3.3 Groundwater Investigation**

Langan retained Lakewood Environmental to install temporary groundwater monitoring wells. Four temporary monitoring wells were proposed to characterize and analyze groundwater for metals and pesticides. Seventeen borings were advanced throughout the western portion of the Development Area to attempt to install the temporary groundwater monitoring wells using a Geoprobe 6610DT direct-push technology drill rig. Refusal was encountered in each boring between 1.5 and 12 feet bgs in bedrock. Groundwater was not encountered in the borings, and no wells were installed. The proposed locations of the temporary monitoring wells and attempted offset locations are shown on Figure 2.

#### 4.0 OBSERVATIONS AND RESULTS

#### 4.1 Geophysical Survey

A geophysical survey was conducted in areas of planned borings only. Subsurface anomalies indicative of underground utilities or USTs were not identified. The geophysical survey report is included in Appendix A.

#### 4.2 Surface and Subsurface Observations

Site topography generally slopes downward toward the east-northeast with a steep downward slope at the eastern extent of the Development Area boundary. The historical orchard spanned the western portion of the Development Area within a generally level topographic area. A drainage feature, presumed to be an ephemeral stream, was observed at the southern boundary of the Development Area in the vicinity of the ESI soil borings SB30A and around SB31A in Area X. The streambed was observed to be dry and inactive at the time of the Supplemental ESI, however, it is suspected that during wet weather events, this streambed channels sheetflow from the Development Area (including the former orchard area) to off-site locations.

Soil borings were advanced to up to 2 feet bgs using a hand auger. During the Supplemental ESI, the subsurface lithology was generally observed to consist of native soils comprised of silt, fine sand, or silty sand with varying amounts of silt, fine sands, organic matter, rootlets, and fine gravel. Bedrock was encountered in several boring attempts at depths between 1.5 and 2 feet bgs. In borings where bedrock was encountered before the proposed termination depth, the borings were offset by 1-foot increments until the proposed termination depth was attainable. Bedrock outcrops at grade surface were observed throughout the site. Groundwater or visual, olfactory, and/or PID evidence of impacts were not observed in any of the borings.

Seventeen borings were advanced throughout the western portion of the Development Area to attempt install the temporary groundwater monitoring wells. Refusal was encountered in each boring between 1.5 and 12 feet bgs in bedrock. Groundwater was not encountered in the borings, and no wells were installed.

#### 4.3 Soil Sample Analytical Results

Forty-two soil samples were collected from 16 soil borings for laboratory analysis. Soil sample analytical results were compared to the 6 NYCRR Part 375 UU and RURR SCOs.

Soil sample analytical results are provided in Table 2 and are presented on Figure 2. Laboratory analytical reports are provided in Appendix C.

#### <u>Metals</u>

Arsenic was detected above the UU and RURR SCOs of 13 milligrams per kilogram and16 mg/kg, respectively, in 23 samples collected from 10 borings (SB13A, SB13B, SB14A, SB14B, SB14D, SB30A, SB30B, SB30C, SB30E, and SB31E) from 0 to 6, 6 to 12, 12 to 18, and/or 18 to 24 inches bgs.

Arsenic was also detected above the UU SCOs, but below the RURR SCOs, in 4 samples collected from 4 borings (SB14B, SB30C, SB31C, and SB31E) from 0 to 6, 6 to 12, and/or 18 to 24 inches bgs.

#### 5.0 CONCLUSIONS

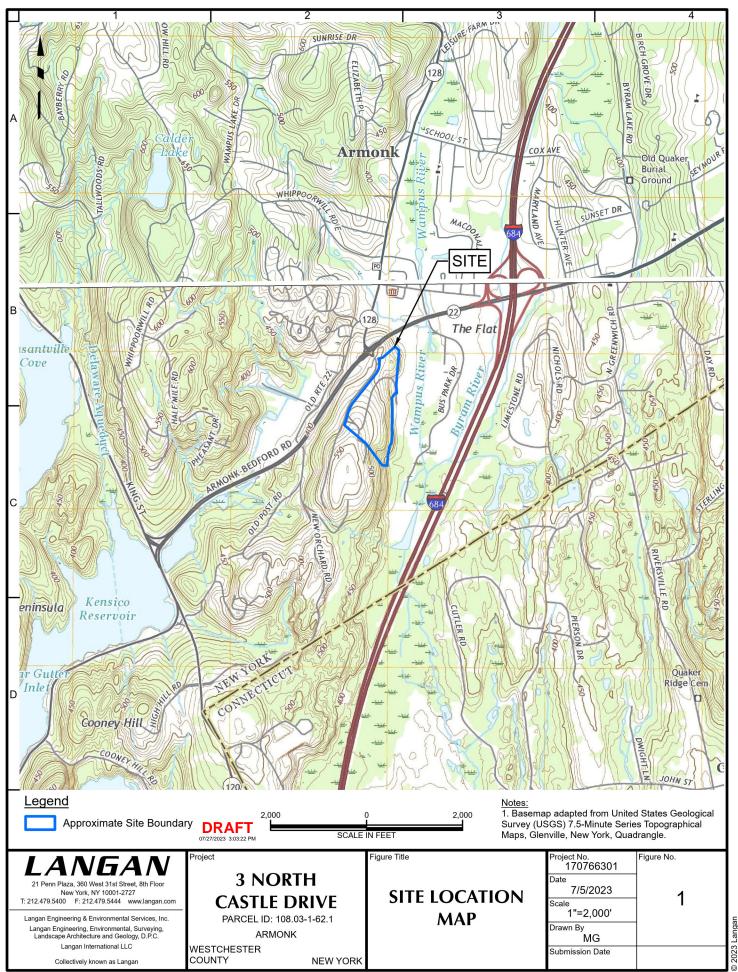
Findings and conclusions of the Supplemental ESI are summarized below:

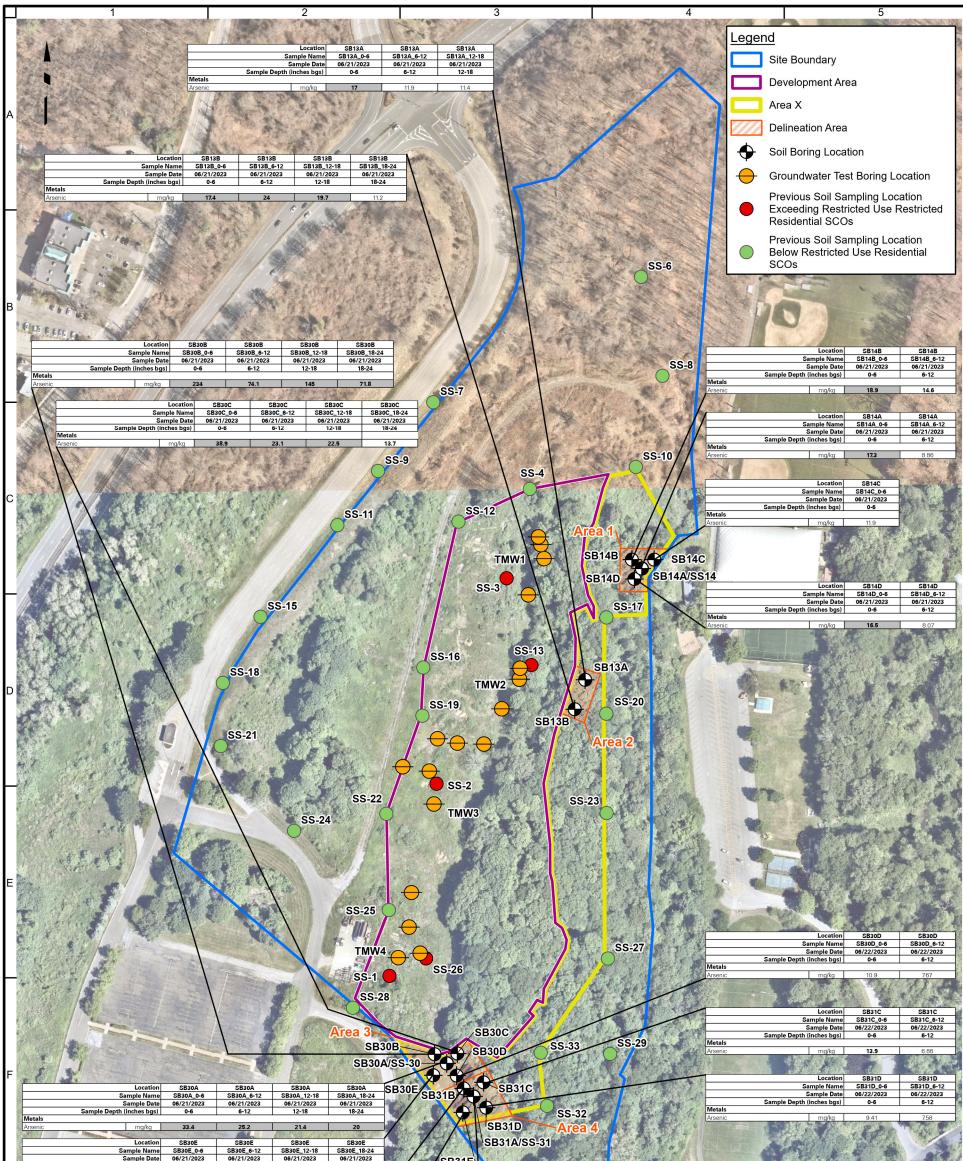
- <u>Geophysical Survey</u>: Subsurface anomalies, including utility lines (e.g., electric and water) and/or USTs, were not detected at the site.
- <u>Lithology</u>: The subsurface lithology was generally observed to consist of native soils comprised of silt, fine sand, or silty sand, with varying amounts of silt, fine sands, organic matter, rootlets, and fine gravel. The native soil is underlain by bedrock (schist and gneiss) at shallow depths (i.e., less than boring termination depth, 2 feet bgs). Bedrock outcrops at grade surface were observed throughout the site.
- <u>Hydrogeology</u>: Groundwater was not encountered in the 17 borings advanced during the Supplemental ESI. Based on groundwater seepage observed during the April 2022 geotechnical investigation by SESI, groundwater at the site is likely contained within a bedrock aquifer. Regional groundwater is expected to flow to the east toward the Wampus River; however, the groundwater flow on the site is likely influenced by topography and bedrock depth and characteristics (i.e., fracture density and porosity). Groundwater flow at the site was not evaluated as part of the Supplemental ESI.
- Soil Analytical Results:
  - Soil contains arsenic at concentrations above the UU and/or RURR SCOs. The presence of elevated arsenic concentrations is attributed to former use of the site as a fruit orchard.
  - Concentrations of arsenic generally decreased with depth across borings, and arsenic was delineated vertically below the UU SCOs in Area 2 to a depth of 18 inches. Arsenic was delineated vertically below the RURR SCOs in Areas 1 and 4 to a depth of six inches. Vertical delineation of arsenic in Area 3 is incomplete.
  - Horizontal delineation of arsenic impacts remains incomplete in Areas 1 through 4.
  - Based on the distribution of arsenic exceedances in relation to the site topography and general location of the historical orchard at higher elevations than Area X, it can be inferred that concentrations of arsenic at the site are influenced by surface water flow and site topography.
  - Based on the shallow depths of arsenic exceedances and low mobility of arsenic in soil and relative bedrock impermeability, transport of arsenic to a bedrock aquifer is considered unlikely.

#### 6.0 LIMITATIONS

This Supplemental ESI Report was prepared expressly for JCAL Development Group LLC for the 3 North Castle Drive site and for the objectives defined herein. Special risks occur whenever engineering or related disciplines are applied to identify subsurface conditions. Even a comprehensive sampling and testing program implemented in accordance with a professional Standard of Care may fail to detect certain conditions. The environmental, geologic, geotechnical, geochemical, and hydrogeologic conditions that Langan interprets to exist between sampling points will differ from those that actually exist. Actual conditions will vary from those encountered at the locations where borings, sampling, surveys, observations, or explorations are made by Langan or its subcontractors and the data, interpretation, and recommendations of Langan are based solely on the information available to it. Furthermore, the passage of time, natural occurrences, and/or direct or indirect human intervention at or near the site may substantially alter discovered conditions. Langan shall not be responsible for interpretations by others of the information it develops or provides to JCAL Development Group LLC without specific written authorization from Langan.

