Groundwater & Environmental Services, Inc.

415 Lawrence Bell Drive, Suite 6
Williamsville, NY 14221

T. 800.287.7857

January 25, 2019

Ms. Sarah Saucier
NYSDEC Division of Environmental Remediation
625 Broadway, 12th Floor Remedial Bureau E, Section A
Albany, New York 12233-5060

Re: Site Characterization Report
Buffalo Lakeside Commercial Park Parcel 5
Laborers Way and Ship Canal Parkway
Buffalo, New York 14218
NYSDEC Site No. 915322

Dear Ms. Saucier:

Groundwater & Environmental Services, Inc. (GES) has prepared the enclosed Site Characterization Report for the Buffalo Lakeside Commercial Park Parcel 5 (the Site), located in Buffalo, New York. The purpose of the activities conducted at the Site was to investigate subsurface contamination. The work was completed in accordance with the call-out issued on August 27, 2018, by New York State Department of Environmental Conservation (NYSDEC).

If you have any questions or comments, please do not hesitate to contact GES at your convenience.

Sincerely,

Digitally signed by Eric D Popken
Date: 2019.01.25 14:53:51 -05'00'

Eric D. Popken, PG
Senior Project Manager

Enclosure

New York State Department of Environmental Conservation, Division of Environmental Remediation

Site Characterization Report

Buffalo Lakeside Commercial Park Parcel 5

Laborers Way and Ship Canal Parkway, Buffalo, NY 14218

NYSDEC Site No. 915322

January 25, 2019

Site Characterization Report

Buffalo Lakeside Commercial Park Parcel 5
Laborers Way and Ship Canal Parkway
Buffalo, NY 14218

Prepared for:
New York State Department of Environmental Conservation, Division of Environmental Remediation
625 Broadway, 12th Floor Remedial Bureau E, Section A
Albany, NY 1223-5060

Prepared by:
Groundwater & Environmental Services, Inc.
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TEL: 800-287-7857
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GES Project:
0901752

Date:
January 25, 2019

Digitally signed by Jennifer Clay
Date: 2019.01.25 15:18:26 -05'00'

Jennifer Clay
Staff Geologist

Digitally signed by Eric D Popken
Date: 2019.01.25 14:54:13 -05'00'

Eric D. Popken, PG
Senior Project Manager

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Acronyms

bgs	Below ground surface
BLCP	Buffalo Lakeside Commercial Park
BUDC	Buffalo Urban Development Corporation
Cascade	Cascade Drilling, L.P.
CP-51	Commissioners Policy-51
DO	Dissolved oxygen
DOT	Department of Transportation
DUSR	Data Usability Summary Report
ESG	Environmental Service Group, Inc.
ESRD	Environmental Site Remediation Database
eV	electron volts
GES	Groundwater & Environmental Services, Inc.
GWQS	Ambient groundwater quality standards and guidance values
IDW	Investigation derived waste
N&C	Nussbaumer & Clarke, Inc.
6 NYCRR	Title 6 Official Compilation of New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
ORP	Oxidation reduction potential
PCBs	Polychlorinated biphenyls
PID	Photoionization detector
ppm	Parts per million
PVC	Polyvinyl chloride
SCOs	Soil cleanup objectives
Site	Buffalo Lakeside Commercial Park Parcel 5
SVOC	Semi-volatile organic compound
SWQS	Ambient surface water quality standards and guidance values
TestAmerica	TestAmerica Laboratories, Inc.
TOGS 1.1.1	Technical and Operational Guidance Series 1.1.1
USEPA	United States Environmental Protection Agency
VOC	Volatile organic compound

1 Introduction

This report has been prepared by Groundwater & Environmental Services, Inc. (GES) to document the site characterization field activities conducted at Buffalo Lakeside Commercial Park Parcel 5, located in the northwest quadrant of Laborers Way and Ship Canal Parkway in Buffalo, New York (the Site). The purpose of the activities conducted was to characterize and delineate subsurface contamination at the Site. The work was completed in accordance with the call-out issued on August 27, 2018, by New York State Department of Environmental Conservation (NYSDEC). A site location map has been included as **Figure 1**. A site map illustrating the site layout has been included as **Figure 2.**

2 Site History

Information on the site history was obtained by GES from NYSDEC Environmental Site Remediation Database (ESRD) and has been summarized below, an environmental site investigation was completed in 2006.

The Site is located at the Buffalo Lakeside Commerce Park (BCLP) at the southern edge of the City of Buffalo. The Site is a 51-acre, vacant parcel located on the northwestern corner of the BLCP. The site is bordered to the west by New York State Route 5, to the north by Tifft Street, to the east by Ship Canal Parkway, and to the south by Laborers Way. The current zoning for the Site is light industrial/commercial use by Buffalo Urban Development Corporation (BUDC), owner of the BLCP. The primary features of the Site consists of vacant undeveloped land and is generally covered with brush vegetation, as well as areas of slag and gravel. The northern portion of the Site is covered with wetland type vegetation and ponded water. Historically, the Site has been used for slag dumping and a railroad corridor. Historic adjacent and nearby sites included rail yards and heavy industrial sites, including the Hanna Furnace Corporation site located south of the Site. Site geology can be characterized as non-native slag fill materials overlying silty clay. The fill materials primarily consist of slag (light gray, dark gray, black/blue and/or gray/blue) at depths ranging from approximately ground surface to 18 feet below ground surface (bgs) with the majority of the fill ending at 10 feet bgs. Groundwater was encountered on-site from approximately 1 to 12 feet bgs and flows to the southwest. The bedrock at the site is the Levanna Shale Member of the Middle Devonian Age Skaneateles Formation. The Levanna shale is described as a fissile shale, dark gray or black near the bottom and lighter gray in color near the top. Some calcareous (limey) beds and some pyrite concretions are present within this shale member. The Levanna is reportedly 45 feet thick and typically produces low quantities of groundwater in the range of 10 to 15 gallons per minute.

During the 2006 site investigation the following contaminants of concern were identified:

- Soil Samples – barium, copper, lead, manganese, mercury, selenium, and zinc;
- Groundwater – arsenic, barium, beryllium, iron, lead, manganese, and selenium;
- Elevated pH readings were also encountered in soil and groundwater.

3 Site Characterization Activities

3.1 Soil Borings

GES personnel over saw the advancement of 50 soil borings (SB-101 through SB-150) performed by Cascade Drilling, L.P. (Cascade) of Flint, Michigan. Soil borings were advanced using a Sonic drill rig due to the fill material at the Site which is dominated by slag debris.

Soil borings were advanced to a depth of 20 feet bgs. Soil samples were collected in 10-foot long sonic tubes for logging of color, moisture content, grain size, and visual evidence of impacts. Samples were collected at intervals, for each soil type or roughly 2 feet in length, and placed in a re-sealable plastic bag, then screened for volatile organic vapors. GES personnel used a MiniRae 3000 photoionization detector (PID) with a 10.6 electronvolt (eV) lamp to collect readings. The PID, per manufacturer specifications, is able to detect volatile organic compounds (VOCs) as low as 0.1 parts per million (ppm). Readings were recorded in ppm on the bore logs. Bore logs are included in **Appendix A**.

In general, soil samples were collected from the surface ranging from 0 to 2 feet bgs, fill material ranging from 2 to 14 feet bgs, and native sedimentary sample ranging from 14 to 20 feet bgs; however some soil borings (SB-105, SB-110, SB-117, SB-121, SB-133, SB-136, SB-139 and SB-148) collected an additional soil sample due to signs of impacts, such as staining or unidentified material. Samples were collected in laboratory supplied bottleware and submitted to TestAmerica Laboratories, Inc. (TestAmerica) of Amherst, New York, for analysis of VOCs via United States Environmental Protection Agency (USEPA) Method 8260C, semi-volatile organic compounds (SVOCs) via USEPA Method 8270D, organochlorine pesticides via USEPA Method 8081B, polychlorinated biphenyls (PCBs) via USEPA Method 8082A, metals including mercury via USEPA Method 6010C/7471B, and general chemistry parameters for total cyanide, pH, and temperature.

Soil boring locations are shown on **Figure 3**.

3.2 Monitoring Well Installation

Upon completion of the 50 soil borings, from October 22 through 24, 2018, 10 locations (MW-101, MW-105, MW-108, MW-120, MW-123, MW-126, MW-128, MW-131, MW-144, and MW-148) were chosen to be converted to monitoring wells and were installed under the guidance of GES personnel. Wells were installed to a depth of 15 feet bgs, with the exception of MW-126 which was installed to a depth of 14 feet bgs. Monitoring wells were constructed of 2-inch diameter Schedule 40 polyvinyl chloride (PVC) well casing and 0.010-inch slot screens. The table below summarizes monitoring well construction.

Table 3.2 – Monitoring Well Construction Summary

Monitoring Well ID	Total Installation Depth (feet bg)	Screened Interval (feet bg)
MW-101	15	5 - 15
MW-105	15	5 – 15
MW-108	15	5 – 15
MW-120	15	5 – 15
MW-123	15	5 – 15
MW-126	14	4 – 14
MW-128	15	5 – 15
MW-131	15	5 – 15
MW-144	15	5 – 15
MW-148	15	5 – 15

Each well was constructed with type 20 to 40 mesh filter sand pack to 1 foot above screen followed by at least 2 feet of medium bentonite chips. The top foot of the wells was backfilled with grout and finished with a 3-foot tall steel protective casing in an approximately 1.5-foot diameter concrete pad.

Monitoring well locations can been seen on **Figure 2** and monitoring well construction is located in **Appendix A**.

3.3 Monitoring Well Development

On October 24, 2018, GES personnel oversaw Cascade develop the newly installed monitoring wells. Development was performed through mechanical surging and bailing using a submersible pump. Monitoring wells were developed until visual clarity was achieved.

Development water was collected and stored onsite in a 275-gallon tote.

3.4 Monitoring Well Gauging and Sampling

On October 29 and 30, 2018, GES personnel performed site-wide gauging and sampling. All newly installed site monitoring wells were gauged followed by low flow purging using a peristaltic pump until groundwater parameters (temperature, pH, specific conductivity, oxidation reduction potential (ORP), dissolved oxygen (DO) and turbidity). Samples were then immediately collected in laboratory supplied bottleware to be submitted for analysis. Samples were placed on ice and submitted to TestAmerica for laboratory analysis of VOCs via USEPA Method 8260C, SVOCs via USEPA Method 8270D, organochlorine pesticides via USEPA Method 8081B, PCBs via USEPA Method 8082A, metals including mercury via USEPA Method 6010C/7471B, and general chemistry parameters for total cyanide, pH, and temperature. Groundwater contours are shown on **Figure 4**.

3.5 Surface Water Sampling

On November 9, 2018, GES personnel performed surface water sampling. Samples were collected using a peristaltic pump and tubing due to the shallow nature of the surface water, samples were then placed in laboratory supplied bottleware to be submitted for analysis. Samples were placed on ice and submitted to TestAmerica for laboratory analysis of VOCs via USEPA Method 8260C, SVOCs via USEPA Method 8270D, organochlorine pesticides via USEPA Method 8081B, PCBs via USEPA Method 8082A, metals including mercury via USEPA Method 6010C/7471B, and general chemistry parameters for total cyanide, pH, and temperature. Sample locations are shown on **Figure 2**.

3.6 Site Survey Activities

Upon completion of all field activities a survey was performed by Nussbaumer & Clarke, Inc. (N&C) of Buffalo, New York. The newly installed monitoring wells were tied into existing features on-site including existing temporary monitoring wells, ground surface and visible utilities.

3.7 Investigation Derived Waste

Investigation derived waste (IDW) in the form of soil cuttings and decontamination/purge water were generated during the subsurface investigation activities conducted in fall 2018.

3.7.1 Soil

The soil IDW was staged in Department of Transportation (DOT)-approved 55-gallon steel drums and labeled. Based on clusters of drums, 3 composite samples of the soil cuttings were collected for waste characterization and to establish a disposal profile. Analytical results of waste sampling are determined to be non-hazardous and will be transported by Environmental Service Group, Inc. (ESG) located in Tonawanda, New York to American Recyclers Company located in Tonawanda, New York for disposal.

3.7.2 Purge and Decontamination Water

Decontamination and purge water from field activities was stored in 2 (275-gallon) totes and staged onsite. The water was sampled from each tote for waste characterization and to establish a disposal profile. Analytical results of waste sampling are determined to be non-hazardous and will be transported by ESG to American Recyclers Company located in Tonawanda, New York for disposal.

3.8 Laboratory Sample Analysis: Quality Assurance/Quality Control

TestAmerica in Amherst, New York and North Canton, Ohio analyzed the groundwater samples collected at the Site. TestAmerica provided full category B deliverables with laboratory analytical data and are included as **Appendix B**. Additionally, a Quality Assessment Data Usability Summary Report (DUSR) was performed by RemVer of Colchester, Connecticut and is included

as **Appendix C**. RemVer found all results included in the laboratory analytical reports to be acceptable for use.

Care was taken during all aspects of the sample collection to ensure that high quality data was obtained. Duplicate (DUP) samples, matrix spike, and matrix spike duplicate (MS/MSD) samples were collected for every twenty (20) field samples and submitted for analysis to assure quality of both the sample collection procedure and the laboratory preparation/analytical method. All samples were submitted to TestAmerica under a chain of custody.

4 Supplemental Site Investigation Results

4.1 Soil Analytical Results

Soil analytical results were compared with Title 6 Official Compilation of New York Codes, Rules and Regulations (6 NYCRR) Part 375 Environmental Remediation Program Table 375-6.8 Unrestricted and Restricted Commercial Use Soil Cleanup Objectives and NYSDEC Commissioner Policy-15 (CP-51) Supplemental Soil Cleanup Objectives (SCOs). Exceedances are summarized as follows:

- VOC concentrations exceeded Unrestricted SCOs in thirty-four (34) sample locations:
  - One or more VOC concentration exceeded in SB-101-B, SB-105-C, SB-106-C, SB-108-C, SB-110-D, SB-112-C, SB-117-C, SB-121-D, SB-122-A, SB-122-C, SB-124-B, SB-125-C, SB-126-C, SB-127-C, SB-128-C, SB-131-C, SB-132-C, SB-133-C, SB-133-D, SB-134-C, SB-136-C, SB-137-C, SB-138-C, SB-139-C, SB-140-B, SB-140-C, SB-141-C, SB-142-C, SB-143-C, SB-144-C, SB-145-C, SB-146-C, SB-147-C and SB-150-B.
- VOC concentrations did not exceed Commercial SCOs in any sample collected.
- SVOC concentrations exceeded Unrestricted SCOs in nineteen (19) sample locations.
  - One or more SVOC concentration exceeded in SB-103-A, SB-105-A, SB-108-A, SB-109-A, SB-109-B, SB-111-A, SB-112-A, SB-113-A, SB-116-A, SB-118-A, SB-119-A, SB-125-A, SB-126-A, SB-128-A, SB-132-A, SB-135-A, SB-141-A, SB-143-C and SB-149-A.
- SVOC concentrations did not exceed Commercial SCOs in any sample locations.
- Pesticide concentrations exceeded Unrestricted SCOs in twenty-seven (27) sample locations.
  - One or more pesticide concentrations exceeded in SB-103-A, SB-108-A, SB-109-A, SB-112-B, SB-116-A, SB-118-A, SB-119-A, SB-122-A, SB-123-A, SB-124-A, SB-125-C, SB-126-B, SB-126-C, SB-127-B, SB-128-C, SB-132-B, SB-133-A, SB-136-A, SB-136-B, SB-136-D, SB-142-A, SB-142-B, SB-143-A, SB-143-C, SB-144-A, SB-145-B and SB-147-A.
- Pesticide concentrations did not exceed Commercial SCOs in any sample collected.
- PCB concentrations exceeded Unrestricted SCOs in four (4) sample locations.
  - SB-126-A, SB-126-B, SB-128-A and SB-135-A.
- PCB concentrations did not exceed Commercial SCOs in any sample collected.

- Metals concentrations exceeded Unrestricted SCOs in all sample locations.
  - Exceedances were in Arsenic, Barium, Beryllium, Cadmium, Copper, Manganese, Nickel, Selenium, and Zinc.
- Metals concentrations exceeded Commercial SCOs in forty-one (41) sample locations.
  - One or more metals concentrations exceeded in SB-103-C, SB-104-B, SB-109-A, SB-109-B, SB-112-A, SB-116-B, SB-117-D, SB-120-B, SB-120-C, SB-123-A, SB-124-A, SB-124-B, SB-125-B, SB-126-A, SB-127-A, SB-128-A, SB-129-A, SB-129-B, SB-130-B, SB-131-A, SB-132-B, SB-133-A, SB-133-B, SB-134-B, SB-136-A, SB-137-A, SB-137-B, SB-138-A, SB-138-B, SB-139-A, SB-139-B, SB-142-A, SB-143-B, SB-145-B, SB-146-A, SB-146-B, SB-147-B, SB-148-A, SB-148-B, SB-148-D and SB-150-B.
- Cyanide concentrations exceeded Unrestricted/Commercial (same value) SCOs in eight (8) sample locations.
  - Cyanide concentration exceeded in SB-102-A, SB-103-A, SB-108-A, SB-109-B, SB-111-B, SB-130-A, SB-139-A, SB-148-B.

Details of the soil analytical data are summarized in **Table 1**. Analytical reports are included in **Appendix B**.

4.2 Groundwater Analytical Results

Groundwater analytical results were compared with NYSDEC Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1) Table 1 Ambient Groundwater Quality Standards and Guidance Values (GWQS). Exceedances are summarized as follows:

- VOC concentrations exceeded TOGS 1.1.1 GWQS in one (1) sample location.
  - VOC concentration exceeded in MW-108.
- SVOC concentrations exceeded TOGS 1.1.1 GWQS in eight (8) sample locations.
  - SVOC concentration exceeded MW-101, MW-105, MW-108, MW-120, MW-123, MW-126, MW-128 and MW-144.
- Pesticide concentrations exceeded TOGS 1.1.1 GWQS in one (1) sample location.
  - Pesticide concentration exceeded in MW-105.
- PCB concentrations did not exceeded TOGS 1.1.1 GWQS in any sample location.
- Metals concentrations exceeded TOGS 1.1.1 GWQS in all sample locations.
  - Exceeded analytes are Chromium, Iron, Selenium and Sodium.
- Cyanide concentrations did not exceeded TOGS 1.1.1 GWQS in any sample location.

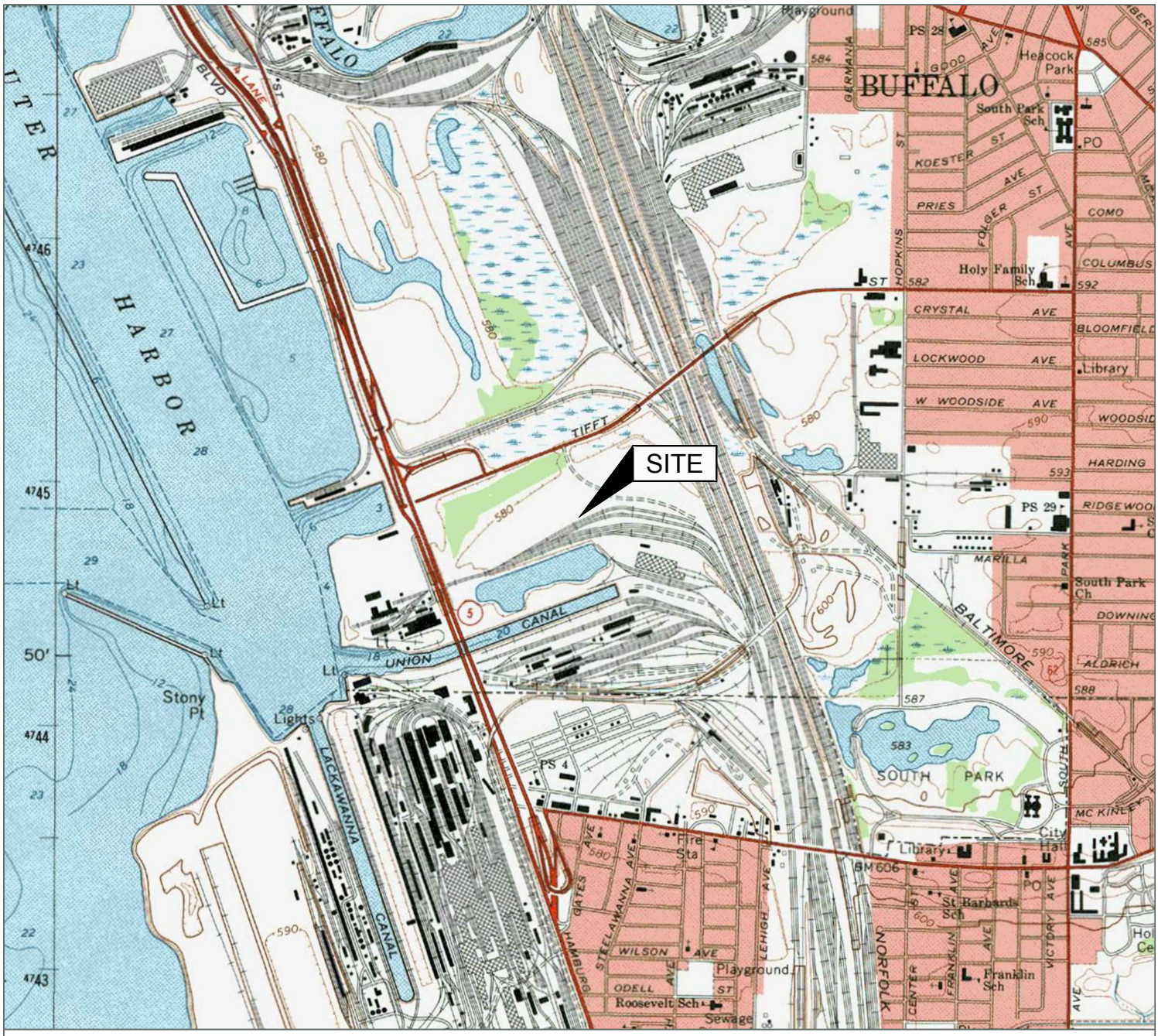
Details of the groundwater analytical data are summarized in **Table 2**. Analytical reports are included in **Appendix B**.

4.3 Surface Water Analytical Results

Surface water analytical results were compared with NYSDEC TOGS 1.1.1 Table 1 Ambient Surface Water Quality Standards and Guidance Values (SWQS). Concentrations did not exceeded TOGS 1.1.1 SWQS in any sample location, with the exception of the duplicate sample (DUP-110918), this sample was collected from the SW-2 location shown on **Figure 2**. The value was below the reporting limit, but above the minimum detection limit and is approximate.

Details of the surface water analytical data are summarized in **Table 2**. Analytical reports are included in **Appendix B**.

Figures



Source:
USGS 7.5 Minute Series
Topographic Quadrangle, 1965
Buffalo SE, New York
Contour Interval = 10'

Site Location Map

NYSDEC
Buffalo Lakeside Commercial Park-Parcel 5
Laborers Way and Ship Canal Parkway
Buffalo, New York

Drawn
W.G.S.
Designed
J.K.C.
Approved
E.P.

Date
10/16/18
Figure
1

Scale In Feet
0 2000

Groundwater & Environmental Services, Inc.

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LEGEND

- PROPERTY BOUNDARY
- TREE LINE
- UTILITY MANHOLE
- FIRE HYDRANT
- LIGHT POLE
- UTILITY POLE
- CATCH BASIN
- MONITORING WELL
- SW — SURFACE WATER SAMPLE
- UE — UNDERGROUND ELECTRIC LINE
- ST — UNDERGROUND STORM SEWER LINE
- G — UNDERGROUND GAS LINE

Site Map

NYSDEC
Buffalo Lakeside Commercial Park-Parcel 5
Laborers Way and Ship Canal Parkway
Buffalo, New York

Drawn
W.G.S.
Designed
J.K.C.
Approved
E.P.

Date
1/24/19
Figure
2

Scale In Feet
0 200

Groundwater & Environmental Services, Inc.

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LEGEND

- PROPERTY BOUNDARY
- TREE LINE
- UTILITY MANHOLE
- FIRE HYDRANT
- LIGHT POLE
- UTILITY POLE
- CATCH BASIN
- MONITORING WELL
- UE — UNDERGROUND ELECTRIC LINE
- ST — UNDERGROUND STORM SEWER LINE
- G — UNDERGROUND GAS LINE
- SOIL BORING
- GEOPROBE BORING

Soil Sample Location Map

NYSDEC
Buffalo Lakeside Commercial Park-Parcel 5
Laborers Way and Ship Canal Parkway
Buffalo, New York

Drawn: W.G.S.
Designed: J.K.C.
Approved: E.P.
Date: 1/23/19
Figure: 3

Scale In Feet
0 200

Groundwater & Environmental Services, Inc.

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LEGEND

- PROPERTY BOUNDARY
- TREE LINE
- UTILITY MANHOLE
- FIRE HYDRANT
- LIGHT POLE
- UTILITY POLE
- CATCH BASIN
- MONITORING WELL
- (576.42) GROUNDWATER ELEVATION (feet)
- GROUNDWATER CONTOUR (feet msl)

Groundwater Contour Map
October 29-30, 2018

NYSDEC
Buffalo Lakeside Commercial Park-Parcel 5
Laborers Way and Ship Canal Parkway
Buffalo, New York

Drawn
W.G.S.
Designed
J.K.C.
Approved
E.P.

Date
12/26/18
Figure
4

Scale In Feet
0 200

Groundwater & Environmental Services, Inc.

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Tables

Table 1
Soil Analytical Data

Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO	SB-101-A	SB-101-B	SB-101-C	SB-102-A	SB-102-B	SB-102-C	SB-103-A	SB-103-B	SB-103-C	SB-104-A	SB-104-B	SB-104-C
Start Depth (ft bgs)				**0**	**8**	**12**	**0**	**4**	**12**	**0**	**4**	**12**	**0**	**4**	**14**
End Depth (ft bgs)				**1**	**10**	**14**	**1**	**6**	**14**	**1**	**6**	**14**	**1**	**6**	**16**
Sample Date				**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**
SW6010C															
Aluminum	mg/kg	-	-	20400 J	17900 J	14100 J	19800 J	30000 J	14700 J	20700 J	47100 J	14600 J	14100 J	23400 J	12200 J
Antimony	mg/kg	-	-	< 16.9 UJ	< 22.5 UJ	< 18.4 UJ	< 18.5 UJ	< 18.3 UJ	< 17.6 UJ	< 20.1 UJ	< 18.2 UJ	< 17.5 UJ	< 18.4 UJ	3.1 UJ	< 18.4 UJ
Arsenic	mg/kg	**13**	16	6.5 J	2.1 UJ	8.3 J	6.9 J	9.3 J	8.4 J	11.1 J	1.0 UJ	**16.8 J**	6.3 J	**22.4 J**	3.7 J
Barium	mg/kg	**350**	400	161 J	157 J	84.9 J	157 J	247 J	90.0 J	156 J	347 J	83.9 J	89.5 J	258 J	64.4 J
Beryllium	mg/kg	**7.2**	590	3.4 J	2.6 J	0.68 J	3.2 J	5.0 J	0.68 J	3.4 J	**9.0 J**	0.74 J	0.72 J	3.5 J	0.57 J
Cadmium	mg/kg	**2.5**	9.3	0.78 J	0.36 J	0.21 UJ	0.58 J	0.095 UJ	0.20 UJ	1.6 J	< 0.24 UJ	0.20 UJ	0.30 J	0.34 UJ	0.17 UJ
Calcium	mg/kg	-	-	148000 J	101000 J	29700 J	106000 J	221000 J	30700 J	101000 J	245000 J	27100 J	20800 J	165000 J	7720 J
Chromium	mg/kg	-	-	13.3 J	5.5 J	19.7 J	8.1 J	11.0 J	20.2 J	19.5 J	0.65 J	19.8 J	18.5 J	15.5 J	15.5 J
Cobalt	mg/kg	-	-	3.7 J	1.3 J	12.5 J	3.8 J	3.8 J	13.1 J	6.1 J	0.81 J	13.5 J	10.1 J	11.7 J	10.6 J
Copper	mg/kg	**50**	270	20.2 J	11.0 J	25.0 J	18.5 J	8.2 J	27.0 J	**107 J**	< 6.1 UJ	27.1 J	23.8 J	19.1 J	20.3 J
Iron	mg/kg	-	-	31200 J	7290 J	22400 J	51300 J	39500 J	22800 J	49200 J	3650 J	28000 J	21700 J	142000 J	28100 J
Lead	mg/kg	**63**	1000	62.4 J	6.2 J	13.0 J	52.5 J	< 1.2 UJ	12.5 J	**127 J**	< 6.1 UJ	15.5 J	23.4 J	< 5.8 UJ	12.5 J
Magnesium	mg/kg	-	-	11500 J	4040 J	11800 J	9950 J	4580 J	11300 J	3510 J	4850 J	10700 J	8790 J	3840 J	4650 J
Manganese	mg/kg	**1600**	10000	1120 J	779 J	364 J	1120 J	1200 J	373 J	1510 J	428 J	351 J	333 J	**2600 J**	513 J
Nickel	mg/kg	**30**	310	12.2 J	5.4 UJ	**32.1 J**	11.0 J	9.8 J	**32.6 J**	22.0 J	0.41 UJ	**34.9 J**	26.8 J	**32.2 J**	25.7 J
Potassium	mg/kg	-	-	1050 J	1300 J	3060 J	1390 J	831 J	3120 J	1220 J	528 J	2820 J	1900 J	907 J	1410 J
Selenium	mg/kg	**3.9**	1500	**4.1 UJ**	0.74 UJ	< 4.9 UJ	1.7 UJ	**5.2 J**	< 4.7 UJ	2.5 UJ	**7.0 J**	< 4.7 UJ	< 4.9 UJ	3.7 UJ	< 4.9 UJ
Silver	mg/kg	2	1500	< 0.68 UJ	< 0.90 UJ	< 0.74 UJ	< 0.74 UJ	< 0.73 UJ	< 0.70 UJ	< 0.80 UJ	< 0.73 UJ	< 0.70 UJ	< 0.74 UJ	< 3.5 UJ	< 0.74 UJ
Sodium	mg/kg	-	-	304 J	330 J	137 UJ	323 J	386 J	127 UJ	253 J	260 UJ	118 UJ	102 UJ	455 J	74.7 UJ
Thallium	mg/kg	-	-	< 6.8 UJ	< 9.0 UJ	< 7.4 UJ	< 7.4 UJ	< 7.3 UJ	< 7.0 UJ	< 8.0 UJ	< 7.3 UJ	< 7.0 UJ	< 7.4 UJ	< 6.9 UJ	< 7.4 UJ
Vanadium	mg/kg	-	-	11.3 J	11.6 J	26.3 J	21.7 J	20.5 J	26.8 J	13.6 J	1.8 J	28.7 J	27.6 J	53.2 J	24.8 J
Zinc	mg/kg	**109**	10000	**168 J**	50.3 J	62.3 J	**168 J**	< 2.4 UJ	62.8 J	**287 J**	< 2.4 UJ	63.4 J	85.6 J	1.3 UJ	48.3 J
SW7471B															
Mercury	mg/kg	**0.81**	2.8	0.044	< 0.030 U	< 0.026 U	0.041	< 0.025 U	0.019 UJ	0.094	< 0.023 U	0.014 UJ	0.024	< 0.023 U	0.019 UJ

Analyte	SB-105-A	SB-105-B	SB-105-C	SB-105-D	SB-106-A	SB-106-B	SB-106-C	SB-107-A	SB-107-B	SB-107-C
Start Depth (ft bgs)	**0**	**4**	**10**	**12**	**0**	**4**	**14**	**0**	**6**	**13**
End Depth (ft bgs)	**1**	**6**	**12**	**14**	**1**	**8**	**16**	**2**	**8**	**18**
Sample Date	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/10/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**
SW6010C										
Aluminum	24600 J	43700 J	29100 J	14500 J	28100 J	43100 J	16500 J	10600 J	40800 J	11000 J
Antimony	< 18.6 UJ	< 92.4 UJ	< 49.4 UJ	< 19.2 UJ	< 18.9 UJ	< 19.5 UJ	< 31.3 UJ	< 17.7 UJ	< 89.6 UJ	< 17.7 UJ
Arsenic	10.1 J	5.2 UJ	9.7 J	2.6 J	7.8 J	4.8 J	5.0 J	4.9	4.1	7.3
Barium	195 J	298 J	138 J	62.5 J	184 J	263 J	168 J	80.0 J	259 J	57.8 J
Beryllium	3.6 J	**8.3 J**	0.99 J	0.40 J	2.9 J	**7.6 J**	1.7 J	1.3	**7.6**	0.53
Cadmium	0.86 J	< 1.2 UJ	0.45 UJ	0.19 UJ	0.33 J	0.051 UJ	0.47 J	0.66	< 1.2	0.21
Calcium	166000 J	215000 J	7730 J	3050 J	85800 J	225000 J	51400 UJ	57600 J B	201000 J B	27000 J B
Chromium	11.8 J	< 3.1 UJ	28.6 J	14.1 J	14.4 J	2.4 UJ	10.2 J	12.4 J	2.4 UJ	15.4 J
Cobalt	5.3 J	2.0 J	11.2 J	4.9 J	9.9 J	2.1 J	3.9 J	4.7	1.7	11.3
Copper	32.5 J	< 6.2 UJ	17.6 J	8.2 J	22.3 J	1.6 UJ	15.5 J	21.1	< 6.0	22.1
Iron	38200 J	16200 J	21100 J	10300 J	21100 J	16000 J	17000 J	21100 J B	17000 J B	22700 J B
Lead	**106 J**	< 6.2 UJ	18.1 J	8.7 J	38.8 J	< 1.3 UJ	16.4 J	61.9	< 6.0	13.0
Magnesium	6370 J	6180 J	4990 J	2820 J	10500 J	7390 J	3360 J	15400 J	6260 J	9780 J
Manganese	1580 J	1430 J	148 J	77.7 J	972 J	972 J	555 UJ	559 J B	1430 J B	388 J B
Nickel	14.5 J	2.1 UJ	26.2 J	12.0 J	23.2 J	2.9 UJ	11.7 J	12.8	2.5	29.0
Potassium	1640 J	985 J	2510 J	1210 J	3800 J	476 J	1910 J	1440 J	824 J	2220 J
Selenium	2.1 UJ	**7.8 UJ**	2.1 UJ	< 5.1 UJ	1.9 UJ	3.3 UJ	1.7 UJ	0.72 UJ	**7.4 UJ**	< 4.7 UJ
Silver	< 0.74 UJ	< 3.7 UJ	< 2.0 UJ	< 0.77 UJ	< 0.75 UJ	< 3.9 UJ	< 1.3 UJ	< 0.71	< 3.6	< 0.71 U
Sodium	302 J	540 UJ	238 UJ	105 UJ	405 J	369 UJ	239 UJ	175	682	104
Thallium	< 7.4 UJ	< 7.4 UJ	< 19.8 UJ	< 7.7 UJ	< 7.5 UJ	< 7.8 UJ	< 12.5 UJ	< 7.1	< 7.2	< 7.1 U
Vanadium	18.1 J	9.4 J	55.9 J	27.6 J	22.3 J	9.2 J	18.7 J	14.6	8.8	20.5
Zinc	**211 J**	< 12.3 UJ	80.6 J	38.3 J	86.5 J	< 13.0 UJ	55.6 J	**167 J**	< 11.9 UJ	56.8 J
SW7471B										
Mercury	0.071	< 0.023 U	0.042 UJ	0.024	0.075	< 0.026 U	0.061	0.047	< 0.023 U	0.011 UJ

Analyte	SB-108-A	SB-108-B	SB-108-C	SB-109-A	SB-109-B	SB-109-C	SB-110-A	SB-110-B	SB-110-C	SB-110-D
Start Depth (ft bgs)	**0**	**8**	**10**	**0**	**4**	**16**	**0**	**4**	**17.5**	**10**
End Depth (ft bgs)	**1**	**10**	**14**	**1**	**6**	**18**	**1**	**6**	**20**	**12.5**
Sample Date	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**
SW6010C										
Aluminum	23000 J	42000 J	18200 J	9920 J	26700 J	5730 J	10100 J	44900 J	11000 J	13100 J
Antimony	< 18.1 UJ	< 17.8 UJ	< 33.4 UJ	< 76.7 UJ	< 19.1 UJ	< 17.5 UJ	< 15.8 UJ	< 88.9 UJ	< 17.8 UJ	< 21.7 UJ
Arsenic	**13.1**	2.0 UJ	7.3	**18.6**	**16.5**	3.5	5.0	4.4 UJ	3.2	3.2
Barium	237 J	159 J	111 J	**451 J**	196 J	34.7 J	71.4 J	331 J	52.7 J	107 J
Beryllium	3.4	**8.0**	1.3	1.2	4.8	0.27	0.77	**8.6**	0.53	1.3
Cadmium	1.9	0.040 UJ	0.64	2.1	**2.9**	0.19 UJ	0.60	< 1.2 U	0.31	0.23 UJ
Calcium	94200 J B	232000 J B	44500 J B	55000 J B	140000 J B	8070 J B	71500 J B	217000 J B	29500 J B	30900 J B
Chromium	19.7 J	1.5 J	23.5 J	38.2 J	27.4 J	7.8 J	16.3 J	2.5 UJ	14.7 J	9.3 J
Cobalt	6.9	1.1	13.4	6.5	7.4	4.5	5.5	1.7	10.7	5.5
Copper	41.9	< 5.9 U	41.4	**109**	39.0	13.1	29.9	< 5.9 U	24.4	12.4
Iron	43900 J B	10500 J B	31600 J B	73300 J B	83700 J B	6520 J B	15100 J B	5500 J B	22300 J B	7660 J B
Lead	**236**	< 5.9 U	40.5	**713**	**344**	6.1	**111**	< 5.9 U	13.4	6.9
Magnesium	8070 J	4160 J	11300 J B	9030 J B	4330 J B	3460 J B	8900 J B	6870 J B	10500 J B	4870 J B
Manganese	1360 J B	775 J B	597 J B	**1930 J B**	1330 J B	93.9 J B	547 J B	**1850 J B**	316 J B	270 J B
Nickel	22.1	1.7 UJ	**36.1**	**33.8**	28.8	12.3	17.1	0.74 UJ	25.3	15.7
Potassium	1390 J	764 J	3540 J	1350 J	2130 J	808 J	1850 J	1580 J	2560 J	1630 J
Selenium	2.5 UJ	2.7 UJ	1.3 UJ	1.9 UJ	2.4 UJ	< 4.7 UJ	< 4.2 UJ	**4.5 UJ**	0.48 UJ	1.2 UJ
Silver	< 0.72 U	< 0.71 U	< 1.3 U	< 3.1 U	< 0.76 U	< 0.70 U	< 0.63 U	< 3.6 U	< 0.71 U	< 0.87 U
Sodium	303	474 UJ	228 UJ	266	399 UJ	61.0 UJ	193	1230	126 UJ	155 UJ
Thallium	< 7.2 U	< 7.1 U	< 13.4 U	< 6.1 U	< 7.6 U	< 7.0 U	< 6.3 U	< 7.1 U	< 7.1 U	< 8.7 U
Vanadium	14.3	7.5	30.5	32.1	18.9	13.8	19.4	9.9	21.1	12.4
Zinc	**381 J**	< 2.4 UJ	**110 J**	**869 J**	**477 J**	29.0 J	**139 J**	< 11.8 UJ	55.9 J	33.4 J
SW7471B										
Mercury	0.083	< 0.023 U	0.031 UJ	0.13	0.079	0.011 UJ	0.22	< 0.022 U	0.011 UJ	0.028

Notes:

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives

\- = no SCO established

NA = not applicable/analyzed

Qualifiers:

U = Analyte analyzed for, but not detected above the sample's reported quantitation limit

J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample

J+ = Sample likely to have a high bias

J- = Sample likely to have a low bias

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.

R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.

B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.

P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).

PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

Soil Sample ID				SB-111-A	SB-111-B	SB-111-C	SB-112-A	SB-112-B	SB-112-C	SB-113-A	SB-113-B	SB-113-C	SB-114-A	SB-114-B	SB-114-C	SB-115-A	SB-115-B	SB-115-C	SB-116-A	SB-116-B	SB-116-C	SB-117-A	SB-117-B	SB-117-C	SB-117-D	SB-118-A	SB-118-B	SB-118-C	SB-119-A	SB-119-B	SB-119-C	SB-120-A	SB-120-B	SB-120-C
Start Depth (ft bgs)				0	6	18	0	8	12	0	6	18	0	8	10	0	7	15	0	5	14	0	4	10	16	0	6	16	0	8	13	0	4	16
End Depth (ft bgs)				1	8	20	1	10	15	1	8	20	1	10	20	1	10	17	1	7	18	2	7	12	20	1	8	20	1	10	15	1	6	20
Sample Date				10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018
Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO																															
SW6010C																																		
Aluminum	mg/kg	-	-	29200 J	38100 J	14900 J	18100 J	34300 J	11700 J	7550 J	32200 J	12600 J	11000 J	28300 J	35300 J	17100 J	33100 J	2430 J	12100 J	9630 J	15400 J	27300 J	27100 J	25900 J	14600 J	8290 J	29900 J	9230 J	10500 J	34100 J	4680 J	6510 J	18500 J	15800 J
Antimony	mg/kg	-	-	0.71 UJ	0.47 UJ	< 2.0 UJ	2.4 UJ	0.46 UJ	< 6.3 UJ	< 1.9 UJ	0.56 UJ	< 1.7 UJ	< 2.1 UJ	< 1.8 UJ	< 2.3 UJ	< 18.8 UJ	< 17.6 UJ	< 17.1 UJ	2.9 UJ	7.4 UJ	< 19.4 UJ	< 17.2 UJ	< 17.3 UJ	< 24.9 UJ	< 18.5 UJ	< 183 UJ	< 18.0 UJ	< 17.6 UJ	< 18.6 UJ	< 17.9 UJ	< 19.4 UJ	< 16.1 UJ	< 90.3 UJ	< 22.5 UJ
Arsenic	mg/kg	**13**	16	7.5	4.7 UJ	11.8	**35.9**	1.6 UJ	4.4 UJ	8.6	2.7	10.5	11.2	< 6.8 U	4.8 UJ	9.7	0.89 UJ	0.84 UJ	**15.9**	**45.1**	**15.8**	**14.9**	10.1	4.2	**24.3**	**13.8**	< 2.4 U	3.3	8.6	3.3	2.4 UJ	7.0	**37.2**	**21.0**
Barium	mg/kg	**350**	400	183 UJ	**351 J**	92.9 J	168 J	165 J	117 J	45.8 J	202 J	80.7 J	63.5 UJ	158 J	207 J	147 J	172 J	18.0 J	128 J	288 J	78.9 J	208 J	283 J	186 J	82.8 J	117 J	232 J	42.8 J	161 J	344 J	21.0 J	71.9 J	198 J	69.3 J
Beryllium	mg/kg	**7.2**	590	5.1 UJ	**8.5 J**	0.68 J	2.7 J	6.0 J	0.88 UJ	0.44 UJ	6.2 J	0.56 J	0.61 UJ	5.1 J	5.9 J	2.0	6.8	0.10 UJ	1.6	2.0	0.73	4.0	3.5	4.2	0.71	1.4	4.1	0.43	1.0	5.2	0.24 UJ	0.70	2.5	0.71
Cadmium	mg/kg	**2.5**	9.3	0.085 UJ	< 0.49 UJ	0.14 UJ	**9.8 J**	< 0.62 UJ	0.62 UJ	0.22 UJ	< 0.54 UJ	0.12 UJ	0.24 UJ	0.043 UJ	< 0.58 UJ	1.1	0.043 UJ	0.050 UJ	1.7	< 2.6 U	0.21 UJ	**3.9**	0.13 UJ	0.25 UJ	0.19 UJ	1.6 UJ	0.049 UJ	0.19 UJ	0.90	0.070 UJ	0.13 UJ	0.36	0.44 UJ	0.33
Calcium	mg/kg	-	-	162000 J	225000 J	25100 J	98000 J	269000 J	25100 J	72600 J	265000 J	30000 J	18700 UJ	220000 J	254000 J	66400 J	264000 J	1260 J	57700 J	25700 J	30900 J	179000 J	230000 J	131000 J	27100 J	33900 J	264000 J	30300 J	50200 J B	251000 J B	18100 J B	144000 J B	158000 J B	36900 J B
Chromium	mg/kg	-	-	3.9 UJ	1.8 J	21.9 J	42.1 J	1.4 J	15.2 J	10.8 J	0.87 UJ	18.9 J	14.8 J	1.4 J	5.2 J	25.4 J	1.7 J	2.8 J	51.1 J	48.5 J	20.9 J	26.4 J	13.1 J	5.7 J	19.3 J	88.0 J	1.0 J	12.8 J	26.6 J	3.1 J	6.9 J	9.1 J	65.8 J	21.8 J
Cobalt	mg/kg	-	-	2.6 J	1.4 J	15.1 J	9.8 J	0.47 UJ	4.0 J	8.2 J	0.63 UJ	14.5 J	19.8 UJ	0.58 UJ	1.1 UJ	7.5	0.83	1.4	7.5	18.9	13.7	4.9	4.5	2.9	14.0	8.4	0.37 UJ	9.4	7.1	1.8	4.4	4.3	14.3	19.6
Copper	mg/kg	**50**	270	8.5 J	4.8 UJ	26.1 J	**419 J**	3.8 UJ	34.8 J	21.8 J	3.8 UJ	26.0 J	29.8 UJ	2.5 UJ	5.5 UJ	**56.9**	< 5.9 U	3.0	**59.4**	45.7	30.7	33.8	8.5	8.3	26.4	**162**	< 6.0 U	21.9	43.8	< 6.0 U	12.5	13.9	15.6	31.5
Iron	mg/kg	-	-	28500 J	9020 J	28300 J	120000 J	976 J	13600 J	17400 J	1920 J	26200 J	26500 J	618 J	6210 J	40700 J	2200 J	1840 J	110000 J	348000 J	24400 J	47500 J	43900 J	12000 J	28700 J	184000 J	643 J	19500 J	40600 J B	9360 J B	8160 J B	16000 J B	212000 J B	23800 J B
Lead	mg/kg	**63**	1000	11.0 UJ	0.91 UJ	12.6 J	**363 J**	0.43 UJ	12.2 J	17.9 J	0.36 UJ	11.2 J	20.6 UJ	0.28 UJ	0.78 UJ	**136**	< 5.9 U	2.2	**165**	50.6	15.0	**254**	1.5	9.4	15.4	**367**	< 6.0 U	11.0	**211**	< 6.0 U	5.0	32.4	7.1	18.5
Magnesium	mg/kg	-	-	5810 UJ	6690 J	12400 J	3770 J	5900 J	1910 J	9600 J	5280 J	11800 J	4320 J	4680 J	5180 J	9080 J	5530 J	476 J	10100 J	4120 J	11800 J	7400 J	6850 J	3790 J	9850 J	6680 J	13400 J	10600 J	8610 J B	6140 J B	7880 J B	7200 J B	26000 J B	14100 J B
Manganese	mg/kg	**1600**	10000	1400 J	**3370 J**	433 J	**3630 J**	1100 J	261 J	420 J	1000 J	392 J	506 J	**1670 J**	**2750 J**	1080 J	1130 J	49.7 J	**2100 J**	**6650 J**	346 J	**1730 J**	**1970 J**	1020 J	356 J	**3590 J**	1010 J	402 J	1060 J B	**2220 J B**	197 J B	862 J B	**3830 J B**	408 J B
Nickel	mg/kg	**30**	310	8.9	3.6 UJ	**37.1**	**39.4**	1.8 UJ	18.0	23.8	2.1 UJ	**37.5**	**31.5**	1.4 UJ	3.8 UJ	27.0	< 5.9 U	3.1 UJ	**31.6**	**65.4**	**36.7**	22.7	15.2	7.7 UJ	**35.0**	**54.9 UJ**	< 6.0 U	23.3	**38.6**	2.1 UJ	10.1	12.7	17.7 UJ	**40.7**
Potassium	mg/kg	-	-	820 UJ	1720 UJ	2860 J	1560 J	600 UJ	2420 J	881 J	368 UJ	1900 J	990 J	1140 J	1290 J	1820 J	1170 J	377 J	1590 J	666 J	3600 J	1940 J	1380 J	1860 J	3420 J	1420 J	618 J	2010 J	1950 J	692 J	877 J	852 J	926 J	3440 J
Selenium	mg/kg	**3.9**	1500	**5.2**	**11.0**	0.60 UJ	3.1 UJ	**6.1**	**4.2 UJ**	< 1.9 U	**7.0**	0.58 UJ	0.73 UJ	**8.8 UJ**	**6.5 UJ**	0.99 UJ	**6.5**	< 4.6 U	1.4 UJ	0.84 UJ	< 5.2 U	2.4 UJ	3.9 UJ	3.0 UJ	< 4.9 U	1.3 UJ	**4.3 UJ**	< 4.7 U	1.3 UJ	**4.8 J**	< 5.2 UJ	0.66 UJ	3.6 UJ	< 6.0 UJ
Silver	mg/kg	2	1500	0.11 UJ	0.12 UJ	< 1.0 UJ	1.1 J	< 1.2 UJ	< 3.2 UJ	< 0.93 UJ	< 1.1 UJ	< 0.85 UJ	< 1.1 UJ	< 0.90 UJ	< 1.2 UJ	< 0.75 U	< 0.70 U	< 0.68 U	< 3.5 U	< 7.7 U	< 0.77 U	< 0.69 U	< 0.69 U	< 1.0 U	< 0.74 U	< 7.3 U	< 0.72 U	< 0.71 U	< 0.74 U	< 0.71 U	< 0.78 U	< 0.65 U	< 3.6 U	< 0.90 U
Sodium	mg/kg	-	-	335 UJ	935 UJ	212 UJ	287 UJ	422 UJ	< 1580 UJ	127 UJ	301 UJ	109 UJ	79.7 UJ	462 J	581 UJ	223	513	64.8 UJ	308	185	192	592	521	441	155 UJ	252	282	142 UJ	228	360	87.6 UJ	195	293	171 UJ
Thallium	mg/kg	-	-	< 4.4 U	< 9.8 U	< 2.0 U	< 9.3 U	< 2.5 U	< 6.3 U	< 1.9 U	< 2.2 U	< 1.7 U	< 2.1 U	< 9.0 U	< 11.7 U	< 7.5 U	< 7.0 U	< 6.8 U	< 7.0 U	< 7.7 U	< 7.7 U	< 6.9 U	< 6.9 U	< 10 U	< 7.4 U	< 7.3 U	< 7.2 U	< 7.1 U	< 7.4 U	< 7.1 U	< 7.8 U	< 6.5 U	< 7.2 U	< 9.0 U
Vanadium	mg/kg	-	-	10.1 UJ	8.6 UJ	27.9 J	40.0 J	4.7 UJ	19.3 J	15.6 J	3.3 UJ	22.4 J	19.8 UJ	3.7 UJ	7.4 J	19.2	8.3	5.1	35.0	89.7	29.3	17.2	18.8	11.5	26.2	32.0	2.8	18.3	23.4	13.5	13.0	13.3	52.0	27.9
Zinc	mg/kg	**109**	10000	46.8 UJ	1.3 UJ	82.1 J	**3260 J**	< 6.2 UJ	63.9 J	**122 J**	< 5.4 UJ	83.9 J	89.2 UJ	< 4.5 UJ	3.0 UJ	**307 J**	< 2.3 UJ	10 J	**466 J**	**804 J**	71.8 J	**603 J**	7.9 J	50.8 J	65.2 J	**576 J**	0.81 UJ	51.2 J	**355 J**	1.2 UJ	30.6 J	89.9 J	17.2 J	80.6 J
SW7471B																																		
Mercury	mg/kg	**0.81**	2.8	< 0.14 U	< 0.13 U	< 0.12 U	0.12	< 0.17 U	0.14 UJ	0.040 UJ	< 0.13 U	< 0.12 U	0.025 UJ	< 0.14 U	< 0.11 U	0.10	< 0.023 U	0.017 UJ	< 0.022 U	< 0.026 U	0.010 UJ	0.012 UJ	< 0.024 U	0.031 UJ	0.0094 UJ	0.12	0.012 UJ	0.012 UJ	0.24	< 0.024 U	< 0.022 U	0.033	< 0.026 U	0.020 UJ

Notes:

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives

- = no SCO established

NA = not applicable/analyzed

Qualifiers:

U = Analyte analyzed for, but not detected above the sample's reported quantitation limit

J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample

J+ = Sample likely to have a high bias

J- = Sample likely to have a low bias

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.

R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.

B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.

P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).

PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

				SB-121-A	SB-121-B	SB-121-C	SB-121-D	SB-122-A	SB-122-B	SB-122-C	SB-123-A	SB-123-B	SB-123-C	SB-124-A	SB-124-B	SB-124-C	SB-125-A	SB-125-B	SB-125-C	SB-126-A	SB-126-B	SB-126-C	SB-127-A	SB-127-B	SB-127-C	SB-128-A	SB-128-B	SB-128-C	SB-129-A	SB-129-B	SB-129-C	SB-130-A	SB-130-B	SB-130-C
			Soil Sample ID																													
			Start Depth (ft bgs)	0	8	17	10	0	8	18	0	10	18	0	12	18	0	5	16.5	0	1	14.5	0	5	18	0	5	14	0	6	16	0	6	15
			End Depth (ft bgs)	1	10	20	12	2	10	20	1	12	20	1	14	20	1	6	18	1	4	15.5	5	10	20	2	7	16	2	7	17	3	10	18
			Sample Date	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018
Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO																													
SW6010C																																
Aluminum	mg/kg	-	-	18700 J	29900 J	12600 J	11000 J	7230 J	35100 J	29300 J	11900	34900	8150	13100	57900	6250	13800 J	31100 J	12700 J	8680 J	6370 J	6740 J	38700 J	31900 J	6780 J	8050 J	18800 J	8110 J	9030 J	30400 J	4290 J	25000 J	8040 J	6490 J
Antimony	mg/kg	-	-	1.6 UJ	0.32 UJ	< 2.0 UJ	< 4.1 UJ	0.48 UJ	0.50 UJ	< 5.1 UJ	< 20.9 U	0.52 UJ	< 2.1 U	1.2 UJ	< 3.8 U	< 1.9 U	0.73 UJ	< 2.2 UJ	< 8.1 UJ	1.3 UJ	0.69 UJ	< 4.6 UJ	< 2.0 UJ	0.50 UJ	< 5.9 UJ	2.0 UJ	< 9.1 UJ	< 7.6 UJ	< 40.9 UJ	0.61 UJ	< 1.7 UJ	0.46 UJ	< 10.1 UJ	< 2.0 UJ
Arsenic	mg/kg	**13**	16	**14.3**	1.7	7.1	5.1	4.0	7.2 UJ	5.2	**42.0**	4.1 UJ	5.5	**20.9**	6.9 UJ	2.2	10.8	1.5 UJ	**15.5**	**18.7**	7.1	4.2	3.2 UJ	5.5 UJ	6.8	**18.2**	11.3	4.8 UJ	**57.8**	5.4 UJ	1.4	2.8 UJ	**18.1**	2.9
Barium	mg/kg	**350**	400	209 J	194 J	62.9 J	163 J	74.2 J	**394 J**	270 J	256	**382**	39.1	156	**565**	52.8	140	**549**	70.7 UJ	132	194	85.6	**657**	326	75.0	122	204	130	225	**403**	24.5	234	118	35.2
Beryllium	mg/kg	**7.2**	590	2.3 J	5.3 J	0.59 J	0.71 UJ	1.3 J	3.9 J	3.8 J	2.2	4.8	0.40 UJ	1.6	**8.7**	0.36 UJ	1.9	5.0	0.67 UJ	0.80	0.37 UJ	0.75 UJ	6.9	4.6	0.56 UJ	1.7	3.8	0.53 UJ	1.8	5.2	0.23 UJ	6.3	1.3	0.38 UJ
Cadmium	mg/kg	**2.5**	9.3	0.95 UJ	< 0.45 UJ	0.14 UJ	0.19 UJ	0.41 UJ	< 0.43 UJ	0.73 UJ	**3.4 UJ**	0.067 UJ	0.14 UJ	1.0	0.10 UJ	0.11 UJ	1.0	< 0.54 U	0.54 UJ	1.2	0.76	0.19 UJ	< 0.51 U	< 0.57 U	0.36 UJ	1.4 UJ	1.0 UJ	0.51 UJ	< 10.2 U	< 0.55 U	0.057 UJ	< 0.62 U	1.1 UJ	0.17 UJ
Calcium	mg/kg	-	-	87100 J	207000 J	15500 J	67800 J	183000 J	225000 J	120000 J	42700	238000	29600	58500	477000	2410	68400	216000	15600	25100	54100	23400	256000	236000	16000	43000	148000	22700	19000	236000	4220	149000	33600	22700
Chromium	mg/kg	-	-	21.4 J	0.97 J	18.6 J	11.5 J	7.3 J	8.2 J	11.0 J	38.7	2.6	12.3	14.8	1.9	8.4	19.5	0.80 UJ	18.5	25.3	14.2	7.1	0.94 UJ	6.6	9.4	98.1	32.2	10.2	21.1	3.1	6.0	8.8	20.4	10.1
Cobalt	mg/kg	-	-	8.9 J	0.55 UJ	13.2 J	2.6 J	1.9 J	1.5 J	2.8 J	12.6	0.88 UJ	9.0	6.8	1.2 UJ	5.2	6.6	0.45 UJ	10.3	5.9	4.2	1.1 UJ	0.62 UJ	0.85 UJ	3.2	8.5	4.9	2.5 UJ	14.4	1.2	3.2	0.99 UJ	7.4	6.6
Copper	mg/kg	**50**	270	34.3 J	3.3 UJ	26.9 J	16.8 J	12.1 UJ	5.4 UJ	24.4 J	**54.6**	6.8 UJ	24.5	**52.6**	8.6 UJ	15.4	38.2	< 13.6 U	36.6	**89.4**	31.7	15.4	3.5 UJ	3.3 UJ	26.0	**256**	**104**	25.4	36.2 UJ	4.6 UJ	7.8	6.9	45.6	20.5
Iron	mg/kg	-	-	65900 J	1770 J	25400 J	8200 J	15000 J	12300 J	12100 J	225000	5240	17500	30300	4670	8480	40800 J	487 J	19200 J	48700 J	18600 J	5680 J	1370 J	3830 J	10400 J	167000 J	77800 J	6720 J	342000 J	8360 J	6080 J	8130 J	116000 J	15400 J
Lead	mg/kg	**63**	1000	**88.4 J**	< 0.89 UJ	13.9 J	15.4 J	18.5 J	0.80 UJ	7.9 J	**214**	2.4	9.1	**131**	2.6	8.5	**96.6**	0.37 UJ	12.8	**223**	**83.9**	5.0	0.52 UJ	1.0 UJ	7.2	**401**	**190**	7.6	33.5	0.91 UJ	5.0	1.8	**103**	9.7
Magnesium	mg/kg	-	-	8220 J	5050 J	10500 J	1550 J	8090 J	6510 J	5200 J	3330	7490	9990	9480	9250	2160	6940	7460	4810	4350	11200	905 UJ	8110	7590	2170	9710	6120	1700 UJ	934	4080	1940	25200	8010	6070
Manganese	mg/kg	**1600**	10000	**2630 J**	735 J	308 J	170 J	792 J	**6880 J**	1100 J	**5340**	**3160**	277	1080	**4650**	62.0	**1880**	814	208	1150	414	78.5	**2440**	**4750**	146	**4530**	**3140**	159	**7310**	**3350**	74.0	1580	**2470**	233
Nickel	mg/kg	**30**	310	24.3	1.9 UJ	**35.9**	15.9	10.3	5.6	15.2	**35.4 UJ**	2.6 UJ	25.2	18.0	3.9 UJ	16.5	21.7	1.4 UJ	**36.5**	28.5	15.7	9.1 UJ	1.6 UJ	2.6 UJ	14.7	**64.9**	29.4	16.2	29.3 UJ	2.5 UJ	9.8	4.2 UJ	18.5 UJ	20.5
Potassium	mg/kg	-	-	1380 J	521 J	2010 J	3380 J	838 J	1450 J	2390 J	1040	645	1150	1030	1020	452 UJ	1350	391 UJ	2180	983	1280	1950	946 UJ	1310	1550	757	1150	2050	1790	1230	432	1790	1040	925
Selenium	mg/kg	**3.9**	1500	2.1 UJ	**5.1**	0.68 UJ	2.6 UJ	0.92 UJ	**12.0 UJ**	**5.5**	**4.9 UJ**	**7.6 UJ**	< 2.1 U	3.0 UJ	**11.3 UJ**	0.54 UJ	2.0 UJ	**15.8**	< 8.1 U	1.2 UJ	0.50 UJ	**9.7**	**7.6 UJ**	**5.8 UJ**	1.9 UJ	**5.1 UJ**	**5.4 UJ**	2.1 UJ	**10 UJ**	**7.1 UJ**	< 1.7 U	3.8 UJ	2.7 UJ	< 2.0 U
Silver	mg/kg	2	1500	0.39 UJ	< 0.89 UJ	< 0.98 UJ	< 2.1 UJ	0.099 UJ	0.37 UJ	< 2.6 UJ	1.0	0.21 UJ	< 1.1 U	0.29 UJ	< 1.9 U	< 0.93 U	0.36 UJ	< 1.1 U	< 4.0 U	0.36 UJ	0.085 UJ	< 2.3 U	< 1.0 U	0.27 UJ	< 3.0 U	1.1	0.51 UJ	< 3.8 U	1.0	0.14 UJ	< 0.83 U	0.18 UJ	0.61 UJ	< 1.0 U
Sodium	mg/kg	-	-	276 UJ	244 UJ	130 UJ	253 UJ	306 UJ	592 J	539 UJ	206 UJ	450 UJ	87.1 UJ	195 UJ	583 UJ	< 463 U	247 UJ	334 UJ	< 2020 U	125 UJ	153 UJ	160 UJ	839 UJ	381 UJ	< 1480 U	199 UJ	347 UJ	< 1890 U	211 UJ	644	< 413 U	947	222 UJ	69.2 UJ
Thallium	mg/kg	-	-	< 4.4 U	< 1.8 U	< 2.0 U	< 4.1 U	0.46 UJ	< 17.2 U	< 5.1 U	< 20.9 U	< 11.6 U	< 2.1 U	< 9.4 U	< 37.6 U	< 1.9 U	0.92 UJ	< 2.2 U	< 8.1 U	< 3.5 U	< 1.9 U	< 4.6 U	< 10.2 U	< 11.5 U	< 5.9 U	< 10.4 U	< 9.1 U	< 7.6 U	< 40.9 U	< 11.0 U	< 1.7 U	< 5.0 U	< 10.1 U	< 2.0 U
Vanadium	mg/kg	-	-	24.6 J	1.3 UJ	23.4 J	19.5 J	14.2 J	11.9 J	17.3 J	51.7 UJ	3.3 UJ	15.7	15.6	4.2 UJ	13.4	16.2	< 5.4 U	23.0	18.7	13.8	9.8 UJ	< 25.6 U	11.0	12.7 UJ	20.0 UJ	11.7 UJ	14.1 UJ	62.4 UJ	9.2	9.2	2.8 UJ	29.6	13.9
Zinc	mg/kg	**109**	10000	**516 J**	< 4.5 UJ	85.5 J	62.8 J	**178 J**	< 4.3 UJ	35.1 J	**1260**	20.4	56.4	**353**	17.2	37.4	**438**	< 5.4 U	73.2	**414**	**378**	92.5	< 5.1 U	< 5.7 U	36.9	**764**	**434**	50.0	**681**	36.2	26.4	8.1	**874**	67.5
SW7471B																																
Mercury	mg/kg	**0.81**	2.8	0.046 UJ	< 0.10 U	< 0.12 U	0.088 UJ	< 0.11 U	< 0.11 U	0.070 UJ	0.077 UJ	< 0.13 U	< 0.11 U	0.13 UJ	< 0.25 U	< 0.12 U	0.23	< 0.11 U	0.095 UJ	0.16	0.10 UJ	0.11 UJ	< 0.13 U	< 0.11 U	0.076 UJ	0.16	0.082 UJ	0.098 UJ	< 0.11 U	< 0.15 U	< 0.12 U	< 0.13 U	0.11 UJ	< 0.12 U

Notes:

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

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- = no SCO established

NA = not applicable/analyzed

Qualifiers:

U = Analyte analyzed for, but not detected above the sample's reported quantitation limit

J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample

J+ = Sample likely to have a high bias

J- = Sample likely to have a low bias

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.

P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).
PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

				SB-131A	SB-131B	SB-131C	SB-132A	SB-132B	SB-132C	SB-133A	SB-133B	SB-133C	SB-133D	SB-134A	SB-134B	SB-134C	SB-135A	SB-135B	SB-135C	SB-136-A	SB-136-B	SB-136-C	SB-136-D	SB-137-A	SB-137-B	SB-137-C	SB-138-A	SB-138-B	SB-138-C	SB-139A	SB-139B	SB-139C	SB-139D	SB-140A	SB-140B	SB-140C	SB-141A	SB-141B	SB-141C
			Soil Sample ID																																			
			Start Depth (ft bgs)	0	6	14	0	14	17	0	4	17	14	0	6	12	0	6	18	0	5	17	12	0	4	14	0	5	15	0	6	13	17	0	15	17	0	5	18
			End Depth (ft bgs)	1	8	16	2	16	19	1	6	19	16	1	8	14	2	8	20	1	8	20	15	1	5	16	2	8	17	2	8	15	18	2	17	19	2	7	20
			Sample Date	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018
Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO																																		
SW6010C																																					
Aluminum	mg/kg	-	-	32500 J	31500 J	14600 J	13800 J	34100 J	9260 J	24300 J	41900 J	9710 J	7660 J	10500 J	35800 J	9220 J	15700 J	35300 J	8070 J	16400 J	27100 J	8700 J	46500 J	7320 J	15700 J	9830 J	9950 J	35400 J	7850 J	28000 J	50000 J	15400 J	4240 J	10800 J	20000 J	7690 J	15100 J	30100 J	3510 J
Antimony	mg/kg	-	-	0.88 UJ	0.76 UJ	< 3.5 UJ	3.9 J	0.88 UJ	< 2.5 UJ	0.96 UJ	< 8.3 UJ	< 2.9 UJ	< 6.3 UJ	0.35 UJ	< 2.3 UJ	< 6.9 UJ	1.1 UJ	0.51 UJ	< 2.1 UJ	< 8.6 UJ	< 2.4 UJ	< 5.3 UJ	< 2.2 UJ	< 19.8 UJ	3.5 UJ	< 3.1 UJ	2.8 UJ	0.47 UJ	< 7.0 UJ	< 9.9 UJ	0.57 UJ	< 5.2 UJ	< 2.2 U	1.0 UJ	< 4.0 UJ	< 2.6 UJ	0.93 UJ	< 2.3 UJ	< 3.4 UJ
Arsenic	mg/kg	**13**	16	6.8 UJ	3.6 UJ	8.6	12.4	4.8 UJ	5.0	**18.2**	**31.8**	8.0	3.7 UJ	5.2	7.7 UJ	5.1	10.7	2.6	4.0	**23.1**	2.4 UJ	4.3	8.3 UJ	**33.2**	**36.5**	4.4	**38.2**	3.4	4.4 UJ	**18.6**	3.0	5.8	2.7	10.4	7.3	4.6	8.2	1.9	5.2
Barium	mg/kg	**350**	400	**495**	**395**	180	145	**448**	37.1	271	**600**	51.7	73.2	130	**476**	103	191	214	46.5	284	284	141	**371**	95.9	249	**398**	183	**453**	120	240	**639**	107	27.5	116	**355**	31.2	127	290	42.8
Beryllium	mg/kg	**7.2**	590	5.4	4.7	1.5	2.3	5.2	0.39 UJ	3.8	6.1	0.49 UJ	0.56 UJ	1.1	5.7	0.85 UJ	2.5	**7.4**	0.40 UJ	2.5	5.6	1.2 UJ	**9.3**	1.5	3.7	1.4	1.5	6.3	0.68 UJ	5.4	**8.0**	0.82 UJ	0.33 UJ	1.6	2.9	0.43 UJ	2.4	5.9	0.26 UJ
Cadmium	mg/kg	**2.5**	9.3	< 0.52 U	< 0.53 U	< 0.87 U	0.80	< 0.57 U	0.36 UJ	2.5	< 2.1 U	0.40 UJ	1.5 UJ	0.24 UJ	< 0.58 U	0.92 UJ	0.86	< 0.68 U	0.17 UJ	1.5 UJ	< 0.60 U	0.35 UJ	< 0.56 U	0.66 UJ	0.33 UJ	0.34 UJ	2.0 UJ	< 0.62 U	0.46 UJ	< 2.5 U	< 0.49 U	0.31 UJ	0.19 UJ	0.36 UJ	0.20 UJ	0.32 UJ	0.88	< 0.59 U	0.38 UJ
Calcium	mg/kg	-	-	240000	223000	65000	118000	258000	3020	165000	198000	2950	17900	93000	246000	28400	79500	268000	31600	100000	252000	45900	258000	29100	118000	106000	35400	240000	26200	211000	245000	8800	1620	71800	95500	3620	156000	229000	6140
Chromium	mg/kg	-	-	3.3	2.0	12.3	17.2	2.6	13.8	38.9	18.0	14.8	10.0	10.0	2.1	10.1	18.8	2.2	12.4	24.5	4.7	6.7	3.4	41.1	45.7	7.6	29.7	2.2	10.2	8.2	1.2	22.4	6.3	11.2	8.2	11.6	20.2	0.73 UJ	4.0
Cobalt	mg/kg	-	-	1.6	0.54 UJ	3.9	5.6	1.0 UJ	8.2	5.3	8.1	17.2	6.6	6.5	1.1 UJ	5.1	5.4	0.75 UJ	10.7	6.7	0.35 UJ	1.7 UJ	1.5	9.1	8.5	3.7	13.2	1.1 UJ	1.7 UJ	4.6	0.99	9.3	3.8	6.0	2.5	10.4	5.3	0.47 UJ	1.8
Copper	mg/kg	**50**	270	4.7 UJ	2.8 UJ	18.3	45.1	3.5 UJ	23.9	38.8	20.3	26.4	44.2	41.6	1.9 UJ	38.4	35.0	3.3 UJ	23.1	27.6	< 15.0 U	16.1	3.9 UJ	20.6 UJ	30.3	18.3	43.1	2.7 UJ	20.3	11.1 UJ	3.9 UJ	31.4	8.9	35.3	14.5	19.8	24.3	< 14.7 U	15.1
Iron	mg/kg	-	-	11900 J	1380 J	31100 J	36600 J	2900 J	14100 J	54100 J	137000 J	16100 J	15200 J	16700 J	8170 J	14200 J	37800 J	4060 J	23600 J	106000 J	2490 J	8720 J	23100 J	261000 J	180000 J	20000 J	201000 J	7940 J	5050 J	85800 J	7600 J	19500 J	6120 J	34400 J	25300 J	12800 J	25300 J	1170 J	4470 J
Lead	mg/kg	**63**	1000	0.58 UJ	0.62 UJ	19.0	**126**	0.94 UJ	9.6	**142**	1.3 UJ	12.0	11.1	28.3	0.73 UJ	10.7	**116**	0.71 UJ	10	**95.9**	0.64 UJ	6.0	0.80 UJ	45.7	35.2	12.1	**135**	0.60 UJ	7.0	< 5.0 U	0.55 UJ	14.3	6.4 J	46.8 J	17.3 J	8.2 J	**91.7 J**	0.55 UJ	2.9 J
Magnesium	mg/kg	-	-	5150	6320	3010	12200	9230	3860	7970	7310	4000	1950	24400	6780	1980	7670	6600	10700	5580	5720	1760	10900	1310	3140	1800	4580	5690	1120 UJ	5280	8140	5250	1500	11200	3490	3540	14500	6520	1030
Manganese	mg/kg	**1600**	10000	**2690**	**2330**	597	1230	**2660**	136	**3800**	**3390**	139	163	574	**2230**	199	**1810**	1130	480	**1950**	**3820**	276	**2670**	**1960**	**2310**	501	**3010**	**1910**	97.4	**2200**	658	209	45.9	1200	727	129	856	826	51.8
Nickel	mg/kg	**30**	310	4.0 UJ	1.4 UJ	16.0	21.0	2.3 UJ	25.6	19.2	20.9	**41.5**	20.6	17.8	3.2 UJ	19.5	17.9	2.9 UJ	28.0	17.5	1.7 UJ	10.7	6.8	11.1 UJ	20.6	10.2	**30.6**	3.4 UJ	15.7	17.8 UJ	2.9 UJ	**34.9**	10.5	17.4	11.3	27.5	19.2	1.6 UJ	8.4
Potassium	mg/kg	-	-	863	830	3000	1090	1190	1180	1840	1380 UJ	1140	2060	1280	993	2170	1410	854	995	1170	1170	1200 UJ	809 UJ	985	580	1470	1480	1080	2720	1440	819 UJ	2520	457 UJ	1260	1620	844	1510	495 UJ	477 UJ
Selenium	mg/kg	**3.9**	1500	**7.7 UJ**	**6.2 UJ**	3.4 UJ	3.4	**6.9 UJ**	< 2.5 U	3.6 UJ	**9.1**	1.1 UJ	2.3 UJ	1.0 UJ	**5.5 UJ**	**5.4 UJ**	2.1 UJ	**7.2**	< 2.1 U	< 8.6 U	**4.3 UJ**	2.9 UJ	**8.6 UJ**	< 19.8 U	2.0 UJ	**9.9**	3.3 UJ	**5.4**	**4.7 UJ**	**9.3 UJ**	**6.6**	1.3 UJ	0.90 UJ	0.80 UJ	**7.3**	< 2.6 U	3.8	**7.7**	1.6 UJ
Silver	mg/kg	2	1500	0.095 UJ	0.089 UJ	< 1.7 U	0.23 UJ	0.11 UJ	< 1.3 U	0.79 UJ	0.22 UJ	< 1.4 U	< 3.2 U	< 0.83 U	< 1.2 U	< 3.4 U	0.40 UJ	< 1.4 U	< 1.0 U	0.45 UJ	0.30 UJ	< 2.6 U	0.12 UJ	0.53 UJ	0.56 UJ	< 1.6 U	0.98	0.14 UJ	< 3.5 U	0.12 UJ	< 0.97 U	< 2.6 U	< 1.1 U	0.18 UJ	< 2.0 U	< 1.3 U	0.33 UJ	< 1.2 U	0.17 UJ
Sodium	mg/kg	-	-	378 UJ	450 UJ	296 UJ	378 UJ	499 UJ	< 636 U	389 UJ	950 UJ	< 723 U	< 1590 U	189 UJ	558 UJ	268 UJ	270 UJ	543 UJ	86.6 UJ	350 UJ	588 UJ	275 UJ	548 UJ	233 UJ	257 UJ	305 UJ	195 UJ	552 UJ	364 UJ	488 UJ	796 UJ	171 UJ	78.1 UJ	299 UJ	335 UJ	103 UJ	526 UJ	326 UJ	135 UJ
Thallium	mg/kg	-	-	< 10.5 U	< 10.7 U	< 3.5 U	0.45 UJ	< 11.4 U	< 2.5 U	< 12.8 U	< 8.3 U	< 2.9 U	< 6.3 U	< 1.7 U	< 11.6 U	< 6.9 U	< 4.3 U	< 2.7 U	< 2.1 U	< 8.6 U	< 12.0 U	< 5.3 U	< 11.2 U	< 19.8 U	< 8.5 U	< 3.1 U	< 9.6 U	< 2.5 U	< 7.0 U	< 9.9 U	< 1.9 U	< 5.2 U	< 2.2 U	< 2.2 U	< 4.0 U	< 2.6 U	0.44 UJ	< 2.3 U	< 3.4 U
Vanadium	mg/kg	-	-	5.4	2.5 UJ	21.1	12.2	4.0 UJ	13.8	33.1	46.8	15.7	14.3 UJ	12.3	3.3 UJ	21.3	15.6	3.2 UJ	14.7	26.6	9.8	10.9 UJ	11.7 UJ	31.4 UJ	41.2	18.9	52.4	3.8 UJ	18.3	21.3 UJ	< 24.3 U	21.4	16.6	14.3	14.7	13.2	12.8	< 5.9 U	4.7 UJ
Zinc	mg/kg	**109**	10000	< 5.2 U	< 5.3 U	101	**303**	2.6 UJ	68.8	**720**	< 4.1 U	81.5	**155**	94.9	< 5.8 U	50.3	**420**	< 6.8 U	64.6	**609**	1.7 UJ	30.6	< 5.6 U	**292**	**736**	79.1	**1410**	2.7 UJ	15.1 UJ	2.7 UJ	< 4.9 U	97.2	31.0	**143**	94.2	65.8	**294**	< 5.9 U	21.9
SW7471B																																					
Mercury	mg/kg	**0.81**	2.8	< 0.11 UJ	< 0.12 UJ	0.096 UJ	0.089 UJ	< 0.12 UJ	0.045 UJ	0.066 UJ	< 0.11 UJ	0.046 UJ	0.057 UJ	< 0.13 UJ	< 0.13 UJ	< 0.45 UJ	0.23 J	< 0.16 UJ	< 0.12 UJ	0.099 UJ	< 0.15 U	0.059 UJ	< 0.13 U	< 0.12 U	< 0.12 U	0.061 UJ	0.42	< 0.12 U	< 0.39 U	< 0.12 UJ	< 0.11 UJ	0.052 UJ	< 0.13 U	0.057 UJ	0.052 UJ	< 0.16 U	0.11 UJ	< 0.15 U	0.064 UJ

Notes:

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives

- = no SCO established

NA = not applicable/analyzed

Qualifiers:

U = Analyte analyzed for, but not detected above the sample's reported quantitation limit

J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample

J+ = Sample likely to have a high bias

J- = Sample likely to have a low bias

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.

