
SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION REPORT

for

**3 North Castle Drive
Armonk, New York 10504**

Prepared for:

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**August 3, 2023
170766301**

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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 62.1 on 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 elevation¹ (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.

¹ 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.¹ +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

¹ 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.

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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.

Metals

Arsenic was detected above the UU and RURR SCOs of 13 milligrams per kilogram and 16 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.

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5.0 CONCLUSIONS

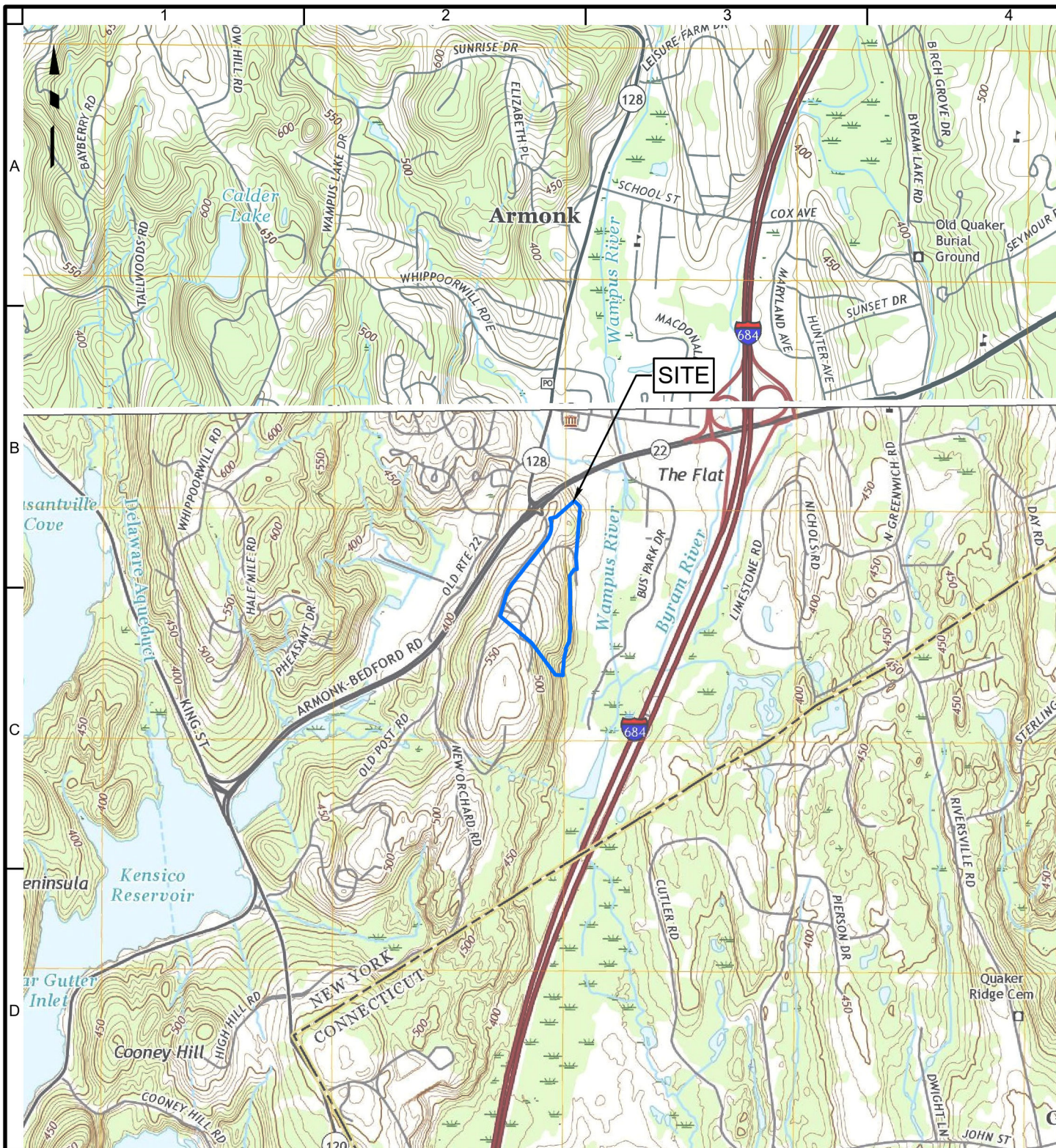
Findings and conclusions of the Supplemental ESI are summarized below:

- Geophysical Survey: Subsurface anomalies, including utility lines (e.g., electric and water) and/or USTs, were not detected at the site.
- Lithology: 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.
- Hydrogeology: 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



Legend

Approximate Site Boundary

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Notes:

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

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Langan International LLC

Collectively known as Langan

Project

**3 NORTH
CASTLE DRIVE**

PARCEL ID: 108.03-1-62.1

ARMONK

WESTCHESTER
COUNTY

NEW YORK

Figure Title

**SITE LOCATION
MAP**

Project No.

170766301

Date

7/5/2023

Scale

1"=2,000'

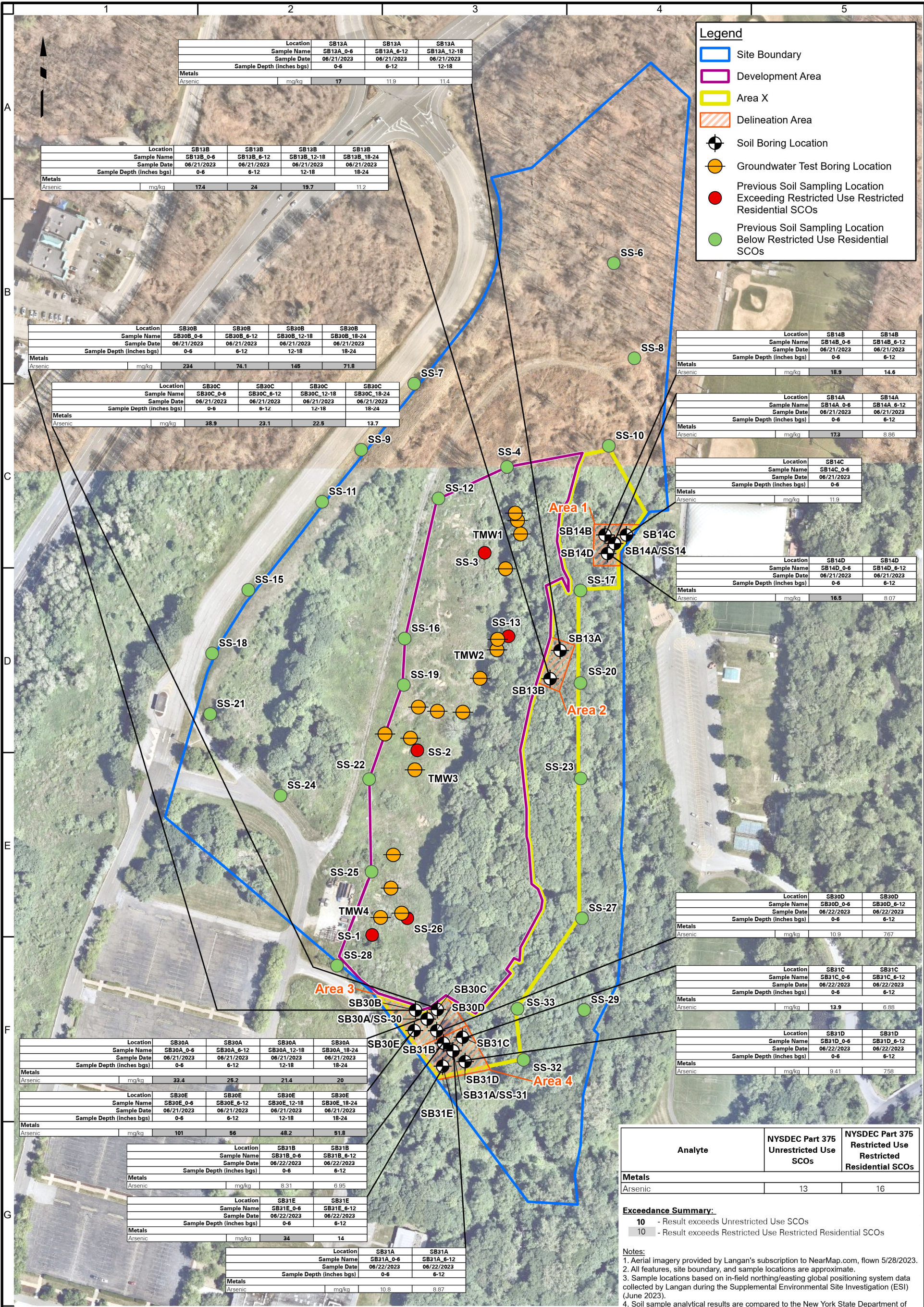
Drawn By

MG

Submission Date

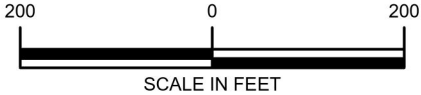
Figure No.