**FIGURES** 





Sample Date 06/21/2023 Sample Depth (inches bgs) 0-6	06/21/2023 06/21/202 6-12 12-18	3 06/21/2023 18-24	SB31E	and the second second		A COMPANY AND	The Last Cheek
Metals Arsenic	Y RECTION	3 06/22/2023 6-12 6.95 SB31E 6-12 3 06/22/2023 6-12 14 Location Sample Name Sample Date 06 le Depth (inches bgs) mg/kg	SB31A         SB31A           B31A         SB31A           B31A         6           SB31A         6.12           10.8         8.87           0         0           0         0           SCALE I	200	Analyte           Metals           Arsenic           Exceedance Summary:           10         - Result exceeds Unrestrict           10         - Result exceeds Restricted           Notes:         -           1. Aerial imagery provided by Langan's s           2. All features, site boundary, and sample           3. Sample locations based on in-field no collected by Langan during the Supplem (June 2023).           4. Soil sample analytical results are com Environmental Conservation (NYSDEC) Codes, Rules, and Regulations Part 375 Restricted Residential (RURR) Soil Clea           5. Detected analytical results above RUI           6. Detected analytical results above RUI           7. bgs = below grade surface           8. mg/kg = milligram per kilogram	Use Restricted Resid subscription to NearMap e locations are approxim rthing/easting global po- ental Environmental Sit pared to the New York S Title 6 of the Official Co Unrestricted Use (UU) nup Objectives (SCO). SCOs are bolded.	com, flown 5/28/2023. nate. sitioning system data e Investigation (ESI) State Department of mpilation of New York
LARAGEAN Langan Engineering, Environmental, Survey Landscape Architecture, and Geology, D.P. 360 West 31st Street, 8th Floor New York, NY 10001 T: 212.479.5440 F: 212.479.5444 www.langan.4	ing, C. PA	RTH CAST	LE DRIVE	Figure Title SOIL SAMP LOCATION A ANALYTICA RESULTS MA	ND 8/3/20 NL <sup>Scale</sup> 1"=20	023	<sup>No.</sup>

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TABLES

# Table 1 Supplemental Environmental Site Investigation Sample Collection Summary

#### 3 North Castle Drive Armonk, New York Langan Project No.: 170766301

No.	Sample Location	Sample ID	Sample Depth Interval (inches bgs)	Sample Date	Analyses
			Soil Samples		
1	SB13A	SB13A_0-6	0 - 6	6/21/2023	
2	SB13A	SB13A_6-12	6 - 12	6/21/2023	
3	SB13A	SB13A_12-18	12 - 18	6/21/2023	
4	SB13B	SB13B_0-6	0 - 6	6/21/2023	
5	SB13B	SB13B_6-12	6 - 12	6/21/2023	
6	SB13B	SB13B_12-18	12 - 18	6/21/2023	
7	SB13B	SB13B_18-24	18 - 24	6/21/2023	
8	SB14A	SB14A_0-6	0 - 6	6/21/2023	
9	SB14A	SB14A_6-12	6 - 12	6/21/2023	
10	SB14B	SB14B_0-6	0 - 6	6/21/2023	
11	SB14B	SB14B_6-12	6 - 12	6/21/2023	
12	SB14C	SB14C_0-6	0 - 6	6/21/2023	
13	SB14D	SB14D_0-6	0 - 6	6/21/2023	1
14	SB14D	SB14D_6-12	6 - 12	6/21/2023	
15	SB30A	SB30A_0-6	0 - 6	6/21/2023	1
16	SB30A	SB30A_6-12	6 - 12	6/21/2023	1
17	SB30A	SB30A_12-18	12 - 18	6/21/2023	
18	SB30A	SB30A_18-24	18-24	6/21/2023	
19	SB30B	SB30B_0-6	0 - 6	6/21/2023	
20	SB30B	SB30B_6-12	6 - 12	6/21/2023	
21	SB30B	SB30B_12-18	12 - 18	6/21/2023	
22	SB30B	SB30B_18-24	18-24	6/21/2023	Part 375 Arsenic
23	SB30C	SB30C_0-6	0 - 6	6/21/2023	1
24	SB30C	SB30C_6-12	6 - 12	6/21/2023	1
25	SB30C	SB30C_12-18	12 - 18	6/21/2023	1
26	SB30C	SB30C_18-24	18-24	6/21/2023	1
27	SB30D	SB30D_0-6	0 - 6	6/22/2023	1
28	SB30D	SB30D_6-12	6 - 12	6/22/2023	
29	SB30E	SB30E_0-6	0 - 6	6/21/2023	1
30	SB30E	SB30E_6-12	6 - 12	6/21/2023	
31	SB30E	SB30E_12-18	12 - 18	6/21/2023	1
32	SB30E	SB30E_18-24	18-24	6/21/2023	
33	SB31A	SB31A_0-6	0 - 6	6/22/2023	1
34	SB31A	SB31A_6-12	6 - 12	6/22/2023	1
35	SB31B	SB31B_0-6	0 - 6	6/22/2023	1
36	SB31B	SB31B_6-12	6 - 12	6/22/2023	1
37	SB31C	SB31C_0-6	0 - 6	6/22/2023	1
38	SB31C	SB31C_6-12	6 - 12	6/22/2023	1
39	SB31D	SB31D_0-6	0 - 6	6/22/2023	1
40	SB31D	SB31D_6-12	6 - 12	6/22/2023	1
41	SB31E	SB31E_0-6	0 - 6	6/22/2023	1
42	SB31E	SB31E_6-12	6 - 12	6/22/2023	1

#### Notes:

1. Part 375 = Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (6 NYCRR) New York State Department of Environmental Conservation (NYSDEC) Part 375

2. bgs = below grade surface

#### 3 North Castle Drive

Armonk, New York

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Restricted Residential SCOs	Location Sample Name Sample Date Sample Depth Unit	SB13A SB13A_0-6 6/21/2023 0-6 Result	SB13A SB13A_6-12 6/21/2023 6-12 Result	SB13A SB13A_12-18 6/21/2023 12-18 Result	SB13B SB13B_0-6 6/21/2023 0-6 Result	SB13B SB13B_6-12 6/21/2023 6-12 Result	SB13B SB13B_12-18 6/21/2023 12-18 Result	SB13B SB13B_18-24 6/21/2023 18-24 Result	SB14A SB14A_0-6 6/21/2023 0-6 Result	SB14A SB14A_6-12 6/21/2023 6-12 Result	SB14B SB14B_0-6 6/21/2023 0-6 Result	SB14B SB14B_6-12 6/21/2023 6-12 Result	SB14C SB14C_0-6 6/21/2023 0-6 Result	SB14D SB14D_0-6 6/21/2023 0-6 Result	SB14D SB14D_6-12 6/21/2023 6-12 Result
Metals																		
Arsenic	7440-38-2	13	16	mg/kg	17	11.9	11.4	17.4	24	19.7	11.2	17.3	8.86	18.9	14.6	11.9	16.5	8.07
General Chemistry																		
Total Solids	TSOLID	NS	NS	Percent	83.4	87.7	90.3	83.3	85	88	89.8	71.3	81.3	84.6	91.7	88.3	77.2	87.3

#### 3 North Castle Drive

#### Armonk, New York Lang

Langan	Project	No.:	1707	66301	I

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use	NYSDEC Part 375 Restricted Use Restricted Residential SCOs	Location Sample Name Sample Date Sample Depth Unit	SB30A SB30A_0-6 6/21/2023 0-6 Result	SB30A SB30A_6-12 6/21/2023 6-12 Result	SB30A SB30A_12-18 6/21/2023 12-18 Result	SB30A SB30A_18-24 6/21/2023 18-24 Result	SB30B SB30B_0-6 6/21/2023 0-6 Result	SB30B SB30B_6-12 6/21/2023 6-12 Result	SB30B SB30B_12-18 6/21/2023 12-18 Result	SB30B SB30B_18-24 6/21/2023 18-24 Result	SB30C SB30C_0-6 6/21/2023 0-6 Result	SB30C SB30C_6-12 6/21/2023 6-12 Result	SB30C SB30C_12-18 6/21/2023 12-18 Result	SB30C SB30C_18-24 6/21/2023 18-24 Result	SB30D SB30D_0-6 6/22/2023 0-6 Result	SB30D SB30D_6-12 6/22/2023 6-12 Result
Metals																		
Arsenic	7440-38-2	13	16	mg/kg	33.4	25.2	21.4	20	234	74.1	145	71.8	38.9	23.1	22.5	13.7	10.9	7.67
General Chemistry																		
Total Solids	TSOLID	NS	NS	Percent	84.7	87.2	88.1	89.8	80.1	82.6	80.2	80.3	82.7	88.6	87.3	90.7	72.9	75.1

#### 3 North Castle Drive

Armonk, New York Langan Project No. 47--

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			NYSDEC Part 375	Location	SB30E	SB30E	SB30E	SB30E	SB31A	SB31A	SB31B	SB31B	SB31C	SSB31C	SB31D	SB31D	SB31E	SB31E
	CAS	NYSDEC Part 375	Restricted Use	Sample Name	SB30E_0-6	SB30E_6-12	SB30E_12-18	SB30E_18-24	SB31A_0-6	SB31A_6-12	SB31B_0-6	SB31B_6-12	SB31C_0-6	SB31C_6-12	SB31D_0-6	SB31D_6-12	SB31E_0-6	SB31E_6-12
Analyte	Number	Unrestricted Use	Restricted	Sample Date	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/22/2023	6/22/2023	6/22/2023	6/22/2023	6/22/2023	6/22/2023	6/22/2023	6/22/2023	6/22/2023	6/22/2023
	Number	SCOs	Residential SCOs	Sample Depth	0-6	6-12	12-18	18-24	0-6	6-12	0-6	6-12	0-6	6-12	0-6	6-12	0-6	6-12
			Residential SCOs	Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Metals																		
Arsenic	7440-38-2	13	16	mg/kg	101	56	48.2	51.8	10.8	8.87	8.31	6.95	13.9	6.88	9.41	7.58	34	14
General Chemistry																		
Total Solids	TSOLID	NS	NS	Percent	85.3	87.4	87	88.4	71.7	75.5	75.8	75.1	75.9	76.3	71.1	76.9	87.3	86

#### 3 North Castle Drive Armonk, New York Langan Project No.: 170766301

#### Notes:

CAS - Chemical Abstract Service

mg/kg - milligram per kilogram

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

#### Exceedance Summary:

10 - Result exceeds Unrestricted Use SCOs

10 - Result exceeds Restricted Use Restricted Residential SCOs

**APPENDIX A** 

**GEOPHYSICAL SURVEY REPORT** 

# **GEOPHYSICAL ENGINEERING SURVEY REPORT**

3 North Castle Drive, North Castle, New York 10504

**NOVA PROJECT NUMBER:** 

23-3203

**DATED:** June 26, 2023

## PREPARED FOR: LANGAN

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

#### **PREPARED BY:**



NOVA GEOPHYSICAL SERVICES

Subsurface Mapping Solutions 56-01 Marathon Parkway, # 765, Douglaston, NY 11362 Ph. 347-556-7787 Fax. 718-261-1527 www.novagsi.com

June 26, 2023

Chris Kakolewski Project Manager

#### LANGAN

21 Penn Plaza 360 West 31st Street, 8th Floor New York, New York 10001-2727 Mobile: 845.750.9649 E: Ckakolewski@langan.com

Re: Geophysical Engineering Survey (GES) Report 3 North Castle Drive, North Castle, New York 10504

Dear Mr. Kakolewski.

Nova Geophysical Services (NOVA) is pleased to provide the findings of the geophysical engineering survey (GES) at the above referenced project site: 3 North Castle Drive, North Castle, New York (the "Site")

## INTRODUCTION TO GEOPHYSICAL ENGINEERING SURVEY (GES)

NOVA performed a geophysical engineering survey (GES) consisting of a Ground Penetrating Radar (GPR) and Electromagnetic (EM) survey at the site. The purpose of this survey is to locate and identify utilities, underground storage tanks (USTs) and other substructures in the vicinity of proposed boring locations on June 20<sup>th</sup>, 2023.

The equipment selected for this investigation was a RadioDetection RD7100 Electromagnetic utility locator. A typical electromagnetic (EM) utility locating system consists of a transmitter unit and a receiver unit. The receiver unit can be used independently of the transmitter unit in order to detect utility lines with an inherent EM signature (electric utility lines, water lines, etc.). If needed a current at a specific frequency can also be placed on a utility that is being located. This can be done via the transmitter unit by either direct connection or induction via an EM field varying at specific frequency. The receiver unit is then set to the selected frequency and the electromagnetic field created by the current running through the utility can be located allowing the utility to be marked.

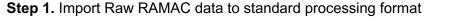
## GEOPHYSICAL METHODS

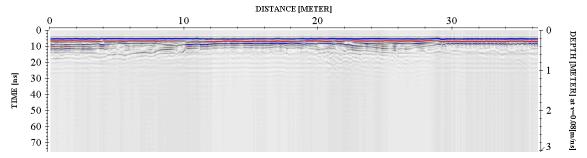
The project site was screened using an EM utility locator to help determine the locations of utilities within the survey area.

EM data was collected and interpreted on site and suspected utilities marked as needed.

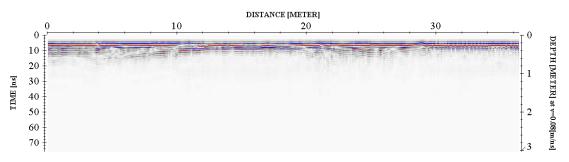
## DATA PROCESSING

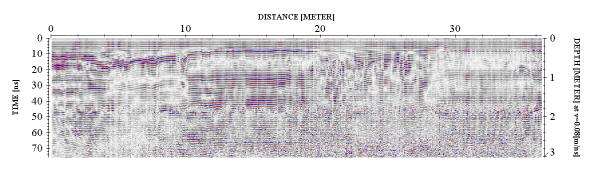
To improve the quality of the results and to better identify anomalies NOVA processed the collected data. The processing workflow is briefly described in this section.

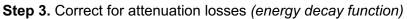


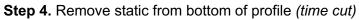


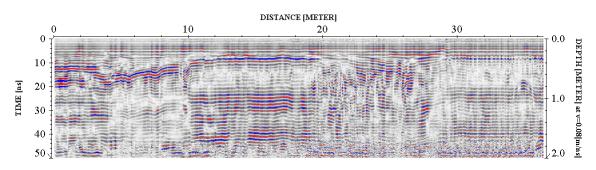




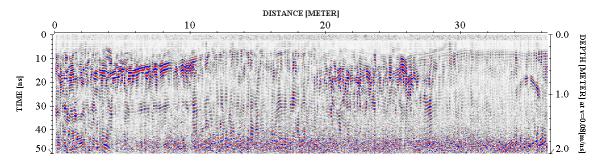








Step 5. Mute horizontal ringing/noise (subtracting average)



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

## PHYSICAL SETTINGS

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

Weather: Cloudy

Temperature: 65° F

Surface: Grass, Dirt

**Survey Parameters:** An EM scan was conducted within the survey areas as shown on the survey plan. The approximate line spacing of the grid survey was approximately 2'.

**Limitations:** NOVA was unable to collect data using a GPR due to vegetation in the boundary area that exceeded six feet tall. An EM scan was conducted but was unable to locate any utilities that cannot emit an electromagnetic signal. Further, NOVA was unable to determine if any UST's were present due to the inability to perform a GPR survey.

### RESULTS

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

- No anomalies were found in the boundaries of the site. The site was mainly overgrown vegetation.
- NOVA cleared and marked all proposed boring locations a the time of the survey.
- A visual scan around the perimeter of the site boundaries did not show any sign of UST's or utility lines (sewer, electric, telecom, gas, water, etc.).