R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.

B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.

P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).

PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO	SB-142A	SB-142B	SB-142C	SB-143A	SB-143B	SB-143C	SB-144A	SB-144B	SB-144C	SB-145A	SB-145B	SB-145C	SB-146-A	SB-146-B	SB-146-C	SB-147-A	SB-147-B	SB-147-C	SB-148-A	SB-148-B	SB-148-C	SB-148-D	SB-149-A	SB-149-B	SB-149-C	SB-150A	SB-150B	SB-150C	DUP-101018	DUP-101118	DUP-101618	DUP-101718	DUP-101818	DUP-101918	DUP-102318
Soil Sample ID																																					
Start Depth (ft bgs)				0	8	15	0	8	13	0	7	15	0	10	18	0	2	13	0	5	16	0	4	15	12	0	5	16	0	14	18	NA	NA	NA	NA	NA	NA	NA
End Depth (ft bgs)				1	10	16	1	10	15	2	9	17	1	12	20	2	5	15	1	7	17	1.5	5	17.5	14	1	6	18	2	16	20	NA	NA	NA	NA	NA	NA	NA
Sample Date				10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/19/2018	10/19/2018	10/19/2018	10/10/2018	10/11/2018	10/16/2018	10/17/2018	10/18/2018	10/19/2018	10/23/2018
SW6010C																																					
Aluminum	mg/kg	-	-	8640 J	30200 J	12400 J	20800 J	33600 J	11000 J	5160 J	5070 J	15500 J	6730 J	46300 J	7140 J	16600 J	35700 J	15000 J	10400 J	20100 J	15000 J	32000 J	31400 J	20800 J	42800 J	10700 J	1330 J	13100 J	28700 J	24300 J	5560 J	40100 J	26000 J B	7440 J	5630 J	10600 J	13400 J	20900 J
Antimony	mg/kg	-	-	< 12.4 UJ	0.40 UJ	< 3.6 UJ	1.4 UJ	0.50 UJ	< 5.4 UJ	< 2.5 UJ	0.46 UJ	< 7.6 UJ	< 2.0 UJ	0.88 UJ	< 3.9 UJ	< 97.7 UJ	< 18.5 UJ	< 47.8 UJ	3.6 UJ	< 78.6 UJ	1.1 UJ	3.4 UJ	< 17.6 UJ	< 42.7 UJ	< 19.0 UJ	1.0 UJ	< 15.0 UJ	< 35.6 UJ	0.62 UJ	< 5.2 UJ	0.34 UJ	< 94.3 UJ	< 20.0 U	< 4.7 UJ	< 1.7 UJ	< 3.0 UJ	< 6.4 UJ	< 49.0 UJ
Arsenic	mg/kg	**13**	16	**35.4**	5.1 UJ	6.2	11.5	4.0	4.7	2.5	1.9	3.6 UJ	3.1	8.4	2.4 UJ	**33.9 J**	1.2 UJ	4.0 UJ	**14.0 J**	**41.6 J**	6.0 J	10.6 J	2.3 J	4.8 UJ	2.9 J	4.2 J	1.4 UJ	2.5 UJ	7.1	4.7	2.6	4.7 UJ	10.4	5.3	2.9	10.8	2.4 UJ	5.3 UJ
Barium	mg/kg	**350**	400	161	328	51.2	226	**474**	72.1	35.7	35.7	164	40.5	**650**	99.1	**576 J**	**765 J**	149 J	99.0 J	**413 J**	181 J	**449 J**	**460 J**	123 J	**709 J**	78.0 J	6.4 J	127 J	252	**562**	30.3	268 J	214 J B	88.0 J	43.7	55.9	171	207 J
Beryllium	mg/kg	**7.2**	590	1.6	5.2	0.61 UJ	3.5	4.8	0.60 UJ	0.56 UJ	0.34 UJ	1.6 UJ	0.57	**7.8**	0.73 UJ	2.6	5.4	1.0	0.86	2.9	0.90	4.8	4.3	1.1	6.0	0.59	0.069 UJ	0.78	4.5	4.1	0.28 UJ	7.1 J	3.9	0.61 UJ	0.40 UJ	0.58 UJ	1.2 UJ	1.9
Cadmium	mg/kg	**2.5**	9.3	**3.1**	0.057 UJ	0.33 UJ	0.78 UJ	< 0.51 U	0.33 UJ	0.23 UJ	0.11 UJ	0.57 UJ	0.18 UJ	< 0.52 U	0.27 UJ	< 1.3 U	< 0.25 U	1.3	1.7	< 0.21 U	0.52	0.17 UJ	< 0.23 U	0.65	< 0.25 U	0.27	0.17 UJ	0.88	< 0.59 U	0.40 UJ	0.092 UJ	< 1.3 UJ	0.12 UJ	0.69 UJ	0.25 UJ	0.37 UJ	0.63 UJ	1.2
Calcium	mg/kg	-	-	24800 J	222000 J	3540 J	90700 J	223000 J	9750 J	86000 J	145000 J	68300 J	55800 J	206000 J	28300 J	69500 J	220000 J	28000 J	69000 J	80000 UJ	28600 J	178000 J	227000 J	25100 J	255000 J	32700 J	167000 J	19100 J	147000 J	167000 J	21400 J	215000 J	238000 J B	23000 J	11800	4440	42500 J	62500 J
Chromium	mg/kg	-	-	60.9 J	6.0 J	18.6 J	12.3 J	6.0 J	15.5 J	7.9 J	9.7 J	10.2 J	6.8 J	4.2 J	6.8 J	30.2 J	0.88 J	16.1 J	23.9 J	35.2 J	17.1 J	10.2 J	6.1 J	25.8 J	4.4 J	14.9 J	4.0 J	15.6 J	10.1 J	11.3 J	8.7 J	2.2 UJ	30.3 J	9.9 J	8.8	15.6	12.0 J	16.6 J
Cobalt	mg/kg	-	-	9.9	1.4	12.4	4.8	1.5	6.3	3.0	1.4	3.0 UJ	3.5	2.3	1.3 UJ	9.3	0.37 UJ	2.7	6.9	13.4	4.1	4.1	1.4	3.1	1.1	5.2	0.72	3.3	2.4	3.8	7.6	1.6 J	4.8	3.6 J	5.1	11.5	2.4 UJ	2.3
Copper	mg/kg	**50**	270	44.8	4.9 UJ	30.4	20.4	4.4 UJ	27.6	10.3	5.1 UJ	25.9	12.6	6.2 UJ	13.2	30.0 J	< 2.5 UJ	45.0 J	**71.3 J**	36.6 J	17.1 J	12.1 J	**85.0 J**	32.8 J	< 6.3 UJ	16.1 J	2.4 J	28.8 J	5.2 UJ	25.7	17.8	< 6.3 UJ	5.6 UJ	36.2 J	17.9	27.5	31.9	40.8 J
Iron	mg/kg	-	-	225000 J	8730 J	19100 J	77400 J	12300 J	14100 J	8130 J	7520 J	10900 J	11000 J	28800 J	5190 J	233000	1550	11800	37200	237000	16400	53700	8920	7710	7630	14100	2090	6830	30600 J	31300 J	15300 J	19400 J	46600 J B	7050 J	17000 J	16200 J	7570 J	17200
Lead	mg/kg	**63**	1000	**209**	1.1	14.3	53.8	0.56 UJ	11.1	27.8	5.8	10.2	18.3	1.9	5.4	19.5	< 1.2 U	14.8	**146**	13.5	15.4	31.6	1.6	13.4	< 1.3 U	**206**	4.1	9.8	5.5	24.0	7.6	< 1.3 UJ	8.7	6.9 J	19.8	12.1	9.6	19.0
Magnesium	mg/kg	-	-	2500	5550	5010	5610	6800	3550	37000	15400	2330	18200	6480	1220	2060	5860	1740	19600	3100	1860	4800	4680	2640	6400	8480	5540	1610	5390	5510	7880	6860 J	6230	1240 J	3370	4120	1530 UJ	2780
Manganese	mg/kg	**1600**	10000	**2360 J**	**2990 J**	167 J	1360 J	748 J	168 J	346 J	243 J	348 J	408 J	**2250 J**	268 J	**2580**	897	185	727	**4030**	190	**2290**	**1650**	116	**1630**	331	73.9	80.3	989 J	**1610 J**	339 J	815 J	**2990 J B**	117 J	263	132	171 J	368
Nickel	mg/kg	**30**	310	**30.9**	3.6 UJ	**38.6**	12.0	4.1	25.2	11.2	7.2	13.5 UJ	8.5	6.1	8.3	17.3 UJ	0.40 UJ	17.7 J	23.0 J	**31.0 J**	19.1 J	9.6 J	3.2 UJ	19.7 J	1.5 UJ	11.2 J	7.1 J	17.0 J	6.5	13.0	19.9	2.4 UJ	6.7	17.5	15.6	**33.3**	11.9 UJ	16.1 UJ
Potassium	mg/kg	-	-	1060	1170	1430	1030	513	1980	898	917	2350	765	686 UJ	1340	2240 J	465 J	3840 J	2480 J	1510 J	3620 J	1590 J	1690 J	5370 J	1330 J	2080 J	695 J	4000 J	434 UJ	1960	730	444 J	1210 J	1570 J	715	1560	2750	3990 J
Selenium	mg/kg	**3.9**	1500	< 12.4 U	**6.5 UJ**	1.0 UJ	2.4 UJ	**4.3**	< 5.4 U	< 2.5 U	< 2.3 U	**16.6**	< 2.0 U	**6.5 UJ**	2.4 UJ	**4.3 UJ**	**6.3 J**	**5.0 UJ**	1.2 UJ	**4.3 J**	**5.1 UJ**	**5.6 J**	**4.4 UJ**	**4.8 UJ**	**4.7 UJ**	0.60 UJ	< 4.0 UJ	2.7 UJ	**4.7**	**11.8**	< 1.7 U	**6.8 UJ**	**4.4 UJ**	2.9 UJ	0.60 UJ	0.84 UJ	**16.4**	**7.1 UJ**
Silver	mg/kg	2	1500	0.86 UJ	0.22 UJ	< 1.8 U	0.33 UJ	< 1.0 U	< 2.7 U	< 1.3 U	< 1.1 U	< 3.8 U	< 0.99 U	0.099 UJ	< 1.9 U	< 0.78 U	< 0.74 U	< 1.9 U	< 0.74 U	< 0.63 U	< 1.4 U	< 0.74 U	< 0.70 U	< 1.7 U	< 0.76 U	< 0.67 U	< 0.60 U	< 1.4 U	< 1.2 U	< 2.6 U	< 0.87 U	< 3.8 UJ	< 0.80 U	< 2.3 UJ	0.13 UJ	< 1.5 U	< 3.2 U	< 2.0 U
Sodium	mg/kg	-	-	163 UJ	568	< 901 U	325 UJ	299 UJ	< 1340 U	188 UJ	311 UJ	292 UJ	120 UJ	470 UJ	122 UJ	444	347	266 UJ	231	385	176 UJ	605	677	225 UJ	615	232	137 UJ	216 UJ	280 UJ	418 UJ	70.9 UJ	287 UJ	499	148 UJ	104 UJ	100 UJ	207 UJ	335 UJ
Thallium	mg/kg	-	-	< 12.4 U	< 10.9 U	< 3.6 U	< 4.6 U	< 2.0 U	< 5.4 U	< 2.5 U	< 2.3 U	< 7.6 U	< 2.0 U	< 10.5 U	< 3.9 U	< 7.8 U	< 7.4 U	< 19.1 U	< 7.4 U	< 6.3 U	< 13.9 U	< 7.4 U	< 7.0 U	< 17.1 U	< 7.6 U	< 6.7 U	< 6.0 U	0.78 UJ	< 2.4 U	< 5.2 U	< 1.7 U	< 7.5 UJ	< 8.0 U	< 4.7 U	< 1.7 U	< 3.0 U	< 6.4 U	< 19.6 U
Vanadium	mg/kg	-	-	39.9	7.0	19.8	15.3	3.7 UJ	18.0	8.5	11.3	14.9 UJ	11.2	8.0 UJ	7.8 UJ	57.7 J	1.5 J	26.0 J	22.6 J	76.6 J	29.9 J	21.0 J	12.5 J	34.5 J	6.2 J	21.7 J	14.6 J	23.6 J	7.2	17.7	11.9	7.0 J	26.9	18.5 J	13.7	18.4	15.9	27.2 J
Zinc	mg/kg	**109**	10000	**1060 J**	18.1 J	94.9 J	**455 J**	< 5.1 UJ	63.2 J	67.3 J	64.0 J	50.2 J	69.1 J	22.0 J	22.5 J	**459 J**	1.3 UJ	85.8 J	**364 J**	**518 J**	**121 J**	**158 J**	8.7 J	73.8 J	1.6 UJ	106 J	30.9 J	35.0 J	**181 J**	**118 J**	51.9 J	< 12.6 UJ	8.9 J	29.3 J	**164**	81.0	31.5 J	97.6 J
SW7471B																																					
Mercury	mg/kg	**0.81**	2.8	0.093 UJ	< 0.13 U	0.047 UJ	0.069 UJ	< 0.10 U	< 0.30 U	0.054 UJ	< 0.12 U	0.11 UJ	0.043 UJ	< 0.13 U	0.047 UJ	< 0.025 U	< 0.024 U	0.12	0.26	< 0.020 UJ	0.089 J	0.016 UJ	< 0.022 UJ	0.070 J	< 0.024 UJ	0.27	< 0.019 U	0.10	< 0.15 U	0.092 UJ	< 0.11 U	< 0.024 U	< 0.027 U	0.085 UJ	0.024 UJ	0.041 UJ	0.16 UJ	0.12

Notes:

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

ug/kg = micrograms per kilogram

6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives

- = no SCO established

NA = not applicable/analyzed

Qualifiers:

U = Analyte analyzed for, but not detected above the sample's reported quantitation limit

J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample

J+ = Sample likely to have a high bias

J- = Sample likely to have a low bias

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.

R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.

B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.

P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).

PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

				SB-101-A	SB-101-B	SB-101-C	SB-102-A	SB-102-B	SB-102-C	SB-103-A	SB-103-B	SB-103-C	SB-104-A	SB-104-B	SB-104-C	SB-105-A	SB-105-B	SB-105-C	SB-105-D	SB-106-A	SB-106-B	SB-106-C	SB-107-A	SB-107-B	SB-107-C	SB-108-A	SB-108-B	SB-108-C	SB-109-A	SB-109-B	SB-109-C	SB-110-A	SB-110-B	SB-110-C	SB-110-D
			Soil Sample ID																														
			Start Depth (ft bgs)	0	8	12	0	4	12	0	4	12	0	4	14	0	4	10	12	0	4	14	0	6	13	0	8	10	0	4	16	0	4	17.5	10
			End Depth (ft bgs)	1	10	14	1	6	14	1	6	14	1	6	16	1	6	12	14	1	8	16	2	8	18	1	10	14	1	6	18	1	6	20	12.5
			Sample Date	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/11/2018	11/11/2018	11/11/2018	11/11/2018	11/11/2018	11/11/2018	11/11/2018	11/11/2018	11/11/2018	11/11/2018	11/11/2018	11/11/2018	11/11/2018
Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO																														
SW8081B																																	
4,4'-DDD	ug/kg	**3.3**	92000	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
4,4'-DDE	ug/kg	**3.3**	62000	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	0.89 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	0.59 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
4,4'-DDT	ug/kg	**3.3**	47000	1.1 UJ	< 2.5 UJ	< 2.1 UJ	0.68 UJ	< 2.1 UJ	< 2.0 UJ	**3.9 J**	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	2.6 J	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	**5.9 UJ**	< 1.9 UJ	< 38 UJ	**33 UJ**	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Aldrin	ug/kg	**5**	680	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Alpha-BHC	ug/kg	20	3400	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	1.1 UJ	< 2.1 UJ	< 2.0 UJ	1.3 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
alpha-Chlordane	ug/kg	94	24000	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Beta-BHC	ug/kg	**36**	3000	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Delta-BHC	ug/kg	40	500000	0.57 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Dieldrin	ug/kg	**5**	1400	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	0.93 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	**10 UJ**	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Endosulfan I	ug/kg	2400	200000	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Endosulfan II	ug/kg	2400	200000	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Endosulfan Sulfate	ug/kg	2400	200000	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Endrin	ug/kg	14	89000	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	1.1 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Endrin Aldehyde	ug/kg	-	-	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	0.98 UJ	< 2.1 UJ	< 2.0 UJ	6.1 J	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Endrin Ketone	ug/kg	-	-	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	6.3 J	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Gamma-BHC	ug/kg	100	9200	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Gamma-Chlordane	ug/kg			< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Heptachlor	ug/kg	42	15000	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Heptachlor Epoxide	ug/kg	-	-	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	< 2.0 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Methoxychlor	ug/kg	-	-	< 1.9 UJ	< 2.5 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.0 UJ	< 2.2 UJ	< 2.0 UJ	< 2.0 UJ	< 2.0 UJ	< 1.9 UJ	< 2.0 UJ	< 2.1 UJ	< 2.0 UJ	< 28 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 3.4 UJ	< 9.9 UJ	< 2.0 UJ	< 1.9 UJ	< 20 UJ	< 1.9 UJ	< 38 UJ	< 34 UJ	< 20 UJ	0.99 UJ	< 170 UJ	< 2.0 UJ	< 1.9 UJ	< 47 UJ
Toxaphene	ug/kg	-	-	< 19 UJ	< 25 UJ	< 21 UJ	< 21 UJ	< 21 UJ	< 20 UJ	< 22 UJ	< 20 UJ	< 20 UJ	< 20 UJ	< 19 UJ	< 20 UJ	< 21 UJ	< 20 UJ	< 280 UJ	< 21 UJ	< 21 UJ	< 21 UJ	< 34 UJ	< 99 UJ	< 20 UJ	< 19 UJ	< 200 UJ	< 19 UJ	< 380 UJ	< 340 UJ	< 200 UJ	< 20 UJ	< 1700 UJ	< 20 UJ	< 19 UJ	< 470 UJ
SW8082A																																	
Aroclor 1016	ug/kg			< 260 UJ	< 300 UJ	< 250 UJ	< 280 UJ	< 220 UJ	< 280 UJ	< 290 UJ	< 240 UJ	< 290 UJ	< 300 UJ	< 260 UJ	< 270 UJ	< 300 UJ	< 240 UJ	< 760 UJ	< 280 UJ	< 240 UJ	< 230 UJ	< 400 UJ	< 280 UJ	< 220 UJ	< 260 UJ	< 280 UJ	< 270 UJ	< 510 UJ	< 200 UJ	< 270 UJ	< 250 UJ	< 190 UJ	< 300 UJ	< 220 UJ	< 350 UJ
Aroclor 1221	ug/kg			< 260 UJ	< 300 UJ	< 250 UJ	< 280 UJ	< 220 UJ	< 280 UJ	< 290 UJ	< 240 UJ	< 290 UJ	< 300 UJ	< 260 UJ	< 270 UJ	< 300 UJ	< 240 UJ	< 760 UJ	< 280 UJ	< 240 UJ	< 230 UJ	< 400 UJ	< 280 UJ	< 220 UJ	< 260 UJ	< 280 UJ	< 270 UJ	< 510 UJ	< 200 UJ	< 270 UJ	< 250 UJ	< 190 UJ	< 300 UJ	< 220 UJ	< 350 UJ
Aroclor 1232	ug/kg			< 260 UJ	< 300 UJ	< 250 UJ	< 280 UJ	< 220 UJ	< 280 UJ	< 290 UJ	< 240 UJ	< 290 UJ	< 300 UJ	< 260 UJ	< 270 UJ	< 300 UJ	< 240 UJ	< 760 UJ	< 280 UJ	< 240 UJ	< 230 UJ	< 400 UJ	< 280 UJ	< 220 UJ	< 260 UJ	< 280 UJ	< 270 UJ	< 510 UJ	< 200 UJ	< 270 UJ	< 250 UJ	< 190 UJ	< 300 UJ	< 220 UJ	< 350 UJ
Aroclor 1242	ug/kg			< 260 UJ	< 300 UJ	< 250 UJ	< 280 UJ	< 220 UJ	< 280 UJ	< 290 UJ	< 240 UJ	< 290 UJ	< 300 UJ	< 260 UJ	< 270 UJ	< 300 UJ	< 240 UJ	< 760 UJ	< 280 UJ	< 240 UJ	< 230 UJ	< 400 UJ	< 280 UJ	< 220 UJ	< 260 UJ	< 280 UJ	< 270 UJ	< 510 UJ	< 200 UJ	< 270 UJ	< 250 UJ	< 190 UJ	< 300 UJ	< 220 UJ	< 350 UJ
Aroclor 1248	ug/kg	**100**	1000	< 260 UJ	< 300 UJ	< 250 UJ	< 280 UJ	< 220 UJ	< 280 UJ	< 290 UJ	< 240 UJ	< 290 UJ	< 300 UJ	< 260 UJ	< 270 UJ	< 300 UJ	< 240 UJ	< 760 UJ	< 280 UJ	< 240 UJ	< 230 UJ	< 400 UJ	< 280 UJ	< 220 UJ	< 260 UJ	< 280 UJ	< 270 UJ	< 510 UJ	< 200 UJ	< 270 UJ	< 250 UJ	< 190 UJ	< 300 UJ	< 220 UJ	< 350 UJ
Aroclor 1254	ug/kg			< 260 UJ	< 300 UJ	< 250 UJ	< 280 UJ	< 220 UJ	< 280 UJ	< 290 UJ	< 240 UJ	< 290 UJ	< 300 UJ	< 260 UJ	< 270 UJ	< 300 UJ	< 240 UJ	< 760 UJ	< 280 UJ	< 240 UJ	< 230 UJ	< 400 UJ	< 280 UJ	< 220 UJ	< 260 UJ	< 280 UJ	< 270 UJ	< 510 UJ	< 200 UJ	< 270 UJ	< 250 UJ	< 190 UJ	< 300 UJ	< 220 UJ	< 350 UJ
Aroclor 1260	ug/kg			< 260 UJ	< 300 UJ	< 250 UJ	< 280 UJ	< 220 UJ	< 280 UJ	< 290 UJ	< 240 UJ	< 290 UJ	< 300 UJ	< 260 UJ	< 270 UJ	< 300 UJ	< 240 UJ	< 760 UJ	< 280 UJ	< 240 UJ	< 230 UJ	< 400 UJ	< 280 UJ	< 220 UJ	< 260 UJ	< 280 UJ	< 270 UJ	< 510 UJ	< 200 UJ	< 270 UJ	< 250 UJ	< 190 UJ	< 300 UJ	< 220 UJ	< 350 UJ
Aroclor 1262	ug/kg			< 260 UJ	< 300 UJ	< 250 UJ	< 280 UJ	< 220 UJ	< 280 UJ	< 290 UJ	< 240 UJ	< 290 UJ	< 300 UJ	< 260 UJ	< 270 UJ	< 300 UJ	< 240 UJ	< 760 UJ	< 280 UJ	< 240 UJ	< 230 UJ	< 400 UJ	< 280 UJ	< 220 UJ	< 260 UJ	< 280 UJ	< 270 UJ	< 510 UJ	< 200 UJ	< 270 UJ	< 250 UJ	< 190 UJ	< 300 UJ	< 220 UJ	< 350 UJ
Aroclor 1268	ug/kg			< 260 UJ	< 300 UJ	< 250 UJ	< 280 UJ	< 220 UJ	< 280 UJ	< 290 UJ	< 240 UJ	< 290 UJ	< 300 UJ	< 260 UJ	< 270 UJ	< 300 UJ	< 240 UJ	< 760 UJ	< 280 UJ	< 240 UJ	< 230 UJ	< 400 UJ	< 280 UJ	< 220 UJ	< 260 UJ	< 280 UJ	< 270 UJ	< 510 UJ	< 200 UJ	< 270 UJ	< 250 UJ	< 190 UJ	< 300 UJ	< 220 UJ	< 350 UJ

Notes:
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
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6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives
- = no SCO established
NA = not applicable/analyzed
Qualifiers:
U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J+ = Sample likely to have a high bias
J- = Sample likely to have a low bias
UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).
PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

				SB-111-A	SB-111-B	SB-111-C	SB-112-A	SB-112-B	SB-112-C	SB-113-A	SB-113-B	SB-113-C	SB-114-A	SB-114-B	SB-114-C	SB-115-A	SB-115-B	SB-115-C	SB-116-A	SB-116-B	SB-116-C	SB-117-A	SB-117-B	SB-117-C	SB-117-D	SB-118-A	SB-118-B	SB-118-C	SB-119-A	SB-119-B	SB-119-C	SB-120-A	SB-120-B	SB-120-C
			Soil Sample ID																													
			Start Depth (ft bgs)	0	6	18	0	8	12	0	6	18	0	8	10	0	7	15	0	5	14	0	4	10	16	0	6	16	0	8	13	0	4	16
			End Depth (ft bgs)	1	8	20	1	10	15	1	8	20	1	10	20	1	10	17	1	7	18	2	7	12	20	1	8	20	1	10	15	1	6	20
			Sample Date	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018
Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO																													
SW8081B																																
4,4'-DDD	ug/kg	**3.3**	92000	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
4,4'-DDE	ug/kg	**3.3**	62000	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	1.6 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
4,4'-DDT	ug/kg	**3.3**	47000	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	**9.4 UJ**	< 2.2 UJ	< 2.1 UJ	2.4 J	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	**5.2 UJ**	< 2.0 UJ	< 2.0 UJ	**20 UJ**	< 1.9 UJ	< 2.1 UJ	0.73 UJ	< 2.0 UJ	< 2.4 UJ
Aldrin	ug/kg	**5**	680	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Alpha-BHC	ug/kg	20	3400	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	7.5 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	4.1 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	0.98 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
alpha-Chlordane	ug/kg	94	24000	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Beta-BHC	ug/kg	**36**	3000	< 6.1 UJ	5.8 UJ	< 6.4 UJ	< 5.5 UJ	**130 UJ**	< 16 UJ	< 66 UJ	6.3 UJ	< 6.1 UJ	5.1 UJ	23 UJ	31 UJ	5.8 UJ	< 1.9 UJ	< 1.9 UJ	13 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	4.7 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Delta-BHC	ug/kg	40	500000	< 120 UJ	< 120 U	< 6.4 U	< 110 U	< 140 U	< 3300 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	0.44 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Dieldrin	ug/kg	**5**	1400	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Endosulfan I	ug/kg	2400	200000	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Endosulfan II	ug/kg	2400	200000	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	7.2 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Endosulfan Sulfate	ug/kg	2400	200000	< 120 UJ	< 120 U	< 6.4 U	< 110 U	< 140 U	< 3300 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	0.79 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Endrin	ug/kg	14	89000	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Endrin Aldehyde	ug/kg	-	-	< 120 UJ	< 120 U	< 6.4 U	< 110 U	< 140 U	< 3300 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Endrin Ketone	ug/kg	-	-	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Gamma-BHC	ug/kg	100	9200	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	0.47 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Gamma-Chlordane	ug/kg			< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Heptachlor	ug/kg	42	15000	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Heptachlor Epoxide	ug/kg	-	-	< 6.1 UJ	< 6.0 U	< 6.4 U	< 5.5 U	< 140 U	< 16 UJ	< 66 U	< 7.0 UJ	< 6.1 U	< 6.0 U	< 29 U	< 31 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Methoxychlor	ug/kg	-	-	< 12 UJ	< 12 U	< 13 U	< 11 U	< 270 U	< 33 UJ	< 130 U	< 14 UJ	< 12 U	< 12 U	< 59 U	< 62 U	< 20 UJ	< 1.9 UJ	< 1.9 UJ	< 19 UJ	< 2.2 UJ	< 2.1 UJ	< 1.9 UJ	< 2.0 UJ	< 2.8 UJ	< 2.0 UJ	< 10 UJ	< 2.0 UJ	< 2.0 UJ	< 41 UJ	< 1.9 UJ	< 2.1 UJ	< 180 UJ	< 2.0 UJ	< 2.4 UJ
Toxaphene	ug/kg	-	-	< 120 UJ	< 120 U	< 130 U	< 110 U	< 2700 U	< 330 UJ	< 1300 U	< 140 UJ	< 120 U	< 120 U	< 590 U	< 620 U	< 200 UJ	< 19 UJ	< 19 UJ	< 190 UJ	< 22 UJ	< 21 UJ	< 19 UJ	< 20 UJ	< 28 UJ	< 20 UJ	< 100 UJ	< 20 UJ	< 20 UJ	< 410 UJ	< 19 UJ	< 21 UJ	< 1800 UJ	< 20 UJ	< 24 UJ
SW8082A																																
Aroclor 1016	ug/kg			< 61 UJ	< 120 UJ	< 67 UJ	< 58 UJ	< 140 UJ	< 160 UJ	< 65 UJ	< 140 UJ	< 64 UJ	< 62 UJ	< 120 UJ	< 120 UJ	< 250 UJ	< 250 UJ	< 220 UJ	< 210 UJ	< 280 UJ	< 280 UJ	< 250 UJ	< 210 UJ	< 320 UJ	< 250 UJ	< 260 UJ	< 250 UJ	< 250 UJ	< 240 UJ	< 230 UJ	< 230 UJ	< 210 UJ	< 220 UJ	< 290 UJ
Aroclor 1221	ug/kg			< 61 UJ	< 120 UJ	< 67 UJ	< 58 UJ	< 140 UJ	< 160 UJ	< 65 UJ	< 140 UJ	< 64 UJ	< 62 UJ	< 120 UJ	< 120 UJ	< 250 UJ	< 250 UJ	< 220 UJ	< 210 UJ	< 280 UJ	< 280 UJ	< 250 UJ	< 210 UJ	< 320 UJ	< 250 UJ	< 260 UJ	< 250 UJ	< 250 UJ	< 240 UJ	< 230 UJ	< 230 UJ	< 210 UJ	< 220 UJ	< 290 UJ
Aroclor 1232	ug/kg			< 61 UJ	< 120 UJ	< 67 UJ	< 58 UJ	< 140 UJ	< 160 UJ	< 65 UJ	< 140 UJ	< 64 UJ	< 62 UJ	< 120 UJ	< 120 UJ	< 250 UJ	< 250 UJ	< 220 UJ	< 210 UJ	< 280 UJ	< 280 UJ	< 250 UJ	< 210 UJ	< 320 UJ	< 250 UJ	< 260 UJ	< 250 UJ	< 250 UJ	< 240 UJ	< 230 UJ	< 230 UJ	< 210 UJ	< 220 UJ	< 290 UJ
Aroclor 1242	ug/kg			< 61 UJ	< 120 UJ	< 67 UJ	< 58 UJ	< 140 UJ	< 160 UJ	< 65 UJ	< 140 UJ	< 64 UJ	< 62 UJ	< 120 UJ	< 120 UJ	< 250 UJ	< 250 UJ	< 220 UJ	< 210 UJ	< 280 UJ	< 280 UJ	< 250 UJ	< 210 UJ	< 320 UJ	< 250 UJ	< 260 UJ	< 250 UJ	< 250 UJ	< 240 UJ	< 230 UJ	< 230 UJ	< 210 UJ	< 220 UJ	< 290 UJ
Aroclor 1248	ug/kg	**100**	1000	< 61 UJ	< 120 UJ	< 67 UJ	< 58 UJ	< 140 UJ	< 160 UJ	< 65 UJ	< 140 UJ	< 64 UJ	< 62 UJ	< 120 UJ	< 120 UJ	< 250 UJ	< 250 UJ	< 220 UJ	< 210 UJ	< 280 UJ	< 280 UJ	< 250 UJ	< 210 UJ	< 320 UJ	< 250 UJ	< 260 UJ	< 250 UJ	< 250 UJ	< 240 UJ	< 230 UJ	< 230 UJ	< 210 UJ	< 220 UJ	< 290 UJ
Aroclor 1254	ug/kg			< 61 UJ	< 120 UJ	< 67 UJ	< 58 UJ	< 140 UJ	< 160 UJ	< 65 UJ	< 140 UJ	< 64 UJ	< 62 UJ	< 120 UJ	< 120 UJ	< 250 UJ	< 250 UJ	< 220 UJ	< 210 UJ	< 280 UJ	< 280 UJ	< 250 UJ	< 210 UJ	< 320 UJ	< 250 UJ	< 260 UJ	< 250 UJ	< 250 UJ	< 240 UJ	< 230 UJ	< 230 UJ	< 210 UJ	< 220 UJ	< 290 UJ
Aroclor 1260	ug/kg			< 61 UJ	< 120 UJ	< 67 UJ	< 58 UJ	< 140 UJ	< 160 UJ	< 65 UJ	< 140 UJ	< 64 UJ	< 62 UJ	< 120 UJ	< 120 UJ	< 250 UJ	< 250 UJ	< 220 UJ	< 210 UJ	< 280 UJ	< 280 UJ	< 250 UJ	< 210 UJ	< 320 UJ	< 250 UJ	< 260 UJ	< 250 UJ	< 250 UJ	< 240 UJ	< 230 UJ	< 230 UJ	< 210 UJ	< 220 UJ	< 290 UJ
Aroclor 1262	ug/kg			< 61 UJ	< 120 UJ	< 67 UJ	< 58 UJ	< 140 UJ	< 160 UJ	< 65 UJ	< 140 UJ	< 64 UJ	< 62 UJ	< 120 UJ	< 120 UJ	< 250 UJ	< 250 UJ	< 220 UJ	< 210 UJ	< 280 UJ	< 280 UJ	< 250 UJ	< 210 UJ	< 320 UJ	< 250 UJ	< 260 UJ	< 250 UJ	< 250 UJ	< 240 UJ	< 230 UJ	< 230 UJ	< 210 UJ	< 220 UJ	< 290 UJ
Aroclor 1268	ug/kg			< 61 UJ	< 120 UJ	< 67 UJ	< 58 UJ	< 140 UJ	< 160 UJ	< 65 UJ	< 140 UJ	< 64 UJ	< 62 UJ	< 120 UJ	< 120 UJ	< 250 UJ	< 250 UJ	< 220 UJ	< 210 UJ	< 280 UJ	< 280 UJ	< 250 UJ	< 210 UJ	< 320 UJ	< 250 UJ	< 260 UJ	< 250 UJ	< 250 UJ	< 240 UJ	< 230 UJ	< 230 UJ	< 210 UJ	< 220 UJ	< 290 UJ

Notes:
ft bgs = feet below ground surface
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- = no SCO established
NA = not applicable/analyzed
Qualifiers:
U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J+ = Sample likely to have a high bias
J- = Sample likely to have a low bias
UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).
PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

			Soil Sample ID	SB-121-A	SB-121-B	SB-121-C	SB-121-D	SB-122-A	SB-122-B	SB-122-C	SB-123-A	SB-123-B	SB-123-C	SB-124-A	SB-124-B	SB-124-C	SB-125-A	SB-125-B	SB-125-C	SB-126-A	SB-126-B	SB-126-C	SB-127-A	SB-127-B	SB-127-C	SB-128-A	SB-128-B	SB-128-C	SB-129-A	SB-129-B	SB-129-C	SB-130-A	SB-130-B	SB-130-C
			Start Depth (ft bgs)	0	8	17	10	0	8	18	0	10	18	0	12	18	0	5	16.5	0	1	14.5	0	5	18	0	5	14	0	6	16	0	6	15
			End Depth (ft bgs)	1	10	20	12	2	10	20	1	12	20	1	14	20	1	6	18	1	4	15.5	5	10	20	2	7	16	2	7	17	3	10	18
			Sample Date	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018
Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO																																
SW8081B																																			
4,4'-DDD	ug/kg	**3.3**	92000	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	**14 UJ**	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	< 6.1 UJ	< 6.1 UJ	< 110 UJ	< 6.3 UJ	**6.4 J**	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
4,4'-DDE	ug/kg	**3.3**	62000	< 120 U	< 30 U	< 61 U	< 11 U	**7.3**	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	1.8 UJ	< 6.1 UJ	< 110 UJ	< 6.3 UJ	**3.4 UJ**	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
4,4'-DDT	ug/kg	**3.3**	47000	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	**26 UJ**	< 11 UJ	< 5.8 U	< 6.1 UJ	< 6.1 UJ	< 110 UJ	< 6.3 UJ	**5.4 UJ**	**11 UJ**	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
Aldrin	ug/kg	**5**	680	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	< 6.1 UJ	< 6.1 UJ	< 110 UJ	< 6.3 UJ	< 5.9 UJ	< 12 UJ	< 28 UJ	< 110 UJ	3.6 UJ	< 6.1 UJ	2.0 UJ	**8.2 UJ**	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	1.0 UJ	< 6.4 UJ	< 5.9 UJ
Alpha-BHC	ug/kg	20	3400	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	< 6.1 UJ	< 6.1 UJ	< 110 UJ	< 6.3 UJ	< 5.9 UJ	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
alpha-Chlordane	ug/kg	94	24000	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	< 6.1 UJ	< 6.1 UJ	< 110 UJ	< 6.3 UJ	< 5.9 UJ	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
Beta-BHC	ug/kg	**36**	3000	< 120 UJ	< 30 UJ	< 61 UJ	< 11 UJ	3.1 UJ	3.2 UJ	< 15 UJ	< 31 UJ	< 30 UJ	2.5 UJ	< 30 U	< 11 UJ	4.1 UJ	< 6.1 UJ	26 J	**190 J**	< 6.3 UJ	< 5.9 UJ	< 12 UJ	27 UJ	**320 J**	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	3.1 UJ	< 6.3 UJ	6.7 J	< 6.8 UJ	2.3 UJ	< 5.9 UJ
Delta-BHC	ug/kg	40	500000	< 120 U	< 30 U	< 61 U	< 1100 U	< 290 U	< 110 U	< 310 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 1100 UJ	< 5.8 U	< 120 UJ	< 6.1 UJ	< 110 UJ	< 63 UJ	< 120 UJ	< 1200 UJ	< 28 UJ	< 110 UJ	< 190 UJ	< 120 UJ	< 110 UJ	< 200 UJ	< 62 UJ	< 63 UJ	< 5.7 UJ	< 140 UJ	< 640 UJ	< 59 UJ
Dieldrin	ug/kg	**5**	1400	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	< 6.1 UJ	< 6.1 UJ	< 110 UJ	1.8 UJ	< 5.9 UJ	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
Endosulfan I	ug/kg	2400	200000	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	< 6.1 UJ	< 6.1 UJ	< 110 UJ	< 6.3 UJ	< 5.9 UJ	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
Endosulfan II	ug/kg	2400	200000	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	2.0 UJ	< 6.1 UJ	< 110 UJ	< 6.3 UJ	< 5.9 UJ	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
Endosulfan Sulfate	ug/kg	2400	200000	< 120 U	< 30 U	< 61 U	< 1100 U	< 290 U	< 110 U	< 310 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 1100 UJ	< 5.8 U	< 120 UJ	< 6.1 UJ	< 110 UJ	< 63 UJ	< 120 UJ	< 1200 UJ	< 28 UJ	< 110 UJ	< 190 UJ	< 120 UJ	< 110 UJ	< 200 UJ	< 62 UJ	< 63 UJ	< 5.7 UJ	< 140 UJ	< 640 UJ	< 59 UJ
Endrin	ug/kg	14	89000	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	< 6.1 UJ	< 6.1 UJ	< 110 UJ	2.9 UJ	< 5.9 UJ	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
Endrin Aldehyde	ug/kg	-	-	< 120 U	< 30 U	< 61 U	< 1100 U	< 290 U	< 110 U	< 310 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 1100 UJ	< 5.8 U	< 120 UJ	< 6.1 UJ	< 110 UJ	< 63 UJ	< 120 UJ	< 1200 UJ	< 28 UJ	< 110 UJ	< 190 UJ	< 120 UJ	< 110 UJ	< 200 UJ	< 62 UJ	< 63 UJ	< 5.7 UJ	< 140 UJ	< 640 UJ	< 59 UJ
Endrin Ketone	ug/kg	-	-	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	2.1 UJ	< 6.1 UJ	< 110 UJ	3.2 UJ	< 5.9 UJ	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
Gamma-BHC	ug/kg	100	9200	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	< 6.1 UJ	< 6.1 UJ	< 110 UJ	< 6.3 UJ	< 5.9 UJ	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
Gamma-Chlordane	ug/kg			< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	< 6.1 UJ	< 6.1 UJ	< 110 UJ	< 6.3 UJ	< 5.9 UJ	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
Heptachlor	ug/kg	42	15000	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	< 6.1 UJ	< 6.1 UJ	< 110 UJ	< 6.3 UJ	< 5.9 UJ	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
Heptachlor Epoxide	ug/kg	-	-	< 120 U	< 30 U	< 61 U	< 11 U	< 5.9 U	< 5.6 U	< 15 UJ	< 31 UJ	< 30 UJ	< 6.2 U	< 30 U	< 11 UJ	< 5.8 U	< 6.1 UJ	< 6.1 UJ	< 110 UJ	6.7 J	3.5 UJ	< 12 UJ	< 28 UJ	< 110 UJ	< 19 UJ	< 6.1 UJ	< 5.6 UJ	< 20 UJ	< 6.2 UJ	< 6.3 UJ	< 5.7 UJ	< 6.8 UJ	< 6.4 UJ	< 5.9 UJ
Methoxychlor	ug/kg	-	-	< 240 U	< 61 U	< 120 U	< 23 U	< 12 U	< 11 U	< 31 UJ	< 61 UJ+	< 60 UJ+	< 12 UJ+	< 60 UJ+	< 23 UJ+	< 12 UJ+	< 61 UJ+	< 12 UJ+	< 220 UJ+	< 13 UJ+	< 12 UJ+	< 25 UJ+	< 57 UJ+	< 230 UJ+	< 38 UJ+	< 12 UJ+	< 11 UJ+	< 41 UJ+	< 12 UJ+	< 13 UJ+	< 11 UJ+	< 14 UJ+	< 13 UJ+	< 12 UJ+
Toxaphene	ug/kg	-	-	< 2400 U	< 610 U	< 1200 U	< 230 U	< 120 U	< 110 U	< 310 UJ	< 610 UJ	< 600 UJ	< 120 U	< 600 U	< 230 UJ	< 120 U	< 120 UJ	< 120 UJ	< 2200 UJ	< 130 UJ	< 120 UJ	< 250 UJ	< 570 UJ	< 2300 UJ	< 380 UJ	< 120 UJ	< 110 UJ	< 410 UJ	< 120 UJ	< 130 UJ	< 110 UJ	< 140 UJ	< 130 UJ	< 120 UJ
SW8082A																																			
Aroclor 1016	ug/kg			< 62 UJ	< 120 UJ	< 62 UJ	< 110 UJ	< 300 UJ	< 110 UJ	< 150 UJ	< 62 U	< 120 U	< 61 U	< 61 U	< 120 U	< 58 U	< 61 UJ	< 120 U	< 220 UJ	< 64 UJ	< 59 UJ	< 120 U	< 110 U	< 110 U	< 190 U	< 60 U	< 57 U	< 200 U	< 63 U	< 130 U	< 58 U	< 66 U	< 64 UJ	< 60 U
Aroclor 1221	ug/kg			< 62 UJ	< 120 UJ	< 62 UJ	< 110 UJ	< 300 UJ	< 110 UJ	< 150 UJ	< 62 U	< 120 U	< 61 U	< 61 U	< 120 U	< 58 U	< 61 UJ	< 120 U	< 220 UJ	< 64 UJ	< 59 UJ	< 120 U	< 110 U	< 110 U	< 190 U	< 60 U	< 57 U	< 200 U	< 63 U	< 130 U	< 58 U	< 66 U	< 64 UJ	< 60 U
Aroclor 1232	ug/kg			< 62 UJ	< 120 UJ	< 62 UJ	< 110 UJ	< 300 UJ	< 110 UJ	< 150 UJ	< 62 U	< 120 U	< 61 U	< 61 U	< 120 U	< 58 U	< 61 UJ	< 120 U	< 220 UJ	< 64 UJ	< 59 UJ	< 120 U	< 110 U	< 110 U	< 190 U	< 60 U	< 57 U	< 200 U	< 63 U	< 130 U	< 58 U	< 66 U	< 64 UJ	< 60 U
Aroclor 1242	ug/kg			< 62 UJ	< 120 UJ	< 62 UJ	< 110 UJ	< 300 UJ	< 110 UJ	< 150 UJ	< 62 U	< 120 U	< 61 U	< 61 U	< 120 U	< 58 U	< 61 UJ	< 120 U	< 220 UJ	< 64 UJ	< 59 UJ	< 120 U	< 110 U	< 110 U	< 190 U	< 60 U	< 57 U	< 200 U	< 63 U	< 130 U	< 58 U	< 66 U	< 64 UJ	< 60 U
Aroclor 1248	ug/kg	**100**	1000	< 62 UJ	< 120 UJ	< 62 UJ	< 110 UJ	< 300 UJ	< 110 UJ	< 150 UJ	< 62 U	< 120 U	< 61 U	< 61 U	< 120 U	< 58 U	< 61 UJ	< 120 U	< 220 UJ	< 64 UJ	< 59 UJ	< 120 U	< 110 U	< 110 U	< 190 U	< 60 U	< 57 U	< 200 U	< 63 U	< 130 U	< 58 U	< 66 U	< 64 UJ	< 60 U
Aroclor 1254	ug/kg			< 62 UJ	< 120 UJ	< 62 UJ	< 110 UJ	< 300 UJ	< 110 UJ	< 150 UJ	< 62 U	< 120 U	< 61 U	< 61 U	< 120 U	< 58 U	< 61 UJ	< 120 U	< 220 UJ	< 64 UJ	**190 J**	< 120 U	< 110 U	< 110 U	< 190 U	< 60 U	< 57 U	< 200 U	< 63 U	< 130 U	< 58 U	< 66 U	< 64 UJ	< 60 U
Aroclor 1260	ug/kg			37 UJ	< 120 UJ	< 62 UJ	< 110 UJ	< 300 UJ	< 110 UJ	< 150 UJ	< 62 U	< 120 U	< 61 U	< 61 U	< 120 U	< 58 U	36 UJ	< 120 U	< 220 UJ	**140 J**	< 59 UJ	< 120 U	< 110 U	< 110 U	< 190 U	**200**	< 57 U	< 200 U	< 63 U	< 130 U	< 58 U	< 66 U	< 64 UJ	< 60 U
Aroclor 1262	ug/kg			< 62 UJ	< 120 UJ	< 62 UJ	< 110 UJ	< 300 UJ	< 110 UJ	< 150 UJ	< 62 U	< 120 U	< 61 U	< 61 U	< 120 U	< 58 U	< 61 UJ	< 120 U	< 220 UJ	< 64 UJ	< 59 UJ	< 120 U	< 110 U	< 110 U	< 190 U	< 60 U	< 57 U	< 200 U	< 63 U	< 130 U	< 58 U	< 66 U	< 64 UJ	< 60 U
Aroclor 1268	ug/kg			< 62 UJ	< 120 UJ	< 62 UJ	< 110 UJ	< 300 UJ	< 110 UJ	< 150 UJ	< 62 U	< 120 U	< 61 U	< 61 U	< 120 U	< 58 U	< 61 UJ	< 120 U	< 220 UJ	< 64 UJ	< 59 UJ	< 120 U	< 110 U	< 110 U	< 190 U	< 60 U	< 57 U	< 200 U	< 63 U	< 130 U	< 58 U	< 66 U	< 64 UJ	< 60 U

Notes:
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives
- = no SCO established
NA = not applicable/analyzed
Qualifiers:
U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J+ = Sample likely to have a high bias
J- = Sample likely to have a low bias
UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (*i.e.*, dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).
PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO	Soil Sample ID	SB-131A	SB-131B	SB-131C	SB-132A	SB-132B	SB-132C	SB-133A	SB-133B	SB-133C	SB-133D	SB-134A	SB-134B	SB-134C	SB-135A	SB-135B	SB-135C	SB-136-A	SB-136-B	SB-136-C	SB-136-D	SB-137-A	SB-137-B	SB-137-C	SB-138-A	SB-138-B	SB-138-C	SB-139A	SB-139B	SB-139C	SB-139D	SB-140A	SB-140B	SB-140C	SB-141A	SB-141B	SB-141C
				Start Depth (ft bgs)	0	6	14	0	14	17	0	4	17	14	0	6	12	0	6	18	0	5	17	12	0	4	14	0	5	15	0	6	13	17	0	15	17	0	5	18
				End Depth (ft bgs)	1	8	16	2	16	19	1	6	19	16	1	8	14	2	8	20	1	8	20	15	1	5	16	2	8	17	2	8	15	18	2	17	19	2	7	20
				Sample Date	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018
SW8081B																																						
4,4'-DDD	ug/kg	**3.3**	92000		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	2.9 UJ	< 6.9 U	< 8.8 U
4,4'-DDE	ug/kg	**3.3**	62000		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	2.9 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	1.9 UJ	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
4,4'-DDT	ug/kg	**3.3**	47000		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	**4.9 UJ**	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	**7.9**	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
Aldrin	ug/kg	**5**	680		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
Alpha-BHC	ug/kg	20	3400		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
alpha-Chlordane	ug/kg	94	24000		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
Beta-BHC	ug/kg	**36**	3000		< 5.6 UJ	29 J	< 9.9 UJ	< 5.8 UJ	**59 UJ**	34 UJ	< 6.6 UJ	2.8 UJ	4.8 UJ	< 16 UJ	< 5.9 UJ	27 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	**84 UJ**	< 14 U	**44 UJ**	< 6.9 U	< 5.9 U	4.6 UJ	< 6.2 UJ	3.9 UJ	< 180 U	< 5.8 UJ	8.5 J	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	10 J	< 6.0 UJ	11 J	< 8.8 U
Delta-BHC	ug/kg	40	500000		< 5.6 UJ	< 29 UJ	< 200 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 62 UJ	< 6.4 UJ	< 180 U	< 120 UJ	< 6.2 UJ	< 140 UJ	< 120 UJ	< 5.9 UJ	< 480 UJ	< 8.1 U	< 120 UJ	< 6.9 U	< 8.8 U
Dieldrin	ug/kg	**5**	1400		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
Endosulfan I	ug/kg	2400	200000		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
Endosulfan II	ug/kg	2400	200000		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	3.0 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
Endosulfan Sulfate	ug/kg	2400	200000		< 5.6 UJ	< 29 UJ	< 200 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	20 J	< 300 UJ	< 29 UJ	< 200 UJ	< 280 UJ	< 36 UJ	< 5.7 UJ	< 600 U	< 63 U	< 720 U	< 67 U	< 6.9 U	< 300 U	< 1200 U	< 62 UJ	< 320 UJ	< 180 U	< 120 UJ	< 6.2 UJ	< 140 UJ	< 120 UJ	< 120 UJ	< 480 UJ	< 8.1 U	< 120 UJ	< 6.9 U	< 8.8 U
Endrin	ug/kg	14	89000		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
Endrin Aldehyde	ug/kg	-	-		< 110 UJ	< 29 UJ	< 200 UJ	< 290 UJ	< 62 UJ	< 36 UJ	< 130 UJ	< 300 UJ	< 8.1 UJ	< 800 UJ	< 300 UJ	< 29 UJ	< 200 UJ	< 280 UJ	< 36 UJ	< 5.7 UJ	< 600 U	< 63 U	< 720 U	< 67 U	< 6.9 U	< 300 U	< 1200 U	< 62 UJ	< 320 UJ	< 180 U	< 120 UJ	< 6.2 UJ	< 140 UJ	< 120 UJ	< 120 UJ	< 480 UJ	< 8.1 U	< 120 UJ	< 6.9 U	< 8.8 U
Endrin Ketone	ug/kg	-	-		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
Gamma-BHC	ug/kg	100	9200		< 5.6 UJ	< 29 UJ	< 200 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 120 UJ	< 6.2 UJ	< 140 UJ	< 120 UJ	< 120 UJ	< 480 UJ	< 8.1 U	< 120 UJ	< 6.9 U	< 8.8 U
Gamma-Chlordane	ug/kg				< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
Heptachlor	ug/kg	42	15000		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	6.4 UJ	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
Heptachlor Epoxide	ug/kg	-	-		< 5.6 UJ	< 29 UJ	< 9.9 UJ	< 5.8 UJ	< 62 UJ	< 36 UJ	< 6.6 UJ	< 6.0 UJ	< 8.1 UJ	< 16 UJ	< 5.9 UJ	< 29 UJ	< 200 UJ	< 5.6 UJ	< 36 UJ	< 5.7 UJ	< 6.0 U	< 63 U	< 14 U	< 67 U	< 6.9 U	< 5.9 U	< 12 U	< 6.2 UJ	< 6.4 UJ	< 180 U	< 5.8 UJ	< 6.2 UJ	< 14 UJ	< 120 UJ	< 5.9 UJ	< 9.6 UJ	< 8.1 U	< 6.0 UJ	< 6.9 U	< 8.8 U
Methoxychlor	ug/kg	-	-		< 11 UJ+	< 59 UJ+	< 20 UJ+	< 12 UJ+	< 120 UJ+	< 72 UJ+	< 13 UJ+	< 12 UJ+	< 16 UJ+	< 32 UJ+	< 12 UJ+	< 59 UJ+	< 390 UJ+	< 11 UJ+	< 71 UJ+	< 11 UJ+	< 12 UJ	< 130 UJ	< 29 UJ	< 130 UJ	< 14 U	< 12 U	< 23 UJ	< 12 UJ+	< 13 UJ+	< 370 UJ	< 12 UJ+	< 12 UJ+	< 28 UJ+	< 250 UJ	< 12 UJ	< 19 UJ	< 16 UJ	< 12 U	< 14 UJ	< 18 UJ
Toxaphene	ug/kg	-	-		< 110 UJ	< 590 UJ	< 200 UJ	< 120 UJ	< 1200 UJ	< 720 UJ	< 130 UJ	< 120 UJ	< 160 UJ	< 320 UJ	< 120 UJ	< 590 UJ	< 3900 UJ	< 110 UJ	< 710 UJ	< 110 UJ	< 120 U	< 1300 U	< 290 U	< 1300 U	< 140 U	< 120 U	< 230 U	< 120 UJ	< 130 UJ	< 3700 U	< 120 UJ	< 120 UJ	< 280 UJ	< 2500 UJ	< 120 UJ	< 190 UJ	< 160 U	< 120 UJ	< 140 U	< 180 U
SW8082A																																						
Aroclor 1016	ug/kg				< 110 U	< 120 U	< 95 U	< 56 U	< 62 U	< 74 U	< 66 U	< 120 U	< 79 U	< 160 U	< 60 U	< 110 U	< 190 U	< 55 U	< 140 U	< 58 U	< 57 U	< 120 U	< 140 U	< 130 U	< 67 U	< 58 U	< 110 U	< 62 U	< 130 U	< 180 U	< 59 U	< 120 U	< 140 U	< 59 U	< 59 U	< 97 U	< 81 U	< 59 U	< 130 U	< 85 U
Aroclor 1221	ug/kg				< 110 U	< 120 U	< 95 U	< 56 U	< 62 U	< 74 U	< 66 U	< 120 U	< 79 U	< 160 U	< 60 U	< 110 U	< 190 U	< 55 U	< 140 U	< 58 U	< 57 U	< 120 U	< 140 U	< 130 U	< 67 U	< 58 U	< 110 U	< 62 U	< 130 U	< 180 U	< 59 U	< 120 U	< 140 U	< 59 U	< 59 U	< 97 U	< 81 U	< 59 U	< 130 U	< 85 U
Aroclor 1232	ug/kg				< 110 U	< 120 U	< 95 U	< 56 U	< 62 U	< 74 U	< 66 U	< 120 U	< 79 U	< 160 U	< 60 U	< 110 U	< 190 U	< 55 U	< 140 U	< 58 U	< 57 U	< 120 U	< 140 U	< 130 U	< 67 U	< 58 U	< 110 U	< 62 U	< 130 U	< 180 U	< 59 U	< 120 U	< 140 U	< 59 U	< 59 U	< 97 U	< 81 U	< 59 U	< 130 U	< 85 U
Aroclor 1242	ug/kg				< 110 U	< 120 U	< 95 U	< 56 U	< 62 U	< 74 U	< 66 U	< 120 U	< 79 U	< 160 U	< 60 U	< 110 U	< 190 U	< 55 U	< 140 U	< 58 U	< 57 U	< 120 U	< 140 U	< 130 U	< 67 U	< 58 U	< 110 U	< 62 U	< 130 U	< 180 U	< 59 U	< 120 U	< 140 U	< 59 U	< 59 U	< 97 U	< 81 U	< 59 U	< 130 U	< 85 U
Aroclor 1248	ug/kg	**100**	1000		< 110 U	< 120 U	< 95 U	< 56 U	< 62 U	< 74 U	< 66 U	< 120 U	< 79 U	< 160 U	< 60 U	< 110 U	< 190 U	< 55 U	< 140 U	< 58 U	< 57 U	< 120 U	< 140 U	< 130 U	< 67 U	< 58 U	< 110 U	< 62 U	< 130 U	< 180 U	< 59 U	< 120 U	< 140 U	< 59 U	< 59 U	< 97 U	< 81 U	< 59 U	< 130 U	< 85 U
Aroclor 1254	ug/kg				< 110 U	< 120 U	< 95 U	< 56 U	38 UJ	< 74 U	< 66 U	< 120 U	< 79 U	< 160 U	< 60 U	< 110 U	< 190 U	< 55 U	< 140 U	< 58 U	< 57 U	< 120 U	< 140 U	< 130 U	< 67 U	< 58 U	< 110 U	< 62 U	< 130 U	< 180 U	< 59 U	< 120 U	< 140 U	< 59 U	< 59 U	< 97 U	< 81 U	84	< 130 U	< 85 U
Aroclor 1260	ug/kg				< 110 U	< 120 U	< 95 U	< 56 U	< 62 U	< 74 U	67	< 120 U	< 79 U	< 160 U	< 60 U	< 110 U	< 190 U	**140**	< 140 U	< 58 U	< 57 U	< 120 U	< 140 U	< 130 U	< 67 U	< 58 U	< 110 U	< 62 U	< 130 U	< 180 U	< 59 U	< 120 U	< 140 U	< 59 U	< 59 U	< 97 U	< 81 U	< 59 U	< 130 U	< 85 U
Aroclor 1262	ug/kg				< 110 U	< 120 U	< 95 U	< 56 U	< 62 U	< 74 U	< 66 U	< 120 U	< 79 U	< 160 U	< 60 U	< 110 U	< 190 U	< 55 U	< 140 U	< 58 U	< 57 U	< 120 U	< 140 U	< 130 U	< 67 U	< 58 U	< 110 U	< 62 U	< 130 U	< 180 U	< 59 U	< 120 U	< 140 U	< 59 U	< 59 U	< 97 U	< 81 U	< 59 U	< 130 U	< 85 U
Aroclor 1268	ug/kg				< 110 U	< 120 U	< 95 U	< 56 U	< 62 U	< 74 U	< 66 U	< 120 U	< 79 U	< 160 U	< 60 U	< 110 U	< 190 U	< 55 U	< 140 U	< 58 U	< 57 U	< 120 U	< 140 U	< 130 U	< 67 U	< 58 U	< 110 U	< 62 U	< 130 U	< 180 U	< 59 U	< 120 U	< 140 U	< 59 U	< 59 U	< 97 U	< 81 U	< 59 U	< 130 U	< 85 U

Notes:
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives
- = no SCO established
NA = not applicable/analyzed
Qualifiers:
U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J+ = Sample likely to have a high bias
J- = Sample likely to have a low bias
UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).
PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

Soil Sample ID				**SB-142A**	**SB-142B**	**SB-142C**	**SB-143A**	**SB-143B**	**SB-143C**	**SB-144A**	**SB-144B**	**SB-144C**	**SB-145A**
Start Depth (ft bgs)				**0**	**8**	**15**	**0**	**8**	**13**	**0**	**7**	**15**	**0**
End Depth (ft bgs)				**1**	**10**	**16**	**1**	**10**	**15**	**2**	**9**	**17**	**1**
Sample Date				**10/19/2018**	**10/19/2018**	**10/19/2018**	**10/19/2018**	**10/19/2018**	**10/19/2018**	**10/19/2018**	**10/19/2018**	**10/19/2018**	**10/19/2018**
Analyte	Units	**6 NYCRR PART 375 UNRESTRICTED USE SCO**	6 NYCRR PART 375 COMMERCIAL USE SCO										
SW8081B													
4,4'-DDD	ug/kg	**3.3**	92000	< 140 U	< 63 UJ	< 9.2 U	< 110 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 990 UJ	< 28 UJ
4,4'-DDE	ug/kg	**3.3**	62000	2.6 UJ	< 63 UJ	< 9.2 U	< 5.7 UJ	< 30 U	< 150 U	**19 UJ**	< 5.9 U	< 20 UJ	< 28 UJ
4,4'-DDT	ug/kg	**3.3**	47000	**8.9**	< 63 UJ	< 9.2 U	**6.0 J**	< 30 U	< 150 U	**62 J**	< 5.9 U	< 20 UJ	< 28 UJ
Aldrin	ug/kg	**5**	680	< 7.0 U	< 63 UJ	< 9.2 U	< 5.7 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 20 UJ	< 28 UJ
Alpha-BHC	ug/kg	20	3400	< 7.0 U	< 63 UJ	< 9.2 U	< 5.7 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	8.9 UJ	< 28 UJ
alpha-Chlordane	ug/kg	94	24000	< 7.0 U	< 63 UJ	< 9.2 U	< 5.7 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 20 UJ	< 28 UJ
Beta-BHC	ug/kg	**36**	3000	< 7.0 U	**510 J**	< 9.2 U	< 5.7 UJ	15 UJ	**60 UJ**	< 33 UJ	< 5.9 U	< 20 UJ	< 28 UJ
Delta-BHC	ug/kg	40	500000	< 140 U	< 63 UJ	< 9.2 U	< 110 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 990 UJ	< 28 UJ
Dieldrin	ug/kg	**5**	1400	< 7.0 U	< 63 UJ	< 9.2 U	< 5.7 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 20 UJ	< 28 UJ
Endosulfan I	ug/kg	2400	200000	< 7.0 U	< 63 UJ	< 9.2 U	< 5.7 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 20 UJ	< 28 UJ
Endosulfan II	ug/kg	2400	200000	< 7.0 U	< 63 UJ	< 9.2 U	< 5.7 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 20 UJ	< 28 UJ
Endosulfan Sulfate	ug/kg	2400	200000	< 140 U	< 63 UJ	< 9.2 U	< 110 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 990 UJ	< 28 UJ
Endrin	ug/kg	14	89000	< 7.0 U	< 63 UJ	< 9.2 U	< 5.7 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 20 UJ	< 28 UJ
Endrin Aldehyde	ug/kg	-	-	< 140 UJ	< 63 UJ	< 9.2 U	< 110 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 990 UJ	< 28 UJ
Endrin Ketone	ug/kg	-	-	< 7.0 U	< 63 UJ	< 9.2 U	< 5.7 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 20 UJ	< 28 UJ
Gamma-BHC	ug/kg	100	9200	< 140 UJ	< 63 UJ	< 9.2 UJ	< 110 UJ	< 30 UJ	< 150 UJ	< 33 UJ	< 5.9 UJ	< 990 UJ	< 28 UJ
Gamma-Chlordane	ug/kg			< 7.0 U	< 63 UJ	< 9.2 U	< 5.7 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 20 UJ	< 28 UJ
Heptachlor	ug/kg	42	15000	< 7.0 U	< 63 UJ	< 9.2 U	< 5.7 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 20 UJ	< 28 UJ
Heptachlor Epoxide	ug/kg	-	-	< 7.0 U	< 63 UJ	< 9.2 U	< 5.7 UJ	< 30 U	< 150 U	< 33 UJ	< 5.9 U	< 20 UJ	< 28 UJ
Methoxychlor	ug/kg	-	-	< 14 UJ+	< 130 UJ+	< 18 UJ+	< 11 UJ+	< 59 UJ+	< 300 UJ+	< 66 UJ+	< 12 UJ+	< 40 UJ+	< 57 UJ+
Toxaphene	ug/kg	-	-	< 140 U	< 1300 UJ	< 180 U	< 110 UJ	< 590 U	< 3000 U	< 660 UJ	< 120 U	< 400 UJ	< 570 UJ
SW8082A													
Aroclor 1016	ug/kg			< 67 U	< 120 U	< 94 U	< 58 U	< 110 U	< 140 U	< 62 U	< 56 U	< 190 U	< 55 U
Aroclor 1221	ug/kg			< 67 U	< 120 U	< 94 U	< 58 U	< 110 U	< 140 U	< 62 U	< 56 U	< 190 U	< 55 U
Aroclor 1232	ug/kg			< 67 U	< 120 U	< 94 U	< 58 U	< 110 U	< 140 U	< 62 U	< 56 U	< 190 U	< 55 U
Aroclor 1242	ug/kg			< 67 U	< 120 U	< 94 U	< 58 U	< 110 U	< 140 U	< 62 U	< 56 U	< 190 U	< 55 U
Aroclor 1248	ug/kg	**100**	1000	< 67 U	< 120 U	< 94 U	< 58 U	< 110 U	< 140 U	< 62 U	< 56 U	< 190 U	< 55 U
Aroclor 1254	ug/kg			< 67 U	< 120 U	< 94 U	< 58 U	< 110 U	< 140 U	< 62 U	< 56 U	< 190 U	< 55 U
Aroclor 1260	ug/kg			32 U	< 120 U	< 94 U	< 58 U	< 110 U	< 140 U	< 62 U	< 56 U	< 190 U	< 55 U
Aroclor 1262	ug/kg			< 67 U	< 120 U	< 94 U	< 58 U	< 110 U	< 140 U	< 62 U	< 56 U	< 190 U	< 55 U
Aroclor 1268	ug/kg			< 67 U	< 120 U	< 94 U	< 58 U	< 110 U	< 140 U	< 62 U	< 56 U	< 190 U	< 55 U

Soil Sample ID	**SB-145B**	**SB-145C**	**SB-146-A**	**SB-146-B**	**SB-146-C**	**SB-147-A**	**SB-147-B**	**SB-147-C**	**SB-148-A**	**SB-148-B**	**SB-148-C**	**SB-148-D**
Start Depth (ft bgs)	**10**	**18**	**0**	**2**	**13**	**0**	**5**	**16**	**0**	**4**	**15**	**12**
End Depth (ft bgs)	**12**	**20**	**2**	**5**	**15**	**1**	**7**	**17**	**1.5**	**5**	**17.5**	**14**
Sample Date	**10/19/2018**	**10/19/2018**	**10/23/2018**	**10/23/2018**	**10/23/2018**	**10/23/2018**	**10/23/2018**	**10/23/2018**	**10/23/2018**	**10/23/2018**	**10/23/2018**	**10/23/2018**
SW8081B												
4,4'-DDD	< 68 U	< 200 U	< 2.1 U	< 2.1 U	< 11 UJ	**6.7 J**	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
4,4'-DDE	< 68 U	< 9.8 U	< 2.1 U	< 2.1 U	< 11 UJ	**4.9 J**	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
4,4'-DDT	< 68 U	< 9.8 U	< 2.1 U	< 2.1 U	< 11 UJ	**9.4 J**	< 1.7 U	< 3.7 U	0.57 UJ	< 2.0 U	< 4.7 U	< 2.1 U
Aldrin	< 68 U	< 9.8 U	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Alpha-BHC	< 68 U	3.1 UJ	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
alpha-Chlordane	< 68 U	< 9.8 U	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Beta-BHC	**63 UJ**	< 9.8 U	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Delta-BHC	< 68 U	< 200 U	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Dieldrin	< 68 U	< 9.8 U	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Endosulfan I	< 68 U	< 9.8 U	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Endosulfan II	< 68 U	< 9.8 U	< 2.1 U	< 2.1 U	2.6 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Endosulfan Sulfate	< 68 U	< 200 U	< 2.1 U	< 2.1 U	5.2 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Endrin	< 68 U	< 9.8 U	< 2.1 U	< 2.1 U	3.3 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Endrin Aldehyde	< 68 U	< 200 U	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Endrin Ketone	< 68 U	< 9.8 U	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Gamma-BHC	< 68 UJ	< 200 UJ	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	1.5 UJ	< 2.0 U	< 4.7 U	< 2.1 U
Gamma-Chlordane	< 68 U	< 9.8 U	< 2.1 U	< 2.1 U	< 11 UJ	2.4 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Heptachlor	< 68 U	< 9.8 U	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Heptachlor Epoxide	< 68 U	< 9.8 U	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Methoxychlor	< 140 UJ+	< 20 UJ+	< 2.1 U	< 2.1 U	< 11 UJ	< 4.2 UJ	< 1.7 U	< 3.7 U	< 2.0 U	< 2.0 U	< 4.7 U	< 2.1 U
Toxaphene	< 1400 U	< 200 U	< 21 U	< 21 U	< 110 UJ	< 42 UJ	< 17 U	< 37 U	< 20 U	< 20 U	< 47 U	< 21 U
SW8082A												
Aroclor 1016	< 130 U	< 95 U	< 220 UJ	< 280 UJ	< 480 UJ	< 290 UJ	< 250 UJ	< 550 UJ	< 220 UJ	< 280 UJ	< 700 UJ	< 300 UJ
Aroclor 1221	< 130 U	< 95 U	< 220 UJ	< 280 UJ	< 480 UJ	< 290 UJ	< 250 UJ	< 550 UJ	< 220 UJ	< 280 UJ	< 700 UJ	< 300 UJ
Aroclor 1232	< 130 U	< 95 U	< 220 UJ	< 280 UJ	< 480 UJ	< 290 UJ	< 250 UJ	< 550 UJ	< 220 UJ	< 280 UJ	< 700 UJ	< 300 UJ
Aroclor 1242	< 130 U	< 95 U	< 220 UJ	< 280 UJ	< 480 UJ	< 290 UJ	< 250 UJ	< 550 UJ	< 220 UJ	< 280 UJ	< 700 UJ	< 300 UJ
Aroclor 1248	< 130 U	< 95 U	< 220 UJ	< 280 UJ	< 480 UJ	< 290 UJ	< 250 UJ	< 550 UJ	< 220 UJ	< 280 UJ	< 700 UJ	< 300 UJ
Aroclor 1254	< 130 U	< 95 U	< 220 UJ	< 280 UJ	< 480 UJ	< 290 UJ	< 250 UJ	< 550 UJ	< 220 UJ	< 280 UJ	< 700 UJ	< 300 UJ
Aroclor 1260	< 130 U	< 95 U	< 220 UJ	< 280 UJ	< 480 UJ	< 290 UJ	< 250 UJ	< 550 UJ	< 220 UJ	< 280 UJ	< 700 UJ	< 300 UJ
Aroclor 1262	< 130 U	< 95 U	< 220 UJ	< 280 UJ	< 480 UJ	< 290 UJ	< 250 UJ	< 550 UJ	< 220 UJ	< 280 UJ	< 700 UJ	< 300 UJ
Aroclor 1268	< 130 U	< 95 U	< 220 UJ	< 280 UJ	< 480 UJ	< 290 UJ	< 250 UJ	< 550 UJ	< 220 UJ	< 280 UJ	< 700 UJ	< 300 UJ

Soil Sample ID	**SB-149-A**	**SB-149-B**	**SB-149-C**	**SB-150A**	**SB-150B**	**SB-150C**	**DUP-101018**	**DUP-101118**	**DUP-101618**	**DUP-101718**	**DUP-101818**	**DUP-101918**	**DUP-102318**
Start Depth (ft bgs)	**0**	**5**	**16**	**0**	**14**	**18**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
End Depth (ft bgs)	**1**	**6**	**18**	**2**	**16**	**20**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Sample Date	**10/23/2018**	**10/23/2018**	**10/23/2018**	**10/19/2018**	**10/19/2018**	**10/19/2018**	**10/10/2018**	**10/11/2018**	**10/16/2018**	**10/17/2018**	**10/18/2018**	**10/19/2018**	**10/23/2018**
SW8081B													
4,4'-DDD	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 1400 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 800 U	< 5.3 U
4,4'-DDE	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 16 U	< 5.3 U
4,4'-DDT	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 16 U	< 5.3 U
Aldrin	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 16 U	< 5.3 U
Alpha-BHC	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	4.9 UJ	< 5.3 U
alpha-Chlordane	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 16 U	< 5.3 U
Beta-BHC	< 9.0 UJ	< 820 UJ	< 3.9 UJ	3.7 UJ	8.8 UJ	2.9 UJ	< 2.1 UJ	< 2.2 UJ	**63 UJ**	< 60 U	16 UJ	< 16 U	< 5.3 U
Delta-BHC	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 1400 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 800 U	< 5.3 U
Dieldrin	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 16 U	< 5.3 U
Endosulfan I	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 16 U	< 5.3 U
Endosulfan II	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 16 U	1.6 UJ
Endosulfan Sulfate	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 1400 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 800 U	5.8
Endrin	< 9.0 UJ	< 820 UJ	1.8 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 16 U	< 5.3 U
Endrin Aldehyde	2.9 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 1400 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 800 U	< 5.3 U
Endrin Ketone	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 16 U	< 5.3 U
Gamma-BHC	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 1400 UJ	< 6.0 UJ	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 800 UJ	< 5.3 U
Gamma-Chlordane	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 16 U	< 5.3 U
Heptachlor	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 16 U	< 5.3 U
Heptachlor Epoxide	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 7.2 UJ	< 14 UJ	< 6.0 U	< 2.1 UJ	< 2.2 UJ	< 86 U	< 60 U	< 41 UJ	< 16 U	< 5.3 U
Methoxychlor	< 9.0 UJ	< 820 UJ	< 3.9 UJ	< 14 UJ+	< 28 UJ+	< 12 UJ+	< 2.1 UJ	< 2.2 UJ	< 170 U	< 120 UJ	< 82 UJ+	< 32 UJ+	< 5.3 U
Toxaphene	< 90 UJ	< 8200 UJ	< 39 UJ	< 140 UJ	< 280 UJ	< 120 U	< 21 UJ	< 22 UJ	< 1700 U	< 1200 U	< 820 UJ	< 320 U	< 53 U
SW8082A													
Aroclor 1016	< 250 UJ	< 220 UJ	< 580 UJ	< 140 U	< 140 U	< 61 U	< 280 UJ	< 300 UJ	< 160 UJ	< 58 U	< 80 U	< 150 U	< 730 UJ
Aroclor 1221	< 250 UJ	< 220 UJ	< 580 UJ	< 140 U	< 140 U	< 61 U	< 280 UJ	< 300 UJ	< 160 UJ	< 58 U	< 80 U	< 150 U	< 730 UJ
Aroclor 1232	< 250 UJ	< 220 UJ	< 580 UJ	< 140 U	< 140 U	< 61 U	< 280 UJ	< 300 UJ	< 160 UJ	< 58 U	< 80 U	< 150 U	< 730 UJ
Aroclor 1242	< 250 UJ	< 220 UJ	< 580 UJ	< 140 U	< 140 U	< 61 U	< 280 UJ	< 300 UJ	< 160 UJ	< 58 U	< 80 U	< 150 U	< 730 UJ
Aroclor 1248	< 250 UJ	< 220 UJ	< 580 UJ	< 140 U	< 140 U	< 61 U	< 280 UJ	< 300 UJ	< 160 UJ	< 58 U	< 80 U	< 150 U	< 730 UJ
Aroclor 1254	< 250 UJ	< 220 UJ	< 580 UJ	< 140 U	< 140 U	< 61 U	< 280 UJ	< 300 UJ	< 160 UJ	< 58 U	< 80 U	< 150 U	< 730 UJ
Aroclor 1260	< 250 UJ	< 220 UJ	< 580 UJ	< 140 U	< 140 U	< 61 U	< 280 UJ	< 300 UJ	< 160 UJ	< 58 U	< 80 U	< 150 U	< 730 UJ
Aroclor 1262	< 250 UJ	< 220 UJ	< 580 UJ	< 140 U	< 140 U	< 61 U	< 280 UJ	< 300 UJ	< 160 UJ	< 58 U	< 80 U	< 150 U	< 730 UJ
Aroclor 1268	< 250 UJ	< 220 UJ	< 580 UJ	< 140 U	< 140 U	< 61 U	< 280 UJ	< 300 UJ	< 160 UJ	< 58 U	< 80 U	< 150 U	< 730 UJ

Notes:

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

μg/kg = micrograms per kilogram

6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives

\- = no SCO established

NA = not applicable/analyzed

Qualifiers:

U = Analyte analyzed for, but not detected above the sample's reported quantitation limit

J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample

J+ = Sample likely to have a high bias

J- = Sample likely to have a low bias

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.