1



WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

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SCALE IN FEET

Analyte	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs
Metals		
Arsenic	13	16

Exceedance Summary:

- 10 - Result exceeds Unrestricted Use SCOs
- 10 - Result exceeds Restricted Use Restricted Residential SCOs

Notes:

- Aerial imagery provided by Langan's subscription to NearMap.com, flown 5/28/2023.
- All features, site boundary, and sample locations are approximate.
- Sample locations based on in-field northing/easting global positioning system data collected by Langan during the Supplemental Environmental Site Investigation (ESI) (June 2023).
- 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 Part 375 Unrestricted Use (UU) and Restricted Use Restricted Residential (RURR) Soil Cleanup Objectives (SCO).
- Detected analytical results above UU SCOs are bolded.
- Detected analytical results above RURR SCOs are shaded.
- bgs = below grade surface
- mg/kg = milligram per kilogram

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Project

3 NORTH CASTLE DRIVE

PARCEL ID: 108.03-1-62.1

ARMONK

WESTCHESTER COUNTY

NEW YORK

Figure Title

**SOIL SAMPLE
LOCATION AND
ANALYTICAL
RESULTS MAP**

Project No.

170766301

Date

8/3/2023

Scale

1"=200'

Drawn By

GS

Figure No.

2

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	Part 375 Arsenic
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	
14	SB14D	SB14D_6-12	6 - 12	6/21/2023	
15	SB30A	SB30A_0-6	0 - 6	6/21/2023	
16	SB30A	SB30A_6-12	6 - 12	6/21/2023	
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	
23	SB30C	SB30C_0-6	0 - 6	6/21/2023	
24	SB30C	SB30C_6-12	6 - 12	6/21/2023	
25	SB30C	SB30C_12-18	12 - 18	6/21/2023	
26	SB30C	SB30C_18-24	18-24	6/21/2023	
27	SB30D	SB30D_0-6	0 - 6	6/22/2023	
28	SB30D	SB30D_6-12	6 - 12	6/22/2023	
29	SB30E	SB30E_0-6	0 - 6	6/21/2023	
30	SB30E	SB30E_6-12	6 - 12	6/21/2023	
31	SB30E	SB30E_12-18	12 - 18	6/21/2023	
32	SB30E	SB30E_18-24	18-24	6/21/2023	
33	SB31A	SB31A_0-6	0 - 6	6/22/2023	
34	SB31A	SB31A_6-12	6 - 12	6/22/2023	
35	SB31B	SB31B_0-6	0 - 6	6/22/2023	
36	SB31B	SB31B_6-12	6 - 12	6/22/2023	
37	SB31C	SB31C_0-6	0 - 6	6/22/2023	
38	SB31C	SB31C_6-12	6 - 12	6/22/2023	
39	SB31D	SB31D_0-6	0 - 6	6/22/2023	
40	SB31D	SB31D_6-12	6 - 12	6/22/2023	
41	SB31E	SB31E_0-6	0 - 6	6/22/2023	
42	SB31E	SB31E_6-12	6 - 12	6/22/2023	

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

Table 2
Supplemental Environmental Site Investigation Report
Soil Sample Analytical Results

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

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Restricted Residential SCOs	Location	SB13A	SB13A	SB13A	SB13B	SB13B	SB13B	SB13B	SB13B	SB14A	SB14A	SB14B	SB14B	SB14C	SB14D	SB14D
				Sample Name	SB13A_0-6	SB13A_6-12	SB13A_12-18	SB13B_0-6	SB13B_6-12	SB13B_12-18	SB13B_18-24	SB14A_0-6	SB14A_6-12	SB14B_0-6	SB14B_6-12	SB14C_0-6	SB14D_0-6	SB14D_6-12	
				Sample Date	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	
				Sample Depth	0-6	6-12	12-18	0-6	6-12	12-18	18-24	0-6	6-12	0-6	6-12	0-6	0-6	6-12	
				Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	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	

Table 2
Supplemental Environmental Site Investigation Report
Soil Sample Analytical Results

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

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Restricted Residential SCOs	Location	SB30A	SB30A	SB30A	SB30A	SB30B	SB30B	SB30B	SB30B	SB30C	SB30C	SB30C	SB30C	SB30D	SB30D
				Sample Name	SB30A_0-6	SB30A_6-12	SB30A_12-18	SB30A_18-24	SB30B_0-6	SB30B_6-12	SB30B_12-18	SB30B_18-24	SB30C_0-6	SB30C_6-12	SB30C_12-18	SB30C_18-24	SB30D_0-6	SB30D_6-12
				Sample Date	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/21/2023	6/22/2023	6/22/2023
				Sample Depth	0-6	6-12	12-18	18-24	0-6	6-12	12-18	18-24	0-6	6-12	12-18	18-24	0-6	6-12
				Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	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

Table 2
Supplemental Environmental Site Investigation Report
Soil Sample Analytical Results

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

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Restricted Residential SCOs	Location	SB30E	SB30E	SB30E	SB30E	SB31A	SB31A	SB31B	SB31B	SB31C	SSB31C	SB31D	SB31D	SB31E	SB31E
				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
				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
				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
				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

Table 2
Supplemental Environmental Site Investigation Report
Soil Sample Analytical Results

Page 4 of 4

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:

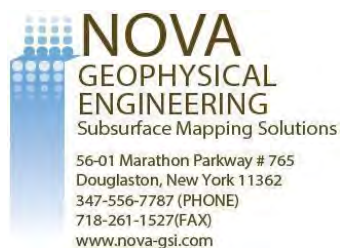
June 26, 2023

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 20th, 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

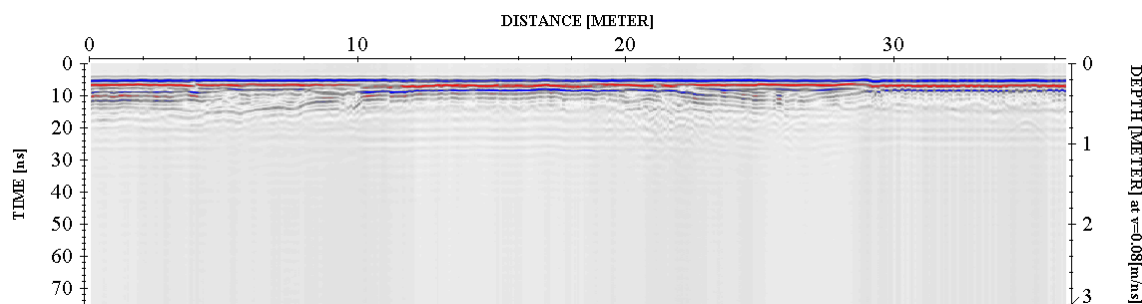
The project site was screened using an EM utility locator to help determine the locations of utilities within the survey area.

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

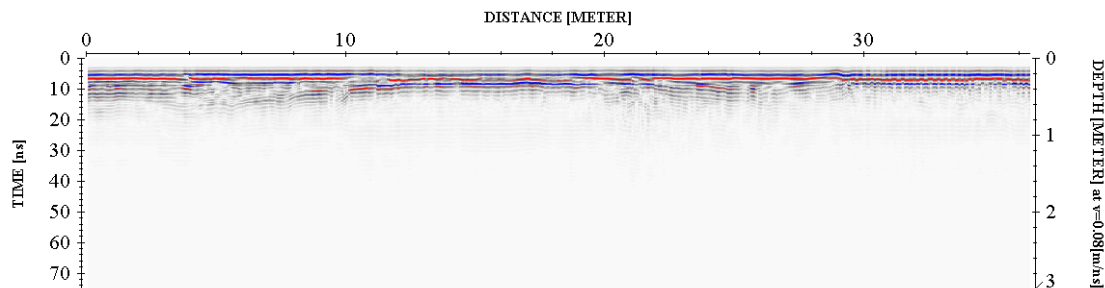
DATA PROCESSING

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.