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

Sincerely,

#### **NOVA Geophysical Services**

Sweet Chilf

Levent Eskicakit, P.G., E.P. Project Manager

#### Attachments:

Location Map Survey Plan Geophysical Images

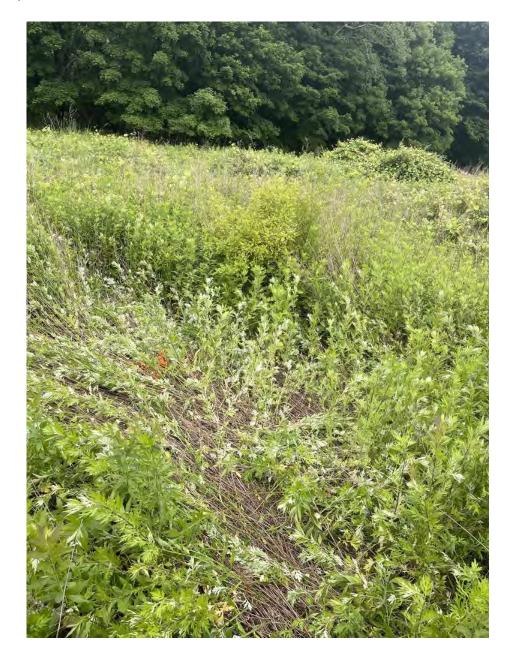
Google Earth			
	SITE:	3 North Castle Drive	LEGEND
NOVA Coophysical Com/isso		North Castle, New York 10504	
Geophysical Services Subsurface Mapping Solutions 56-01 Marathon Parkway, # 765	CLIENT:	Langan	
56-01 Marathon Parkway, # 765 Douglaston, New York 11362 Phone (347) 556-7787 * Fax (718) 261-1527	DATE:	June 20th, 2023	
Www.novagsi.com	AUTH:	Raymond Looney	



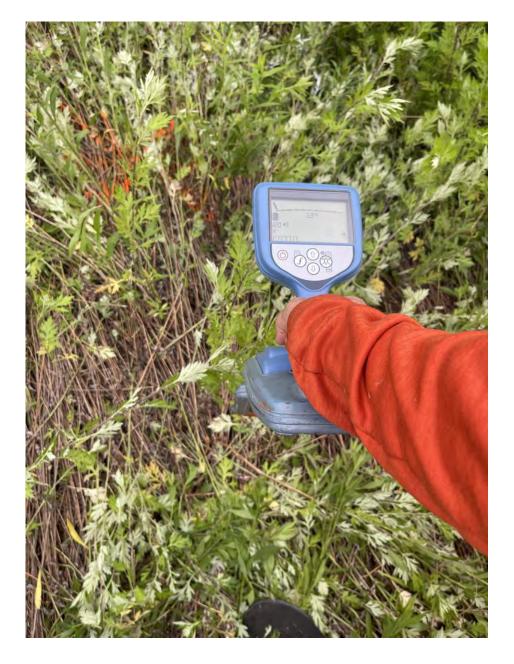
#### GEOPHYSICAL IMAGES Langan 3 North Castle Drive North Castle, New York 10504 June 20th, 2023







GEOPHYSICAL IMAGES Langan 3 North Castle Drive North Castle, New York 10504 June 20th, 2023





#### GEOPHYSICAL IMAGES Langan 3 North Castle Drive North Castle, New York 10504 June 20th, 2023





## **APPENDIX B**

**SOIL BORING LOGS** 

Joint Control     South Caste Drive, North Caste, NY     Beaton and Data       NA     NA     Caste Started     6/21/2023     Date Finished     6/21/2023       Start Caste Drive, North Caste, NY     Caste Started     Completion Depth     2.0 ft     NA       Caster Drive, North Caste, NY     NA     Caster Drive, North Caste, NY     Caster Drive, NA     Velocity       Start Caster Drive, NA     Mainteer of Sample District     NA     NA     Caster Drive, NA     Velocity       Start Caster Drive, NA     Weight (bit) NA     Caster Drive, NA     Prop. (n) NA     Field Engineer     NA     Caster Drive, NA     Veling Forena       Sampler Harneer     NA     Weight (bit) NA     Drop (n) NA     Sample Data     Remarks       Sample Teameer     NA     Weight (bit) NA     Drop (n) NA     Sample Data     Remarks       Sample Teameer     NA     Weight (bit) NA     Drop (n) NA     Sample Data     Remarks       Tamish bown to breen SILT, Usce free gravel, trace rootlets     1     Image Start, 0.6     SatisA.0.6     SatisA.0.6       1     Tamish bown to breen SILT, Usce free gravel, trace rootlets     1     Image Start, 0.6     SatisA.0.6       2     Tamish bown to breen SILT, Usce free gravel, trace rootlets     1     Image Start, 0.6     SatisA.0.6       1     1	oject	3 North Castle	e Drive		Project No.		17076	5301					
Initing Company     N/A     Date Started     6/21/2023     Date Finished     6/21/2023       Initing Equipment     4-inch ID Hand Auger     Completion Depth     2.0 ft     Rock Depth     N/E       asing Diameter (in)     N/A     Casing Depth (ft)     N/A     Drop (in)     N/A     Completion Depth     Core       asing Diameter (in)     N/A     Weight (lbs)     N/A     Drop (in)     N/A     Field Engineer     N/A       ampler     N/A     Weight (lbs)     N/A     Drop (in)     N/A     Field Engineer     N/A       ampler Hammer     N/A     Weight (lbs)     N/A     Drop (in)     N/A     Field Engineer     N/A       Sample Description     Sample Description     Dark brown fine SAND, some silt, trace rootlets (moist) [SP]     0     MAIA     0     Sample Deata     Remarks       Tannish brown to brown SILT, trace fine gravei, trace rootlets     1     MAIA     0     0     SB13A, 0-6     SB13A, 0-6       SB13A, 0-6     Boring at 2ft     1     1     MAIA     0     0     SB13A, 0-6       SB13A, 0-12     SB13A, 0-12     SB13A, 0-12     SB13A, 0-12     SB13A, 0-12     SB13A, 0-12       SB13A, 0-12     SB13A, 0-12     SB13A, 0-12     SB13A, 0-12     SB13A, 0-12     SB13A, 0-12 <t< td=""><td>cation</td><td></td><td></td><td></td><td>Elevation an</td><td>d Datum</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	cation				Elevation an	d Datum							
Completion Depth     Rock Depth     N/E       2.0 ft     N/E       2.0 ft     N/E       asing Diameter (in)     N/A     Completion Depth       N/A     Completion Depth       N/A     Completion Depth       N/A     Completion N/A       Sample Tammer     N/A     Completion N/A       angle mammer     N/A     Completion       Address angle mammer     N/A     Completion       Address angle mammer     N/A     Completion       O     Minit brown fine SAND, some silt, trace rootlets (moist) (SP)       Taminish brown to brown SiLT, trace fine gravel, trace rootlets     O     Minit Multi       End of Boring at 2ft.     End of Boring at 2ft     Completion       O     Minit Multi <th cols<="" td=""><td>Illing Company</td><td></td><td>e Drive, North Castle, I</td><td></td><td>Date Started</td><td>1</td><td></td><td></td><td>Date Finishe</td><td>ed</td><td></td><td></td></th>	<td>Illing Company</td> <td></td> <td>e Drive, North Castle, I</td> <td></td> <td>Date Started</td> <td>1</td> <td></td> <td></td> <td>Date Finishe</td> <td>ed</td> <td></td> <td></td>	Illing Company		e Drive, North Castle, I		Date Started	1			Date Finishe	ed		
ze and Type of Bit N/A N/A Casing Depth (ft) N/A Weight (lbs) N/A Drop (in) N/A ampler N/A Weight (lbs) N/A Drop (in) N/A ampler Hammer N/A Weight (lbs) N/A Drop (in) N/A ampler Ammer N/A Weight (lbs) N/A Drop (in) N/A Bield Engineer Andrew Ashley Field Engineer Andrew Ashley Depth Scale Set (ft) Se	illing Equipment				Completion	Depth		)23	Rock Depth			23	
N/A     N/A     Casing Depth (ft) N/A     Water Level (ft.)     First N/A     O       asing Hammer mapper     N/A     Weight (lbs) N/A     N/A     Drop (in) N/A     Mater Level (ft.)     First N/A     N/A     Completion N/A     24 HR.       asing Hammer MA     N/A     Weight (lbs) N/A     Drop (in) N/A     Drop (in) N/A     Drop (in) N/A     N/A     Drop (in) N/A     N/A     Drop (in) N/A     N/A       Field Engineer     N/A     Weight (lbs) N/A     Drop (in) N/A     N/A     Drop (in) N/A     N/A     Remarks       Bogod Bogod 0.0     Completion N/A     Sample Description     Depth Scale     Sample Data Bogod Bogod Completion     Remarks Completion N/A     Sample Description Fluid Loss, Drilling Resistance, et SB13A_0-6       Completion N/A     Dark brown fine SAND, some silt, trace rootlets (moist) [ML]     Dark brown SILT, trace fine gravel, trace rootlets (moist) [ML]     0.0     SB13A_0-6 SB13A_0-6     SB13A_0-6 SB13A_0-6       Completion N/A     End of Boring at 2ft.     End of Boring at 2ft.     Completion N/A     Completion N/A     Completion N/A     Completion N/A       End of Boring at 2ft.     End of Boring at 2ft.     End of Boring at 2ft.     Completion N/A     Completion N/A     Completion N/A	e and Type of Bi	t	id Auger					ed	Undisturbed				
N/A     Weight (lbs)     N/A     Drop (in)     N/A     Drop (in)     N/A     N/A     N/A       mpler     N/A     Weight (lbs)     N/A     Drop (in)     N/A     Drop (in)     N/A     N/A     N/A       mpler     N/A     Weight (lbs)     N/A     Drop (in)     N/A     Field Engineer     Andrew Ashley       Tage of the provide of the provid		N/A		Casing Depth (ft)			First	1	Completion	0	24 HR.	0	
Impler     N/A     N/A     N/A       mpler     N/A     Weight (lbs)     N/A     Drop (in)     N/A     Field Engineer       model     N/A     Weight (lbs)     N/A     Drop (in)     N/A     Andrew Ashley       model     Sample Description     Depth     Sample Data     Remarks       indication     Dark brown fine SAND, some silt, trace rootlets (moist) [SP]     0     MinA     SB13A_0-6       indication     Tannish brown to brown SILT, trace fine gravel, trace rootlets     0     1     MinA     SB13A_0-6       indication     End of Boring at 2ft.     End of Boring at 2ft.     0.0     0.0     SB13A_0-6       indication     Sample Data     Remarks     SB13A_0-6     SB13A_0-6       indication     Sample Data     Remarks     SB13A_0-6       indication     Sample Data     SB13A_0-6     SB13A_0-6       indication     Sample Data     Sample Data     SB13A_0-6       indication     Sample Data     Sample Data     Sample Data       indication     Sample Data     Sa		N/A	Weight (lbs)	N/A	. ,		$\Box$	N/A	▼' N/A	N/A	<b>V</b>	N/A	
Implement N/A     Weight (lbs)     N/A     Drop (in)     N/A     Drop (in)     Andrew Ashley       Image: Second	-		N/A	N/A			N/A						
Elev. (ft)     Sample Description     Sample Description     Sample Description     Remarks       0.0     Dark brown fine SAND, some silt, trace rootlets (moist) [SP]     0     0     Bit 36 or 12 (moist) [ML]     SB13A_0-6 SB13A_6-12       1     Tannish brown to brown SILT, trace fine gravel, trace rootlets     1     1     0.0     0.0       2     Image: Second se	mpler Hammer		Weight (lbs)	Drop (in) N/A	- Field Engine	er	Andrew	v Ashley					
0.0       Dark brown fine SAND, some silt, trace rootlets (moist) [SP]       0       Z       Image: Constraint of the second secon	i o				Danth	Sa	mple D	ata		Rem	narks		
Tannish brown to brown SILT, trace fine gravel, trace rootlets (moist) [ML]       0.0       SB13A_6-12         End of Boring at 2ft.       0.0       0.0       0.0         End of Boring at 2ft.       3       0.0       0.0       0.0         6       7       8       0       0       0.0       0.0	G S 0.0		Sample Description	I	Scale Scale		Penetr- resist BL/6in	Reading	(Drillin Fluid Los	ng Fluid,	Casing De	epth, ce, etc.)	
Image: model of Boring at 2ft.			, ,	( ), , ,				0.0					
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			End of Boning at 2it.						with clean soil	cuttings	to grade s	surface.	
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asing Hammer	N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman	N/A					
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ze and Type of Bi	N/A			Number of S	Samples		1	Undisturbed	0		0
asing Diameter (ir	n) N/A		Casing Depth (ft) N/A	Water Level	. ,	First ☑	N/A		N/A	24 HR. V	N/A
asing Hammer	N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Fore	man	N/A					
mpler Hammer	N/A	Weight (lbs)	Drop (in)	Field Engine	er						
	N/A	N/A	N/A		<u> </u>	mple D	w Ashley				
Elev. (ft)		Sample Description		Depth Scale			PID			narks	
(ft) S 0.0				Scale aquinn	Type Recov.	(III) Penetr- resist BL/6in	Reading (ppm)	Drilli) Fluid Los	ng Fluid, s, Drillin	Casing De g Resistano	pth, ce, etc.)
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roject	3 North Castle	e Drive		Project No.		17076	6301				
ocation				Elevation an	d Datum	ı					
rilling Company		e Drive, North Castle, I	NY	Date Started		N/A		Date Finishe	ed		
rilling Equipment	N/A			Completion	Denth	6/21/2	023	Rock Depth		6/21/202	23
	4-inch ID Han	nd Auger		Completion	Deptil	2.0 ft				N/E	
ze and Type of B	N/A			Number of S	amples	Disturb	bed 1	Undisturbed	0	Core	0
asing Diameter (i	in) N/A		Casing Depth (ft) N/A	Water Level	(ft.)	First ☑	N/A	Completion	N/A	24 HR.	N/A
asing Hammer	N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Fore	man	N/A					
Impler	N/A			Field Engine	er						
mpler Hammer	N/A	Weight (lbs) N/A	Drop (in) N/A				w Ashley	I			
				Depth		mple D		-	Ren	narks	
S XI		Sample Description	I	Scale Scale	Type Recov.	(III) Penetr- resist BL/6in	PID Reading	(Drilli Fluid Los	ng Fluid, s. Drillin	Casing De g Resistan	epth, ce. etc.)
0.0	Dark brown to brow	vn fine SAND, some silt, tr	ace fine gravel.			с - п	(ppm)	SB14D_0-6		<b>J</b> · · · · · · · · · · · · · · · · · · ·	
	trace rootlets (mois		<b>U</b> ,	0	HA		0.0 0.0				
				1 -1 M-1	T N 2		0.0				
		End of Boring at 2ft.		2			0.0	End of boring with clean soi			
							with oldari sol	routinge	i to grade s	undoc.	
				шилина 3 4							
				5							
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				10							
				11							
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				17							
				9							
				18							
				19							
				E I							