R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.

B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.

P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).

PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO	SB-101-A	SB-101-B	SB-101-C	SB-102-A	SB-102-B	SB-102-C	SB-103-A	SB-103-B	SB-103-C	SB-104-A
Start Depth (ft bgs)				0	8	12	0	4	12	0	4	12	0
End Depth (ft bgs)				1	10	14	1	6	14	1	6	14	1
Sample Date				10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018
SW8260C													
1,1,1-Trichloroethane	ug/kg	680	500000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
1,1,2,2-Tetrachloroethane	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	-	-	< 5.7 UJ-	< 7.4 UJ-	< 6.3 UJ-	< 6.2 UJ-	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ-	< 5.9 UJ-	< 5.9 UJ-	< 6.0 UJ-
1,1,2-Trichloroethane	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
1,1-Dichloroethane	ug/kg	270	240000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
1,1-Dichloroethene	ug/kg	330	500000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
1,2,4-Trichlorobenzene	ug/kg	330	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
1,2-Dibromo-3-chloropropane	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
1,2-Dibromoethane	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
1,2-Dichlorobenzene	ug/kg	1100	500000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
1,2-Dichloroethane	ug/kg	20	30000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
1,2-Dichloropropane	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
1,3-Dichlorobenzene	ug/kg	2400	280000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
1,4-Dichlorobenzene	ug/kg	1800	130000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
2-Butanone	ug/kg	**120**	500000	< 28 UJ	48 J	< 31 UJ	< 31 UJ	< 31 UJ	< 29 UJ	< 32 UJ	< 29 UJ	< 29 UJ	< 30 UJ
2-Hexanone	ug/kg	-	-	< 28 UJ	< 37 UJ	< 31 UJ	< 31 UJ	< 31 UJ	< 29 UJ	< 32 UJ	< 29 UJ	< 29 UJ	< 30 UJ
4-Methyl-2-pentanone	ug/kg	-	-	< 28 UJ	< 37 UJ	< 31 UJ	< 31 UJ	< 31 UJ	< 29 UJ	< 32 UJ	< 29 UJ	< 29 UJ	< 30 UJ
Acetone	ug/kg	**50**	500000	13 UJ	**360 J**	39 J	< 31 UJ	13 UJ	42 J	< 32 UJ	17 UJ	45 J	6.2 UJ
Benzene	ug/kg	60	44000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Bromodichloromethane	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Bromoform	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Bromomethane	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Carbon Disulfide	ug/kg	-	-	< 5.7 UJ	6.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Carbon tetrachloride	ug/kg	760	22000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Chlorobenzene	ug/kg	1100	500000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Chloroethane	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Chloroform	ug/kg	370	350000	0.49 UJ	1.1 UJ	0.74 UJ	0.42 UJ	< 6.2 UJ	0.65 UJ	0.43 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Chloromethane	ug/kg	-	-	< 5.7 UJ-	< 7.4 UJ-	< 6.3 UJ-	< 6.2 UJ-	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ-	< 5.9 UJ-	< 5.9 UJ-	< 6.0 UJ-
cis-1,2-Dichloroethene	ug/kg	250	500000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
cis-1,3-Dichloropropene	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Cyclohexane	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Dibromochloromethane	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Dichlorodifluoromethane	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Ethylbenzene	ug/kg	1000	390000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Isopropylbenzene	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Methyl acetate	ug/kg	-	-	< 28 UJ	< 37 UJ	< 31 UJ	< 31 UJ	< 31 UJ	< 29 UJ	< 32 UJ	< 29 UJ	< 29 UJ	< 30 UJ
Methyl tert-butyl ether	ug/kg	930	500000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Methylcyclohexane	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Methylene chloride	ug/kg	**50**	500000	7.1 J	11 J	7.1 J	4.0 UJ	8.4 J	10 J	6.6 J	4.8 UJ	4.8 UJ	5.2 UJ
Styrene	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Tetrachloroethene	ug/kg	1300	150000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Toluene	ug/kg	700	500000	< 5.7 UJ	0.78 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
trans-1,2-Dichloroethene	ug/kg	190	500000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
trans-1,3-Dichloropropene	ug/kg	-	-	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Trichloroethene	ug/kg	470	200000	< 5.7 UJ	< 7.4 UJ	< 6.3 UJ	< 6.2 UJ	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ	< 5.9 UJ	< 5.9 UJ	< 6.0 UJ
Trichlorofluoromethane	ug/kg	-	-	< 5.7 UJ-	< 7.4 UJ-	< 6.3 UJ-	< 6.2 UJ-	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ-	< 5.9 UJ-	< 5.9 UJ-	< 6.0 UJ-
Vinyl Chloride	ug/kg	20	13000	< 5.7 UJ-	< 7.4 UJ-	< 6.3 UJ-	< 6.2 UJ-	< 6.2 UJ	< 5.8 UJ	< 6.5 UJ-	< 5.9 UJ-	< 5.9 UJ-	< 6.0 UJ-
Xylenes, Total	ug/kg	260	500000	< 11 UJ	< 15 UJ	< 13 UJ	< 12 UJ	< 12 UJ	< 12 UJ	< 13 UJ	< 12 UJ	< 12 UJ	< 12 UJ

Analyte	Units	SB-104-B	SB-104-C	SB-105-A	SB-105-B	SB-105-C	SB-105-D	SB-106-A	SB-106-B	SB-106-C	SB-107-A
Start Depth (ft bgs)		4	14	0	4	10	12	0	4	14	0
End Depth (ft bgs)		6	16	1	6	12	14	1	8	16	2
Sample Date		10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/11/2018
SW8260C											
1,1,1-Trichloroethane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
1,1,2,2-Tetrachloroethane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	< 5.7 UJ-	< 6.3 UJ-	< 6.2 UJ-	< 6.1 UJ-	< 16 UJ-	< 6.2 UJ-	< 6.4 UJ-	< 6.4 UJ-	< 10 UJ-	< 5.9 UJ
1,1,2-Trichloroethane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
1,1-Dichloroethane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
1,1-Dichloroethene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
1,2,4-Trichlorobenzene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
1,2-Dibromo-3-chloropropane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
1,2-Dibromoethane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
1,2-Dichlorobenzene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
1,2-Dichloroethane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
1,2-Dichloropropane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
1,3-Dichlorobenzene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
1,4-Dichlorobenzene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
2-Butanone	ug/kg	< 28 UJ	< 31 UJ	< 31 UJ	< 30 UJ	**140 J**	< 31 UJ	< 32 UJ	< 32 UJ	50 UJ	< 30 UJ
2-Hexanone	ug/kg	< 28 UJ	< 31 UJ	< 31 UJ	< 30 UJ	< 81 UJ	< 31 UJ	< 32 UJ	< 32 UJ	< 51 UJ	< 30 UJ
4-Methyl-2-pentanone	ug/kg	< 28 UJ	< 31 UJ	< 31 UJ	< 30 UJ	< 81 UJ	< 31 UJ	< 32 UJ	< 32 UJ	< 51 UJ	< 30 UJ
Acetone	ug/kg	14 UJ	39 J	< 31 UJ	13 UJ	**660 J**	33 J	11 UJ	7.9 UJ	**300 J**	< 30 UJ
Benzene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Bromodichloromethane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Bromoform	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Bromomethane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Carbon Disulfide	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	12 J	< 5.9 UJ
Carbon tetrachloride	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Chlorobenzene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Chloroethane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Chloroform	ug/kg	< 5.7 UJ	0.52 UJ	< 6.2 UJ	< 6.1 UJ	1.6 UJ	0.61 UJ	< 6.4 UJ	< 6.4 UJ	1.5 UJ	0.45 UJ
Chloromethane	ug/kg	< 5.7 UJ-	< 6.3 UJ-	< 6.2 UJ-	< 6.1 UJ-	< 16 UJ-	< 6.2 UJ-	< 6.4 UJ-	< 6.4 UJ-	< 10 UJ-	< 5.9 UJ
cis-1,2-Dichloroethene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
cis-1,3-Dichloropropene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Cyclohexane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Dibromochloromethane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Dichlorodifluoromethane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Ethylbenzene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Isopropylbenzene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Methyl acetate	ug/kg	< 28 UJ	< 31 UJ	< 31 UJ	< 30 UJ	< 81 UJ	< 31 UJ	< 32 UJ	< 32 UJ	< 51 UJ	< 30 UJ
Methyl tert-butyl ether	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Methylcyclohexane	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Methylene chloride	ug/kg	4.9 UJ	8.7 J	3.6 UJ	3.0 UJ	16 J	5.8 UJ	< 6.4 UJ	< 6.4 UJ	19 J	5.4 UJ
Styrene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Tetrachloroethene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Toluene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	1.5 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	2.2 UJ	< 5.9 UJ
trans-1,2-Dichloroethene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
trans-1,3-Dichloropropene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Trichloroethene	ug/kg	< 5.7 UJ	< 6.3 UJ	< 6.2 UJ	< 6.1 UJ	< 16 UJ	< 6.2 UJ	< 6.4 UJ	< 6.4 UJ	< 10 UJ	< 5.9 UJ
Trichlorofluoromethane	ug/kg	< 5.7 UJ-	< 6.3 UJ-	< 6.2 UJ-	< 6.1 UJ-	< 16 UJ-	< 6.2 UJ-	< 6.4 UJ-	< 6.4 UJ-	< 10 UJ-	< 5.9 UJ
Vinyl Chloride	ug/kg	< 5.7 UJ-	< 6.3 UJ-	< 6.2 UJ-	< 6.1 UJ-	< 16 UJ-	< 6.2 UJ-	< 6.4 UJ-	< 6.4 UJ-	< 10 UJ-	< 5.9 UJ
Xylenes, Total	ug/kg	< 11 UJ	< 13 UJ	< 12 UJ	< 12 UJ	< 32 UJ	< 12 UJ	< 13 UJ	< 13 UJ	< 21 UJ	< 12 UJ

Analyte	Units	SB-107-B	SB-107-C	SB-108-A	SB-108-B	SB-108-C	SB-109-A	SB-109-B	SB-109-C	SB-110-A	SB-110-B	SB-110-C	SB-110-D
Start Depth (ft bgs)		6	13	0	8	10	0	4	16	0	4	17.5	10
End Depth (ft bgs)		8	18	1	10	14	1	6	18	1	6	20	12.5
Sample Date		10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018
SW8260C													
1,1,1-Trichloroethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,1,2,2-Tetrachloroethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,1,2-Trichloroethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,1-Dichloroethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,1-Dichloroethene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,2,4-Trichlorobenzene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,2-Dibromo-3-chloropropane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,2-Dibromoethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,2-Dichlorobenzene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,2-Dichloroethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,2-Dichloropropane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,3-Dichlorobenzene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
1,4-Dichlorobenzene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
2-Butanone	ug/kg	< 29 UJ	< 29 UJ	< 30 UJ	< 29 UJ+	40 UJ+	< 25 UJ+	< 31 UJ+	< 29 UJ+	< 26 UJ+	< 29 UJ+	< 29 UJ+	30 UJ+
2-Hexanone	ug/kg	< 29 UJ	< 29 UJ	< 30 UJ	< 29 UJ	< 57 UJ	< 25 UJ	< 31 UJ	< 29 UJ	< 26 UJ	< 29 UJ	< 29 UJ	< 36 UJ
4-Methyl-2-pentanone	ug/kg	< 29 UJ	< 29 UJ	< 30 UJ	< 29 UJ	< 57 UJ	< 25 UJ	< 31 UJ	< 29 UJ	< 26 UJ	< 29 UJ	< 29 UJ	< 36 UJ
Acetone	ug/kg	14 UJ	12 UJ	< 30 UJ	29 J	**240 J**	< 25 UJ	< 31 UJ	14 UJ	25 UJ	8.9 UJ	8.6 UJ	**120 J**
Benzene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Bromodichloromethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Bromoform	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Bromomethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Carbon Disulfide	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	4.6 UJ
Carbon tetrachloride	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Chlorobenzene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Chloroethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Chloroform	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	0.36 UJ	< 11 UJ	0.33 UJ	< 6.2 UJ	< 5.9 UJ	0.32 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Chloromethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
cis-1,2-Dichloroethene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
cis-1,3-Dichloropropene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Cyclohexane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Dibromochloromethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Dichlorodifluoromethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Ethylbenzene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Isopropylbenzene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Methyl acetate	ug/kg	< 29 UJ	< 29 UJ	< 30 UJ	< 29 UJ	< 57 UJ	< 25 UJ	< 31 UJ	< 29 UJ	< 26 UJ	< 29 UJ	< 29 UJ	< 36 UJ
Methyl tert-butyl ether	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Methylcyclohexane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Methylene chloride	ug/kg	4.5 UJ	6.3 J	3.1 UJ	5.2 UJ	8.8 UJ	3.7 UJ	2.8 UJ	6.7 J	5.1 J	4.1 UJ	4.0 UJ	6.6 UJ
Styrene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Tetrachloroethene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Toluene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	0.51 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
trans-1,2-Dichloroethene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
trans-1,3-Dichloropropene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Trichloroethene	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Trichlorofluoromethane	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Vinyl Chloride	ug/kg	< 5.8 UJ	< 5.8 UJ	< 6.0 UJ	< 5.8 UJ	< 11 UJ	< 5.0 UJ	< 6.2 UJ	< 5.9 UJ	< 5.1 UJ	< 5.9 UJ	< 5.8 UJ	< 7.2 UJ
Xylenes, Total	ug/kg	< 12 UJ	< 12 UJ	< 12 UJ	< 12 UJ	< 23 UJ	< 10 UJ	< 12 UJ	< 12 UJ	1.4 UJ	< 12 UJ	< 12 UJ	< 14 UJ

Notes:
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives
- = no SCO established
NA = not applicable/analyzed
Qualifiers:
U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J+ = Sample likely to have a high bias
J- = Sample likely to have a low bias
UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.
R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).
PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO	SB-111-A	SB-111-B	SB-111-C	SB-112-A	SB-112-B	SB-112-C	SB-113-A	SB-113-B	SB-113-C	SB-114-A	SB-114-B	SB-114-C	SB-115-A	SB-115-B	SB-115-C
Start Depth (ft bgs)				**0**	**6**	**18**	**0**	**8**	**12**	**0**	**6**	**18**	**0**	**8**	**10**	**0**	**7**	**15**
End Depth (ft bgs)				**1**	**8**	**20**	**1**	**10**	**15**	**1**	**8**	**20**	**1**	**10**	**20**	**1**	**10**	**17**
Sample Date				**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**
SW8260C																		
1,1,1-Trichloroethane	ug/kg	680	500000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,1,2,2-Tetrachloroethane	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,1,2-Trichloroethane	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,1-Dichloroethane	ug/kg	270	240000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,1-Dichloroethene	ug/kg	330	500000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,2,4-Trichlorobenzene	ug/kg	330	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,2-Dibromo-3-chloropropane	ug/kg	-	-	< 12 UJ	< 11 UJ	< 13 UJ	< 11 UJ	< 14 UJ	< 160 UJ	< 13 UJ	< 13 UJ	< 12 UJ	< 12 UJ	< 11 UJ	< 10 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,2-Dibromoethane	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,2-Dichlorobenzene	ug/kg	1100	500000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,2-Dichloroethane	ug/kg	20	30000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,2-Dichloropropane	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,3-Dichlorobenzene	ug/kg	2400	280000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
1,4-Dichlorobenzene	ug/kg	1800	130000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
2-Butanone	ug/kg	**120**	500000	5.9 UJ	< 22 UJ	< 26 UJ	< 22 UJ	< 27 UJ	**730 J**	< 25 UJ	< 26 UJ	6.0 UJ	12 UJ	< 23 UJ	4.4 UJ	7.9 UJ+	< 29 UJ+	4.3 UJ+
2-Hexanone	ug/kg	-	-	< 24 UJ	< 22 UJ	< 26 UJ	< 22 UJ	< 27 UJ	< 330 UJ	< 25 UJ	< 26 UJ	< 25 UJ	< 24 UJ	< 23 UJ	< 21 UJ	< 30 UJ	< 29 UJ	< 29 UJ
4-Methyl-2-pentanone	ug/kg	-	-	< 24 UJ	< 22 UJ	< 26 UJ	< 22 UJ	< 27 UJ	< 330 UJ	< 25 UJ	< 26 UJ	< 25 UJ	< 24 UJ	< 23 UJ	< 21 UJ	< 30 UJ	< 29 UJ	< 29 UJ
Acetone	ug/kg	**50**	500000	< 30 UJ	< 28 UJ	< 32 UJ	< 27 UJ	< 34 UJ	**2900 J**	< 31 UJ	< 33 UJ	35 J	< 30 UJ	< 28 UJ	23 UJ	35 J	11 UJ	27 UJ
Benzene	ug/kg	60	44000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Bromodichloromethane	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Bromoform	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Bromomethane	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Carbon Disulfide	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	130 J	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	2.8 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Carbon tetrachloride	ug/kg	760	22000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Chlorobenzene	ug/kg	1100	500000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Chloroethane	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Chloroform	ug/kg	370	350000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Chloromethane	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
cis-1,2-Dichloroethene	ug/kg	250	500000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
cis-1,3-Dichloropropene	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Cyclohexane	ug/kg	-	-	< 12 UJ	< 11 UJ	< 13 UJ	< 11 UJ	< 14 UJ	< 160 UJ	< 13 UJ	< 13 UJ	< 12 UJ	< 12 UJ	< 11 UJ	< 10 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Dibromochloromethane	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Dichlorodifluoromethane	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Ethylbenzene	ug/kg	1000	390000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Isopropylbenzene	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Methyl acetate	ug/kg	-	-	< 30 UJ	< 28 UJ	< 32 UJ	< 27 UJ	< 34 UJ	< 410 UJ	< 31 UJ	< 33 UJ	< 31 UJ	< 30 UJ	< 28 UJ	< 26 UJ	< 30 UJ	< 29 UJ	< 29 UJ
Methyl tert-butyl ether	ug/kg	930	500000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Methylcyclohexane	ug/kg	-	-	< 12 UJ	< 11 UJ	< 13 UJ	< 11 UJ	< 14 UJ	< 160 UJ	< 13 UJ	< 13 UJ	< 12 UJ	< 12 UJ	< 11 UJ	< 10 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Methylene chloride	ug/kg	**50**	500000	< 30 UJ	< 28 UJ	< 32 UJ	33 J	< 34 UJ	< 410 UJ	< 31 UJ	< 33 UJ	< 31 UJ	< 30 UJ	< 28 UJ	< 26 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Styrene	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Tetrachloroethene	ug/kg	1300	150000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Toluene	ug/kg	700	500000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	40 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	0.83 UJ	0.50 UJ	0.48 UJ
trans-1,2-Dichloroethene	ug/kg	190	500000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
trans-1,3-Dichloropropene	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Trichloroethene	ug/kg	470	200000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Trichlorofluoromethane	ug/kg	-	-	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Vinyl Chloride	ug/kg	20	13000	< 6.1 UJ	< 5.6 UJ	< 6.4 UJ	< 5.4 UJ	< 6.8 UJ	< 82 UJ	< 6.3 UJ	< 6.6 UJ	< 6.2 UJ	< 6.0 UJ	< 5.6 UJ	< 5.2 UJ	< 6.1 UJ	< 5.7 UJ	< 5.7 UJ
Xylenes, Total	ug/kg	260	500000	< 12 UJ	< 11 UJ	< 13 UJ	< 11 UJ	< 14 UJ	< 160 UJ	< 13 UJ	< 13 UJ	< 12 UJ	< 12 UJ	< 11 UJ	< 10 UJ	< 12 UJ	< 11 UJ	< 11 UJ

Analyte	SB-116-A	SB-116-B	SB-116-C	SB-117-A	SB-117-B	SB-117-C	SB-117-D	SB-118-A	SB-118-B	SB-118-C	SB-119-A	SB-119-B	SB-119-C	SB-120-A	SB-120-B	SB-120-C
Start Depth (ft bgs)	**0**	**5**	**14**	**0**	**4**	**10**	**16**	**0**	**6**	**16**	**0**	**8**	**13**	**0**	**4**	**16**
End Depth (ft bgs)	**1**	**7**	**18**	**2**	**7**	**12**	**20**	**1**	**8**	**20**	**1**	**10**	**15**	**1**	**6**	**20**
Sample Date	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**
SW8260C																
1,1,1-Trichloroethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,1,2,2-Tetrachloroethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,1,2-Trichloroethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,1-Dichloroethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,1-Dichloroethene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,2,4-Trichlorobenzene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,2-Dibromo-3-chloropropane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,2-Dibromoethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,2-Dichlorobenzene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,2-Dichloroethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,2-Dichloropropane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,3-Dichlorobenzene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
1,4-Dichlorobenzene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
2-Butanone	< 29 UJ+	< 32 UJ+	< 32 UJ+	< 28 UJ+	< 30 UJ+	85 J+	< 30 UJ+	< 30 UJ+	< 31 UJ+	< 29 UJ+	< 30 UJ+	< 29 UJ+	< 31 UJ+	< 27 UJ+	< 30 UJ+	< 37 UJ+
2-Hexanone	< 29 UJ	< 32 UJ	< 32 UJ	< 28 UJ	< 30 UJ	< 41 UJ	< 30 UJ	< 30 UJ	< 31 UJ	< 29 UJ	< 30 UJ	< 29 UJ	< 31 UJ	< 27 UJ	< 30 UJ	< 37 UJ
4-Methyl-2-pentanone	< 29 UJ	< 32 UJ	< 32 UJ	< 28 UJ	< 30 UJ	< 41 UJ	< 30 UJ	< 30 UJ	< 31 UJ	< 29 UJ	< 30 UJ	< 29 UJ	< 31 UJ	< 27 UJ	< 30 UJ	< 37 UJ
Acetone	< 29 UJ	24 UJ	12 UJ	< 28 UJ	7.2 UJ	**490 J**	10 UJ	9.4 UJ	13 UJ	15 UJ	< 30 UJ	16 UJ	8.9 UJ	< 27 UJ	25 UJ	22 UJ
Benzene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	1.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Bromodichloromethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Bromoform	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Bromomethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Carbon Disulfide	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	51 J	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Carbon tetrachloride	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Chlorobenzene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Chloroethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Chloroform	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	0.60 UJ	< 6.2 UJ	< 5.9 UJ	0.44 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	0.41 UJ	< 7.5 UJ
Chloromethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ-	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
cis-1,2-Dichloroethene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
cis-1,3-Dichloropropene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Cyclohexane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Dibromochloromethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Dichlorodifluoromethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Ethylbenzene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	2.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Isopropylbenzene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Methyl acetate	< 29 UJ	< 32 UJ	< 32 UJ	< 28 UJ	< 30 UJ	< 41 UJ	< 30 UJ	< 30 UJ	< 31 UJ	< 29 UJ	< 30 UJ	< 29 UJ	< 31 UJ	< 27 UJ	< 30 UJ	< 37 UJ
Methyl tert-butyl ether	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Methylcyclohexane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Methylene chloride	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	3.2 UJ	< 6.2 UJ	< 5.9 UJ	5.1 UJ	4.8 UJ	3.8 UJ	4.0 UJ	7.0 J	5.4 UJ
Styrene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Tetrachloroethene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Toluene	< 5.8 UJ	1.1 UJ	< 6.4 UJ	0.99 UJ	0.86 UJ	7.2 UJ	0.63 UJ	< 6.1 UJ	< 6.2 UJ	0.45 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
trans-1,2-Dichloroethene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
trans-1,3-Dichloropropene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Trichloroethene	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Trichlorofluoromethane	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Vinyl Chloride	< 5.8 UJ	< 6.5 UJ	< 6.4 UJ	< 5.7 UJ	< 6.0 UJ	< 8.3 UJ	< 6.0 UJ	< 6.1 UJ-	< 6.2 UJ	< 5.9 UJ	< 6.1 UJ	< 5.7 UJ	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 7.5 UJ
Xylenes, Total	< 12 UJ	< 13 UJ	< 13 UJ	< 11 UJ	< 12 UJ	< 17 UJ	< 12 UJ	< 12 UJ	< 12 UJ	< 12 UJ	< 12 UJ	< 11 UJ	< 13 UJ	< 11 UJ	< 12 UJ	< 15 UJ

Notes:
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives
- = no SCO established
NA = not applicable/analyzed
Qualifiers:
U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J+ = Sample likely to have a high bias
J- = Sample likely to have a low bias
UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.
R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).
PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO	SB-121-A	SB-121-B	SB-121-C	SB-121-D	SB-122-A	SB-122-B	SB-122-C
Start Depth (ft bgs)				**0**	**8**	**17**	**10**	**0**	**8**	**18**
End Depth (ft bgs)				**1**	**10**	**20**	**12**	**2**	**10**	**20**
Sample Date				**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**
SW8260C										
1,1,1-Trichloroethane	ug/kg	680	500000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
1,1,2,2-Tetrachloroethane	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
1,1,2-Trichloroethane	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
1,1-Dichloroethane	ug/kg	270	240000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
1,1-Dichloroethene	ug/kg	330	500000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
1,2,4-Trichlorobenzene	ug/kg	330	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
1,2-Dibromo-3-chloropropane	ug/kg	-	-	< 12 UJ	< 12 UJ	< 12 UJ	< 120 UJ	< 10 UJ	< 11 UJ	< 30 UJ
1,2-Dibromoethane	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
1,2-Dichlorobenzene	ug/kg	1100	500000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
1,2-Dichloroethane	ug/kg	20	30000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
1,2-Dichloropropane	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
1,3-Dichlorobenzene	ug/kg	2400	280000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
1,4-Dichlorobenzene	ug/kg	1800	130000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
2-Butanone	ug/kg	**120**	500000	< 23 UJ	< 24 UJ	4.8 UJ	**650 J**	22 J	< 22 UJ	73 J
2-Hexanone	ug/kg	-	-	< 23 UJ	< 24 UJ	< 23 UJ	< 230 UJ	< 21 UJ	< 22 UJ	< 60 UJ
4-Methyl-2-pentanone	ug/kg	-	-	< 23 UJ	< 24 UJ	< 23 UJ	< 230 UJ	< 21 UJ	< 22 UJ	< 60 UJ
Acetone	ug/kg	**50**	500000	< 29 UJ	< 30 UJ	< 29 UJ	**3000 J**	**150 J**	< 27 UJ	**380 J**
Benzene	ug/kg	60	44000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	6.0 J	< 5.4 UJ	< 15 UJ
Bromodichloromethane	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Bromoform	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Bromomethane	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Carbon Disulfide	ug/kg	-	-	1.3 UJ	< 6.0 UJ	< 5.9 UJ	390 J	9.0 J	1.7 UJ	73 J
Carbon tetrachloride	ug/kg	760	22000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Chlorobenzene	ug/kg	1100	500000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Chloroethane	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Chloroform	ug/kg	370	350000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	0.92 UJ	< 5.4 UJ	< 15 UJ
Chloromethane	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
cis-1,2-Dichloroethene	ug/kg	250	500000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
cis-1,3-Dichloropropene	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Cyclohexane	ug/kg	-	-	< 12 UJ	< 12 UJ	< 12 UJ	< 120 UJ	3.3 UJ	< 11 UJ	< 30 UJ
Dibromochloromethane	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Dichlorodifluoromethane	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Ethylbenzene	ug/kg	1000	390000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	8.4 J	< 5.4 UJ	< 15 UJ
Isopropylbenzene	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Methyl acetate	ug/kg	-	-	< 29 UJ	< 30 UJ	< 29 UJ	< 290 UJ	< 26 UJ	< 27 UJ	< 75 UJ
Methyl tert-butyl ether	ug/kg	930	500000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	1.0 UJ	< 5.4 UJ	< 15 UJ
Methylcyclohexane	ug/kg	-	-	< 12 UJ	< 12 UJ	< 12 UJ	< 120 UJ	2.9 UJ	< 11 UJ	< 30 UJ
Methylene chloride	ug/kg	**50**	500000	29 J	< 30 UJ	< 29 UJ	< 290 UJ	< 26 UJ	< 27 UJ	**70 UJ**
Styrene	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Tetrachloroethene	ug/kg	1300	150000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Toluene	ug/kg	700	500000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	13 UJ	41 J	< 5.4 UJ	5.1 UJ
trans-1,2-Dichloroethene	ug/kg	190	500000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
trans-1,3-Dichloropropene	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Trichloroethene	ug/kg	470	200000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Trichlorofluoromethane	ug/kg	-	-	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Vinyl Chloride	ug/kg	20	13000	< 5.8 UJ	< 6.0 UJ	< 5.9 UJ	< 58 UJ	< 5.2 UJ	< 5.4 UJ	< 15 UJ
Xylenes, Total	ug/kg	260	500000	< 12 UJ	< 12 UJ	< 12 UJ	< 120 UJ	53 J	< 11 UJ	< 30 UJ

Analyte	SB-123-A	SB-123-B	SB-123-C	SB-124-A	SB-124-B	SB-124-C	SB-125-A	SB-125-B	SB-125-C	SB-126-A	SB-126-B	SB-126-C
Start Depth (ft bgs)	**0**	**10**	**18**	**0**	**12**	**18**	**0**	**5**	**16.5**	**0**	**1**	**14.5**
End Depth (ft bgs)	**1**	**12**	**20**	**1**	**14**	**20**	**1**	**6**	**18**	**1**	**4**	**15.5**
Sample Date	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**
SW8260C												
1,1,1-Trichloroethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
1,1,2,2-Tetrachloroethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
1,1,2-Trichloroethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
1,1-Dichloroethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
1,1-Dichloroethene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
1,2,4-Trichlorobenzene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	3.1 UJ
1,2-Dibromo-3-chloropropane	< 11 UJ	< 11 U	< 11 U	< 11 U	< 23 U	< 12 U	< 12 UJ	< 12 UJ	< 43 UJ	< 11 UJ	< 11 UJ	< 49 UJ
1,2-Dibromoethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
1,2-Dichlorobenzene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
1,2-Dichloroethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
1,2-Dichloropropane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
1,3-Dichlorobenzene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
1,4-Dichlorobenzene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
2-Butanone	< 23 UJ	< 23 U	< 23 U	< 22 U	53	< 23 U	4.3 UJ	< 23 UJ	**180 J**	< 22 UJ	< 23 UJ	**380 J**
2-Hexanone	< 23 UJ	< 23 UJ	< 23 UJ	< 22 UJ	< 45 UJ	< 23 UJ	< 23 UJ	< 23 UJ	< 87 UJ	< 22 UJ	< 23 UJ	< 99 UJ
4-Methyl-2-pentanone	< 23 UJ	< 23 UJ	< 23 UJ	< 22 UJ	< 45 UJ	< 23 UJ	< 23 UJ	< 23 UJ	< 87 UJ	< 22 UJ	< 23 UJ	< 99 UJ
Acetone	< 29 UJ	< 28 U	< 28 U	< 27 U	**300**	< 29 U	< 29 UJ	< 29 UJ	**720 J**	< 28 UJ	< 28 UJ	**1500 J**
Benzene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Bromodichloromethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Bromoform	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Bromomethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Carbon Disulfide	1.9 UJ	2.0 UJ	< 5.7 U	< 5.4 U	26	< 5.8 U	1.5 UJ	< 5.9 UJ	7.1 UJ	< 5.5 UJ	< 5.7 UJ	110 J
Carbon tetrachloride	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Chlorobenzene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Chloroethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Chloroform	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Chloromethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
cis-1,2-Dichloroethene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
cis-1,3-Dichloropropene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Cyclohexane	< 11 UJ	< 11 UJ	< 11 UJ	< 11 UJ	< 23 UJ	< 12 UJ	< 12 UJ	< 12 UJ	< 43 UJ	< 11 UJ	< 11 UJ	< 49 UJ
Dibromochloromethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Dichlorodifluoromethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Ethylbenzene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Isopropylbenzene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Methyl acetate	< 29 UJ	< 28 U	< 28 U	< 27 U	< 57 U	< 29 U	< 29 UJ	< 29 UJ	< 110 UJ	< 28 UJ	< 28 UJ	< 120 UJ
Methyl tert-butyl ether	< 5.7 UJ	< 5.7 UJ	< 5.7 UJ	< 5.4 UJ	< 11 UJ	< 5.8 UJ	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Methylcyclohexane	< 11 UJ	< 11 U	< 11 U	< 11 U	< 23 U	< 12 U	< 12 UJ	< 12 UJ	< 43 UJ	< 11 UJ	< 11 UJ	< 49 UJ
Methylene chloride	< 29 UJ	< 28 U	< 28 U	< 27 U	< 57 U	< 29 U	< 29 UJ	< 29 UJ	< 110 UJ	< 28 UJ	< 28 UJ	< 120 UJ
Styrene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Tetrachloroethene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Toluene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	2.4 UJ	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	8.6 UJ
trans-1,2-Dichloroethene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
trans-1,3-Dichloropropene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Trichloroethene	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Trichlorofluoromethane	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Vinyl Chloride	< 5.7 UJ	< 5.7 U	< 5.7 U	< 5.4 U	< 11 U	< 5.8 U	< 5.8 UJ	< 5.9 UJ	< 22 UJ	< 5.5 UJ	< 5.7 UJ	< 25 UJ
Xylenes, Total	< 11 UJ	< 11 U	< 11 U	< 11 U	< 23 U	< 12 U	< 12 UJ	< 12 UJ	< 43 UJ	< 11 UJ	< 11 UJ	< 49 UJ

Analyte	SB-127-A	SB-127-B	SB-127-C	SB-128-A	SB-128-B	SB-128-C	SB-129-A	SB-129-B	SB-129-C	SB-130-A	SB-130-B	SB-130-C
Start Depth (ft bgs)	**0**	**5**	**18**	**0**	**5**	**14**	**0**	**6**	**16**	**0**	**6**	**15**
End Depth (ft bgs)	**5**	**10**	**20**	**2**	**7**	**16**	**2**	**7**	**17**	**3**	**10**	**18**
Sample Date	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**
SW8260C												
1,1,1-Trichloroethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
1,1,2,2-Tetrachloroethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
1,1,2-Trichloroethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
1,1-Dichloroethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
1,1-Dichloroethene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
1,2,4-Trichlorobenzene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
1,2-Dibromo-3-chloropropane	< 11 UJ	< 11 UJ	< 36 UJ	< 12 UJ	< 11 UJ	< 40 UJ	< 12 UJ	< 12 UJ	< 11 UJ	< 13 UJ	< 12 UJ	< 12 UJ
1,2-Dibromoethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
1,2-Dichlorobenzene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
1,2-Dichloroethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
1,2-Dichloropropane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
1,3-Dichlorobenzene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
1,4-Dichlorobenzene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
2-Butanone	< 22 UJ	< 22 UJ	**320 J**	< 24 UJ	13 UJ	84 J	< 24 UJ	< 24 UJ	11 UJ	< 26 UJ	< 23 UJ	5.4 UJ
2-Hexanone	< 22 UJ	< 22 UJ	< 72 UJ	< 24 UJ	< 23 UJ	< 81 UJ	< 24 UJ	< 24 UJ	< 23 UJ	< 26 UJ	< 23 UJ	< 23 UJ
4-Methyl-2-pentanone	< 22 UJ	< 22 UJ	< 72 UJ	< 24 UJ	< 23 UJ	< 81 UJ	< 24 UJ	< 24 UJ	< 23 UJ	< 26 UJ	< 23 UJ	< 23 UJ
Acetone	< 27 UJ	< 28 UJ	**1300 J**	< 30 UJ	37 J	**410 J**	< 30 UJ	< 30 UJ	48 J	< 33 UJ	< 29 UJ	< 29 UJ
Benzene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Bromodichloromethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Bromoform	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Bromomethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Carbon Disulfide	< 5.5 UJ	< 5.5 UJ	22 J	< 6.0 UJ	7.8 J	180 J	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	1.5 UJ	2.4 UJ	< 5.8 UJ
Carbon tetrachloride	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Chlorobenzene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Chloroethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Chloroform	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Chloromethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
cis-1,2-Dichloroethene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
cis-1,3-Dichloropropene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Cyclohexane	< 11 UJ	< 11 UJ	< 36 UJ	< 12 UJ	< 11 UJ	< 40 UJ	< 12 UJ	< 12 UJ	< 11 UJ	< 13 UJ	< 12 UJ	< 12 UJ
Dibromochloromethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Dichlorodifluoromethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Ethylbenzene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Isopropylbenzene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Methyl acetate	< 27 UJ	< 28 UJ	< 91 UJ	< 30 UJ	< 29 UJ	< 100 UJ	< 30 UJ	< 30 UJ	< 29 UJ	< 33 UJ	< 29 UJ	< 29 UJ
Methyl tert-butyl ether	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Methylcyclohexane	< 11 UJ	< 11 UJ	< 36 UJ	< 12 UJ	< 11 UJ	< 40 UJ	< 12 UJ	< 12 UJ	< 11 UJ	< 13 UJ	< 12 UJ	< 12 UJ
Methylene chloride	< 27 UJ	< 28 UJ	**3600 J**	< 30 UJ	< 29 UJ	< 100 UJ	< 30 UJ	< 30 UJ	< 29 UJ	< 33 UJ	< 29 UJ	< 29 UJ
Styrene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Tetrachloroethene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Toluene	< 5.5 UJ	< 5.5 UJ	2.9 UJ	< 6.0 UJ	< 5.7 UJ	8.0 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
trans-1,2-Dichloroethene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
trans-1,3-Dichloropropene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Trichloroethene	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Trichlorofluoromethane	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Vinyl Chloride	< 5.5 UJ	< 5.5 UJ	< 18 UJ	< 6.0 UJ	< 5.7 UJ	< 20 UJ	< 6.0 UJ	< 5.9 UJ	< 5.7 UJ	< 6.6 UJ	< 5.8 UJ	< 5.8 UJ
Xylenes, Total	< 11 UJ	< 11 UJ	< 36 UJ	< 12 UJ	< 11 UJ	< 40 UJ	< 12 UJ	< 12 UJ	< 11 UJ	< 13 UJ	< 12 UJ	< 12 UJ

Notes:
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
μg/kg = micrograms per kilogram
6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives
\- = no SCO established
NA = not applicable/analyzed
Qualifiers:
U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J+ = Sample likely to have a high bias
J- = Sample likely to have a low bias
UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.
R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).
PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO	SB-131A	SB-131B	SB-131C	SB-132A	SB-132B	SB-132C
Start Depth (ft bgs)				0	6	14	0	14	17
End Depth (ft bgs)				1	8	16	2	16	19
Sample Date				10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018
SW8260C									
1,1,1-Trichloroethane	ug/kg	680	500000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
1,1,2,2-Tetrachloroethane	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
1,1,2-Trichloroethane	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
1,1-Dichloroethane	ug/kg	270	240000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
1,1-Dichloroethene	ug/kg	330	500000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
1,2,4-Trichlorobenzene	ug/kg	330	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
1,2-Dibromo-3-chloropropane	ug/kg	-	-	< 11 UJ	< 11 UJ	< 38 UJ	< 11 UJ	< 12 UJ	< 14 UJ
1,2-Dibromoethane	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
1,2-Dichlorobenzene	ug/kg	1100	500000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
1,2-Dichloroethane	ug/kg	20	30000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
1,2-Dichloropropane	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
1,3-Dichlorobenzene	ug/kg	2400	280000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
1,4-Dichlorobenzene	ug/kg	1800	130000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
2-Butanone	ug/kg	**120**	500000	< 23 UJ	< 23 UJ	**260 J**	< 22 UJ	< 23 UJ	15 UJ
2-Hexanone	ug/kg	-	-	< 23 UJ	< 23 UJ	< 76 UJ	< 22 UJ	< 23 UJ	< 28 UJ
4-Methyl-2-pentanone	ug/kg	-	-	< 23 UJ	< 23 UJ	< 76 UJ	< 22 UJ	< 23 UJ	< 28 UJ
Acetone	ug/kg	**50**	500000	< 28 UJ	< 28 UJ	**1200 J**	< 28 UJ	< 29 UJ	**71 J**
Benzene	ug/kg	60	44000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Bromodichloromethane	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Bromoform	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Bromomethane	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Carbon Disulfide	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	290 J	1.9 UJ	< 5.8 UJ	4.1 UJ
Carbon tetrachloride	ug/kg	760	22000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Chlorobenzene	ug/kg	1100	500000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Chloroethane	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Chloroform	ug/kg	370	350000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Chloromethane	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
cis-1,2-Dichloroethene	ug/kg	250	500000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
cis-1,3-Dichloropropene	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Cyclohexane	ug/kg	-	-	< 11 UJ	< 11 UJ	< 38 UJ	< 11 UJ	< 12 UJ	< 14 UJ
Dibromochloromethane	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Dichlorodifluoromethane	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Ethylbenzene	ug/kg	1000	390000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Isopropylbenzene	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Methyl acetate	ug/kg	-	-	< 28 UJ	< 28 UJ	< 95 UJ	< 28 UJ	< 29 UJ	< 34 UJ
Methyl tert-butyl ether	ug/kg	930	500000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Methylcyclohexane	ug/kg	-	-	< 11 UJ	< 11 UJ	< 38 UJ	< 11 UJ	< 12 UJ	< 14 UJ
Methylene chloride	ug/kg	**50**	500000	< 28 UJ	< 28 UJ	< 95 UJ	< 28 UJ	< 29 UJ	< 34 UJ
Styrene	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Tetrachloroethene	ug/kg	1300	150000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Toluene	ug/kg	700	500000	< 5.6 UJ	< 5.7 UJ	12 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
trans-1,2-Dichloroethene	ug/kg	190	500000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
trans-1,3-Dichloropropene	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Trichloroethene	ug/kg	470	200000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Trichlorofluoromethane	ug/kg	-	-	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Vinyl Chloride	ug/kg	20	13000	< 5.6 UJ	< 5.7 UJ	< 19 UJ	< 5.5 UJ	< 5.8 UJ	< 6.9 UJ
Xylenes, Total	ug/kg	260	500000	< 11 UJ	< 11 UJ	< 38 UJ	< 11 UJ	< 12 UJ	< 14 UJ

Analyte	SB-133A	SB-133B	SB-133C	SB-133D	SB-134A	SB-134B	SB-134C	SB-135A	SB-135B	SB-135C	SB-136-A	SB-136-B	SB-136-C	SB-136-D	SB-137-A	SB-137-B
Start Depth (ft bgs)	0	4	17	14	0	6	12	0	6	18	0	5	17	12	0	4
End Depth (ft bgs)	1	6	19	16	1	8	14	2	8	20	1	8	20	15	1	5
Sample Date	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018
SW8260C																
1,1,1-Trichloroethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
1,1,2,2-Tetrachloroethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
1,1,2-Trichloro-1,2,2-trifluoroethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
1,1,2-Trichloroethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
1,1-Dichloroethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
1,1-Dichloroethene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
1,2,4-Trichlorobenzene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
1,2-Dibromo-3-chloropropane	< 13 UJ	< 11 UJ	< 16 UJ	< 32 UJ	< 12 UJ	< 12 UJ	< 75 UJ	< 11 UJ	< 14 UJ	< 11 UJ	< 11 U	< 12 U	< 28 U	< 13 U	< 13 U	< 12 U
1,2-Dibromoethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
1,2-Dichlorobenzene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
1,2-Dichloroethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
1,2-Dichloropropane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
1,3-Dichlorobenzene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
1,4-Dichlorobenzene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
2-Butanone	< 25 UJ	< 22 UJ	22 UJ	**160 J**	< 23 UJ	< 24 UJ	**470 J**	< 22 UJ	< 28 UJ	< 23 UJ	< 22 U	< 25 U	100	< 25 U	< 27 U	< 23 U
2-Hexanone	< 25 UJ	< 22 UJ	< 32 UJ	< 64 UJ	< 23 UJ	< 24 UJ	< 150 UJ	< 22 UJ	< 28 UJ	< 23 UJ	< 22 UJ	< 25 UJ	< 55 UJ	< 25 UJ	< 27 UJ	< 23 UJ
4-Methyl-2-pentanone	< 25 UJ	< 22 UJ	< 32 UJ	< 64 UJ	< 23 UJ	< 24 UJ	< 150 UJ	< 22 UJ	< 28 UJ	< 23 UJ	< 22 UJ	< 25 UJ	< 55 UJ	< 25 UJ	< 27 UJ	< 23 UJ
Acetone	< 32 UJ	< 28 UJ	**110 J**	**740 J**	< 29 UJ	< 29 UJ	**1900 J**	< 28 UJ	< 35 UJ	< 28 UJ	< 27 U	26 UJ	**360**	< 32 U	< 33 U	< 29 U
Benzene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Bromodichloromethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Bromoform	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Bromomethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Carbon Disulfide	1.6 UJ	< 5.6 UJ	< 8.1 UJ	45 J	2.6 UJ	< 5.9 UJ	85 J	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	2.4 UJ	< 6.2 U	< 14 U	1.6 UJ	< 6.6 U	2.6 UJ
Carbon tetrachloride	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Chlorobenzene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Chloroethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Chloroform	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Chloromethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
cis-1,2-Dichloroethene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
cis-1,3-Dichloropropene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Cyclohexane	< 13 UJ	< 11 UJ	< 16 UJ	< 32 UJ	< 12 UJ	< 12 UJ	< 75 UJ	< 11 UJ	< 14 UJ	< 11 UJ	< 11 U	< 12 U	< 28 U	< 13 U	< 13 U	< 12 U
Dibromochloromethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Dichlorodifluoromethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Ethylbenzene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Isopropylbenzene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Methyl acetate	< 32 UJ	< 28 UJ	< 40 UJ	< 80 UJ	< 29 UJ	< 29 UJ	< 190 UJ	< 28 UJ	< 35 UJ	< 28 UJ	< 27 U	< 31 U	< 69 U	< 32 U	< 33 U	< 29 U
Methyl tert-butyl ether	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 UJ	< 6.2 UJ	< 14 UJ	< 6.3 UJ	< 6.6 UJ	< 5.8 UJ
Methylcyclohexane	< 13 UJ	< 11 UJ	< 16 UJ	< 32 UJ	< 12 UJ	< 12 UJ	< 75 UJ	< 11 UJ	< 14 UJ	< 11 UJ	< 11 U	< 12 U	< 28 U	< 13 U	< 13 U	< 12 U
Methylene chloride	< 32 UJ	< 28 UJ	< 40 UJ	< 80 UJ	< 29 UJ	< 29 UJ	< 190 UJ	< 28 UJ	< 35 UJ	< 28 UJ	< 27 U	< 31 U	< 69 U	< 32 U	< 33 U	< 29 U
Styrene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Tetrachloroethene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Toluene	1.0 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	11 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
trans-1,2-Dichloroethene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
trans-1,3-Dichloropropene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Trichloroethene	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Trichlorofluoromethane	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Vinyl Chloride	< 6.3 UJ	< 5.6 UJ	< 8.1 UJ	< 16 UJ	< 5.8 UJ	< 5.9 UJ	< 37 UJ	< 5.5 UJ	< 6.9 UJ	< 5.7 UJ	< 5.4 U	< 6.2 U	< 14 U	< 6.3 U	< 6.6 U	< 5.8 U
Xylenes, Total	< 13 UJ	< 11 UJ	< 16 UJ	< 32 UJ	< 12 UJ	< 12 UJ	< 75 UJ	< 11 UJ	< 14 UJ	< 11 UJ	< 11 U	< 12 U	< 28 U	< 13 U	< 13 U	< 12 U

Analyte	SB-137-C	SB-138-A	SB-138-B	SB-138-C	SB-139A	SB-139B	SB-139C	SB-139D	SB-140A	SB-140B	SB-140C	SB-141A	SB-141B	SB-141C
Start Depth (ft bgs)	14	0	5	15	0	6	13	17	0	15	17	0	5	18
End Depth (ft bgs)	16	2	8	17	2	8	15	18	2	17	19	2	7	20
Sample Date	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018
SW8260C														
1,1,1-Trichloroethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
1,1,2,2-Tetrachloroethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
1,1,2-Trichloroethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
1,1-Dichloroethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
1,1-Dichloroethene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
1,2,4-Trichlorobenzene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
1,2-Dibromo-3-chloropropane	< 22 U	< 12 UJ	< 11 UJ	< 35 UJ	< 11 UJ	< 12 UJ	< 27 UJ	< 11 UJ	< 11 UJ	< 19 UJ	< 16 UJ	< 11 UJ	< 12 UJ	< 18 UJ
1,2-Dibromoethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
1,2-Dichlorobenzene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
1,2-Dichloroethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
1,2-Dichloropropane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
1,3-Dichlorobenzene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
1,4-Dichlorobenzene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
2-Butanone	27 UJ	< 23 UJ	< 22 UJ	**270 J**	< 23 UJ	< 24 UJ	**180 J**	< 23 UJ	11 UJ	36 UJ	25 UJ	8.3 UJ	< 24 UJ	97 J
2-Hexanone	< 44 UJ	< 23 UJ	< 22 UJ	< 70 UJ	< 23 UJ	< 24 UJ	< 53 UJ	< 23 UJ	< 22 UJ	< 38 UJ	< 32 UJ	< 22 UJ	< 24 UJ	< 35 UJ
4-Methyl-2-pentanone	< 44 UJ	< 23 UJ	< 22 UJ	< 70 UJ	< 23 UJ	< 24 UJ	< 53 UJ	< 23 UJ	< 22 UJ	< 38 UJ	< 32 UJ	< 22 UJ	< 24 UJ	< 35 UJ
Acetone	**200**	< 29 UJ	< 28 UJ	**1100 J**	< 29 UJ	< 30 UJ	**680 J**	< 28 UJ	< 28 UJ	**200 J**	**90 J**	< 27 UJ	< 31 UJ	**380 J**
Benzene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Bromodichloromethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Bromoform	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Bromomethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Carbon Disulfide	17	2.2 UJ	1.3 UJ	49 J	1.3 UJ	2.1 UJ	160 J	< 5.7 UJ	< 5.6 UJ	13 J	< 8.0 UJ	2.4 UJ	< 6.1 UJ	5.1 UJ
Carbon tetrachloride	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Chlorobenzene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Chloroethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Chloroform	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Chloromethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
cis-1,2-Dichloroethene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
cis-1,3-Dichloropropene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Cyclohexane	< 22 U	< 12 UJ	< 11 UJ	< 35 UJ	< 11 UJ	< 12 UJ	< 27 UJ	< 11 UJ	< 11 UJ	< 19 UJ	< 16 UJ	< 11 UJ	< 12 UJ	< 18 UJ
Dibromochloromethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Dichlorodifluoromethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Ethylbenzene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Isopropylbenzene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Methyl acetate	< 56 U	< 29 UJ	< 28 UJ	< 87 UJ	< 29 UJ	< 30 UJ	< 66 UJ	< 28 UJ	< 28 UJ	< 48 UJ	< 40 UJ	< 27 UJ	< 31 UJ	< 44 UJ
Methyl tert-butyl ether	< 11 UJ	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Methylcyclohexane	< 22 U	< 12 UJ	< 11 UJ	< 35 UJ	< 11 UJ	< 12 UJ	< 27 UJ	< 11 UJ	< 11 UJ	< 19 UJ	< 16 UJ	< 11 UJ	< 12 UJ	< 18 UJ
Methylene chloride	< 56 U	< 29 UJ	< 28 UJ	< 87 UJ	< 29 UJ	< 30 UJ	< 66 UJ	< 28 UJ	< 28 UJ	< 48 UJ	< 40 UJ	< 27 UJ	< 31 UJ	< 44 UJ
Styrene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Tetrachloroethene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Toluene	1.8 UJ	< 5.8 UJ	< 5.6 UJ	4.6 UJ	< 5.7 UJ	< 6.1 UJ	17 J	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	2.0 UJ
trans-1,2-Dichloroethene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
trans-1,3-Dichloropropene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Trichloroethene	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Trichlorofluoromethane	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Vinyl Chloride	< 11 U	< 5.8 UJ	< 5.6 UJ	< 17 UJ	< 5.7 UJ	< 6.1 UJ	< 13 UJ	< 5.7 UJ	< 5.6 UJ	< 9.5 UJ	< 8.0 UJ	< 5.4 UJ	< 6.1 UJ	< 8.8 UJ
Xylenes, Total	< 22 U	< 12 UJ	< 11 UJ	< 35 UJ	< 11 UJ	< 12 UJ	< 27 UJ	< 11 UJ	< 11 UJ	< 19 UJ	< 16 UJ	< 11 UJ	< 12 UJ	< 18 UJ

Notes:
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
μg/kg = micrograms per kilogram
6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives
- = no SCO established
NA = not applicable/analyzed
Qualifiers:
U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J+ = Sample likely to have a high bias
J- = Sample likely to have a low bias
UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.
R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).
PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO	SB-142A	SB-142B	SB-142C	SB-143A	SB-143B	SB-143C
Start Depth (ft bgs)				0	8	15	0	8	13
End Depth (ft bgs)				1	10	16	1	10	15
Sample Date				10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018
SW8260C									
1,1,1-Trichloroethane	ug/kg	680	500000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
1,1,2,2-Tetrachloroethane	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
1,1,2-Trichloroethane	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
1,1-Dichloroethane	ug/kg	270	240000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
1,1-Dichloroethene	ug/kg	330	500000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
1,2,4-Trichlorobenzene	ug/kg	330	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
1,2-Dibromo-3-chloropropane	ug/kg	-	-	< 13 UJ	< 12 UJ	< 19 UJ	< 12 UJ	< 11 UJ	< 28 UJ
1,2-Dibromoethane	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
1,2-Dichlorobenzene	ug/kg	1100	500000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
1,2-Dichloroethane	ug/kg	20	30000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
1,2-Dichloropropane	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
1,3-Dichlorobenzene	ug/kg	2400	280000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
1,4-Dichlorobenzene	ug/kg	1800	130000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
2-Butanone	ug/kg	**120**	500000	< 25 UJ	< 24 UJ	38 J	4.7 UJ	8.2 UJ	70 J
2-Hexanone	ug/kg	-	-	< 25 UJ	< 24 UJ	< 38 UJ	< 23 UJ	< 22 UJ	< 55 UJ
4-Methyl-2-pentanone	ug/kg	-	-	< 25 UJ	< 24 UJ	< 38 UJ	< 23 UJ	< 22 UJ	< 55 UJ
Acetone	ug/kg	**50**	500000	< 32 UJ	< 30 UJ	**160 J**	< 29 UJ	< 27 UJ	**370 J**
Benzene	ug/kg	60	44000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Bromodichloromethane	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Bromoform	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Bromomethane	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Carbon Disulfide	ug/kg	-	-	< 6.3 UJ	3.8 UJ	3.0 UJ	1.8 UJ	< 5.4 UJ	52 J
Carbon tetrachloride	ug/kg	760	22000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Chlorobenzene	ug/kg	1100	500000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Chloroethane	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Chloroform	ug/kg	370	350000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Chloromethane	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
cis-1,2-Dichloroethene	ug/kg	250	500000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
cis-1,3-Dichloropropene	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Cyclohexane	ug/kg	-	-	< 13 UJ	< 12 UJ	< 19 UJ	< 12 UJ	< 11 UJ	< 28 UJ
Dibromochloromethane	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Dichlorodifluoromethane	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Ethylbenzene	ug/kg	1000	390000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Isopropylbenzene	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Methyl acetate	ug/kg	-	-	< 32 UJ	< 30 UJ	< 47 UJ	< 29 UJ	< 27 UJ	< 69 UJ
Methyl tert-butyl ether	ug/kg	930	500000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Methylcyclohexane	ug/kg	-	-	< 13 UJ	< 12 UJ	< 19 UJ	< 12 UJ	< 11 UJ	< 28 UJ
Methylene chloride	ug/kg	**50**	500000	34 J	< 30 UJ	23 UJ	< 29 UJ	< 27 UJ	< 69 UJ
Styrene	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Tetrachloroethene	ug/kg	1300	150000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Toluene	ug/kg	700	500000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
trans-1,2-Dichloroethene	ug/kg	190	500000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
trans-1,3-Dichloropropene	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Trichloroethene	ug/kg	470	200000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Trichlorofluoromethane	ug/kg	-	-	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Vinyl Chloride	ug/kg	20	13000	< 6.3 UJ	< 6.1 UJ	< 9.4 UJ	< 5.8 UJ	< 5.4 UJ	< 14 UJ
Xylenes, Total	ug/kg	260	500000	< 13 UJ	< 12 UJ	< 19 UJ	< 12 UJ	< 11 UJ	< 28 UJ

Analyte	SB-144A	SB-144B	SB-144C	SB-145A	SB-145B	SB-145C	SB-146-A	SB-146-B	SB-146-C	SB-147-A	SB-147-B	SB-147-C	SB-148-A	SB-148-B	SB-148-C	SB-148-D
Start Depth (ft bgs)	0	7	15	0	10	18	0	2	13	0	5	16	0	4	15	12
End Depth (ft bgs)	2	9	17	1	12	20	2	5	15	1	7	17	1.5	5	17.5	14
Sample Date	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018
SW8260C																
1,1,1-Trichloroethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,1,2,2-Tetrachloroethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,1,2-Trichloroethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,1-Dichloroethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,1-Dichloroethene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,2,4-Trichlorobenzene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,2-Dibromo-3-chloropropane	< 12 UJ	< 11 UJ	< 36 UJ	< 11 UJ	< 13 UJ	< 19 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,2-Dibromoethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,2-Dichlorobenzene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,2-Dichloroethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,2-Dichloropropane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,3-Dichlorobenzene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
1,4-Dichlorobenzene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
2-Butanone	< 24 UJ	11 UJ	**210 J**	8.5 UJ	10 UJ	34 UJ	< 31 UJ	< 31 UJ	**270 J**	< 31 UJ	< 25 UJ	**520 J**	2.6 UJ	< 29 UJ	120 J	< 31 UJ
2-Hexanone	< 24 UJ	< 22 UJ	< 71 UJ	< 22 UJ	< 26 UJ	< 38 UJ	< 31 UJ	< 31 UJ	< 81 UJ	< 31 UJ	< 25 UJ	< 56 UJ	< 31 UJ	< 29 UJ	< 70 UJ	< 31 UJ
4-Methyl-2-pentanone	< 24 UJ	< 22 UJ	< 71 UJ	< 22 UJ	< 26 UJ	< 38 UJ	< 31 UJ	< 31 UJ	< 81 UJ	< 31 UJ	< 25 UJ	< 56 UJ	< 31 UJ	< 29 UJ	< 70 UJ	< 31 UJ
Acetone	< 30 UJ	< 28 UJ	**950 J**	< 27 UJ	< 33 UJ	**160 J**	< 31 UJ	< 31 UJ	**1100 J**	< 31 UJ	4.7 UJ	**2000 J**	29 UJ	5.1 UJ	**560 J**	7.2 UJ
Benzene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Bromodichloromethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Bromoform	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Bromomethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Carbon Disulfide	< 6.1 UJ	< 5.6 UJ	130 J	< 5.4 UJ	< 6.5 UJ	4.3 UJ	< 6.2 UJ	< 6.3 UJ	84 J	< 6.3 UJ	< 5.0 UJ	83 J	< 6.2 UJ	< 5.8 UJ	71 J	< 6.2 UJ
Carbon tetrachloride	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Chlorobenzene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Chloroethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Chloroform	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	0.44 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Chloromethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
cis-1,2-Dichloroethene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
cis-1,3-Dichloropropene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Cyclohexane	< 12 UJ	5.9 UJ	< 36 UJ	< 11 UJ	< 13 UJ	< 19 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Dibromochloromethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Dichlorodifluoromethane	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Ethylbenzene	< 6.1 UJ	1.2 UJ	4.1 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	1.2 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Isopropylbenzene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Methyl acetate	< 30 UJ	< 28 UJ	< 89 UJ	< 27 UJ	< 33 UJ	< 48 UJ	< 31 UJ	< 31 UJ	< 81 UJ	< 31 UJ	< 25 UJ	< 56 UJ	< 31 UJ	< 29 UJ	< 70 UJ	< 31 UJ
Methyl tert-butyl ether	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Methylcyclohexane	< 12 UJ	9.8 UJ	< 36 UJ	< 11 UJ	< 13 UJ	< 19 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Methylene chloride	< 30 UJ	< 28 UJ	**75 UJ**	< 27 UJ	< 33 UJ	< 48 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	7.8 J
Styrene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Tetrachloroethene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Toluene	1.1 UJ	2.9 UJ	17 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	5.0 UJ	< 6.3 UJ	< 5.0 UJ	4.6 UJ	< 6.2 UJ	< 5.8 UJ	2.0 UJ	< 6.2 UJ
trans-1,2-Dichloroethene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
trans-1,3-Dichloropropene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Trichloroethene	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Trichlorofluoromethane	3.0 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Vinyl Chloride	< 6.1 UJ	< 5.6 UJ	< 18 UJ	< 5.4 UJ	< 6.5 UJ	< 9.6 UJ	< 6.2 UJ	< 6.3 UJ	< 16 UJ	< 6.3 UJ	< 5.0 UJ	< 11 UJ	< 6.2 UJ	< 5.8 UJ	< 14 UJ	< 6.2 UJ
Xylenes, Total	< 12 UJ	9.9 UJ	< 36 UJ	< 11 UJ	< 13 UJ	< 19 UJ	< 12 UJ	< 13 UJ	< 32 UJ	< 13 UJ	< 10 UJ	< 22 UJ	< 12 UJ	< 12 UJ	< 28 UJ	< 12 UJ

Analyte	SB-149-A	SB-149-B	SB-149-C	SB-150A	SB-150B	SB-150C	DUP-101018	DUP-101118	DUP-101618	DUP-101718	DUP-101818	DUP-101918	DUP-102318
Start Depth (ft bgs)	0	5	16	0	14	18	NA	NA	NA	NA	NA	NA	NA
End Depth (ft bgs)	1	6	18	2	16	20	NA	NA	NA	NA	NA	NA	NA
Sample Date	10/23/2018	10/23/2018	10/23/2018	10/19/2018	10/19/2018	10/19/2018	10/10/2018	10/11/2018	10/16/2018	10/17/2018	10/18/2018	10/19/2018	10/23/2018
SW8260C													
1,1,1-Trichloroethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
1,1,2,2-Tetrachloroethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ-	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
1,1,2-Trichloroethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
1,1-Dichloroethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
1,1-Dichloroethene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
1,2,4-Trichlorobenzene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
1,2-Dibromo-3-chloropropane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 13 UJ	< 28 UJ	< 12 UJ	< 6.3 UJ	< 6.4 UJ	< 83 UJ	< 11 U	< 16 UJ	< 63 UJ	< 16 UJ
1,2-Dibromoethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
1,2-Dichlorobenzene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
1,2-Dichloroethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
1,2-Dichloropropane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
1,3-Dichlorobenzene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
1,4-Dichlorobenzene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
2-Butanone	< 27 UJ	< 25 UJ	89 J	< 27 UJ	36 UJ	9.7 UJ	< 32 UJ	< 32 UJ+	**500 J**	< 23 U	120 J	**480 J**	**210 J**
2-Hexanone	< 27 UJ	< 25 UJ	< 58 UJ	< 27 UJ	< 56 UJ	< 24 UJ	< 32 UJ	< 32 UJ	< 170 UJ	< 23 UJ	< 31 UJ	< 130 UJ	< 79 UJ
4-Methyl-2-pentanone	< 27 UJ	< 25 UJ	< 58 UJ	< 27 UJ	< 56 UJ	< 24 UJ	< 32 UJ	< 32 UJ	< 170 UJ	< 23 UJ	< 31 UJ	< 130 UJ	< 79 UJ
Acetone	< 27 UJ	6.7 UJ	**490 J**	< 33 UJ	**340 J**	< 30 UJ	7.5 UJ	37 J	**2000 J**	< 28 U	**480 J**	**1600 J**	**940 J**
Benzene	< 5.4 UJ	0.25 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Bromodichloromethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Bromoform	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Bromomethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Carbon Disulfide	< 5.4 UJ	< 4.9 UJ	25 J	1.6 UJ	35 J	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	66 J	< 5.7 U	8.8 J	100 J	26 J
Carbon tetrachloride	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Chlorobenzene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Chloroethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Chloroform	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	0.51 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Chloromethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ-	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
cis-1,2-Dichloroethene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
cis-1,3-Dichloropropene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Cyclohexane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 13 UJ	< 28 UJ	< 12 UJ	< 6.3 UJ	< 6.4 UJ	< 83 UJ	< 11 U	< 16 UJ	< 63 UJ	< 16 UJ
Dibromochloromethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Dichlorodifluoromethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Ethylbenzene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	5.5 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Isopropylbenzene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Methyl acetate	< 27 UJ	< 25 UJ	< 58 UJ	< 33 UJ	< 70 UJ	< 30 UJ	< 32 UJ	< 32 UJ	< 210 UJ	< 28 U	< 39 UJ	< 160 UJ	< 79 UJ
Methyl tert-butyl ether	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 UJ	< 7.8 UJ	< 31 UJ	< 16 UJ
Methylcyclohexane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 13 UJ	< 28 UJ	< 12 UJ	< 6.3 UJ	< 6.4 UJ	< 83 UJ	< 11 U	< 16 UJ	< 63 UJ	< 16 UJ
Methylene chloride	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 33 UJ	38 UJ	< 30 UJ	3.8 UJ	9.4 J	< 210 UJ	< 28 U	< 39 UJ	< 160 UJ	< 16 UJ
Styrene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Tetrachloroethene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Toluene	< 5.4 UJ	0.72 UJ	6.9 UJ	< 6.7 UJ	11 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	21 UJ	< 5.7 U	< 7.8 UJ	24 UJ	< 16 UJ
trans-1,2-Dichloroethene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
trans-1,3-Dichloropropene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Trichloroethene	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Trichlorofluoromethane	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ-	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Vinyl Chloride	< 5.4 UJ	< 4.9 UJ	< 12 UJ	< 6.7 UJ	< 14 UJ	< 6.0 UJ	< 6.3 UJ-	< 6.4 UJ	< 42 UJ	< 5.7 U	< 7.8 UJ	< 31 UJ	< 16 UJ
Xylenes, Total	< 11 UJ	< 9.8 UJ	< 23 UJ	< 13 UJ	< 28 UJ	< 12 UJ	< 13 UJ	< 13 UJ	< 83 UJ	< 11 U	< 16 UJ	< 63 UJ	< 32 UJ