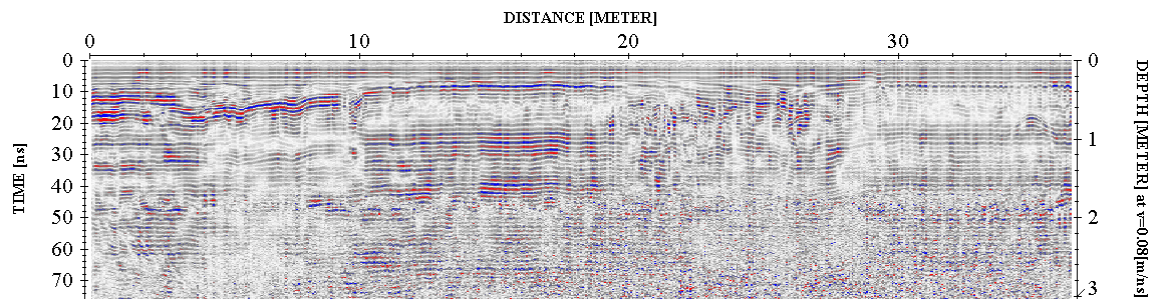
Step 1. Import Raw RAMAC data to standard processing format



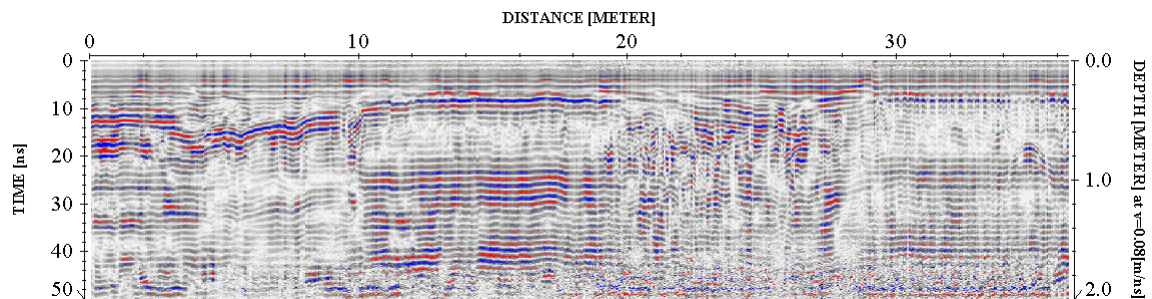
Step 2. Remove instrument noise (*dewow*)



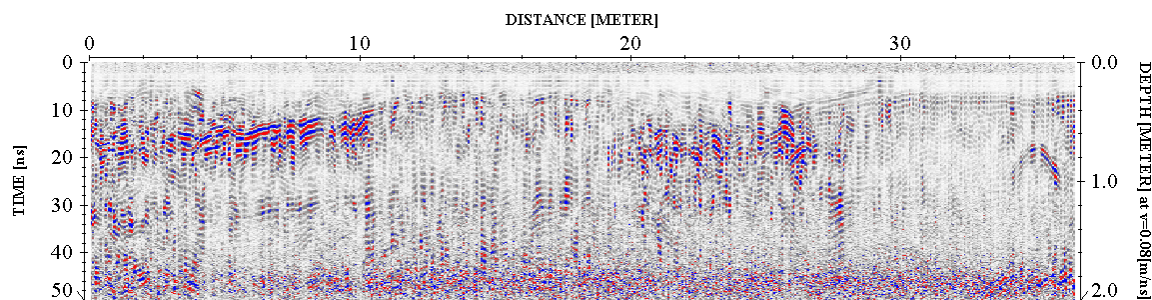
Step 3. Correct for attenuation losses (*energy decay function*)



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



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



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

PHYSICAL SETTINGS

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

Weather: 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 at 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



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

Project Manager

Attachments:

Location Map

Survey Plan

Geophysical Images



Google Earth

900 ft



Location Map

LEGEND

NOVA Geophysical Services

Subsurface Mapping Solutions

56-01 Marathon Parkway, # 765

Douglaston, New York 11362

Phone (347) 556-7787 * Fax (718) 261-1527

www.novagsi.com



SITE: 3 North Castle Drive
North Castle, New York 10504

CLIENT: Langan

DATE: June 20th, 2023

AUTH: Raymond Looney



	SURVEY PLAN	LEGEND
<p>NOVA Geophysical Services Subsurface Mapping Solutions 56-01 Marathon Parkway, # 765 Douglaston, New York 11362 Phone (347) 556-7787 * Fax (718) 261-1527 www.novagsi.com</p>	<p>SITE: 3 North Castle Drive North Castle, New York 10504</p> <p>CLIENT: Langan</p> <p>DATE: June 20th, 2023</p> <p>AUTH: Raymond Looney</p>	<p> Survey Area</p> <p> Boring Location</p>

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

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/21/2023		Date Finished 6/21/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First ∇ N/A		Completion ∇ N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman N/A	
Sampler N/A				Field Engineer Andrew Ashley			
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A			

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Dark brown fine SAND, some silt, trace rootlets (moist) [SP]	0	M-1A	HA	24/24		0.0	SB13A_0-6 SB13A_6-12 SB13A_12-18 End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
		Tannish brown to brown SILT, trace fine gravel, trace rootlets (moist) [ML]	1	M-1B			0.0		
		End of Boring at 2ft.	2					0.0	
			3						
			4						
			5						
			6						
			7						
			8						
			9						
			10						
			11						
			12						
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			14						
			15						
			16						
			17						
			18						
			19						
		20							

Project				Project No.			
3 North Castle Drive				170766301			
Location				Elevation and Datum			
3 North Castle Drive, North Castle, NY				N/A			
Drilling Company				Date Started		Date Finished	
N/A				6/21/2023		6/21/2023	
Drilling Equipment				Completion Depth		Rock Depth	
4-inch ID Hand Auger				2.0 ft		N/E	
Size and Type of Bit				Number of Samples	Disturbed	Undisturbed	Core
N/A					1	0	0
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)	First	Completion	24 HR.
N/A			N/A		N/A	N/A	N/A
Casing Hammer		Weight (lbs)		Drop (in)		Drilling Foreman	
N/A		N/A		N/A		N/A	
Sampler				Field Engineer			
N/A				Laura Grose			
Sampler Hammer		Weight (lbs)		Drop (in)			
N/A		N/A		N/A			

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr-resist BL/6in	PID Reading (ppm)	
	0.0	Dark brown fine SAND, some silt, trace organics, trace rootlets (moist) [SP]	0	M-1A	X			0.0	SB13B_0-6
		Tannish brown to dark brown silty fine SAND, trace rootlets, trace fine gravel (moist) [SM]	1	M-1B	HA	24/24		0.0	SB13B_6-12
			2					0.0	SB13B_12-18
		End of Boring at 2ft.	3					0.0	SB13B_18-24
			4						End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
			5						
			6						
			7						
			8						
			9						
			10						
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/21/2023		Date Finished 6/21/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A			Casing Depth (ft) N/A	Water Level (ft.) First ∇ N/A		Completion ∇ N/A	
Casing Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman N/A			
Sampler N/A				Field Engineer Andrew Ashley			
Sampler Hammer N/A		Weight (lbs) N/A	Drop (in) N/A				

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Dark brown fine SAND, some silt, trace fine gravel (moist) [SP]	0					0.0	SB14A_0-6 SB14A_6-12
			1	M-1	HA	24/24		0.0	
		End of Boring at 2ft.	2					0.0	End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
			3						
			4						
			5						
			6						
			7						
			8						
			9						
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			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/21/2023		Date Finished 6/21/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 1.5 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A			Casing Depth (ft) N/A	Water Level (ft.) First ∇ N/A		Completion ∇ N/A	
Casing Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman N/A			
Sampler N/A				Field Engineer Andrew Ashley			
Sampler Hammer N/A		Weight (lbs) N/A	Drop (in) N/A				

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Tannish brown to brown fine SAND, some silt, trace fine gravel, trace rootlets (moist) [SP]	0	M-1	HA	18/18		0.0	SB14B_0-6
			1					0.0	
			2					0.0	
		End of Boring at 1.5ft.	3						End of boring at 1.5 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
			4						
			5						
			6						
			7						
			8						
			9						
			10						
			11						
			12						
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			16						
			17						
			18						
			19						
			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/21/2023		Date Finished 6/21/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A			Casing Depth (ft) N/A	Water Level (ft.) First ∇ N/A		Completion ∇ N/A	24 HR. ∇ N/A
Casing Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman N/A			
Sampler N/A							
Sampler Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Field Engineer Andrew Ashley			

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Tannish brown to dark brown fine SAND, some silt, trace fine gravel, trace rootlets (moist) [SP]	0					0.0	SB14C_0-6
			1	M-1	HA	24/24		0.0	
		End of Boring at 2ft.	2					0.0	End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
			3						
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			17						
			18						
			19						
			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/21/2023		Date Finished 6/21/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A			Casing Depth (ft) N/A	Water Level (ft.) First ∇ N/A		Completion ∇ N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman N/A	
Sampler N/A				Field Engineer Andrew Ashley			
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A			

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Dark brown to brown fine SAND, some silt, trace fine gravel, trace rootlets (moist) [SP]	0					0.0	SB14D_0-6
			1	M-1	HA	24/24		0.0	
		End of Boring at 2ft.	2					0.0	End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
			3						
			4						
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			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/21/2023		Date Finished 6/21/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A			Casing Depth (ft) N/A	Water Level (ft.) First ∇ N/A		Completion ∇ N/A	24 HR. ∇ N/A
Casing Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman N/A			
Sampler N/A							
Sampler Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Field Engineer Laura Grose			