oject	3 North Ca			Project No.		17	0766301				
ocation		astle Drive, North Castle, I		Elevation a	nd Dat						
illing Comp	any	asue Drive, North Casue, I		Date Starte	d				Date Finished	0/04/00	
illing Equip				Completion	Depth		21/2023		Rock Depth	6/21/20	23
ze and Typ	e of Bit	Hand Auger		Number of	Sample	Ini	) ft sturbed		Undisturbed	N/E Core	
asing Diam	eter (in)		Casing Depth (ft)	Water Leve			rst ☑ I	1	0 Completion	24 HR.	0
asing Hamr	ner N/A	Weight (lbs) N/A	N/A Drop (in) N/A	Drilling Fore	. ,		<u> </u>	N/A	▼ N/A		N/A
Impler	N/A N/A	N/A	IN/A	-		N/	A				
mpler Ham		Weight (lbs) N/A	Drop (in) N/A	- Field Engin	eer	La	ura Grose				
				Depth	;	Samp	le Data		Rei	marks	
(ft) S/mpol		Sample Description	I	Scale du	Type	Recov. (in) Penetr-	IP Read Read (pp	ding	(Drilling Fluic) Fluid Loss, Drilli	l, Casing Do ng Resistar	epth, ice, etc.)
	Dark brown to t	prown fine SAND, some silt, tr	ace rootlets (moist)				0.	0	SB30A_0-6 SB30A_6-12		
		to brown fine SAND, some sil	t (moist) [SP]		⋼⋬⋎	24/24	0.		-		
	End of Boring at 2ft.						0.		End of boring at 2 fee	et bgs. Borir	ng backfille
									with clean soil cutting	s to grade s	surface.
				2 							
				6							
				2							
				9							
				10							
				11							
				12							
				13							
				- 14 -							
				15							
				16							
				17							
				- 18 -							

oject	3 North Cas	stle Drive		Project No.		17076	6301				
ocation				Elevation a	nd Datu	m					
illing Company		stle Drive, North Castle,	NY	Date Starte	d	N/A		Date Finish	ed		
illing Equipment	N/A			Completion	Depth	6/21/2	2023	Rock Depth		6/21/202	23
	4-inch ID H	and Auger			Dopui	2.0 ft		· ·		N/E	
ze and Type of E	N/A			Number of	Sample		l 1	Undisturbed	0	Core	0
asing Diameter (i	in) N/A	1	Casing Depth (ft) N/A	Water Leve	• •	First ☑	N/A	Completion	N/A	24 HR. 100 -	N/A
asing Hammer	N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Fore	eman	N/A					
ampler ampler Hammer	N/A	Weight (lbs)	Drop (in)	Field Engin	er						
·	N/A	N/A	Diop (iii) N/A				Grose				
		Comula Decerintica		Depth	<u> </u>	ample I		-		narks	
(ft) Syn		Sample Descriptior	1	Scale aquin	Type	(in) Penetr- resist BL/6in	Reading	(Drill) Fluid Los	ing Fluid, ss, Drillin	Casing De g Resistan	pth, ce, etc.)
0.0	Dark brown fine	SAND, some silt, trace rootl	ets (moist) [SP]					SB30B_0-6		-	
	Tannish brown to	brown fine SAND, some sil	t (moist) [SP]		¤₹	24/24	0.0	SB30B_6-12			
	Tannish brown fi	ne SAND, some silt (moist)	SPI	E <u> </u>	- ()	5	0.0				
<u></u>		End of Boring at 2ft.					0.0	End of boring with clean so			
									li outinige	, to grade e	undoo.
				1 3 4 5							
				5							
				6							
				2							
				8-							
				<b>9</b>							
				10							
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oject		3 North Cas			Project No.			17076	6301			
ocation			tle Drive, North Castle, N		Elevation ar	nd Dat	um	N/A				
illing Corr	npany	N/A	die Drive, North Castle, 1		Date Starte	1			000	Date Finished		202
illing Equ	ipmen	t			Completion	Depth	ı	6/21/20	023	Rock Depth	6/21/20	JZ3
ze and Ty	pe of	4-inch ID Ha	and Auger		Number of S	Samnl	1	2.0 ft Disturb		Undisturbed	N/E Core	
asing Diar	neter	(in)		Casing Depth (ft)	Water Leve			First ☑	1	Completion	24 HR.	N
asing Ham	nmer	N/A N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Fore	. ,		<u> </u>	N/A	N/A N/A		N/
Impler		N/A	IN/A	N/A	- Field Engine	or		N/A				
mpler Ha	Immer	N/A	Weight (lbs) N/A	Drop (in) N/A		er		Laura	Grose			
					Depth	:	San	nple D	lata	Re	marks	
Syn (	ev. ft) .0		Sample Description		Scale aquin	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	(Drilling Fluid) Fluid Loss, Drilli	1, Casing E ng Resista	Depth, ince, etc.
		Dark brown to bro	own fine SAND, trace rootle	s, some silt (moist)	0 <u>M-1</u>				0.0	SB30C_0-6 SB30C_6-12		
			brown fine SAND, some silt	(moist) [SP]		₹V	24/24		0.0			
	End of Boring at 2ft.							0.0	End of boring at 2 fe	et bqs. Bor	ing backf	
		End of Boring at 2ft.			2					with clean soil cutting	js to grade	surface.
					3 -							
					4							
					6							
					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
					8 -							
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					13							
					- 14 -							
					15							
					16							
					17 -							
					- 18 -							

oject	3 North Cas	stle Drive		Project No.			170766	301				
ocation				Elevation a	nd Da	itum						
illing Compan	у	stle Drive, North Castle,	NY	Date Starte	d		N/A		Date Finish	ed		
illing Equipme	N/A ent			Completion	Dept		6/22/20	)23	Rock Depth		6/22/202	23
	4-inch ID Ha	and Auger			Dobr		2.0 ft Disturb	ad			N/E	
ze and Type o	N/A			Number of	Samp	les		eu 1	Undisturbed	0	Core	0
asing Diamete	N/A		Casing Depth (ft) N/A	Water Leve	. ,		First ☑	N/A	Completion	N/A	24 HR. V	N/A
sing Hammer	N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Fore	eman		N/A					
mpler mpler Hamme	N/A er	Weight (lbs)	Drop (in)	Field Engin	eer							
	N/A	N/A	Diop (iii) N/A				Mat Fra					
Elev. (ft)		Sample Descriptior		Depth Scale		1	r i	PID	-		narks	
(ft) 0.0			I	Scale quint	Type	Recov (in)	Penetr- resist BL/6in	Reading (ppm)	(Drill Fluid Lo	ing Fluid, ss, Drillinຸ	Casing De g Resistan	epth, ce, etc.)
	Tannish brown S	ILT, some rootlets (dry) [ML]							SB30C_0-6			
		ILT, some rootlets (moist) [M	•		–l≤r	24/24		0.0	SB30D_6-12			
		ILT, trace fine gravel, trace r ILT, trace fine gravel (moist)		M-1	-  r	5		0.0				
		End of Boring at 2ft.	[]	<u> </u>		}		0.0	End of boring with clean so			
									with clean so	ii cuttings	to grade s	unace.
				3								
				4								
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						1						
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		3 North Cas	tle Drive		Project No.			170766	5301					
cation			tle Drive, North Castle, I		Elevation ar	nd Dat	um	N/A						
illing C	ompany	/	de Dive, North Castle, I		Date Starte	b				Date Finishe	əd	0.00.00		
illing E	quipme				Completion	Depth	ı	6/21/20	)23	Rock Depth		6/23/20	23	
ve and	Type of	4-inch ID Ha	and Auger				1	2.0 ft Disturb	ed	Undisturbed		N/E Core		
	iameter	N/A		Casing Depth (ft)	Number of S		es		1	Completion	0	24 <u>H</u> R.		0
	ammer	N/A	Weight (lbs)	N/A	Water Level	• •		First ☑	N/A	_ ▼'	N/A	<b>V</b>	N/	I/A
mpler		N/A N/A	N/A	N/A	-			N/A						
mpler	Hamme		Weight (lbs) N/A	Drop (in) N/A	- Field Engine	eer		Laura	Grose					
				14/7				nple D			Pon	narks		
Symbol	Elev. (ft) 0.0		Sample Descriptior	1	Depth Scale	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	Drilli) Fluid Los	ing Fluid,	Casing D g Resistar	epth, 1ce, etc.	.)
			SAND, some silt, trace rootle own fine SAND, some silt (n		0 <u>M-1</u>				0.0	SB30E_0-6 SB30E_6-12				
			,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		₽₹X	24/24		0.0					
		Tannish brown to	brown fine SAND, some sil	t (moist) [SP]					0.0	End of boring	at 2 feet	bas. Bori	na backí	cfille
		End of Boring at 2ft.		2					with clean soi					
					5									
					6									
					7 -									
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					- 17									
					9									