Notes:
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives
- = no SCO established
NA = not applicable/analyzed
Qualifiers:
U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J+ = Sample likely to have a high bias
J- = Sample likely to have a low bias
UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a “tentative identification.”
NJ = The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate oncentration.
R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P = Use professional judgment based on data use. It usually has an “M” with it, which indicates that a manual check should be made if the data that are qualified with the “P” are important to the data user. In addition, “PM” also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).
PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in “R” above. This review should include consideration of potential affects that could result from using the “P” qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

			Soil Sample ID	SB-101-A	SB-101-B	SB-101-C	SB-102-A	SB-102-B	SB-102-C	SB-103-A	SB-103-B	SB-103-C	SB-104-A	SB-104-B	SB-104-C	SB-105-A	SB-105-B	SB-105-C	SB-105-D	SB-106-A	SB-106-B	SB-106-C	SB-107-A	SB-107-B	SB-107-C	SB-108-A	SB-108-B	SB-108-C	SB-109-A	SB-109-B	SB-109-C	SB-110-A	SB-110-B	SB-110-C	SB-110-D
			Start Depth (ft bgs)	0	8	12	0	4	12	0	4	12	0	4	14	0	4	10	12	0	4	14	0	6	13	0	8	10	0	4	16	0	4	17.5	10
			End Depth (ft bgs)	1	10	14	1	6	14	1	6	14	1	6	16	1	6	12	14	1	8	16	2	8	18	1	10	14	1	6	18	1	6	20	12.5
			Sample Date	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018
Analyte	Units	**6 NYCRR PART 375 UNRESTRICTED USE SCO**	6 NYCRR PART 375 COMMERCIAL USE SCO																																
SW8270D																																			
1,1'-Biphenyl	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
2,4,5-Trichlorophenol	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
2,4,6-Trichlorophenol	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
2,4-Dichlorophenol	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
2,4-Dimethylphenol	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
2,4-Dinitrophenol	ug/kg	-	-	< 9300 U	< 2400 U	< 2100 U	< 2100 U	< 2000 U	< 2000 U	< 2200 U	< 1900 U	< 1900 U	< 2000 U	< 1900 U	< 2000 U	< 2100 U	< 2000 U	< 5500 U	< 2100 U	< 2100 U	< 2100 U	< 3400 U	< 2000 U	< 2000 U	< 1900 U	< 2000 U	< 1900 UJ	< 3800 U	< 17000 U	< 2100 U	< 2000 U	< 340000 UJ	< 2000 U	< 1900 U	< 2400 U
2,4-Dinitrotoluene	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
2,6-Dinitrotoluene	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
2-Chloronaphthalene	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
2-Chlorophenol	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
2-Methylnaphthalene	ug/kg	-	-	< 950 U	< 250 U	< 210 U	110 UJ	< 210 U	< 200 U	340	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	160 UJ	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	48 UJ	< 200 U	< 200 U	200 UJ	< 200 UJ	< 390 U	< 1700 U	240	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
2-Methylphenol	ug/kg	330	500000	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
2-Nitroaniline	ug/kg	-	-	< 1800 U	< 490 U	< 410 U	< 410 U	< 400 U	< 390 U	< 440 U	< 390 U	< 380 U	< 400 U	< 380 U	< 400 U	< 410 U	< 400 U	< 1100 U	< 420 U	< 420 U	< 420 U	< 680 U	< 400 U	< 390 U	< 390 U	< 400 U	< 380 UJ	< 760 U	< 3300 U	< 410 U	< 390 U	< 68000 UJ	< 390 U	< 380 U	< 480 U
2-Nitrophenol	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
3 & 4 Methylphenol	ug/kg	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	ug/kg	-	-	< 1800 U	< 490 U	< 410 U	< 410 U	< 400 U	< 390 U	< 440 U	< 390 U	< 380 U	< 400 U	< 380 U	< 400 U	< 410 U	< 400 U	< 1100 U	< 420 U	< 420 U	< 420 U	< 680 U	< 400 U	< 390 U	< 390 U	< 400 U	< 380 UJ	< 760 U	< 3300 U	< 410 U	< 390 U	< 68000 UJ	< 390 U	< 380 U	< 480 U
3-Nitroaniline	ug/kg	-	-	< 1800 U	< 490 U	< 410 U	< 410 U	< 400 U	< 390 U	< 440 U	< 390 U	< 380 U	< 400 U	< 380 U	< 400 U	< 410 U	< 400 U	< 1100 U	< 420 U	< 420 U	< 420 U	< 680 U	< 400 U	< 390 U	< 390 U	< 400 U	< 380 UJ	< 760 U	< 3300 U	< 410 U	< 390 U	< 68000 UJ	< 390 U	< 380 U	< 480 U
4,6-Dinitro-2-methylphenol	ug/kg	-	-	< 1800 U	< 490 U	< 410 U	< 410 U	< 400 U	< 390 U	< 440 U	< 390 U	< 380 U	< 400 U	< 380 U	< 400 U	< 410 U	< 400 U	< 1100 U	< 420 U	< 420 U	< 420 U	< 680 U	< 400 U	< 390 U	< 390 U	< 400 U	< 380 UJ	< 760 U	< 3300 U	< 410 U	< 390 U	< 68000 UJ	< 390 U	< 380 U	< 480 U
4-Bromophenyl phenyl ether	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
4-Chloro-3-methylphenol	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
4-Chloroaniline	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
4-Chlorophenyl phenyl ether	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
4-Methylphenol	ug/kg	330	500000	< 1800 U	< 490 U	< 410 U	< 410 U	< 400 U	< 390 U	< 440 U	< 390 U	< 380 U	< 400 U	< 380 U	< 400 U	< 410 U	< 400 U	< 1100 U	< 420 U	< 420 U	< 420 U	< 680 U	< 400 U	< 390 U	< 390 U	< 400 U	< 380 UJ	< 760 U	< 3300 U	< 410 U	< 390 U	< 68000 UJ	< 390 U	< 380 U	< 480 U
4-Nitroaniline	ug/kg	-	-	< 1800 U	< 490 U	< 410 U	< 410 U	< 400 U	< 390 U	< 440 U	< 390 U	< 380 U	< 400 U	< 380 U	< 400 U	< 410 U	< 400 U	< 1100 U	< 420 U	< 420 U	< 420 U	< 680 U	< 400 U	< 390 U	< 390 U	< 400 U	< 380 UJ	< 760 U	< 3300 U	< 410 U	< 390 U	< 68000 UJ	< 390 U	< 380 U	< 480 U
4-Nitrophenol	ug/kg	-	-	< 1800 U	< 490 U	< 410 U	< 410 U	< 400 U	< 390 U	< 440 U	< 390 U	< 380 U	< 400 U	< 380 U	< 400 U	< 410 U	< 400 U	< 1100 U	< 420 U	< 420 U	< 420 U	< 680 U	< 400 U	< 390 U	< 390 U	< 400 U	< 380 UJ	< 760 U	< 3300 U	< 410 U	< 390 U	< 68000 UJ	< 390 U	< 380 U	< 480 U
Acenaphthene	ug/kg	20000	500000	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	1400 UJ	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Acenaphthylene	ug/kg	100000	500000	< 950 U	< 250 U	< 210 U	74 UJ	< 210 U	< 200 U	59 UJ	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	130 UJ	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	110 UJ	< 200 U	< 200 U	170 UJ	< 200 UJ	< 390 U	270 UJ	92 UJ	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Acetophenone	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Anthracene	ug/kg	100000	500000	< 950 U	< 250 U	< 210 U	130 UJ	< 210 U	< 200 U	120 UJ	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	120 UJ	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	130 UJ	< 200 U	< 200 U	210	< 200 UJ	< 390 U	4000	140 UJ	< 200 U	< 35000 UJ	< 200 U	< 200 U	91 UJ
Atrazine	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Benzaldehyde	ug/kg	-	-	< 950 UJ	< 250 UJ	< 210 UJ	< 210 UJ	< 210 UJ	< 200 UJ	< 220 UJ	< 200 UJ	< 200 UJ	< 200 UJ	< 200 UJ	< 210 UJ	< 210 UJ	< 210 UJ	< 560 UJ	< 210 UJ	< 220 UJ	< 220 UJ	< 350 UJ	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Benzo(b)fluoranthene	ug/kg	**1000**	5600	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	**1100**	< 200 U	< 200 U	140 UJ	< 200 U	< 210 U	**1100**	< 210 U	< 560 U	< 210 U	200 UJ	< 220 U	< 350 U	800	< 200 U	< 200 U	**1300**	< 200 UJ	< 390 U	**9200**	**1200**	< 200 U	< 35000 UJ	< 200 U	< 200 U	150 UJ
Benzo[a]anthracene	ug/kg	**1000**	5600	< 950 U	< 250 U	< 210 U	300	< 210 U	< 200 U	370	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	560	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	540	< 200 U	< 200 U	630	< 200 UJ	< 390 U	**8700**	540	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Benzo[a]pyrene	ug/kg	**1000**	1000	280 UJ	< 250 U	< 210 U	380	< 210 U	< 200 U	500	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	700	< 210 U	< 560 U	< 210 U	130 UJ	< 220 U	< 350 U	570	< 200 U	< 200 U	760	< 200 UJ	< 390 U	**7400**	720	< 200 U	< 35000 UJ	< 200 U	< 200 U	150 UJ
Benzo[g,h,i]perylene	ug/kg	100000	500000	160 UJ	< 250 U	< 210 U	350	< 210 U	< 200 U	670	< 200 U	< 200 U	79 UJ	< 200 U	< 210 U	670	< 210 U	< 560 U	< 210 U	100 UJ	< 220 U	< 350 U	500	< 200 U	< 200 U	780	< 200 UJ	< 390 U	5200	800	< 200 U	< 35000 UJ	< 200 U	< 200 U	86 UJ
Benzo[k]fluoranthene	ug/kg	**800**	56000	170 UJ	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	430	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	650	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	690	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
bis (2-chloroisopropyl) ether	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
bis(2-Chloroethoxy)methane	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
bis(2-Chloroethyl) ether	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
bis(2-Ethylhexyl) phthalate	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	160 UJ	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Butyl benzyl phthalate	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Caprolactam	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Carbazole	ug/kg	-	-	< 950 U	< 250 U	< 210 U	35 UJ	< 210 U	< 200 U	100 UJ	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	70 UJ	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	52 UJ	< 200 U	< 200 U	98 UJ	< 200 UJ	< 390 U	1600 UJ	66 UJ	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Chrysene	ug/kg	**1000**	56000	< 950 U	< 250 U	< 210 U	380	< 210 U	< 200 U	620	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	780	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	630	< 200 U	< 200 U	900	< 200 UJ	< 390 U	**8300**	760	< 200 U	< 35000 UJ	< 200 U	< 200 U	180 UJ
Dibenz[a,h]anthracene	ug/kg	**330**	560	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Dibenzofuran	ug/kg	7000	350000	< 950 U	< 250 U	< 210 U	46 UJ	< 210 U	< 200 U	130 UJ	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	67 UJ	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	25 UJ	< 200 U	< 200 U	81 UJ	< 200 UJ	< 390 U	790 UJ	81 UJ	< 200 U	< 35000 UJ	< 200 U	< 200 U	35 UJ
Diethyl phthalate	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	92 UJ	72 UJ	64 UJ	61 UJ	46 UJ	110 UJ	430 UJ	52 UJ	38 UJ	6600 UJ	< 200 U	< 200 U	< 250 U
Dimethyl phthalate	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Di-n-butyl phthalate	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	44 UJ	39 UJ	39 UJ	42 UJ	< 200 UJ	< 390 U	< 1700 U	41 UJ	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Di-n-octyl phthalate	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Fluoranthene	ug/kg	100000	500000	310 UJ	< 250 U	< 210 U	470	< 210 U	< 200 U	520	< 200 U	< 200 U	80 UJ	< 200 U	< 210 U	820	< 210 U	< 560 U	< 210 U	120 UJ	24 UJ	< 350 U	1000	< 200 U	< 200 U	890	< 200 UJ	< 390 U	17000	850	< 200 U	7200 UJ	< 200 U	< 200 U	400
Fluorene	ug/kg	30000	500000	< 950 U	< 250 U	< 210 U	50 UJ	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	34 UJ	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	1400 UJ	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	44 UJ
Hexachlorobenzene	ug/kg	330	6000	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Hexachlorobutadiene	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Hexachlorocyclopentadiene	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Hexachloroethane	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Indeno[1,2,3-cd]pyrene	ug/kg	**500**	5600	130 UJ	< 250 U	< 210 U	300	< 210 U	< 200 U	**530**	< 200 U	< 200 U	69 UJ	< 200 U	< 210 U	**570**	< 210 U	< 560 U	< 210 U	94 UJ	< 220 U	< 350 U	420	< 200 U	< 200 U	**680**	< 200 UJ	< 390 U	**4600**	**660**	< 200 U	< 35000 UJ	< 200 U	< 200 U	82 UJ
Isophorone	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Naphthalene	ug/kg	12000	500000	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	270	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	130 UJ	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	37 UJ	< 200 U	< 200 U	150 UJ	< 200 UJ	< 390 U	< 1700 U	140 UJ	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Nitrobenzene	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
N-Nitrosodi-n-propylamine	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
N-Nitrosodiphenylamine	ug/kg	-	-	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Pentachlorophenol	ug/kg	800	6700	< 1800 U	< 490 U	< 410 U	< 410 U	< 400 U	< 390 U	< 440 U	< 390 U	< 380 U	< 400 U	< 380 U	< 400 U	< 410 U	< 400 U	< 1100 U	< 420 U	< 420 U	< 420 U	< 680 U	< 400 U	< 390 U	< 390 U	< 400 U	< 380 UJ	< 760 U	< 3300 U	< 410 U	< 390 U	< 68000 UJ	< 390 U	< 380 U	< 480 U
Phenanthrene	ug/kg	100000	500000	220 UJ	< 250 U	< 210 U	280	< 210 U	< 200 U	430	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	430	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	640	< 200 U	< 200 U	390	< 200 UJ	< 390 U	13000	490	< 200 U	< 35000 UJ	< 200 U	< 200 U	380
Phenol	ug/kg	**330**	500000	< 950 U	< 250 U	< 210 U	< 210 U	< 210 U	< 200 U	< 220 U	< 200 U	< 200 U	< 200 U	< 200 U	< 210 U	< 210 U	< 210 U	< 560 U	< 210 U	< 220 U	< 220 U	< 350 U	< 210 U	< 200 U	< 200 U	< 210 U	< 200 UJ	< 390 U	< 1700 U	< 210 U	< 200 U	< 35000 UJ	< 200 U	< 200 U	< 250 U
Pyrene	ug/kg	100000	500000	230 UJ	< 250 U	< 210 U	600	< 210 U	< 200 U	560	< 200 U	< 200 U	91 UJ	< 200 U	< 210 U	860	< 210 U	< 560 U	< 210 U	180 UJ	26 UJ	< 350 U	1100 J	< 200 UJ	< 200 UJ	900 J	< 200 UJ	< 390 UJ	14000 J	770 J	< 200 UJ	4200 UJ	< 200 UJ	< 200 UJ	300 J

Notes:

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives

- = no SCO established

NA = not applicable/analyzed

Qualifiers:

U = Analyte analyzed for, but not detected above the sample's reported quantitation limit

J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample

J+ = Sample likely to have a high bias

J- = Sample likely to have a low bias

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.

R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.

B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.

P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).

PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

Soil Sample ID				SB-111-A	SB-111-B	SB-111-C	SB-112-A	SB-112-B	SB-112-C	SB-113-A	SB-113-B	SB-113-C	SB-114-A	SB-114-B	SB-114-C	SB-115-A	SB-115-B	SB-115-C	SB-116-A	SB-116-B	SB-116-C
Start Depth (ft bgs)				0	6	18	0	8	12	0	6	18	0	8	10	0	7	15	0	5	14
End Depth (ft bgs)				1	8	20	1	10	15	1	8	20	1	10	20	1	10	17	1	7	18
Sample Date				10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018
Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO																		
SW8270D																					
1,1'-Biphenyl	ug/kg	-	-	< 310 U	< 350 U	< 65 U	140	< 380 U	< 160 U	< 1700 U	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
2,4,5-Trichlorophenol	ug/kg	-	-	< 930 U	< 1000 U	< 190 U	< 330 U	< 1100 U	< 490 U	< 5000 U	< 1300 U	< 190 U	< 180 U	< 990 U	< 1100 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
2,4,6-Trichlorophenol	ug/kg	-	-	< 930 U	< 1000 U	< 190 U	< 330 U	< 1100 U	< 490 U	< 5000 U	< 1300 U	< 190 U	< 180 U	< 990 U	< 1100 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
2,4-Dichlorophenol	ug/kg	-	-	< 930 U	< 1000 U	< 190 U	< 330 U	< 1100 U	< 490 U	< 5000 U	< 1300 U	< 190 U	< 180 U	< 990 U	< 1100 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
2,4-Dimethylphenol	ug/kg	-	-	< 930 U	< 1000 U	< 190 U	< 330 U	< 1100 U	< 490 U	< 5000 U	< 1300 U	< 190 U	< 180 U	< 990 U	< 1100 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
2,4-Dinitrophenol	ug/kg	-	-	< 2000 U	< 2300 U	< 430 U	< 730 U	< 2500 U	< 1100 U	< 11000 U	< 2800 U	< 410 U	< 410 U	< 2200 U	< 2300 U	< 2000 U	< 1900 UJ	< 1900 U	< 9500 UJ	< 11000 UJ	< 2200 U
2,4-Dinitrotoluene	ug/kg	-	-	< 1200 U	< 1400 U	< 260 U	< 450 U	< 1500 U	< 660 U	< 6600 U	< 1700 U	< 250 U	< 250 U	< 1300 U	< 1400 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
2,6-Dinitrotoluene	ug/kg	-	-	< 1200 U	< 1400 U	< 260 U	< 450 U	< 1500 U	< 660 U	< 6600 U	< 1700 U	< 250 U	< 250 U	< 1300 U	< 1400 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
2-Chloronaphthalene	ug/kg	-	-	< 310 U	< 350 U	< 65 U	< 110 U	< 380 U	< 160 U	< 1700 U	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
2-Chlorophenol	ug/kg	-	-	< 310 U	< 350 U	< 65 U	< 110 U	< 380 U	< 160 U	< 1700 U	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
2-Methylnaphthalene	ug/kg	-	-	340	< 100 U	< 19 U	1400	< 110 U	< 49 U	130 UJ	< 130 U	< 19 U	16 UJ	< 99 U	< 110 U	66 UJ	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
2-Methylphenol	ug/kg	330	500000	< 1200 U	< 1400 U	< 260 U	< 450 U	< 1500 U	< 660 U	< 6600 U	< 1700 U	< 250 U	< 250 U	< 1300 U	< 1400 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
2-Nitroaniline	ug/kg	-	-	< 1200 U	< 1400 U	< 260 U	< 450 U	< 1500 U	< 660 U	< 6600 U	< 1700 U	< 250 U	< 250 U	< 1300 U	< 1400 U	< 400 U	< 380 UJ	< 380 U	< 1900 UJ	< 2200 UJ	< 430 U
2-Nitrophenol	ug/kg	-	-	< 310 U	< 350 U	< 65 U	< 110 U	< 380 U	< 160 U	< 1700 U	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
3 & 4 Methylphenol	ug/kg	-	-	< 2500 U	< 2800 U	< 520 U	< 890 U	< 3100 U	< 1300 U	< 13000 U	< 3300 U	< 500 U	< 490 U	< 2600 U	< 2800 U	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	ug/kg	-	-	< 620 U	< 700 U	< 130 U	< 220 U	< 760 U	< 330 U	< 3300 U	< 840 U	< 120 U	< 120 U	< 660 U	< 710 U	< 400 U	< 380 UJ	< 380 U	< 1900 UJ	< 2200 UJ	< 430 U
3-Nitroaniline	ug/kg	-	-	< 1200 U	< 1400 U	< 260 U	< 450 U	< 1500 U	< 660 U	< 6600 U	< 1700 U	< 250 U	< 250 U	< 1300 U	< 1400 U	< 400 U	< 380 UJ	< 380 U	< 1900 UJ	< 2200 UJ	< 430 U
4,6-Dinitro-2-methylphenol	ug/kg	-	-	< 2000 U	< 2300 U	< 430 U	< 730 U	< 2500 U	< 1100 U	< 11000 U	< 2800 U	< 410 U	< 410 U	< 2200 U	< 2300 U	< 400 U	< 380 UJ	< 380 U	< 1900 UJ	< 2200 UJ	< 430 U
4-Bromophenyl phenyl ether	ug/kg	-	-	< 310 U	< 350 U	< 65 U	< 110 U	< 380 U	< 160 U	< 1700 U	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
4-Chloro-3-methylphenol	ug/kg	-	-	< 930 U	< 1000 U	< 190 U	< 330 U	< 1100 U	< 490 U	< 5000 U	< 1300 U	< 190 U	< 180 U	< 990 U	< 1100 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
4-Chloroaniline	ug/kg	-	-	< 930 U	< 1000 U	< 190 U	< 330 U	< 1100 U	< 490 U	< 5000 U	< 1300 U	< 190 U	< 180 U	< 990 U	< 1100 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
4-Chlorophenyl phenyl ether	ug/kg	-	-	< 310 U	< 350 U	< 65 U	< 110 U	< 380 U	< 160 U	< 1700 U	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
4-Methylphenol	ug/kg	330	500000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 400 U	< 380 UJ	< 380 U	< 1900 UJ	< 2200 UJ	< 430 U
4-Nitroaniline	ug/kg	-	-	< 1200 U	< 1400 U	< 260 U	< 450 U	< 1500 U	< 660 U	< 6600 U	< 1700 U	< 250 U	< 250 U	< 1300 U	< 1400 U	< 400 U	< 380 UJ	< 380 U	< 1900 UJ	< 2200 UJ	< 430 U
4-Nitrophenol	ug/kg	-	-	< 2000 U	< 2300 U	< 430 U	< 730 U	< 2500 U	< 1100 U	< 11000 U	< 2800 U	< 410 U	< 410 U	< 2200 U	< 2300 U	< 400 U	< 380 UJ	< 380 U	< 1900 UJ	< 2200 UJ	< 430 U
Acenaphthene	ug/kg	20000	500000	800	< 100 U	< 19 U	72	< 110 U	< 49 U	830	< 130 U	< 19 U	< 18 U	< 99 U	< 110 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Acenaphthylene	ug/kg	100000	500000	41 UJ	< 100 U	< 19 U	79	< 110 U	< 49 U	6100	< 130 U	< 19 U	15 UJ	< 99 U	< 110 U	62 UJ	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Acetophenone	ug/kg	-	-	< 620 U	< 700 U	< 130 U	150 UJ	< 760 U	47 UJ	< 3300 U	< 840 U	< 120 U	< 120 U	< 660 U	< 710 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Anthracene	ug/kg	100000	500000	1900	< 100 U	< 19 U	160	< 110 U	< 49 U	7000	< 130 U	< 19 U	9.7 UJ	< 99 U	< 110 U	86 UJ	< 200 UJ	< 190 U	340 UJ	< 1100 UJ	< 220 U
Atrazine	ug/kg	-	-	< 1200 U	< 1400 U	< 260 U	< 450 U	< 1500 U	< 660 U	< 6600 U	< 1700 U	< 250 U	< 250 U	< 1300 U	< 1400 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Benzaldehyde	ug/kg	-	-	< 620 U	< 700 U	< 130 U	130 UJ	< 760 U	120 UJ	< 3300 U	< 840 U	< 120 U	< 120 U	< 660 U	< 710 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Benzo(b)fluoranthene	ug/kg	**1000**	5600	**3900**	< 100 U	< 19 U	**1500**	< 110 U	< 49 U	**27000**	< 130 U	< 19 U	100	< 99 U	< 110 U	640	< 200 UJ	< 190 U	**1400 J**	< 1100 UJ	< 220 U
Benzo[a]anthracene	ug/kg	**1000**	5600	**3100**	< 100 U	< 19 U	680	< 110 U	< 49 U	**18000**	< 130 U	< 19 U	46	< 99 U	< 110 U	370	< 200 UJ	< 190 U	960 UJ	< 1100 UJ	< 220 U
Benzo[a]pyrene	ug/kg	**1000**	1000	**2400**	< 100 U	< 19 U	760	< 110 U	< 49 U	**17000**	< 130 U	< 19 U	51	< 99 U	< 110 U	490	< 200 UJ	< 190 U	**1100 J**	< 1100 UJ	< 220 U
Benzo[g,h,i]perylene	ug/kg	100000	500000	570	< 100 U	< 19 U	260	< 110 U	< 49 U	4100	< 130 U	< 19 U	20	< 99 U	< 110 U	560	< 200 UJ	< 190 U	940 UJ	< 1100 UJ	< 220 U
Benzo[k]fluoranthene	ug/kg	**800**	56000	**1400**	< 100 U	< 19 U	440	< 110 U	< 49 U	**10000**	< 130 U	< 19 U	30	< 99 U	< 110 U	< 200 U	< 200 UJ	< 190 U	490 UJ	< 1100 UJ	< 220 U
bis (2-chloroisopropyl) ether	ug/kg	-	-	< 620 U	< 700 U	< 130 U	< 220 U	< 760 U	< 330 U	< 3300 U	< 840 U	< 120 U	< 120 U	< 660 U	< 710 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
bis(2-Chloroethoxy)methane	ug/kg	-	-	< 620 U	< 700 U	< 130 U	< 220 U	< 760 U	< 330 U	< 3300 U	< 840 U	< 120 U	< 120 U	< 660 U	< 710 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
bis(2-Chloroethyl) ether	ug/kg	-	-	< 620 U	< 700 U	< 130 U	< 220 U	< 760 U	< 330 U	< 3300 U	< 840 U	< 120 U	< 120 U	< 660 U	< 710 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
bis(2-Ethylhexyl) phthalate	ug/kg	-	-	< 430 U	< 490 U	< 91 U	< 160 U	560	< 230 U	< 2300 U	< 590 U	< 87 U	180	< 460 U	400 UJ	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Butyl benzyl phthalate	ug/kg	-	-	< 430 U	< 490 U	< 91 U	< 160 U	< 540 U	< 230 U	< 2300 U	< 590 U	< 87 U	< 86 U	< 460 U	< 490 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Caprolactam	ug/kg	-	-	< 2000 U	< 2300 U	< 430 U	< 730 U	< 2500 U	< 1100 U	< 11000 U	< 2800 U	< 410 U	< 410 U	< 2200 U	< 2300 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Carbazole	ug/kg	-	-	990	< 350 U	< 65 U	120	< 380 U	< 160 U	3000	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	160 UJ	< 1100 UJ	< 220 U
Chrysene	ug/kg	**1000**	56000	**3000**	< 100 U	< 19 U	1000	< 110 U	< 49 U	**18000**	< 130 U	< 19 U	58	< 99 U	< 110 U	470	< 200 UJ	< 190 U	1000 J	< 1100 UJ	< 220 U
Dibenz[a,h]anthracene	ug/kg	**330**	560	200	< 100 U	< 19 U	79	< 110 U	< 49 U	**1500**	< 130 U	< 19 U	< 18 U	< 99 U	< 110 U	120 UJ	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Dibenzofuran	ug/kg	7000	350000	570	< 350 U	< 65 U	410	< 380 U	< 160 U	910 UJ	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	32 UJ	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Diethyl phthalate	ug/kg	-	-	< 430 U	< 490 U	< 91 U	< 160 U	< 540 U	< 230 U	< 2300 U	< 590 U	< 87 U	< 86 U	< 460 U	< 490 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Dimethyl phthalate	ug/kg	-	-	< 430 U	< 490 U	< 91 U	< 160 U	< 540 U	< 230 U	< 2300 U	< 590 U	< 87 U	< 86 U	< 460 U	< 490 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Di-n-butyl phthalate	ug/kg	-	-	< 430 U	< 490 U	< 91 U	< 160 U	< 540 U	< 230 U	< 2300 U	< 590 U	< 87 U	< 86 U	< 460 U	< 490 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Di-n-octyl phthalate	ug/kg	-	-	< 430 UJ	< 490 UJ	< 91 UJ	< 160 UJ	< 540 UJ	< 230 UJ	< 2300 UJ	< 590 UJ	< 87 UJ	< 86 UJ	< 460 UJ	< 490 UJ	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Fluoranthene	ug/kg	100000	500000	8200	< 100 U	< 19 U	1400	< 110 U	< 49 U	45000	< 130 U	< 19 U	76	< 99 U	< 110 U	610	< 200 UJ	< 190 U	2000 J	< 1100 UJ	< 220 U
Fluorene	ug/kg	30000	500000	910	< 100 U	< 19 U	63	< 110 U	< 49 U	3300	< 130 U	< 19 U	< 18 U	< 99 U	< 110 U	24 UJ	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Hexachlorobenzene	ug/kg	330	6000	< 93 U	< 100 U	< 19 U	< 33 U	< 110 U	< 49 U	< 500 U	< 130 U	< 19 U	< 18 U	< 99 U	< 110 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Hexachlorobutadiene	ug/kg	-	-	< 310 U	< 350 U	< 65 U	< 110 U	< 380 U	< 160 U	< 1700 U	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Hexachlorocyclopentadiene	ug/kg	-	-	< 2000 UJ	< 2300 UJ	< 430 UJ	< 730 UJ	< 2500 UJ	< 1100 UJ	< 11000 UJ	< 2800 UJ	< 410 UJ	< 410 UJ	< 2200 UJ	< 2300 UJ	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Hexachloroethane	ug/kg	-	-	< 310 U	< 350 U	< 65 U	< 110 U	< 380 U	< 160 U	< 1700 U	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Indeno[1,2,3-cd]pyrene	ug/kg	**500**	5600	**620**	< 100 U	< 19 U	270	< 110 U	< 49 U	**4800**	< 130 U	< 19 U	20	< 99 U	< 110 U	440	< 200 UJ	< 190 U	**750 UJ**	< 1100 UJ	< 220 U
Isophorone	ug/kg	-	-	< 310 U	< 350 U	< 65 U	< 110 U	< 380 U	< 160 U	< 1700 U	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Naphthalene	ug/kg	12000	500000	370	< 100 U	< 19 U	1000	< 110 U	< 49 U	260 UJ	< 130 U	< 19 U	14 UJ	< 99 U	< 110 U	66 UJ	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Nitrobenzene	ug/kg	-	-	< 620 U	< 700 U	< 130 U	< 220 U	< 760 U	< 330 U	< 3300 U	< 840 U	< 120 U	< 120 U	< 660 U	< 710 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
N-Nitrosodi-n-propylamine	ug/kg	-	-	< 310 U	< 350 U	< 65 U	< 110 U	< 380 U	< 160 U	< 1700 U	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
N-Nitrosodiphenylamine	ug/kg	-	-	< 310 U	< 350 U	< 65 U	< 110 U	< 380 U	< 160 U	< 1700 U	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Pentachlorophenol	ug/kg	800	6700	< 930 U	< 1000 U	< 190 U	< 330 U	< 1100 U	< 490 U	< 5000 U	< 1300 U	< 190 U	< 180 U	< 990 U	< 1100 U	< 400 U	< 380 UJ	< 380 U	< 1900 UJ	< 2200 UJ	< 430 U
Phenanthrene	ug/kg	100000	500000	6700	< 100 U	< 19 U	1400	< 110 U	< 49 U	25000	< 130 U	< 19 U	31	< 99 U	< 110 U	310	< 200 UJ	< 190 U	1400 J	< 1100 UJ	< 220 U
Phenol	ug/kg	**330**	500000	< 310 U	< 350 U	< 65 U	23 UJ	< 380 U	< 160 U	< 1700 U	< 420 U	< 62 U	< 61 U	< 330 U	< 350 U	< 200 U	< 200 UJ	< 190 U	< 980 UJ	< 1100 UJ	< 220 U
Pyrene	ug/kg	100000	500000	6000	< 100 U	7.4 UJ	1200	< 110 U	< 49 U	30000	< 130 U	< 19 U	62	< 99 U	< 110 U	520	< 200 UJ	< 190 U	1500 J	< 1100 UJ	< 220 U

Soil Sample ID	SB-117-A	SB-117-B	SB-117-C	SB-117-D	SB-118-A	SB-118-B	SB-118-C	SB-119-A	SB-119-B	SB-119-C	SB-120-A	SB-120-B	SB-120-C
Start Depth (ft bgs)	0	4	10	16	0	6	16	0	8	13	0	4	16
End Depth (ft bgs)	2	7	12	20	1	8	20	1	10	15	1	6	20
Sample Date	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/12/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018
Analyte													
SW8270D													
1,1'-Biphenyl	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
2,4,5-Trichlorophenol	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
2,4,6-Trichlorophenol	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
2,4-Dichlorophenol	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
2,4-Dimethylphenol	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
2,4-Dinitrophenol	< 1900 U	< 2000 U	< 2800 U	< 2000 U	< 2000 U	< 2100 UJ	< 2000 U	< 10000 U	< 1900 U	< 2100 U	< 530000 UJ	< 2000 U	< 2500 U
2,4-Dinitrotoluene	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
2,6-Dinitrotoluene	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
2-Chloronaphthalene	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
2-Chlorophenol	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
2-Methylnaphthalene	390	< 200 U	< 280 U	< 200 U	87 UJ	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
2-Methylphenol	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
2-Nitroaniline	< 380 U	< 390 U	< 550 U	< 400 U	< 400 U	< 410 UJ	< 390 U	< 2000 U	< 390 U	< 410 U	< 110000 UJ	< 390 U	< 490 U
2-Nitrophenol	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
3 & 4 Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	< 380 U	< 390 U	< 550 U	< 400 U	< 400 U	< 410 UJ	< 390 U	< 2000 U	< 390 U	< 410 U	< 110000 UJ	< 390 U	< 490 U
3-Nitroaniline	< 380 U	< 390 U	< 550 U	< 400 U	< 400 U	< 410 UJ	< 390 U	< 2000 U	< 390 U	< 410 U	< 110000 UJ	< 390 U	< 490 U
4,6-Dinitro-2-methylphenol	< 380 U	< 390 U	< 550 U	< 400 U	< 400 U	< 410 UJ	< 390 U	< 2000 U	< 390 U	< 410 U	< 110000 UJ	< 390 U	< 490 U
4-Bromophenyl phenyl ether	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
4-Chloro-3-methylphenol	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
4-Chloroaniline	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
4-Chlorophenyl phenyl ether	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
4-Methylphenol	< 380 U	< 390 U	< 550 U	< 400 U	< 400 U	< 410 UJ	< 390 U	< 2000 U	< 390 U	< 410 U	< 110000 UJ	< 390 U	< 490 U
4-Nitroaniline	< 380 U	< 390 U	< 550 U	< 400 U	< 400 U	< 410 UJ	< 390 U	< 2000 U	< 390 U	< 410 U	< 110000 UJ	< 390 U	< 490 U
4-Nitrophenol	< 380 U	< 390 U	< 550 U	< 400 U	< 400 U	< 410 UJ	< 390 U	< 2000 U	< 390 U	< 410 U	< 110000 UJ	< 390 U	< 490 U
Acenaphthene	< 190 U	< 200 U	< 280 U	< 200 U	150 UJ	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Acenaphthylene	53 UJ	< 200 U	< 280 U	< 200 U	70 UJ	< 210 UJ	< 200 U	220 UJ	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Acetophenone	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Anthracene	60 UJ	< 200 U	< 280 U	< 200 U	120 UJ	< 210 UJ	< 200 U	1300	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Atrazine	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Benzaldehyde	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Benzo(b)fluoranthene	600	< 200 U	< 280 U	< 200 U	**2400 J**	< 210 UJ	< 200 U	**4200**	< 200 U	< 210 U	< 54000 UJ	83 UJ	< 250 U
Benzo[a]anthracene	350	< 200 U	< 280 U	< 200 U	1000	< 210 UJ	< 200 U	**3000**	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Benzo[a]pyrene	440	< 200 U	< 280 U	< 200 U	**1900 J**	< 210 UJ	< 200 U	**2900**	< 200 U	< 210 U	< 54000 UJ	77 UJ	< 250 U
Benzo[g,h,i]perylene	430	< 200 U	< 280 U	< 200 U	2500 J	< 210 UJ	< 200 U	2400	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Benzo[k]fluoranthene	< 190 U	< 200 U	< 280 U	< 200 U	**1000**	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
bis (2-chloroisopropyl) ether	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
bis(2-Chloroethoxy)methane	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
bis(2-Chloroethyl) ether	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
bis(2-Ethylhexyl) phthalate	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Butyl benzyl phthalate	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Caprolactam	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Carbazole	< 190 U	< 200 U	< 280 U	< 200 U	60 UJ	< 210 UJ	< 200 U	580 UJ	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Chrysene	520	< 200 U	< 280 U	< 200 U	**1200**	< 210 UJ	< 200 U	**3300**	< 200 U	< 210 U	< 54000 UJ	90 UJ	< 250 U
Dibenz[a,h]anthracene	< 190 U	< 200 U	< 280 U	< 200 U	**490 J**	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Dibenzofuran	120 UJ	< 200 U	< 280 U	< 200 U	39 UJ	< 210 UJ	< 200 U	270 UJ	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Diethyl phthalate	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Dimethyl phthalate	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Di-n-butyl phthalate	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Di-n-octyl phthalate	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Fluoranthene	570	< 200 U	< 280 U	< 200 U	1100 J	< 210 UJ	< 200 U	6900	< 200 U	< 210 U	< 54000 UJ	160 UJ	< 250 U
Fluorene	< 190 U	< 200 U	< 280 U	< 200 U	50 UJ	< 210 UJ	< 200 U	440 UJ	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Hexachlorobenzene	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Hexachlorobutadiene	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Hexachlorocyclopentadiene	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Hexachloroethane	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Indeno[1,2,3-cd]pyrene	360	< 200 U	< 280 U	< 200 U	**1900 J**	< 210 UJ	< 200 U	**2000**	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Isophorone	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Naphthalene	280	< 200 U	< 280 U	< 200 U	85 UJ	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Nitrobenzene	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
N-Nitrosodi-n-propylamine	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
N-Nitrosodiphenylamine	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Pentachlorophenol	< 380 U	< 390 U	< 550 U	< 400 U	< 400 U	< 410 UJ	< 390 U	< 2000 U	< 390 U	< 410 U	< 110000 UJ	< 390 U	< 490 U
Phenanthrene	460	< 200 U	< 280 U	< 200 U	450 J	< 210 UJ	< 200 U	4600	< 200 U	< 210 U	< 54000 UJ	120 UJ	< 250 U
Phenol	< 190 U	< 200 U	< 280 U	< 200 U	< 200 U	< 210 UJ	< 200 U	< 1000 U	< 200 U	< 210 U	< 54000 UJ	< 200 U	< 250 U
Pyrene	520	< 200 U	< 280 U	< 200 U	1000	< 210 UJ	< 200 U	5100 J	< 200 UJ	< 210 UJ	< 54000 UJ	130 UJ	< 250 UJ

Notes:
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
μg/kg = micrograms per kilogram
6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives
- = no SCO established
NA = not applicable/analyzed
Qualifiers:
U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J+ = Sample likely to have a high bias
J- = Sample likely to have a low bias
UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.
R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).
PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO	SB-121-A	SB-121-B	SB-121-C	SB-121-D	SB-122-A	SB-122-B	SB-122-C	SB-123-A	SB-123-B	SB-123-C	SB-124-A	SB-124-B	SB-124-C
Start Depth (ft bgs)				0	8	17	10	0	8	18	0	10	18	0	12	18
End Depth (ft bgs)				1	10	20	12	2	10	20	1	12	20	1	14	20
Sample Date				10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018
SW8270D																
1,1'-Biphenyl	ug/kg	-	-	31 UJ	< 350 U	< 63 U	< 110 U	33 UJ	< 320 U	< 150 U	32 UJ	< 340 U	< 62 U	< 62 U	< 120 U	< 58 U
2,4,5-Trichlorophenol	ug/kg	-	-	< 190 U	< 1000 U	< 190 U	< 340 U	< 180 U	< 950 U	< 460 U	< 190 U	< 1000 U	< 180 U	< 190 U	< 350 U	< 180 U
2,4,6-Trichlorophenol	ug/kg	-	-	< 190 U	< 1000 U	< 190 U	< 340 U	< 180 U	< 950 U	< 460 U	< 190 U	< 1000 U	< 180 U	< 190 U	< 350 U	< 180 U
2,4-Dichlorophenol	ug/kg	-	-	< 190 U	< 1000 U	< 190 U	< 340 U	< 180 U	< 950 U	< 460 U	< 190 U	< 1000 U	< 180 U	< 190 U	< 350 U	< 180 U
2,4-Dimethylphenol	ug/kg	-	-	< 190 U	< 1000 U	< 190 U	< 340 U	< 180 U	< 950 U	< 460 U	< 190 U	< 1000 U	< 180 U	< 190 U	< 350 U	< 180 U
2,4-Dinitrophenol	ug/kg	-	-	< 410 U	< 2300 U	< 410 U	< 760 U	< 400 U	< 2100 U	< 1000 U	< 420 U	< 2200 U	< 410 U	< 410 U	< 760 U	< 390 U
2,4-Dinitrotoluene	ug/kg	-	-	< 250 U	< 1400 U	< 250 U	< 460 U	< 240 U	< 1300 U	< 610 U	< 250 U	< 1300 U	< 250 U	< 250 U	< 460 U	< 230 U
2,6-Dinitrotoluene	ug/kg	-	-	< 250 U	< 1400 U	< 250 U	< 460 U	< 240 U	< 1300 U	< 610 U	< 250 U	< 1300 U	< 250 U	< 250 U	< 460 U	< 230 U
2-Chloronaphthalene	ug/kg	-	-	< 62 U	< 350 U	< 63 U	< 110 U	< 61 U	< 320 U	< 150 U	< 63 U	< 340 U	< 62 U	< 62 U	< 120 U	< 58 U
2-Chlorophenol	ug/kg	-	-	< 62 U	< 350 U	< 63 U	< 110 U	< 61 U	< 320 U	< 150 U	< 63 U	< 340 U	< 62 U	< 62 U	< 120 U	< 58 U
2-Methylnaphthalene	ug/kg	-	-	240	< 100 U	< 19 U	< 34 U	550	< 95 U	< 46 U	330	< 100 U	< 18 U	150	< 35 U	< 18 U
2-Methylphenol	ug/kg	330	500000	< 250 U	< 1400 U	< 250 U	< 460 U	< 240 U	< 1300 U	< 610 U	< 250 U	< 1300 U	< 250 U	< 250 U	< 460 U	< 230 U
2-Nitroaniline	ug/kg	-	-	< 250 U	< 1400 U	< 250 U	< 460 U	< 240 U	< 1300 U	< 610 U	< 250 U	< 1300 U	< 250 U	< 250 U	< 460 U	< 230 U
2-Nitrophenol	ug/kg	-	-	< 62 U	< 350 U	< 63 U	< 110 U	< 61 U	< 320 U	< 150 U	< 63 U	< 340 U	< 62 U	< 62 U	< 120 U	< 58 U
3 & 4 Methylphenol	ug/kg	-	-	< 500 U	< 2800 U	< 500 U	76 UJ	< 480 U	< 2500 U	< 1200 U	< 500 U	< 2700 U	< 490 U	< 500 U	2700	< 470 U
3,3'-Dichlorobenzidine	ug/kg	-	-	< 120 U	< 700 U	< 130 U	< 230 U	< 120 U	< 630 U	< 310 U	< 130 U	< 670 U	< 120 U	< 120 U	< 230 U	< 120 U
3-Nitroaniline	ug/kg	-	-	< 250 U	< 1400 U	< 250 U	< 460 U	< 240 U	< 1300 U	< 610 U	< 250 U	< 1300 U	< 250 U	< 250 U	< 460 U	< 230 U
4,6-Dinitro-2-methylphenol	ug/kg	-	-	< 410 U	< 2300 U	< 410 U	< 760 U	< 400 U	< 2100 U	< 1000 U	< 420 U	< 2200 U	< 410 U	< 410 U	< 760 U	< 390 U
4-Bromophenyl phenyl ether	ug/kg	-	-	< 62 U	< 350 U	< 63 U	< 110 U	< 61 U	< 320 U	< 150 U	< 63 U	< 340 U	< 62 U	< 62 U	< 120 U	< 58 U
4-Chloro-3-methylphenol	ug/kg	-	-	< 190 U	< 1000 U	< 190 U	< 340 U	< 180 U	< 950 U	< 460 U	< 190 U	< 1000 U	< 180 U	< 190 U	< 350 U	< 180 U
4-Chloroaniline	ug/kg	-	-	< 190 U	< 1000 U	< 190 U	< 340 U	< 180 U	< 950 U	< 460 U	< 190 U	< 1000 U	< 180 U	< 190 U	< 350 U	< 180 U
4-Chlorophenyl phenyl ether	ug/kg	-	-	< 62 U	< 350 U	< 63 U	< 110 U	< 61 U	< 320 U	< 150 U	< 63 U	< 340 U	< 62 U	< 62 U	< 120 U	< 58 U
4-Methylphenol	ug/kg	330	500000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	ug/kg	-	-	< 250 U	< 1400 U	< 250 U	< 460 U	< 240 U	< 1300 U	< 610 U	< 250 U	< 1300 U	< 250 U	< 250 U	< 460 U	< 230 U
4-Nitrophenol	ug/kg	-	-	< 410 U	< 2300 U	< 410 U	< 760 U	< 400 U	< 2100 U	< 1000 U	< 420 U	< 2200 U	< 410 U	< 410 U	< 760 U	< 390 U
Acenaphthene	ug/kg	20000	500000	45	< 100 U	< 19 U	< 34 U	44	< 95 U	< 46 U	22	< 100 U	< 18 U	< 19 U	< 35 U	< 18 U
Acenaphthylene	ug/kg	100000	500000	110	< 100 U	< 19 U	< 34 U	18	< 95 U	< 46 U	40	< 100 U	< 18 U	27	< 35 U	< 18 U
Acetophenone	ug/kg	-	-	26 UJ	< 700 U	< 130 U	< 230 U	< 120 U	< 630 U	< 310 U	40 UJ	< 670 U	< 120 U	23 UJ	44 UJ	< 120 U
Anthracene	ug/kg	100000	500000	170	< 100 U	< 19 U	< 34 U	32	< 95 U	< 46 U	53	< 100 U	< 18 U	39	< 35 U	< 18 U
Atrazine	ug/kg	-	-	< 250 U	< 1400 U	< 250 U	< 460 U	< 240 U	< 1300 U	< 610 U	< 250 U	< 1300 U	< 250 U	< 250 U	< 460 U	< 230 U
Benzaldehyde	ug/kg	-	-	46 UJ	< 700 U	< 130 U	110 UJ	< 120 U	< 630 U	< 310 U	80 UJ	< 670 U	< 120 U	48 UJ	53 UJ	< 120 U
Benzo(b)fluoranthene	ug/kg	**1000**	5600	1000	< 100 U	< 19 U	< 34 U	180	< 95 U	< 46 U	390	< 100 U	< 18 U	260	20 UJ	< 18 U
Benzo[a]anthracene	ug/kg	**1000**	5600	690	< 100 U	< 19 U	< 34 U	91	< 95 U	< 46 U	250	< 100 U	< 18 U	160	< 35 U	< 18 U
Benzo[a]pyrene	ug/kg	**1000**	1000	640	< 100 U	< 19 U	< 34 U	110	< 95 U	< 46 U	290	< 100 U	< 18 U	170	< 35 U	< 18 U
Benzo[g,h,i]perylene	ug/kg	100000	500000	250	< 100 U	< 19 U	< 34 U	53	< 95 U	< 46 U	180	< 100 U	< 18 U	110	< 35 U	< 18 U
Benzo[k]fluoranthene	ug/kg	**800**	56000	370	< 100 U	< 19 U	< 34 U	67	< 95 U	< 46 U	150	< 100 U	< 18 U	75	< 35 U	< 18 U
bis (2-chloroisopropyl) ether	ug/kg	-	-	< 120 U	< 700 U	< 130 U	< 230 U	< 120 U	< 630 U	< 310 U	< 130 U	< 670 U	< 120 U	< 120 U	< 230 U	< 120 U
bis(2-Chloroethoxy)methane	ug/kg	-	-	< 120 U	< 700 U	< 130 U	< 230 U	< 120 U	< 630 U	< 310 U	< 130 U	< 670 U	< 120 U	< 120 U	< 230 U	< 120 U
bis(2-Chloroethyl) ether	ug/kg	-	-	< 120 U	< 700 U	< 130 U	< 230 U	< 120 U	< 630 U	< 310 U	< 130 U	< 670 U	< 120 U	< 120 U	< 230 U	< 120 U
bis(2-Ethylhexyl) phthalate	ug/kg	-	-	480	< 490 U	< 88 U	< 160 U	69 UJ	< 440 U	< 210 U	71 UJ	< 470 U	< 86 U	64 UJ	150 UJ	110
Butyl benzyl phthalate	ug/kg	-	-	< 87 U	< 490 U	< 88 U	< 160 U	< 85 U	520	< 210 U	< 88 U	< 470 U	< 86 U	< 87 U	< 160 U	< 82 U
Caprolactam	ug/kg	-	-	< 410 U	< 2300 U	< 410 U	< 760 U	< 400 U	< 2100 U	< 1000 U	< 420 U	< 2200 U	< 410 U	< 410 U	< 760 U	< 390 U
Carbazole	ug/kg	-	-	76	< 350 U	< 63 U	< 110 U	< 61 U	< 320 U	< 150 U	42 UJ	< 340 U	< 62 U	< 62 U	< 120 U	< 58 U
Chrysene	ug/kg	**1000**	56000	760	< 100 U	< 19 U	< 34 U	200	< 95 U	< 46 U	330	< 100 U	< 18 U	200	< 35 U	< 18 U
Dibenz[a,h]anthracene	ug/kg	**330**	560	84	< 100 U	< 19 U	< 34 U	< 18 U	< 95 U	< 46 U	62	< 100 U	< 18 U	37	< 35 U	< 18 U
Dibenzofuran	ug/kg	7000	350000	100	< 350 U	< 63 U	< 110 U	35 UJ	< 320 U	< 150 U	110	< 340 U	< 62 U	48 UJ	< 120 U	< 58 U
Diethyl phthalate	ug/kg	-	-	< 87 U	< 490 U	< 88 U	< 160 U	< 85 U	< 440 U	< 210 U	< 88 U	< 470 U	< 86 U	< 87 U	< 160 U	< 82 U
Dimethyl phthalate	ug/kg	-	-	< 87 U	< 490 U	< 88 U	< 160 U	< 85 U	< 440 U	< 210 U	< 88 U	< 470 U	< 86 U	< 87 U	< 160 U	< 82 U
Di-n-butyl phthalate	ug/kg	-	-	< 87 U	< 490 U	< 88 U	< 160 U	< 85 U	< 440 U	< 210 U	< 88 U	< 470 U	< 86 U	< 87 U	< 160 U	< 82 U
Di-n-octyl phthalate	ug/kg	-	-	< 87 UJ	< 490 UJ	< 88 UJ	< 160 UJ	< 85 UJ	< 440 UJ	< 210 UJ	< 88 U	< 470 U	< 86 U	< 87 U	< 160 U	< 82 U
Fluoranthene	ug/kg	100000	500000	1300	< 100 U	< 19 U	< 34 U	210	< 95 U	< 46 U	490	< 100 U	< 18 U	290	16 UJ	< 18 U
Fluorene	ug/kg	30000	500000	51	< 100 U	< 19 U	< 34 U	62	< 95 U	< 46 U	26	< 100 U	< 18 U	12 UJ	11 UJ	< 18 U
Hexachlorobenzene	ug/kg	330	6000	< 19 U	< 100 U	< 19 U	< 34 U	< 18 U	< 95 U	< 46 U	< 19 U	< 100 U	< 18 U	< 19 U	< 35 U	< 18 U
Hexachlorobutadiene	ug/kg	-	-	< 62 U	< 350 U	< 63 U	< 110 U	< 61 U	< 320 U	< 150 U	< 63 U	< 340 U	< 62 U	< 62 U	< 120 U	< 58 U
Hexachlorocyclopentadiene	ug/kg	-	-	< 410 UJ	< 2300 UJ	< 410 UJ	< 760 UJ	< 400 UJ	< 2100 UJ	< 1000 UJ	< 420 U	< 2200 U	< 410 U	< 410 U	< 760 U	< 390 U
Hexachloroethane	ug/kg	-	-	< 62 U	< 350 U	< 63 U	< 110 U	< 61 U	< 320 U	< 150 U	< 63 U	< 340 U	< 62 U	< 62 U	< 120 U	< 58 U
Indeno[1,2,3-cd]pyrene	ug/kg	**500**	5600	260	< 100 U	< 19 U	< 34 U	< 18 U	< 95 U	< 46 U	170	< 100 U	< 18 U	100	< 35 U	< 18 U
Isophorone	ug/kg	-	-	< 62 U	< 350 U	< 63 U	< 110 U	< 61 U	< 320 U	< 150 U	< 63 U	< 340 U	< 62 U	< 62 U	< 120 U	< 58 U
Naphthalene	ug/kg	12000	500000	170	< 100 U	< 19 U	< 34 U	160	< 95 U	< 46 U	230	< 100 U	< 18 U	120	< 35 U	< 18 U
Nitrobenzene	ug/kg	-	-	< 120 U	< 700 U	< 130 U	< 230 U	< 120 U	< 630 U	< 310 U	< 130 U	< 670 U	< 120 U	< 120 U	< 230 U	< 120 U
N-Nitrosodi-n-propylamine	ug/kg	-	-	< 62 U	< 350 U	< 63 U	< 110 U	< 61 U	< 320 U	< 150 U	< 63 U	< 340 U	< 62 U	< 62 U	< 120 U	< 58 U
N-Nitrosodiphenylamine	ug/kg	-	-	< 62 U	< 350 U	< 63 U	< 110 U	< 61 U	< 320 U	< 150 U	< 63 U	< 340 U	< 62 U	< 62 U	< 120 U	< 58 U
Pentachlorophenol	ug/kg	800	6700	< 190 U	< 1000 U	< 190 U	< 340 U	< 180 U	< 950 U	< 460 U	< 190 U	< 1000 U	< 180 U	< 190 U	< 350 U	< 180 U
Phenanthrene	ug/kg	100000	500000	750	< 100 U	< 19 U	14 UJ	310	< 95 U	< 46 U	390	< 100 U	< 18 U	190	< 35 U	< 18 U
Phenol	ug/kg	**330**	500000	< 62 U	< 350 U	< 63 U	27 UJ	< 61 U	< 320 U	< 150 U	< 63 U	< 340 U	< 62 U	< 62 U	65 UJ	< 58 U
Pyrene	ug/kg	100000	500000	1100	< 100 U	9.8 UJ	16 UJ	220	< 95 U	< 46 U	380	< 100 U	< 18 U	230	9.0 UJ	4.1 UJ

Analyte	SB-125-A	SB-125-B	SB-125-C	SB-126-A	SB-126-B	SB-126-C	SB-127-A	SB-127-B	SB-127-C
Start Depth (ft bgs)	0	5	16.5	0	1	14.5	0	5	18
End Depth (ft bgs)	1	6	18	1	4	15.5	5	10	20
Sample Date	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018
SW8270D									
1,1'-Biphenyl	< 120 UJ	< 370 UJ	< 220 UJ	< 260 UJ	< 61 UJ	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
2,4,5-Trichlorophenol	< 370 UJ	< 1100 UJ	< 670 UJ	< 770 UJ	< 180 UJ	< 380 UJ	< 1000 UJ	< 970 UJ	< 570 UJ
2,4,6-Trichlorophenol	< 370 UJ	< 1100 UJ	< 670 UJ	< 770 UJ	< 180 UJ	< 380 UJ	< 1000 UJ	< 970 UJ	< 570 UJ
2,4-Dichlorophenol	< 370 UJ	< 1100 UJ	< 670 UJ	< 770 UJ	< 180 UJ	< 380 UJ	< 1000 UJ	< 970 UJ	< 570 UJ
2,4-Dimethylphenol	< 370 UJ	< 1100 UJ	< 670 UJ	< 770 UJ	< 180 UJ	< 380 UJ	< 1000 UJ	< 970 UJ	< 570 UJ
2,4-Dinitrophenol	< 820 UJ	< 2400 UJ	< 1500 UJ	< 1700 UJ	< 400 UJ	< 840 UJ	< 2300 UJ	< 2100 UJ	< 1300 UJ
2,4-Dinitrotoluene	< 490 UJ	< 1500 UJ	< 890 UJ	< 1000 UJ	< 240 UJ	< 510 UJ	< 1400 UJ	< 1300 UJ	< 770 UJ
2,6-Dinitrotoluene	< 490 UJ	< 1500 UJ	< 890 UJ	< 1000 UJ	< 240 UJ	< 510 UJ	< 1400 UJ	< 1300 UJ	< 770 UJ
2-Chloronaphthalene	< 120 UJ	< 370 UJ	< 220 UJ	< 260 UJ	< 61 UJ	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
2-Chlorophenol	< 120 UJ	< 370 UJ	< 220 UJ	< 260 UJ	< 61 UJ	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
2-Methylnaphthalene	270 J	< 110 UJ	< 67 UJ	290 J	100 J	< 38 UJ	< 100 UJ	< 97 UJ	19 UJ
2-Methylphenol	< 490 UJ	< 1500 UJ	< 890 UJ	< 1000 UJ	< 240 UJ	< 510 UJ	< 1400 UJ	< 1300 UJ	< 770 UJ
2-Nitroaniline	< 490 UJ	< 1500 UJ	< 890 UJ	< 1000 UJ	< 240 UJ	< 510 UJ	< 1400 UJ	< 1300 UJ	< 770 UJ
2-Nitrophenol	< 120 UJ	< 370 UJ	< 220 UJ	< 260 UJ	< 61 UJ	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
3 & 4 Methylphenol	< 990 UJ	< 2900 UJ	< 1800 UJ	< 2100 UJ	< 490 UJ	< 1000 UJ	< 2700 UJ	< 2600 UJ	< 1500 UJ
3,3'-Dichlorobenzidine	< 250 UJ	< 740 UJ	< 440 UJ	< 510 UJ	< 120 UJ	< 250 UJ	< 680 UJ	< 650 UJ	< 380 UJ
3-Nitroaniline	< 490 UJ	< 1500 UJ	< 890 UJ	< 1000 UJ	< 240 UJ	< 510 UJ	< 1400 UJ	< 1300 UJ	< 770 UJ
4,6-Dinitro-2-methylphenol	< 820 UJ	< 2400 UJ	< 1500 UJ	< 1700 UJ	< 400 UJ	< 840 UJ	< 2300 UJ	< 2100 UJ	< 1300 UJ
4-Bromophenyl phenyl ether	< 120 UJ	< 370 UJ	< 220 UJ	< 260 UJ	< 61 UJ	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
4-Chloro-3-methylphenol	< 370 UJ	< 1100 UJ	< 670 UJ	< 770 UJ	< 180 UJ	< 380 UJ	< 1000 UJ	< 970 UJ	< 570 UJ
4-Chloroaniline	< 370 UJ	< 1100 UJ	< 670 UJ	< 770 UJ	< 180 UJ	< 380 UJ	< 1000 UJ	< 970 UJ	< 570 UJ
4-Chlorophenyl phenyl ether	< 120 UJ	< 370 UJ	< 220 UJ	< 260 UJ	< 61 UJ	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	< 490 UJ	< 1500 UJ	< 890 UJ	< 1000 UJ	< 240 UJ	< 510 UJ	< 1400 UJ	< 1300 UJ	< 770 UJ
4-Nitrophenol	< 820 UJ	< 2400 UJ	< 1500 UJ	< 1700 UJ	< 400 UJ	< 840 UJ	< 2300 UJ	< 2100 UJ	< 1300 UJ
Acenaphthene	120 J	< 110 UJ	< 67 UJ	210 J	80 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Acenaphthylene	120 J	< 110 UJ	< 67 UJ	190 J	47 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Acetophenone	< 250 UJ	< 740 UJ	< 440 UJ	< 510 UJ	< 120 UJ	29 UJ	< 680 UJ	< 650 UJ	< 380 UJ
Anthracene	300 J	< 110 UJ	< 67 UJ	650 J	220 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Atrazine	< 490 UJ	< 1500 UJ	< 890 UJ	< 1000 UJ	< 240 UJ	< 510 UJ	< 1400 UJ	< 1300 UJ	< 770 UJ
Benzaldehyde	< 250 UJ	< 740 UJ	110 UJ	< 510 UJ	< 120 UJ	180 UJ	< 680 UJ	< 650 UJ	150 UJ
Benzo(b)fluoranthene	**1600 J**	< 110 UJ	< 67 UJ	**2700 J**	660 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Benzo[a]anthracene	**1200 J**	< 110 UJ	< 67 UJ	**2000 J**	530 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Benzo[a]pyrene	**1200 J**	< 110 UJ	< 67 UJ	**2100 J**	460 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Benzo[g,h,i]perylene	610 J	< 110 UJ	< 67 UJ	1200 J	290 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Benzo[k]fluoranthene	520 J	< 110 UJ	< 67 UJ	**980 J**	190 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
bis (2-chloroisopropyl) ether	< 250 UJ	< 740 UJ	< 440 UJ	< 510 UJ	< 120 UJ	< 250 UJ	< 680 UJ	< 650 UJ	< 380 UJ
bis(2-Chloroethoxy)methane	< 250 UJ	< 740 UJ	< 440 UJ	< 510 UJ	< 120 UJ	< 250 UJ	< 680 UJ	< 650 UJ	< 380 UJ
bis(2-Chloroethyl) ether	< 250 UJ	< 740 UJ	< 440 UJ	< 510 UJ	< 120 UJ	< 250 UJ	< 680 UJ	< 650 UJ	< 380 UJ
bis(2-Ethylhexyl) phthalate	< 170 UJ	< 510 UJ	< 310 UJ	< 360 UJ	< 85 UJ	< 180 UJ	< 480 UJ	< 450 UJ	380 J
Butyl benzyl phthalate	< 170 UJ	< 510 UJ	< 310 UJ	< 360 UJ	< 85 UJ	< 180 UJ	< 480 UJ	< 450 UJ	< 270 UJ
Caprolactam	< 820 UJ	< 2400 UJ	< 1500 UJ	< 1700 UJ	< 400 UJ	< 840 UJ	< 2300 UJ	< 2100 UJ	< 1300 UJ
Carbazole	110 UJ	< 370 UJ	< 220 UJ	260 J	87 J	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
Chrysene	**1300 J**	< 110 UJ	< 67 UJ	**2000 J**	510 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Dibenz[a,h]anthracene	220 J	< 110 UJ	< 67 UJ	**400 J**	77 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Dibenzofuran	120 J	< 370 UJ	< 220 UJ	210 UJ	100 J	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
Diethyl phthalate	< 170 UJ	< 510 UJ	< 310 UJ	< 360 UJ	< 85 UJ	< 180 UJ	< 480 UJ	< 450 UJ	< 270 UJ
Dimethyl phthalate	< 170 UJ	< 510 UJ	< 310 UJ	< 360 UJ	< 85 UJ	< 180 UJ	< 480 UJ	< 450 UJ	< 270 UJ
Di-n-butyl phthalate	< 170 UJ	< 510 UJ	< 310 UJ	< 360 UJ	< 85 UJ	< 180 UJ	< 480 UJ	< 450 UJ	< 270 UJ
Di-n-octyl phthalate	< 170 UJ	< 510 UJ	< 310 UJ	< 360 UJ	< 85 UJ	< 180 UJ	< 480 UJ	< 450 UJ	< 270 UJ
Fluoranthene	2600 J	< 110 UJ	< 67 UJ	3600 J	1100 J	< 38 UJ	< 100 UJ	< 97 UJ	19 UJ
Fluorene	130 J	< 110 UJ	< 67 UJ	230 J	110 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Hexachlorobenzene	< 37 UJ	< 110 UJ	< 67 UJ	< 77 UJ	< 18 UJ	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Hexachlorobutadiene	< 120 UJ	< 370 UJ	< 220 UJ	< 260 UJ	< 61 UJ	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
Hexachlorocyclopentadiene	< 820 UJ	< 2400 UJ	< 1500 UJ	< 1700 UJ	< 400 UJ	< 840 UJ	< 2300 UJ	< 2100 UJ	< 1300 UJ
Hexachloroethane	< 120 UJ	< 370 UJ	< 220 UJ	< 260 UJ	< 61 UJ	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
Indeno[1,2,3-cd]pyrene	**650 J**	< 110 UJ	< 67 UJ	**1200 J**	270 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Isophorone	< 120 UJ	< 370 UJ	< 220 UJ	< 260 UJ	< 61 UJ	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
Naphthalene	210 J	< 110 UJ	< 67 UJ	1100 J	160 J	13 UJ	< 100 UJ	< 97 UJ	< 57 UJ
Nitrobenzene	< 250 UJ	< 740 UJ	< 440 UJ	< 510 UJ	< 120 UJ	< 250 UJ	< 680 UJ	< 650 UJ	< 380 UJ
N-Nitrosodi-n-propylamine	< 120 UJ	< 370 UJ	< 220 UJ	< 260 UJ	< 61 UJ	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
N-Nitrosodiphenylamine	< 120 UJ	< 370 UJ	< 220 UJ	< 260 UJ	< 61 UJ	< 130 UJ	< 340 UJ	< 320 UJ	< 190 UJ
Pentachlorophenol	< 370 UJ	< 1100 UJ	< 670 UJ	< 770 UJ	< 180 UJ	< 380 UJ	< 1000 UJ	< 970 UJ	< 570 UJ
Phenanthrene	1500 J	< 110 UJ	< 67 UJ	2200 J	850 J	11 UJ	< 100 UJ	< 97 UJ	13 UJ
Phenol	< 120 UJ	< 370 UJ	< 220 UJ	< 260 UJ	< 61 UJ	36 UJ	< 340 UJ	< 320 UJ	< 190 UJ
Pyrene	1900 J	< 110 UJ	< 67 UJ	2800 J	830 J	< 38 UJ	< 100 UJ	< 97 UJ	< 57 UJ

Analyte	SB-128-A	SB-128-B	SB-128-C	SB-129-A	SB-129-B	SB-129-C	SB-130-A	SB-130-B	SB-130-C
Start Depth (ft bgs)	0	5	14	0	6	16	0	6	15
End Depth (ft bgs)	2	7	16	2	7	17	3	10	18
Sample Date	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018
SW8270D									
1,1'-Biphenyl	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	49 UJ	< 62 UJ
2,4,5-Trichlorophenol	< 730 UJ	< 440 UJ	< 610 UJ	< 190 UJ	< 190 UJ	< 180 UJ	< 200 UJ	< 190 UJ	< 180 UJ
2,4,6-Trichlorophenol	< 730 UJ	< 440 UJ	< 610 UJ	< 190 UJ	< 190 UJ	< 180 UJ	< 200 UJ	< 190 UJ	< 180 UJ
2,4-Dichlorophenol	< 730 UJ	< 440 UJ	< 610 UJ	< 190 UJ	< 190 UJ	< 180 UJ	< 200 UJ	< 190 UJ	< 180 UJ
2,4-Dimethylphenol	< 730 UJ	< 440 UJ	< 610 UJ	< 190 UJ	< 190 UJ	< 180 UJ	< 200 UJ	< 190 UJ	< 180 UJ
2,4-Dinitrophenol	< 1600 UJ	< 960 UJ	< 1300 UJ	< 420 UJ	< 420 UJ	< 390 UJ	< 450 UJ	< 420 UJ	< 410 UJ
2,4-Dinitrotoluene	< 970 UJ	< 580 UJ	< 820 UJ	< 260 UJ	< 260 UJ	< 230 UJ	< 270 UJ	< 260 UJ	< 250 UJ
2,6-Dinitrotoluene	< 970 UJ	< 580 UJ	< 820 UJ	< 260 UJ	< 260 UJ	< 230 UJ	< 270 UJ	< 260 UJ	< 250 UJ
2-Chloronaphthalene	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	< 64 UJ	< 62 UJ
2-Chlorophenol	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	< 64 UJ	< 62 UJ
2-Methylnaphthalene	250 J	52 J	< 61 UJ	19 J	< 19 UJ	< 18 UJ	9.9 UJ	190 J	< 18 UJ
2-Methylphenol	< 970 UJ	< 580 UJ	< 820 UJ	< 260 UJ	< 260 UJ	< 230 UJ	< 270 UJ	< 260 UJ	< 250 UJ
2-Nitroaniline	< 970 UJ	< 580 UJ	< 820 UJ	< 260 UJ	< 260 UJ	< 230 UJ	< 270 UJ	< 260 UJ	< 250 UJ
2-Nitrophenol	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	< 64 UJ	< 62 UJ
3 & 4 Methylphenol	< 1900 UJ	< 1200 UJ	< 1600 UJ	< 510 UJ	< 510 UJ	< 470 UJ	< 540 UJ	< 510 UJ	< 490 UJ
3,3'-Dichlorobenzidine	< 490 UJ	< 290 UJ	< 410 UJ	< 130 UJ	< 130 UJ	< 120 UJ	< 140 UJ	< 130 UJ	< 120 UJ
3-Nitroaniline	< 970 UJ	< 580 UJ	< 820 UJ	< 260 UJ	< 260 UJ	< 230 UJ	< 270 UJ	< 260 UJ	< 250 UJ
4,6-Dinitro-2-methylphenol	< 1600 UJ	< 960 UJ	< 1300 UJ	< 420 UJ	< 420 UJ	< 390 UJ	< 450 UJ	< 420 UJ	< 410 UJ
4-Bromophenyl phenyl ether	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	< 64 UJ	< 62 UJ
4-Chloro-3-methylphenol	< 730 UJ	< 440 UJ	< 610 UJ	< 190 UJ	< 190 UJ	< 180 UJ	< 200 UJ	< 190 UJ	< 180 UJ
4-Chloroaniline	< 730 UJ	< 440 UJ	< 610 UJ	< 190 UJ	< 190 UJ	< 180 UJ	< 200 UJ	< 190 UJ	< 180 UJ
4-Chlorophenyl phenyl ether	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	< 64 UJ	< 62 UJ
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	< 970 UJ	< 580 UJ	< 820 UJ	< 260 UJ	< 260 UJ	< 230 UJ	< 270 UJ	< 260 UJ	< 250 UJ
4-Nitrophenol	< 1600 UJ	< 960 UJ	< 1300 UJ	< 420 UJ	< 420 UJ	< 390 UJ	< 450 UJ	< 420 UJ	< 410 UJ
Acenaphthene	69 UJ	< 44 UJ	< 61 UJ	< 19 UJ	< 19 UJ	< 18 UJ	< 20 UJ	29 J	< 18 UJ
Acenaphthylene	37 UJ	< 44 UJ	< 61 UJ	< 19 UJ	< 19 UJ	< 18 UJ	< 20 UJ	36 J	< 18 UJ
Acetophenone	< 490 UJ	< 290 UJ	< 410 UJ	< 130 UJ	< 130 UJ	< 120 UJ	< 140 UJ	27 UJ	< 120 UJ
Anthracene	150 J	16 UJ	< 61 UJ	< 19 UJ	< 19 UJ	< 18 UJ	< 20 UJ	89 J	< 18 UJ
Atrazine	< 970 UJ	< 580 UJ	< 820 UJ	< 260 UJ	< 260 UJ	< 230 UJ	< 270 UJ	< 260 UJ	< 250 UJ
Benzaldehyde	< 490 UJ	< 290 UJ	< 410 UJ	< 130 UJ	< 130 UJ	< 120 UJ	< 140 UJ	34 UJ	< 120 UJ
Benzo(b)fluoranthene	**1800 J**	130 J	< 61 UJ	24 J	< 19 UJ	< 18 UJ	23 J	380 J	< 18 UJ
Benzo[a]anthracene	820 J	69 J	< 61 UJ	12 UJ	< 19 UJ	< 18 UJ	14 UJ	260 J	< 18 UJ
Benzo[a]pyrene	**1400 J**	85 J	< 61 UJ	12 UJ	< 19 UJ	< 18 UJ	18 UJ	200 J	< 18 UJ
Benzo[g,h,i]perylene	1000 J	75 J	< 61 UJ	9.8 UJ	< 19 UJ	< 18 UJ	17 UJ	170 J	< 18 UJ
Benzo[k]fluoranthene	620 J	48 J	< 61 UJ	< 19 UJ	< 19 UJ	< 18 UJ	11 UJ	140 J	< 18 UJ
bis (2-chloroisopropyl) ether	< 490 UJ	< 290 UJ	< 410 UJ	< 130 UJ	< 130 UJ	< 120 UJ	< 140 UJ	< 130 UJ	< 120 UJ
bis(2-Chloroethoxy)methane	< 490 UJ	< 290 UJ	< 410 UJ	< 130 UJ	< 130 UJ	< 120 UJ	< 140 UJ	< 130 UJ	< 120 UJ
bis(2-Chloroethyl) ether	< 490 UJ	< 290 UJ	< 410 UJ	< 130 UJ	< 130 UJ	< 120 UJ	< 140 UJ	< 130 UJ	< 120 UJ
bis(2-Ethylhexyl) phthalate	< 340 UJ	< 200 UJ	< 290 UJ	< 90 UJ	< 89 UJ	< 82 UJ	< 95 UJ	< 90 UJ	< 86 UJ
Butyl benzyl phthalate	< 340 UJ	< 200 UJ	< 290 UJ	< 90 UJ	< 89 UJ	< 82 UJ	< 95 UJ	< 90 UJ	< 86 UJ
Caprolactam	< 1600 UJ	< 960 UJ	< 1300 UJ	< 420 UJ	< 420 UJ	< 390 UJ	< 450 UJ	< 420 UJ	< 410 UJ
Carbazole	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	50 UJ	< 62 UJ
Chrysene	**1100 J**	100 J	< 61 UJ	21 J	< 19 UJ	< 18 UJ	18 UJ	390 J	< 18 UJ
Dibenz[a,h]anthracene	270 J	< 44 UJ	< 61 UJ	< 19 UJ	< 19 UJ	< 18 UJ	< 20 UJ	58 J	< 18 UJ
Dibenzofuran	100 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	88 J	< 62 UJ
Diethyl phthalate	< 340 UJ	< 200 UJ	< 290 UJ	< 90 UJ	< 89 UJ	< 82 UJ	< 95 UJ	< 90 UJ	< 86 UJ
Dimethyl phthalate	< 340 UJ	< 200 UJ	< 290 UJ	< 90 UJ	< 89 UJ	< 82 UJ	< 95 UJ	< 90 UJ	< 86 UJ
Di-n-butyl phthalate	< 340 UJ	< 200 UJ	< 290 UJ	< 90 UJ	< 89 UJ	< 82 UJ	< 95 UJ	< 90 UJ	< 86 UJ
Di-n-octyl phthalate	< 340 UJ	< 200 UJ	< 290 UJ	< 90 UJ	< 89 UJ	< 82 UJ	< 95 UJ	< 90 UJ	< 86 UJ
Fluoranthene	930 J	110 J	< 61 UJ	29 J	< 19 UJ	< 18 UJ	29 J	470 J	< 18 UJ
Fluorene	43 UJ	< 44 UJ	< 61 UJ	< 19 UJ	< 19 UJ	< 18 UJ	< 20 UJ	34 J	< 18 UJ
Hexachlorobenzene	< 73 UJ	< 44 UJ	< 61 UJ	< 19 UJ	< 19 UJ	< 18 UJ	< 20 UJ	< 19 UJ	< 18 UJ
Hexachlorobutadiene	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	< 64 UJ	< 62 UJ
Hexachlorocyclopentadiene	< 1600 UJ	< 960 UJ	< 1300 UJ	< 420 UJ	< 420 UJ	< 390 UJ	< 450 UJ	< 420 UJ	< 410 UJ
Hexachloroethane	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	< 64 UJ	< 62 UJ
Indeno[1,2,3-cd]pyrene	**940 J**	64 J	< 61 UJ	< 19 UJ	< 19 UJ	< 18 UJ	12 UJ	150 J	< 18 UJ
Isophorone	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	< 64 UJ	< 62 UJ
Naphthalene	220 J	43 UJ	< 61 UJ	14 UJ	< 19 UJ	< 18 UJ	5.1 UJ	250 J	< 18 UJ
Nitrobenzene	< 490 UJ	< 290 UJ	< 410 UJ	< 130 UJ	< 130 UJ	< 120 UJ	< 140 UJ	< 130 UJ	< 120 UJ
N-Nitrosodi-n-propylamine	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	< 64 UJ	< 62 UJ
N-Nitrosodiphenylamine	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	< 64 UJ	< 62 UJ
Pentachlorophenol	< 730 UJ	< 440 UJ	< 610 UJ	< 190 UJ	< 190 UJ	< 180 UJ	< 200 UJ	< 190 UJ	< 180 UJ
Phenanthrene	550 J	93 J	< 61 UJ	28 J	< 19 UJ	< 18 UJ	13 UJ	440 J	4.7 UJ
Phenol	< 240 UJ	< 150 UJ	< 200 UJ	< 64 UJ	< 64 UJ	< 58 UJ	< 68 UJ	< 64 UJ	< 62 UJ
Pyrene	870 J	94 J	< 61 UJ	21 J	< 19 UJ	< 18 UJ	26 J	360 J	4.1 UJ