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Dark brown to brown fine SAND, some silt, trace rootlets (moist) [SP]	0	M-1A	HA	24/24		0.0	SB30A_0-6 SB30A_6-12
		Tannish brown to brown fine SAND, some silt (moist) [SP]	1	M-1B				0.0	
		End of Boring at 2ft.	2					0.0	End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
			3						
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Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/21/2023		Date Finished 6/21/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First ∇ N/A		Completion ∇ N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman N/A	
Sampler N/A				Field Engineer Laura Grose			
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A			

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Dark brown fine SAND, some silt, trace rootlets (moist) [SP] Tannish brown to brown fine SAND, some silt (moist) [SP]	0	M-1A	HA	24/24			SB30B_0-6 SB30B_6-12
		Tannish brown fine SAND, some silt (moist) [SP]	1	M-1B				0.0	
		End of Boring at 2ft.	2	M-1C				0.0	
			3						End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
			4						
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			10						
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			12						
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			15						
			16						
			17						
			18						
			19						
			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/21/2023		Date Finished 6/21/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A			Casing Depth (ft) N/A	Water Level (ft.) First ∇ N/A		Completion ∇ N/A	24 HR. ∇ N/A
Casing Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman N/A			
Sampler N/A							
Sampler Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Field Engineer Laura Grose			

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Dark brown to brown fine SAND, trace rootlets, some silt (moist) [SP]	0	M-1A	HA	24/24		0.0	SB30C_0-6 SB30C_6-12
		Tannish brown to brown fine SAND, some silt (moist) [SP]	1	M-1B				0.0	
		End of Boring at 2ft.	2					0.0	End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
			3						
			4						
			5						
			6						
			7						
			8						
			9						
			10						
			11						
			12						
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			17						
			18						
			19						
			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/22/2023		Date Finished 6/22/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First ∇ N/A		Completion ∇ N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman N/A	
Sampler N/A				Field Engineer Mat Frankel			
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A			

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Tannish brown SILT, some rootlets (dry) [ML]	0	M-1A	HA	24/24			SB30C_0-6 SB30D_6-12 End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
		Tannish brown SILT, some rootlets (moist) [ML]		M-1B				0.0	
		Tannish brown SILT, trace fine gravel, trace rootlets (moist) [ML]	1	M-1C				0.0	
		Tannish brown SILT, trace fine gravel (moist) [ML]		M-1D				0.0	
		End of Boring at 2ft.	2						
			3						
			4						
			5						
			6						
			7						
			8						
			9						
			10						
			11						
			12						
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			15						
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			18						
			19						
			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/21/2023		Date Finished 6/23/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A			Casing Depth (ft) N/A	Water Level (ft.) First ∇ N/A		Completion ∇ N/A	
Casing Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman N/A			
Sampler N/A							
Sampler Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Field Engineer Laura Grose			

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Dark brown fine SAND, some silt, trace rootlets (moist) [SP]	0	M-1A	HA	24/24		0.0	SB30E_0-6 SB30E_6-12
		Dark brown to brown fine SAND, some silt (moist) [SP]	1	M-1B			0.0		
		Tannish brown to brown fine SAND, some silt (moist) [SP]	2	M-1C			0.0		
		End of Boring at 2ft.						0.0	End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
			3						
			4						
			5						
			6						
			7						
			8						
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			19						
			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/22/2023		Date Finished 6/22/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First ∇ N/A		Completion ∇ N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman N/A	
Sampler N/A				Field Engineer Mat Frankel			
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A			

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Grayish brown SILT, some organics, some rootlets, trace fine gravel (moist) [ML]	0	M-1A	HA	24/24		0.0	SB31A_0-6 SB31A_6-12 End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
		Grayish brown SILT, some rootlets, trace fine gravel (moist) [ML]	1	M-1B				0.0	
		Grayish brown sandy SILT, some rootlets (moist) [ML]		M-1C				0.0	
		Grayish brown sandy SILT, some rootlets (moist) [SM]	2	M-1D				0.0	
		Grayish brown sandy SILT, some rootlets (moist) [ML]							
		End of Boring at 2ft.							
			3						
			4						
			5						
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			11						
			12						
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			17						
			18						
			19						
			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/22/2023		Date Finished 6/22/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples	Disturbed 1	Undisturbed 0	Core 0
Casing Diameter (in) N/A			Casing Depth (ft) N/A	Water Level (ft.)	First N/A	Completion N/A	24 HR. N/A
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman N/A	
Sampler N/A				Field Engineer Mat Frankel			
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A			

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Brown SILT, some organics, some rootlets (moist) [ML]	0	M-1A	HA	24/24		0.0	SB31B_0-6 SB31B_6-12 End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
		Brown SILT, some organics, trace fine gravel, some rootlets (moist) [ML]	1	M-1B				0.0	
		Gray to brownish tan sandy SILT, trace rootlets (moist) [ML]	2	M-1C				0.0	
		End of Boring at 2ft.						0.0	
			3						
			4						
			5						
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			18						
			19						
			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/22/2023		Date Finished 6/22/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A			Casing Depth (ft) N/A	Water Level (ft.) First ∇ N/A		Completion ∇ N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman N/A	
Sampler N/A				Field Engineer Mat Frankel			
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A			

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Brown SILT, some organics, some rootlets (moist) [ML]	0	M-1A	HA	24/24			SB31C_0-6 SB31C_6-12 End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
		Brown SILT, some rootlets, trace fine gravel (moist) [ML]		M-1B				0.0	
		Brown SILT, some rootlets (moist) [ML]	1	M-1C				0.0	
		Gray to brownish tan sandy SILT, orange to grayish black mottling (moist) [SM]	2	M-1D				0.0	
		End of Boring at 2ft.							
			3						
			4						
			5						
			6						
			7						
			8						
			9						
			10						
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/22/2023		Date Finished 6/22/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First ∇ N/A		Completion ∇ N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman N/A	
Sampler N/A				Field Engineer Mat Frankel			
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A			

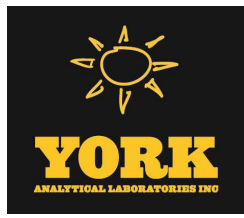
Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Brown SILT, some organics, some rootlets, trace fine gravel (moist) [ML]	0	M-1A	HA	24/24		0.0	SB31D_0-6 SB31D_6-12 End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
		Brown SILT, some organics, trace fine gravel (moist) [ML]	1	M-1B				0.0	
		Brown SILT, some rootlets (moist) [ML]		M-1C				0.0	
		End of Boring at 2ft.	2					0.0	
			3						
			4						
			5						
			6						
			7						
			8						
			9						
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			11						
			12						
			13						
			14						
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			17						
			18						
			19						
			20						

Project 3 North Castle Drive				Project No. 170766301			
Location 3 North Castle Drive, North Castle, NY				Elevation and Datum N/A			
Drilling Company N/A				Date Started 6/22/2023		Date Finished 6/22/2023	
Drilling Equipment 4-inch ID Hand Auger				Completion Depth 2.0 ft		Rock Depth N/E	
Size and Type of Bit N/A				Number of Samples Disturbed 1		Undisturbed 0 Core 0	
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First ∇ N/A		Completion ∇ N/A	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman N/A	
Sampler N/A				Field Engineer Mat Frankel			
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A			

Material Symbol	Elev. (ft) 0.0	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr- resist BL/6in	PID Reading (ppm)	
		Light tannish brown SILT, some organics, some rootlets, trace fine gravel (moist) [ML]	0	M-1A	HA	24/24		0.0	SB31E_0-6 SB31E_6-12 End of boring at 2 feet bgs. Boring backfilled with clean soil cuttings to grade surface.
		Light tannish brown SILT, some rootlets, trace fine gravel (moist) [ML]	1	M-1B				0.0	
		Light tannish brown SILT, some rootlets (moist) [ML]		M-1C				0.0	
		Light tannish brown sandy SILT, some rootlets (moist) [SM]	2	M-1D				0.0	
		End of Boring at 2ft.							
			3						
			4						
			5						
			6						
			7						
			8						
			9						
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			20						

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

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.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
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



Cassie L. Mosher
Laboratory Manager

Date: 07/03/2023





Sample Information

Client Sample ID: SB31A_0-6

York Sample ID: 23F1479-01

York Project (SDG) No.

23F1479

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 22, 2023 9:15 am

Date Received

06/22/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	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-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	72.9		%	0.100	1	SM 2540G	06/30/2023 07:37	06/30/2023 14:04	sgs
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB31A_6-12

York Sample ID: 23F1479-02

York Project (SDG) No.