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	_ /	<b>A/VĽ</b>	<u>FAN</u>	Log of E			SB	31A	L		Shee	t 1	of 1
Project		3 North Castle	Drive		Project No.			17076	6301				
Location		3 North Castle	Drive, North Castle, N	Y	Elevation a	nd Dat		N/A					
Drilling C	Compar		, ,		Date Starte	d		6/22/2	022	Date Finishe	d	6/22/202	2
Drilling E	Equipme	ent			Completion	Depth	ı		023	Rock Depth			3
Size and	Type o	4-inch ID Hand	d Auger					2.0 ft Disturt	bed	Undisturbed		N/E Core	
Casing [		N/A		Casing Depth (ft)	Number of		es	First	1	Completion	0	24 <u>H</u> R.	0
Casing H		r N/A	Weight (lbs)	N/A Drop (in)	Water Leve Drilling Fore			First ∑	N/A	<b>▼</b> <sup>1</sup>	N/A	V	N/A
Sampler		<u>N/A</u>	N/A	N/A		man		N/A					
Sampler	Hamm		Weight (lbs) N/A	Drop (in) N/A	- Field Engin	eer		Mat Fr	ankel				
				10/7	5 11			nple D			Rem	arke	
Material Symbol	Elev. (ft)	:	Sample Description		Depth Scale	Type	ecov. (in)	Penetr- resist BL/6in	PID Reading	(Drillir	ng Fluid,	Casing Dep	oth,
	0.0	Gravish brown SILT	some organics, some roo	tlats trace fine			Å,	Pe Bl	(ppm)	SB31A 0-6	s, Driiling	Resistanc	e, etc.)
		gravel (moist) [ML]	some rootlets, trace fine				24		0.0	SB31A_6-12			
						- n	24/24		0.0				
		Grayish brown sand	y SILT, some rootlets (moi y SILT, some rootlets (moi	ist) [SM]	2				0.0	End of boring with clean soil			
		Grayish brown sand	y SILT, some rootlets (moi End of Boring at 2ft.	St) [IVIL]						with clean soli	cuttings	to grade st	inace.
					5								
					2 								
					7 -								
					8								
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Project			<b>5ΑΛ</b>		Project I	No.		47070	C204				
Location		3 North Castle			Elevatio	n and	Datu		0301				
Drilling (	Compan		e Drive, North Castle, N	Y	Date Sta	arted		N/A		Date Finishe	d		
Drilling E	auinme	N/A			Complet	tion De	onth	6/22/2	023	Rock Depth		6/22/202	3
		4-inch ID Han	d Auger					2.0 ft Disturt	ad	Undisturbed		N/E Core	
Size and		N/A		Casing Depth (ft)	Number	of Sa	nples	5	1	Completion	0	24 <u>H</u> R.	0
Casing I		N/A	Weight (lbs)	N/A Drop (in)	Water Lo Drilling F			First ☑	N/A		N/A	<b>T</b>	N/A
Sampler		N/A	N/A	N/A		orem	311	N/A					
-	Hamme	N/A er N/A	Weight (lbs) N/A	Drop (in) N/A	Field En	gineer		Mat Fr	ankel				
					Dert		S	ample D			Rem	arks	
Material Symbol	Elev. (ft)		Sample Description		Depth Scale	Number	Type Recov.	(in) Penetr- resist BL/6in	PID Reading	(Drillin	ng Fluid,	Casing Dep	oth,
Σώ 	0.0	D 017		· () [5.4] 2	0			, Per re€ BL	(ppm)	Fluid Loss	s, Drilling	g Resistanc	e, etc.)
		Brown SILI, some c	organics, some rootlets (mo	oist) [ML]		M-1A	М,	4	0.0	SB31B_0-6 SB31B_6-12			
		(moist) [ML]	organics, trace fine gravel,		EI	M-1B		24/24	0.0				
		Gray to brownish ta	n sandy SILT, trace rootlet End of Boring at 2ft.	s (moist) [ML]	F 7 -	M-1C	$\mathbb{H}$		0.0	End of boring a with clean soil			
											outingo	to grade of	
					5								
					8								
					10								
					11 -								
					12								
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oject	3 North Ca	stle Drive		Project No.	170766	301				
ocation				Elevation and Datu						
rilling Comp	any	stle Drive, North Castle,		Date Started Date Finished						
rilling Equip	N/A ment			Completion Depth	6/22/20	)23	Rock Depth		6/22/202	3
	4-inch ID H	and Auger			Undisturbed		N/E Core			
ze and Type	N/A			Number of Samples		1		0		0
asing Diame	N/A		Casing Depth (ft) N/A	Water Level (ft.)	First ☑	N/A	Completion	N/A	24 HR. V	N/A
asing Hamn	ner N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman	N/A					
mpler Ham	N/A	Weight (lbs)	Drop (in)	Field Engineer						
	N/A	N/A	N/A		Mat Fra ample D					
Elev (ft)		Sample Description	1	Denth	<u> </u>	PID		Rem		
(ft) S 0.0				Scale Number 1	(in) Penetr- resist BL/6in	Reading (ppm)	(Drillir) Fluid Los	ng Fluid, s, Drilling	Casing De g Resistand	pth, ce, etc.)
		e organics, some rootlets (r	noist) [ML]				SB31C_0-6			
		e rootlets, trace fine gravel	(moist) [ML]	1 <u>M-1B</u>	24/24	0.0	SB31C_6-12			
		ne rootlets (moist) [ML] In tan sandy SILT, orange to g	aravish black	1 <u>M-1B</u> M-1D	Ň	0.0				
	mottling (moist) [	[SM] End of Boring at 2ft.				0.0	End of boring with clean soil			
		End of Doning at Zit.						outingo	10 g. au o o	
				4						
				5						
				6						
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				12						
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3 North Castle Drive					Project No. 170766301							
ation					Elevation and	d Datum	า					
ing C	ompany	/	stle Drive, North Castle, I	NY	N/A           Date Started         Date Finish					ed		
ina E	quipmer	N/A nt			Completion D	Depth	6/22/2	023	Rock Depth		6/22/202	23
		4-inch ID H	and Auger				2.0 ft				N/E	
	Type of	N/A			Number of Sa	amples	Disturb	1	Undisturbed	0	Core	0
-	iameter	r (in) N/A		Casing Depth (ft) N/A	Water Level (	. ,	First         Completion         24 HR.           ☑         N/A         ☑         N/A         ☑					N/A
-	ammer	N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman N/A							
npler	Hamme	N/A	Weight (lbs)	Drop (in)	Field Enginee	er						
· 		N/A	N/A	N/A			Mat Fr					
Symbol	Elev.		Sample Descriptior		Depth Scale		ample D	PID	-		narks	
Syn	(ft)			I	Scale Jaquin N	Type Recov.	(III) Penetr- resist BL/6in	Reading (ppm)	(Drilli) Fluid Los	, Casing De g Resistan	epth, ce, etc.)	
	0.0		ne organics, some rootlets, tr	ace fine gravel			_		SB31D_0-6			
		(moist) [ML] Brown SILT, som	ne organics, trace fine gravel	(moist) [ML]	1 <u>M-1A</u> M-1B	HA		0.0 0.0	SB31D_6-12			
		Brown SILT, som	ne rootlets (moist) [ML]		■M-1C	_∭ ∾		0.0				
	-		End of Boring at 2ft.					0.0	End of boring with clean soi			
					3					-	-	
				ուղուղուղուղուղուղուղուղուղուղուղուղուղո								
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Project	. /		<b>5ΑΛ</b>	Log of B	Boring Project No.			31E			Shee	t 1	of 1
Location		3 North Castle	Drive		Elevation a	nd Dat		17076	6301				
Deillie e. C			Drive, North Castle, N	NY				N/A		Dete Finishe			
Drilling C		N/A			Date Started 6/22/2023			Date Finishe	a	6/22/202	3		
Drilling E	quipme	ent 4-inch ID Hand	dAuger		Completior	Depth		2.0 ft		Rock Depth	Rock Depth N/E		
Size and	Туре с				Number of	er of Samples Disturbed Undisturbed 0			Core	0			
Casing E	)iamete			Casing Depth (ft)	Water Leve	Water Level (ft.) First Completion 24 HR.					24 HR.	N/A	
Casing F	lamme		Weight (lbs) N/A	N/A Drop (in) N/A	Drilling For	eman		<u> </u>	14/7		11/7		11/7
Sampler		N/A		107	- Field Engir	oor		N/A					
Sampler	Hamm	er N/A	Weight (lbs) N/A	Drop (in) N/A		eei		Mat Fr	ankel				
ial ol					Depth	_	San	nple D	Data	-	Rem	arks	
Material Symbol	0.0				Scale	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	(Drillin) Fluid Loss	ig Fluid,	Casing Der Resistanc	oth, e, etc.)
	Light tannish brown SILT, some organics, some rootlets, trace fine gravel (moist) [ML]				0				0.0	SB31E_0-6 SB31E_6-12			
			SILT, some rootlets, trace	e fine gravel (moist)		1\$I)	24/24		0.0	00012_012			
	Light tannich brown SILT come regulate (moint) [ML]										at 2 fact	O fact has Devine heal/filled	
									0.0	with clean soil			
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					4 -								
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## **APPENDIX C**

# LABORATORY ANALYTICAL RESULTS



# **Technical Report**

prepared for:

# Langan Engineering & Environmental Services (NYC)

21 Penn Plaza, 360 West 31st Street New York NY, 10001 **Attention: Stuart Knoop** 

Report Date: 07/03/2023 Client Project ID: 170766301 York Project (SDG) No.: 23F1479

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

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**RICHMOND HILL, NY 11418** ClientServices@yorklab.com

Page 1 of 23

## Report Date: 07/03/2023 Client Project ID: 170766301 York Project (SDG) No.: 23F1479

#### Langan Engineering & Environmental Services (NYC)

21 Penn Plaza, 360 West 31st Street New York NY, 10001 Attention: Stuart Knoop

#### **Purpose and Results**

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on June 22, 2023 and listed below. The project was identified as your project: **170766301**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	<b>Date Collected</b>	Date Received
23F1479-01	SB31A_0-6	Soil	06/22/2023	06/22/2023
23F1479-02	SB31A_6-12	Soil	06/22/2023	06/22/2023
23F1479-05	SB31B_0-6	Soil	06/22/2023	06/22/2023
23F1479-06	SB31B_6-12	Soil	06/22/2023	06/22/2023
23F1479-09	SB31C_0-6	Soil	06/22/2023	06/22/2023
23F1479-10	SB31C_6-12	Soil	06/22/2023	06/22/2023
23F1479-13	SB31D_0-6	Soil	06/22/2023	06/22/2023
23F1479-14	SB31D_6-12	Soil	06/22/2023	06/22/2023
23F1479-17	SB31E_0-6	Soil	06/22/2023	06/22/2023
23F1479-18	SB31E 6-12	Soil	06/22/2023	06/22/2023
23F1479-21	SB30D 0-6	Soil	06/22/2023	06/22/2023
23F1479-22	SB30D 6-12	Soil	06/22/2023	06/22/2023

### General Notes for York Project (SDG) No.: 23F1479

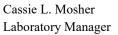
- 1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
- 2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
- 3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
- 4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.

5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.

- 6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
- 7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
- 8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By John L Mosh

**Date:** 07/03/2023







<u>Client Sample ID:</u> SB31A_0-6			<u>York Sample ID:</u>	23F1479-01
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1479	170766301	Soil	June 22, 2023 9:15 am	06/22/2023

Arsenic by	<u>y EPA 6010</u>					Log-in Notes:		Sample Notes	<u>s:</u>		
Sample Prepare	d by Method: EPA 3050	)B									
CAS No	). I	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic		10.9		mg/kg dry	1.43	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:22	CEG
								Certifications: CTDOH-PH	-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solic</u>	<u>ds</u>					Log-in Notes:		Sample Notes	<u>):</u>		
Sample Prepare	d by Method: % Solids	Prep									
CAS No	). I	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst

0.100 1

SM 2540G

Certifications: CTDOH-PH-0723

%

72.9

solids

\* % Solids

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06/30/2023 07:37 06/30/2023 14:04

sgs

Page 4 of 23



Client Sample ID: SB31A_6	12		York Sample ID:	23F1479-02
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1479	170766301	Soil	June 22, 2023 9:30 am	06/22/2023

Arsenic by El	PA 6010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by	Method: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 A	rsenic	7.67		mg/kg dry	1.39	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:25	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	854,NJDEP,PADEP	
T ( 10 P 1					<b>T 1 N 1</b>					
<u>Total Solids</u>					<u>Log-in Notes:</u>		<u>Sample Note</u>	<u>s:</u>		
Sample Prepared by	Method: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids *	% Solids	75.1		%	0.100	1	SM 2540G	06/30/2023 07:37	06/30/2023 14:04	sgs

Certifications: CTDOH-PH-0723

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Page 5 of 23



Client Sample ID: SB31B_	0-6		York Sample ID:	23F1479-05
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1479	170766301	Soil	June 22, 2023 10:20 am	06/22/2023

Arsenic by EPA	arsenic by EPA 6010				Log-in Notes:	Notes: <u>Sample Notes:</u>				
Sample Prepared by Me	thod: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arse	enic	10.8		mg/kg dry	1.45	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:27	CEG
							Certifications: CTDOH-PH	1-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Me	thod: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * %	Solids	71.7		%	0.100	1	SM 2540G	06/30/2023 07:37	06/30/2023 14:04	sgs

Certifications: CTDOH-PH-0723

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Page 6 of 23



<u>Client Sample ID:</u> SB31B_6-1	2		York Sample ID:	23F1479-06
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1479	170766301	Soil	June 22, 2023 10:25 am	06/22/2023

Arsenic by EPA	<u>6010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Meth	hod: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arser	nic	8.87		mg/kg dry	1.38	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:29	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	854,NJDEP,PADEP	
Total Solids					Log-in Notes:		Sample Note	e.		
Sample Prepared by Meth	hod: % Solids Prep				<u>Log in Potes.</u>		Sample Hote	<u>.</u>		
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % S	Solids	75.5		%	0.100	1	SM 2540G	06/30/2023 07:37	06/30/2023 14:04	sgs

Certifications: CTDOH-PH-0723

RICHMOND HILL, NY 11418

ClientServices

Page 7 of 23



Client Sample ID: SB31C_0-6			York Sample ID:	23F1479-09
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1479	170766301	Soil	June 22, 2023 11:15 am	06/22/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenio	c	8.31		mg/kg dry	1.37	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:32	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	lids	75.8		%	0.100	1	SM 2540G	06/30/2023 07:37	06/30/2023 14:04	sgs

Certifications: CTDOH-PH-0723

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Client Sample ID: SB31C_6-1	2		York Sample ID:	23F1479-10
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1479	170766301	Soil	June 22, 2023 11:25 am	06/22/2023

Arsenic by EPA 6	<u>5010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	od: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arseni	ic	6.95		mg/kg dry	1.39	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:34	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	s:		
Sample Prepared by Metho	od: % Solids Prep						·····			
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % S	olids	75.1		%	0.100	1	SM 2540G	06/30/2023 07:37	06/30/2023 14:04	sgs

Certifications: CTDOH-PH-0723

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Page 9 of 23



Client Sample ID: SB31D_0-6			York Sample ID:	23F1479-13
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1479	170766301	Soil	June 22, 2023 12:15 pm	06/22/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenic	2	13.9		mg/kg dry	1.37	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:46	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solids</u>					<u>Log-in Notes:</u>		<u>Sample Note</u>	<u>s:</u>		
Sample Prepared by Metho	d: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	lids	75.9		%	0.100	1	SM 2540G	06/30/2023 07:42	06/30/2023 14:13	sgs



Client Sample ID: SB31D_6-12			York Sample ID:	23F1479-14
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1479	170766301	Soil	June 22, 2023 12:35 pm	06/22/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenic	2	6.88		mg/kg dry	1.37	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:49	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	lids	76.3		%	0.100	1	SM 2540G	06/30/2023 07:42	06/30/2023 14:13	sgs



Client Sample ID: SB31E_	0-6		York Sample ID:	23F1479-17
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1479	170766301	Soil	June 22, 2023 1:05 pm	06/22/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenio	:	9.41		mg/kg dry	1.46	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:51	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					<u>Log-in Notes:</u>		<u>Sample Note</u>	<u>s:</u>		
Sample Prepared by Metho	d: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	lids	71.1		%	0.100	1	SM 2540G	06/30/2023 07:42	06/30/2023 14:13	sgs

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Client Sample ID: SB31E_6-12			York Sample ID:	23F1479-18
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1479	170766301	Soil	June 22, 2023 1:15 pm	06/22/2023

Arsenic by EPA 6	010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	od: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arseni	c	7.58		mg/kg dry	1.36	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:54	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	0854,NJDEP,PADEP	
<b>Total Solids</b>					Log-in Notes:		<u>Sample Note</u>	<u>s:</u>		
Sample Prepared by Metho	od: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	olids	76.9		%	0.100	1	SM 2540G	06/30/2023 07:42	06/30/2023 14:13	sgs



Client Sample ID: SB30D_0-0	6		York Sample ID:	23F1479-21
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1479	170766301	Soil	June 22, 2023 2:05 pm	06/22/2023

Arsenic by EPA 6	<u>5010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	od: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsen	ic	34.0		mg/kg dry	1.19	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:56	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	od: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % S	olids	87.3		%	0.100	1	SM 2540G	06/30/2023 07:42	06/30/2023 14:13	sgs



Client Sample ID: SB30D_6-	12		York Sample ID:	23F1479-22
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1479	170766301	Soil	June 22, 2023 2:10 pm	06/22/2023

Arsenic by EPA	6010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Me	thod: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arse	nic	14.0		mg/kg dry	1.21	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:58	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solids</u>					<u>Log-in Notes:</u>		Sample Note	<u>s:</u>		
Sample Prepared by Me	thod: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * %	Solids	86.0		%	0.100	1	SM 2540G	06/30/2023 07:42	06/30/2023 14:13	sgs

Certifications:

CTDOH-PH-0723



## **Analytical Batch Summary**

Batch ID: BF31910	<b>Preparation Method:</b>	EPA 3050B	Prepared By:	KMQ
YORK Sample ID	Client Sample ID	Preparation Date		
23F1479-01	SB31A_0-6	06/28/23		
23F1479-02	SB31A_6-12	06/28/23		
23F1479-05	SB31B_0-6	06/28/23		
23F1479-06	SB31B_6-12	06/28/23		
23F1479-09	SB31C_0-6	06/28/23		
23F1479-10	SB31C_6-12	06/28/23		
23F1479-13	SB31D_0-6	06/28/23		
23F1479-14	SB31D_6-12	06/28/23		
23F1479-17	SB31E_0-6	06/28/23		
23F1479-18	SB31E_6-12	06/28/23		
23F1479-21	SB30D_0-6	06/28/23		
23F1479-22	SB30D_6-12	06/28/23		
BF31910-BLK1	Blank	06/28/23		
BF31910-DUP1	Duplicate	06/28/23		
BF31910-MS1	Matrix Spike	06/28/23		
BF31910-PS1	Post Spike	06/28/23		
BF31910-SRM1	Reference	06/28/23		
Batch ID: BF32018	Preparation Method:	% Solids Prep	Prepared By:	sgs
YORK Sample ID	Client Sample ID	Preparation Date		
23F1479-01	SB31A_0-6	06/30/23		
23F1479-02	SB31A_6-12	06/30/23		
23F1479-05	SB31B_0-6	06/30/23		
23F1479-06	SB31B_6-12	06/30/23		
23F1479-09	SB31C_0-6	06/30/23		
23F1479-10	SB31C_6-12	06/30/23		
BF32018-DUP1	Duplicate	06/30/23		
Batch ID: BF32019	Preparation Method:	% Solids Prep	Prepared By:	sgs
YORK Sample ID	Client Sample ID	Preparation Date		
	-			
23F1479-13	SB31D_0-6	06/30/23		
23F1479-14 23F1479-17	SB31D_6-12	06/30/23		
	SB31E_0-6	06/30/23 06/30/23		
23F1479-18	SB31E_6-12			
23F1479-21	SB30D_0-6	06/30/23		
23F1479-22 BF32019-DUP1	SB30D_6-12	06/30/23 06/30/23		
BI 52017-DOLL	Duplicate	00/50/25		
120 RESEARCH DRIVE	STRATFORD, CT 06615	■ 132-02 89th AVENUE	RICHM	OND HILL, NY 11418
	, -			-

(203) 325-1371

FAX (203) 357-0166

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Page 16 of 23



#### Metals by ICP - Quality Control Data

#### York Analytical Laboratories, Inc. - Stratford

Analyte		Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF31910 - EPA 30	50B											
Blank (BF31910-BLK1)	Blank							Prep	ared: 06/28/2	2023 Analyz	ed: 06/30/2	2023
Arsenic		ND	1.04	mg/kg wet								
Duplicate (BF31910-DUP1)	Duplicate	*Source sample: 23	F1494-04 (E	Ouplicate)				Prep	ared: 06/28/2	2023 Analyz	ed: 06/30/2	2023
Arsenic		21.1	1.40	mg/kg dry		24.3				14.0	35	
Matrix Spike (BF31910-MS1)	Matrix Spike	*Source sample: 23	F1494-04 (N	fatrix Spike)				Prep	ared: 06/28/2	2023 Analyz	ed: 06/30/2	2023
Arsenic		246	1.40	mg/kg dry	224	24.3	99.1	75-125				
Post Spike (BF31910-PS1)	Post Spike	*Source sample: 23	F1494-04 (P	ost Spike)				Prep	ared: 06/28/2	2023 Analyz	ed: 06/30/2	2023
Arsenic	-	2.19		ug/mL	2.00	0.217	98.6	75-125				
Reference (BF31910-SRM1)	Reference							Prep	ared: 06/28/2	2023 Analyz	ed: 06/30/2	2023
Arsenic		184	1.04	mg/kg wet	183		101	69.9-130.1				

RICHMOND HILL, NY 11418 ClientServices Page 1

Page 17 of 23



## Miscellaneous Physical Parameters - Quality Control Data

#### York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF32018 - % Solids Prep											
Duplicate (BF32018-DUP1) Duplicate	*Source sample: 23	*Source sample: 23F1479-10 (SB31C 6-12)					Prepared & Analyzed: 06/30/2023				
% Solids	75.7	0.100	%		75.1				0.797	20	
Batch BF32019 - % Solids Prep											
Duplicate (BF32019-DUP1) Duplicate	*Source sample: 23	*Source sample: 23F1479-13 (SB31D_0-6)						Prepared & Analyzed: 06/30/2023			
% Solids	71.0	0.100	%		75.9				6.69	20	



#### Sample and Data Qualifiers Relating to This Work Order

#### **Definitions and Other Explanations**

- \* Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
- ND NOT DETECTED the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
- RL REPORTING LIMIT the minimum reportable value based upon the lowest point in the analyte calibration curve.
- LOQ LIMIT OF QUANTITATION the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
- LOD LIMIT OF DETECTION a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
- MDL METHOD DETECTION LIMIT a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
- Reported to This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
- NR Not reported
- RPD Relative Percent Difference
- Wet The data has been reported on an as-received (wet weight) basis
- Low Bias Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
- High Bias High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
- Non-Dir. Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

STRATFORD, CT 06615 (203) 325-1371 132-02 89th AVENUE FAX (203) 357-0166 **RICHMOND HILL, NY 11418** 

ClientServices

Page 19 of 23



RICHMOND HILL, NY 11418 ClientServices Page 20

Page 20 of 23

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132-02 89th Ave Queens, NY 11418 56 Church Hill Rd. #2 Newtown, CT 08470 clientservices@yorklab.com		es@	www.)	www.yorklab.com 800-306-YORK	$P_{age} \xrightarrow{\sim} o_{f} \xrightarrow{\sim}$
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Sample Identification	Sample Matrix	Date/Time Sampled	V	Analyses Requested	Container Type No.
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# **Technical Report**

prepared for:

## Langan Engineering & Environmental Services (NYC)

21 Penn Plaza, 360 West 31st Street New York NY, 10001 Attention: Stuart Knoop

## Report Date: 07/20/2023 Client Project ID: 170766301 York Project (SDG) No.: 23F1372

Revision No. 2.0

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

120 RESEARCH DRIVE www.YORKLAB.com STRATFORD, CT 06615 (203) 325-1371 132-02 89th AVENUE FAX (203) 357-0166 RICHMOND HILL, NY 11418 ClientServices@yorklab.com

Page 1 of 46

### Report Date: 07/20/2023 Client Project ID: 170766301 York Project (SDG) No.: 23F1372

#### Langan Engineering & Environmental Services (NYC)

21 Penn Plaza, 360 West 31st Street New York NY, 10001 Attention: Stuart Knoop

#### **Purpose and Results**

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on June 21, 2023 and listed below. The project was identified as your project: **170766301**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	<u>Matrix</u>	Date Collected	Date Received
23F1372-01	SB13A_0-6	Soil	06/21/2023	06/21/2023
23F1372-02	SB13A_6-12	Soil	06/21/2023	06/21/2023
23F1372-03	SB13A_12-18	Soil	06/21/2023	06/21/2023
23F1372-05	SB13B_0-6	Soil	06/21/2023	06/21/2023
23F1372-06	SB13B_6-12	Soil	06/21/2023	06/21/2023
23F1372-07	SB13B_12-18	Soil	06/21/2023	06/21/2023
23F1372-08	SB13B_18-24	Soil	06/21/2023	06/21/2023
23F1372-09	SB14A_0-6	Soil	06/21/2023	06/21/2023
23F1372-10	SB14A_6-12	Soil	06/21/2023	06/21/2023
23F1372-13	SB14B_0-6	Soil	06/21/2023	06/21/2023
23F1372-14	SB14B_6-12	Soil	06/21/2023	06/21/2023
23F1372-16	SB14C_0-6	Soil	06/21/2023	06/21/2023
23F1372-20	SB14D_0-6	Soil	06/21/2023	06/21/2023
23F1372-21	SB14D_6-12	Soil	06/21/2023	06/21/2023
23F1372-24	SB30A_0-6	Soil	06/21/2023	06/21/2023
23F1372-25	SB30A_6-12	Soil	06/21/2023	06/21/2023
23F1372-26	SB30A_12-18	Soil	06/21/2023	06/21/2023
23F1372-27	SB30A_18-24	Soil	06/21/2023	06/21/2023
23F1372-28	SB30B_0-6	Soil	06/21/2023	06/21/2023
23F1372-29	SB30B_6-12	Soil	06/21/2023	06/21/2023
23F1372-30	SB30B_12-18	Soil	06/21/2023	06/21/2023
23F1372-31	SB30B_18-24	Soil	06/21/2023	06/21/2023

York Sample ID	<b><u>Client Sample ID</u></b>	Matrix	<b>Date Collected</b>	<b>Date Received</b>
23F1372-32	SB30C_0-6	Soil	06/21/2023	06/21/2023
23F1372-33	SB30C_6-12	Soil	06/21/2023	06/21/2023
23F1372-34	SB30C_12-18	Soil	06/21/2023	06/21/2023
23F1372-35	SB30C_18-24	Soil	06/21/2023	06/21/2023
23F1372-36	SB30E_0-6	Soil	06/21/2023	06/21/2023
23F1372-37	SB30E_6-12	Soil	06/21/2023	06/21/2023
23F1372-38	SB30E_12-18	Soil	06/21/2023	06/21/2023
23F1372-39	SB30E_18-24	Soil	06/21/2023	06/21/2023

#### General Notes for York Project (SDG) No.: 23F1372

- 1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
- 2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
- 3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
- 4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.

5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.

- 6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
- 7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
- 8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By plu & Most

**Date:** 07/20/2023

Cassie L. Mosher Laboratory Manager





Client Sample ID: SB13A_0-6			York Sample ID:	23F1372-01
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 10:00 am	06/21/2023

Arsenic by	<u>y EPA 6010</u>					<u>Log-in Notes:</u>		Sample Notes	<u>s:</u>		
Sample Prepared	d by Method: EPA	3050B									
CAS No.		Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic		17.0		mg/kg dry	1.25	1	EPA 6010D	06/27/2023 14:45	06/29/2023 21:10	CEG
								Certifications: CTDOH-PH	I-0723,NELAC-NY10	)854,NJDEP,PADEP	
<u>Total Solid</u>	<u>ls</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared	d by Method: % So	olids Prep									
CAS No.	•	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst

0.100 1

SM 2540G

Certifications: CTDOH-PH-0723

%

solids

\* % Solids

83.4

RICHMOND HILL, NY 11418

ClientServices

06/29/2023 08:16 06/29/2023 11:01

TAJ

Page 4 of 46



Client Sample ID: SB13A_6-	12		York Sample ID:	23F1372-02
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 10:05 am	06/21/2023

Arsenic by EPA	<u>6010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metl	hod: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsei	nic	11.9		mg/kg dry	1.19	1	EPA 6010D	06/27/2023 14:45	06/29/2023 21:13	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					<u>Log-in Notes:</u>		Sample Note	<u>s:</u>		
Sample Prepared by Meth	hod: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * %	Solids	87.7		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ

Certifications: CTDOH-PH-0723



Client Sample ID: SB13A	A_12-18		York Sample ID:	23F1372-03
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 10:10 am	06/21/2023

Arsenic by EPA 6	010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	od: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arseni	c	11.4		mg/kg dry	1.15	1	EPA 6010D	06/27/2023 14:45	06/29/2023 21:22	CEG
							Certifications: CTDOH-PH	1-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					<u>Log-in Notes:</u>		Sample Note	<u>s:</u>		
Sample Prepared by Metho	od: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	olids	90.3		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ

Certifications: CTDOH-PH-0723



Client Sample ID: SB13B_	0-6		York Sample ID:	23F1372-05
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 9:00 am	06/21/2023

Arsenic by EPA 6	010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenie	c	17.4		mg/kg dry	1.25	1	EPA 6010D Certifications: CTDOH-PH	06/27/2023 16:56 H-0723,NELAC-NY10	06/30/2023 16:54 854,NJDEP,PADEP	CEG
<u>Total Solids</u> Sample Prepared by Metho	d. % Salida Dran				<u>Log-in Notes:</u>		Sample Note	<u>s:</u>		
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	lids	83.3		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ

Certifications: CTDOH-PH-0723



Client Sample ID: SB13B	3_6-12		York Sample ID:	23F1372-06
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 9:05 am	06/21/2023

Arsenic by <b>E</b>	CPA 6010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by	y Method: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	24.0		mg/kg dry	1.23	1	EPA 6010D	06/27/2023 16:56	06/30/2023 16:56	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solids</u>					<u>Log-in Notes:</u>		Sample Note	<u>s:</u>		
Sample Prepared by	y Method: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	85.0		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ

Certifications: CTDOH-PH-0723

ClientServices

Page 8 of 46



Client Sample ID: SB13B	_12-18		York Sample ID:	23F1372-07
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 9:10 am	06/21/2023

<u>Arsenic by E</u>	CPA 6010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by	Method: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 A	Arsenic	19.7		mg/kg dry	1.18	1	EPA 6010D	06/27/2023 16:56	06/30/2023 16:58	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by	/ Method: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids *	* % Solids	88.0		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ

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Certifications: CTDOH-PH-0723



Client Sample ID: SB13B_1	18-24		York Sample ID:	23F1372-08
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 9:15 am	06/21/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenie	c	11.2		mg/kg dry	1.16	1	EPA 6010D Certifications: CTDOH-PH	07/06/2023 14:02 H-0723,NELAC-NY10	07/10/2023 15:17 854,NJDEP,PADEP	CEG
<b>Total Solids</b>					Log-in Notes:		<u>Sample Note</u>	<u>s:</u>		
Sample Prepared by Metho	d: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	lids	89.8		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2

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Certifications: CTDOH-PH-0723



Page 10 of 46



Client Sample ID: SB14A_0-6			York Sample ID:	23F1372-09
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 12:00 pm	06/21/2023