Notes:
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives
- = no SCO established
NA = not applicable/analyzed
Qualifiers:
U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J+ = Sample likely to have a high bias
J- = Sample likely to have a low bias
UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.
R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).
PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

			Soil Sample ID	SB-131A	SB-131B	SB-131C	SB-132A	SB-132B	SB-132C	SB-133A	SB-133B	SB-133C	SB-133D	SB-134A	SB-134B	SB-134C	SB-135A	SB-135B	SB-135C	SB-136-A	SB-136-B	SB-136-C	SB-136-D	SB-137-A	SB-137-B	SB-137-C	SB-138-A	SB-138-B	SB-138-C	SB-139A	SB-139B	SB-139C	SB-139D	SB-140A	SB-140B	SB-140C	SB-141A	SB-141B	SB-141C
			Start Depth (ft bgs)	**0**	**6**	**14**	**0**	**14**	**17**	**0**	**4**	**17**	**14**	**0**	**6**	**12**	**0**	**6**	**18**	**0**	**5**	**17**	**12**	**0**	**4**	**14**	**0**	**5**	**15**	**0**	**6**	**13**	**17**	**0**	**15**	**17**	**0**	**5**	**18**
			End Depth (ft bgs)	**1**	**8**	**16**	**2**	**16**	**19**	**1**	**6**	**19**	**16**	**1**	**8**	**14**	**2**	**8**	**20**	**1**	**8**	**20**	**15**	**1**	**5**	**16**	**2**	**8**	**17**	**2**	**8**	**15**	**18**	**2**	**17**	**19**	**2**	**7**	**20**
			Sample Date	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/17/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**	**10/18/2018**
Analyte	Units	**6 NYCRR PART 375 UNRESTRICTED USE SCO**	6 NYCRR PART 375 COMMERCIAL USE SCO																																				
SW8270D																																							
1,1'-Biphenyl	ug/kg	-	-	< 340 U	< 350 U	< 390 U	110 UJ	< 350 U	< 72 U	45 UJ	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	67 UJ	< 410 U	< 59 U	< 59 U	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	22 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	42 UJ	< 99 U	< 81 U	42 UJ	< 400 U	< 88 U
2,4,5-Trichlorophenol	ug/kg	-	-	< 1000 U	< 1000 U	< 1200 U	< 350 U	< 1100 U	< 220 U	< 190 U	< 1100 U	< 240 U	< 490 U	< 180 U	< 1000 U	< 560 U	< 340 U	< 1200 U	< 180 U	< 180 U	< 1100 U	< 430 U	< 1200 U	< 200 U	< 180 U	< 340 U	< 190 UJ	< 200 UJ	< 550 U	< 180 U	< 1100 U	< 410 U	< 180 U	< 180 U	< 300 U	< 240 U	< 180 U	< 1200 U	< 260 U
2,4,6-Trichlorophenol	ug/kg	-	-	< 1000 U	< 1000 U	< 1200 U	< 350 U	< 1100 U	< 220 U	< 190 U	< 1100 U	< 240 U	< 490 U	< 180 U	< 1000 U	< 560 U	< 340 U	< 1200 U	< 180 U	< 180 U	< 1100 U	< 430 U	< 1200 U	< 200 U	< 180 U	< 340 U	< 190 UJ	< 200 UJ	< 550 U	< 180 U	< 1100 U	< 410 U	< 180 U	< 180 U	< 300 U	< 240 U	< 180 U	< 1200 U	< 260 U
2,4-Dichlorophenol	ug/kg	-	-	< 1000 U	< 1000 U	< 1200 U	< 350 U	< 1100 U	< 220 U	< 190 U	< 1100 U	< 240 U	< 490 U	< 180 U	< 1000 U	< 560 U	< 340 U	< 1200 U	< 180 U	< 180 U	< 1100 U	< 430 U	< 1200 U	< 200 U	< 180 U	< 340 U	< 190 UJ	< 200 UJ	< 550 U	< 180 U	< 1100 U	< 410 U	< 180 U	< 180 U	< 300 U	< 240 U	< 180 U	< 1200 U	< 260 U
2,4-Dimethylphenol	ug/kg	-	-	< 1000 U	< 1000 U	< 1200 U	< 350 U	< 1100 U	< 220 U	< 190 U	< 1100 U	< 240 U	< 490 U	< 180 U	< 1000 U	< 560 U	< 340 U	< 1200 U	< 180 U	< 180 U	< 1100 U	< 430 U	< 1200 U	< 200 U	< 180 U	< 340 U	< 190 UJ	< 200 UJ	< 550 U	< 180 U	< 1100 U	< 410 U	< 180 UJ	< 180 UJ	< 300 UJ	< 240 UJ	< 180 UJ	< 1200 UJ	< 260 UJ
2,4-Dinitrophenol	ug/kg	-	-	< 2200 U	< 2300 U	< 2600 U	< 760 U	< 2300 U	< 480 U	< 420 U	< 2300 U	< 530 U	< 1100 U	< 390 U	< 2300 U	< 1200 U	< 750 U	< 2700 U	< 390 U	< 390 U	< 2500 U	< 940 U	< 2600 U	< 440 UJ	< 390 UJ	< 740 UJ	< 410 UJ	< 430 UJ	< 1200 UJ	< 390 U	< 2300 U	< 900 U	< 390 U	< 400 U	< 650 U	< 530 U	< 390 U	< 2600 U	< 580 U
2,4-Dinitrotoluene	ug/kg	-	-	< 1300 U	< 1400 U	< 1600 U	< 460 U	< 1400 U	< 290 U	< 260 U	< 1400 U	< 320 U	< 660 U	< 230 U	< 1400 U	< 750 U	< 450 U	< 1600 U	< 240 U	< 230 U	< 1500 U	< 570 U	< 1600 U	< 270 U	< 240 U	< 450 U	< 250 UJ	< 260 UJ	< 730 U	< 240 U	< 1400 U	< 550 U	< 240 U	< 240 U	< 390 U	< 320 U	< 240 U	< 1600 U	< 350 U
2,6-Dinitrotoluene	ug/kg	-	-	< 1300 U	< 1400 U	< 1600 U	< 460 U	< 1400 U	< 290 U	< 260 U	< 1400 U	< 320 U	< 660 U	< 230 U	< 1400 U	< 750 U	< 450 U	< 1600 U	< 240 U	< 230 U	< 1500 U	< 570 U	< 1600 U	< 270 U	< 240 U	< 450 U	< 250 UJ	< 260 UJ	< 730 U	< 240 U	< 1400 U	< 550 U	< 240 U	< 240 U	< 390 U	< 320 U	< 240 U	< 1600 U	< 350 U
2-Chloronaphthalene	ug/kg	-	-	< 340 U	< 350 U	< 390 U	< 120 U	< 350 U	< 72 U	< 64 U	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	< 110 U	< 410 U	< 59 U	< 59 U	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	< 62 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	< 60 U	< 99 U	< 81 U	< 59 U	< 400 U	< 88 U
2-Chlorophenol	ug/kg	-	-	< 340 U	< 350 U	< 390 U	< 120 U	< 350 U	< 72 U	< 64 U	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	< 110 U	< 410 U	< 59 U	< 59 U	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	< 62 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	< 60 U	< 99 U	< 81 U	< 59 U	< 400 U	< 88 U
2-Methylnaphthalene	ug/kg	-	-	< 100 U	< 100 U	38 UJ	890	< 110 U	< 22 U	400	< 110 U	< 24 U	< 49 U	36	< 100 U	< 56 U	440	< 120 U	< 18 U	100	< 110 U	< 43 U	< 120 U	30	4.7 UJ	11 UJ	110 J	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	400	30	< 24 U	280	< 120 U	< 26 U
2-Methylphenol	ug/kg	330	500000	< 1300 U	< 1400 U	< 1600 U	< 460 U	< 1400 U	< 290 U	< 260 U	< 1400 U	< 320 U	< 660 U	< 230 U	< 1400 U	< 750 U	< 450 U	< 1600 U	< 240 U	< 230 U	< 1500 U	< 570 U	< 1600 U	< 270 U	< 240 U	< 450 U	< 250 UJ	< 260 UJ	< 730 U	< 240 U	< 1400 U	< 550 U	< 240 U	< 240 U	< 390 U	< 320 U	< 240 U	< 1600 U	< 350 U
2-Nitroaniline	ug/kg	-	-	< 1300 U	< 1400 UJ	< 1600 U	< 460 U	< 1400 U	< 290 U	< 260 U	< 1400 U	< 320 U	< 660 U	< 230 U	< 1400 U	< 750 U	< 450 U	< 1600 U	< 240 U	< 230 U	< 1500 U	< 570 U	< 1600 U	< 270 U	< 240 U	< 450 U	< 250 UJ	< 260 UJ	< 730 U	< 240 UJ	< 1400 U	< 550 U	< 240 U	< 240 U	< 390 U	< 320 U	< 240 U	< 1600 U	< 350 U
2-Nitrophenol	ug/kg	-	-	< 340 U	< 350 U	< 390 U	< 120 U	< 350 U	< 72 U	< 64 U	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	< 110 U	< 410 U	< 59 U	< 59 U	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	< 62 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	< 60 U	< 99 U	< 81 U	< 59 U	< 400 U	< 88 U
3 & 4 Methylphenol	ug/kg	-	-	< 2700 U	< 2800 U	< 3100 U	< 920 U	< 2800 U	< 580 U	< 510 U	< 2800 U	< 640 U	< 1300 U	< 470 U	< 2800 U	< 1500 U	< 900 U	< 3300 U	< 480 U	< 470 U	< 3000 U	< 1100 U	< 3100 U	< 540 U	< 470 U	370 UJ	< 490 UJ	< 520 UJ	< 1500 U	< 480 U	< 2800 U	< 1100 U	< 470 U	< 480 U	61 UJ	< 650 U	< 470 U	< 3200 U	< 700 U
3,3'-Dichlorobenzidine	ug/kg	-	-	< 670 U	< 690 U	< 780 U	< 230 U	< 710 U	< 140 U	< 130 U	< 700 U	< 160 U	< 330 U	< 120 U	< 700 U	< 380 U	< 230 U	< 820 U	< 120 U	< 120 U	< 760 U	< 290 U	< 780 U	< 130 U	< 120 U	< 220 U	< 120 UJ	< 130 UJ	< 360 U	< 120 U	< 710 U	< 270 U	< 120 UJ	< 120 UJ	< 200 UJ	< 160 UJ	< 120 UJ	< 790 UJ	< 180 UJ
3-Nitroaniline	ug/kg	-	-	< 1300 U	< 1400 U	< 1600 U	< 460 U	< 1400 U	< 290 U	< 260 U	< 1400 U	< 320 U	< 660 U	< 230 U	< 1400 U	< 750 U	< 450 U	< 1600 U	< 240 U	< 230 U	< 1500 U	< 570 U	< 1600 U	< 270 U	< 240 U	< 450 U	< 250 UJ	< 260 UJ	< 730 U	< 240 U	< 1400 U	< 550 U	< 240 UJ	< 240 UJ	< 390 UJ	< 320 UJ	< 240 UJ	< 1600 UJ	< 350 UJ
4,6-Dinitro-2-methylphenol	ug/kg	-	-	< 2200 U	< 2300 U	< 2600 U	< 760 U	< 2300 U	< 480 U	< 420 U	< 2300 U	< 530 U	< 1100 U	< 390 U	< 2300 U	< 1200 U	< 750 U	< 2700 U	< 390 U	< 390 U	< 2500 U	< 940 U	< 2600 U	< 440 UJ	< 390 UJ	< 740 UJ	< 410 UJ	< 430 UJ	< 1200 UJ	< 390 U	< 2300 U	< 900 U	< 390 U	< 400 U	< 650 U	< 530 U	< 390 U	< 2600 U	< 580 U
4-Bromophenyl phenyl ether	ug/kg	-	-	< 340 U	< 350 U	< 390 U	< 120 U	< 350 U	< 72 U	< 64 U	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	< 110 U	< 410 U	< 59 U	< 59 U	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	< 62 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	< 60 U	< 99 U	< 81 U	< 59 U	< 400 U	< 88 U
4-Chloro-3-methylphenol	ug/kg	-	-	< 1000 UJ	< 1000 UJ	< 1200 UJ	< 350 UJ	< 1100 UJ	< 220 UJ	< 190 UJ	< 1100 UJ	< 240 UJ	< 490 UJ	< 180 UJ	< 1000 UJ	< 560 UJ	< 340 UJ	< 1200 UJ	< 180 UJ	< 180 U	< 1100 U	< 430 U	< 1200 U	< 200 U	< 180 U	< 340 U	< 190 UJ	< 200 UJ	< 550 U	< 180 UJ	< 1100 UJ	< 410 UJ	< 180 U	< 180 U	< 300 U	< 240 U	< 180 U	< 1200 U	< 260 U
4-Chloroaniline	ug/kg	-	-	< 1000 U	< 1000 U	< 1200 U	< 350 U	< 1100 U	< 220 U	< 190 U	< 1100 U	< 240 U	< 490 U	< 180 U	< 1000 U	< 560 U	< 340 U	< 1200 U	< 180 U	< 180 U	< 1100 U	< 430 U	< 1200 U	< 200 U	< 180 U	< 340 U	< 190 UJ	< 200 UJ	< 550 U	< 180 U	< 1100 U	< 410 U	< 180 UJ	< 180 UJ	< 300 UJ	< 240 UJ	< 180 UJ	< 1200 UJ	< 260 UJ
4-Chlorophenyl phenyl ether	ug/kg	-	-	< 340 U	< 350 U	< 390 U	< 120 U	< 350 U	< 72 U	< 64 U	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	< 110 U	< 410 U	< 59 U	< 59 U	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	< 62 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	< 60 U	< 99 U	< 81 U	< 59 U	< 400 U	< 88 U
4-Methylphenol	ug/kg	330	500000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	ug/kg	-	-	< 1300 U	< 1400 U	< 1600 U	< 460 U	< 1400 U	< 290 U	< 260 U	< 1400 U	< 320 U	< 660 U	< 230 U	< 1400 U	< 750 U	< 450 U	< 1600 U	< 240 U	< 230 U	< 1500 U	< 570 U	< 1600 U	< 270 U	< 240 U	< 450 U	< 250 UJ	< 260 UJ	< 730 U	< 240 U	< 1400 U	< 550 U	< 240 UJ	< 240 UJ	< 390 UJ	< 320 UJ	< 240 UJ	< 1600 UJ	< 350 UJ
4-Nitrophenol	ug/kg	-	-	< 2200 U	< 2300 UJ	< 2600 U	< 760 U	< 2300 U	< 480 U	< 420 U	< 2300 U	< 530 U	< 1100 U	< 390 U	< 2300 U	< 1200 U	< 750 U	< 2700 U	< 390 U	< 390 U	< 2500 U	< 940 U	< 2600 U	< 440 U	< 390 U	< 740 U	< 410 UJ	< 430 UJ	< 1200 U	< 390 UJ	< 2300 U	< 900 U	< 390 U	< 400 U	< 650 U	< 530 U	< 390 U	< 2600 U	< 580 U
Acenaphthene	ug/kg	20000	500000	< 100 U	< 100 U	< 120 U	170	< 110 U	< 22 U	26	< 110 U	< 24 U	< 49 U	< 18 U	< 100 U	< 56 U	220	< 120 U	< 18 U	39	< 110 U	< 43 U	< 120 U	< 20 U	< 18 U	< 34 U	7.1 UJ	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	28	< 30 U	< 24 U	41	< 120 U	< 26 U
Acenaphthylene	ug/kg	100000	500000	< 100 U	< 100 U	< 120 U	71	< 110 U	< 22 U	100	< 110 U	< 24 U	< 49 U	4.7 UJ	< 100 U	< 56 U	53	< 120 U	< 18 U	43	< 110 U	< 43 U	< 120 U	< 20 U	< 18 U	< 34 U	11 UJ	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	66	< 30 U	< 24 U	140	< 120 U	< 26 U
Acetophenone	ug/kg	-	-	< 670 U	< 690 U	< 780 U	80 UJ	< 710 U	< 140 U	47 UJ	< 700 U	< 160 U	< 330 U	< 120 U	< 700 U	< 380 U	48 UJ	< 820 U	< 120 U	< 120 U	< 760 U	< 290 U	< 780 U	< 130 U	< 120 U	66 UJ	15 UJ	< 130 UJ	< 360 U	< 120 U	< 710 U	< 270 U	< 120 U	40 UJ	< 200 U	< 160 U	24 UJ	< 790 U	< 180 U
Anthracene	ug/kg	100000	500000	< 100 U	< 100 U	< 120 U	330	< 110 U	< 22 U	95	< 110 U	< 24 U	< 49 U	13 UJ	< 100 U	< 56 U	580	< 120 U	< 18 U	100	< 110 U	< 43 U	< 120 U	< 20 U	< 18 U	< 34 U	18 UJ	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	75	12 UJ	< 24 U	180	< 120 U	< 26 U
Atrazine	ug/kg	-	-	< 1300 U	< 1400 U	< 1600 U	< 460 U	< 1400 U	< 290 U	< 260 U	< 1400 U	< 320 U	< 660 U	< 230 U	< 1400 U	< 750 U	< 450 U	< 1600 U	< 240 U	< 230 U	< 1500 U	< 570 U	< 1600 U	< 270 U	< 240 U	< 450 U	< 250 UJ	< 260 UJ	< 730 U	< 240 U	< 1400 U	< 550 U	< 240 U	< 240 U	< 390 U	< 320 U	< 240 U	< 1600 U	< 350 U
Benzaldehyde	ug/kg	-	-	< 670 U	< 690 UJ	< 780 U	83 UJ	< 710 U	< 140 U	64 UJ	< 700 U	< 160 U	110 UJ	< 120 U	< 700 U	94 UJ	53 UJ	< 820 U	< 120 U	< 120 U	< 760 U	100 UJ	< 780 U	< 130 U	< 120 U	< 220 U	43 UJ	< 130 UJ	230 UJ	< 120 UJ	< 710 U	< 270 U	< 120 UJ	47 UJ	52 UJ	< 160 UJ	74 UJ	< 790 UJ	< 180 UJ
Benzo(b)fluoranthene	ug/kg	**1000**	5600	< 100 U	< 100 U	91 UJ	**1500**	< 110 U	< 22 U	1000	< 110 U	< 24 U	< 49 U	61	< 100 U	< 56 U	**1500**	< 120 U	< 18 U	450	< 110 U	< 43 U	< 120 U	33	< 18 U	21 UJ	110 J	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	590	43	< 24 U	**1200**	< 120 U	< 26 U
Benzo[a]anthracene	ug/kg	**1000**	5600	< 100 U	< 100 U	37 UJ	820	< 110 U	< 22 U	520	< 110 U	< 24 U	< 49 U	38	< 100 U	< 56 U	**1100**	< 120 U	< 18 U	350	< 110 U	< 43 U	< 120 U	13 UJ	< 18 U	< 34 U	76 J	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	260	21 UJ	< 24 U	590	< 120 U	< 26 U
Benzo[a]pyrene	ug/kg	**1000**	1000	< 100 U	< 100 U	< 120 U	900	< 110 U	< 22 U	580	< 110 U	< 24 U	< 49 U	45	< 100 U	< 56 U	1000	< 120 U	< 18 U	310	< 110 U	< 43 U	< 120 U	13 UJ	< 18 U	< 34 U	72 J	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	300	< 30 U	< 24 U	670	< 120 U	< 26 U
Benzo[g,h,i]perylene	ug/kg	100000	500000	< 100 U	< 100 U	< 120 U	350	< 110 U	< 22 U	290	< 110 U	< 24 U	< 49 U	65	< 100 U	< 56 U	370	< 120 U	< 18 U	130	< 110 U	< 43 U	< 120 U	< 20 U	< 18 U	< 34 U	44 J	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	200	25 UJ	< 24 U	390	< 120 U	< 26 U
Benzo[k]fluoranthene	ug/kg	**800**	56000	< 100 U	< 100 U	< 120 U	570	< 110 U	< 22 U	430	< 110 U	< 24 U	< 49 U	22	< 100 U	< 56 U	580	< 120 U	< 18 U	160	< 110 U	< 43 U	< 120 U	< 20 U	< 18 U	< 34 U	41 J	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	200	14 UJ	< 24 U	420	< 120 U	< 26 U
bis (2-chloroisopropyl) ether	ug/kg	-	-	< 670 U	< 690 UJ	< 780 U	< 230 U	< 710 U	< 140 U	< 130 U	< 700 U	< 160 U	< 330 U	< 120 U	< 700 U	< 380 U	< 230 U	< 820 U	< 120 U	< 120 U	< 760 U	< 290 U	< 780 U	< 130 U	< 120 U	< 220 U	< 120 UJ	< 130 UJ	< 360 U	< 120 UJ	< 710 U	< 270 U	< 120 UJ	< 120 UJ	< 200 UJ	< 160 UJ	< 120 UJ	< 790 UJ	< 180 UJ
bis(2-Chloroethoxy)methane	ug/kg	-	-	< 670 U	< 690 U	< 780 U	< 230 U	< 710 U	< 140 U	< 130 U	< 700 U	< 160 U	< 330 U	< 120 U	< 700 U	< 380 U	< 230 U	< 820 U	< 120 U	< 120 U	< 760 U	< 290 U	< 780 U	< 130 U	< 120 U	< 220 U	< 120 UJ	< 130 UJ	< 360 U	< 120 U	< 710 U	< 270 U	< 120 U	< 120 U	< 200 U	< 160 U	< 120 U	< 790 U	< 180 U
bis(2-Chloroethyl) ether	ug/kg	-	-	< 670 U	< 690 U	< 780 U	< 230 U	< 710 U	< 140 U	< 130 U	< 700 U	< 160 U	< 330 U	< 120 U	< 700 U	< 380 U	< 230 U	< 820 U	< 120 U	< 120 U	< 760 U	< 290 U	< 780 U	< 130 U	< 120 U	< 220 U	< 120 UJ	< 130 UJ	< 360 U	< 120 U	< 710 U	< 270 U	< 120 UJ	< 120 UJ	< 200 UJ	< 160 UJ	< 120 UJ	< 790 UJ	< 180 UJ
bis(2-Ethylhexyl) phthalate	ug/kg	-	-	< 470 U	610	< 540 U	< 160 U	< 500 U	< 100 U	< 90 U	< 490 U	< 110 U	< 230 U	< 82 U	< 490 U	< 260 U	< 160 U	< 580 U	< 83 U	< 82 U	680	< 200 U	< 540 U	< 94 U	< 83 U	< 160 U	< 86 UJ	< 92 UJ	< 250 U	< 83 U	< 500 U	< 190 U	< 83 U	< 84 U	< 140 U	< 110 U	< 83 U	< 550 U	< 120 U
Butyl benzyl phthalate	ug/kg	-	-	< 470 U	< 480 U	< 540 U	< 160 U	< 500 U	< 100 U	< 90 U	< 490 U	< 110 U	< 230 U	< 82 U	< 490 U	< 260 U	< 160 U	< 580 U	< 83 U	< 82 U	< 530 U	< 200 U	< 540 U	< 94 U	< 83 U	< 160 U	< 86 UJ	< 92 UJ	< 250 U	< 83 U	< 500 U	< 190 U	< 83 U	< 84 U	< 140 U	< 110 U	< 83 U	< 550 U	< 120 U
Caprolactam	ug/kg	-	-	< 2200 U	< 2300 U	< 2600 U	< 760 U	< 2300 U	< 480 U	< 420 U	< 2300 U	< 530 U	< 1100 U	< 390 U	< 2300 U	< 1200 U	< 750 U	< 2700 U	< 390 U	< 390 U	< 2500 U	< 940 U	< 2600 U	< 440 U	< 390 U	< 740 U	< 410 UJ	< 430 UJ	< 1200 U	< 390 U	< 2300 U	< 900 U	< 390 U	< 400 U	< 650 U	< 530 U	< 390 U	< 2600 U	< 580 U
Carbazole	ug/kg	-	-	< 340 U	< 350 U	< 390 U	240	< 350 U	< 72 U	85	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	290	< 410 U	< 59 U	56 UJ	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	< 62 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	37 UJ	< 99 U	< 81 U	63	< 400 U	< 88 U
Chrysene	ug/kg	**1000**	56000	< 100 U	< 100 U	63 UJ	980	< 110 U	< 22 U	700	< 110 U	< 24 U	< 49 U	52	< 100 U	< 56 U	**1100**	< 120 U	< 18 U	410	< 110 U	< 43 U	< 120 U	30	< 18 U	17 UJ	120 J	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	8.1 UJ	360	31	< 24 U	720	< 120 U	< 26 U
Dibenz[a,h]anthracene	ug/kg	**330**	560	< 100 U	< 100 U	< 120 U	120	< 110 U	< 22 U	100	< 110 U	< 24 U	< 49 U	17 UJ	< 100 U	< 56 U	140	< 120 U	< 18 U	48	< 110 U	< 43 U	< 120 U	< 20 U	< 18 U	< 34 U	17 UJ	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	< 18 U	< 30 U	< 24 U	< 18 U	< 120 U	< 26 U
Dibenzofuran	ug/kg	7000	350000	< 340 U	< 350 U	< 390 U	330	< 350 U	< 72 U	140	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	220	< 410 U	< 59 U	50 UJ	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	39 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	120	29 UJ	< 81 U	140	< 400 U	< 88 U
Diethyl phthalate	ug/kg	-	-	< 470 U	< 480 U	< 540 U	< 160 U	< 500 U	< 100 U	< 90 U	< 490 U	< 110 U	< 230 U	< 82 U	< 490 U	< 260 U	< 160 U	< 580 U	< 83 U	< 82 U	< 530 U	< 200 U	< 540 U	< 94 U	< 83 U	< 160 U	< 86 UJ	< 92 UJ	< 250 U	< 83 U	< 500 U	< 190 U	< 83 U	< 84 U	< 140 U	< 110 U	< 83 U	< 550 U	< 120 U
Dimethyl phthalate	ug/kg	-	-	< 470 U	< 480 U	< 540 U	< 160 U	< 500 U	< 100 U	< 90 U	< 490 U	< 110 U	< 230 U	< 82 U	< 490 U	< 260 U	< 160 U	< 580 U	< 83 U	< 82 U	< 530 U	< 200 U	< 540 U	< 94 U	< 83 U	< 160 U	< 86 UJ	< 92 UJ	< 250 U	< 83 U	< 500 U	< 190 U	< 83 U	< 84 U	< 140 U	< 110 U	< 83 U	< 550 U	< 120 U
Di-n-butyl phthalate	ug/kg	-	-	< 470 U	660	< 540 U	< 160 U	< 500 U	< 100 U	< 90 U	< 490 U	< 110 U	< 230 U	< 82 U	< 490 U	< 260 U	< 160 U	< 580 U	< 83 U	< 82 U	< 530 U	< 200 U	< 540 U	< 94 U	< 83 U	< 160 U	< 86 UJ	< 92 UJ	< 250 U	< 83 U	< 500 U	< 190 U	< 83 U	< 84 U	< 140 U	< 110 U	< 83 U	< 550 U	< 120 U
Di-n-octyl phthalate	ug/kg	-	-	< 470 U	< 480 U	< 540 U	< 160 U	< 500 U	< 100 U	< 90 U	< 490 U	< 110 U	< 230 U	< 82 U	< 490 U	< 260 U	< 160 U	< 580 U	< 83 U	< 82 U	< 530 U	< 200 U	< 540 U	< 94 U	< 83 U	< 160 U	< 86 UJ	< 92 UJ	< 250 U	< 83 U	< 500 U	< 190 U	< 83 U	< 84 U	< 140 U	< 110 U	< 83 U	< 550 U	< 120 U
Fluoranthene	ug/kg	100000	500000	< 100 U	40 UJ	120	1500	< 110 U	< 22 U	1100	< 110 U	< 24 U	< 49 U	75	< 100 U	< 56 U	2700	< 120 U	< 18 U	710	< 110 U	20 UJ	< 120 U	28	11 UJ	< 34 U	140 J	< 20 UJ	< 55 U	< 18 U	< 110 U	13 UJ	< 18 U	330	82	< 24 U	910	< 120 U	< 26 U
Fluorene	ug/kg	30000	500000	< 100 U	< 100 U	< 120 U	200	< 110 U	< 22 U	30	< 110 U	< 24 U	< 49 U	7.3 UJ	< 100 U	< 56 U	250	< 120 U	< 18 U	45	< 110 U	< 43 U	< 120 U	< 20 U	< 18 U	< 34 U	< 19 UJ	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	27	14 UJ	< 24 U	56	< 120 U	< 26 U
Hexachlorobenzene	ug/kg	330	6000	< 100 U	< 100 U	< 120 U	< 35 U	< 110 U	< 22 U	< 19 U	< 110 U	< 24 U	< 49 U	< 18 U	< 100 U	< 56 U	< 34 U	< 120 U	< 18 U	< 18 U	< 110 U	< 43 U	< 120 U	< 20 U	< 18 U	< 34 U	< 19 UJ	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 UJ	< 18 UJ	< 30 UJ	< 24 UJ	< 18 UJ	< 120 UJ	< 26 UJ
Hexachlorobutadiene	ug/kg	-	-	< 340 U	< 350 U	< 390 U	< 120 U	< 350 U	< 72 U	< 64 U	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	< 110 U	< 410 U	< 59 U	< 59 U	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	< 62 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	< 60 U	< 99 U	< 81 U	< 59 U	< 400 U	< 88 U
Hexachlorocyclopentadiene	ug/kg	-	-	< 2200 UJ	< 2300 UJ	< 2600 UJ	< 760 UJ	< 2300 UJ	< 480 UJ	< 420 UJ	< 2300 UJ	< 530 UJ	< 1100 UJ	< 390 UJ	< 2300 UJ	< 1200 UJ	< 750 UJ	< 2700 UJ	< 390 UJ	< 390 U	< 2500 U	< 940 U	< 2600 U	< 440 UJ	< 390 UJ	< 740 UJ	< 410 UJ	< 430 UJ	< 1200 UJ	< 390 UJ	< 2300 UJ	< 900 UJ	< 390 UJ	< 400 UJ	< 650 UJ	< 530 UJ	< 390 UJ	< 2600 UJ	< 580 UJ
Hexachloroethane	ug/kg	-	-	< 340 UJ	< 350 UJ	< 390 UJ	< 120 UJ	< 350 UJ	< 72 UJ	< 64 UJ	< 350 UJ	< 81 UJ	< 160 UJ	< 59 UJ	< 350 UJ	< 190 UJ	< 110 UJ	< 410 UJ	< 59 UJ	< 59 U	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	< 62 UJ	< 65 UJ	< 180 U	< 59 UJ	< 360 UJ	< 140 UJ	< 59 UJ	< 60 UJ	< 99 UJ	< 81 UJ	< 59 UJ	< 400 UJ	< 88 UJ
Indeno[1,2,3-cd]pyrene	ug/kg	**500**	5600	< 100 U	< 100 U	< 120 U	340	< 110 U	< 22 U	300	< 110 U	< 24 U	< 49 U	39	< 100 U	< 56 U	400	< 120 U	< 18 U	120	< 110 U	< 43 U	< 120 U	< 20 U	< 18 U	< 34 U	43 J	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	190	20 UJ	< 24 U	400	< 120 U	< 26 U
Isophorone	ug/kg	-	-	< 340 U	< 350 U	< 390 U	< 120 U	< 350 U	< 72 U	< 64 U	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	< 110 U	< 410 U	< 59 U	< 59 U	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	< 62 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	< 60 U	< 99 U	< 81 U	< 59 U	< 400 U	< 88 U
Naphthalene	ug/kg	12000	500000	< 100 U	< 100 U	51 UJ	670	< 110 U	< 22 U	330	< 110 U	< 24 U	< 49 U	22	< 100 U	< 56 U	320	< 120 U	< 18 U	89	< 110 U	< 43 U	< 120 U	22	14 UJ	19 UJ	82 J	< 20 UJ	< 55 U	16 UJ	< 110 U	< 41 U	< 18 U	240	36	< 24 U	310	< 120 U	< 26 U
Nitrobenzene	ug/kg	-	-	< 670 U	< 690 UJ	< 780 U	< 230 U	< 710 U	< 140 U	< 130 U	< 700 U	< 160 U	< 330 U	< 120 U	< 700 U	< 380 U	< 230 U	< 820 U	< 120 U	< 120 U	< 760 U	< 290 U	< 780 U	< 130 U	< 120 U	< 220 U	< 120 UJ	< 130 UJ	< 360 U	< 120 UJ	< 710 U	< 270 U	< 120 U	< 120 U	< 200 U	< 160 U	< 120 U	< 790 U	< 180 U
N-Nitrosodi-n-propylamine	ug/kg	-	-	< 340 U	< 350 U	< 390 U	< 120 U	< 350 U	< 72 U	< 64 U	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	< 110 U	< 410 U	< 59 U	< 59 U	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	< 62 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	< 60 U	< 99 U	< 81 U	< 59 U	< 400 U	< 88 U
N-Nitrosodiphenylamine	ug/kg	-	-	< 340 U	< 350 U	< 390 U	< 120 U	< 350 U	< 72 U	< 64 U	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	< 110 U	< 410 U	< 59 U	< 59 U	< 380 U	< 140 U	< 390 U	< 67 U	< 59 U	< 110 U	< 62 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	< 60 U	< 99 U	< 81 U	< 59 U	< 400 U	< 88 U
Pentachlorophenol	ug/kg	800	6700	< 1000 U	< 1000 U	< 1200 U	< 350 U	< 1100 U	< 220 U	< 190 U	< 1100 U	< 240 U	< 490 U	< 180 U	< 1000 U	< 560 U	< 340 U	< 1200 U	< 180 U	< 180 U	< 1100 U	< 430 U	< 1200 U	< 200 U	< 180 U	< 340 U	< 190 UJ	< 200 UJ	< 550 U	< 180 U	< 1100 U	< 410 U	< 180 U	< 180 U	< 300 U	< 240 U	< 180 U	< 1200 U	< 260 U
Phenanthrene	ug/kg	100000	500000	< 100 U	40 UJ	77 UJ	1500	< 110 U	< 22 U	620	< 110 U	< 24 U	< 49 U	59	< 100 U	< 56 U	2100	< 120 U	4.0 UJ	470	< 110 U	< 43 U	< 120 U	29	28	24 UJ	150 J	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	350	54	< 24 U	410	< 120 U	< 26 U
Phenol	ug/kg	**330**	500000	< 340 U	< 350 U	< 390 U	< 120 U	< 350 U	< 72 U	< 64 U	< 350 U	< 81 U	< 160 U	< 59 U	< 350 U	< 190 U	< 110 U	< 410 U	< 59 U	< 59 U	< 380 U	39 UJ	< 390 U	< 67 U	< 59 U	270	< 62 UJ	< 65 UJ	< 180 U	< 59 U	< 360 U	< 140 U	< 59 U	< 60 U	< 99 U	< 81 U	< 59 U	< 400 U	< 88 U
Pyrene	ug/kg	100000	500000	< 100 U	24 UJ	72 UJ	1100	< 110 U	< 22 U	850	< 110 U	< 24 U	< 49 U	63	< 100 U	< 56 U	1900	< 120 U	7.6 UJ	610	< 110 U	12 UJ	< 120 U	21	7.4 UJ	15 UJ	110 J	< 20 UJ	< 55 U	< 18 U	< 110 U	< 41 U	< 18 U	330	52	< 24 U	810	< 120 U	< 26 U

Notes:

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives

\- = no SCO established

NA = not applicable/analyzed

Qualifiers:

U = Analyte analyzed for, but not detected above the sample's reported quantitation limit

J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample

J+ = Sample likely to have a high bias

J- = Sample likely to have a low bias

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.

R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.

B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.

P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).

PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO	SB-142A	SB-142B	SB-142C	SB-143A	SB-143B	SB-143C
Start Depth (ft bgs)				0	8	15	0	8	13
End Depth (ft bgs)				1	10	16	1	10	15
Sample Date				10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018
SW8270D									
1,1'-Biphenyl	ug/kg	-	-	25 UJ	< 370 U	< 94 U	< 59 U	< 350 U	< 140 U
2,4,5-Trichlorophenol	ug/kg	-	-	< 200 U	< 1100 U	< 280 U	< 180 U	< 1000 U	< 430 U
2,4,6-Trichlorophenol	ug/kg	-	-	< 200 U	< 1100 U	< 280 U	< 180 U	< 1000 U	< 430 U
2,4-Dichlorophenol	ug/kg	-	-	< 200 U	< 1100 U	< 280 U	< 180 U	< 1000 U	< 430 U
2,4-Dimethylphenol	ug/kg	-	-	< 200 U	< 1100 U	< 280 U	< 180 U	< 1000 U	< 430 U
2,4-Dinitrophenol	ug/kg	-	-	< 440 U	< 2400 U	< 620 U	< 390 U	< 2300 U	< 940 U
2,4-Dinitrotoluene	ug/kg	-	-	< 270 U	< 1500 U	< 380 U	< 240 U	< 1400 U	< 570 U
2,6-Dinitrotoluene	ug/kg	-	-	< 270 U	< 1500 U	< 380 U	< 240 U	< 1400 U	< 570 U
2-Chloronaphthalene	ug/kg	-	-	< 67 U	< 370 U	< 94 U	< 59 U	< 350 U	< 140 U
2-Chlorophenol	ug/kg	-	-	< 67 U	< 370 U	< 94 U	< 59 U	< 350 U	< 140 U
2-Methylnaphthalene	ug/kg	-	-	240	< 110 U	< 28 U	170	< 100 U	< 43 U
2-Methylphenol	ug/kg	330	500000	< 270 U	< 1500 U	< 380 U	< 240 U	< 1400 U	< 570 U
2-Nitroaniline	ug/kg	-	-	< 270 U	< 1500 U	< 380 U	< 240 U	< 1400 U	< 570 U
2-Nitrophenol	ug/kg	-	-	< 67 U	< 370 U	< 94 U	< 59 U	< 350 U	< 140 U
3 & 4 Methylphenol	ug/kg	-	-	56 UJ	< 3000 U	< 750 U	< 470 U	< 2800 U	2100
3,3'-Dichlorobenzidine	ug/kg	-	-	< 130 UJ	< 740 U	< 190 U	< 120 U	< 700 U	< 280 U
3-Nitroaniline	ug/kg	-	-	< 270 UJ	< 1500 U	< 380 U	< 240 U	< 1400 U	< 570 U
4,6-Dinitro-2-methylphenol	ug/kg	-	-	< 440 U	< 2400 U	< 620 U	< 390 U	< 2300 U	< 940 U
4-Bromophenyl phenyl ether	ug/kg	-	-	< 67 U	< 370 U	< 94 U	< 59 U	< 350 U	< 140 U
4-Chloro-3-methylphenol	ug/kg	-	-	< 200 U	< 1100 U	< 280 U	< 180 U	< 1000 U	< 430 U
4-Chloroaniline	ug/kg	-	-	< 200 U	< 1100 U	< 280 U	< 180 U	< 1000 U	< 430 U
4-Chlorophenyl phenyl ether	ug/kg	-	-	< 67 U	< 370 U	< 94 U	< 59 U	< 350 U	< 140 U
4-Methylphenol	ug/kg	330	500000	NA	NA	NA	NA	NA	NA
4-Nitroaniline	ug/kg	-	-	< 270 UJ	< 1500 U	< 380 U	< 240 U	< 1400 U	< 570 U
4-Nitrophenol	ug/kg	-	-	< 440 U	< 2400 U	< 620 U	< 390 U	< 2300 U	< 940 U
Acenaphthene	ug/kg	20000	500000	17 UJ	< 110 U	< 28 U	< 18 U	< 100 U	< 43 U
Acenaphthylene	ug/kg	100000	500000	42	< 110 U	< 28 U	22	< 100 U	< 43 U
Acetophenone	ug/kg	-	-	< 130 U	< 740 U	< 190 U	< 120 U	< 700 U	< 280 U
Anthracene	ug/kg	100000	500000	54	< 110 U	< 28 U	34	< 100 U	< 43 U
Atrazine	ug/kg	-	-	< 270 U	< 1500 U	< 380 U	< 240 U	< 1400 U	< 570 U
Benzaldehyde	ug/kg	-	-	68 UJ	< 740 U	< 190 U	53 UJ	< 700 U	< 280 U
Benzo(b)fluoranthene	ug/kg	**1000**	5600	400	< 110 U	< 28 U	170	< 100 U	< 43 U
Benzo[a]anthracene	ug/kg	**1000**	5600	240	< 110 U	< 28 U	130	< 100 U	< 43 U
Benzo[a]pyrene	ug/kg	**1000**	1000	270	< 110 U	< 28 U	120	< 100 U	< 43 U
Benzo[g,h,i]perylene	ug/kg	100000	500000	190	< 110 U	< 28 U	81	< 100 U	< 43 U
Benzo[k]fluoranthene	ug/kg	**800**	56000	140	< 110 U	< 28 U	65	< 100 U	< 43 U
bis (2-chloroisopropyl) ether	ug/kg	-	-	< 130 U	< 740 U	< 190 U	< 120 U	< 700 U	< 280 U
bis(2-Chloroethoxy)methane	ug/kg	-	-	< 130 U	< 740 U	< 190 U	< 120 U	< 700 U	< 280 U
bis(2-Chloroethyl) ether	ug/kg	-	-	< 130 U	< 740 U	< 190 U	< 120 U	< 700 U	< 280 U
bis(2-Ethylhexyl) phthalate	ug/kg	-	-	71 UJ	< 520 U	< 130 U	< 82 U	< 490 U	< 200 U
Butyl benzyl phthalate	ug/kg	-	-	< 94 U	< 520 U	< 130 U	< 82 U	< 490 U	< 200 U
Caprolactam	ug/kg	-	-	< 440 U	< 2400 U	< 620 U	< 390 U	< 2300 U	< 940 U
Carbazole	ug/kg	-	-	35 UJ	< 370 U	< 94 U	< 59 U	< 350 U	< 140 U
Chrysene	ug/kg	**1000**	56000	310	< 110 U	< 28 U	150	< 100 U	< 43 U
Dibenz[a,h]anthracene	ug/kg	**330**	560	65	< 110 U	< 28 U	29	< 100 U	< 43 U
Dibenzofuran	ug/kg	7000	350000	95	< 370 U	< 94 U	55 UJ	< 350 U	< 140 U
Diethyl phthalate	ug/kg	-	-	< 94 U	< 520 U	< 130 U	< 82 U	< 490 U	< 200 U
Dimethyl phthalate	ug/kg	-	-	< 94 U	< 520 U	< 130 U	< 82 U	< 490 U	< 200 U
Di-n-butyl phthalate	ug/kg	-	-	< 94 U	< 520 U	< 130 U	< 82 U	< 490 U	< 200 U
Di-n-octyl phthalate	ug/kg	-	-	< 94 U	< 520 U	< 130 U	< 82 U	< 490 U	< 200 U
Fluoranthene	ug/kg	100000	500000	430	< 110 U	< 28 U	220	< 100 U	18 UJ
Fluorene	ug/kg	30000	500000	21	< 110 U	< 28 U	12 UJ	< 100 U	< 43 U
Hexachlorobenzene	ug/kg	330	6000	< 20 U	< 110 U	< 28 U	< 18 U	< 100 U	< 43 U
Hexachlorobutadiene	ug/kg	-	-	< 67 U	< 370 U	< 94 U	< 59 U	< 350 U	< 140 U
Hexachlorocyclopentadiene	ug/kg	-	-	< 440 UJ	< 2400 U	< 620 U	< 390 U	< 2300 U	< 940 U
Hexachloroethane	ug/kg	-	-	< 67 U	< 370 U	< 94 U	< 59 U	< 350 U	< 140 U
Indeno[1,2,3-cd]pyrene	ug/kg	**500**	5600	180	< 110 U	< 28 U	77	< 100 U	< 43 U
Isophorone	ug/kg	-	-	< 67 U	< 370 U	< 94 U	< 59 U	< 350 U	< 140 U
Naphthalene	ug/kg	12000	500000	180	< 110 U	< 28 U	110	< 100 U	< 43 U
Nitrobenzene	ug/kg	-	-	< 130 U	< 740 U	< 190 U	< 120 U	< 700 U	< 280 U
N-Nitrosodi-n-propylamine	ug/kg	-	-	< 67 U	< 370 U	< 94 U	< 59 U	< 350 U	< 140 U
N-Nitrosodiphenylamine	ug/kg	-	-	< 67 U	< 370 U	< 94 U	< 59 U	< 350 U	< 140 U
Pentachlorophenol	ug/kg	800	6700	< 200 U	< 1100 U	< 280 U	< 180 U	< 1000 U	< 430 U
Phenanthrene	ug/kg	100000	500000	350	< 110 U	< 28 U	190	< 100 U	17 UJ
Phenol	ug/kg	**330**	500000	< 67 U	< 370 U	< 94 U	< 59 U	< 350 U	**880**
Pyrene	ug/kg	100000	500000	340	< 110 U	< 28 U	190	< 100 U	14 UJ

Analyte	SB-144A	SB-144B	SB-144C	SB-145A	SB-145B	SB-145C	SB-146-A	SB-146-B	SB-146-C	SB-147-A	SB-147-B	SB-147-C	SB-148-A	SB-148-B	SB-148-C
Start Depth (ft bgs)	0	7	15	0	10	18	0	2	13	0	5	16	0	4	15
End Depth (ft bgs)	2	9	17	1	12	20	2	5	15	1	7	17	1.5	5	17.5
Sample Date	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018
SW8270D															
1,1'-Biphenyl	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
2,4,5-Trichlorophenol	< 190 U	< 430 U	< 570 U	< 170 U	< 1200 U	< 290 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
2,4,6-Trichlorophenol	< 190 U	< 430 U	< 570 U	< 170 U	< 1200 U	< 290 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
2,4-Dichlorophenol	< 190 U	< 430 U	< 570 U	< 170 U	< 1200 U	< 290 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
2,4-Dimethylphenol	< 190 U	< 430 U	< 570 U	< 170 U	< 1200 U	< 290 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
2,4-Dinitrophenol	< 420 U	< 940 U	< 1300 U	< 370 U	< 2600 U	< 640 U	< 2100 UJ	< 2100 UJ	< 5300 UJ	< 2100 UJ	< 1700 UJ	< 3800 UJ	< 2000 UJ	< 1900 UJ	< 4700 UJ
2,4-Dinitrotoluene	< 250 U	< 570 U	< 760 U	< 220 U	< 1600 U	< 390 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
2,6-Dinitrotoluene	< 250 U	< 570 U	< 760 U	< 220 U	< 1600 U	< 390 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
2-Chloronaphthalene	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
2-Chlorophenol	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
2-Methylnaphthalene	25	130	19 UJ	9.8 UJ	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	79 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
2-Methylphenol	< 250 U	< 570 U	< 760 U	< 220 U	< 1600 U	< 390 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
2-Nitroaniline	< 250 U	< 570 U	< 760 U	< 220 U	< 1600 U	< 390 U	< 420 UJ	< 410 UJ	< 1100 UJ	< 420 UJ	< 340 UJ	< 750 UJ	< 410 UJ	< 380 UJ	< 930 UJ
2-Nitrophenol	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
3 & 4 Methylphenol	< 510 U	< 1100 U	180 UJ	< 440 U	< 3200 U	< 770 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	< 130 U	< 280 U	< 380 U	< 110 U	< 790 U	< 190 U	< 420 UJ	< 410 UJ	< 1100 UJ	< 420 UJ	< 340 UJ	< 750 UJ	< 410 UJ	< 380 UJ	< 930 UJ
3-Nitroaniline	< 250 U	< 570 U	< 760 U	< 220 U	< 1600 U	< 390 U	< 420 UJ	< 410 UJ	< 1100 UJ	< 420 UJ	< 340 UJ	< 750 UJ	< 410 UJ	< 380 UJ	< 930 UJ
4,6-Dinitro-2-methylphenol	< 420 U	< 940 U	< 1300 U	< 370 U	< 2600 U	< 640 U	< 420 UJ	< 410 UJ	< 1100 UJ	< 420 UJ	< 340 UJ	< 750 UJ	< 410 UJ	< 380 UJ	< 930 UJ
4-Bromophenyl phenyl ether	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
4-Chloro-3-methylphenol	< 190 U	< 430 U	< 570 U	< 170 U	< 1200 U	< 290 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
4-Chloroaniline	< 190 U	< 430 U	< 570 U	< 170 U	< 1200 U	< 290 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
4-Chlorophenyl phenyl ether	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
4-Methylphenol	NA	NA	NA	NA	NA	NA	< 420 UJ	< 410 UJ	< 1100 UJ	< 420 UJ	< 340 UJ	< 750 UJ	< 410 UJ	< 380 UJ	< 930 UJ
4-Nitroaniline	< 250 U	< 570 U	< 760 U	< 220 U	< 1600 U	< 390 U	< 420 UJ	< 410 UJ	< 1100 UJ	< 420 UJ	< 340 UJ	< 750 UJ	< 410 UJ	< 380 UJ	< 930 UJ
4-Nitrophenol	< 420 U	< 940 U	< 1300 U	< 370 U	< 2600 U	< 640 U	< 420 UJ	< 410 UJ	< 1100 UJ	< 420 UJ	< 340 UJ	< 750 UJ	< 410 UJ	< 380 UJ	< 930 UJ
Acenaphthene	7.4 UJ	31 UJ	< 57 U	< 17 U	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	36 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Acenaphthylene	14 UJ	< 43 U	< 57 U	5.6 UJ	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	51 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Acetophenone	< 130 U	< 280 U	< 380 U	< 110 U	< 790 U	< 190 U	< 220 UJ	< 210 UJ	73 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Anthracene	28	39 UJ	< 57 U	18	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	100 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Atrazine	< 250 U	< 570 U	< 760 U	< 220 U	< 1600 U	< 390 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Benzaldehyde	< 130 U	< 280 U	260 UJ	< 110 U	< 790 U	< 190 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Benzo(b)fluoranthene	120	88	36 UJ	76	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	630 J	44 UJ	< 390 UJ	110 UJ	< 200 UJ	< 480 UJ
Benzo[a]anthracene	97	98	< 57 U	85	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	440 J	32 UJ	< 390 UJ	72 UJ	< 200 UJ	< 480 UJ
Benzo[a]pyrene	89	72	< 57 U	68	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	480 J	28 UJ	< 390 UJ	85 UJ	< 200 UJ	< 480 UJ
Benzo[g,h,i]perylene	45	35 UJ	< 57 U	37	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	350 J	24 UJ	< 390 UJ	65 UJ	< 200 UJ	< 480 UJ
Benzo[k]fluoranthene	37	42 UJ	< 57 U	25	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	260 J	< 170 UJ	< 390 UJ	51 UJ	< 200 UJ	< 480 UJ
bis (2-chloroisopropyl) ether	< 130 U	< 280 U	< 380 U	< 110 U	< 790 U	< 190 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
bis(2-Chloroethoxy)methane	< 130 U	< 280 U	< 380 U	< 110 U	< 790 U	< 190 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
bis(2-Chloroethyl) ether	< 130 U	< 280 U	< 380 U	< 110 U	< 790 U	< 190 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
bis(2-Ethylhexyl) phthalate	< 88 U	< 200 U	< 270 U	< 78 U	740	< 140 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Butyl benzyl phthalate	< 88 U	< 200 U	< 270 U	< 78 U	< 560 U	< 140 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Caprolactam	< 420 U	< 940 U	< 1300 U	< 370 U	< 2600 U	< 640 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Carbazole	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	46 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Chrysene	93	99	< 57 U	87	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	530 J	46 UJ	< 390 UJ	80 UJ	< 200 UJ	< 480 UJ
Dibenz[a,h]anthracene	15 UJ	< 43 U	< 57 U	12 UJ	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Dibenzofuran	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	44 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Diethyl phthalate	< 88 U	< 200 U	< 270 U	< 78 U	< 560 U	< 140 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Dimethyl phthalate	< 88 U	< 200 U	< 270 U	< 78 U	< 560 U	< 140 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Di-n-butyl phthalate	< 88 U	< 200 U	< 270 U	< 78 U	< 560 U	< 140 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Di-n-octyl phthalate	< 88 U	< 200 U	< 270 U	< 78 U	< 560 U	< 140 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Fluoranthene	180	180	36 UJ	110	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	650 J	40 UJ	< 390 UJ	100 UJ	< 200 UJ	< 480 UJ
Fluorene	10 UJ	37 UJ	< 57 U	< 17 U	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	34 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Hexachlorobenzene	< 19 U	< 43 U	< 57 U	< 17 U	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Hexachlorobutadiene	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Hexachlorocyclopentadiene	< 420 U	< 940 U	< 1300 U	< 370 U	< 2600 U	< 640 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Hexachloroethane	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Indeno[1,2,3-cd]pyrene	45	33 UJ	< 57 U	31	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	300 J	< 170 UJ	< 390 UJ	53 UJ	< 200 UJ	< 480 UJ
Isophorone	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Naphthalene	19	30 UJ	27 UJ	9.0 UJ	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	120 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Nitrobenzene	< 130 U	< 280 U	< 380 U	< 110 U	< 790 U	< 190 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
N-Nitrosodi-n-propylamine	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
N-Nitrosodiphenylamine	< 63 U	< 140 U	< 190 U	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Pentachlorophenol	< 190 U	< 430 U	< 570 U	< 170 U	< 1200 U	< 290 U	< 420 UJ	< 410 UJ	< 1100 UJ	< 420 UJ	< 340 UJ	< 750 UJ	< 410 UJ	< 380 UJ	< 930 UJ
Phenanthrene	97	180	31 UJ	66	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	320 J	50 UJ	< 390 UJ	55 UJ	< 200 UJ	< 480 UJ
Phenol	< 63 U	< 140 U	100 UJ	< 56 U	< 400 U	< 97 U	< 220 UJ	< 210 UJ	< 540 UJ	< 210 UJ	< 170 UJ	< 390 UJ	< 210 UJ	< 200 UJ	< 480 UJ
Pyrene	150	140	20 UJ	150	< 120 U	< 29 U	< 220 UJ	< 210 UJ	< 540 UJ	720 J	37 UJ	< 390 UJ	93 UJ	< 200 UJ	< 480 UJ

Analyte	SB-148-D	SB-149-A	SB-149-B	SB-149-C	SB-150A	SB-150B	SB-150C	DUP-101018	DUP-101118	DUP-101618	DUP-101718	DUP-101818	DUP-101918	DUP-102318
Start Depth (ft bgs)	12	0	5	16	0	14	18	NA	NA	NA	NA	NA	NA	NA
End Depth (ft bgs)	14	1	6	18	2	16	20	NA	NA	NA	NA	NA	NA	NA
Sample Date	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/19/2018	10/19/2018	10/19/2018	10/10/2018	10/11/2018	10/16/2018	10/17/2018	10/18/2018	10/19/2018	10/23/2018
SW8270D														
1,1'-Biphenyl	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	< 230 U	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
2,4,5-Trichlorophenol	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 1300 U	< 420 U	< 190 U	< 210 U	< 230 U	< 510 U	< 180 U	< 240 U	< 470 U	< 550 UJ
2,4,6-Trichlorophenol	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 1300 U	< 420 U	< 190 U	< 210 U	< 230 U	< 510 U	< 180 U	< 240 U	< 470 U	< 550 UJ
2,4-Dichlorophenol	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 1300 U	< 420 U	< 190 U	< 210 U	< 230 U	< 510 U	< 180 U	< 240 U	< 470 U	< 550 UJ
2,4-Dimethylphenol	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 1300 U	< 420 U	< 190 U	< 210 U	< 230 U	< 510 U	< 180 U	< 240 U	< 470 U	< 550 UJ
2,4-Dinitrophenol	< 2100 UJ	< 9100 UJ	< 330000 UJ	< 3900 UJ	< 2800 U	< 920 U	< 410 U	< 2100 U	< 2200 U	< 1100 U	< 390 UJ	< 530 U	< 1000 U	< 5300 UJ
2,4-Dinitrotoluene	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 1700 U	< 560 U	< 250 U	< 210 U	< 230 U	< 690 U	< 240 U	< 320 U	< 630 U	< 550 UJ
2,6-Dinitrotoluene	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 1700 U	< 560 U	< 250 U	< 210 U	< 230 U	< 690 U	< 240 U	< 320 U	< 630 U	< 550 UJ
2-Chloronaphthalene	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	< 230 U	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
2-Chlorophenol	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	< 230 U	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
2-Methylnaphthalene	< 210 UJ	200 UJ	< 34000 UJ	< 400 UJ	< 130 U	< 42 U	< 19 U	< 210 U	77 UJ	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
2-Methylphenol	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 1700 U	< 560 U	< 250 U	< 210 U	< 230 U	< 690 U	< 240 U	< 320 U	< 630 U	< 550 UJ
2-Nitroaniline	< 410 UJ	< 1800 UJ	< 66000 UJ	< 780 UJ	< 1700 U	< 560 U	< 250 U	< 410 U	< 440 U	< 690 U	< 240 U	< 320 U	< 630 U	< 1100 UJ
2-Nitrophenol	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	< 230 U	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
3 & 4 Methylphenol	NA	NA	NA	NA	< 3300 U	150 UJ	< 500 U	NA	NA	< 1400 U	< 480 U	< 640 U	< 1300 U	NA
3,3'-Dichlorobenzidine	< 410 UJ	< 1800 UJ	< 66000 UJ	< 780 UJ	< 830 U	< 280 U	< 120 U	< 410 U	< 440 U	< 340 U	< 120 U	< 160 U	< 320 U	< 1100 UJ
3-Nitroaniline	< 410 UJ	< 1800 UJ	< 66000 UJ	< 780 UJ	< 1700 U	< 560 U	< 250 U	< 410 U	< 440 U	< 690 U	< 240 U	< 320 U	< 630 U	< 1100 UJ
4,6-Dinitro-2-methylphenol	< 410 UJ	< 1800 UJ	< 66000 UJ	< 780 UJ	< 2800 U	< 920 U	< 410 U	< 410 U	< 440 U	< 1100 U	< 390 UJ	< 530 U	< 1000 U	< 1100 UJ
4-Bromophenyl phenyl ether	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	< 230 U	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
4-Chloro-3-methylphenol	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 1300 U	< 420 U	< 190 U	< 210 U	< 230 U	< 510 U	< 180 U	< 240 UJ	< 470 U	< 550 UJ
4-Chloroaniline	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 1300 U	< 420 U	< 190 U	< 210 U	< 230 U	< 510 U	< 180 U	< 240 U	< 470 U	< 550 UJ
4-Chlorophenyl phenyl ether	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	< 230 U	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
4-Methylphenol	< 410 UJ	< 1800 UJ	< 66000 UJ	< 780 UJ	NA	NA	NA	< 410 U	< 440 U	NA	NA	NA	NA	< 1100 UJ
4-Nitroaniline	< 410 UJ	< 1800 UJ	< 66000 UJ	< 780 UJ	< 1700 U	< 560 U	< 250 U	< 410 U	< 440 U	< 690 U	< 240 U	< 320 U	< 630 U	< 1100 UJ
4-Nitrophenol	< 410 UJ	< 1800 UJ	< 66000 UJ	< 780 UJ	< 2800 U	< 920 U	< 410 U	< 410 U	< 440 U	< 1100 U	< 390 U	< 530 U	< 1000 U	< 1100 UJ
Acenaphthene	< 210 UJ	440 UJ	< 34000 UJ	< 400 UJ	< 130 U	< 42 U	< 19 U	< 210 U	< 230 U	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Acenaphthylene	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 130 U	< 42 U	< 19 U	< 210 U	67 UJ	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Acetophenone	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 830 U	94 UJ	< 120 U	< 210 U	< 230 U	< 340 U	< 120 U	< 160 U	< 320 U	< 550 UJ
Anthracene	< 210 UJ	880 UJ	< 34000 UJ	< 400 UJ	< 130 U	< 42 U	< 19 U	< 210 U	340	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Atrazine	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 1700 U	< 560 U	< 250 U	< 210 U	< 230 U	< 690 U	< 240 U	< 320 U	< 630 U	< 550 UJ
Benzaldehyde	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 830 U	110 UJ	< 120 U	< 210 UJ	< 230 U	100 U	< 120 U	81 UJ	310 UJ	< 550 UJ
Benzo(b)fluoranthene	< 210 UJ	970 J	< 34000 UJ	< 400 UJ	< 130 U	19 UJ	< 19 U	< 210 U	720	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Benzo[a]anthracene	< 210 UJ	**1200 J**	< 34000 UJ	< 400 UJ	< 130 U	< 42 U	< 19 U	< 210 U	760	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Benzo[a]pyrene	< 210 UJ	870 UJ	< 34000 UJ	< 400 UJ	< 130 U	< 42 U	< 19 U	< 210 U	570	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Benzo[g,h,i]perylene	< 210 UJ	380 UJ	< 34000 UJ	< 400 UJ	< 130 U	< 42 U	< 19 U	< 210 U	400	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Benzo[k]fluoranthene	< 210 UJ	620 UJ	< 34000 UJ	< 400 UJ	< 130 U	< 42 U	< 19 U	< 210 U	< 230 U	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
bis (2-chloroisopropyl) ether	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 830 U	< 280 U	< 120 U	< 210 U	< 230 U	< 340 U	< 120 U	< 160 U	< 320 U	< 550 UJ
bis(2-Chloroethoxy)methane	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 830 U	< 280 U	< 120 U	< 210 U	< 230 U	< 340 U	< 120 U	< 160 U	< 320 U	< 550 UJ
bis(2-Chloroethyl) ether	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 830 U	< 280 U	< 120 U	< 210 U	< 230 U	< 340 U	< 120 U	< 160 U	< 320 U	< 550 UJ
bis(2-Ethylhexyl) phthalate	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 580 U	< 190 U	88	< 210 U	< 230 U	< 240 U	< 84 U	< 110 U	< 220 U	< 550 UJ
Butyl benzyl phthalate	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 580 U	< 190 U	< 87 U	< 210 U	< 230 U	< 240 U	< 84 U	< 110 U	< 220 U	< 550 UJ
Caprolactam	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 2800 U	< 920 U	< 410 U	< 210 U	< 230 U	< 1100 U	< 390 U	< 530 U	< 1000 U	< 550 UJ
Carbazole	< 210 UJ	280 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	120 UJ	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
Chrysene	< 210 UJ	**1200 J**	< 34000 UJ	< 400 UJ	< 130 U	15 UJ	< 19 U	< 210 U	710	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Dibenz[a,h]anthracene	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 130 U	< 42 U	< 19 U	< 210 U	< 230 U	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Dibenzofuran	< 210 UJ	330 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	66 UJ	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
Diethyl phthalate	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 580 U	< 190 U	< 87 U	< 210 U	< 230 U	< 240 U	< 84 U	< 110 U	< 220 U	< 550 UJ
Dimethyl phthalate	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 580 U	< 190 U	< 87 U	< 210 U	< 230 U	< 240 U	< 84 U	< 110 U	< 220 U	< 550 UJ
Di-n-butyl phthalate	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 580 U	< 190 U	< 87 U	< 210 U	< 230 U	< 240 U	< 84 U	< 110 U	< 220 U	< 550 UJ
Di-n-octyl phthalate	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 580 U	< 190 U	< 87 U	< 210 U	< 230 U	< 240 UJ	< 84 U	< 110 U	< 220 U	< 550 UJ
Fluoranthene	< 210 UJ	2600 J	< 34000 UJ	< 400 UJ	< 130 U	24 UJ	< 19 U	< 210 U	1500	16 UJ	< 18 U	< 24 U	< 47 U	< 550 UJ
Fluorene	< 210 UJ	450 UJ	< 34000 UJ	< 400 UJ	< 130 U	< 42 U	< 19 U	< 210 U	140 UJ	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Hexachlorobenzene	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 130 U	< 42 U	< 19 U	< 210 U	< 230 U	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Hexachlorobutadiene	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	< 230 U	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
Hexachlorocyclopentadiene	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 2800 U	< 920 U	< 410 U	< 210 U	< 230 U	< 1100 UJ	< 390 UJ	< 530 UJ	< 1000 U	< 550 UJ
Hexachloroethane	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	< 230 U	< 170 U	< 60 U	< 80 UJ	< 160 U	< 550 UJ
Indeno[1,2,3-cd]pyrene	< 210 UJ	380 UJ	< 34000 UJ	< 400 UJ	< 130 U	< 42 U	< 19 U	< 210 U	380	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Isophorone	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	< 230 U	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
Naphthalene	< 210 UJ	170 UJ	< 34000 UJ	< 400 UJ	< 130 U	19 UJ	< 19 U	< 210 U	< 230 U	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Nitrobenzene	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 830 U	< 280 U	< 120 U	< 210 U	< 230 U	< 340 U	< 120 U	< 160 U	< 320 U	< 550 UJ
N-Nitrosodi-n-propylamine	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	< 230 U	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
N-Nitrosodiphenylamine	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 420 U	< 140 U	< 62 U	< 210 U	< 230 U	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
Pentachlorophenol	< 410 UJ	< 1800 UJ	< 66000 UJ	< 780 UJ	< 1300 U	< 420 U	< 190 U	< 410 U	< 440 U	< 510 U	< 180 U	< 240 U	< 470 U	< 1100 UJ
Phenanthrene	< 210 UJ	2800 J	< 34000 UJ	< 400 UJ	< 130 U	19 UJ	< 19 U	< 210 U	1300	< 51 U	< 18 U	< 24 U	< 47 U	< 550 UJ
Phenol	< 210 UJ	< 930 UJ	< 34000 UJ	< 400 UJ	< 420 U	330	< 62 U	< 210 U	< 230 U	< 170 U	< 60 U	< 80 U	< 160 U	< 550 UJ
Pyrene	< 210 UJ	2100 J	< 34000 UJ	< 400 UJ	< 130 U	15 UJ	< 19 U	< 210 U	1100 J	12 UJ	< 18 U	< 24 U	< 47 U	< 550 UJ

Notes:

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives

\- = no SCO established

NA = not applicable/analyzed

Qualifiers:

U = Analyte analyzed for, but not detected above the sample's reported quantitation limit

J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample

J+ = Sample likely to have a high bias

J- = Sample likely to have a low bias

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.

R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.

B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.

P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).

PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Soil Analytical Data

				SB-101-A	SB-101-B	SB-101-C	SB-102-A	SB-102-B	SB-102-C	SB-103-A	SB-103-B	SB-103-C	SB-104-A	SB-104-B	SB-104-C	SB-105-A	SB-105-B	SB-105-C	SB-105-D	SB-106-A	SB-106-B	SB-106-C	SB-107-A	SB-107-B	SB-107-C	SB-108-A	SB-108-B	SB-108-C	SB-109-A	SB-109-B	SB-109-C	SB-110-A	SB-110-B	SB-110-C	SB-110-D
			Soil Sample ID																														
			Start Depth (ft bgs)	0	8	12	0	4	12	0	4	12	0	4	14	0	4	10	12	0	4	14	0	6	13	0	8	10	0	4	16	0	4	17.5	10
			End Depth (ft bgs)	1	10	14	1	6	14	1	6	14	1	6	16	1	6	12	14	1	8	16	2	8	18	1	10	14	1	6	18	1	6	20	12.5
			Sample Date	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/10/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018
Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO																														
SW9012																																	
Cyanide, Total	mg/kg	**27**	27	19.6 J	< 1.5 UJ	< 1.2 UJ	**33.1 J**	1.2 J	< 1.2 UJ	**28.1 J**	1.6 J	< 1.2 UJ	< 1.2 UJ	2.0 J	0.62 UJ	25.6 J	2.5 J	< 3.3 UJ	< 1.3 UJ	6.8 J	8.9 J	< 2.1 UJ	4.6 J	2.1 J	< 1.2 UJ	**52.1 J**	9.7 J	1.5 UJ	3.5 J	**73.8 J**	0.91 UJ	3.1 J	5.5 J	0.62 UJ	< 1.4 UJ
SW9045D																																	
CORROSIVITY	pH UNITS	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	pH UNITS	-	-	10.4 J	11.2 J	8.7 J	9.6 J	11.9 J	8.6 J	9.1 J	11.9 J	8.4 J	8.5 J	11.6 J	7.7 J	8.6 J	12.0 J	7.6 J	8.3 J	9.8 J	11.5 J	9.8 J	8.4 J	12.0 J	8.3 J	8.4 J	12.2 J	10.2 J	8.4 J	8.3 J	8.0 J	10.7 J	10.7 J	8.1 J	7.8 J
Temperature	Celcius	-	-	19.4 J	25.3 J	19.6 J	19.5 J	25.1 J	19.7 J	19.6 J	25.2 J	19.8 J	19.9 J	19.7 J	19.7 J	19.7 J	19.6 J	19.6 J	19.6 J	19.6 J	19.5 J	19.6 J	19.0 J	19.4 J	19.5 J	19.3 J	19.2 J	19.4 J	18.9 J	19.3 J	19.3 J	19.3 J	19.7 J	18.8 J	18.9 J

Notes:

ft bgs = feet below ground surface

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µg/kg = micrograms per kilogram

6 NYCRR Part 375 SCO = Title 6 Official Compilation of New York Codes, Rules and Regulations Part 375 Soil Cleanup Objectives

- = no SCO established

NA = not applicable/analyzed

** =The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO (CrVI & CrIII)

Qualifiers:

U = Analyte analyzed for, but not detected above the sample's reported quantitation limit

J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample

J+ = Sample likely to have a high bias

J- = Sample likely to have a low bias

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

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Table 1
Soil Analytical Data

				Soil Sample ID	**SB-111-A**	**SB-111-B**	**SB-111-C**	**SB-112-A**	**SB-112-B**	**SB-112-C**	**SB-113-A**	**SB-113-B**	**SB-113-C**	**SB-114-A**	**SB-114-B**	**SB-114-C**	**SB-115-A**	**SB-115-B**	**SB-115-C**	**SB-116-A**	**SB-116-B**	**SB-116-C**	**SB-117-A**	**SB-117-B**	**SB-117-C**	**SB-117-D**	**SB-118-A**	**SB-118-B**	**SB-118-C**	**SB-119-A**	**SB-119-B**	**SB-119-C**	**SB-120-A**	**SB-120-B**	**SB-120-C**
				Start Depth (ft bgs)	**0**	**6**	**18**	**0**	**8**	**12**	**0**	**6**	**18**	**0**	**8**	**10**	**0**	**7**	**15**	**0**	**5**	**14**	**0**	**4**	**10**	**16**	**0**	**6**	**16**	**0**	**8**	**13**	**0**	**4**	**16**
				End Depth (ft bgs)	**1**	**8**	**20**	**1**	**10**	**15**	**1**	**8**	**20**	**1**	**10**	**20**	**1**	**10**	**17**	**1**	**7**	**18**	**2**	**7**	**12**	**20**	**1**	**8**	**20**	**1**	**10**	**15**	**1**	**6**	**20**
				Sample Date	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/16/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/12/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**	**10/11/2018**
Analyte	Units	**6 NYCRR PART 375 UNRESTRICTED USE SCO**	6 NYCRR PART 375 COMMERCIAL USE SCO																																	
SW9012																																				
Cyanide, Total	mg/kg	**27**	27		13.5 J	**31.5 J**	< 0.66 UJ	6.4 J	6.1 J	0.62 UJ	0.36 UJ	1.3 J	< 0.56 UJ	1.2 J	4.9 J	10.5 J	11.3 J	4.1 J	< 1.1 UJ	7.3 J	1.6 J	< 1.3 UJ	22.7 J	25.7 J	1.8 J	< 1.2 UJ	7.0 J	1.3 J	< 1.2 UJ	14.4 J	19.9 J	< 1.3 UJ	6.3 J	2.3 J	< 1.5 UJ
SW9045D																																				
CORROSIVITY	pH UNITS	-	-		10.1 J	11.9 J	8.3 J	8.0 J	12.0 J	7.8 J	8.8 J	12.0 J	8.3 J	8.3 J	11.9 J	11.5 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	pH UNITS	-	-		10.1 J	11.9 J	8.3 J	8.0 J	12.0 J	7.8 J	8.8 J	12.0 J	8.3 J	8.3 J	11.9 J	11.5 J	10 J	11.9 J	7.9 J	9.0 J	9.3 J	8.4 J	8.3 J	11.1 J	10.7 J	8.2 J	8.8 J	12.3 J	8.4 J	8.1 J	12.2 J	8.3 J	9.9 J	11.0 J	8.3 J
Temperature	Celcius	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18.9 J	18.8 J	19.5 J	18.8 J	18.7 J	19.0 J	19.7 J	19.7 J	19.1 J	19.6 J	19.7 J	19.4 J	18.9 J	18.9 J	18.8 J	18.8 J	18.9 J	19.0 J	18.6 J

Notes:

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

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Qualifiers:

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J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample

J+ = Sample likely to have a high bias

J- = Sample likely to have a low bias

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

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Table 1
Soil Analytical Data

			Soil Sample ID	SB-121-A	SB-121-B	SB-121-C	SB-121-D	SB-122-A	SB-122-B	SB-122-C	SB-123-A	SB-123-B	SB-123-C	SB-124-A	SB-124-B	SB-124-C	SB-125-A	SB-125-B	SB-125-C	SB-126-A	SB-126-B	SB-126-C	SB-127-A	SB-127-B	SB-127-C	SB-128-A	SB-128-B	SB-128-C	SB-129-A	SB-129-B	SB-129-C	SB-130-A	SB-130-B	SB-130-C
			Start Depth (ft bgs)	0	8	17	10	0	8	18	0	10	18	0	12	18	0	5	16.5	0	1	14.5	0	5	18	0	5	14	0	6	16	0	6	15
			End Depth (ft bgs)	1	10	20	12	2	10	20	1	12	20	1	14	20	1	6	18	1	4	15.5	5	10	20	2	7	16	2	7	17	3	10	18
			Sample Date	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/16/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018
Analyte	Units	**6 NYCRR PART 375 UNRESTRICTED USE SCO**	6 NYCRR PART 375 COMMERCIAL USE SCO																																	
SW9012																																				
Cyanide, Total	mg/kg	**27**	27	5.1 J	4.9 J	< 0.66 UJ	0.85 UJ	4.1 J	2.5 J	1.9 J	8.3 J	16.5 J	< 0.58 UJ	4.1 J	2.1 J	< 0.59 UJ	5.1 J	0.60 UJ	< 2.4 UJ	2.2 J	1.6 J	< 1.3 UJ	9.6 J	8.2 J	1.6 UJ	5.6 J	24.1 J	< 2.0 UJ	0.57 UJ	1.0 J	< 0.61 UJ	**44.6 J**	1.8 J	< 0.57 UJ
SW9045D																																				
CORROSIVITY	pH UNITS	-	-	8.8 J	12.0 J	8.4 J	7.8 J	12.0 J	11.9 J	8.3 J	8.0 J	12.0 J	7.8 J	9.5 J	10.2 J	8.1 J	9.3 J	12.1 J	7.7 J	8.1 J	8.2 J	8.9 J	12.2 J	12.0 J	7.7 J	8.4 J	11.0 J	7.7 J	8.3 J	11.7 J	8.1 J	9.7 J	10.1 J	8.2 J
pH	pH UNITS	-	-	8.8 J	12.0 J	8.4 J	7.8 J	12.0 J	11.9 J	8.3 J	8.0 J	12.0 J	7.8 J	9.5 J	10.2 J	8.1 J	9.3 J	12.1 J	7.7 J	8.1 J	8.2 J	8.9 J	12.2 J	12.0 J	7.7 J	8.4 J	11.0 J	7.7 J	8.3 J	11.7 J	8.1 J	9.7 J	10.1 J	8.2 J
Temperature	Celcius	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

ft bgs = feet below ground surface

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J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample

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J- = Sample likely to have a low bias

UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

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Table 1
Soil Analytical Data

				SB-131A	SB-131B	SB-131C	SB-132A	SB-132B	SB-132C	SB-133A	SB-133B	SB-133C	SB-133D	SB-134A	SB-134B	SB-134C	SB-135A	SB-135B	SB-135C	SB-136-A	SB-136-B	SB-136-C	SB-136-D	SB-137-A	SB-137-B	SB-137-C	SB-138-A	SB-138-B	SB-138-C	SB-139A	SB-139B	SB-139C	SB-139D	SB-140A	SB-140B	SB-140C	SB-141A	SB-141B	SB-141C
			Soil Sample ID																																				
			Start Depth (ft bgs)	0	6	14	0	14	17	0	4	17	14	0	6	12	0	6	18	0	5	17	12	0	4	14	0	5	15	0	6	13	17	0	15	17	0	5	18
			End Depth (ft bgs)	1	8	16	2	16	19	1	6	19	16	1	8	14	2	8	20	1	8	20	15	1	5	16	2	8	17	2	8	15	18	2	17	19	2	7	20
			Sample Date	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/17/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018	10/18/2018
Analyte	Units	**6 NYCRR PART 375 UNRESTRICTED USE SCO**	6 NYCRR PART 375 COMMERCIAL USE SCO																																			
SW9012																																						
Cyanide, Total	mg/kg	**27**	27	5.2 J	3.2 J	8.1 J	5.1 J	6.1 J	< 0.79 UJ	10.9 J	1.0 J	< 0.78 UJ	< 1.8 UJ	1.7 J	1.1 J	0.82 UJ	7.5 J	1.7 J	< 0.58 UJ	2.1	5.0	1.4 UJ	3.0	7.5	2.1	0.70 UJ	2.7 J	16.3 J	< 2.0 U	**30.2 J**	0.93 J	0.59 UJ	< 0.55 UJ	3.4 J	3.2 J	< 0.78 UJ	1.9 J	0.92 J	< 0.92 UJ
SW9045D																																						
CORROSIVITY	pH UNITS	-	-	11.6 J	12.2 J	8.1 J	9.2 J	11.3 J	8.3 J	8.8 J	11.5 J	8.2 J	7.6 J	10.1 J	11.3 J	7.7 J	8.5 J	11.6 J	8.9 J	8.7 J	11.9 J	7.2 J	12.2 J	8.9 J	11.5 J	11.1 J	10.1 J	11.8 J	7.8 J	10.7 J	12.3 J	7.4 J	7.4 J	8.8 J	8.7 J	7.9 J	9.8 J	11.6 J	7.7 J
pH	pH UNITS	-	-	11.6 J	12.2 J	8.1 J	9.2 J	11.3 J	8.3 J	8.8 J	11.5 J	8.2 J	7.6 J	10.1 J	11.3 J	7.7 J	8.5 J	11.6 J	8.9 J	8.7 J	11.9 J	7.2 J	12.2 J	8.9 J	11.5 J	11.1 J	10.1 J	11.8 J	7.8 J	10.7 J	12.3 J	7.4 J	7.4 J	8.8 J	8.7 J	7.9 J	9.8 J	11.6 J	7.7 J
Temperature	Celcius	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Table 1
Soil Analytical Data

				Soil Sample ID	SB-142A	SB-142B	SB-142C	SB-143A	SB-143B	SB-143C	SB-144A	SB-144B	SB-144C	SB-145A	SB-145B	SB-145C	SB-146-A	SB-146-B	SB-146-C	SB-147-A	SB-147-B	SB-147-C	SB-148-A	SB-148-B	SB-148-C	SB-148-D	SB-149-A	SB-149-B	SB-149-C	SB-150A	SB-150B	SB-150C	DUP-101018	DUP-101118	DUP-101618	DUP-101718	DUP-101818	DUP-101918	DUP-102318
				Start Depth (ft bgs)	0	8	15	0	8	13	0	7	15	0	10	18	0	2	13	0	5	16	0	4	15	12	0	5	16	0	14	18	NA	NA	NA	NA	NA	NA	NA
				End Depth (ft bgs)	1	10	16	1	10	15	2	9	17	1	12	20	2	5	15	1	7	17	1.5	5	17.5	14	1	6	18	2	16	20	NA	NA	NA	NA	NA	NA	NA
				Sample Date	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/19/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/19/2018	10/19/2018	10/19/2018	10/10/2018	10/11/2018	10/16/2018	10/17/2018	10/18/2018	10/19/2018	10/23/2018
Analyte	Units	6 NYCRR PART 375 UNRESTRICTED USE SCO	6 NYCRR PART 375 COMMERCIAL USE SCO																																			
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Cyanide, Total	mg/kg	**27**	27		3.0 J	23.3 J	< 0.95 UJ	10.7 J	2.4 J	< 1.6 UJ	0.25 UJ	< 0.63 UJ	< 2.1 UJ	< 0.61 UJ	4.7 J	< 0.98 UJ	7.5 J	0.57 UJ	1.5 UJ	1.5 J	9.9 J	< 2.2 UJ	6.9 J	**31.0 J**	< 2.6 UJ	10.4 J	< 1.0 UJ	1.2 J	1.5 UJ	0.60 UJ	3.7 J	< 0.56 U	6.0 J	4.5 J	< 1.5 UJ	< 0.58 U	< 0.92 UJ	0.76 UJ	2.2 UJ
SW9045D																																					
CORROSIVITY	pH UNITS	-	-		8.2 J	11.9 J	7.8 J	9.4 J	12.3 J	7.4 J	9.9 J	12.5 J	8.4 J	8.9 J	11.8 J	7.7 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11.0 J	11.6 J	8.1 J	NA	NA	8.0 J	8.1 J	7.3 J	9.0 J	NA
pH	pH UNITS	-	-		8.2 J	11.9 J	7.8 J	9.4 J	12.3 J	7.4 J	9.9 J	12.5 J	8.4 J	8.9 J	11.8 J	7.7 J	10.0 J	11.9 J	7.8 J	8.3 J	9.9 J	7.8 J	9.9 J	10.6 J	7.6 J	11.7 J	8.6 J	8.9 J	7.8 J	11.0 J	11.6 J	8.1 J	11.5 J	11.3 J	8.0 J	8.1 J	7.3 J	9.0 J	7.7 J
Temperature	Celcius	-	-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	25.1 J	25.4 J	18.4 J	18.3 J	25.5 J	18.6 J	25.3 J	25.1 J	18.3 J	25.2 J	18.7 J	18.7 J	18.5 J	NA	NA	NA	19.6 J	19.1 J	NA	NA	NA	NA	18.4 J

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Table 2
Groundwater/Surface Water Analytical Data

			Monitoring Well/Surface Sample ID	MW-101	MW-105	MW-108	MW-120	MW-123	MW-126	MW-128	MW-131	MW-144	MW-148	SW-1	SW-2	DUP-102918	DUP-110918
			Groundwater Elevation (fmsl)	576.42	576.26	576.23	576.32	576.44	576.32	576.27	576.54	576.35	576.36	NA	NA	NA	NA
			Sample Date	10/29/2018	10/29/2018	10/29/2018	10/30/2018	10/30/2018	10/30/2018	10/30/2018	10/29/2018	10/30/2018	10/30/2018	11/9/2018	11/9/2018	10/29/2018	11/9/2018
Analyte	Units	NY TOGS 1.1.1 GWQS (CLASS GA)	NY TOGS 1.1.1 SWQS (CLASS A, A-S, AA, AA-S)														
SW6010C																	
Aluminum	mg/l	2	-	0.64	1.1	1.3	0.92	0.42	0.66	0.55	0.25	0.83	0.71	0.099 UJ	< 0.20 U	0.27	0.065 UJ
Antimony	mg/l	0.003	0.003	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U
Arsenic	mg/l	0.025	0.050	< 0.015 U	< 0.015 U	< 0.015 U	< 0.015 U	< 0.015 U	< 0.015 U	< 0.015 U	< 0.015 U	< 0.015 U	< 0.015 U	< 0.015 U	< 0.015 U	< 0.015 U	< 0.015 U
Barium	mg/l	1.000	1.000	0.10	0.14	0.084	0.072	0.17	0.20	0.14	0.20	0.21	0.19	0.16	0.17	0.21	0.17
Beryllium	mg/l	0.003	0.003	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U
Cadmium	mg/l	0.005	0.005	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U
Calcium	mg/l	-	-	163	207	145	150	241	263	208	257	236	198	264	265	261	247
Chromium	mg/l	**0.05**	0.05	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	**0.063**	0.0012 UJ	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	0.0016 UJ
Cobalt	mg/l	-	-	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U	< 0.0040 U
Copper	mg/l	0.200	0.200	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	0.0020 UJ	0.084	< 0.010 U	< 0.010 U	0.0026 UJ	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U
Iron	mg/l	**0.300**	0.300	0.041 U	< 0.050 U	0.097	0.038 UJ	0.019 UJ	**0.66**	0.052	0.024 U	0.18	0.17	0.12	0.032 UJ	0.026 U	0.084
Lead	mg/l	0.025	0.050	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U
Magnesium	mg/l	35	35	< 0.20 U	< 0.20 U	0.098 UJ	< 0.20 U	< 0.20 U	0.087 UJ	0.12 UJ	< 0.20 U	0.12 UJ	0.071 UJ	0.19 UJ	< 0.20 U	< 0.20 U	0.063 UJ
Manganese	mg/l	0.300	0.300	0.0014 U	0.00072 U	0.0024 U	0.0021 UJ	0.0012 UJ	0.020	0.0080	0.0021 U	0.0083	0.019	0.0049	0.0012 UJ	0.0021 U	0.0033
Nickel	mg/l	0.100	0.100	< 0.010 U	< 0.010 U	0.0022 UJ	< 0.010 U	< 0.010 U	0.014	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U	< 0.010 U
Potassium	mg/l	-	-	10.6	19.8	264	25.3	14.3	22.9	23.0	11.5	21.2	16.1	16.7	27.0	11.2	25.3
Selenium	mg/l	**0.010**	0.010	< 0.025 U	0.010 UJ	**0.017 UJ**	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	0.0092 UJ	< 0.025 U	0.0090 UJ	< 0.025 U	< 0.025 U
Silver	mg/l	0.050	0.050	< 0.0060 U	< 0.0060 U	< 0.0060 U	< 0.0060 U	< 0.0060 U	< 0.0060 U	< 0.0060 U	< 0.0060 U	< 0.0060 U	< 0.0060 U	< 0.0060 U	< 0.0060 U	< 0.0060 U	< 0.0060 U
Sodium	mg/l	**20**	-	**152**	**38.5**	**80.3**	**63.3**	**199**	**37.7**	**34.5**	**38.4**	**37.7**	**44.3**	92.8	38.9	**40.9**	37.9
Thallium	mg/l	0.005	0.005	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U	< 0.020 U
Vanadium	mg/l	-	-	0.0022 UJ	0.0029 UJ	0.0042 UJ	0.0065	0.0031 UJ	0.0020 UJ	0.0015 UJ	0.0017 UJ	0.0029 UJ	0.0017 UJ	< 0.0050 U	< 0.0050 U	0.0016 UJ	< 0.0050 U
Zinc	mg/l	2	2	0.0031 U	0.0045 U	0.0037 U	0.0043 UJ	0.0026 UJ	0.0058 UJ	0.0061 UJ	0.0028 U	0.0044 UJ	0.0034 UJ	0.0039 UJ	0.0049 UJ	0.0033 U	0.0035 UJ
SW7470A																	
Mercury	mg/l	0.0007	0.0007	< 0.00020 U	< 0.00020 U	0.00015 UJ	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U
SW8081B																	
4,4'-DDD	µg/l	0.3	0.3	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
4,4'-DDE	µg/l	0.2	0.2	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
4,4'-DDT	µg/l	0.2	0.2	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
Aldrin	µg/l	0	0.002	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 UJ	< 0.050 UJ	< 0.050 U	< 0.050 UJ
Alpha-BHC	µg/l	0.01	0.01	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
alpha-Chlordane	µg/l	-	-	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
Beta-BHC	µg/l	**0.04**	0.04	< 0.050 U	**0.050**	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	0.045 UJ
Delta-BHC	µg/l	0.04	0.04	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 UJ	< 0.050 UJ	< 0.050 U	< 0.050 UJ
Dieldrin	µg/l	0.004	0.004	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
Endosulfan I	µg/l	-	-	< 0.050 UJ	< 0.050 UJ	< 0.050 UJ	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 UJ	< 0.050 UJ	< 0.050 UJ	< 0.050 UJ
Endosulfan II	µg/l	-	-	< 0.050 UJ	< 0.050 UJ	< 0.050 UJ	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 UJ	< 0.050 U	< 0.050 U	< 0.050 UJ	< 0.050 UJ	< 0.050 UJ	< 0.050 UJ
Endosulfan Sulfate	µg/l	-	-	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
Endrin	µg/l	0	0.2	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
Endrin Aldehyde	µg/l	5	5	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
Endrin Ketone	µg/l	5	5	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
Gamma-BHC	µg/l	0.05	0.05	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
Gamma-Chlordane	µg/l	-	-	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 UJ	< 0.050 UJ	< 0.050 U	< 0.050 UJ
Heptachlor	µg/l	0.04	0.04	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 UJ	< 0.050 UJ	< 0.050 U	< 0.050 UJ
Heptachlor Epoxide	µg/l	0.03	0.03	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 UJ	< 0.050 UJ	< 0.050 U	< 0.050 UJ
Methoxychlor	µg/l	35	35	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U	< 0.050 U
Toxaphene	µg/l	0.06	0.06	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
SW8082A																	
Aroclor 1016	µg/l	0.09	0.09	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Aroclor 1221	µg/l			< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Aroclor 1232	µg/l			< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 UJ
Aroclor 1242	µg/l			< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Aroclor 1248	µg/l			< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Aroclor 1254	µg/l			< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Aroclor 1260	µg/l			< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Aroclor-1262	µg/l			< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 U
Aroclor-1268	µg/l			< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 U

Table 2
Groundwater/Surface Water Analytical Data

			Monitoring Well/Surface Sample ID	MW-101	MW-105	MW-108	MW-120	MW-123	MW-126	MW-128	MW-131	MW-144	MW-148	SW-1	SW-2	DUP-102918	DUP-110918
			Groundwater Elevation (fmsl)	576.42	576.26	576.23	576.32	576.44	576.32	576.27	576.54	576.35	576.36	NA	NA	NA	NA
			Sample Date	10/29/2018	10/29/2018	10/29/2018	10/30/2018	10/30/2018	10/30/2018	10/30/2018	10/29/2018	10/30/2018	10/30/2018	11/9/2018	11/9/2018	10/29/2018	11/9/2018
Analyte	Units	NY TOGS 1.1.1 GWQS (CLASS GA)	NY TOGS 1.1.1 SWQS (CLASS A, A-S, AA, AA-S)														
SW8260C																	
1,1,1-Trichloroethane	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2,2-Tetrachloroethane	µg/l	5	0.2	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2-Trichloroethane	µg/l	1	1	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	µg/l	5	0.7	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dibromo-3-chloropropane	µg/l	0.04	0.04	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dibromoethane	µg/l	0.0006	0.0006	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichlorobenzene	µg/l	3	3	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloroethane	µg/l	0.6	0.6	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloropropane	µg/l	1	1	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,3-Dichlorobenzene	µg/l	3	3	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	µg/l	3	3	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	µg/l	50	50	1.3 UJ	1.4 UJ	3.4 UJ	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	1.4 UJ	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
2-Hexanone	µg/l	50	50	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Methyl-2-pentanone	µg/l	-	-	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Acetone	µg/l	50	50	7.4 UJ	12	28	5.6 UJ	9.5 UJ	5.9 UJ	3.6 UJ	< 10 U	10	< 10 U	< 10 U	< 10 U	3.6 UJ	< 10 U
Benzene	µg/l	1	1	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromodichloromethane	µg/l	50	50	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromoform	µg/l	50	50	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromomethane	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Carbon Disulfide	µg/l	60	60	1.0	0.46 UJ	1.3	0.21 UJ	0.66 UJ	0.63 UJ	0.55 UJ	0.49 UJ	2.7	0.27 UJ	0.30 UJ	1.1	0.94 UJ	0.68 UJ
Carbon tetrachloride	µg/l	5	0.4	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chlorobenzene	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroethane	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroform	µg/l	7	7	1.7	0.60 UJ	0.67 UJ	< 1.0 U	0.34 UJ	< 1.0 U	< 1.0 U	< 1.0 U	0.65 UJ	< 1.0 U	< 1.0 U	< 1.0 U	0.36 UJ	< 1.0 U
Chloromethane	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,3-Dichloropropene	µg/l	0.4	0.4	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Cyclohexane	µg/l	-	-	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.21 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dibromochloromethane	µg/l	50	50	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dichlorodifluoromethane	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	µg/l	5	5	< 1.0 U	< 1.0 U	0.95 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Isopropylbenzene	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Methyl acetate	µg/l	-	-	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
Methyl tert-butyl ether	µg/l	10	10	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Methylcyclohexane	µg/l	-	-	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.16 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Methylene chloride	µg/l	5	5	1.9	1.9	2.0	2.2	3.5	2.5	2.5	1.5	2.0	2.2	< 1.0 U	< 1.0 U	1.7	< 1.0 U
Styrene	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Tetrachloroethene	µg/l	5	0.7	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,3-Dichloropropene	µg/l	0.4	0.4	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichlorofluoromethane	µg/l	5	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Vinyl Chloride	µg/l	2	0.3	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Xylenes, Total	µg/l	**5	**5	< 2.0 U	< 2.0 U	**6.0**	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U

Table 2
Groundwater/Surface Water Analytical Data

			Monitoring Well/Surface Sample ID	MW-101	MW-105	MW-108	MW-120	MW-123	MW-126	MW-128	MW-131	MW-144	MW-148	SW-1	SW-2	DUP-102918	DUP-110918
			Groundwater Elevation (fmsl)	576.42	576.26	576.23	576.32	576.44	576.32	576.27	576.54	576.35	576.36	NA	NA	NA	NA
			Sample Date	10/29/2018	10/29/2018	10/29/2018	10/30/2018	10/30/2018	10/30/2018	10/30/2018	10/29/2018	10/30/2018	10/30/2018	11/9/2018	11/9/2018	10/29/2018	11/9/2018
Analyte	Units	**NY TOGS 1.1.1 GWQS (CLASS GA)**	NY TOGS 1.1.1 SWQS (CLASS A, A-S, AA, AA-S)														
SW8270D																	
1,1'-Biphenyl	µg/l	5	5	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
2,2'-oxybis(1-Chloropropane)	µg/l	-	-	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
2,4,5-Trichlorophenol	µg/l	***1	***1	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
2,4,6-Trichlorophenol	µg/l	***1	***1	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
2,4-Dichlorophenol	µg/l	5	5	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
2,4-Dimethylphenol	µg/l	50	50	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
2,4-Dinitrophenol	µg/l	10	10	< 10 U	< 10 U	< 50 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
2,4-Dinitrotoluene	µg/l	5	5	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
2,6-Dinitrotoluene	µg/l	5	0.07	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
2-Chloronaphthalene	µg/l	10	10	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
2-Chlorophenol	µg/l	***1	***1	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
2-Methylnaphthalene	µg/l	-	-	< 5.0 U	< 5.0 U	< 25 U	0.62 UJ	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
2-Methylphenol	µg/l	***1	***1	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
2-Nitroaniline	µg/l	5	5	< 10 U	< 10 U	< 50 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
2-Nitrophenol	µg/l	***1	***1	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
3,3'-Dichlorobenzidine	µg/l	5	5	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
3-Nitroaniline	µg/l	5	5	< 10 U	< 10 U	< 50 U	< 10 UJ	< 10 UJ	< 10 UJ	< 10 UJ	< 10 U	< 10 UJ	< 10 UJ	< 10 U	< 10 U	< 10 U	< 10 U
4,6-Dinitro-2-methylphenol	µg/l	***1	***1	< 10 U	< 10 U	< 50 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
4-Bromophenyl phenyl ether	µg/l	-	-	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Chloro-3-methylphenol	µg/l	***1	***1	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Chloroaniline	µg/l	5		< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Chlorophenyl phenyl ether	µg/l	-	-	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Methylphenol	µg/l	***1	***1	< 10 U	**0.65 UJ**	**2.1 UJ**	**1.0 UJ**	**0.41 UJ**	**0.69 UJ**	**1.1 UJ**	< 10 U	**1.2 UJ**	< 10 U	< 10 U	0.89 UJ	< 10 U	0.97 UJ
4-Nitroaniline	µg/l	5	5	< 10 U	< 10 U	< 50 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
4-Nitrophenol	µg/l	***1	***1	< 10 U	< 10 U	< 50 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Acenaphthene	µg/l	20	20	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Acenaphthylene	µg/l	-	-	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Acetophenone	µg/l	-	-	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Anthracene	µg/l	50	50	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Atrazine	µg/l	7.5	3	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Benzaldehyde	µg/l	-	-	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Benzo(b)fluoranthene	µg/l	0.002	0.002	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Benzo[a]anthracene	µg/l	0.002	0.002	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Benzo[a]pyrene	µg/l	0	0.002	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Benzo[g,h,i]perylene	µg/l	-	-	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Benzo[k]fluoranthene	µg/l	0.002	0.002	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
bis(2-Chloroethoxy)methane	µg/l	5	5	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
bis(2-Chloroethyl) ether	µg/l	1.0	0.03	< 5.0 U	< 5.0 U	< 25 U	< 5.0 UJ	< 5.0 UJ	< 5.0 UJ	< 5.0 UJ	< 5.0 U	< 5.0 UJ	< 5.0 UJ	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
bis(2-Ethylhexyl) phthalate	µg/l	5	5	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Butyl benzyl phthalate	µg/l	50	50	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Caprolactam	µg/l	-	-	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Carbazole	µg/l	-	-	< 5.0 U	< 5.0 U	< 25 U	0.32 UJ	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Chrysene	µg/l	0.002	0.002	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Dibenz[a,h]anthracene	µg/l	-	-	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Dibenzofuran	µg/l	-	-	< 10 U	< 10 U	< 50 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Diethyl phthalate	µg/l	50	50	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Dimethyl phthalate	µg/l	50	50	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Di-n-butyl phthalate	µg/l	50	50	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 UJ	< 5.0 UJ	< 5.0 U	0.33 UJ
Di-n-octyl phthalate	µg/l	50	50	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 UJ	< 5.0 UJ	< 5.0 U	< 5.0 UJ
Fluoranthene	µg/l	50	50	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Fluorene	µg/l	50	50	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Hexachlorobenzene	µg/l	0.04	0.04	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Hexachlorobutadiene	µg/l	0.5	0.5	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Hexachlorocyclopentadiene	µg/l	5	5	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Hexachloroethane	µg/l	5	5	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Indeno[1,2,3-cd]pyrene	µg/l	0.002	0.002	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Isophorone	µg/l	50	50	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Naphthalene	µg/l	10	10	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Nitrobenzene	µg/l	0.4	0.4	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
N-Nitrosodi-n-propylamine	µg/l	-	-	< 5.0 U	< 5.0 U	< 25 U	< 5.0 UJ	< 5.0 UJ	< 5.0 UJ	< 5.0 UJ	< 5.0 U	< 5.0 UJ	< 5.0 UJ	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
N-Nitrosodiphenylamine	µg/l	50	50	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Pentachlorophenol	µg/l	***1	***1	< 10 U	**2.7 UJ**	**11 UJ**	**2.4 UJ**	**2.3 UJ**	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 UJ	< 10 UJ	< 10 U	< 10 UJ
Phenanthrene	µg/l	50		< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Phenol	µg/l	***1	***1	**3.7 UJ**	**11**	**14 UJ**	**4.2 UJ**	**1.7 UJ**	**3.0 UJ**	**0.77 UJ**	0.57 UJ	**0.59 UJ**	< 5.0 U	< 5.0 U	< 5.0 U	0.59 UJ	< 5.0 U
Pyrene	µg/l	50	50	< 5.0 U	< 5.0 U	< 25 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U

Table 2
Groundwater/Surface Water Analytical Data

			Monitoring Well/Surface Sample ID	**MW-101**	**MW-105**	**MW-108**	**MW-120**	**MW-123**	**MW-126**	**MW-128**	**MW-131**	**MW-144**	**MW-148**	**SW-1**	**SW-2**	**DUP-102918**	**DUP-110918**
			Groundwater Elevation (fmsl)	**576.42**	**576.26**	**576.23**	**576.32**	**576.44**	**576.32**	**576.27**	**576.54**	**576.35**	**576.36**	**NA**	**NA**	**NA**	**NA**
			Sample Date	**10/29/2018**	**10/29/2018**	**10/29/2018**	**10/30/2018**	**10/30/2018**	**10/30/2018**	**10/30/2018**	**10/29/2018**	**10/30/2018**	**10/30/2018**	**11/9/2018**	**11/9/2018**	**10/29/2018**	**11/9/2018**
Analyte	Units	**NY TOGS 1.1.1 GWQS (CLASS GA)**	NY TOGS 1.1.1 SWQS (CLASS A, A-S, AA, AA-S)														
SW9012																	
Cyanide, Total	mg/l	0.2	0.2	< 0.010 U	0.0091 UJ	0.043	0.0078 UJ	0.010	0.011	0.010	< 0.010 U	0.016	< 0.010 UJ	0.010 J+	0.012 J+	< 0.010 U	0.013 J+
SW9040C																	
pH	NA	-	-	11.7 J	11.9 J	11.8 J	11.4 J	6.27 J	11.8 J	11.8 J	12.0 J	6.08 J	5.46 J	12.2 J	12.2 J	12.0 J	12.2 J
Temperature	Celcius	-	-	25.3 J	25.1 J	25.1 J	19.8 J	19.7 J	19.9 J	19.8 J	25.3 J	19.1 J	19.5 J	19.7 J	20.0 J	25.2 J	20.2 J

Notes:
ft bgs = feet below ground surface
mg/L = milligrams per liter
µg/L = micrograms per liter
TOGS 1.1.1 = Technical and Operational Guidance Series 1.1.1
GWQS = Ambient Groundwater Quality Standards and Guidance Values (Table 1)
SWQS = Ambient Surface Water Quailty Sandards and Guidance Values (Table 1) - only applies to SW-1, SW-2 and DUP-110918
- = no GWQS or SWQS established
NA = not applicable/analyzed
Qualifiers as indicated by validator:
U = Analyte analyzed for, but not detected above the sample's reported quantitation limit
J = Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J+ = Sample likely to have a high bias
J- = Sample likely to have a low bias
UJ = Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N = The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate oncentration.

R = Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (i.e., dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B/EB/TB/BB = An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.

P = Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (see below).

PM = A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Appendix A – Soil Boring and Monitoring Well Logs

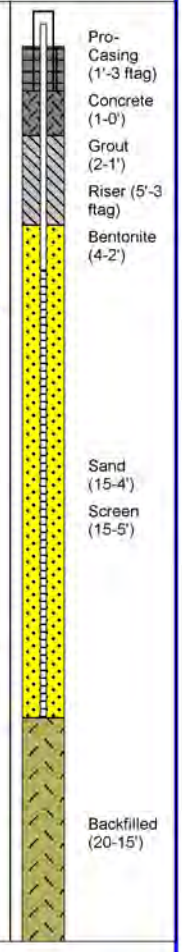
Soil Boring/Monitoring Well

Groundwater & Environmental Services, Inc.

ID NO. **SB-101/MW-101**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-10-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-25-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **2 fbgs.**
TOC Elevation: **583.73 famsl.**	Borehole Diameter: **4.5 in.**	Type of Seal: **Bentonite Chips**
Total Depth: **20 fbgs.**	Well Diameter: **2 in.**	Top of Sand: **4 fbgs.**
Refusal Depth: **Not Encountered**	Riser Length: **8 ft. (3 ftag)**	Sand Type: **20-40 Mesh Sand Pack**
Initial Depth to Water: **~6 fbgs.**	Screen Slot Size: **0.010-in.**	Well Material Type: **Schedule 40 PVC**
Static Depth to Water: **7.31 ft. btoc.**	Screen Length: **10 ft.**	Top of Grout: **1 fbgs.**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm)	Geologic Description	Comments
0	0-1	5.5/10	2.2	TOPSOIL & FILL fine to coarse SAND and GRAVEL, dark brown, moist, loose, no odor	SB-101-A @ 0-1'
	1-2		NA	FILL, fine to coarse SLAG debris, gray, very moist to wet	3 ft. stick up protective casing
	3-4		0.9	FILL, fine to coarse SLAG debris, gray, very moist to wet	
	4-6		1.0	FILL, fine to coarse SLAG debris, gray, very moist to wet	
5	6-8		0.9	FILL, fine to coarse SLAG debris, gray, wet	
	8-10		1.3	FILL, fine to coarse SLAG debris, gray, very moist to wet, at 10 fbgs. CLAY and FILL debris, dark brown-black, very moist-wet, organic odor	SB-101-B @ 8-10'
10	10-12	8.5/10	0.7	CLAY, little SILT, gray, some brown veins, moist	
	12-14		0.6	CLAY, little SILT, gray, some brown veins, moist	SB-101-C @ 12-14'
	14-16		0.5	CLAY, veins of fine SAND, gray, some brown veins, moist	
15	16-18		0.6	CLAY, veins of fine SAND, gray, some brown veins, moist	
	18-20		0.9	CLAY, gray, moist, very soft	Boring ended at 20 fbgs.
20					



Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. **SB-102**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-10-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-10-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 5	Geologic Description	Comments	Completion Detail
0	0-1	7.5/10	0.6	TOPSOIL and SLAG debris, brown, slightly moist		
	1-4		3.4	SLAG debris, some fine to coarse SAND and GRAVEL, brown and gray, moist	SB-102-A @ 0-1'	
	4-6		0.4	SLAG debris, some fine to coarse SAND and GRAVEL, gray, wet	SB-102-B @ 4-6'	
5	6-8		1.1	SLAG debris, some fine to coarse SAND and GRAVEL, gray, saturated		
	8-10		0.6	organic CLAY, wood and SLAG debris, black, wet		
10	10-12	8/10	0.6	Clay and fine SAND, interbedded layers, gray, slightly moist		Backfilled with cuttings
	12-14		0.3	CLAY, trace medium GRAVEL, gray and brown, mottling, slightly moist, stiff	SB-102-C @ 12-14'	
	14-16		0.2	CLAY, trace medium GRAVEL, gray and brown, mottling, slightly moist, stiff, gray is dominant at 15 fbgs.		
15	16-18		0.1	CLAY and fine SAND, interbedded layers, gray with brown veins, slightly moist		
	18-20		0.1	CLAY, gray, slightly moist, soft	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-103

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-10-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-10-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm)	Geologic Description	Comments	Completion Detail
	0-1	7/10	0.3	TOPSOIL and fine to coarse SLAG debris, brown, moist		
	1-4		0.3	FILL, SLAG debris, some fine to coarse SAND and GRAVEL, brown and gray, moist	SB-103-A @ 0-1'	
	4-6		0.2	FILL, SLAG debris, little fine to coarse SAND and GRAVEL, gray, wet	SB-103-B @ 4-6'	
5	6-8		0.3	FILL, SLAG debris, little fine to coarse SAND and GRAVEL, gray, wet		
	8-10		0.4	Organic CLAY, wood debris, some SLAG debris, black, moist to wet		
10	10-12	10/10	0.4	Organic CLAY, wood debris, some SLAG debris, black, wet		Backfilled with cuttings
	12-14		0.3	CLAY, some fine SAND veins, gray, moist	SB-103-C @ 12-14'	
	14-16		0.2	CLAY, gray, moist, stiff		
15	16-18		0.3	CLAY, gray, moist, stiff		
	18-20		0.2	CLAY, gray, very moist, soft	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-104

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-10-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-10-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 5	Geologic Description	Comments	Completion Detail
0	0-1	5/10	0.5	TOPSOIL, SLAG debris and CLAY, dark brown, wet	SB-104-A @ 0-1'	
	1-4		2.6	CLAY and gray fine to coarse SLAG debris, dark brown, moist		
	4-6		0.5	SLAG debris, gray, wet	SB-104-B @ 4-6'	
5	6-8		0.2	SLAG debris, gray, wet		
	8-10		0.2	SLAG debris, gray, wet		
10	10-12	9/10	0.7	Organic CLAY, some wood debris, dark brown-black		Backfilled with cuttings
	12-14		0.2	Organic CLAY, some wood debris, dark brown-black		
	14-16		0.3	CLAY, some fine Sand, gray, moist, medium stiff	SB-104-C @ 14-16'	
15	16-18		0.3	CLAY, little fine SAND, gray with brown layers, sligtly moist, stiff		
	18-20		0.2	CLAY, little fine SAND, gray with brown layers, sligtly moist, stiff	Boring ended at 20 fbgs.	
20				CLAY, some black organic CLAY, gray, soft		

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring/Monitoring Well

Groundwater & Environmental Services, Inc.

ID NO. **SB-105/MW-105**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-10-2018**	Sample Tool Diameter: **4.5 in.**
Drilling Company: **Cascade Drilling**	Completion Date: **10-25-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **2 fbgs.**
TOC Elevation: **584.12 famsl.**	Borehole Diameter: **4.5 in.**	Type of Seal: **Medium Bentonite Chips**
Total Depth: **20 fbgs.**	Well Diameter: **2 in.**	Top of Sand: **4 fbgs.**
Refusal Depth: **Not Encountered**	Riser Length: **8 ft. (3 ftag)**	Sand Type: **20-40 Mesh Sand Pack**
Initial Depth to Water: **~4 fbgs.**	Screen Slot Size: **0.010-in.**	Well Material Type: **Schedule 40 PVC**
Static Depth to Water: **8.84 ft. btoc.**	Screen Length: **10 ft.**	Top of Grout: **1 fbgs.**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 3	Geologic Description	Comments	Completion Detail
0	0-1	6/10	1.2	TOPSOIL and SLAG debris, dark brown, slightly moist, loose	SB-105-A @ 0-1'	Pro-Casing (1'-3 ftag)
	1-4		0.8	FILL, fine to coarse SLAG debris, gray/brown, moist	3 ft. stick up protective casing	Concrete (1-0')
						Grout (2-1')
						Riser (5'-3 ftag)
	4-6		0.3	FILL, fine to coarse GRAVEL and SLAG debris, gray, wet		Bentonite (4-2')
5					SB-105-B @ 4-6'	
	6-8		0.3	FILL, fine to coarse GRAVEL and SLAG debris, gray, wet		
	8-10		0.7	FILL, fine to coarse GRAVEL and SLAG debris, gray-brown, wet		
				Organic CLAY, trance fine to medium SAND, black, wet		Sand (15-4')
10	10-12	9/10	0.7	PEAT and WOOD debris, brown, moist	SB-105-C @ 10-12'	Screen (15-5')
	12-14		0.3	CLAY, gray with brown veins, some SAND, moist		
				CLAY, gray with brown veins, moist	SB-105-D @ 12-14'	
	14-16		0.4	CLAY, gray with brown veins, moist		
15						
	16-18		0.3	CLAY, gray with brown veins, moist		
						Backfilled (20-15')
	18-20		0.5	Fine to medium SAND, some CLAY, little fine to coarse GRAVEL, brown, moist, 19-20 fbgs. nodules of PEAT	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-106

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-10-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-10-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 3	Geologic Description	Comments	Completion Detail
0	0-1	6.5/10	0.3	TOPSOIL, roots, some SLAG and GRAVEL debris, dark brown, wet		
	1-4		1.1	FILL, fine to coarse GRAVEL and SAND, some SLAG debris, dark brown-brown, moist	SB-106-A @ 0-1'	
	4-6		0.5	FILL, fine to coarse SAND and GRAVEL, dark brown/black, followed by fine to coarse SLAG and GRAVEL, gray, wet		
5	6-8		0.1	FILL, fine to coarse SLAG and GRAVEL, gray, wet	SB-106-B & DUP-101018 @ 4-8'	
	8-10		0.1	FILL, fine to coarse SLAG and GRAVEL, gray, wet		
10	10-11	10/10	0.1	Organic CLAY, black, wet		Backfilled with cuttings
	11-14		0.5	PEAT, dark brown, moist		
	14-16		0.1	CLAY, trace fine SAND veins, gray, medium stiff to stiff, moist	SB-106-C @ 14-16'	
15	16-18		0.2	CLAY, trace fine SAND veins, gray, medium stiff to stiff, moist		
	18-20		0.2	CLAY, little fine SAND veins, gray with red-brown veins, slightly moist, at 20' organic CLAY, black	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-107

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-11-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-11-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 3	Geologic Description	Comments	Completion Detail
0	0-2	6/10	0.3	TOPSOIL and SLAG debris, some fine to medium SAND and GRAVEL, dark brown, moist	SB-107-A & MS/MSD @ 0-2'	
	2-4		2.1	FILL, SLAG debris and fine to coarse SAND, some medium GRAVEL, gray and dark gray, very moist		
5	4-6		1.0	FILL, SLAG debris and fine to coarse GRAVEL, gray, wet		
	6-8		0.4	FILL, SLAG debris and fine to coarse GRAVEL, light gray, wet	SB-107-B @ 6-8'	
	8-10		0.4	FILL, SLAG debris and fine to coarse GRAVEL, light gray, wet		
10	10-11	10/10	0.3	Organic CLAY, little SLAG debris, black, saturated		Backfilled with cuttings
	11-13		0.3	PEAT, dark brown, very moist		
	13-18		0.4	CLAY, layers of fine SAND, gray, wet	SB-107-C @ 13-18'	
15						
	18-20		0.6	CLAY, layers of fine SAND, gray, wet, at 20' some black organic CLAY	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring/Monitoring Well

Groundwater & Environmental Services, Inc.

ID NO. **SB-108/MW-108**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-11-2018**	Sample Tool Diameter: **4.5 in.**
Drilling Company: **Cascade Drilling**	Completion Date: **10-25-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **2 fbgs.**
TOC Elevation: **580.92 famsl.**	Borehole Diameter: **4.5 in.**	Type of Seal: **Medium Bentonite Chips**
Total Depth: **20 fbgs.**	Well Diameter: **2 in.**	Top of Sand: **4 fbgs.**
Refusal Depth: **Not Encountered**	Riser Length: **8 ft. (3 ftag)**	Sand Type: **20-40 Mesh Sand Pack**
Initial Depth to Water: **~7 fbgs.**	Screen Slot Size: **0.010-in.**	Well Material Type: **Schedule 40 PVC**
Static Depth to Water: **7.43 ft. btoc.**	Screen Length: **10 ft.**	Top of Grout: **1 fbgs.**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm)	Geologic Description	Comments	Completion Detail
0	0-1	7.5/10	0.3	TOPSOIL and SLAG debris, some fine to coarse SAND, dark brown, moist	SB-108-A @ 0-1'	Pro-Casing (1'-3 ftag)
	1-4		0.9	FILL, GRAVEL and SLAG debris, some fine to coarse SAND, dark brown, slightly moist	3 ft. stick up protective casing	Concrete (1-0')
						Grout (2-1')
						Riser (5'-3 ftag)
5	4-6		1.2	FILL, GRAVEL and SLAG debris, some fine to coarse SAND, gray, slightly moist		Bentonite (4-2')
	6-8		0.8	FILL, GRAVEL and SLAG debris, few fine to coarse SAND, dark gray/light gray, wet		
	8-10		0.9	FILL, GRAVEL and SLAG debris, few fine to coarse SAND, gray, wet	SB-108-B @ 8-10'	Sand (15-4')
10	10-14	7.5/10	0.5	CLAY and PEAT and SLAG debris, dark brown/black, wet	SB-108-C @ 10-14'	Screen (15-5')
	14-16		0.6	CLAY, some fine SAND, gray, moist		
15	16-18		0.5	CLAY, some fine SAND, gray, moist		Backfilled (20-15')
	18-20		0.5	CLAY, some fine SAND, gray, moist, (vein of fine to coarse SAND at 19fbgs.)	Boring ended at 20 fbgs.	
20				Organic CLAY, gray, moist		

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-109

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-11-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-11-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 5	Geologic Description	Comments	Completion Detail
0	0-1	7.5/10	0.4	TOPSOIL and SLAG debris, dark brown, moist	SB-109-A @ 0-1'	
	1-4		1.1	FILL, SLAG and fine to coarse GRAVEL debris, many fine to coarse SAND, dark brown/black, slightly moist		
	4-6		4.6	FILL, SLAG and fine to coarse GRAVEL debris, many fine to coarse SAND, light gray/white, slightly moist	SB-109-B @ 4-6'	
5	6-8		0.9	FILL, SLAG and fine to coarse GRAVEL, some fine to coarse SAND, light gray-white, moist		
	8-10		0.9	FILL, SLAG and fine to coarse GRAVEL debris, little fine to coarse SAND, light gray, wet		
10	10-16	9.5/10	0.6	PEAT, dark brown, very moist		Backfilled with cuttings
15	16-18		0.5	Fine SAND, some layers of CLAY, gray, wet	SB-109-C @ 16-18'	
	18-20		0.6	Fine SAND, some layers of CLAY, gray, wet	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-110

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-11-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-11-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 3	Geologic Description	Comments	Completion Detail
0	0-1	8/10	2.2	TOPSOIL and SLAG debris, dark brown, dry	SB-110-A @ 0-1'	
	1-4		1.9	SLAG and GRAVEL, dark brown to black, some SAND, fine to coarse, dry		
	4-6		0.7	SLAG and GRAVEL debris, light gray to white, some SAND, fine to coarse, wet	SB-110-B @ 4-6'	
5	6-8		0.6	SLAG and GRAVEL, light gray/white, SAND, fine to coarse, slightly moist		
	8-10		0.7	SLAG and GRAVEL, gray, little SAND, fine to coarse, wet		
10	10-12.5	8/10	0.6	PEAT, saturated, interbedded with layers of CLAY, brown	SB-110-D @ 10-12.5'	Backfilled with cuttings
	12.5-15		0.4	PEAT, saturated, interbedded with layers of CLAY, brown		
15	15-17.5		0.6	SAND, fine, gray, some CLAY, medium, wet	Boring ended at 20 fbgs.	
	17.5-20		0.5	SAND, fine, gray, some CLAY, medium, wet	SB-110-C @ 17.5-20'	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-111

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-16-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-16-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 100	Geologic Description	Comments	Completion Detail
0	0-1	10/10	0.0	TOPSOIL, some SAND and SLAG debris, brown, dry	SB-111-A @ 0-1'	
	1-4		0.0	FILL, SLAG debris, some SAND, light gray, slightly moist		
5	4-6		0.0	FILL, SLAG debris, few SAND and SILT, gray, slightly moist		
	6-8		0.0	FILL, large SLAG debris, some SAND and SILT, dark gray to white, moist	SB-111-B @ 6-8'	
	8-10		0.0	FILL, large SLAG debris, some SAND and SILT, dark gray to white, wet		
10	10-13	8/10	0.0	CLAY, some PEAT, few SILT, little SAND, dark brown-gray, wet		Backfilled with cuttings
	13-18		NA	CLAY, some SAND, few SILT, gray, slightly moist		
15					Boring ended at 20 fbgs.	
	18-20		NA	CLAY, trace SAND and SILT, gray, moist	SB-111-C @ 18-20'	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. **SB-112**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-16-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-16-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom)	Geologic Description	Comments	Completion Detail
0	0-1		0.0	TOPSOIL, some SAND and SLAG debris, dark brown, dry	SB-112-A @ 0-1'	
	1-4	8/10	0.0	FILL, fine to coarse SAND, some SLAG debris, light brown-white, dry		
	4-6		0.0	FILL, SLAG debris, some fine to medium SAND, black-gray, slightly moist		
5	6-8		0.0	FILL, SLAG debris, some SAND, moist		
	8-10		0.0	FILL, fine SAND, some SLAG debris, white, moist	SB-112-B @ 8-10	
10	10-12	10/10	0.0	PEAT, little CLAY and fine SAND, black		Backfilled with cuttings
	12-15		0.0	PEAT, little CLAY and fine SAND, black	SB-112-C & DUP-101618 @ 12-15'	
15	15-18		0.0	CLAY, some fine to medium SAND, gray, slightly mosit		
	18-20		0.1	CLAY, gray, slightly moist	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. **SB-113**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-16-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-16-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom)	Geologic Description	Comments	Completion Detail
0	0-1		0.0	TOPSOIL, little fine to coarse SAND and SILT, light brown	SB-113-A @ 0-1'	
	1-4	7.5/10	0.0	FILL, fine to coarse SAND and coarse SLAG debris, brown, dry		
5	4-6		0.0	FILL, fine to coarse SLAG debris, few fine to medium SAND, light gray, dry		
	6-8		0.0	FILL, fine to coarse SLAG debris, few fine to medium SAND, dark gray, slightly moist	SB-113-B @ 6-8'	
	8-10		0.0	FILL, fine to coarse SLAG debris, few fine to medium SAND, dark gray, slightly moist		
10	10-12	8/10	0.0	PEAT, black, moist		Backfilled with cuttings
	12-14		0.0	PEAT, little organic CLAY and SILT, light brown to black, moist		
	14-18		0.0	CLAY, some SAND and SILT, gray, moist		
15					Boring ended at 20 fbgs.	
	18-20		0.1	CLAY, little SAND and SILT, gray, slightly moist	SB-113-C @ 18-20'	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring/Monitoring Well

Groundwater & Environmental Services, Inc.

ID NO. **SB-114**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-16-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-16-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 100	Geologic Description	Comments	Completion Detail
0	0-1		0.0	TOPSOIL, little CLAY and fine to coarse SAND and SILT, some SLAG debris, light brown, dry	SB-114-A & MS/MSD @ 0-1'	Backfilled with cuttings
	1-4	10/10	0.0	FILL, some fine to coarse SAND and gray SLAG debris, brown		
	4-6		NA	FILL, SLAG debris, few fine to coarse SAND, dark gray, wet		
5	6-8		0.0	FILL, SLAG debris, few fine to coarse SAND, dark gray, wet		
	8-10		0.0	FILL, SLAG debris, few fine to coarse SAND, light gray, wet	SB-114-B @ 8-10'	
10	10-20	1/10	0.0	FILL large SLAG debris, little SAND, wet to saturated Note: Lithology description may be incomplete due to sample loss in soil boring.		
15					SB-114-C @ 10-20'	
					Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-115

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-12-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-12-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom)	Geologic Description	Comments	Completion Detail
0	0-1	6.5/10	0.2	TOPSOIL and SLAG debris, dark brown, moist	SB-115-A @ 0-1'	
	1-4		0.2	FILL, fine to coarse SAND, some SLAG debris, dark brown/black, slightly moist		
5	4-6		0.1	FILL, fine to coarse SLAG debris and GRAVEL, some fine to coarse SAND, brown-gray, moist		
	6-7		0.1	FILL, fine to coarse SLAG debris and GRAVEL, some fine to coarse SAND, gray, moist		
	7-10		0.1	FILL, SLAG debris and GRAVEL, little fine to coarse SAND, gray, wet	SB-115-B @ 7-10'	
10	10-12	8/10	0.2	FILL, SLAG debris and GRAVEL, little fine to coarse SAND, gray, wet		Backfilled with cuttings
	12-13		0.2	Organic CLAY, black, wet		
	13-15		0.2	PEAT, brown, moist		
15	15-17		0.2	Fine to medium SAND, gray, wet	SB-115-C @ 15-17'	
	17-20		0.2	CLAY, trace SAND, gray with brown veins, moist	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-116

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-12-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-12-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom)	Geologic Description	Comments	Completion Detail
0	0-1	6.5/10	0.1	TOPSOIL and SLAG, dark brown, moist	SB-116-A @ 0-1'	
	1-5		0.1	FILL, fine to coarse SAND and GRAVEL, many SLAG debris, dark brown, very moist		
5	5-7		0.1	FILL, fine to coarse SAND, little GRAVEL and SLAG debris, dark brown-black, wet	SB-116-B @ 5-7'	
	7-10		0.1	FILL, GRAVEL and SLAG debris, some fine to coarse SAND, gray/light gray, wet		
10	10-12	7/10	0.2	FILL, GRAVEL and SLAG, gray, some fine to coarse SAND, gray, wet at 11' organic CLAY, black, wet		Backfilled with cuttings
	12-14		0.2	PEAT, brown, moist		
	14-18		0.1	Fine SAND, some CLAY, gray with some brown veins, wet	SB-116-C @ 14-18'	
15						
	18-20		0.1	CLAY, some fine SAND, gray, moist, stiff	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-117

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-12-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-12-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm)	Geologic Description	Comments	Completion Detail
0	0-2	6/10	0.1	TOPSOIL and fine to coarse SLAG debris and GRAVEL, dark brown, moist	SB-117-A @ 0-1'	
	2-4		0.1	FILL, GRAVEL and SLAG debris, many fine to coarse SAND, gray/black, slightly moist		
5	4-7		0.1	FILL, fine to coarse GRAVEL and SLAG debris, some fine to coarse SAND, gray, wet	SB-117-B @ 4-7'	
	7-10		0.1	FILL, fine to coarse GRAVEL and SLAG debris, some fine to coarse SAND, light gray, wet		
10	10-12	8.5/10	0.2	Organic CLAY, some PEAT, some SLAG debris, black, wet	SB-117-C @ 10-12'	Backfilled with cuttings
	12-14		0.4	PEAT,some layers of gray CLAY, brown, moist		
15	14-16		0.2	PEAT, black, wet		
	16-20		0.2	CLAY, some SAND, fine, gray, moist	Boring ended at 20 fbgs. SB-117-D @ 16-20'	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

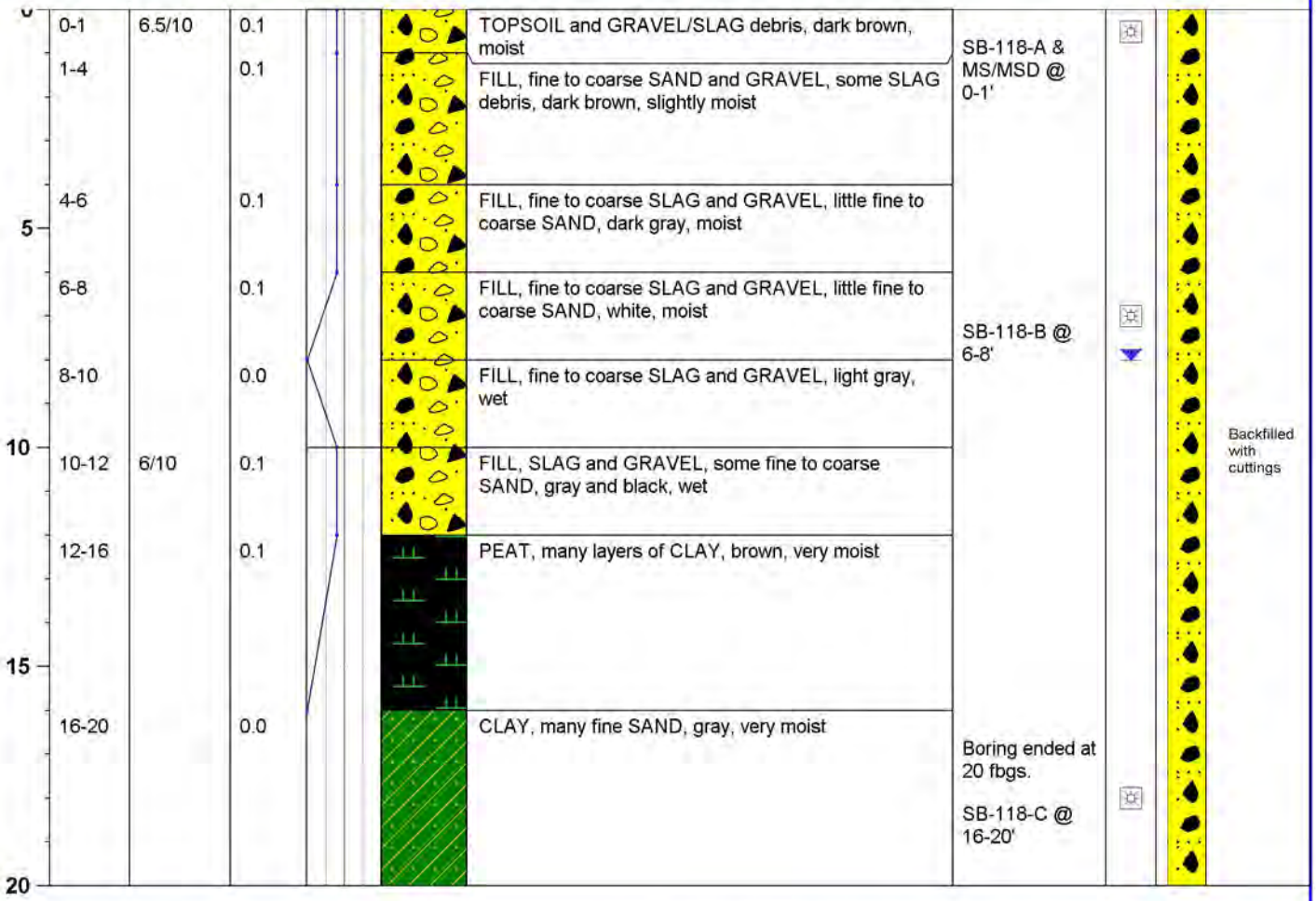
Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-118

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-12-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-12-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom)	Geologic Description	Comments	Completion Detail
0	0-1	6.5/10	0.1	TOPSOIL and GRAVEL/SLAG debris, dark brown, moist	SB-118-A & MS/MSD @ 0-1'	
	1-4		0.1	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, dark brown, slightly moist		
5	4-6		0.1	FILL, fine to coarse SLAG and GRAVEL, little fine to coarse SAND, dark gray, moist		
	6-8		0.1	FILL, fine to coarse SLAG and GRAVEL, little fine to coarse SAND, white, moist	SB-118-B @ 6-8'	
	8-10		0.0	FILL, fine to coarse SLAG and GRAVEL, light gray, wet		
10	10-12	6/10	0.1	FILL, SLAG and GRAVEL, some fine to coarse SAND, gray and black, wet		Backfilled with cuttings
	12-16		0.1	PEAT, many layers of CLAY, brown, very moist		
15	16-20		0.0	CLAY, many fine SAND, gray, very moist	Boring ended at 20 fbgs. SB-118-C @ 16-20'	
20						



Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-119

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-11-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-11-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom)	Geologic Description	Comments	Completion Detail
0	0-1	7/10	0.4	TOPSOIL and SLAG debris, dark brown, wet	SB-119-A @ 0-1'	
	1-4		0.3	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, dark brown/black, slightly moist		
	4-6		0.3	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, dark brown/black, slightly moist		
5	6-8		0.4	FILL, fine to coarse SLAG debris and GRAVEL, little fine to coarse SAND, dark gray-gray, moist-wet		
	8-10		0.4	FILL, fine to coarse SLAG debris and GRAVEL, little fine to coarse SAND, gray-light gray, wet	SB-119-B @ 8-10'	
10	10-11	4/10	0.3	FILL, fine to coarse SLAG debris and GRAVEL, little fine to coarse SAND, gray-light gray, wet		Backfilled with cuttings
	11-13		0.4	Organic CLAY and PEAT, black, wet		
	13-15		0.4	Fine SAND, gray, wet	SB-119-C @ 13-15'	
15	15-20		NA	No recovery		
20					Boring ended at 20 fbgs.	

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring/Monitoring Well

Groundwater & Environmental Services, Inc.

ID NO. **SB-120/MW-120**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/P. Colern**	Date Drilled: **10-11-2018**	Sample Tool Diameter: **4.5 in.**
Drilling Company: **Cascade Drilling**	Completion Date: **10-25-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **2 fbgs.**
TOC Elevation: **582.47 famsl.**	Borehole Diameter: **4.5 in.**	Type of Seal: **Medium Bentonite Chips**
Total Depth: **20 fbgs.**	Well Diameter: **2 in.**	Top of Sand: **4 fbgs.**
Refusal Depth: **Not Encountered**	Riser Length: **8 ft. (3 ftag)**	Sand Type: **20-40 Mesh Sand Pack**
Initial Depth to Water: **~6 fbgs.**	Screen Slot Size: **0.010-in.**	Well Material Type: **Schedule 40 PVC**
Static Depth to Water: **6.15 ft. btoc.**	Screen Length: **10 ft.**	Top of Grout: **1 fbgs.**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm)	Geologic Description	Comments
0	0-1	6/10	0.4	TOPSOIL and SLAG debris, dark brown, wet	
	1-4		1.1	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, dark brown, slightly moist	SB-120-A @ 0-1' 3 ft. stick up protective casing
5	4-6		2.7	FILL, fine to coarse GRAVEL and SLAG debris, some fine to coarse SAND, mottled color, slightly moist	SB-120-B & DUP-101118 @ 4-6'
	6-8		0.7	FILL, GRAVEL and SLAG debris, some fine to coarse SAND, gray, wet	
	8-10		0.8	FILL, GRAVEL and SLAG debris, some fine to coarse SAND, dark gray, saturated	
10	10-11	4/10	0.4	FILL, GRAVEL and CONCRETE and SLAG debris, saturated	
	11-16		6.3	PEAT, layers of brown/black CLAY, brown, saturated, strong organic odor	
15	16-20		13.6	CLAY, some fine SAND layers, gray, wet	SB-120-C @ 16-20' Boring ended at 20 fbgs.
20					

Completion Detail: Pro-Casing (1'-3 ftag); Concrete (1-0'); Grout (2-1'); Riser (5'-3 ftag); Bentonite (4-2'); Sand (15-4'); Screen (15-5'); Backfilled (20-15')

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. **SB-121**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-16-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-16-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 10	Geologic Description	Comments	Completion Detail
0	0-1	9/10	NA	TOPSOIL, little SAND, light brown, slightly moist	SB-121-A @ 0-1'	Backfilled with cuttings
	1-4		NA	FILL, SLAG/CONCRETE debris and GRAVEL, some fine to medium SAND, brown-gray, moist		
5	4-6		NA	FILL, SLAG/CONCRETE debris and GRAVEL, some fine to medium SAND, brown-gray, moist		
	6-8		NA	FILL, SLAG/CONCRETE debris and GRAVEL, some fine to medium SAND, brown-gray, slightly moist		
	8-10		NA	FILL, SLAG/CONCRETE debris and GRAVEL, some fine to medium SAND, brown-gray, wet	SB-121-B @ 8-10'	
10	10-12	9/10	9.6	PEAT, little organic CLAY and SILT, black, moist	SB-121-D @ 10-12'	
	12-14		9.2	CLAY, some PEAT and SAND, moist		
15	14-17		NA	CLAY and fine to medium SAND, gray, moist		
	17-20		0.0	CLAY, gray, moist	Boring ended at 20 fbgs. SB-121-C @ 17-20'	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-122

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-16-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-16-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 10	Geologic Description	Comments	Completion Detail
0	0-2	8/10	9.2	TOPSOIL, some SLAG and ASPHALT/GLASS debris, brown, moist	SB-122-A @ 0-2'	Backfilled with cuttings
	2-4		0.0	FILL, TOPSOIL and SLAG debris, few fine to medium SAND, brown, moist		
5	4-6		0.0	FILL, TOPSOIL and SLAG debris, few fine to medium SAND, dark brown, moist		
	6-8		NA	FILL, TOPSOIL and SLAG debris, few fine to medium SAND, dark brown, moist		
	8-10		NA	FILL, SLAG debris, some SAND and CLAY, gray, wet	SB-122-B @ 8-10'	
10	10-18	4.5/10	NA	FILL, SLAG debris, some SAND and CLAY, gray, wet		
15					Boring ended at 20 fbgs.	
	18-20		NA	CLAY and PEAT, little fine to medium SAND, black	SB-122-C @ 18-20'	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring/Monitoring Well

Groundwater & Environmental Services, Inc.

ID NO. **SB-123/MW-123**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-16-2018**	Sample Tool Diameter: **4.5 in.**
Drilling Company: **Cascade Drilling**	Completion Date: **10-25-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **2 fbgs.**
TOC Elevation: **584.12 famsl.**	Borehole Diameter: **4.5 in.**	Type of Seal: **Medium Bentonite Chips**
Total Depth: **20 fbgs.**	Well Diameter: **2 in.**	Top of Sand: **4 fbgs.**
Refusal Depth: **Not Encountered**	Riser Length: **8 ft. (3 ftag)**	Sand Type: **20-40 Mesh Sand Pack**
Initial Depth to Water: **~10 fbgs.**	Screen Slot Size: **0.010-in.**	Well Material Type: **Schedule 40 PVC**
Static Depth to Water: **9.46 ft. btoc.**	Screen Length: **10 ft.**	Top of Grout: **1 fbgs.**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 100	Geologic Description	Comments	Completion Detail
0	0-1	9.5/10	0.0	TOPSOIL and SLAG debris, with little SAND, brown, dry	SB-123-A @ 0-1'	Pro-Casing (1'-3 ftag)
	1-4		0.0	FILL, SLAG debris, some SAND, light brown/gray, slightly moist	3 ft. stick up protective casing	Concrete (1-0')
						Grout (2-1')
						Riser (5'-3 ftag)
	4-6		0.0	FILL, SLAG debris, some SAND, light brown/gray, slightly moist		Bentonite (4-2')
5	6-8		0.0	FILL, SLAG debris, some SAND, light brown/gray, slightly moist		
	8-10		NA	FILL, SLAG debris, few SAND and CLAY, gray, saturated		
10	10-12	-	NA	FILL, SLAG debris, some SAND, gray, saturated	SB-123-B @ 10-12'	Sand (15-4')
						Screen (15-5')
	12-14		NA	PEAT, some WOOD material, little SAND and CLAY, black, moist		
	14-16		NA	PEAT, some WOOD material, little SAND and CLAY, black, moist		
15	16-18		NA	CLAY, some SAND, gray, moist	SB-123-C @ 18-20'	Backfilled (20-15')
	18-20		NA	CLAY, some SAND, gray, moist	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. **SB-124**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-16-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-16-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom)	Geologic Description	Comments	Completion Detail
0	0-1		0.0	TOPSOIL, some SLAG debris, few fine to medium SAND, brown, moist	SB-124-A @ 0-1'	
	1-4	9/10	0.7	FILL, fine to coarse SAND, few SLAG debris, brown-gray,, slightly moist		
5	4-6		0.0	FILL, SLAG debris, some fine to medium SAND, gray, slightly moist		
	6-8		0.0	FILL, SLAG debris, some fine to medium SAND, gray, slightly moist		
	8-10		0.0	FILL, SLAG debris, some fine to medium SAND, gray, slightly moist		
10	10-12	-	NA	FILL, SLAG debris, some fine to medium SAND, gray, slightly moist		Backfilled with cuttings
	12-14		NA	FILL, SLAG debris, some fine to medium SAND and SILT, dark-black, wet	SB-124-B @ 12-14'	
15	14-16		NA	CLAY and PEAT, some wood debris, little SAND, light brown		
	16-18		NA	CLAY and PEAT, some wood debris, little SAND, light brown	Boring ended at 20 fbgs.	
	18-20		NA	CLAY, some SAND and SILT and SLAG debris, gray	SB-124-C @ 18-20'	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-125

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/D. Zordan**	Date Drilled: **10-17-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-17-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 5	Geologic Description	Comments	Completion Detail
0	0-1	10/10	0.0	TOPSOIL and SLAG debris, dark brown, moist	SB-125-A @ 0-1'	
	1-4		0.0	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, dark brown, slightly moist		
	4-5		0.0	FILL, fine to coarse SLAG debris and GRAVEL, some fine to coarse SAND, gray, moist		
5	5-6		0.0	FILL, fine to coarse SAND, many fine to coarse GRAVEL, white with tan spots, wet	SB-125-B @ 5-6'	
	6-10		0.0	FILL, fine to coarse SLAG debris and GRAVEL, some fine to coarse SAND, gray, wet		
10	10-14	10/10	0.0	FILL, fine to coarse SLAG debris and GRAVEL, some fine to coarse SAND, gray, saturated		Backfilled with cuttings
	14-16.5		0.3	Organic CLAY, black, moist		
15	16.5-18		2.5	PEAT and WOOD, some brown clay, dark brown, moist, strong methane odor	SB-125-C @ 16.5-18'	
	18-20		0.0	Fine SAND, little CLAY, gray, wet	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

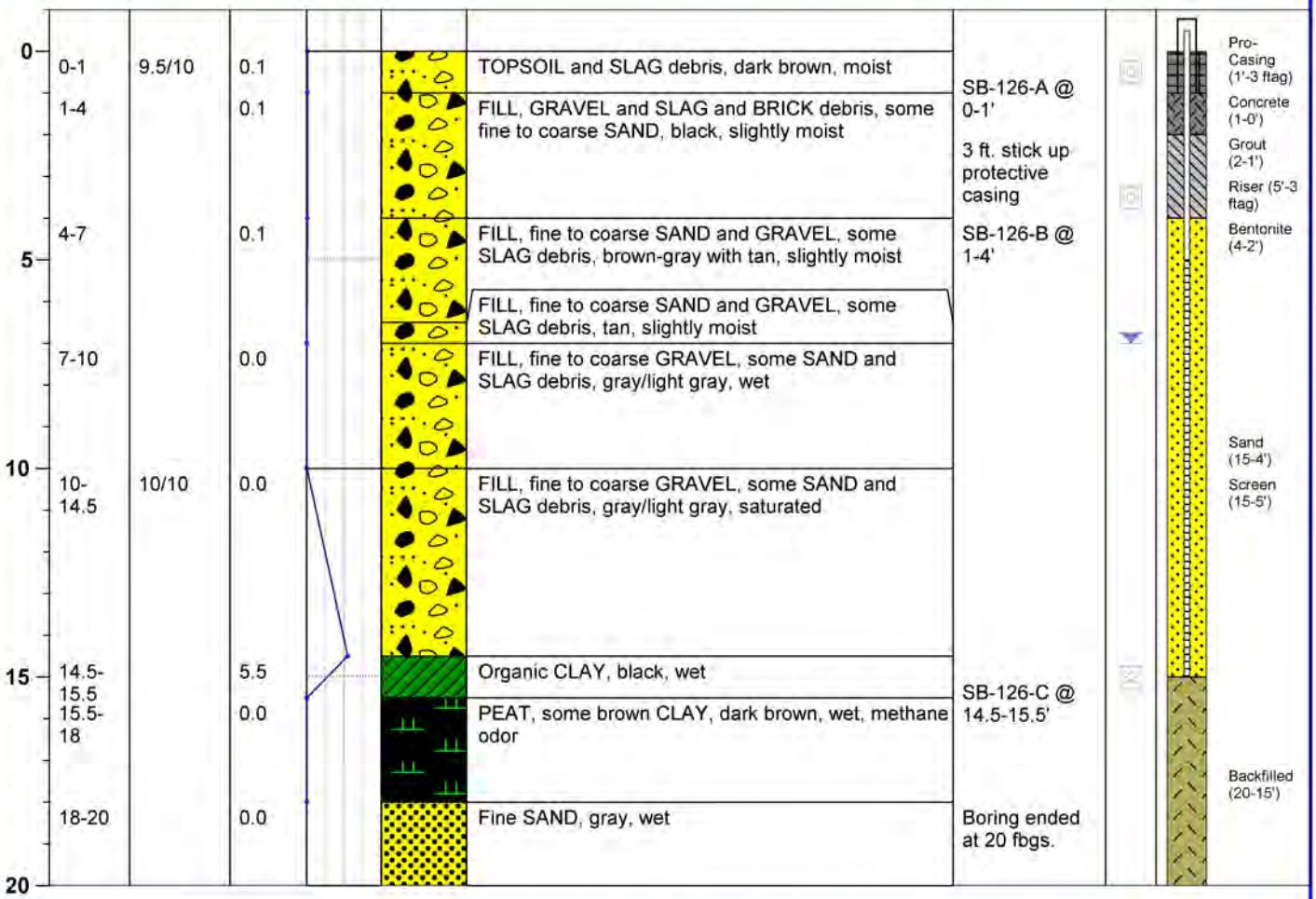
Soil Boring/Monitoring Well

Groundwater & Environmental Services, Inc.