23F1479

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 22, 2023 9:30 am

Date Received

06/22/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	7.67		mg/kg dry	1.39	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:25	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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		



Sample Information

Client Sample ID: SB31B_0-6

York Sample ID: 23F1479-05

York Project (SDG) No.
23F1479

Client Project ID
170766301

Matrix
Soil

Collection Date/Time
June 22, 2023 10:20 am

Date Received
06/22/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	10.8		mg/kg dry	1.45	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:27	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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		



Sample Information

Client Sample ID: SB31B_6-12

York Sample ID: 23F1479-06

York Project (SDG) No.
23F1479

Client Project ID
170766301

Matrix
Soil

Collection Date/Time
June 22, 2023 10:25 am

Date Received
06/22/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	8.87		mg/kg dry	1.38	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:29	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

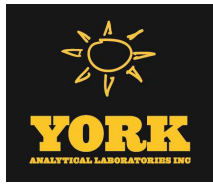
Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	75.5		%	0.100	1	SM 2540G	06/30/2023 07:37	06/30/2023 14:04	sgs
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB31C_0-6

York Sample ID: 23F1479-09

York Project (SDG) No.

23F1479

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 22, 2023 11:15 am

Date Received

06/22/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	8.31		mg/kg dry	1.37	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:32	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	75.8		%	0.100	1	SM 2540G	06/30/2023 07:37	06/30/2023 14:04	sgs
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB31C_6-12

York Sample ID: 23F1479-10

York Project (SDG) No.

23F1479

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 22, 2023 11:25 am

Date Received

06/22/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	6.95		mg/kg dry	1.39	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:34	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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		



Sample Information

Client Sample ID: SB31D_0-6

York Sample ID: 23F1479-13

York Project (SDG) No.
23F1479

Client Project ID
170766301

Matrix
Soil

Collection Date/Time
June 22, 2023 12:15 pm

Date Received
06/22/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	13.9		mg/kg dry	1.37	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:46	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	75.9		%	0.100	1	SM 2540G	06/30/2023 07:42	06/30/2023 14:13	sgs
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB31D_6-12

York Sample ID: 23F1479-14

York Project (SDG) No.

23F1479

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 22, 2023 12:35 pm

Date Received

06/22/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	6.88		mg/kg dry	1.37	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:49	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	76.3		%	0.100	1	SM 2540G	06/30/2023 07:42	06/30/2023 14:13	sgs
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB31E_0-6

York Sample ID: 23F1479-17

York Project (SDG) No.

23F1479

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 22, 2023 1:05 pm

Date Received

06/22/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	9.41		mg/kg dry	1.46	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:51	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	71.1		%	0.100	1	SM 2540G	06/30/2023 07:42	06/30/2023 14:13	sgs
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB31E_6-12

York Sample ID: 23F1479-18

York Project (SDG) No.

23F1479

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 22, 2023 1:15 pm

Date Received

06/22/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	7.58		mg/kg dry	1.36	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:54	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	76.9		%	0.100	1	SM 2540G	06/30/2023 07:42	06/30/2023 14:13	sgs
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30D_0-6

York Sample ID: 23F1479-21

York Project (SDG) No.

23F1479

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 22, 2023 2:05 pm

Date Received

06/22/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	34.0		mg/kg dry	1.19	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:56	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	87.3		%	0.100	1	SM 2540G	06/30/2023 07:42	06/30/2023 14:13	sgs
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30D_6-12

York Sample ID: 23F1479-22

York Project (SDG) No.

23F1479

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 22, 2023 2:10 pm

Date Received

06/22/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	14.0		mg/kg dry	1.21	1	EPA 6010D	06/28/2023 19:48	07/03/2023 16:58	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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

Preparation Method: 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	SB31D_6-12	06/30/23
23F1479-17	SB31E_0-6	06/30/23
23F1479-18	SB31E_6-12	06/30/23
23F1479-21	SB30D_0-6	06/30/23
23F1479-22	SB30D_6-12	06/30/23
BF32019-DUP1	Duplicate	06/30/23



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 3050B											
Blank (BF31910-BLK1)	Blank								Prepared: 06/28/2023	Analyzed: 06/30/2023	
Arsenic	ND	1.04	mg/kg wet								
Duplicate (BF31910-DUP1)	Duplicate	*Source sample: 23F1494-04 (Duplicate)							Prepared: 06/28/2023	Analyzed: 06/30/2023	
Arsenic	21.1	1.40	mg/kg dry		24.3				14.0	35	
Matrix Spike (BF31910-MS1)	Matrix Spike	*Source sample: 23F1494-04 (Matrix Spike)							Prepared: 06/28/2023	Analyzed: 06/30/2023	
Arsenic	246	1.40	mg/kg dry	224	24.3	99.1	75-125				
Post Spike (BF31910-PS1)	Post Spike	*Source sample: 23F1494-04 (Post Spike)							Prepared: 06/28/2023	Analyzed: 06/30/2023	
Arsenic	2.19		ug/mL	2.00	0.217	98.6	75-125				
Reference (BF31910-SRM1)	Reference								Prepared: 06/28/2023	Analyzed: 06/30/2023	
Arsenic	184	1.04	mg/kg wet	183		101	69.9-130.1				



Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC Limits	Flag	RPD Limit	Flag
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Batch BF32018 - % Solids Prep

Duplicate (BF32018-DUP1)	Duplicate	*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: 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.





YORK
ANALYTICAL LABORATORIES INC

Field Chain-of-Custody Record

York Analytical Laboratories, Inc. (YORK)'s Standard Terms & Conditions are listed on the back side of this document. This document serves as your written authorization for YORK to proceed with the analyses requested below. Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No.

23F1479

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.yorklab.com

800-306-YORK

Page 1 of 3

YOUR INFORMATION		Report To:		Invoice To:		YOUR Project Number		Turn-Around Time	
Company:	LANCAN	Company:		Company:		170766301		RUSH - Next Day	
Address:	360 W 31st St. 8th Floor	Address:		Address:		YOUR Project Name		RUSH - Two Day	
Phone:	NEW YORK NY 10001	Phone:		Phone:		3 NORTH CASTLE DRIVE		RUSH - Three Day	
Contact:	STUART KNOOP	Contact:		Contact:		YOUR PO#:		RUSH - Four Day	
E-mail:	SKNOOP@LANCAN.COM	E-mail:		E-mail:				RUSH - Five Day	
Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.		Matrix Codes		Samples From		Report / EDD Type (circle selections)		YORK Reg. Comp.	
MAT FRANKEL AN		S - soil / solid		New York		Summary Report		Compared to the following Regulation(s): (please fill in)	
		GW - groundwater		New Jersey		QA Report			
		DW - drinking water		Connecticut		CMDP			
		WW - wastewater		Pennsylvania		Standard Excel EDD			
		O - Oil		Other:		NY ASP B Package			
Samples Collected by: (print AND sign your name)		Sample Matrix		Date/Time Sampled		Analyses Requested		Container Type No.	
SB31A - 0-6		S		6/22/23 09:15		ARSENIC		462	
SB31A - 6-12				09:30					
SB31A - 12-18				09:35					
SB31A - 18-24				09:55					
SB31B - 0-6				10:20					
SB31B - 6-12				10:25					
SB31B - 12-18				10:35					
SB31B - 18-24				10:45					
SB31C - 0-6				11:15					
SB31C - 6-12				11:25					
Comments:		DATA MANAGEMENT@LANCAN.COM		Samples Incubated at time of lab pickup? circle Yes or No		Preservation: (check all that apply)		Special Instruction	
CC: KATOLEWSKIE@LANCAN.COM						HCl MeOH HNO3 H2SO4 NaOH		Field Filtered	
FBARZIERE@LANCAN.COM						ZnAc Ascorbic Acid Other:		Lab to Filter	
1. Samples Relinquished by / Company		Date/Time		Date/Time		Date/Time		Date/Time	
AN W LANCAN 6/22/23 16:30		6/22/23 16:30		6/22/23 16:30		6/22/23 16:30		6/22/23 16:30	
2. Samples Received by / Company		Date/Time		Date/Time		Date/Time		Date/Time	
6/22/23 16:30		6/22/23 16:30		6/22/23 16:30		6/22/23 16:30		6/22/23 16:30	
4. Samples Relinquished by / Company		Date/Time		Date/Time		Date/Time		Date/Time	



Field Chain-of-Custody Record

York Analytical Laboratories, Inc. (YORK)'s Standard Terms & Conditions are listed on the back side of this document. This document serves as your written authorization for YORK to proceed with the analyses requested below. Your signature binds you to YORK's Standard Terms & Conditions.

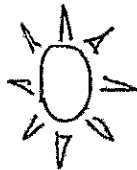
YORK Project No.