Arsenic by EPA	6010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Me	thod: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arse	nic	17.3		mg/kg dry	1.46	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:01	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Me	thod: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * %	Solids	71.3		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ



<u>Client Sample ID:</u> SB14A_6-12			York Sample ID:	23F1372-10
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 12:05 pm	06/21/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	od: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arseni	c	8.86		mg/kg dry	1.28	1	EPA 6010D	07/06/2023 14:02	07/10/2023 15:19	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solids</u>					<u>Log-in Notes:</u>		<u>Sample Note</u>	<u>s:</u>		
Sample Prepared by Metho	od: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	olids	81.3		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2



Client Sample ID: SB14B_0	-6		York Sample ID:	23F1372-13
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 12:40 pm	06/21/2023

Arsenic by EPA 6	010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenio	c	18.9		mg/kg dry	1.23	1	EPA 6010D Certifications: CTDOH-PF	06/27/2023 16:56 H-0723,NELAC-NY10	06/30/2023 17:03 0854,NJDEP,PADEP	CEG
<u>Total Solids</u>					<u>Log-in Notes:</u>		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	lids	84.6		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ

Certifications: CTDOH-PH-0723

Page 13 of 46



Client Sample ID: SB14B_6-12			York Sample ID:	23F1372-14
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 12:45 pm	06/21/2023

Arsenic by EP	PA 6010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by M	Method: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Ar	senic	14.6		mg/kg dry	1.14	1	EPA 6010D	07/06/2023 14:02	07/10/2023 15:22	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		<u>Sample Note</u>	<u>s:</u>		
Sample Prepared by M	Method: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * 9	% Solids	91.7		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2

Certifications: CTDOH-PH-0723

Page 14 of 46



Client Sample ID: SB14C_0-6			York Sample ID:	23F1372-16
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 1:00 pm	06/21/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenic	c	11.9		mg/kg dry	1.18	1	EPA 6010D Certifications: CTDOH-PH	06/27/2023 16:56 H-0723,NELAC-NY10	06/30/2023 17:06 854,NJDEP,PADEP	CEG
Total Solids					Log-in Notes:		Sample Note	۰.		
Sample Prepared by Metho	d: % Solids Prep				Loc in Potest		Sample Hote	<u>.</u>		
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	lids	88.3		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ



Client Sample ID: SB14D_0-6			York Sample ID:	23F1372-20
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 11:00 am	06/21/2023

Arsenic by	EPA 6010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared	by Method: EPA 3050B									
CAS No.	Para	ameter Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	16.5		mg/kg dry	1.35	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:08	CEG
							Certifications: CTDOH-PH	-0723,NELAC-NY10	854,NJDEP,PADEP	
Total Solids	<u>i</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared	by Method: % Solids Prep	0								
CAS No.	Para	ameter Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	77.2		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ



Client Sample ID: SB14I	0_6-12		York Sample ID:	23F1372-21
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 11:05 am	06/21/2023

Arsenic by EPA	<u>6010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metl	nod: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsei	nic	8.07		mg/kg dry	1.19	1	EPA 6010D	07/06/2023 14:02	07/10/2023 15:24	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metl	nod: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % S	Solids	87.3		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2



<u>Client Sample ID:</u> SB30A_0	)-6		York Sample ID:	23F1372-24
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 3:10 pm	06/21/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenie	c	33.4		mg/kg dry	1.23	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:10	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	lids	84.7		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ

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Client Sample ID: SB30A_6-1	2		York Sample ID:	23F1372-25
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 3:20 pm	06/21/2023

Arsenic by El	PA 6010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by	Method: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 A	rsenic	25.2		mg/kg dry	1.19	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:22	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by	Method: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids *	% Solids	87.2		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ

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Certifications: CTDOH-PH-0723

Page 19 of 46



<u>Client Sample ID:</u> SB30A_	12-18		York Sample ID:	23F1372-26
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 3:10 pm	06/21/2023

Arsenic by I	EPA 6010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared b	y Method: EPA 3050B									
CAS No.	Par	rameter Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	21.4		mg/kg dry	1.18	1	EPA 6010D	07/06/2023 14:02	07/10/2023 15:40	CEG
							Certifications: CTDOH-PH	-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared b	y Method: % Solids Pre	ep								
CAS No.	Par	rameter Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	88.1		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2

Certifications: CTDOH-PH-0723

Page 20 of 46



Client Sample ID: SB30A_1	8-24		York Sample ID:	23F1372-27
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 3:10 pm	06/21/2023

Arsenic by EPA	<u>A 6010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Mo	ethod: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Ars	enic	20.0		mg/kg dry	1.16	1	EPA 6010D	07/18/2023 14:23	07/20/2023 17:48	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Mo	ethod: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * %	5 Solids	89.8		%	0.100	1	SM 2540G	07/13/2023 08:12	07/13/2023 15:27	PMB

Certifications: CTDOH-PH-0723



<u>Client Sample ID:</u> SB30B_	0-6		York Sample ID:	23F1372-28
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 3:00 pm	06/21/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	od: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arseni	c	234		mg/kg dry	1.30	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:25	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					<u>Log-in Notes:</u>		<u>Sample Note</u>	<u>s:</u>		
Sample Prepared by Metho	od: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	olids	80.1		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ



Client Sample ID: SB30B_6	-12		York Sample ID:	23F1372-29
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 3:05 pm	06/21/2023

Arsenic by El	PA 6010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by	Method: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 A	rsenic	74.1		mg/kg dry	1.26	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:27	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	0854,NJDEP,PADEP	
Total Solids					I					
Total Solius					<u>Log-in Notes:</u>		<u>Sample Note</u>	<u>s:</u>		
Sample Prepared by	Method: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids *	% Solids	82.6		%	0.100	1	SM 2540G	06/29/2023 08:18	06/29/2023 11:37	TAJ

Certifications: CTDOH-PH-0723



<u>Client Sample ID:</u> SB30B_	12-18		York Sample ID:	23F1372-30
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 3:10 pm	06/21/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Method	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenic	:	145		mg/kg dry	1.30	1	EPA 6010D	07/06/2023 14:02	07/10/2023 15:42	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	0854,NJDEP,PADEP	
<b>Total Solids</b>					<u>Log-in Notes:</u>		Sample Note	<u>s:</u>		
Sample Prepared by Method	d: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % Sol	lids	80.2		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2

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Certifications: CTDOH-PH-0723

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ClientServices

Page 24 of 46



<u>Client Sample ID:</u> SB30E	3_18-24		York Sample ID:	23F1372-31
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 3:15 pm	06/21/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Method	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenic	:	71.8		mg/kg dry	1.30	1	EPA 6010D	07/18/2023 14:23	07/20/2023 18:00	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	0854,NJDEP,PADEP	
<b>Total Solids</b>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Method	d: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % Sol	lids	80.3		%	0.100	1	SM 2540G	07/13/2023 08:12	07/13/2023 15:27	PMB

Certifications: CTDOH-PH-0723



Client Sample ID: SB30C_0-6			York Sample ID:	23F1372-32
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 3:30 pm	06/21/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenie	c	38.9		mg/kg dry	1.26	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:29	CEG
							Certifications: CTDOH-PH	1-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Metho	d: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	lids	82.7		%	0.100	1	SM 2540G	06/29/2023 08:18	06/29/2023 11:37	TAJ



Client Sample ID: SB30C_6-12			York Sample ID:	23F1372-33
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 3:30 pm	06/21/2023

Arsenic by E	CPA 6010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by	y Method: EPA 3050B									
CAS No.	Paramet	er Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	23.1		mg/kg dry	1.18	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:32	CEG
							Certifications: CTDOH-PH	1-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by	y Method: % Solids Prep									
CAS No.	Paramet	er Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	88.6		%	0.100	1	SM 2540G	06/29/2023 08:18	06/29/2023 11:37	TAJ



<u>Client Sample ID:</u> SB30C	_12-18		York Sample ID:	23F1372-34
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 3:35 pm	06/21/2023

Arsenic by EPA 6	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Method	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenic	:	22.5		mg/kg dry	1.19	1	EPA 6010D	07/06/2023 14:02	07/10/2023 15:45	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	0854,NJDEP,PADEP	
Total Solids					<u>Log-in Notes:</u>		<u>Sample Note</u>	<u>s:</u>		
Sample Prepared by Method	1: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % Sol	lids	87.3		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2

Certifications: CTDOH-PH-0723



Client Sample ID: SB30C_18-24	l de la constante de		York Sample ID:	23F1372-35
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 3:40 pm	06/21/2023

Arsenic by EPA 60	<u>010</u>				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Method	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenic	:	13.7		mg/kg dry	1.15	1	EPA 6010D	07/18/2023 14:23	07/20/2023 18:02	CEG
							Certifications: CTDOH-PH	H-0723,NELAC-NY10	0854,NJDEP,PADEP	
Total Solids					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Method	d: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % Sol	lids	90.7		%	0.100	1	SM 2540G	07/13/2023 08:12	07/13/2023 15:27	PMB

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Certifications: CTDOH-PH-0723

RICHMOND HILL, NY 11418 ClientServices Page 29

Page 29 of 46



Client Sample ID: SB30	E_0-6		York Sample ID:	23F1372-36
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 2:20 pm	06/21/2023

<u>Arsenic by H</u>	EPA 6010				Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by	y Method: EPA 3050B									
CAS No.	Par	rameter Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	101		mg/kg dry	1.22	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:34	CEG
							Certifications: CTDOH-PH	-0723,NELAC-NY10	854,NJDEP,PADEP	
<u>Total Solids</u>					<u>Log-in Notes:</u>		Sample Note	<u>s:</u>		
Sample Prepared by	y Method: % Solids Pre	ep								
CAS No.	Par	rameter Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	85.3		%	0.100	1	SM 2540G	06/29/2023 08:18	06/29/2023 11:37	TAJ

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Client Sample ID: SB30E	_6-12		York Sample ID:	23F1372-37
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 2:25 pm	06/21/2023

Arsenic by EPA 6010				Log-in Notes:		Sample Notes:					
Sample Prepared b	y Method: EPA 3	050B									
CAS No.		Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic		56.0		mg/kg dry	1.19	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:37	CEG
								Certifications: CTDOH-PH	I-0723,NELAC-NY10	854,NJDEP,PADEP	
Total Solids					Log-in Notes:		Sample Note	<u>s:</u>			
Sample Prepared b	y Method: % Sol	ids Prep									
CAS No.		Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids		87.4		%	0.100	1	SM 2540G	06/29/2023 08:18	06/29/2023 11:37	TAJ

Certifications: CTDOH-PH-0723



<u>Client Sample ID:</u> SB30E	2_12-18		York Sample ID:	23F1372-38
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 2:30 pm	06/21/2023

Arsenic by EPA 6010				Log-in Notes:		Sample Notes:					
Sample Prepared	by Method: EPA 3	8050B									
CAS No.		Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic		48.2		mg/kg dry	1.20	1	EPA 6010D	07/06/2023 14:02	07/10/2023 15:47	CEG
								Certifications: CTDOH-PH	I-0723,NELAC-NY10	854,NJDEP,PADEP	
Total Solids					<u>Log-in Notes:</u>		Sample Note	<u>s:</u>			
Sample Prepared	by Method: % So	lids Prep									
CAS No.		Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids		87.0		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2



Client Sample ID: SB30E_1	8-24		York Sample ID:	23F1372-39
York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23F1372	170766301	Soil	June 21, 2023 2:35 pm	06/21/2023

Arsenic by EPA 6010				Log-in Notes:		Sample Notes:				
Sample Prepared by Method	d: EPA 3050B									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference Method</b>	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2 Arsenic	:	51.8		mg/kg dry	1.18	1	EPA 6010D	07/18/2023 14:23	07/20/2023 18:05	CEG
							Certifications: CTDOH-PH	I-0723,NELAC-NY10	0854,NJDEP,PADEP	
<u>Total Solids</u>					Log-in Notes:		Sample Note	<u>s:</u>		
Sample Prepared by Method	d: % Solids Prep									
CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	<b>Reference</b> Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids * % So	lids	88.4		%	0.100	1	SM 2540G	07/13/2023 08:12	07/13/2023 15:27	PMB



# **Analytical Batch Summary**

Batch ID: BF31784	<b>Preparation Method:</b>	EPA 3050B	Prepared By:	KMQ
YORK Sample ID	Client Sample ID	Preparation Date		
23F1372-01	SB13A_0-6	06/27/23		
23F1372-02	SB13A 6-12	06/27/23		
23F1372-03	SB13A_12-18	06/27/23		
BF31784-BLK1	Blank	06/27/23		
BF31784-DUP1	Duplicate	06/27/23		
BF31784-MS1	Matrix Spike	06/27/23		
BF31784-PS1	Post Spike	06/27/23		
BF31784-SRM1	Reference	06/27/23		
Batch ID: BF31806	Preparation Method:	EPA 3050B	Prepared By:	KMQ
YORK Sample ID	Client Sample ID	Preparation Date		
23F1372-05	SB13B_0-6	06/27/23		
23F1372-06	SB13B_6-12	06/27/23		
23F1372-07	SB13B_12-18	06/27/23		
23F1372-09	SB14A_0-6	06/27/23		
23F1372-13	SB14B_0-6	06/27/23		
23F1372-16	SB14C_0-6	06/27/23		
23F1372-20	SB14D_0-6	06/27/23		
23F1372-24	SB30A_0-6	06/27/23		
23F1372-25	SB30A_6-12	06/27/23		
23F1372-28	SB30B_0-6	06/27/23		
23F1372-29	SB30B_0-12	06/27/23		
23F1372-32	SB30D_0 12 SB30C_0-6	06/27/23		
23F1372-33	SB30C_6-12	06/27/23		
23F1372-36	SB30E_0-6	06/27/23		
23F1372-37	SB30E_0 0 SB30E_6-12	06/27/23		
BF31806-BLK1	Blank	06/27/23		
BF31806-DUP1	Duplicate	06/27/23		
BF31806-MS1	Matrix Spike	06/27/23		
BF31806-PS1	Post Spike	06/27/23		
BF31806-SRM1	Reference	06/27/23		
Batch ID: BF31934	Preparation Method:	% Solids Prep	Prepared By:	AD
YORK Sample ID	Client Sample ID	Preparation Date		
23F1372-01	SB13A 0-6	06/29/23		
23F1372-02	SB13A_6-12	06/29/23		
23F1372-03	SB13A_12-18	06/29/23		
23F1372-05	SB13B_0-6	06/29/23		
23F1372-06	SB13B_6-12	06/29/23		
23F1372-07	SB13B_12-18	06/29/23		
23F1372-09	SB14A_0-6	06/29/23		
23F1372-13	SB14B_0-6	06/29/23		
23F1372-16	SB14C_0-6	06/29/23		
120 RESEARCH DRIVE	STRATFORD, CT 06615	■ 132-02 89th AVENUE	RICHM	OND HILL, NY 11418
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23F1372-20	SB14D_0-6	06/29/23
23F1372-24	SB30A_0-6	06/29/23
23F1372-25	SB30A_6-12	06/29/23
23F1372-28	SB30B 0-6	06/29/23
BF31934-DUP1	Duplicate	06/29/23