ID NO. **SB-126/MW-126**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/D. Zordan**	Date Drilled: **10-17-2018**	Sample Tool Diameter: **4.5 in.**
Drilling Company: **Cascade Drilling**	Completion Date: **10-25-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **1 fbgs.**
TOC Elevation: **587.00 famsl.**	Borehole Diameter: **4.5 in.**	Type of Seal: **Medium Bentonite Chips**
Total Depth: **20 fbgs.**	Well Diameter: **2 in.**	Top of Sand: **3 fbgs.**
Refusal Depth: **Not Encountered**	Riser Length: **7 ft. (3 ftag)**	Sand Type: **20-40 Mesh Sand Pack**
Initial Depth to Water: **~7 fbgs.**	Screen Slot Size: **0.010-in.**	Well Material Type: **Schedule 40 PVC**
Static Depth to Water: **10.68 ft. btoc.**	Screen Length: **10 ft.**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 10	Geologic Description	Comments
0	0-1	9.5/10	0.1	TOPSOIL and SLAG debris, dark brown, moist	SB-126-A @ 0-1'
	1-4		0.1	FILL, GRAVEL and SLAG and BRICK debris, some fine to coarse SAND, black, slightly moist	3 ft. stick up protective casing
5	4-7		0.1	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, brown-gray with tan, slightly moist	SB-126-B @ 1-4'
				FILL, fine to coarse SAND and GRAVEL, some SLAG debris, tan, slightly moist	
	7-10		0.0	FILL, fine to coarse GRAVEL, some SAND and SLAG debris, gray/light gray, wet	
10	10-14.5	10/10	0.0	FILL, fine to coarse GRAVEL, some SAND and SLAG debris, gray/light gray, saturated	
15	14.5-15.5		5.5	Organic CLAY, black, wet	SB-126-C @ 14.5-15.5'
	15.5-18		0.0	PEAT, some brown CLAY, dark brown, wet, methane odor	
	18-20		0.0	Fine SAND, gray, wet	Boring ended at 20 fbgs.
20					



Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-127

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/D. Zordan**	Date Drilled: **10-17-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-17-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 3	Geologic Description	Comments	Completion Detail
0	0-5	5/5	0.0	FILL, coarse GRAVEL and SLAG debris, some fine to coarse SAND, gray, wet	SB-127-A @ 0-1'	
5	5-10	3/5	0.0	FILL, coarse GRAVEL and SLAG debris, some fine to coarse SAND, gray, wet	SB-127-B @ 5-10'	
10	10-16	5/10	0.1	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, gray, saturated		Backfilled with cuttings
15	16-18		0.1	Organic CLAY, some SLAG debris, black	Boring ended at 20 fbgs.	
20	18-20		1.3	PEAT, some layers of gray-brown CLAY, dark brown	SB-127-C & MS/MSD @ 18-20'	

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring/Monitoring Well

Groundwater & Environmental Services, Inc.

ID NO. **SB-128/MW-128**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/D. Zordan**	Date Drilled: **10-17-2018**	Sample Tool Diameter: **4.5 in.**
Drilling Company: **Cascade Drilling**	Completion Date: **10-25-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **2 fbgs.**
TOC Elevation: **586.08 famsl.**	Borehole Diameter: **4.5 in.**	Type of Seal: **Medium Bentonite Chips**
Total Depth: **20 fbgs.**	Well Diameter: **2 in.**	Top of Sand: **4 fbgs.**
Refusal Depth: **Not Encountered**	Riser Length: **8 ft. (3 ftag)**	Sand Type: **20-40 Mesh Sand Pack**
Initial Depth to Water: **~4 fbgs.**	Screen Slot Size: **0.010-in.**	Well Material Type: **Schedule 40 PVC**
Static Depth to Water: **9.81 ft. btoc.**	Screen Length: **10 ft.**	Top of Grout: **1 fbgs.**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 3	Geologic Description	Comments	Completion Detail
0	0-2	5/5	0.1	TOPSOIL and SLAG debris, dark brown, slightly moist, large SLAG at surface	SB-128-A @ 0-2'	Pro-Casing (1'-3 ftag)
	2-4		0.0	FILL, fine to coarse GRAVEL and SLAG debris, some fine to coarse SAND, gray, moist	3 ft. stick up protective casing	Concrete (1-0')
						Grout (2-1')
	4-5		NA	FILL, fine to coarse GRAVEL and SLAG debris, some fine to coarse SAND, gray, wet		Riser (5'-3 ftag)
5	5-7	5/5	0.5	FILL, fine to coarse GRAVEL and SLAG debris, some fine to coarse SAND, brown, slightly moist	SB-128-B @ 5-7'	Bentonite (4-2')
	7-10		0.0	FILL, fine to coarse GRAVEL and SLAG debris, gray, wet		
10	10-12	7/10	0.1	FILL, fine to coarse GRAVEL and SLAG debris, gray, wet		Sand (15-4')
	12-14		1.5	Organic CLAY, black, moist, methane odor		Screen (15-5')
	14-20		0.5	PEAT, layers of gray-brown CLAY, dark brown, moist	SB-128-C @ 14-16'	
15						Backfilled (20-15')
					Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-129

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/D. Zordan**	Date Drilled: **10-17-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-17-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 5	Geologic Description	Comments	Completion Detail
0	0-2	8/10	0.2	TOPSOIL and SLAG debris, dark brown, moist	SB-129-A @ 0-2'	
	2-5		0.1	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, white-tan, slightly moist		
5	5-6		0.1	FILL, SLAG debris and GRAVEL, some fine to coarse SAND, dark brown, moist		
	6-9		0.1	FILL, SLAG debris and GRAVEL, some fine to coarse SAND, gray, wet	SB-129-B @ 6-7'	
	9-10		0.1	FILL, SLAG debris and GRAVEL, some fine to coarse SAND, gray, saturated		
10	10-12	10/10	0.5	Organic CLAY, black, moist		Backfilled with cuttings
	12-14		2.9	PEAT, some layers of gray/brown CLAY, brown, moist		
	14-16		0.2	PEAT, some layers of gray/brown CLAY, brown, moist		
15	16-17		0.1	Fine SAND, gray, wet	SB-129-C @ 16-17'	
	17-20		0.1	Fine SAND and CLAY, gray, wet	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

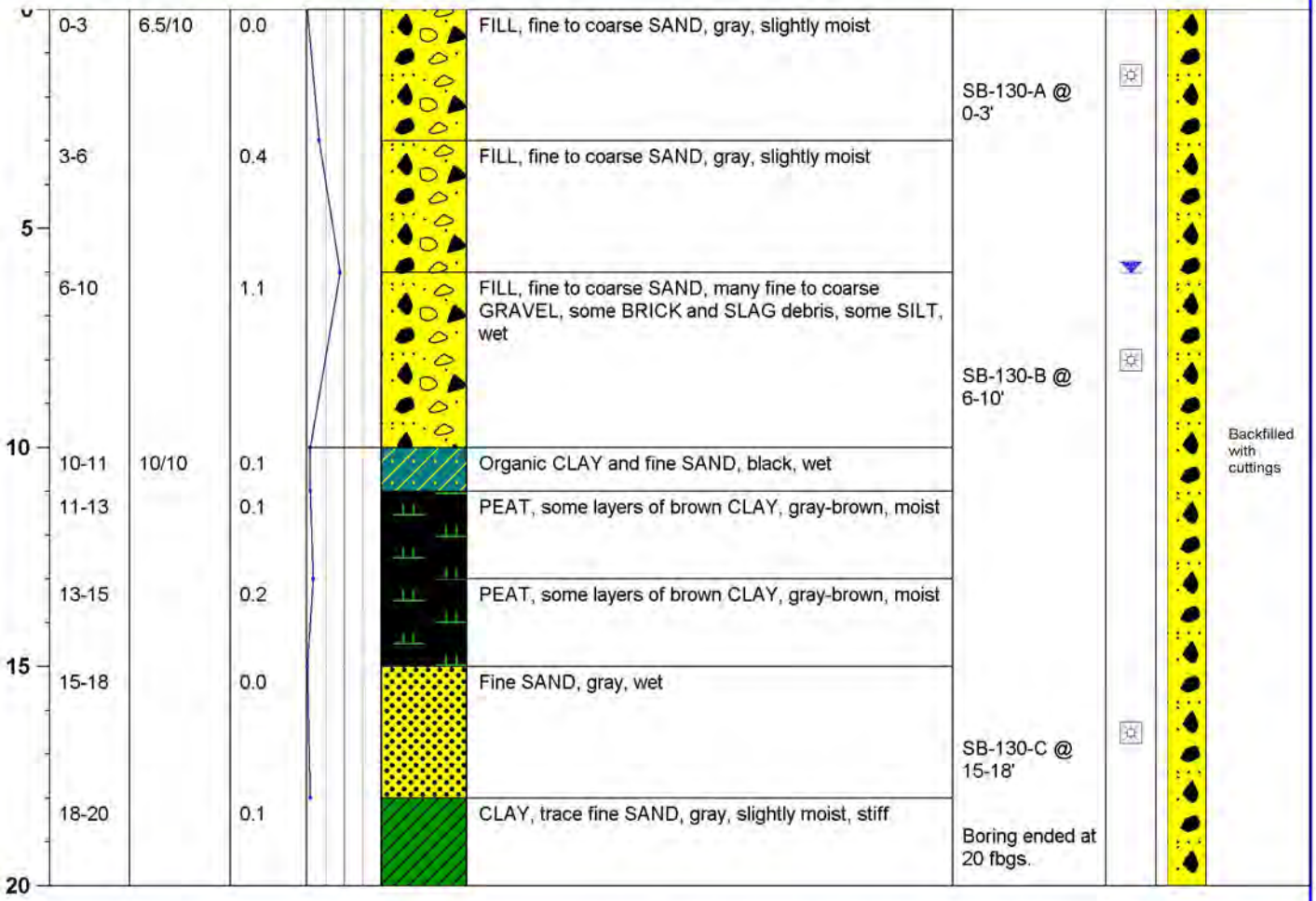
Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. **SB-130**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/D. Zordan**	Date Drilled: **10-17-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-17-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**



Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring/Monitoring Well

Groundwater & Environmental Services, Inc.

ID NO. **SB-131/MW-131**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-18-2018**	Sample Tool Diameter: **4.5 in.**
Drilling Company: **Cascade Drilling**	Completion Date: **10-25-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **2 fbgs.**
TOC Elevation: **586.81 famsl.**	Borehole Diameter: **4.5 in.**	Type of Seal: **Medium Bentonite Chips**
Total Depth: **20 fbgs.**	Well Diameter: **2 in.**	Top of Sand: **4 fbgs.**
Refusal Depth: **Not Encountered**	Riser Length: **8 ft. (3 ftag)**	Sand Type: **20-40 Mesh Sand Pack**
Initial Depth to Water: **~1 fbgs.**	Screen Slot Size: **0.010-in.**	Well Material Type: **Schedule 40 PVC**
Static Depth to Water: **10.27 ft. btoc.**	Screen Length: **10 ft.**	Top of Grout: **1 fbgs.**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 50	Geologic Description	Comments	Completion Detail
0	0-1	10/10	0.0	FILL, SLAG debris, brown/gray, moist	SB-131-A @ 0-1'	Pro-Casing (1'-3 ftag)
	1-6		0.0	FILL, SLAG debris, gray/blue, wet	3 ft. stick up protective casing	Concrete (1-0')
						Grout (2-1')
5						Riser (5'-3 ftag)
						Bentonite (4-2')
	6-10		0.0	FILL, SLAG debris, gray/blue, saturated	SB-131-B @ 6-8'	
10	10-14	10/10	0.0	FILL, SLAG debris, gray/blue, saturated		Sand (15-4')
						Screen (15-5')
	14-16		48.7	FILL, SLAG debris, gray/blue, saturated		
15				PEAT, few SLAG, black, moist, H2S - 11.8ppm	SB-131-C @ 14-16'	
	16-18		7.6	Organic CLAY, tan/light brown, very moist		
						Backfilled (20-15')
	18-19		0.0	Fine SAND, few interbedded SILT, gray	Boring ended at 20 fbgs.	
	19-20		0.0	Fine SAND and CLAY, gray, wet		
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

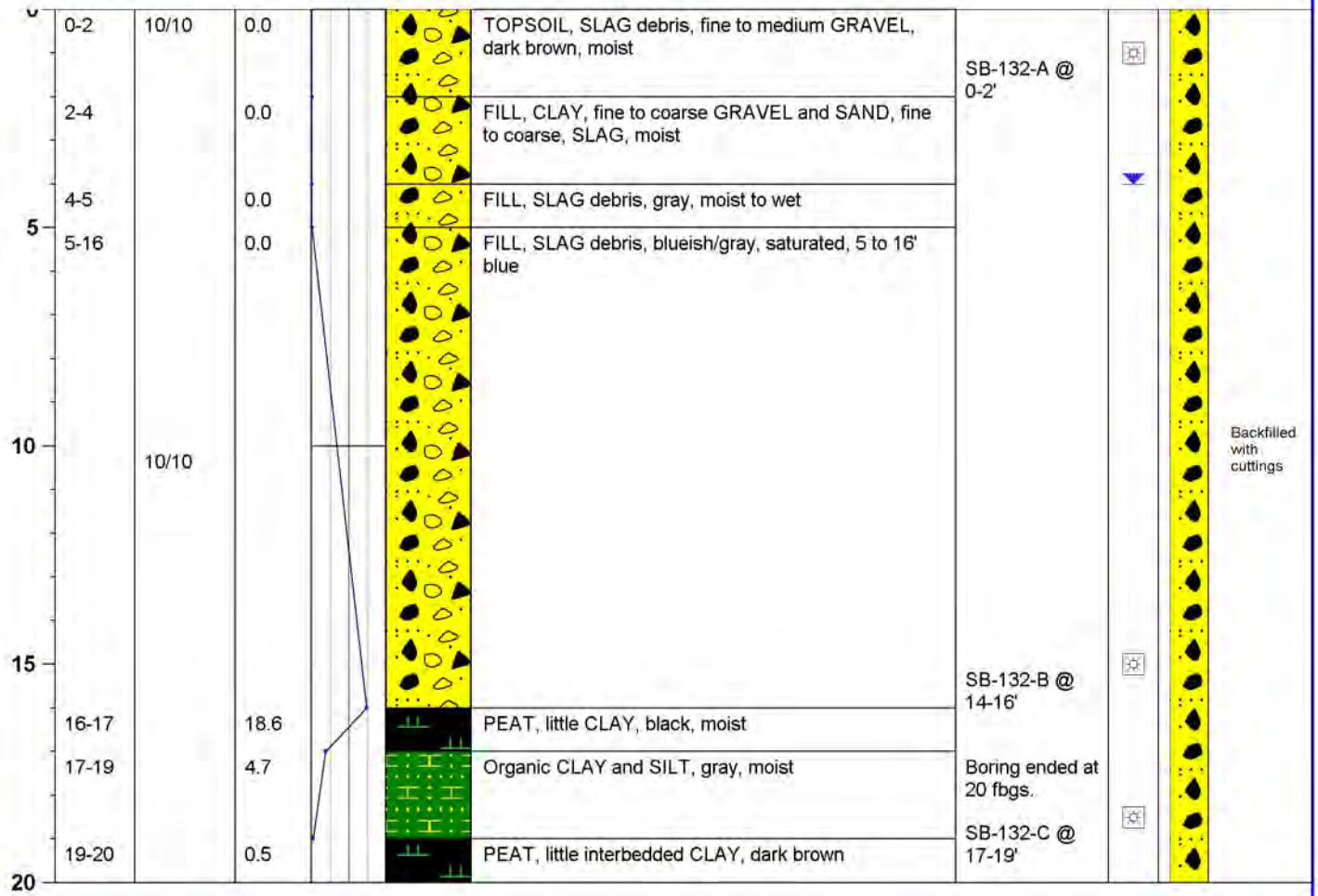
Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. **SB-132**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-18-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-18-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 25	Geologic Description	Comments	Completion Detail
0	0-2	10/10	0.0	TOPSOIL, SLAG debris, fine to medium GRAVEL, dark brown, moist	SB-132-A @ 0-2'	
	2-4		0.0	FILL, CLAY, fine to coarse GRAVEL and SAND, fine to coarse, SLAG, moist		
	4-5		0.0	FILL, SLAG debris, gray, moist to wet		
5	5-16		0.0	FILL, SLAG debris, blueish/gray, saturated, 5 to 16' blue		
10		10/10				Backfilled with cuttings
15					SB-132-B @ 14-16'	
	16-17		18.6	PEAT, little CLAY, black, moist		
	17-19		4.7	Organic CLAY and SILT, gray, moist	Boring ended at 20 fbgs.	
	19-20		0.5	PEAT, little interbedded CLAY, dark brown	SB-132-C @ 17-19'	
20						



Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. **SB-133**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-18-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-18-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 25	Geologic Description	Comments	Completion Detail
0	0-1	10/10	0	TOPSOIL and SLAG debris, wet	SB-133-A @ 0-1'	
	1-3		0	FILL, SLAG debris, few fine to coarse SAND and GRAVEL, moist		
	3-6		0	FILL, SLAG debris, white/gray, moist	SB-133-B @ 4-6'	
5	6-10		0	FILL, SLAG debris, gray, wet		
10	10-14	10/10	NA	FILL, SLAG debris, gray, saturated		Backfilled with cuttings
	14-16		10.7	Organic CLAY, black, moist	Boring ended at 20 fbgs.	
15	16-17		10.7	PEAT, interbedded CLAY, dark brown, very moist	SB-133-D @ 15-17'	
	17-19		0	CLAY and SILT, little interbedded organics, gray, very moist	SB-133-C & MS/MSD @ 17-19'	
20	19-20		0	PEAT and interbedded organic CLAY, dark brown, very moist		

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

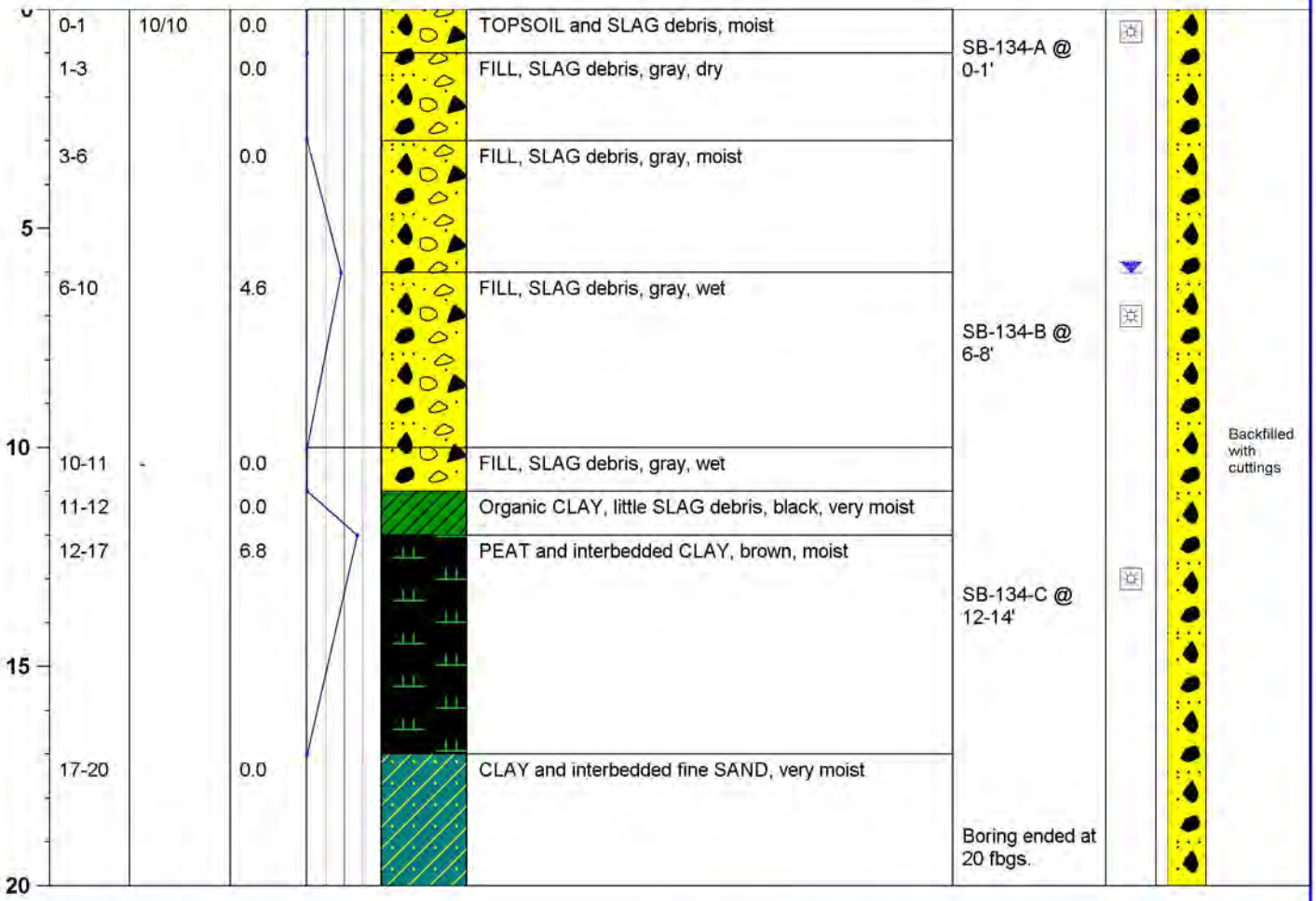
Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-134

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-18-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-18-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**



Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. **SB-135**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-18-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-18-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 5	Geologic Description	Comments	Completion Detail
0	0-2	8/10	0.0	TOPSOIL and SLAG debris, trace BRICK fragments, dark brown, moist	SB-135-A @ 0-2'	
	2-6		0.0	FILL, fine to coarse GRAVEL and SAND, some SLAG fragments, tan, dry		
5	6-8		0.0	FILL, SLAG debris, gray, moist	SB-135-B @ 6-8'	
	8-10		0.0	FILL, SLAG debris, gray, moist		
10	10-12	10/10	0.5	FILL, SLAG debris, gray, moist		Backfilled with cuttings
	12-14		2.7	FILL, SLAG debris, gray, moist		
	14-15		0.8	Organic CLAY, some SLAG debris, black, moist		
15	15-18		0.0	PEAT, layers of organic CLAY, dark brown, moist	Boring ended at 20 fbgs.	
	18-20		2.8	Interbedded CLAY and fine SAND, gray, very moist	SB-135-C @ 18-20'	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. **SB-136**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/D. Zordan**	Date Drilled: **10-17-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-17-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm)	Geologic Description	Comments	Completion Detail
0	0-1	8/10	0.1	TOPSOIL and some SLAG/BRICK debris, dark brown, slightly moist	SB-136-A @ 0-1'	
	1-4		0.1	TOPSOIL and some SLAG debris, slightly, moist		
	4-5		0.2	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, tan/gray, slightly moist		
5	5-8		0.1	FILL, fine to coarse SLAG debris and GRAVEL, some fine to coarse SAND, gray, wet	SB-136-B @ 5-8'	
	8-10		0.5	FILL, fine to coarse SLAG debris and GRAVEL, some fine to coarse SAND, gray, saturated		
10	10-12	8/10	0.1	FILL, fine to coarse SLAG debris and GRAVEL, some fine to coarse SAND, gray, saturated		Backfilled with cuttings
	12-15		0.1	FILL, SAND and GRAVEL some fine to coarse SLAG debris, green-gray, saturated	SB-136-D @ 12-15'	
15	15-17		0.1	FILL, SLAG debris, wet		
	17-20		0.1	Organic CLAY, some interbedded brown PEAT, black, moist-wet	Boring ended at 20 fbgs. SB-136-C @ 17-20'	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-137

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay/D. Zordan**	Date Drilled: **10-17-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-17-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm)	Geologic Description	Comments	Completion Detail
0	0-1	5/5	0.1	TOPSOIL and SLAG debris, dark brown, moist	SB-137-A @ 0-1'	
	1-4		0.1	FILL, fine to coarse SLAG debris and GRAVEL, little fine to coarse SAND, gray slightly moist		
	4-5		0.1	FILL, SLAG debris and GRAVEL, some fine to coarse SAND, brown/dark brown, slightly moist, large piece of metal debris	SB-137-B @ 4-5'	
5	5-6	4/5	0.2	FILL, SLAG debris and GRAVEL, some fine to coarse SAND, brown/dark brown, slightly moist		
	6-10		0.0	FILL, fine to coarse SLAG debris and GRAVEL, little fine to coarse SAND, gray, wet-saturated		
10	10-14	8/10	0.1	FILL, fine to coarse SLAG debris and GRAVEL, little fine to coarse SAND, gray, wet-saturated		Backfilled with cuttings
	14-16		0.5	Organic CLAY interbedded with PEAT/WOOD debris, black, wet	SB-137-C @ 14-16'	
15	16-20		0.2	CLAY interbedded with PEAT, gray-brown, moist		
20					Boring ended at 20 fbgs.	

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-138

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-17-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-17-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 5	Geologic Description	Comments	Completion Detail
0	0-2	10/10	0.1	TOPSOIL and BRICK / SLAG debris, dark brown, moist	SB-138-A @ 0-2'	
	2-5		0.0	FILL, fine to coarse GRAVEL and SLAG debris, some fine to coarse SAND, gray, moist		
5	5-8		0.0	FILL, fine to coarse GRAVEL and SLAG debris, some fine to coarse SAND, gray, moist	SB-138-B @ 5-8'	
	8-10		0.0	FILL, fine to coarse GRAVEL and SLAG debris, some fine to coarse SAND, gray, wet		
10	10-14	10/10	0.1	FILL, fine to coarse GRAVEL and SLAG debris, some fine to coarse SAND, gray, wet		Backfilled with cuttings
	14-15		0.3	Organic CLAY, black, moist		
15	15-17		3.2	PEAT, layers of gray-brown CLAY, dark brown, moist	SB-138-C @ 15-17'	
	17-19		0.3	PEAT, layers of gray-brown CLAY, dark brown, moist		
	19-20		0.2	Interbedded CLAY and fine SAND, gray, very moist	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-139

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-18-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-18-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 50	Geologic Description	Comments	Completion Detail
0	0-2	10/10	0.0	FILL, SLAG debris, gray-blue, moist	SB-139-A @ 0-2'	Backfilled with cuttings
	2-4		0.0	FILL, SLAG debris, gray-blue, wet		
	4-10		0.0	FILL, SLAG debris, gray-blue, saturated	SB-139-B @ 6-8'	
10	10-13	10/10	NA	FILL, SLAG debris, gray-blue, saturated		
	13-15		36.5	PEAT, little CLAY, dark brown, moist	SB-139-C @ 13-15'	
15	15-16		0.0	Organic CLAY, gray, moist		
	16-17		0.0	PEAT, little CLAY, dark brown, ,moist		
	17-18		0.0	Fine SAND, few CLAY, gray, saturated	SB-139-D @ 17-18'	
	18-20		0.0	Fine SAND and CLAY, gray, wet	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-140

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-18-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-18-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 25	Geologic Description	Comments	Completion Detail
0	0-2	8/10	0.0	TOPSOIL and SLAG debris, dark brown, moist	SB-140-A @ 0-2'	
	2-5		0.0	FILL, CLAY, some SLAG debris, dark brown, moist		
5	5-7		0.0	FILL, fine SAND, some fine to coarse GRAVEL, trace SLAG debris, tan, dry		
	7-10		0.0	FILL, SLAG debris, light gray/blue, wet		
10	10-15	-	0.0	FILL, SLAG debris, light gray/blue, wet		Backfilled with cuttings
15	15-17		3.5	PEAT, little interbedded CLAY, trace SLAG debris, dark brown/black, moist	SB-140-B @ 15-17'	
	17-19		19.2	Organic CLAY, tan/gray, moist	Boring ended at 20 fbgs.	
20	19-20		0.0	PEAT, little interbedded CLAY, trace SLAG debris, dark brown/black, moist	SB-140-C @ 17-19'	

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. **SB-141**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-18-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-18-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 5	Geologic Description	Comments	Completion Detail
0	0-2	10/10	0.0	TOPSOIL and fine to coarse GRAVEL, moist	SB-141-A @ 0-2'	
	2-5		0.0	FILL, SLAG debris, gray-blueish, moist		
5	5-10		0.0	FILL, SLAG debris, gray-blueish, wet	SB-141-B @ 5-7'	
				FILL, SLAG debris, gray-blueish, saturated		
10	10-16	-	0.0	FILL, SLAG debris, gray-blueish, saturated		Backfilled with cuttings
15	16-18		2.8	PEAT, little interbedded CLAY, dark brown/black, moist	Boring ended at 20 fbgs.	
	18-20		0.5	Organic CLAY, tan/light brown, very moist	SB-141-C @ 18-20'	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-142

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-19-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-19-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 100	Geologic Description	Comments	Completion Detail
0	0-1	9/10	0.0	TOPSOIL and SLAG debris	SB-142-A & MS/MSD @ 0-1'	Backfilled with cuttings
	1-5		0.0	FILL, SLAG debris, blue-gray, dry		
5	5-10		0.0	FILL, SLAG debris, blue-gray, moist-wet		
10	10-13	10/10	0.0	FILL, SLAG debris, blue-gray, saturated	SB-142-B @ 8-10'	
	13-15		0.0	PEAT, interbedded CLAY, dark brown/black, moist		
15	15-16		0.0	Organic CLAY, tan/light gray, very moist	SB-142-C @ 15-16'	
	16-18		0.0	PEAT, interbedded CLAY, dark brown/black, moist		
	18-20		0.0	Fine SAND and CLAY, gray, wet	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-143

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-19-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-19-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 50	Geologic Description	Comments	Completion Detail
0	0-1	8/10	0.0	TOPSOIL and SLAG debris, moist	SB-143-A @ 0-1'	Backfilled with cuttings
	2-4		0.0	FILL, SLAG debris, light gray/blue, dry		
5	4-6		0.0	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, light brown/tan, dry		
	6-10		0.0	FILL, SLAG debris, light gray/blue, wet	SB-143-B @ 8-10'	
10	10-13	-	0.0	FILL, SLAG debris, light gray/blue, wet		
	13-15		25.7	PEAT, little interbedded CLAY, dark brown/black, moist	SB-143-C @ 13-15'	
15	15-15.5		7.5	Organic CLAY, light brown, moist		
	15.5-17		0.0	PEAT, little interbedded CLAY, dark brown/black, moist		
	17-19		0.0	Fine SAND and SILT, gray, very moist		
	19-20		NA	CLAY, gray, moist	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring/Monitoring Well

Groundwater & Environmental Services, Inc.

ID NO. **SB-144/MW-144**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-19-2018**	Sample Tool Diameter: **4.5 in.**
Drilling Company: **Cascade Drilling**	Completion Date: **10-25-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **2 fbgs.**
TOC Elevation: **588.35 famsl.**	Borehole Diameter: **4.5 in.**	Type of Seal: **Medium Bentonite Chips**
Total Depth: **20 fbgs.**	Well Diameter: **2 in.**	Top of Sand: **4 fbgs.**
Refusal Depth: **Not Encountered**	Riser Length: **8 ft. (3 ftag)**	Sand Type: **20-40 Mesh Sand Pack**
Initial Depth to Water: **~7 fbgs.**	Screen Slot Size: **0.010-in.**	Well Material Type: **Schedule 40 PVC**
Static Depth to Water: **12.00 ft. btoc.**	Screen Length: **10 ft.**	Top of Grout: **1 fbgs.**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 25	Geologic Description	Comments	Completion Detail
0	0-2	10/10	0.0	TOPSOIL and SLAG debris, dry	SB-144-A @ 0-2'	Pro-Casing (1'-3 ftag); Concrete (1-0')
	2-4		0.0	FILL, fine to coarse SAND and GRAVEL, some SLAG, brown, dry	3 ft. stick up protective casing	Grout (2-1'); Riser (5'-3 ftag)
5	4-7		0.0	FILL, SLAG and BRICK debris		Bentonite (4-2')
	7-10		2.4	FILL, SLAG debris, some fine to coarse SAND, wet	SB-144-B @ 7-9'	
10	10-15	10/10	0.0	FILL, SLAG debris, gray/blue, saturated		Sand (15-4'); Screen (15-5')
15	15-17		24.6	PEAT, black, very moist	SB-144-C @ 15-17'	
	17-20		11.3	PEAT and organic CLAY layers, dark brown, very moists	Boring ended at 20 fbgs.	Backfilled (20-15')
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-145

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10-19-2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10-19-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 5	Geologic Description	Comments	Completion Detail
0	0-1	6/10	0.0	TOPSOIL and SLAG debris	SB-145-A @ 0-1'	
	1-8		0.0	FILL, fine to coarse SAND and GRAVEL, some gray-blue SLAG debris, trace BRICK debris, brown, dry		
5						
	8-10		0.0	FILL, SLAG debris, gray-blue, dry		
10	10-18	6/10	0.0	FILL, SLAG debris, gray-blue, saturated	SB-145-B @ 10-12'	Backfilled with cuttings
15						
	18-20		2.7	PEAT, some organic CLAY and SLAG debris, brown, wet	Boring ended at 20 fbgs. SB-145-C @ 18-20'	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-146

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay**	Date Drilled: **10/23/2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10/23/2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm) 0 5	Geologic Description	Comments	Completion Detail
0	0-2	10/10	0.4	TOPSOIL and GRAVEL, possible SLAG debris, dark brown, moist	SB-146-A @ 0-2'	
	2-5		0.7	FILL, SLAG debris, some GRAVEL, white with some gray/dark gray, wet	SB-146-B @ 2-5'	
5	5-7		0.9	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, gray, slightly moist-moist, loose		
	7-8		0.7	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, dark gray, wet, loose		
	8-10		0.6	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, gray, saturated, loose		
10	10-13	10/10	0.4	FILL, fine to coarse SAND and GRAVEL, some SLAG debris, dark gray, saturated, loose		Backfilled with cuttings
	13-15		2.9	PEAT and layers of CLAY, dark brown, moist	SB-146-C & DUP-102318 @ 13-15'	
15	15-17		NA	Fine SAND, little CLAY and PEAT, tan-brown, moist		
	17-19		NA	PEAT and layers of CLAY, dark brown, moist		
	19-20		NA	CLAY, little PEAT and fine SAND, gray, slightly moist	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-147

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay**	Date Drilled: **10/23/2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10/23/2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm)	Geologic Description	Comments	Completion Detail
0	0-1	8/10	0.8	TOPSOIL and FILL, little GRAVEL, dark brown, moist	SB-147-A @ 0-1'	
	1-5		0.5	FILL, fine to coarse SAND, little fine to coarse GRAVEL, red-orange, slightly moist, loose		
5	5-7		4.1	FILL, SAND, some SLAG debris, little fine to coarse GRAVEL, black/dark brown, slightly moist, loose	SB-147-B & MS/MSD @ 5-7'	
	7-8.5		3.0	FILL, SLAG debris, some fine to coarse SAND, dark brown, moist		
	8.5-10		0.9	FILL, White substance, SAND and GRAVEL size, wet		
10	10-13	10/10	0.5	FILL, SLAG debris and GRAVEL, little fine to coarse SAND, gray, saturated		Backfilled with cuttings
	13-16		0.5	FILL, SLAG debris and GRAVEL, little fine to coarse SAND, gray, saturated		
15	16-17		0.9	Organic CLAY, black, wet	SB-147-C @ 16-17'	
	17-18.5		0.8	PEAT, some CLAY, dark brown, moist		
	18.5-20		0.6	CLAY, layers of PEAT, brown, moist	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring/Monitoring Well

Groundwater & Environmental Services, Inc.

ID NO. **SB-148/MW-148**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay**	Date Drilled: **10-23-2018**	Sample Tool Diameter: **4.5 in.**
Drilling Company: **Cascade Drilling**	Completion Date: **10-25-2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **2 fbgs.**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **Medium Bentonite Chips**
Total Depth: **20 fbgs.**	Well Diameter: **2 in.**	Top of Sand: **4 fbgs.**
Refusal Depth: **Not Encountered**	Riser Length: **8 ft. (3 ftag)**	Sand Type: **20-40 Mesh Sand Pack**
Initial Depth to Water: **~7 fbgs.**	Screen Slot Size: **0.010-in.**	Well Material Type: **Schedule 40 PVC**
Static Depth to Water: **10.84 ft. btoc.**	Screen Length: **10 ft.**	Top of Grout: **1 fbgs.**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (pom) 0 3	Geologic Description	Comments	Completion Detail
0	0-1.5	9.5/10	0.6	TOPSOIL and SLAG debris, some fine to coarse GRAVEL, brown, ,moist	SB-148-A @ 0-1.5'	Pro-Casing (1'-3 ftag)
	1.5-4		0.8	FILL, GRAVEL and SLAG debris, some fine to coarse SAND, gray, slightly moist	3 ft. stick up protective casing	Concrete (1-0')
						Grout (2-1')
						Riser (5'-3 ftag)
	4-5		1.2	FILL, GRAVEL and SLAG debris, some fine to coarse SAND, gray with white and blue-green, slightly moist		Bentonite (4-2')
5	5-7		1.2	FILL, GRAVEL and SLAG debris, trace fine to coarse SAND, brown/gray	SB-148-B @ 4-5'	
	7-10		1.1	FILL, fine and coarse GRAVEL and SLAG debris, few fine to coarse SAND, dark gray, wet		
				FILL, fine and coarse GRAVEL and SLAG debris, few fine to coarse SAND, gray, wet		
						Sand (15-4')
10	10-12	10/10	0.8	FILL, SLAG debris, some GRAVEL, little fine to coarse SAND, gray, wet		Screen (15-5')
	12-14		1.2	FILL, SLAG debris, some GRAVEL, little fine to coarse SAND, dark blue/gray, saturated	SB-148-D @ 12-14'	
	14-15		1.4	Organic CLAY, little PEAT, black, wet		
15	15-17.5		2.3	PEAT and CLAY layers, brown, moist	SB-148-C @ 15-17.5'	
	17.5-20		1.1	PEAT and CLAY layers, dark brown, moist	Boring ended at 20 fbgs.	Backfilled (20-15')
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. **SB-149**

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **J. Clay**	Date Drilled: **10/23/2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10/23/2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm)	Geologic Description	Comments	Completion Detail
0	0-1	8/10	0.4	TOPSOIL and BRICK debris, brown, slightly moist, dense	SB-149-A @ 0-1'	
	1-5		0.8	FILL, fine to medium SAND, few fine to coarse GRAVEL, brown some red-brown, slightly moist, loose		
5	5-6		1.0	FILL, Possible SLAG debris, some fine to coarse SAND, black, slightly moist, highly fractured	SB-149-B @ 5-6'	
	6-8		0.7	FILL, fine to medium SAND, few fine to coarse GRAVEL, brown, slightly moist, loose		
	8-9		0.8	FILL, fine SAND, some fine to coarse GRAVEL, brown, slightly moist, medium dense		
	9-10		1.0	FILL, fine to coarse SAND and GRAVEL, black, moist		
10	10-16	10/10	0.4	FILL, fine to course GRAVEL and SLAG debris, little fine to coarse SAND, gray, wet		Backfilled with cuttings
15	16-18		0.5	PEAT and organic CLAY, dark brown, moist	SB-149-C @ 16-18'	
	18-20		0.8	SILT and CLAY, some PEAT, gray-brown, moist	Boring ended at 20 fbgs.	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Soil Boring

Groundwater & Environmental Services, Inc.

ID NO. SB-150

Project: **Buffalo Lakeside Commercial Park**	Client: **NYSDEC**	Regulatory Case #: **Site No. 915322**
Address: **Laborers Way & Ship Canal Pkwy, Buffalo, NY**		Regulatory Case Mgr: **Jenelle Gaylord**
County: **Erie**	GES Job #: **0901752**	GES Project Mgr: **Eric D. Popken**
Logged By: **P. Colern/D. Zordan**	Date Drilled: **10/19/2018**	Sample Tool Diameter: **NA**
Drilling Company: **Cascade Drilling**	Completion Date: **10/19/2018**	Sample Tool Length: **10 ft.**
Drill Operator: **Arlen Little**	Drilling Method: **Sonic Rig**	Soil Classification System: **Modified Burmister**
Drill Rig Type: **Sonic**	Sampling Method: **Sonic Tube**	Field Screening: **MiniRae3000 10.6 eV**
Latitude: **NA**	Longitude: **NA**	Top of Bentonite Seal: **NA**
TOC Elevation: **NA**	Borehole Diameter: **4.5 in.**	Type of Seal: **NA**
Total Depth: **20 fbgs.**	Well Diameter: **NA**	Top of Sand: **NA**
Refusal Depth: **Not Encountered**	Riser Length: **NA**	Sand Type: **NA**
Initial Depth to Water: **NA**	Screen Slot Size: **NA**	Well Material Type: **NA**
Static Depth to Water: **NA**	Screen Length: **NA**	Top of Grout: **NA**

Depth (fbgs)	Sample Interval (feet)	Recovery (ft/ft)	Field Screen (ppm)	Geologic Description	Comments	Completion Detail
0	0-10	10/10	0.0	FILL, SLAG debris, gray-blue, dry	SB-150-A @ 0-2'	
5				FILL, SLAG debris, gray-blue, wet		
10	10-14	10/10	0.0	FILL, SLAG debris, gray-blue, wet		Backfilled with cuttings
	14-17		0.4	PEAT, few interbedded CLAY, dark brown/black, moist	SB-150-B @ 14-16'	
15				Organic CLAY lense		
	17-18		0.0	CLAY and fine SAND, gray, moist	Boring ended at 20 fbgs.	
	18-19		0.0	Fine SAND, little SILT, gray, wet		
	19-20		0.0	CLAY, little interbedded SILT, gray, moist	SB-150-C @ 18-20'	
20						

Proportions Used:

Trace =	<5%
Little =	6-15%
Few =	16-30%
Some =	31-49%
And =	>50%

Notes:

NA = not available; fbgs. = feet below ground surface
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
famsl. = feet above mean sea level
btoc = below top-of-casing; ftag = feet above grade
eV = electron volt; PVC = polyvinyl chloride

Blow Count Pentration Resistance:

Consistency (M&C)		Density (G&S)	
<2 =	Very Soft	0-4 =	Very Loose
2-4 =	Soft	4-10 =	Loose
4-8 =	Medium	10-30 =	Medium
8-15 =	Stiff	30-50 =	Dense
15-30 =	Very Stiff	>50 =	Very Dense
>30 =	Hard		

Symbol Legend

Static Water Level

Lab Sample Location

Appendix B – Laboratory Analytical Reports

Appendix C – DUSR Validation Package

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	See Table 1		
Sample Matrix:	☐ Drinking water ☒ Groundwater ☒ Surface water ☒ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

Groundwater & Environmental Services (GES) contracted RemVer to perform a data quality assessment (DQA) on the analytical data for groundwater samples. reported in multiple Sample Delivery Groups (SDGs) from Test America. Table 1 (attached) lists fourteen (14) SDGs. Table 2 provides a cross-list of the samples associated with each SDG; some samples occur in two different SDGs.

RemVer prepared a separate DQA sub-report for each SDG, evaluating the performance of the analytical procedures and the quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. Each sub-report includes a narrative discussion of sample results qualified during the DQA/DUSR.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☒ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☒ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☒ Method 8081B or ☐ 608 Pesticides
☒ Method 8082 or ☐ 608 PCBs
☐ Method 8151 Chlorinated Herbicides
☒ Method 8260C VOCs GC/MS
☒ Method 8270D Semi-VOCs (sVOCs) GC/MS or SIM
☒ Method 9010/9012/9014 Cyanides (_____)
☐ Method TO-13A PAHs (air)
☐ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Method 537 PFCs via SPE & LC/MS-MS
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ Extractable Petroleum Hydrocarbons (EPH)
☒ Other Methods:
- ☑ Method 3535 Solid-Phase Extraction (SPE)
- ☑ Method 3510C Liquid-Liquid Extraction
- ☑ Method 5030C/5035A_L Purge & Trap
- ☑ Method 3005A/3050B Total Metals Prep.
- ☑ 9045D pH
- ☑ Percent Moisture
- ☑ 3540C Soxhlet Extraction
- ☑ 3550C Ultrasonic Extraction

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals/metalloids, pH, and Cyanides.

Significant Data Usability Issues

The laboratory (Test America) reported the data in fourteen separate laboratory reports, under distinct Sample Delivery Group (SDG) numbers. RemVer prepared fourteen sub-reports, one DUSR per SDG. RemVer rejected no results; therefore, all results are acceptable for use, although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section in each DUSR sub-report (listed below by SDG#) for further detail.

- SDG#240-103104 16 soil samples (including MS/MSD & 1 duplicate [dup]) collected on 19Oct2018
- SDG#240-103106 20 soil samples (including MS/MSD & 1 dup) collected 16Oct2018
- SDG#240-103107 6 soil samples (including MS/MSD) collected 16Oct2018
- SDG#240-103108 20 soil samples (including MS/MSD) collected 17Oct2018
- SDG#240-103109 9 soil samples (including MS/MSD & 1 dup) collected 17Oct2018
- SDG#240-103111 20 soil samples (including MS/MSD & 1 dup) collected 18Oct2018
- SDG#240-103112 7 soil samples (including MS/MSD) collected 18Oct2018
- SDG#480-143282 20 soil samples (including MS/MSD & 1 dup) collected 10Oct2018
- SDG480-143525-1 20 soil samples (including MS/MSD & 1 dup) collected 11Oct2018
- SDG#480-143525-2 13 soil samples (including MS/MSD) collected 12Oct2018
- SDG#480-144091 14 soil samples (including MS/MSD & 1 dup) collected 23Oct2018
- SDG#480-144395 5 groundwater samples (including MS/MSD & 1 dup) collected 29Oct2018
- SDG#480-144471 7 groundwater samples (including MS/MSD & 1 Equip. Blank) collected 30Oct2018
- SDG#480-145042 4 surface water samples (including MS/MSD, dup, & 1 Trip Blank) collected 09Nov2018

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

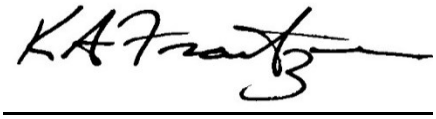
USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

Biography
Qualifier Flags

Tables

1. Sample Data Group List
2. Sample and SDG Cross-List



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment

Biography
Data Usability Reviewer: Kurt A. Frantzen, PhD

Experience

2014-Present	AECC	Senior EHS Consultant
2013-Present	d/b/a RemVer	Owner
2011-2012	RemVer, Inc.	President
2006-2011	Kleinfelder	Senior Principal Scientist
2005	Kleinfelder	Principal Scientist, Part-Time/On Call
2004-2006	d/b/a Environmental Risk Group	Owner
2004-2006	RemVer, Inc., Larchmont, NY	Founder, President
1999-2004	VHB, Inc.	ERM Director & Associate
1997-1998	GEI Consultants, Inc.	Senior Project Manager
1992-1997	Ecology and Environment, Inc.	Technical Chief
1991-1992	EA Engineering, Science, & Technology, Inc.	Project Manager III
1990-1991	Ecology and Environment, Inc.	Technical Group Manager
1986-1990	Ecology and Environment, Inc.	Senior Environmental Scientist

Education

Am Cancer Soc. Post-Doctoral Fellow, U Washington 1985-1986

PhD—Life Sci. / Biochem, NU—Lincoln	1985
MS—Plant Pathology, Kansas State Univ.	1980
BS—Biology, NU—Omaha	1978

Registrations

Certified Hazardous Materials Manager, since 2007-2018, #14143

Professional Affiliations

Society Risk Analysis ('09 & '11 Chair, Eco-Risk Assessment)
Am. Chemistry Society
Am. Assoc. Advance Science
NY Academy of Science
Am. Institute of Biological Sciences
LSP Association

Other

- CERCLA & RCRA experience, as well as DOD (Air Force & Army) & DOE (INEL)
- NE Regional Experience—NY BCP; Mass MCP; & various sites in CT, RI & NH
- National Experience: NE, SE, Gulf & West Coast, Mid-west, Inter-mountain, California, Alaska
- International: Germany, Israel, Kuwait, Australia
- Selected Publications
    - *Using Risk Appraisals to Manage Environmentally Impaired Properties*, 2000, VHB Site Works, Report 108
    - *Risk-Based Analysis for Environmental Managers*, 2001, CRC/Lewis
    - Chapter 7 Risk Assessment, *Managing Hazardous Materials*, 2002 & 2009, IHMM
    - Chapter 22 Cleanup Goals, *Brownfields Law & Practice*, 2004-Present, Lexis/Nexis
    - *Use of Risk Assessment in Risk Management of Contaminated Sites*, 2008, ITRC
- 61 Conference Papers & Invited Professional Presentations
    - 1999-2018, Visiting Lecturer, Brownfields Program, Harvard Graduate School of Design
    - 2010-2013, Invited Lecturer, Pace University Law School

Attachment
Qualifier Flags

Qualifier	Quality Implication
U	Analyte analyzed for, but not detected above the sample's reported quantitation limit
J	Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J +	Sample likely to have a high bias
J –	Sample likely to have a low bias
UJ	Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R	Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (*i.e.*, dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B | EB TB | BB	An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P	Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (*see below*).
PM	A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Table 1
Sample Data Group List
Al-Tech NYSDEC Site #907022
Dunkirk, New York

RemVer

Count	SDG	Report Date	Matrix	# of Samples	Receipt by Lab	# of Coolers	Temps (°C)											
1	240-103104	11/06/18	Soil	16	10/20/18 10:15	12	1.3	1.5	1.5	1.7	1.7	1.9	1.9	2.1	2.1	2.5	2.7	3.5
2	240-103106	11/06/18	Soil	20	10/20/18 10:15	12	1.3	1.5	1.5	1.7	1.7	1.9	1.9	2.1	2.1	2.5	2.7	3.5
3	240-103107	11/06/18	Soil	6	10/20/18 10:15	12	1.3	1.5	1.5	1.7	1.7	1.9	1.9	2.1	2.1	2.5	2.7	3.5
4	240-103108	11/06/18	Soil	20	10/20/18 10:15	12	1.3	1.5	1.5	1.7	1.7	1.9	1.9	2.1	2.1	2.5	2.7	3.5
5	240-103109	11/05/18	Soil	9	10/20/18 10:15	12	1.3	1.5	1.5	1.7	1.7	1.9	1.9	2.1	2.1	2.5	2.7	3.5
6	240-103111	11/07/18	Soil	20	10/20/18 10:15	12	1.3	1.5	1.5	1.7	1.7	1.9	1.9	2.1	2.1	2.5	2.7	3.5
7	240-103112	11/06/18	Soil	7	10/20/18 10:15	12	1.3	1.5	1.5	1.7	1.7	1.9	1.9	2.1	2.1	2.5	2.7	3.5
8	480-143282	10/31/18	Soil	20	10/11/18 13:25	2	3.0	3.2										
9	480-143525-1	11/12/18	Soil	20	10/16/18 13:10	8	1.3	1.8	2.2	2.3	2.6	2.9	3.1	3.1				
10	480-143525-2	11/09/18	Soil	13	10/16/18 13:10	8	1.3	1.8	2.2	2.3	2.6	2.9	3.1	3.1				
11	480-144091	11/16/18	Soil	14	10/24/18 13:15	1	4.4											
12	480-144395	11/15/18	Groundwater	5	10/30/18 12:35	3	7.9	7.9	8.4									
13	480-144471	11/27/18	Groundwater	7	10/31/18 13:20	2	3.1	3.3										
14	480-145042	12/04/18	Surface Water	4	11/09/18 14:00	2	4.7	5.2										

Table 2
Sample List and Sample Data Group Cross-List
Al-Tech NYSDEC Site #907022
Dunkirk, New York

RemVer

Count	Sample ID	QA/QC	Matrix	Sample Date	Lab-SDG-#	Receipt by Lab
1	SB-142A		Soil	10/19/18	240-103104-1	10/20/18 10:15
2	SB-142B		Soil	10/19/18	240-103104-2	10/20/18 10:15
3	SB-142C		Soil	10/19/18	240-103104-3	10/20/18 10:15
4	SB-143A		Soil	10/19/18	240-103104-4	10/20/18 10:15
5	SB-143B		Soil	10/19/18	240-103104-5	10/20/18 10:15
6	SB-143C		Soil	10/19/18	240-103104-6	10/20/18 10:15
7	DUP-10/19/18	X	Soil	10/19/18	240-103104-7	10/20/18 10:15
8	SB-144A		Soil	10/19/18	240-103104-8	10/20/18 10:15
9	SB-144B		Soil	10/19/18	240-103104-9	10/20/18 10:15
10	SB-144C		Soil	10/19/18	240-103104-10	10/20/18 10:15
11	SB-150A		Soil	10/19/18	240-103104-11	10/20/18 10:15
12	SB-150B		Soil	10/19/18	240-103104-12	10/20/18 10:15
13	SB-150C		Soil	10/19/18	240-103104-13	10/20/18 10:15
14	SB-145A		Soil	10/19/18	240-103104-14	10/20/18 10:15
15	SB-145B		Soil	10/19/18	240-103104-15	10/20/18 10:15
16	SB-145C		Soil	10/19/18	240-103104-16	10/20/18 10:15
17	SB-111-A		Soil	10/16/18	240-103106-1	10/20/18 10:15
18	SB-111-B		Soil	10/16/18	240-103106-2	10/20/18 10:15
19	SB-111-C		Soil	10/16/18	240-103106-3	10/20/18 10:15
20	SB-112-A		Soil	10/16/18	240-103106-4	10/20/18 10:15
21	SB-112-B		Soil	10/16/18	240-103106-5	10/20/18 10:15
22	SB-112-C		Soil	10/16/18	240-103106-6	10/20/18 10:15
23	DUP-101618	X	Soil	10/16/18	240-103106-7	10/20/18 10:15
24	SB-113-A		Soil	10/16/18	240-103106-8	10/20/18 10:15
25	SB-113-B		Soil	10/16/18	240-103106-9	10/20/18 10:15
26	SB-113-C		Soil	10/16/18	240-103106-10	10/20/18 10:15
27	SB-114-A		Soil	10/16/18	240-103106-11	10/20/18 10:15
28	SB-114-B		Soil	10/16/18	240-103106-12	10/20/18 10:15
29	SB-114-C		Soil	10/16/18	240-103106-13	10/20/18 10:15
30	SB-121-A		Soil	10/16/18	240-103106-14	10/20/18 10:15
31	SB-121-B		Soil	10/16/18	240-103106-15	10/20/18 10:15
32	SB-121-C		Soil	10/16/18	240-103106-16	10/20/18 10:15
33	SB-121-D		Soil	10/16/18	240-103106-17	10/20/18 10:15
34	SB-122-A		Soil	10/16/18	240-103106-18	10/20/18 10:15
35	SB-122-B		Soil	10/16/18	240-103106-19	10/20/18 10:15
36	SB-122-C		Soil	10/16/18	240-103106-20	10/20/18 10:15
37	SB-123-A		Soil	10/16/18	240-103107-1	10/20/18 10:15
38	SB-123-B		Soil	10/16/18	240-103107-2	10/20/18 10:15
39	SB-123-C		Soil	10/16/18	240-103107-3	10/20/18 10:15
40	SB-124-A		Soil	10/16/18	240-103107-4	10/20/18 10:15
41	SB-124-B		Soil	10/16/18	240-103107-5	10/20/18 10:15
42	SB-124-C		Soil	10/16/18	240-103107-6	10/20/18 10:15
43	SB-125-A		Soil	10/17/18	240-103108-1	10/20/18 10:15
44	SB-125-B		Soil	10/17/18	240-103108-2	10/20/18 10:15
45	SB-125-C		Soil	10/17/18	240-103108-3	10/20/18 10:15
46	SB-126-A		Soil	10/17/18	240-103108-4	10/20/18 10:15
47	SB-126-B		Soil	10/17/18	240-103108-5	10/20/18 10:15
48	SB-126-C		Soil	10/17/18	240-103108-6	10/20/18 10:15

Table 2
Sample List and Sample Data Group Cross-List
Al-Tech NYSDEC Site #907022
Dunkirk, New York

RemVer

Count	Sample ID	QA/QC	Matrix	Sample Date	Lab-SDG-#	Receipt by Lab
49	SB-127-A		Soil	10/17/18	240-103108-7	10/20/18 10:15
50	SB-127-B		Soil	10/17/18	240-103108-8	10/20/18 10:15
51	SB-127-C		Soil	10/17/18	240-103108-9	10/20/18 10:15
52	SB-128-A		Soil	10/17/18	240-103108-10	10/20/18 10:15
53	SB-128-B		Soil	10/17/18	240-103108-11	10/20/18 10:15
54	SB-128-C		Soil	10/17/18	240-103108-12	10/20/18 10:15
55	SB-129-A		Soil	10/17/18	240-103108-13	10/20/18 10:15
56	SB-129-B		Soil	10/17/18	240-103108-14	10/20/18 10:15
57	SB-129-C		Soil	10/17/18	240-103108-15	10/20/18 10:15
58	SB-130-A		Soil	10/17/18	240-103108-16	10/20/18 10:15
59	SB-130-B		Soil	10/17/18	240-103108-17	10/20/18 10:15
60	SB-130-C		Soil	10/17/18	240-103108-18	10/20/18 10:15
61	SB-138-A		Soil	10/17/18	240-103108-19	10/20/18 10:15
62	SB-138-B		Soil	10/17/18	240-103108-20	10/20/18 10:15
63	SB-138-C		Soil	10/17/18	240-103109-1	10/20/18 10:15
64	SB-137-A		Soil	10/17/18	240-103109-2	10/20/18 10:15
65	SB-137-B		Soil	10/17/18	240-103109-3	10/20/18 10:15
66	SB-137-C		Soil	10/17/18	240-103109-4	10/20/18 10:15
67	SB-136-A		Soil	10/17/18	240-103109-5	10/20/18 10:15
68	SB-136-B		Soil	10/17/18	240-103109-6	10/20/18 10:15
69	SB-136-C		Soil	10/17/18	240-103109-7	10/20/18 10:15
70	SB-136-D		Soil	10/17/18	240-103109-8	10/20/18 10:15
71	DUP	X	Soil	10/17/18	240-103109-9	10/20/18 10:15
72	SB-135A		Soil	10/18/18	240-103111-1	10/20/18 10:15
73	SB-135B		Soil	10/18/18	240-103111-2	10/20/18 10:15
74	SB-135C		Soil	10/18/18	240-103111-3	10/20/18 10:15
75	SB-134A		Soil	10/18/18	240-103111-4	10/20/18 10:15
76	SB-134B		Soil	10/18/18	240-103111-5	10/20/18 10:15
77	SB-134C		Soil	10/18/18	240-103111-6	10/20/18 10:15
78	SB-133A		Soil	10/18/18	240-103111-7	10/20/18 10:15
79	SB-133B		Soil	10/18/18	240-103111-8	10/20/18 10:15
80	SB-133C		Soil	10/18/18	240-103111-9	10/20/18 10:15
81	SB-133D		Soil	10/18/18	240-103111-10	10/20/18 10:15
82	SB-132A		Soil	10/18/18	240-103111-11	10/20/18 10:15
83	SB-132B		Soil	10/18/18	240-103111-12	10/20/18 10:15
84	SB-132C		Soil	10/18/18	240-103111-13	10/20/18 10:15
85	DUP 10/18/18	X	Soil	10/18/18	240-103111-14	10/20/18 10:15
86	SB-131A		Soil	10/18/18	240-103111-15	10/20/18 10:15
87	SB-131B		Soil	10/18/18	240-103111-16	10/20/18 10:15
88	SB-131C		Soil	10/18/18	240-103111-17	10/20/18 10:15
89	SB-139A		Soil	10/18/18	240-103111-18	10/20/18 10:15
90	SB-139B		Soil	10/18/18	240-103111-19	10/20/18 10:15
91	SB-139C		Soil	10/18/18	240-103111-20	10/20/18 10:15
92	SB-139D		Soil	10/18/18	240-103112-1	10/20/18 10:15
93	SB-140A		Soil	10/18/18	240-103112-2	10/20/18 10:15
94	SB-140B		Soil	10/18/18	240-103112-3	10/20/18 10:15
95	SB-140C		Soil	10/18/18	240-103112-4	10/20/18 10:15
96	SB-141A		Soil	10/18/18	240-103112-5	10/20/18 10:15

Table 2
Sample List and Sample Data Group Cross-List
Al-Tech NYSDEC Site #907022
Dunkirk, New York

RemVer

Count	Sample ID	QA/QC	Matrix	Sample Date	Lab-SDG-#	Receipt by Lab
97	SB-141B		Soil	10/18/18	240-103112-6	10/20/18 10:15
98	SB-141C		Soil	10/18/18	240-103112-7	10/20/18 10:15
99	SB-105-A		Soil	10/10/18	480-143282-1	10/11/18 13:25
100	SB-105-B		Soil	10/10/18	480-143282-2	10/11/18 13:25
101	SB-105-C		Soil	10/10/18	480-143282-3	10/11/18 13:25
102	SB-105-D		Soil	10/10/18	480-143282-4	10/11/18 13:25
103	SB-106-A		Soil	10/10/18	480-143282-5	10/11/18 13:25
104	SB-106-B		Soil	10/10/18	480-143282-6	10/11/18 13:25
105	SB-106-C		Soil	10/10/18	480-143282-7	10/11/18 13:25
106	DUP-101018	X	Soil	10/10/18	480-143282-8	10/11/18 13:25
107	SB-101-A		Soil	10/10/18	480-143282-9	10/11/18 13:25
108	SB-101-B		Soil	10/10/18	480-143282-10	10/11/18 13:25
109	SB-101-C		Soil	10/10/18	480-143282-11	10/11/18 13:25
110	SB-102-A		Soil	10/10/18	480-143282-12	10/11/18 13:25
111	SB-102-B		Soil	10/10/18	480-143282-13	10/11/18 13:25
112	SB-102-C		Soil	10/10/18	480-143282-14	10/11/18 13:25
113	SB-103-A		Soil	10/10/18	480-143282-15	10/11/18 13:25
114	SB-103-B		Soil	10/10/18	480-143282-16	10/11/18 13:25
115	SB-103-C		Soil	10/10/18	480-143282-17	10/11/18 13:25
116	SB-104-A		Soil	10/10/18	480-143282-18	10/11/18 13:25
117	SB-104-B		Soil	10/10/18	480-143282-19	10/11/18 13:25
118	SB-104-C		Soil	10/10/18	480-143282-20	10/11/18 13:25
119	SB-107-A		Soil	10/11/18	480-143525-1	10/16/18 13:10
120	SB-107-B		Soil	10/11/18	480-143525-2	10/16/18 13:10
121	SB-107-C		Soil	10/11/18	480-143525-3	10/16/18 13:10
122	SB-108-A		Soil	10/11/18	480-143525-4	10/16/18 13:10
123	SB-108-B		Soil	10/11/18	480-143525-5	10/16/18 13:10
124	SB-108-C		Soil	10/11/18	480-143525-6	10/16/18 13:10
125	SB-109-A		Soil	10/11/18	480-143525-7	10/16/18 13:10
126	SB-109-B		Soil	10/11/18	480-143525-8	10/16/18 13:10
127	SB-109-C		Soil	10/11/18	480-143525-9	10/16/18 13:10
128	SB-110-A		Soil	10/11/18	480-143525-10	10/16/18 13:10
129	SB-110-B		Soil	10/11/18	480-143525-11	10/16/18 13:10
130	SB-110-C		Soil	10/11/18	480-143525-12	10/16/18 13:10
131	SB-110-D		Soil	10/11/18	480-143525-13	10/16/18 13:10
132	SB-120-A		Soil	10/11/18	480-143525-14	10/16/18 13:10
133	SB-120-B		Soil	10/11/18	480-143525-15	10/16/18 13:10
134	SB-120-C		Soil	10/11/18	480-143525-16	10/16/18 13:10
135	SB-119-A		Soil	10/11/18	480-143525-17	10/16/18 13:10
136	SB-119-B		Soil	10/11/18	480-143525-18	10/16/18 13:10
137	SB-119-C		Soil	10/11/18	480-143525-19	10/16/18 13:10
138	DUP-101118	X	Soil	10/11/18	480-143525-20	10/16/18 13:10
139	SB-117-A		Soil	10/12/18	480-143525-21	10/16/18 13:10
140	SB-117-B		Soil	10/12/18	480-143525-22	10/16/18 13:10
141	SB-117-C		Soil	10/12/18	480-143525-23	10/16/18 13:10
142	SB-117-D		Soil	10/12/18	480-143525-24	10/16/18 13:10
143	SB-118-A		Soil	10/12/18	480-143525-25	10/16/18 13:10
144	SB-118-B		Soil	10/12/18	480-143525-26	10/16/18 13:10

Table 2
Sample List and Sample Data Group Cross-List
Al-Tech NYSDEC Site #907022
Dunkirk, New York

RemVer

Count	Sample ID	QA/QC	Matrix	Sample Date	Lab-SDG-#	Receipt by Lab
145	SB-118-C		Soil	10/12/18	480-143525-27	10/16/18 13:10
146	SB-116-A		Soil	10/12/18	480-143525-28	10/16/18 13:10
147	SB-116-B		Soil	10/12/18	480-143525-29	10/16/18 13:10
148	SB-116-C		Soil	10/12/18	480-143525-30	10/16/18 13:10
149	SB-115-A		Soil	10/12/18	480-143525-31	10/16/18 13:10
150	SB-115-B		Soil	10/12/18	480-143525-32	10/16/18 13:10
151	SB-115-C		Soil	10/12/18	480-143525-33	10/16/18 13:10
152	SB-129-A		Soil	10/23/18	480-144091-1	10/24/18 13:15
153	SB-129-B		Soil	10/23/18	480-144091-2	10/24/18 13:15
154	SB-129-C		Soil	10/23/18	480-144091-3	10/24/18 13:15
155	SB-126-A		Soil	10/23/18	480-144091-4	10/24/18 13:15
156	SB-126-B		Soil	10/23/18	480-144091-5	10/24/18 13:15
157	SB-126-C		Soil	10/23/18	480-144091-6	10/24/18 13:15
158	SB-127-A		Soil	10/23/18	480-144091-7	10/24/18 13:15
159	SB-127-B		Soil	10/23/18	480-144091-8	10/24/18 13:15
160	SB-127-C		Soil	10/23/18	480-144091-9	10/24/18 13:15
161	SB-128-A		Soil	10/23/18	480-144091-10	10/24/18 13:15
162	SB-128-B		Soil	10/23/18	480-144091-11	10/24/18 13:15
163	SB-128-C		Soil	10/23/18	480-144091-12	10/24/18 13:15
164	SB-128-D		Soil	10/23/18	480-144091-13	10/24/18 13:15
165	DUP-102318	X	Soil	10/23/18	480-144091-14	10/24/18 13:15
166	MW-101		Water	10/29/18	480-144395-1	10/30/18 10:35
167	MW-131		Water	10/29/18	480-144395-2	10/30/18 12:35
168	DUP-102918	X	Water	10/29/18	480-144395-3	10/30/18 12:35
169	MW-105		Water	10/29/18	480-144395-4	10/30/18 12:35
170	MW-108		Water	10/29/18	480-144395-5	10/30/18 12:35
171	MW-120		Water	10/30/18	480-144471-1	10/31/18 13:20
172	MW-128		Water	10/30/18	480-144471-2	10/31/18 13:20
173	EQUIPMENT BLANK-01	X	Water	10/30/18	480-144471-3	10/31/18 13:20
174	MW-126		Water	10/30/18	480-144471-4	10/31/18 13:20
175	MW-123		Water	10/30/18	480-144471-5	10/31/18 13:20
176	MW-144		Water	10/30/18	480-144471-6	10/31/18 13:20
177	MW-148		Water	10/30/18	480-144471-7	10/31/18 13:20
178	SW-1		Water	11/09/18	480-145042-1	11/09/18 14:00
179	SW-2		Water	11/09/18	480-145042-2	11/09/18 14:00
180	DUP-11918	X	Water	11/09/18	480-145042-3	11/09/18 14:00
181	TRIP BLANK	X	Water	11/09/18	480-145042-4	11/09/18 14:00

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	240-103104		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☒ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for soil samples. reported in Sample Delivery Groups (SDGs) #240-103104 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

- ☐ Method 1311 TCLP
- ☐ Method 1312 SPLP
- ☒ Method 6010A, B & C / 6020 Trace Metals
- ☐ Method 7000 Metals
- ☐ Method 7196 Hexavalent Chromium (other:_____)
- ☒ Method 7470A or 7471 Mercury
- ☐ Method 8021 Volatile Organic Compounds (VOCs) GC
- ☒ Method 8081B or ☐ 608 Pesticides
- ☒ Method 8082 or ☐ 608 PCBs
- ☐ Method 8151 Chlorinated Herbicides
- ☒ Method 8260C VOCs GC/MS
- ☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
- ☒ Method 9010/9012/9014 Cyanides (_____)
- ☐ Method TO-13A PAHs (air)
- ☐ Method TO-14A / -15 VOCs (air, summa) (_____)
- ☐ Method TO-17 VOCs (air, sorbent)
- ☐ Method 537 PFCs via SPE & LC/MS-MS
- ☐ Volatile Petroleum Hydrocarbons (VPH) Method
- ☐ Extractable Petroleum Hydrocarbons (EPH)
- ☒ Other Methods:
  - ☑ Method Percent Moisture
  - ☑ Method 3550C Ultrasonic Extraction
  - ☑ Method 5035A_L Purge & Trap, closed
  - ☑ Method 3005B Total Metals Prep.
  - ☑ Method 9045D pH

Quality Control Requirements Summary

- ☒ Duplicate
- ☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
- ☐ Trip Blanks
- ☒ Equipment, Method, &/or Rinsate Blank
- ☐ Other Field QC: Field notes regarding sampling
- ☐ Special QAPP Requirements: _____
  _____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) purpose was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals (including metalloids), pH, and Cyanides.

This DUSR addresses SDG #240-103104. The soil samples came from a collection event on October 19, 2018.

Significant Data Usability Issues In SDG: #240-103104

Of the sixteen samples (including one Duplicate) discussed herein, RemVer rejected no results. The other results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #240-103104)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #240-103104–sample #	Matrix	Sampled	Received
SB-142A	#–1	Soil	10/19/18	10/20/18
SB-142B	#–2	Soil	10/19/18	10/20/18
SB-142C	#–3	Soil	10/19/18	10/20/18
SB-143A	#–4	Soil	10/19/18	10/20/18
SB-143B	#–5	Soil	10/19/18	10/20/18
SB-143C	#–6	Soil	10/19/18	10/20/18
DUP-10/19/18	#–7	Soil	10/19/18	10/20/18
SB-144A	#–8	Soil	10/19/18	10/20/18
SB-144B	#–9	Soil	10/19/18	10/20/18
SB-144C	#–10	Soil	10/19/18	10/20/18
SB-150A	#–11	Soil	10/19/18	10/20/18
SB-150B	#–12	Soil	10/19/18	10/20/18
SB-150C	#–13	Soil	10/19/18	10/20/18
SB-145A	#–14	Soil	10/19/18	10/20/18
SB-145B	#–15	Soil	10/19/18	10/20/18
SB-145C	#–16	Soil	10/19/18	10/20/18

The SDG included the following samples with their analyses:

143282	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	SB-142A	X	X	X	X	X	X	X	X
#–2	SB-142B	X	X	X	X	X	X	X	X
#-3	SB-142C	X	X	X	X	X	X	X	X
#-4	SB-143A	X	X	X	X	X	X	X	X
#–5	SB-143B	X	X	X	X	X	X	X	X
#–6	SB-143C	X	X	X	X	X	X	X	X
#–7	DUP10/19/18	X	X	X	X	X	X	X	X
#–8	SB-144A	X	X	X	X	X	X	X	X
#–9	SB-144B	X	X	X	X	X	X	X	X
#–10	SB-144C	X	X	X	X	X	X	X	X
#–11	SB-150A	X	X	X	X	X	X	X	X
#–12	SB-150B	X	X	X	X	X	X	X	X
#–13	SB-150C	X	X	X	X	X	X	X	X
#–14	SB-145A	X	X	X	X	X	X	X	X
#–15	SB-145B	X	X	X	X	X	X	X	X
#–16	SB-145C	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
240-103104	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
240-103104	N (pH & temp) Y	Y	15-min holding time missed, qualified None

Do the QC data fall within the protocol required limits and specifications?
(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data

SDG	1	2	3	4	5	6	7	8	9
240-103104	☐	☐	☒	☒	☒	☒	☐	☒	☒

The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
240-103104	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
240-103104	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
240-103104	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
240-103104	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The soil boring samples came from a collection event October 16, 2018. RemVer reviewed the field notes (soil boring logs) as part of this DUSR.