23F1479

120 Research Drive Stratford, CT 06815 132-02 89th Ave Queens, NY 11418 56 Church Hill Rd. #2 Newtown, CT 06470 clientservices@yorklab.com 800-306-YORK

Page 2 of 3

YOUR INFORMATION		Report To:		Invoice To:		YOUR Project Number		Turn-Around Time	
Company:	LANHAN	Company:		Company:		170766301		RUSH - Next Day	
Address:	360 W 31st St 8th Fl	Address:		Address:				RUSH - Two Day	
Phone:	New York NY 10001	Phone:		Phone:		3 North Castle Drive		RUSH - Three Day	
Contact:	212-479-5400	Contact:		Contact:				RUSH - Four Day	
E-mail:	STANLEY KNEEL	E-mail:		E-mail:		YOUR PO#:		RUSH - Five Day	
Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.		Matrix Codes		Samples From		Report / EDD Type (circle selections)		YORK Reg. Comp.	
Samples Collected by: (print AND sign your name) MAT FRANKEL CN		S - soil / solid		New York		Summary Report		Compared to the following Regulation(s): (please fill in)	
		GW - groundwater		New Jersey		QA Report			
		DW - drinking water		Connecticut		CMDP			
		WW - wastewater		Pennsylvania		Standard Excel EDD			
		O - Oil		Other:		NY ASP B Package			
Sample Identification		Sample Matrix		Date/Time Sampled		Analyses Requested		Container Type	
SB31C-12-18		S		6/22/23 11:35		ARSENIC			
SB31C-18-24				11:40					
SB31D-0-6				12:15					
SB31D-6-12				12:35					
SB31D-12-18				12:45					
SB31D-18-24				12:50					
SB31E-0-6				13:05					
SB31E-6-12				13:15					
SB31E-12-18				13:25					
SB31E-18-24				13:30					
Comments:		DATA MANAGEMENT@LANHAN.COM		Samples lead/chilled at time of lab pickup? circle Yes or No		Preservation: (check all that apply)		Special Instruction	
CC: CKATOLEWSKI@LANHAN.COM		FBRACZ@LANHAN.COM				HCl MeOH HNO3 H2SO4 NaOH		Field Filtered	
						ZnAc Ascorbic Acid Other:		Lab to Filter	
1. Samples Relinquished by / Company		Date/Time		Date/Time		Date/Time		Date/Time	
1. Samples Relinquished by / Company		6/22/23 16:30		6/22/23 4:30 PM		6/22/23 18:30		6/22/23 18:30	
2. Samples Relinquished by / Company		Date/Time		Date/Time		Date/Time		Date/Time	
2. Samples Relinquished by / Company		Date/Time		Date/Time		Date/Time		Date/Time	
3. Samples Relinquished by / Company		Date/Time		Date/Time		Date/Time		Date/Time	
3. Samples Relinquished by / Company		Date/Time		Date/Time		Date/Time		Date/Time	
4. Samples Relinquished by / Company		Date/Time		Date/Time		Date/Time		Date/Time	
4. Samples Relinquished by / Company		Date/Time		Date/Time		Date/Time		Date/Time	



YORK
ANALYTICAL LABORATORIES INC

Field Chain-of-Custody Record

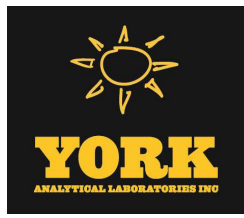
York Analytical Laboratories, Inc. (YORK)'s Standard Terms & Conditions are listed on the back side of this document. This document serves as your written authorization for YORK to proceed with the analyses requested below. Your signature binds you to YORK's Standard Terms & Conditions.

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.yorklab.com 800-306-YORK	
YOUR INFORMATION		Report To:	
Company: LANCAN	Company:	Invoice To:	
Address: 360 W 21st ST 8th Floor	Address:	YOUR Project Number: 170766301	
Phone: NEW York NY 10001	Phone:	YOUR Project Name: 3 NORTHERN DRIVE	
Contact: 212-479-5400	Contact:	YOUR PO#:	
E-mail: STUART KNOOP	E-mail:	Turn-Around Time	
SKNOOP@LANCAN.COM		RUSH - Next Day	
		RUSH - Two Day	
		RUSH - Three Day	
		RUSH - Four Day	
		RUSH - Five Day	
		Standard (6-9 Day) <input checked="" type="checkbox"/>	
		PFAS Standard is 7-10 Days	

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.		Report / EDD Type (circle selections)	
MAT RAWKEL		Summary Report <input checked="" type="checkbox"/> CT RCP	
CN		QA Report <input type="checkbox"/> CT RCP DQADUE NYSDEC EQUIS	
		CMDP <input type="checkbox"/> NJDEP Reduced NJDKQP	
		Standard Excel EDD <input type="checkbox"/> Deliverables NJDEP SRP HazSite	
		NY ASP B Package Other:	
Sample Identification		Analyses Requested	
Samples Collected by: (print AND sign your name)	Sample Matrix	Container Type No.	

S330D-0-6	S	Date/Time Sampled	6/22/23 14:05	ARCSEM							
S330D-6-12	↓	14:10									
S330D-12-18	↓	14:20									
S330D-18-24	↓	14:35									

Comments:		Preservation: (check all that apply)		Special Instruction	
CC: C.KATO@LANCAN.COM DATA MANAGEMENT@LANCAN.COM		HCl MeOH HNO3 H2SO4 NaOH		Field Filtered	
STF-BAR F.BRAZIER@LANCAN.COM		ZnAc Ascorbic Acid Other:		Lab to Filter	
1. Samples Relinquished by / Company		Date/Time		Date/Time	
CN LANCAN 6/22/23 16:30		6/22/23 14:05		6/22/23 16:30	
2. Samples Received by / Company		Date/Time		Date/Time	
CN LANCAN 6/22/23 16:30		6/22/23 16:30		6/22/23 16:30	
4. Samples Relinquished by / Company		Date/Time		Date/Time	
CN LANCAN 6/22/23 16:30		6/22/23 16:30		6/22/23 16:30	



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

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.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
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

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
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 

Cassie L. Mosher
Laboratory Manager

Date: 07/20/2023





Sample Information

Client Sample ID: SB13A_0-6

York Sample ID: 23F1372-01

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 10:00 am

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	83.4		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB13A_6-12

York Sample ID: 23F1372-02

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 10:05 am

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	11.9		mg/kg dry	1.19	1	EPA 6010D	06/27/2023 14:45	06/29/2023 21:13	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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		



Sample Information

Client Sample ID: SB13A_12-18

York Sample ID: 23F1372-03

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 10:10 am

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	11.4		mg/kg dry	1.15	1	EPA 6010D	06/27/2023 14:45	06/29/2023 21:22	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	90.3		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB13B_0-6

York Sample ID: 23F1372-05

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 9:00 am

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	17.4		mg/kg dry	1.25	1	EPA 6010D	06/27/2023 16:56	06/30/2023 16:54	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	83.3		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB13B_6-12

York Sample ID: 23F1372-06

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 9:05 am

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by 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		



Sample Information

Client Sample ID: SB13B_12-18

York Sample ID: 23F1372-07

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 9:10 am

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	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-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB13B_18-24

York Sample ID: 23F1372-08

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 9:15 am

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	11.2		mg/kg dry	1.16	1	EPA 6010D	07/06/2023 14:02	07/10/2023 15:17	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	89.8		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB14A_0-6

York Sample ID: 23F1372-09

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 12:00 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	17.3		mg/kg dry	1.46	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:01	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB14A_6-12

York Sample ID: 23F1372-10

York Project (SDG) No.
23F1372

Client Project ID
170766301

Matrix
Soil

Collection Date/Time
June 21, 2023 12:05 pm

Date Received
06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	8.86		mg/kg dry	1.28	1	EPA 6010D	07/06/2023 14:02	07/10/2023 15:19	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	81.3		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB14B_0-6

York Sample ID: 23F1372-13

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 12:40 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	18.9		mg/kg dry	1.23	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:03	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	84.6		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB14B_6-12

York Sample ID: 23F1372-14

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 12:45 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	14.6		mg/kg dry	1.14	1	EPA 6010D	07/06/2023 14:02	07/10/2023 15:22	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	91.7		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB14C_0-6

York Sample ID: 23F1372-16

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 1:00 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	11.9		mg/kg dry	1.18	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:06	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	88.3		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB14D_0-6

York Sample ID: 23F1372-20

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 11:00 am

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	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-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	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
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB14D_6-12

York Sample ID: 23F1372-21

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 11:05 am

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	8.07		mg/kg dry	1.19	1	EPA 6010D	07/06/2023 14:02	07/10/2023 15:24	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	87.3		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: 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 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	33.4		mg/kg dry	1.23	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:10	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	84.7		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30A_6-12

York Sample ID: 23F1372-25

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 3:20 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	25.2		mg/kg dry	1.19	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:22	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30A_12-18

York Sample ID: 23F1372-26

York Project (SDG) No.
23F1372

Client Project ID
170766301

Matrix
Soil

Collection Date/Time
June 21, 2023 3:10 pm

Date Received
06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	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-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	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		



Sample Information

Client Sample ID: SB30A_18-24

York Sample ID: 23F1372-27

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 3:10 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	20.0		mg/kg dry	1.16	1	EPA 6010D	07/18/2023 14:23	07/20/2023 17:48	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	89.8		%	0.100	1	SM 2540G	07/13/2023 08:12	07/13/2023 15:27	PMB
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30B_0-6