Batch ID: BF31936	Preparation Method:	% Solids Prep	Prepared By:	AD
YORK Sample ID	Client Sample ID	Preparation Date		
23F1372-29	SB30B_6-12	06/29/23		
23F1372-32	SB30C_0-6	06/29/23		
23F1372-33	SB30C_6-12	06/29/23		
23F1372-36	SB30E_0-6	06/29/23		
23F1372-37	SB30E_6-12	06/29/23		
BF31936-DUP1	Duplicate	06/29/23		
Batch ID: BG30181	Preparation Method:	% Solids Prep	Prepared By:	CAM2
YORK Sample ID	Client Sample ID	Preparation Date		
23F1372-08	SB13B_18-24	07/05/23		
23F1372-10	SB14A_6-12	07/05/23		
23F1372-14	SB14B_6-12	07/05/23		
23F1372-21	SB14D_6-12	07/05/23		
23F1372-26	SB30A_12-18	07/05/23		
23F1372-30	SB30B_12-18	07/05/23		
23F1372-34	SB30C_12-18	07/05/23		
23F1372-38	SB30E 12-18	07/05/23		
BG30181-DUP1	Duplicate	07/05/23		
Batch ID: BG30265	Preparation Method:	EPA 3050B	Prepared By:	KMQ
YORK Sample ID	Client Sample ID	Preparation Date		
23F1372-08	SB13B_18-24	07/06/23		
23F1372-10	SB14A_6-12	07/06/23		
23F1372-14	SB14B_6-12	07/06/23		
23F1372-21	SB14D_6-12	07/06/23		
23F1372-26	SB30A_12-18	07/06/23		
23F1372-30	SB30B_12-18	07/06/23		
23F1372-34	SB30C_12-18	07/06/23		
23F1372-38	SB30E_12-18	07/06/23		
BG30265-BLK1	Blank	07/06/23		
BG30265-DUP1	Duplicate	07/06/23		
BG30265-MS1	Matrix Spike	07/06/23		
BG30265-PS1	Post Spike	07/06/23		
BG30265-SRM1	Reference	07/06/23		
Batch ID: BG30651	Preparation Method:	% Solids Prep	Prepared By:	PMB
YORK Sample ID	Client Sample ID	Preparation Date		
	*			
120 RESEARCH DRIVE	STRATFORD, CT 06615	■ 132-02 89th AVENUE	RICHMO	DND HILL, NY 11418



23F1372-27	SB30A 18-24	07/13/23
23F1372-31	SB30B_18-24	07/13/23
23F1372-35	SB30C <sup>18-24</sup>	07/13/23
23F1372-39	SB30E 18-24	07/13/23
BG30651-DUP1	Duplicate	07/13/23
	*	

Batch ID: BG30976	<b>Preparation Method:</b>	EPA 3050B	Prepared By:	KMQ
YORK Sample ID	Client Sample ID	Preparation Date		
23F1372-27	SB30A_18-24	07/18/23		
23F1372-31	SB30B_18-24	07/18/23		
23F1372-35	SB30C_18-24	07/18/23		
23F1372-39	SB30E_18-24	07/18/23		
BG30976-BLK1	Blank	07/18/23		
BG30976-DUP1	Duplicate	07/18/23		
BG30976-MS1	Matrix Spike	07/18/23		
BG30976-PS1	Post Spike	07/18/23		
BG30976-SRM1	Reference	07/18/23		



# Metals by ICP - Quality Control Data

## York Analytical Laboratories, Inc. - Stratford

Analyte		Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF31784 - EPA 3050	0B											
Blank (BF31784-BLK1) B	Blank							Prep	oared: 06/27/2	023 Analyze	d: 06/29/2	023
Arsenic		ND	1.04	mg/kg wet								
Duplicate (BF31784-DUP1)	Duplicate	*Source sample:	23F1372-03 (S	B13A_12-18	)			Prep	oared: 06/27/2	023 Analyze	d: 06/29/2	023
Arsenic		12.0	1.15	mg/kg dry		11.4				4.61	35	
Matrix Spike (BF31784-MS1) N	Aatrix Spike	*Source sample:	23F1372-03 (S	B13A_12-18	)			Prep	pared: 06/27/2	023 Analyze	d: 06/29/2	023
Arsenic		193	1.15	mg/kg dry	185	11.4	98.6	75-125				
Post Spike (BF31784-PS1) P	ost Spike	*Source sample:	23F1372-03 (S	B13A_12-18	)			Prep	bared: 06/27/2	023 Analyze	d: 06/29/2	.023
Arsenic		0.0496		ug/mL	2.00	0.124	NR	75-125	Low Bias			
Reference (BF31784-SRM1) R	Reference							Prep	oared: 06/27/2	023 Analyze	d: 06/29/2	.023
Arsenic		204	1.04	mg/kg wet	183		111	69.9-130.1				
Batch BF31806 - EPA 3050	0B											
Blank (BF31806-BLK1) B	Blank							Prep	oared: 06/27/2	023 Analyze	d: 06/29/2	023
Arsenic		ND	1.04	mg/kg wet								
Duplicate (BF31806-DUP1)	Duplicate	*Source sample:	23F1381-03 (D	uplicate)				Prep	pared: 06/27/2	023 Analyze	d: 06/29/2	023
Arsenic	· ·	15.0	1.19	mg/kg dry		18.8				22.0	35	
Matrix Spike (BF31806-MS1) N	Aatrix Spike	*Source sample:	23F1381-03 (M	latrix Spike)				Prep	bared: 06/27/2	023 Analyze	d: 06/29/2	023
Arsenic	•	219	1.19	mg/kg dry	190	18.8	105	75-125				
Post Spike (BF31806-PS1) P	ost Spike	*Source sample:	23F1381-03 (P	ost Spike)				Prep	pared: 06/27/2	023 Analyze	d: 06/29/2	023
Arsenic	<u>.</u>	2.32		ug/mL	2.00	0.986	66.7	75-125	Low Bias			

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ClientServices

Page 37 of 46



### Metals by ICP - Quality Control Data

# York Analytical Laboratories, Inc. - Stratford

Analyte		Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF31806 - EPA 3	050B											
Reference (BF31806-SRM1)	Reference							Prep	ared: 06/27/2	2023 Analyze	d: 06/29/2	023
Arsenic		192	1.04	mg/kg wet	183		105	69.9-130.1				
Batch BG30265 - EPA 3	050B											
Blank (BG30265-BLK1)	Blank							Prep	ared: 07/06/2	2023 Analyze	d: 07/07/2	023
Arsenic		ND	1.04	mg/kg wet								
Duplicate (BG30265-DUP1)	Duplicate	*Source sample: 23	3F1981-02 (D	uplicate)				Prep	ared: 07/06/2	2023 Analyze	d: 07/10/2	023
Arsenic	•	ND	1.64	mg/kg dry		ND					35	
Matrix Spike (BG30265-MS1)	) Matrix Spike	*Source sample: 23	3F1981-02 (M	latrix Spike)				Prep	ared: 07/06/2	2023 Analyze	d: 07/10/2	023
Arsenic		30.5	1.64	mg/kg dry	262	ND	11.6	75-125	Low Bias			
Post Spike (BG30265-PS1)	Post Spike	*Source sample: 23	3F1981-02 (Po	ost Spike)				Prep	ared: 07/06/2	2023 Analyze	d: 07/10/2	023
Arsenic		2.11		ug/mL	2.00	0.0113	105	75-125				
Reference (BG30265-SRM1)	Reference							Prep	ared: 07/06/2	2023 Analyze	d: 07/07/2	023
Arsenic		212	1.04	mg/kg wet	183		116	69.9-130.1				
Batch BG30976 - EPA 3	050B											
Blank (BG30976-BLK1)	Blank							Prep	ared: 07/18/2	2023 Analyze	d: 07/19/2	023
Arsenic		ND	1.04	mg/kg wet								
Duplicate (BG30976-DUP1)	Duplicate	*Source sample: 23	3G0839-01 (D	uplicate)				Prep	ared: 07/18/2	2023 Analyze	d: 07/19/2	023
Arsenic		19.2	1.17	mg/kg dry		14.2				30.3	35	

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RICHMOND HILL, NY 11418 ClientServices Page 38

Page 38 of 46



### Metals by ICP - Quality Control Data

# York Analytical Laboratories, Inc. - Stratford

Analyte		Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
7 maryte		Result	Linit	Cints	Level	Result	/orcec	Lillits	The	Iu D	Linit	Thug
Batch BG30976 - EPA 30	)50B											
Matrix Spike (BG30976-MS1)	Matrix Spike	*Source sample: 230	G0839-01 (N	Matrix Spike)				Prepa	ared: 07/18/2	2023 Analyz	ed: 07/19/2	023
Arsenic		224	1.17	mg/kg dry	188	14.2	112	75-125				
Post Spike (BG30976-PS1)	Post Spike	*Source sample: 230	G0839-01 (F	Post Spike)				Prepa	ared: 07/18/2	2023 Analyz	ed: 07/19/2	023
Arsenic		2.24		ug/mL	2.00	0.151	104	75-125				
Reference (BG30976-SRM1)	Reference							Prepa	ared: 07/18/2	2023 Analyz	ed: 07/19/2	023
Arsenic		211	1.04	mg/kg wet	183		115	69.9-130.1				

Page 39 of 46



#### **Miscellaneous Physical Parameters - Quality Control Data**

York Analytical Laboratories, Inc. - Stratford

Analyte		Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BF31934 - % Soli	ids Prep											
Duplicate (BF31934-DUP1)	Duplicate	*Source sample: 23I	F1372-28 (SB	30B_0-6)				Prepa	ared & Analy	yzed: 06/29/2	2023	
% Solids	•	79.4	0.100	%		80.1				0.822	20	
Batch BF31936 - % Sol	ids Prep											
Duplicate (BF31936-DUP1)	Duplicate	*Source sample: 23I	F1482-15 (Du	plicate)				Prep	ared & Analy	yzed: 06/29/2	2023	
% Solids		96.3	0.100	%		96.2				0.157	20	
Batch BG30181 - % Sol	ids Prep											
Duplicate (BG30181-DUP1)	Duplicate	*Source sample: 23I	F2020-20 (Du	plicate)				Prepa	ared & Analy	yzed: 07/05/2	2023	
% Solids		96.5	0.100	%		96.5				0.0184	20	
<u>Batch BG30651 - % Sol</u>	ids Prep											
Duplicate (BG30651-DUP1)	Duplicate	*Source sample: 230	G0543-01 (Dı	iplicate)				Prepa	ared & Analy	yzed: 07/13/2	2023	
% Solids		85.2	0.100	%		87.1				2.14	20	

RICHMOND HILL, NY 11418 ClientServices Page 4(

Page 40 of 46



#### Sample and Data Qualifiers Relating to This Work Order

#### **Definitions and Other Explanations**

- \* Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
- ND NOT DETECTED the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
- RL REPORTING LIMIT the minimum reportable value based upon the lowest point in the analyte calibration curve.
- LOQ LIMIT OF QUANTITATION the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
- LOD LIMIT OF DETECTION a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
- MDL METHOD DETECTION LIMIT a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
- Reported to This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
- NR Not reported
- RPD Relative Percent Difference
- Wet The data has been reported on an as-received (wet weight) basis
- Low Bias Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
- High Bias High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
- Non-Dir. Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

STRATFORD, CT 06615 (203) 325-1371 132-02 89th AVENUE FAX (203) 357-0166 **RICHMOND HILL, NY 11418** 

ClientServices Page 41 of 46



Revision Description: This report has been revised to report activated hold samples 27/31/35/39 for Arsenic 6010.

RICHMOND HILL, NY 11418 ClientServices Page 42

Page 42 of 46

					YORK Project No.	
	Field C	hain-of-(	Custoa	Chain-of-Custody Record	662100	
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	DW - drinking water	Connecticut	CMDP	NJDEP Reduced NJDKQP		
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ANALYTICAL LADORATORIES INC	This	document serves as	es as your written authorization for YORK to proceed with the analys Your simpature hinds you to YORK's Standard Terms & Conditions.	or YORK to proceed wit RK's Standard Terms &	h the analyses requested below. Conditions.	
490 NO 8014 Avia Ottagee MV 11418		se Chirch Hill Rd #2 Newfown, CT 06470	own. Ch <sup>0</sup> 06470 clientserv	clientservices@vorklab.com v	www.yorklab.com 800-306-YORK	Page Z of Y
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		DW - drinking water	Connecticut	CMDP	NJDEP Reduced NJDKQP	
		WW - wastewater	Pennsylvania	Standard Excel EDD	Deliverables NJDEP SRP HazSite	
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	Your signature binds you to YORK's Standard Terms & Conditions.		R
120 Research Drive Stratford, CT 06615 132-02 89th Ave Queens, NY 11418 56 Church Hill Rd. #2 Newtown, CT 06470	clientservices@yorklab.com www.y	ab.com 800-306-YORK	Page J of C
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- (		DW - drinking water	Connecticut	CMDP	NJDEP Reduced NJDKQP	
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