York Sample ID: 23F1372-28

York Project (SDG) No.
23F1372

Client Project ID
170766301

Matrix
Soil

Collection Date/Time
June 21, 2023 3:00 pm

Date Received
06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	234		mg/kg dry	1.30	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:25	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	80.1		%	0.100	1	SM 2540G	06/29/2023 08:16	06/29/2023 11:01	TAJ
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30B_6-12

York Sample ID: 23F1372-29

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 3:05 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	74.1		mg/kg dry	1.26	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:27	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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		



Sample Information

Client Sample ID: SB30B_12-18

York Sample ID: 23F1372-30

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 3:10 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	80.2		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30B_18-24

York Sample ID: 23F1372-31

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 3:15 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	80.3		%	0.100	1	SM 2540G	07/13/2023 08:12	07/13/2023 15:27	PMB
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30C_0-6

York Sample ID: 23F1372-32

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 3:30 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	38.9		mg/kg dry	1.26	1	EPA 6010D	06/27/2023 16:56	06/30/2023 17:29	CEG
							Certifications:	CTDOH-PH-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	82.7		%	0.100	1	SM 2540G	06/29/2023 08:18	06/29/2023 11:37	TAJ
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30C_6-12

York Sample ID: 23F1372-33

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 3:30 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30C_12-18

York Sample ID: 23F1372-34

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 3:35 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	87.3		%	0.100	1	SM 2540G	07/05/2023 15:42	07/05/2023 18:36	CAM2
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30C_18-24

York Sample ID: 23F1372-35

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 3:40 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	90.7		%	0.100	1	SM 2540G	07/13/2023 08:12	07/13/2023 15:27	PMB
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30E_0-6

York Sample ID: 23F1372-36

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 2:20 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	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-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	85.3		%	0.100	1	SM 2540G	06/29/2023 08:18	06/29/2023 11:37	TAJ
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30E_6-12

York Sample ID: 23F1372-37

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 2:25 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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		



Sample Information

Client Sample ID: SB30E_12-18

York Sample ID: 23F1372-38

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 2:30 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids 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
							Certifications:	CTDOH-PH-0723		



Sample Information

Client Sample ID: SB30E_18-24

York Sample ID: 23F1372-39

York Project (SDG) No.

23F1372

Client Project ID

170766301

Matrix

Soil

Collection Date/Time

June 21, 2023 2:35 pm

Date Received

06/21/2023

Arsenic by EPA 6010

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	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-0723,NELAC-NY10854,NJDEP,PADEP		

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	* % Solids	88.4		%	0.100	1	SM 2540G	07/13/2023 08:12	07/13/2023 15:27	PMB
							Certifications:	CTDOH-PH-0723		



Analytical Batch Summary

Batch ID: BF31784

Preparation Method: 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_6-12	06/27/23
23F1372-32	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_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



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
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23F1372-27	SB30A_18-24	07/13/23
23F1372-31	SB30B_18-24	07/13/23
23F1372-35	SB30C_18-24	07/13/23
23F1372-39	SB30E_18-24	07/13/23
BG30651-DUP1	Duplicate	07/13/23

Batch ID: BG30976 **Preparation Method:** 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 3050B											
Blank (BF31784-BLK1)	Blank								Prepared: 06/27/2023	Analyzed: 06/29/2023	
Arsenic	ND	1.04	mg/kg wet								
Duplicate (BF31784-DUP1)	Duplicate	*Source sample: 23F1372-03 (SB13A_12-18)							Prepared: 06/27/2023	Analyzed: 06/29/2023	
Arsenic	12.0	1.15	mg/kg dry		11.4				4.61	35	
Matrix Spike (BF31784-MS1)	Matrix Spike	*Source sample: 23F1372-03 (SB13A_12-18)							Prepared: 06/27/2023	Analyzed: 06/29/2023	
Arsenic	193	1.15	mg/kg dry	185	11.4	98.6	75-125				
Post Spike (BF31784-PS1)	Post Spike	*Source sample: 23F1372-03 (SB13A_12-18)							Prepared: 06/27/2023	Analyzed: 06/29/2023	
Arsenic	0.0496		ug/mL	2.00	0.124	NR	75-125	Low Bias			
Reference (BF31784-SRM1)	Reference								Prepared: 06/27/2023	Analyzed: 06/29/2023	
Arsenic	204	1.04	mg/kg wet	183		111	69.9-130.1				
Batch BF31806 - EPA 3050B											
Blank (BF31806-BLK1)	Blank								Prepared: 06/27/2023	Analyzed: 06/29/2023	
Arsenic	ND	1.04	mg/kg wet								
Duplicate (BF31806-DUP1)	Duplicate	*Source sample: 23F1381-03 (Duplicate)							Prepared: 06/27/2023	Analyzed: 06/29/2023	
Arsenic	15.0	1.19	mg/kg dry		18.8				22.0	35	
Matrix Spike (BF31806-MS1)	Matrix Spike	*Source sample: 23F1381-03 (Matrix Spike)							Prepared: 06/27/2023	Analyzed: 06/29/2023	
Arsenic	219	1.19	mg/kg dry	190	18.8	105	75-125				
Post Spike (BF31806-PS1)	Post Spike	*Source sample: 23F1381-03 (Post Spike)							Prepared: 06/27/2023	Analyzed: 06/29/2023	
Arsenic	2.32		ug/mL	2.00	0.986	66.7	75-125	Low Bias			



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 3050B											
Reference (BF31806-SRM1)	Reference		Prepared: 06/27/2023 Analyzed: 06/29/2023								
Arsenic	192	1.04	mg/kg wet	183		105	69.9-130.1				
Batch BG30265 - EPA 3050B											
Blank (BG30265-BLK1)	Blank		Prepared: 07/06/2023 Analyzed: 07/07/2023								
Arsenic	ND	1.04	mg/kg wet								
Duplicate (BG30265-DUP1)	Duplicate		*Source sample: 23F1981-02 (Duplicate)		Prepared: 07/06/2023 Analyzed: 07/10/2023						
Arsenic	ND	1.64	mg/kg dry		ND					35	
Matrix Spike (BG30265-MS1)	Matrix Spike		*Source sample: 23F1981-02 (Matrix Spike)		Prepared: 07/06/2023 Analyzed: 07/10/2023						
Arsenic	30.5	1.64	mg/kg dry	262	ND	11.6	75-125	Low Bias			
Post Spike (BG30265-PS1)	Post Spike		*Source sample: 23F1981-02 (Post Spike)		Prepared: 07/06/2023 Analyzed: 07/10/2023						
Arsenic	2.11		ug/mL	2.00	0.0113	105	75-125				
Reference (BG30265-SRM1)	Reference		Prepared: 07/06/2023 Analyzed: 07/07/2023								
Arsenic	212	1.04	mg/kg wet	183		116	69.9-130.1				
Batch BG30976 - EPA 3050B											
Blank (BG30976-BLK1)	Blank		Prepared: 07/18/2023 Analyzed: 07/19/2023								
Arsenic	ND	1.04	mg/kg wet								
Duplicate (BG30976-DUP1)	Duplicate		*Source sample: 23G0839-01 (Duplicate)		Prepared: 07/18/2023 Analyzed: 07/19/2023						
Arsenic	19.2	1.17	mg/kg dry		14.2				30.3	35	



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 BG30976 - EPA 3050B											
Matrix Spike (BG30976-MS1)	Matrix Spike	*Source sample: 23G0839-01 (Matrix Spike)							Prepared: 07/18/2023 Analyzed: 07/19/2023		
Arsenic	224	1.17	mg/kg dry	188	14.2	112	75-125				
Post Spike (BG30976-PS1)	Post Spike	*Source sample: 23G0839-01 (Post Spike)							Prepared: 07/18/2023 Analyzed: 07/19/2023		
Arsenic	2.24		ug/mL	2.00	0.151	104	75-125				
Reference (BG30976-SRM1)	Reference								Prepared: 07/18/2023 Analyzed: 07/19/2023		
Arsenic	211	1.04	mg/kg wet	183		115	69.9-130.1				



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
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Batch BF31934 - % Solids Prep

Duplicate (BF31934-DUP1)	Duplicate	*Source sample: 23F1372-28 (SB30B_0-6)					Prepared & Analyzed: 06/29/2023				
% Solids		79.4	0.100	%		80.1			0.822	20	

Batch BF31936 - % Solids Prep

Duplicate (BF31936-DUP1)	Duplicate	*Source sample: 23F1482-15 (Duplicate)					Prepared & Analyzed: 06/29/2023				
% Solids		96.3	0.100	%		96.2			0.157	20	

Batch BG30181 - % Solids Prep

Duplicate (BG30181-DUP1)	Duplicate	*Source sample: 23F2020-20 (Duplicate)					Prepared & Analyzed: 07/05/2023				
% Solids		96.5	0.100	%		96.5			0.0184	20	

Batch BG30651 - % Solids Prep

Duplicate (BG30651-DUP1)	Duplicate	*Source sample: 23G0543-01 (Duplicate)					Prepared & Analyzed: 07/13/2023				
% Solids		85.2	0.100	%		87.1			2.14	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.



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





Field Chain-of-Custody Record

YORK Analytical Laboratories, Inc. (YORK)'s Standard Terms & Conditions are listed on the back side of this document. This document serves as your written authorization for YORK to proceed with the analyses requested below. Your signature binds you to YORK's Standard Terms & Conditions.

120 Research Drive Stratford, CT 06615 132-02 89th Ave Queens, NY 11418 58 Church Hill Rd. #2 Newtown, CT 06470 clientservices@yorklab.com www.yorklab.com 800-306-YORK

YOUR Information		Report To:		Invoice To:		YOUR Project Number		Turn-Around Time	
Company:	LANGAN DPC	Company:		Company:		170766301		RUSH - Next Day	
Address:	360 West 31st St.	Address:		Address:		YOUR Project Name		RUSH - Two Day	
	8th Floor, New York, NY 10001			Phone:		3 North Castle Drive		RUSH - Three Day	
Phone:	212-479-5400	Phone:		Contact:		YOUR PO#:		RUSH - Four Day	
Contact:	Stuart Knapp	Contact:		E-mail:				RUSH - Five Day	
E-mail:	sknapp@langan.com	E-mail:						Standard (6-9 Day)	

Matrix Codes		Samples From		Report / EDD Type (circle selections)		YORK Reg. Comp.	
S - soil / solid	New York	Summary Report	CT RCP	EQUS (Standard)	Compared to the following Regulation(s): (please fill in)		PFAS Standard is 7-10 Days
GW - groundwater	New Jersey	QA Report	CT RCP DQADUE	NYSDEC EQUS			
DW - drinking water	Connecticut	CMDP	NJDEP Reduced	NJDKQP			
WW - wastewater	Pennsylvania	Standard Excel EDD	Deliverables	NJDEP SRP HazSite			
O - Oil	Other:	NY ASP-B Package	Other:				

Samples Collected by: (print AND sign your name)				Analyses Requested		Container Type		No.
Sample Identification				Date/Time Sampled				
SB13A-0-6	Soil			06/21/23	10 ⁰⁰	Ar Senic	402	1
SB13A-6-12					10 ⁰⁵			
SB13A-12-18					10 ¹⁰			
SB13A-18-24		* HOLD *			10 ¹⁵			
SB13B-0-6					09 ⁰⁰			
SB13B-6-12					09 ⁰⁵			
SB13B-12-18					09 ¹⁰			
SB13B-18-24		* HOLD *			09 ¹⁵			
SB14A-0-6					12 ⁰⁰			
SB14A-6-12		* HOLD *			12 ⁰⁵			

Comments: Please see: data management @ langan.com and ekakolewski@langan.com		Preservation: (check all that apply)		Special Instruction	
		HCl / MeOH HNO3 H2SO4 NaOH		Field Filtered	
		ZnAc Ascorbic Acid Other:		Lab to Filter	
1. Samples Relinquished by / Company		Date/Time		Date/Time	
Andrew Ashley/Langan		06/21/23 17:00		06/21/23 18:35	
2. Samples Relinquished by / Company		Date/Time		Date/Time	
Andrew Ashley/Langan		06/21/23 17:00		06/21/23 18:35	
3. Samples Relinquished by / Company		Date/Time		Date/Time	
Andrew Ashley/Langan		06/21/23 17:00		06/21/23 18:35	
4. Samples Relinquished by / Company		Date/Time		Date/Time	
Andrew Ashley/Langan		06/21/23 17:00		06/21/23 18:35	



Field Chain-of-Custody Record

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YORK Project No.

23F1372

Page 2 of 4

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.yorklab.com 800-306-YORK

YOUR INFORMATION		Report To:		Invoice To:		YOUR Project Number		Turn-Around Time	
Company:	LANGAN DRC	Company:		Company:		170766301		RUSH - Next Day	
Address:	360 West 31st St.	Address:		Address:		YOUR Project Name		RUSH - Two Day	
	8th Floor New York, NY					3 North Castle Drive		RUSH - Three Day	
Phone:	212-479-5400	Phone:		Phone:		YOUR PO#:		RUSH - Four Day	
Contact:	Stuart Knoop	Contact:		Contact:				RUSH - Five Day	
E-mail:	sknoop@langan.com	E-mail:		E-mail:				Standard (6-9 Day) <input checked="" type="checkbox"/>	
Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.		Matrix Codes		Samples From		Report / EDD Type (circle selections)		YORK Reg. Comp.	
Samples Collected by: (print AND sign your name) Andrew Ashley		S - soil / solid		New York		Summary Report		Compared to the following Regulation(s): (please fill in)	
		GW - groundwater		New Jersey		QA Report			
		DW - drinking water		Connecticut		CMDP			
		WW - wastewater		Pennsylvania		Standard Excel EDD			
		O - Oil		Other:		NJDEP Reduced Deliverables			
		Other:				NJDEP SRP HazSite			
Sample Identification		Sample Matrix		Date/Time Sampled		Analyses Requested		Container Type	
SB14A-12-18 * HOLD *		Soil		6/21/23 12:10		Arsenic		No.	
SB14A-18-24 * HOLD *				12:15					
SB14B-0-6				12:40					
SB14B-6-12				12:45					
SB14B-12-18				12:50					
SB14C-0-6				13:00					
SB14C-6-12				13:05					
SB14C-12-18				13:10					
SB14C-18-24				13:15					
Comments: cc: datamanagement@langan.com and e.kaholewski@langan.com + f.pozier@langan.com		1. Samples Relinquished by / Company		Date/Time		Preservation: (check all that apply)		Special Instruction	
Andrew Ashley/Langan		6/21/23 17:00		6/21/23 4pm		HCl MeOH HNO3 H2SO4 NaOH		Field Filtered	
2. Samples Received by / Company		Date/Time		Date/Time		ZnAc Ascorbic Acid Other:		Lab to Filter	
3. Samples Relinquished by / Company		Date/Time		Date/Time		2. Samples Relinquished by / Company		Date/Time	
4. Samples Relinquished by / Company		Date/Time		Date/Time		3. Samples Received by / Company		Date/Time	
						Samples Relinquished by LAB by		Temperature	
						6/21/23 1835		5.7 Degrees C	



Field Chain-of-Custody Record

YORK Project No.
23P1372

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120 Research Drive Stratford, CT 06615 132-02 89th Ave Queens, NY 11418 56 Church Hill Rd. #2 Newtown, CT 06470 clientservices@yorklab.com 800-306-YORK		www.yorklab.com	
YOUR Information		Report To:	
Company: Langan	Company: York	Company: York	
Address: NYC	Address: York	Address: York	
Phone: 212-479-5400	Phone: York	Phone: York	
Contact: Stuart Knoopp	Contact: York	Contact: York	
E-mail: sknoopp@langan.com	E-mail: York	E-mail: York	
YOUR Project Number		Turn-Around Time	
170766301		RUSH - Next Day	
YOUR Project Name		RUSH - Two Day	
3 North Castle Dr		RUSH - Three Day	
YOUR PO#:		RUSH - Four Day	
		RUSH - Five Day	
		Standard (6-9 Day) 2	
		PFAS Standard is 7-10 Days	

Matrix Codes		Samples From		Report / EDD Type (circle selections)		YORK Reg. Comp.	
S - soil / solid		New York		Summary Report		Compared to the following Regulation(s): (please fill in)	
GW - groundwater		New Jersey		QA Report			
DW - drinking water		Connecticut		CMDP			
WW - wastewater		Pennsylvania		Standard Excel EDD			
O - Oil		Other:		NY ASP B Package			
Sample Matrix		Date/Time Sampled		Analyses Requested		Container Type	
Soil		6/21/23		Arsenic		402	
X HOLD		11:05					
X HOLD		11:10					
X HOLD		11:10					
X HOLD		15:10					
X HOLD		15:20					
X HOLD		15:10					
X HOLD		15:10					
X HOLD		15:00					
X HOLD		15:03					

Comments: Cc Chaholewski@langan.com + data@management@langan.com Frazier@langan.com		Preservation: (check all that apply) HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other: ___	
1. Samples Relinquished by / Company Andrew Ashlaw/Langan 6/21/23 17		2. Samples Relinquished by / Company K. B. York 6/21/23 1835	
3. Samples Received by / Company Date/Time		3. Samples Received by / Company Date/Time	
4. Samples Relinquished by / Company Date/Time		4. Samples Received by / Company Date/Time	
5. Samples Relinquished by / Company Date/Time		5. Samples Received by / Company Date/Time	