Laboratory Report Inspection

TA produced an SDG report #240-103104 (dated 6-Nov-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#739392): SDG: #240-103104—single, two-page COC; laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received twelve coolers with samples on 10/20/2018 @ 10:15 AM (designated as SDG-#240-103104). The temperatures of the coolers at receipt were 1.3, 1.5, 1.5, 1.7, 1.7, 1.9, 1.9, 2.1, 2.1, 2.5, 2.7, 3.5, and 3.2ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with one exception:

- Analysis of pH (Method 9040 and includes temperature measurement) has a 15-minute holding time, which was violated; therefore, RemVer qualified these results with a J.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues other than those noted below:

- If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as “UJ”.
- Method 8081 (Pesticides)—the relative percent difference (RPD) between the primary and confirmation column / detector was >40%; the laboratory reported the lower detected value. This occurred with gamma-BHC in all samples. RemVer qualified these results with a UJ or J flag, as appropriate.

Blank Evaluation

SDG #240-103104 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- VOC analysis (Method 8260) had 1,2,4-Trichlorobenzene and 2-Butanone (MEK) in the MBs either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag these analytes with B-flag.

Laboratory Control Samples (LCS)

The various method LCS' (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 240-103104, with the following exceptions:

- Method 8081 (Pesticides)—Methoxychlor had LCS/LCSD recoveries beyond control limits (RPD beyond criteria) causing the results to be biased high. Therefore, RemVer flagged the results UJ+ or J+ in the samples and duplicate.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #240-103104 there were no exceptions requiring flagging of the sample results.

- Method 8260 (VOCs)—recoveries for Sample #-9 were outside control limits. RemVer flagged the results as UJ or J as appropriate.
- Method 8081 (Pesticides)—recoveries for Samples #-2, #-4, #-8, #-10, #-11, #-12, and #-14 were outside control limits, as were the MS/MSD runs. RemVer flagged the results as UJ or J as appropriate.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG 240-103104 with the following exceptions:

- Method 8260—several analytes (1,1-Dichloroethane, 1,1-Dichloroethene, 1,2,4-Trichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, Chloroform, cis-1,2-Dichloroethene, 1,2-Dibromoethane, Methylene Chloride, and trans-1,2-Dichloroethene) had poor MS/MSD recoveries or RPDs beyond limits. RemVer flagged all samples as UJ or J for these analytes.
- Method 6010—MS recoveries for Aluminum, Antimony, Calcium, Chromium, Iron, Manganese, and Zinc were beyond limits and/or had RPD beyond limits. RemVer flagged all results as UJ or J as appropriate.
- Method 9012—the Cyanide batch MS's were beyond control limits due to low sample homogeneity. As a result, RemVer flagged all results as UJ or J as appropriate.

Duplicates

GES collected a field replicate (sample #-7). RemVer did not evaluate the duplicate to judge sampling performance because the source of the replicate was unclear. This is not a significant quality issue as it can be handled by GES directly (*note: if the Relative Percent Difference [RPD] between the original sample and its associated replicate are less than 20%, then sampling performance precision is within acceptable limits*). Regardless, the analytical Method Duplicates met their RPD performance criteria.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) were acceptable for all analytes with the following exceptions:

- Method 8260—the internal standard responses and retention were beyond method criteria method criteria for Samples #-7, #-10 and #-12. Therefore, RemVer flagged results for this analyte as UJ or J as appropriate.

CCVs were acceptable in the SDG for all methods and analytes, with the following exceptions:

- Method 8260C—several batches had recoveries greater than the upper control limit (UCL) for differing analytes. RemVer flagged the results as UJ or J in the samples corresponding to the different batches.
  - Batch #352205/352209: Methyl tert-butyl ether in Samples #-1 and #-2
  - Batch #352300/352302: 2-Hexanone, 4-Methyl-2-pentanone, Cyclohexane, Methyl tert-butyl ether, and Trichlorofluoromethane in Samples #-3, #-4, #-6, #-8, #-10, #-11, and #-12
  - Batch #352567/352571: 4-Methyl-2-pentanone, Methyl tert-butyl ether, and Trichlorofluoromethane in Samples #-5, #-7, #-9, #-13, #-14, and #-15
  - Batch #352999/353025: 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,1-Dichloroethene, 1,2-Dichlorobenzene, Dichloro-difluoromethane, Isopropylbenzene, Methylcyclohexane, Trichlorofluoromethane, o-Xylene, and Total Xylenes in Samples #-16
- Method 8081B—Batch #445452 had recoveries greater than the UCL for Methoxychlor and effect all samples. RemVer flagged the results as UJ or J.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

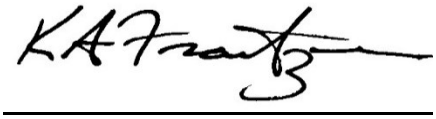
USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

1. DQA Detail Worksheet
2. DQA Non-Conformance Summary Workheet
3. 240-103104_EquaNysdec.xls (EXCEL annotated EDD with validation, attached)



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
Hg (7470)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
SVOC (8270)	—	—	—	None	No Comment
Pest (8081)	—	—	—	None	No Comment
	—	—	X	Methoxychlor	Flag UJ+ or J+
PCBs (8082)	—	—	—	None	No Comment
Metals (6010)	—	—	—	None	No Comment
Hg (7470)	—	—	—	None	No Comment
Cyanide (9012)	—	—	—	None	No Comment

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	—	No Comment
	—	—	X	All in #-9	Flag UJ or J
SVOC (8270)	—	—	—	—	No Comment
Pest (8081)	—	—	—	—	No Comment
	—	—	X	All in #-2, #-4, #-8, #-10, #-11, #-12, & #-14	Flag UJ or J
PCBs (8082)	—	—	—	—	No Comment
Metals (6010)	—	—	—	—	No Comment
Hg (7470)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

Attachment 1 continued

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	—	—	Batch	—	No Comment
1,1-Dichloroethane, 1,1-Dichloroethene, 1,2,4-Trichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, Chloroform, cis-1,2-Dichloroethene, 1,2-Dibromoethane, Methylene Chloride, and trans-1,2-Dichloroethene	—	—	X	Batch	X	Flag UJ or J
SVOC (8270)	—	—	—	Batch	—	No Comment
Pest (8081)	—	—	—	Batch	—	No Comment
PCBs (8082)	—	—	—	Batch	—	No Comment
Metals (6010)	—	—	—	Batch	—	No Comment
Aluminum, Antimony, Calcium, Chromium, Iron, Manganese, & Zinc	—	—	X	Batch	X	Flag UJ or J
Hg (7470)	—	—	—	Batch	—	No Comment
Cyanide (9012)	—	—	X	Batch	X	Flag UJ or J

Attachment 1 continued

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
#-7 (Dup 11918)	Site		N/A	—	
			N/A	—	
			N/A	—	
LAB DUPLICATES					
All Methods	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #240-103104						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	Methoxychlor	LCS CCV	>UCL	—	—	Flag UJ or J
	1,1-Dichloroethane, 1,1-Dichloroethene, 1,2,4-Trichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, Chloroform, cis-1,2-Dichloroethene, 1,2-Dibromoethane, Methylene Chloride, and trans-1,2-Dichloroethene	MS/MSD	>UCL	X	—	Flag UJ or J
	Aluminum, Antimony, Calcium, Chromium, Iron, Manganese, & Zinc	MS/MSD	>UCL	X	—	Flag UJ or J
	Cyanide	MS/MSD	>UCL	X	—	Flag UJ or J
	pH	Holding Time	—	—	—	Flag J
#-1 & 2	Methyl tert-butyl ether	CCV	X	—	—	Flag UJ or J
#-5, #-7, #-9, #-13, #-14, & #-15	4-Methyl-2-pentanone, Methyl tert-butyl ether, & Trichlorofluoro-methane	CCV	X	—	—	Flag UJ or J
#-3, #-4, #-6, #-8, #-10, #-11, & #-12	2-Hexanone, 4-Methyl-2-pentanone, Cyclohexane, Methyl tert-butyl ether, and Trichlorofluoro-methane	CCV	X	—	—	Flag UJ or J
#-9	All VOCs	Surrogates	>UCL	X	—	Flag UJ or J
#-7, #-10 & #-12	All VOCs	Calib. Stnd.	X	—	—	Flag UJ or J
#-2, #-4, #-8, #-10, #-11, #-12, & #-14	All Pesticides	Surrogates	>UCL	X	—	Flag UJ or J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	240-103106		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☒ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for soil samples. reported in Sample Delivery Groups (SDGs) #240-103106 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

- ☐ Method 1311 TCLP
- ☐ Method 1312 SPLP
- ☒ Method 6010A, B & C / 6020 Trace Metals
- ☐ Method 7000 Metals
- ☐ Method 7196 Hexavalent Chromium (other:_____)
- ☒ Method 7470A or 7471 Mercury
- ☐ Method 8021 Volatile Organic Compounds (VOCs) GC
- ☒ Method 8081B or ☐ 608 Pesticides
- ☒ Method 8082 or ☐ 608 PCBs
- ☐ Method 8151 Chlorinated Herbicides
- ☒ Method 8260C VOCs GC/MS
- ☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
- ☒ Method 9010/9012/9014 Cyanides (_____)
- ☐ Method TO-13A PAHs (air)
- ☐ Method TO-14A / -15 VOCs (air, summa) (_____)
- ☐ Method TO-17 VOCs (air, sorbent)
- ☐ Method 537 PFCs via SPE & LC/MS-MS
- ☐ Volatile Petroleum Hydrocarbons (VPH) Method
- ☐ Extractable Petroleum Hydrocarbons (EPH)
- ☒ Other Methods:
  - ☑ Method Percent Moisture
  - ☑ Method 3550C Ultrasonic Extraction
  - ☑ Method 5035A_L Purge & Trap, closed
  - ☑ Method 3005B Total Metals Prep.
  - ☑ Method 9045D pH

Quality Control Requirements Summary

- ☒ Duplicate
- ☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
- ☐ Trip Blanks
- ☒ Equipment, Method, &/or Rinsate Blank
- ☐ Other Field QC: Field notes regarding sampling
- ☐ Special QAPP Requirements: _____
  _____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) purpose was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals (including metalloids), pH, and Cyanides.

This DUSR addresses SDG #240-103106. The soil samples came from a collection event on October 16, 2018.

Significant Data Usability Issues In SDG: #240-103106

Of the twenty samples (including one Duplicate) discussed herein, RemVer rejected no results. The other results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #240-103106)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #240-103106–sample #	Matrix	Sampled	Received
SB-111-A	#–1	Soil	10/16/18	10/20/18
SB-111-B	#–2	Soil	10/16/18	10/20/18
SB-111-C	#–3	Soil	10/16/18	10/20/18
SB-112-A	#–4	Soil	10/16/18	10/20/18
SB-112-B	#–5	Soil	10/16/18	10/20/18
SB-112-C	#–6	Soil	10/16/18	10/20/18
DUP-101618	#–7	Soil	10/16/18	10/20/18
SB-113-A	#–8	Soil	10/16/18	10/20/18
SB-113-B	#–9	Soil	10/16/18	10/20/18
SB-113-C	#–10	Soil	10/16/18	10/20/18
SB-114-A	#–11	Soil	10/16/18	10/20/18
SB-114-B	#–12	Soil	10/16/18	10/20/18
SB-114-C	#–13	Soil	10/16/18	10/20/18
SB-121-A	#–14	Soil	10/16/18	10/20/18
SB-121-B	#–15	Soil	10/16/18	10/20/18
SB-121-C	#–16	Soil	10/16/18	10/20/18
SB-121-D	#–17	Soil	10/16/18	10/20/18
SB-122-A	#–18	Soil	10/16/18	10/20/18
SB-122-B	#–19	Soil	10/16/18	10/20/18
SB-122-C	#–20	Soil	10/16/18	10/20/18

The SDG included the following samples with their analyses:

143282	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	SB-111-A	X	X	X	X	X	X	X	X
#–2	SB-111-B	X	X	X	X	X	X	X	X
#-3	SB-111-C	X	X	X	X	X	X	X	X
#-4	SB-112-A	X	X	X	X	X	X	X	X
#–5	SB-112-B	X	X	X	X	X	X	X	X
#–6	SB-112-C	X	X	X	X	X	X	X	X
#–7	DUP-101618	X	X	X	X	X	X	X	X
#–8	SB-113-A	X	X	X	X	X	X	X	X
#–9	SB-113-B	X	X	X	X	X	X	X	X
#–10	SB-113-C	X	X	X	X	X	X	X	X
#–11	SB-114-A	X	X	X	X	X	X	X	X
#–12	SB-114-B	X	X	X	X	X	X	X	X
#–13	SB-114-C	X	X	X	X	X	X	X	X
#–14	SB-121-A	X	X	X	X	X	X	X	X
#–15	SB-121-B	X	X	X	X	X	X	X	X
#–16	SB-121-C	X	X	X	X	X	X	X	X
#–17	SB-121-D	X	X	X	X	X	X	X	X
#–18	SB-122-A	X	X	X	X	X	X	X	X
#–19	SB-122-B	X	X	X	X	X	X	X	X
#–20	SB-122-C	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
240-103106	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
240-103106	N (pH corrosivity) Y	Y	15-min holding time missed, qualified None

Do the QC data fall within the protocol required limits and specifications?

(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data

SDG	1	2	3	4	5	6	7	8	9
240-103106	☐	☐	☒	☒	☒	☒	☐	☐	☒

The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
240-103106	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
240-103106	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?

Laboratory Report	Qualifiers (Y/N)	Comment
240-103106	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
240-103106	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The soil boring samples came from a collection event October 16, 2018. RemVer reviewed the field notes (soil boring logs) as part of this DUSR.

Laboratory Report Inspection

TA produced an SDG report #240-103106 (dated 6-Nov-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#739391): SDG: #240-103106—single, three-page COC; laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received twelve coolers with samples on 10/20/2018 @ 10:15 AM (designated as SDG-#240-103106). The temperatures of the coolers at receipt were 1.3, 1.5, 1.5, 1.7, 1.7, 1.9, 1.9, 2.1, 2.1, 2.5, 2.7, 3.5, and 3.2ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with one exception:

- Analysis of pH (Method 9040 and includes temperature measurement) has a 15-minute holding time, which was violated; therefore, RemVer qualified these results with a J.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues other than those noted below:

- If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as “UJ”.
- Method 8082 (Pesticides)—the relative percent difference (RPD) between the primary and confirmation column / detector was >40%; the laboratory reported the lower detected value. This occurred with surrogates (DCBP and TCX) in Samples #-9, #-13, and #-20, and Beta-BHC in the MS/MSD runs. RemVer qualified these results with a UJ or J flag, as appropriate.
- Method 8082 (PCBs)—the relative percent difference (RPD) between the primary and confirmation column / detector was >40%; the laboratory reported the lower detected

value. This occurred with PCB surrogate TCX in Sample #-16. RemVer qualified these results with a UJ or J flag, as appropriate.

Blank Evaluation

SDG #240-103106 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- VOC analysis (Method 8260) had 1,2,4-Trichlorobenzene and Bis(2-ethylhexyl) phthalate in the MBs either greater than the MDL but less than the RL. Therefore, RemVer did not flag these analytes with B-flag.
- SVOC analysis (Method 8270) had Bis(2-ethylhexyl) phthalate in the MB either greater than the MDL but less than the RL. Therefore, RemVer did not flag these analytes with a B-flag.
- Mercury analysis (Method 7471B) had the analyte in the MB greater than the MDL but less than the RL. Therefore, RemVer did not flag this analyte with a B-flag.

Laboratory Control Samples (LCS)

The various method LCS' (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 240-103106, with no exceptions.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #240-103106 there were no exceptions requiring flagging of the sample results.

- Method 8260—one surrogate (DBFM) had poor recovery in Samples #-2 and #-5, while the other three surrogates performed within limits. Therefore, RemVer did not flag these samples.
- Method 8081—Pesticide surrogate recovery was outside control limits for the following samples: #-1, #-6, #-9, and #-20. This was due to matrix interference requiring dilutions and effecting recovery. RemVer flagged the results as UJ or J as appropriate.
- Method 8082—PCB surrogate (DCBP & TCX) performance had anomalies while recoveries fell within limits. DCB in the continuing calibration verification (CCV) failed to meet criteria. The TCX surrogate failed the inter-column comparison in the MS/MSD runs (parent sample runs had acceptable surrogate performance). RemVer flagged all results as UJ or J as appropriate.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG 240-103106 with the following exceptions:

- Method 8260— the internal standards (ISTD) were beyond method criteria in the MS/MSD runs (based on Sample #-11) and in the parent sample (see below). Therefore, RemVer flagged results for all samples as UJ or J as appropriate.

- Method 8270—spike recoveries and/or relative percent difference (RPD) was beyond criteria for Di-n-octyl phthalate and Hexachlorocyclopentadiene in the MS/MSD runs. RemVer flagged these analytes as UJ or J in all samples.
- Method 8081—Beta-BHC had poor inter-column performance in the MS/MSD runs beyond limits. Therefore, RemVer flagged all samples as UJ or J for these analytes.
- Method 8082—surrogates in the MS/MSD runs were beyond control limits (see discussion above).
- Method 6010—MS/MSD performance (spike recovery and RPD) were beyond control limits for the following analytes in all samples: Aluminum, Antimony, Barium, Beryllium, Cadmium, Calcium, total Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Potassium, Silver, Sodium, Vanadium, and Zinc. RemVer flagged these results as UJ or J as appropriate.
- Method 9012—the Cyanide batch MS's were beyond control limits (and RPD beyond criteria) due to low sample homogeneity because the associated LCS recovery acceptable. As a result, RemVer flagged all results as UJ or J as appropriate.

Duplicates

GES collected a field replicate (sample #-7). RemVer did not evaluate the duplicate to judge sampling performance because the source of the replicate was unclear. This is not a significant quality issue as it can be handled by GES directly (*note: if the Relative Percent Difference [RPD] between the original sample and its associated replicate are less than 20%, then sampling performance precision is within acceptable limits*). Regardless, the analytical Method Duplicates met their RPD performance criteria.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) were acceptable for all analytes with the following exceptions:

- Method 8260—the ISTDs were beyond method criteria for Samples #-6, #-7, #-11, #-17, #-18, and #-20; therefore, RemVer flagged results for this Sample as UJ or J as appropriate.

CCVs were acceptable in the SDG for all methods and analytes, with the following exceptions:

- Method 8270D—Batch #351630 had recoveries greater than the upper control limit (UCL) for 2,4-Dinitrophenol, 4,6-Dinitro-2-methyl phenol, and Hexachlorocyclopentadiene in Samples #-3, #-10, #-11, and #-16, which were non-detect or less than the RL. Therefore, RemVer did not flag the results.
- Method 8270D—Batch #352849 had recoveries greater than the UCL for Butyl benzyl phthalate, bis (2-chloroisopropyl) ether, and 2-Nitroaniline in Sample #-6, which were non-detect or less than the RL. Therefore, RemVer did not flag the results.
- Method 8082—see discussion of surrogates above.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

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USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

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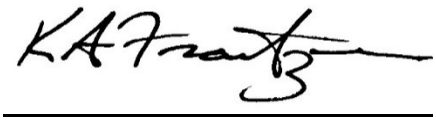
2. DQA Non-Conformance Summary Workheet
3. 240-103106_EquaNysdec.xls (EXCEL annotated EDD with validation, attached)



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
Hg (7470)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
SVOC (8270)	—	—	—	None	No Comment
Pest (8081)	—	—	—	None	No Comment
PCBs (8082)	—	—	—	None	No Comment
Metals (6010)	—	—	—	None	No Comment
Hg (7470)	—	—	—	None	No Comment
Cyanide (9012)	—	—	X	Cyanide	Flag UJ+ or J+

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	—	No Comment
SVOC (8270)	—	—	—	—	No Comment
Pest (8081)	—	—	—	—	No Comment
#-1, 6, 9, 20	—	—	X	DCBP & TCX	Flag UJ or J
PCBs (8082)	—	—	X	In MS/MSD—TCX	Flag UJ or J
Metals (6010)	—	—	—	—	No Comment
Hg (7470)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

Attachment 1 continued

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	ISTD beyond criteria			Batch	—	Flag UJ or J
SVOC (8270)	—	—	—	Batch	—	No Comment
Di-n-octyl phthalate & Hexachloro-cyclopentadiene	—	X	X	Batch	X	Flag UJ or J
Pest (8081)	—	—	—	Batch	—	No Comment
Beta-BHC	—	—	X	Batch	—	Flag UJ or J
PCBs (8082)	—	—	X	Batch	—	Flag UJ or J
Metals (6010)	—	—	—	Batch	—	No Comment
Aluminum, Antimony, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Potassium, Silver, Sodium, Vanadium, & Zinc	—	X	X	Batch	>UCL	Flag UJ or J
Hg (7470)	—	—	—	Batch	—	No Comment
Cyanide (9012)	—	X	X	Batch	>UCL	Flag UJ or J

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
#-7 (Dup 101618)	Site		N/A	—	No Comment
			N/A	—	
			N/A	—	
LAB DUPLICATES					
All Methods	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #240-103106						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	All VOCs	MS/MSD (ISTD)	X	—	—	Flag UJ or J
	Di-n-octyl phthalate & Hexachlorocyclo-pentadiene	MS/MSD	X	X	—	Flag UJ or J
	Beta-BHC	MS/MSD Inter-colum	Beyond method criteria		—	Flag UJ or J
	PCBs	MS/MSD Surrogates	X	—	—	Flag UJ or J
	Aluminum, Antimony, Barium, Beryllium, Cadmium, Calcium, total Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Potassium, Silver, Sodium, Vanadium, and Zinc	MS	>UCL or <LCL	X	—	Flag UJ or J
	Cyanide	MS	>UCL	—	—	Flag UJ or J
	pH	Holding Time	—	—	—	Flag J
#-6, 7, 11, 17, 18, & 20	All VOCs	Calibration Internal Stnd.	Beyond method criteria		—	Flag UJ or J
#-1, 6, 9, & 20	All Pesticides	Surrogates	>UCL	—	—	Flag UJ or J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	240-103107		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☒ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for soil samples. reported in Sample Delivery Groups (SDGs) #240-103107 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

- ☐ Method 1311 TCLP
- ☐ Method 1312 SPLP
- ☒ Method 6010A, B & C / 6020 Trace Metals
- ☐ Method 7000 Metals
- ☐ Method 7196 Hexavalent Chromium (other:_____)
- ☒ Method 7470A or 7471 Mercury
- ☐ Method 8021 Volatile Organic Compounds (VOCs) GC
- ☒ Method 8081B or ☐ 608 Pesticides
- ☒ Method 8082 or ☐ 608 PCBs
- ☐ Method 8151 Chlorinated Herbicides
- ☒ Method 8260C VOCs GC/MS
- ☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
- ☒ Method 9010/9012/9014 Cyanides (_____)
- ☐ Method TO-13A PAHs (air)
- ☐ Method TO-14A / -15 VOCs (air, summa) (_____)
- ☐ Method TO-17 VOCs (air, sorbent)
- ☐ Method 537 PFCs via SPE & LC/MS-MS
- ☐ Volatile Petroleum Hydrocarbons (VPH) Method
- ☐ Extractable Petroleum Hydrocarbons (EPH)
- ☒ Other Methods:
  - ☑ Method Percent Moisture
  - ☑ Method 3550C Ultrasonic Extraction
  - ☑ Method 5035A_L Purge & Trap, closed
  - ☑ Method 3005B Total Metals Prep.
  - ☑ Method 9045D pH

Quality Control Requirements Summary

- ☒ Duplicate
- ☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
- ☐ Trip Blanks
- ☒ Equipment, Method, &/or Rinsate Blank
- ☐ Other Field QC: Field notes regarding sampling
- ☐ Special QAPP Requirements: _____
  _____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) purpose was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals (including metalloids), pH, and Cyanides.

This DUSR addresses SDG #240-103107. The soil samples came from a collection event on October 16, 2018.

Significant Data Usability Issues In SDG: #240-103107

Of the six samples discussed herein, RemVer rejected no results. The other results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

The samples associated with this SDG contained no Field Duplicate. RemVer did not evaluate the duplicate to judge sampling performance in this instance. Regardless, the analytical Method Duplicates met their RPD performance criteria. This was a multi-day sampling event covered by multiple SDGs; herein the reader will find a cross-listing of the samples and their association with other SDGs. RemVer did not find this is to be a significant quality issue as it can be handled by GES directly (*note: if the Relative Percent Difference [RPD] between the original sample and its associated replicate are less than 20%, then sampling performance precision is within acceptable limits*).

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #240-103107)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #240-103107–sample #	Matrix	Sampled	Received
SB-123-A	#–1	Soil	10/16/18	10/20/18
SB-123-B	#–2	Soil	10/16/18	10/20/18
SB-123-C	#–3	Soil	10/16/18	10/20/18
SB-124-A	#–4	Soil	10/16/18	10/20/18
SB-124-B	#–5	Soil	10/16/18	10/20/18
SB-124-C	#–6	Soil	10/16/18	10/20/18

The SDG included the following samples with their analyses:

103107	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	SB-123-A	X	X	X	X	X	X	X	X
#–2	SB-123-B	X	X	X	X	X	X	X	X
#-3	SB-123-C	X	X	X	X	X	X	X	X
#-4	SB-124-A	X	X	X	X	X	X	X	X
#–5	SB-124-B	X	X	X	X	X	X	X	X
#–6	SB-124-C	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
240-103107	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
240-103107	N (pH) Y	Y	15-min holding time missed, qualified None

Do the QC data fall within the protocol required limits and specifications? *(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data*									
SDG	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
240-103107	☐	☐	☒	☒	☒	☒	☐	☒	☒
The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.									

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
240-103107	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
240-103107	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
240-103107	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
240-103107	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The soil boring samples came from a collection event October 16, 2018. RemVer reviewed the field notes (soil boring logs) as part of this DUSR.

Laboratory Report Inspection

TA produced an SDG report #240-103107 (dated 6-Nov-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#739391/2): SDG: #240-103107—single, three-page COC; laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received twelve coolers with samples on 10/20/2018 @ 10:15 AM (designated as SDG-#240-103107). The temperatures of the coolers at receipt were 1.3, 1.5, 1.5, 1.7, 1.7, 1.9, 1.9, 2.1, 2.1, 2.5, 2.7, 3.5, and 3.2ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with one exception:

- Analysis of pH (Method 9040 and includes temperature measurement) has a 15-minute holding time, which was violated; therefore, RemVer qualified these results with a J.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues other than those noted below:

- If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as “UJ”.
- Method 8081 (Pesticides)—the relative percent difference (RPD) between the primary and confirmation column / detector was >40%; the laboratory reported the lower detected value. This occurred with Beta-BHC in Samples #-3 and #-6. RemVer qualified these results with a UJ or J flag, as appropriate.

Blank Evaluation

SDG #240-103107 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- VOC analysis (Method 8260) had 1,2,4-Trichlorobenzene in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag this analyte with B-flag.
- Metals analysis (Method 6010) had Selenium in the MB greater than the MDL but less than the RL and less than 5X greater than the RL. Therefore, RemVer did not flag this analyte with a B-flag.

Laboratory Control Samples (LCS)

The various method LCS’ (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 240-103107, with the following exceptions:

- Method 8081 (Pesticides)—had LCS/LCSD recoveries beyond control limits (RPD >UCL) causing the results to be biased high for Methoxychlor. Therefore, RemVer flagged the results as UJ+ or J+ as appropriate.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #240-103107 there were no exceptions requiring flagging of the sample results, except for the following:

- Method 8081—surrogate recoveries (DCBP & TCX) were outside control limits for the method in Samples #-1, 2, and 5. This was due to matrix interference requiring dilutions and effecting recovery. RemVer flagged the results as UJ or J as appropriate.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG 240-103107 with the following exceptions:

- Method 9012—the Cyanide batch MS's were beyond control limits due to low sample homogeneity. As a result, RemVer flagged all results as UJ or J as appropriate.

Duplicates

The samples associated with this SDG did not have an accompanying field replicate. RemVer did not evaluate a field duplicate to judge sampling performance in this instance; however, as this was a multi-day sampling event covered by multiple SDGs. Therefore, this is not a significant quality issue. Regardless, the analytical Method Duplicates met their RPD performance criteria.

The analytical Method Duplicates met their RPD performance criteria of <20%, with no exceptions.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) were acceptable for all analytes with the following exceptions:

- Method 8260—the internal standard responses and retention were beyond method criteria method criteria for Sample #-1. Therefore, RemVer flagged results for this analyte as UJ or J as appropriate.

CCVs were acceptable in the SDG for all methods and analytes, with the following exceptions:

- Method 8260 (VOCs)—Batch #351228 had recoveries greater than the upper control limit (UCL) for 2-Hexanone, Cyclohexane, 4-Methyl-2-pentanone, and Methyl tert-Butyl Ether in all samples, LCS and MS/MSD. Therefore, RemVer did flag the results as UJ or J.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

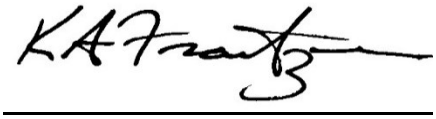
USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

1. DQA Detail Worksheet
2. DQA Non-Conformance Summary Workheet
3. 240-103107_EquaNysdec.xls (EXCEL annotated EDD with validation, attached)



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
Hg (7470)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
SVOC (8270)	—	—	—	None	No Comment
Pest (8081)	—	—	—	None	No Comment
		—	X	Methoxychlor	Flag UJ+ or J+
PCBs (8082)	—	—	—	None	No Comment
Metals (6010)	—	—	—	None	No Comment
Hg (7470)	—	—	—	None	No Comment
Cyanide (9012)	—	—	—	None	No Comment

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	—	No Comment
SVOC (8270)	—	—	—	—	No Comment
Pest (8081)	—	—	—	—	No Comment
#1, 2, & 5	—	—	X	DCBP & TCX	Flag UJ or J
PCBs (8082)	—	—	—	—	No Comment
Metals (6010)	—	—	—	—	No Comment
Hg (7470)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	—	—	Batch	—	No Comment
SVOC (8270)	—	—	—	Batch	—	No Comment
Pest (8081)	—	—	—	Batch	—	No Comment
PCBs (8082)	—	—	—	Batch	—	No Comment
Metals (6010)	—	—	—	Batch	—	No Comment
Hg (7470)	—	—	—	Batch	—	No Comment
Cyanide (9012)	—	X	X	Batch	>UCL	Flag UJ or J

Attachment 1 continued

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
Not in this SDG	Site	N/A	—	—	No Comment
		N/A	—	—	
		N/A	—	—	
LAB DUPLICATES					
All Methods	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #240-103107						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	2-Hexanone, Cyclohexane, 4-Methyl-2-pentanone, & Methyl tert-Butyl Ether	CCV	X	—	—	Flag UJ or J
	Methoxychlor	LCS	X	X	Hi	Flag UJ+ or J+
	Cyanide	MS	>UCL	—	—	Flag UJ or J
	pH	Holding Time	—	—	—	Flag J
#1	All VOCs	Calibration Internal Stnd.	Beyond method criteria		—	Flag UJ or J
#-3 & #-6	Beta-BHC	Column Comparison	Beyond method criteria		—	Flag UJ or J
#1, 2, & 5	All Pesticides	Surrogates	>UCL	—	—	Flag UJ or J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	240-103108		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☒ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for soil samples. reported in Sample Delivery Groups (SDGs) #240-103108 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

- ☐ Method 1311 TCLP
- ☐ Method 1312 SPLP
- ☒ Method 6010A, B & C / 6020 Trace Metals
- ☐ Method 7000 Metals
- ☐ Method 7196 Hexavalent Chromium (other:_____)
- ☒ Method 7470A or 7471 Mercury
- ☐ Method 8021 Volatile Organic Compounds (VOCs) GC
- ☒ Method 8081B or ☐ 608 Pesticides
- ☒ Method 8082 or ☐ 608 PCBs
- ☐ Method 8151 Chlorinated Herbicides
- ☒ Method 8260C VOCs GC/MS
- ☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
- ☒ Method 9010/9012/9014 Cyanides (_____)
- ☐ Method TO-13A PAHs (air)
- ☐ Method TO-14A / -15 VOCs (air, summa) (_____)
- ☐ Method TO-17 VOCs (air, sorbent)
- ☐ Method 537 PFCs via SPE & LC/MS-MS
- ☐ Volatile Petroleum Hydrocarbons (VPH) Method
- ☐ Extractable Petroleum Hydrocarbons (EPH)
- ☒ Other Methods:
  - ☑ Method Percent Moisture
  - ☑ Method 3550C Ultrasonic Extraction
  - ☑ Method 5035A_L Purge & Trap, closed
  - ☑ Method 3005B Total Metals Prep.
  - ☑ Method 9045D pH

Quality Control Requirements Summary

- ☒ Duplicate
- ☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
- ☐ Trip Blanks
- ☒ Equipment, Method, &/or Rinsate Blank
- ☐ Other Field QC: Field notes regarding sampling
- ☐ Special QAPP Requirements: _____
  _____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) purpose was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals (including metalloids), pH, and Cyanides.

This DUSR addresses SDG #240-103108. The soil samples came from a collection event on October 17, 2018.

Significant Data Usability Issues In SDG: #240-103108

Of the twenty samples discussed herein, RemVer rejected no results. The other results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #240-103108)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #240-103108–sample #	Matrix	Sampled	Received
SB-125-A	#–1	Soil	10/17/18	10/20/18
SB-125-B	#–2	Soil	10/17/18	10/20/18
SB-125-C	#–3	Soil	10/17/18	10/20/18
SB-126-A	#–4	Soil	10/17/18	10/20/18
SB-126-B	#–5	Soil	10/17/18	10/20/18
SB-126-C	#–6	Soil	10/17/18	10/20/18
SB-127-A	#–7	Soil	10/17/18	10/20/18
SB-127-B	#–8	Soil	10/17/18	10/20/18
SB-127-C	#–9	Soil	10/17/18	10/20/18
SB-128-A	#–10	Soil	10/17/18	10/20/18
SB-128-B	#–11	Soil	10/17/18	10/20/18
SB-128-C	#–12	Soil	10/17/18	10/20/18
SB-129-A	#–13	Soil	10/17/18	10/20/18
SB-129-B	#–14	Soil	10/17/18	10/20/18
SB-129-C	#–15	Soil	10/17/18	10/20/18
SB-130-A	#–16	Soil	10/17/18	10/20/18
SB-130-B	#–17	Soil	10/17/18	10/20/18
SB-130-C	#–18	Soil	10/17/18	10/20/18
SB-138-A	#–19	Soil	10/17/18	10/20/18
SB-138-B	#–20	Soil	10/17/18	10/20/18

The SDG included the following samples with their analyses:

143282	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	SB-125-A	X	X	X	X	X	X	X	X
#–2	SB-125-B	X	X	X	X	X	X	X	X
#-3	SB-125-C	X	X	X	X	X	X	X	X
#-4	SB-126-A	X	X	X	X	X	X	X	X
#–5	SB-126-B	X	X	X	X	X	X	X	X
#–6	SB-126-C	X	X	X	X	X	X	X	X
#–7	SB-127-A	X	X	X	X	X	X	X	X
#–8	SB-127-B	X	X	X	X	X	X	X	X
#–9	SB-127-C	X	X	X	X	X	X	X	X
#–10	SB-128-A	X	X	X	X	X	X	X	X
#–11	SB-128-B	X	X	X	X	X	X	X	X
#–12	SB-128-C	X	X	X	X	X	X	X	X
#–13	SB-129-A	X	X	X	X	X	X	X	X
#–14	SB-129-B	X	X	X	X	X	X	X	X
#–15	SB-129-C	X	X	X	X	X	X	X	X
#–16	SB-130-A	X	X	X	X	X	X	X	X
#–17	SB-130-B	X	X	X	X	X	X	X	X
#–18	SB-130-C	X	X	X	X	X	X	X	X
#–19	SB-138-A	X	X	X	X	X	X	X	X
#–20	SB-138-B	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
240-103108	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
240-103108	N (pH & temp) Y	Y	15-min holding time missed, qualified None

Do the QC data fall within the protocol required limits and specifications?
(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data

SDG	1	2	3	4	5	6	7	8	9
240-103108	☐	☒	☒	☒	☒	☒	☐	☒	☒

The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
240-103108	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
240-103108	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
240-103108	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
240-103108	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The soil boring samples came from a collection event October 17, 2018. RemVer reviewed the field notes (soil boring logs) as part of this DUSR.

Laboratory Report Inspection

TA produced an SDG report #240-103108 (dated 6-Nov-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#739392): SDG: #240-103108—single, three-page COC; laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received twelve coolers with samples on 10/20/2018 @ 10:15 AM (designated as SDG-#240-103108). The temperatures of the coolers at receipt were 1.3, 1.5, 1.5, 1.7, 1.7, 1.9, 1.9, 2.1, 2.1, 2.5, 2.7, 3.5, and 3.2ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with one exception:

- Analysis of pH (Method 9040 and includes temperature measurement) has a 15-minute holding time, which was violated; therefore, RemVer qualified these results with a J.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues other than those noted below:

- If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as “UJ”.
- Method 9045—pH measurements in Samples #-2 and #-7 were beyond the instrument calibration range of 2 to 12. RemVer flagged the results with a J.
- Method 8082 (PCBs)—the Aroclor pattern was weathered in Samples #-4 and #-5 and the laboratory applied the best match for the two Aroclors in question as follows: This occurred with PCB-1260 in Sample #-4 and PCB-1254 in Sample #-5. RemVer qualified these results with a UJ or J flag, as appropriate.

Blank Evaluation

SDG #240-103108 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- VOC analysis (Method 8260) had 1,2,4-Trichlorobenzene in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag this analyte with B-flag.
- Metals analysis (Method 6010) had Aluminum and Iron in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag these analytes with a B-flag.

Laboratory Control Samples (LCS)

The various method LCS' (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 240-103108, with the following exceptions:

- Method 8081—Batch #351862/352445 had LCS/LCSD recoveries >UCL (RPD acceptable) but biased high for Methoxychlor. Therefore, RemVer flagged the results UJ+ or J+ as appropriate.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #240-103108 there were no exceptions requiring flagging of the sample results.

- Method 8081—DCBP and TCX were beyond control limits in multiple samples (#1, 3, 4, 5, 6 ,7 8, 12, 17, 19, & 20) and in the MS run. DCBP consistently failed in CCV (see below). See MS/MSD discussion below.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG 240-103108 with the following exceptions:

- Method 8260—while the LCS performed well, MS/MSD spike recoveries were beyond limits and the RPD above criteria. Sample #-9 was used as the primary MS/MSD source, which was reported as potentially having suffered cross-contamination in the laboratory. A secondary MS/MSD run using Sample #-5 had better performance but was qualified due to ISTD issues (see below). RemVer flagged all results in all samples UJ or J as appropriate.
- Method 8081—MS/MSD recoveries were beyond control limits and/or RPDs were above criteria leading to poor precision across the runs. The MS run also had poor surrogate performance. Sample matrix interference and/or non-homogeneity are suspected. RemVer flagged all results in all samples UJ or J as appropriate.
- Method 8082—Batch #351389 spike recoveries within control limits but the RPD was beyond criteria for PCB-1260. RemVer flagged the analyte UJ or J in Samples #-1, 3, 4, and 5.
- Method 6010—MS's for Aluminum, Iron, and Antimony were beyond control limits. In the case of Aluminum and Iron, the sample concentration was >4X greater than the spike.

The Antimony spike was below the LCL but the RPD was acceptable. RemVer flagged these results as UJ or J as appropriate.

- Method 9012—the Cyanide batch (#352674/#352718) MS's were beyond control limits due to low sample homogeneity. As a result, RemVer flagged all results as UJ or J as appropriate.

Duplicates

The samples associated with this SDG did not have an accompanying field replicate. RemVer did not evaluate a field duplicate to judge sampling performance in this instance; however, as this was a multi-day sampling event covered by multiple SDGs. Therefore, this is not a significant quality issue. Regardless, the analytical Method Duplicates met their RPD performance criteria.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) were acceptable for all analytes with the following exceptions:

- Method 8260— the internal standard (ISTD) were beyond method criteria method criteria for Samples #-9, 6, 12, and 19. Therefore, RemVer flagged results for this analyte as UJ or J as appropriate.
- Method 8082—ISTD responses and retention were beyond method criteria method criteria for Sample #-17. Therefore, RemVer flagged results for this analyte as UJ or J as appropriate.

CCVs were acceptable in the SDG for all methods and analytes, with the following exceptions:

- Method 8260—
  - CCV in Batch 351290 was outside method criteria for: Chloroethane, Chloromethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, and Bromomethane in Samples #-1, 2, 3, 4, 5, 11, 13, 14, 16, 17, and 20. See MS/MSD discussion above.
  - CCV in Batch 351558 was outside method criteria for: 2-Hexanone; 4-Methyl-2-pentanone; Methyl tert-butyl ether in Samples #-6, 7, 8, 9, 10, 12, 15, 18, and 19. See MS/MSD discussion above.
- Method 8270—CCV associated with Batch 240-352641 was >UCL for Butyl benzyl phthalate and 3,3'-Dichlorobenzidine. This effected Samples #-4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20. RemVer flagged the results as UJ or J.
- Method 8081—DCBP consistently failed recoveries contributing to the surrogate issue discussed above.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

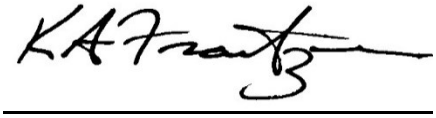
USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

1. DQA Detail Worksheet
2. DQA Non-Conformance Summary Workheet
3. 240-103108_EquaNysdec.xls (EXCEL annotated EDD with validation, attached)



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
Hg (7470)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
SVOC (8270)	—	—	—	None	No Comment
Pest (8081)	— —	— —	— >UCL	None Methoxychlor	No Comment Flag UJ+ or J+
PCBs (8082)	—	—	—	None	No Comment
Metals (6010)	—	—	—	None	No Comment
Hg (7470)	—	—	—	None	No Comment
Cyanide (9012)	—	—	X	Cyanide	Flag UJ+ or J+

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	—	No Comment
SVOC (8270)	—	—	—	—	No Comment
#1, 3, 4, 5, 6 ,7 8, 12, 17, 19, & 20	—	—	X	DCBP & TCX	See MS/MSD
Pest (8081)	—	—	X	DCBP & TCX	See MS/MSD
PCBs (8082)	—	—	—	—	No Comment
Metals (6010)	—	—	—	—	No Comment
Hg (7470)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	X	X	Batch	X	Flag UJ or J
SVOC (8270)	—	X	X	Batch	X	Flag UJ or J
Pest (8081)	—	X	X	Batch	X	Flag UJ or J
PCBs (8082)	—	—	—	Batch	—	No Comment
PCB-1260	—	—	—	Batch	X	Flag UJ or J #-1, 3, 4, & 5
Metals (6010)	—	—	—	Batch	—	No Comment
Aluminum, Iron, & Antimony	—	X	X	Batch	X	Flag UJ or J
Hg (7470)	—	—	—	Batch	—	No Comment
Cyanide (9012)	—	X	X	Batch	>UCL	Flag UJ or J

Attachment 1 continued

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
See other SDGs	Site	—	N/A	—	No Comment
		—	N/A	—	
		—	N/A	—	
LAB DUPLICATES					
All Methods	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #240-103108						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	All VOCs	MS/MSD (cross-contamination?) Calib. & CCV	>UCL <LCL	>UCL	—	Flag UJ or J
	Methoxychlor	LCS	>UCL	—	Hi	Flag UJ+ or J+
	SVOCs	MS/MSD	>UCL <LCL	>UCL	—	Flag UJ or J
	Pesticides	MS/MSD Surrogates	>UCL <LCL	>UCL	—	Flag UJ or J
	Al, Fe, & Sb	MS/MSD	>UCL <LCL	>UCL	—	Flag UJ or J
	Cyanide	MS	>UCL	—	—	Flag UJ or J
	pH	Holding Time	—	—	—	Flag J
#-4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, & 20	Butyl benzyl phthalate & 3,3'-Dichlorobenzidine	CCV	X	—	—	Flag UJ or J
#1, 3, 4, 5, 6 ,7 8, 12, 17, 19, & 20	SVOCs	Surrogates	X	—	—	Flag UJ or J
#-1, 3, 4, & 5	PCB-1260	MS/MSD	—	X	—	Flag UJ or J
#-5 #-4	PCB-1254 PCB-1260	Detection	—	—	—	Flag UJ or J
#-17	PCBs	Calibration (ISTD)	Beyond method criteria		—	Flag UJ or J
#-2 & #-7	pH	Calibration	Out of range		—	Flag J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	240-103109		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☒ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for soil samples. reported in Sample Delivery Groups (SDGs) #240-103109 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

- ☐ Method 1311 TCLP
- ☐ Method 1312 SPLP
- ☒ Method 6010A, B & C / 6020 Trace Metals
- ☐ Method 7000 Metals
- ☐ Method 7196 Hexavalent Chromium (other:_____)
- ☒ Method 7470A or 7471 Mercury
- ☐ Method 8021 Volatile Organic Compounds (VOCs) GC
- ☒ Method 8081B or ☐ 608 Pesticides
- ☒ Method 8082 or ☐ 608 PCBs
- ☐ Method 8151 Chlorinated Herbicides
- ☒ Method 8260C VOCs GC/MS
- ☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
- ☒ Method 9010/9012/9014 Cyanides (_____)
- ☐ Method TO-13A PAHs (air)
- ☐ Method TO-14A / -15 VOCs (air, summa) (_____)
- ☐ Method TO-17 VOCs (air, sorbent)
- ☐ Method 537 PFCs via SPE & LC/MS-MS
- ☐ Volatile Petroleum Hydrocarbons (VPH) Method
- ☐ Extractable Petroleum Hydrocarbons (EPH)
- ☒ Other Methods:
  - ☑ Method Percent Moisture
  - ☑ Method 3550C Ultrasonic Extraction
  - ☑ Method 5035A_L Purge & Trap, closed
  - ☑ Method 3005B Total Metals Prep.
  - ☑ Method 9045D pH

Quality Control Requirements Summary

- ☒ Duplicate
- ☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
- ☐ Trip Blanks
- ☒ Equipment, Method, &/or Rinsate Blank
- ☐ Other Field QC: Field notes regarding sampling
- ☐ Special QAPP Requirements: _____
  _____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) purpose was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals (including metalloids), pH, and Cyanides.

This DUSR addresses SDG #240-103109. The soil samples came from a collection event on October 17, 2018.

Significant Data Usability Issues In SDG: #240-103109

Of the nine samples discussed herein, RemVer rejected no results. The other results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #240-103109)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #240-103109–sample #	Matrix	Sampled	Received
SB-138-C	#–1	Soil	10/17/18	10/20/18
SB-137-A	#–2	Soil	10/17/18	10/20/18
SB-137-B	#–3	Soil	10/17/18	10/20/18
SB-137-C	#–4	Soil	10/17/18	10/20/18
SB-136-A	#–5	Soil	10/17/18	10/20/18
SB-136-B	#–6	Soil	10/17/18	10/20/18
SB-136-C	#–7	Soil	10/17/18	10/20/18
SB-136-D	#–8	Soil	10/17/18	10/20/18
DUP	#–9	Soil	10/17/18	10/20/18

The SDG included the following samples with their analyses:

143282	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	SB-138-C	X	X	X	X	X	X	X	X
#–2	SB-137-A	X	X	X	X	X	X	X	X
#-3	SB-137-B	X	X	X	X	X	X	X	X
#-4	SB-137-C	X	X	X	X	X	X	X	X
#–5	SB-136-A	X	X	X	X	X	X	X	X
#–6	SB-136-B	X	X	X	X	X	X	X	X
#–7	SB-136-C	X	X	X	X	X	X	X	X
#–8	SB-136-D	X	X	X	X	X	X	X	X
#–9	DUP	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
240-103109	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
240-103109	N (pH & temp) Y	Y	15-min holding time missed, qualified None

Do the QC data fall within the protocol required limits and specifications?
(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data

SDG	1	2	3	4	5	6	7	8	9
240-103109	☐	☐	☒	☒	☐	☒	☐	☒	☒

The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
240-103109	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
240-103109	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
240-103109	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
240-103109	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The soil boring samples came from a collection event October 17, 2018. RemVer reviewed the field notes (soil boring logs) as part of this DUSR.

Laboratory Report Inspection

TA produced an SDG report #240-103109 (dated 5-Nov-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#739392): SDG: #240-103109—single, three-page COC; laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received twelve coolers with samples on 10/20/2018 @ 10:15 AM (designated as SDG-#240-103109). The temperatures of the coolers at receipt were 1.3, 1.5, 1.5, 1.7, 1.7, 1.9, 1.9, 2.1, 2.1, 2.5, 2.7, 3.5, and 3.2ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with one exception:

- Analysis of pH (Method 9040 and includes temperature measurement) has a 15-minute holding time, which was violated; therefore, RemVer qualified these results with a J.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues other than those noted below:

- If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as “UJ”.
- Method 8081 (Pesticides)—the relative percent difference (RPD) between the primary and confirmation column / detector was >40%; the laboratory reported the lower detected value. This occurred with Beta-BHC and Heptachlor in Samples #-4, #-6, and #-8. RemVer qualified these results with a UJ or J flag, as appropriate.

Blank Evaluation

SDG #240-103109 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- Metals analysis (Method 6010) had Sodium in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag these analytes with a B-flag.

Laboratory Control Samples (LCS)

The various method LCS’ (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 240-103109, with the following exceptions:

- Method 8081 (Pesticides)—had LCS/LCSD recoveries beyond control limits (RPD >UCL) causing the results to be biased high for Methoxychlor. Therefore, RemVer flagged the results as UJ+ or J+ as appropriate.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #240-103109 there were no exceptions requiring flagging of the sample results.

- Method 8260—surrogate (DBFM) recovery was beyond control limits in Sample #-6. Other surrogates were acceptable and re-analysis had concurring results. RemVer did not set a qualifying flag.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG 240-103109 with the following exceptions:

- Method 6010—while the associated LCS met acceptance criteria, the MS for batch #351908 had poor recovery or RPDs beyond limits for Aluminum, Antimony, and Iron. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS recovery acceptable. Therefore, RemVer flagged these analytes in all samples as UJ or J for these analytes.

Duplicates

GES collected a field replicate (Sample #-9); however, RemVer was not informed as to the replicate source and did not evaluate the field duplicate to judge sampling performance. Therefore, this is not a significant quality issue. All other analytical Method Duplicates met their RPD performance criteria of <20%. The user of this report may perform the analysis (note: if the Relative Percent Difference [RPD] between the original sample and its associated replicate are less than 20%, then sampling performance precision is within acceptable limits).

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) were acceptable for all analytes with the following exceptions:

- Method 8260—the internal standard responses and retention were beyond method criteria method criteria for Sample #-1. Therefore, RemVer flagged results for this analyte as UJ or J as appropriate.

CCVs were acceptable in the SDG for all methods and analytes, with the following exceptions:

- Method 8260C—Batch #351558 was outside method criteria for 2-Hexanone, 4-Methyl-2-pentanone, and Methyl tert-butyl ether (also in Batch #351767). in all samples. Therefore, RemVer flagged the results as UJ or J.
- Method 8270D—Batch #351630 was outside method criteria for 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol and Hexachlorocyclopentadiene in Samples #-1, 2, 3, 4, and 9. Therefore, RemVer flagged the results as UJ or J.

- Method 8081B—Batch #445452 was outside method criteria for Methoxychlor, effecting all samples. RemVer flagged the results as UJ or J.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

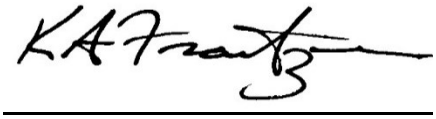
USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

1. DQA Detail Worksheet
2. DQA Non-Conformance Summary Workheet
3. 240-103109_EquaNysdec.xls (EXCEL annotated EDD with validation, attached)



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
Hg (7470)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
SVOC (8270)	—	—	—	None	No Comment
Pest (8081)	—	—	—	None	No Comment
	—	—	X	Methoxychlor	Flag UJ+ or J+
PCBs (8082)	—	—	—	None	No Comment
Metals (6010)	—	—	—	None	No Comment
Hg (7470)	—	—	—	None	No Comment
Cyanide (9012)	—	—	—	None	No Comment

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	—	No Comment
SVOC (8270)	—	—	—	—	No Comment
Pest (8081)	—	—	—	—	No Comment
PCBs (8082)	—	—	—	—	No Comment
Metals (6010)	—	—	—	—	No Comment
Hg (7470)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	—	—	Batch	—	No Comment
SVOC (8270)	—	—	—	Batch	—	No Comment
Pest (8081)	—	—	—	Batch	—	No Comment
PCBs (8082)	—	—	—	Batch	—	No Comment
Metals (6010)	—	—	—	Batch	—	No Comment
Aluminum, Antimony, & Iron	—	—	X	Batch	X	Flag UJ or J
Hg (7470)	—	—	—	Batch	—	No Comment
Cyanide (9012)	—	—	—	Batch	—	No Comment

Attachment 1 continued

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
#-9 (Dup)	Site	N/A	N/A	—	—
		N/A	N/A	—	—
		N/A	N/A	—	—
LAB DUPLICATES					
All Methods	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #240-103109						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
		Calibration	Beyond method criteria		—	Flag UJ or J
	2-Hexanone, 4-Methyl-2-pentanone, & Methyl tert-butyl ether	CCV	X	—	—	Flag UJ or J
	Methoxychlor	CCV	X	—	—	Flag UJ or J
	Aluminum, Antimony, & Iron	MS	>UCL	>UCL	—	Flag UJ or J
	pH	Holding Time	—	—	—	Flag J
#4, 6, & 8	Beta-BHC & Heptachlor	Comparative Columns	Beyond Method Criteria		—	Flag UJ or J
#-1, 2, 3, 4, & 9	2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol & Hexachloro-cyclopentadiene	CCV	X	—	—	Flag UJ or J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	240-103111		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☒ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for soil samples. reported in Sample Delivery Groups (SDGs) #240-103111 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

- ☐ Method 1311 TCLP
- ☐ Method 1312 SPLP
- ☒ Method 6010A, B & C / 6020 Trace Metals
- ☐ Method 7000 Metals
- ☐ Method 7196 Hexavalent Chromium (other:_____)
- ☒ Method 7470A or 7471 Mercury
- ☐ Method 8021 Volatile Organic Compounds (VOCs) GC
- ☒ Method 8081B or ☐ 608 Pesticides
- ☒ Method 8082 or ☐ 608 PCBs
- ☐ Method 8151 Chlorinated Herbicides
- ☒ Method 8260C VOCs GC/MS
- ☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
- ☒ Method 9010/9012/9014 Cyanides (_____)
- ☐ Method TO-13A PAHs (air)
- ☐ Method TO-14A / -15 VOCs (air, summa) (_____)
- ☐ Method TO-17 VOCs (air, sorbent)
- ☐ Method 537 PFCs via SPE & LC/MS-MS
- ☐ Volatile Petroleum Hydrocarbons (VPH) Method
- ☐ Extractable Petroleum Hydrocarbons (EPH)
- ☒ Other Methods:
  - ☑ Method Percent Moisture
  - ☑ Method 3550C Ultrasonic Extraction
  - ☑ Method 5035A_L Purge & Trap, closed
  - ☑ Method 3005B Total Metals Prep.
  - ☑ Method 9045D pH

Quality Control Requirements Summary

- ☒ Duplicate
- ☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
- ☐ Trip Blanks
- ☒ Equipment, Method, &/or Rinsate Blank
- ☐ Other Field QC: Field notes regarding sampling
- ☐ Special QAPP Requirements: _____
  _____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) purpose was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals (including metalloids), pH, and Cyanides.

This DUSR addresses SDG #240-103111. The soil samples came from a collection event on October 18, 2018.

Significant Data Usability Issues In SDG: #240-103111

Of the twenty samples discussed herein, RemVer rejected no results. The other results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #240-103111)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #240-103111–sample #	Matrix	Sampled	Received
SB-135A	#–1	Soil	10/18/18	10/20/18
SB-135B	#–2	Soil	10/18/18	10/20/18
SB-135C	#–3	Soil	10/18/18	10/20/18
SB-134A	#–4	Soil	10/18/18	10/20/18
SB-134B	#–5	Soil	10/18/18	10/20/18
SB-134C	#–6	Soil	10/18/18	10/20/18
SB-133A	#–7	Soil	10/18/18	10/20/18
SB-133B	#–8	Soil	10/18/18	10/20/18
SB-133C	#–9	Soil	10/18/18	10/20/18
SB-133D	#–10	Soil	10/18/18	10/20/18
SB-132A	#–11	Soil	10/18/18	10/20/18
SB-132B	#–12	Soil	10/18/18	10/20/18
SB-132C	#–13	Soil	10/18/18	10/20/18
DUP 10/18/18	#–14	Soil	10/18/18	10/20/18
SB-131A	#–15	Soil	10/18/18	10/20/18
SB-131B	#–16	Soil	10/18/18	10/20/18
SB-131C	#–17	Soil	10/18/18	10/20/18
SB-139A	#–18	Soil	10/18/18	10/20/18
SB-139B	#–19	Soil	10/18/18	10/20/18
SB-139C	#–20	Soil	10/18/18	10/20/18

The SDG included the following samples with their analyses:

143282	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	SB-135A	X	X	X	X	X	X	X	X
#–2	SB-135B	X	X	X	X	X	X	X	X
#-3	SB-135C	X	X	X	X	X	X	X	X
#-4	SB-134A	X	X	X	X	X	X	X	X
#–5	SB-134B	X	X	X	X	X	X	X	X
#–6	SB-134C	X	X	X	X	X	X	X	X
#–7	SB-133A	X	X	X	X	X	X	X	X
#–8	SB-133B	X	X	X	X	X	X	X	X
#–9	SB-133C	X	X	X	X	X	X	X	X
#–10	SB-133D	X	X	X	X	X	X	X	X
#–11	SB-132A	X	X	X	X	X	X	X	X
#–12	SB-132B	X	X	X	X	X	X	X	X
#–13	SB-132C	X	X	X	X	X	X	X	X
#–14	DUP 10/18/18	X	X	X	X	X	X	X	X
#–15	SB-131A	X	X	X	X	X	X	X	X
#–16	SB-131B	X	X	X	X	X	X	X	X
#–17	SB-131C	X	X	X	X	X	X	X	X
#–18	SB-139A	X	X	X	X	X	X	X	X
#–19	SB-139B	X	X	X	X	X	X	X	X
#–20	SB-139C	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
240-103111	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
240-103111	N (pH & temp) Y	Y	15-min holding time missed, qualified None

Do the QC data fall within the protocol required limits and specifications?
(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data

SDG	1	2	3	4	5	6	7	8	9
240-103111	☐	☐	☒	☒	☒	☒	☐	☒	☒

The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
240-103111	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
240-103111	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
240-103111	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
240-103111	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The soil boring samples came from a collection event October 18, 2018. RemVer reviewed the field notes (soil boring logs) as part of this DUSR.

Laboratory Report Inspection

TA produced an SDG report #240-103111 (dated 7-Nov-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#739392): SDG: #240-103111—single, three-page COC; laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received twelve coolers with samples on 10/20/2018 @ 10:15 AM (designated as SDG-#240-103111). The temperatures of the coolers at receipt were 1.3, 1.5, 1.5, 1.7, 1.7, 1.9, 1.9, 2.1, 2.1, 2.5, 2.7, 3.5, and 3.2ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with one exception:

- Analysis of pH (Method 9045 and includes temperature measurement) has a 15-minute holding time, which was violated; therefore, RemVer qualified these results with a J.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues other than those noted below:

- If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as “UJ”.
- Method 8260—several analytes (bis (2-chloroisopropyl) ether, Nitrobenzene, 2-Nitroaniline, Benzaldehyde, and 4-Nitrophenol) had response factors that were below method recommendations in Samples #-16 and #-18. RemVer flagged these analytes in these samples UJ or J.
- Method 9045—pH in Samples #-16 and 19 were beyond the instrument calibration range of 2 to 12. RemVer flagged the results with a J.

Blank Evaluation

SDG #240-103111 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- VOC analysis (Method 8260) had 1,2,4-Trichlorobenzene in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag this analyte with B-flag.
- Metals analysis (Method 6010) had Lead, Manganese, and Sodium in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag these analytes with a B-flag.

Laboratory Control Samples (LCS)

The various method LCS' (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 240-103111, with the following exceptions:

- Method 8082—spike recovery for Methoxychlor was greater than the upper control limit (UCL) (RPD above criteria) causing the results to be biased high. Therefore, RemVer flagged the results UJ+ or J+.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #240-103111 there were no exceptions requiring flagging of the sample results.

- Method 8260—DBFM recoveries were beyond limits in Samples #-16 and #-19. RemVer flagged the analytes with UJ or J as appropriate.
- Method 8082—DCBP and or TCX recoveries were beyond limits across samples and method blanks. RemVer flagged the analytes with UJ or J as appropriate.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG 240-103111 with the following exceptions:

- Method 8260—spike recoveries were beyond limits and RPDs above criteria across the analytes. RemVer flagged the results UJ or J.
- Method 8270—4-Chloro-3-methyl phenol, Hexachlorocyclopentadiene, and Hexachloroethane had spike recoveries beyond control limits and RPDs above criteria. RemVer flagged these analytes as UJ or J as appropriate in all samples.
- Method 6010—Aluminum, Iron, and Antimony had spike recoveries beyond limits. RemVer flagged these analytes as UJ or J as appropriate in all samples.
- Method 7471—the Mercury batch MS's were beyond control limits (RPD was acceptable) due to low sample homogeneity because the associated LCS recovery acceptable. As a result, RemVer flagged all results as UJ or J as appropriate.
- Method 9012—the Cyanide batch MS's were beyond control limits (and RPD beyond criteria) due to low sample homogeneity because the associated LCS recovery acceptable. As a result, RemVer flagged all results as UJ or J as appropriate.

Duplicates

GES collected a field replicate (sample #-14). RemVer did not evaluate the duplicate to judge sampling performance because the source of the replicate was unclear. This is not a significant quality issue as it can be handled by GES directly (note: if the Relative Percent Difference [RPD] between the original sample and its associated replicate are less than 20%, then sampling performance precision is within acceptable limits). Regardless, the analytical Method Duplicates met their RPD performance criteria.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) were acceptable for all analytes with the following exceptions:

- Method 8260—the ISTDs were beyond method criteria for Samples #-1, 6, 7, 10, 11, 17, and 20. RemVer flagged results for this analyte as UJ or J as appropriate.

CCVs were acceptable in the SDG for all methods and analytes, with the following exceptions:

- Method 8260—CCV in multiple batches was outside the method criteria for Methyl tert-butyl ether. RemVer flagged the results as UJ or J in all samples.
- Method 8081B—Batch #352419 had recoveries greater than the UCL for Methoxychlor, and effects Samples #-2 and 3. RemVer flagged the results as UJ or J.
- Method 8082—Batch #352214 had recoveries below the LCL for PCB-1260 on the confirmation column; they were acceptable on the primary column. This effects Samples #-1 and 7. RemVer did not flag the results.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

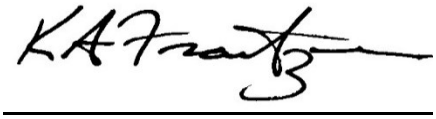
USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

1. DQA Detail Worksheet
2. DQA Non-Conformance Summary Workheet
3. 240-103111_EquaNysdec.xls (EXCEL annotated EDD with validation, attached)



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
Hg (7470)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
SVOC (8270)	—	—	—	None	No Comment
Pest (8081)	— —	— —	— X	Others Methoxychlor	No Comment Flag UJ+ or J+
PCBs (8082)	—	—	—	None	No Comment
	—	—	—	None	No Comment
Metals (6010)	—	—	—	None	No Comment
Hg (7470)	—	—	—	None	No Comment
Cyanide (9012)	—	—	X	Cyanide	Flag UJ+ or J+

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260) #-16 & 19	— —	— —	— X	— DBFM	No Comment Flag UJ or J
SVOC (8270)	—	—	—	—	No Comment
Pest (8081)	—	—	X	DCBP & TCX	Flag UJ or J
PCBs (8082)	—	—	—	—	No Comment
Metals (6010)	—	—	—	—	No Comment
Hg (7470)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

Attachment 1 continued

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	X	X	Batch	X	Flag UJ or J
SVOC (8270)	—	—	—	Batch	—	No Comment
4-Chloro-3-methyl phenol, Hexachlorocyclo-pentadiene, & Hexachloroethane	—	X	X	Batch	X	Flag UJ or J
Pest (8081)	—	—	—	Batch	—	No Comment
	—	X	X	Batch	X	Flag UJ or J
PCBs (8082)	—	—	—	Batch	—	No Comment
Metals (6010)	—	—	—	Batch	—	No Comment
Aluminum, Iron, & Antimony	—	—	X	Batch	—	Flag UJ or J
Hg (7470)	—	X	X	Batch	—	Flag UJ or J
Cyanide (9012)	—	X	X	Batch	X	Flag UJ or J

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
#-14 (Dup 101818)	Site	—	N/A	—	No Comment
		—	N/A	—	
		—	N/A	—	
LAB DUPLICATES					
All Methods	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved ☐ Y ☐ N—Not Applicable
Significant QC Variances Noted ☒ Y ☐ N
Requested Reporting Limits Achieved ☒ Y ☐ N
Preservation Requirements Met ☒ Y ☐ N
Holding Time Requirements Met ☐ Y ☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #240-103111						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	VOCs	MSDS	X	—	—	Flag UJ or J
	Aluminum, Iron, & Antimony	MS/MSD	X	—	—	Flag UJ or J
	Pesticides	Surrogates	>UCL	—	—	Flag UJ or J
	Methoxychlor	LCS CCVs	>UCL	>UCL	—	Flag UJ+ or J+
	Mercury	MS/MSD	>UCL	—	—	Flag UJ or J
	Cyanide	MS/MSD	>UCL	X	—	Flag UJ or J
	pH #-16 & 19	Holding Time Detection Level	—	—	—	Flag J
#-16 & 19	VOCs	Surrogates	X	—	—	Flag UJ or J
#-17	4-Chloro-3-methylphenol	CCV	<LCL	—	—	Flag UJ or J
#16- & -18	bis (2-chloroiso-propyl) ether, Nitrobenzene, 2-Nitroaniline, Benzaldehyde, & 4-Nitrophenol	MS/MSD Level of Detection	<LCL & RPD> Response factor below criteria		—	Flag UJ or J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	240-103112		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☒ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for soil samples. reported in Sample Delivery Groups (SDGs) #240-103112 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☒ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☒ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☒ Method 8081B or ☐ 608 Pesticides
☒ Method 8082 or ☐ 608 PCBs
☐ Method 8151 Chlorinated Herbicides
☒ Method 8260C VOCs GC/MS
☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
☒ Method 9010/9012/9014 Cyanides (_____)

☐ Method TO-13A PAHs (air)
☐ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Method 537 PFCs via SPE & LC/MS-MS
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ Extractable Petroleum Hydrocarbons (EPH)
☒ Other Methods:
- ☑ Method Percent Moisture
- ☑ Method 3550C Ultrasonic Extraction
- ☑ Method 5035A_L Purge & Trap, closed
- ☑ Method 3005B Total Metals Prep.
- ☑ Method 9045D pH

Quality Control Requirements Summary

☒ Duplicate
☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☐ Trip Blanks
☒ Equipment, Method, &/or Rinsate Blank

☐ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) purpose was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals (including metalloids), pH, and Cyanides.

This DUSR addresses SDG #240-103112. The soil samples came from a collection event on October 18, 2018.

Significant Data Usability Issues In SDG: #240-103112

Of the seven samples discussed herein, RemVer rejected no results. The other results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

The samples associated with this SDG contained no Field Duplicate. RemVer did not evaluate the duplicate to judge sampling performance in this instance. Regardless, the analytical Method Duplicates met their RPD performance criteria. This was a multi-day sampling event covered by multiple SDGs; herein the reader will find a cross-listing of the samples and their association with other SDGs. RemVer did not find this is to be a significant quality issue as it can be handled by GES directly (*note: if the Relative Percent Difference [RPD] between the original sample and its associated replicate are less than 20%, then sampling performance precision is within acceptable limits*).

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #240-103112)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #240-103112–sample #	Matrix	Sampled	Received
SB-139D	#–1	Soil	10/18/18	10/20/18
SB-140A	#–2	Soil	10/18/18	10/20/18
SB-140B	#–3	Soil	10/18/18	10/20/18
SB-140C	#–4	Soil	10/18/18	10/20/18
SB-141A	#–5	Soil	10/18/18	10/20/18
SB-141B	#–6	Soil	10/18/18	10/20/18
SB-141C	#–7	Soil	10/18/18	10/20/18

The SDG included the following samples with their analyses:

143282	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	SB-139D	X	X	X	X	X	X	X	X
#–2	SB-140A	X	X	X	X	X	X	X	X
#-3	SB-140B	X	X	X	X	X	X	X	X
#-4	SB-140C	X	X	X	X	X	X	X	X
#–5	SB-141A	X	X	X	X	X	X	X	X
#–6	SB-141B	X	X	X	X	X	X	X	X
#–7	SB-141C	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
240-103112	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
240-103112	N (pH & temp) Y	Y	15-min holding time missed, qualified None

Do the QC data fall within the protocol required limits and specifications? *(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data*									
SDG	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
240-103112	☐	☐	☒	☒	☒	☒	☐	☐	☒
The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.									

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
240-103112	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
240-103112	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
240-103112	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
240-103112	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The soil boring samples came from a collection event October 18, 2018. RemVer reviewed the field notes (soil boring logs) as part of this DUSR.

Laboratory Report Inspection

TA produced an SDG report #240-103112 (dated 6-Nov-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#739392): SDG: #240-103112—single, three-page COC; laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received twelve coolers with samples on 10/20/2018 @ 10:15 AM (designated as SDG-#240-103112). The temperatures of the coolers at receipt were 1.3, 1.5, 1.5, 1.7, 1.7, 1.9, 1.9, 2.1, 2.1, 2.5, 2.7, 3.5, and 3.2ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with the following exceptions:

- Analysis of pH/corrosivity (Method 9040 and includes temperature measurement) has a 15-minute holding time, which was violated; therefore, RemVer qualified these results with a J.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues other than those noted below:

- If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as "UJ".
- Method 8081—the relative percent difference (RPD) between the primary and confirmation column/detector was >40% for Beta-BHC. RemVer qualified the results as UJ or J.

Blank Evaluation

SDG #240-103112 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- Metals analysis (Method 6010) had Lead and Manganese in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag these analytes with a B-flag.

Laboratory Control Samples (LCS)

The various method LCS' (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 240-103112, with no exceptions.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #240-103112 there were no exceptions requiring flagging of the sample results.

- Method 8260—all four surrogates were beyond control limits in the MS/MS sample (#-5).
- Method 8081—surrogate recoveries were beyond control limits for Samples #-1, 2, 3, and 5. RemVer flagged the results for these samples as UJ or J as appropriate.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG 240-103112 with the following exceptions:

- Method 8260—considering the surrogate response (see above) and the internal calibration standard (see below) all VOC results were flagged as UJ or J.

- Method 8270—MS and/or MSD recoveries were outside acceptance limits and/or the RPD was above control limits for 2,4-Dimethylphenol, 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Chloroaniline, 4-Nitroaniline, Benzaldehyde, bis (2-chloroisopropyl) ether, Bis(2-chloroethyl) ether, Hexachlorobenzene, Hexachlorocyclopentadiene, and Hexachloroethane in all samples. Therefore, RemVer flagged all samples as UJ or J for these analytes.
- Method 6010—while the associated LCS met acceptance criteria, the MS for Batch 351908 had recoveries either >UCL or <LCL for Aluminum, Iron, Antimony, and Lead. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS recovery acceptable. Therefore, RemVer flagged all samples as UJ or J for these analytes.
- Method 9012—the Cyanide batch MS/MSD had poor sample homogeneity resulting in precision being beyond control limits. RemVer flagged all results as UJ or J as appropriate.

Duplicates

The samples associated with this SDG did not have an accompanying field replicate. RemVer did not evaluate a field duplicate to judge sampling performance in this instance; however, as this was a multi-day sampling event covered by multiple SDGs. Therefore, this is not a significant quality issue. Regardless, the analytical Method Duplicates met their RPD performance criteria.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) were acceptable for all analytes with the following exceptions:

- Method 8260—the MS/MSD run (which used Sample #-5) and Sample #-7 had Internal standard (ISTD) responses outside control limits, requiring flagging all analytes as UJ or J, as appropriate.

CCVs were acceptable in the SDG for all methods and analytes, with the following exceptions:

- Method 8260—Batch 352205 was outside the method criteria for the following analyte: Methyl tert-butyl ether. RemVer flagged the results as UJ or J.
- Method 8270D—Batch #352598 had recoveries below the lower control limit (LCL) for 4-Chloro-3-methylphenol in all samples, which were non-detect or less than the RL. Therefore, RemVer did not flag the results.
- Method 8081B—Batch #353550 had recoveries greater than the UCL for Methoxychlor and effects all samples. RemVer flagged the results as UJ or J.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

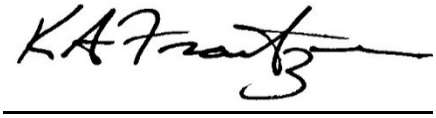
USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

1. DQA Detail Worksheet
2. DQA Non-Conformance Summary Workheet
3. 240-103112_EquaNysdec.xls (EXCEL annotated EDD with validation, attached)



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
Hg (7470)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
SVOC (8270)	—	—	—	None	No Comment
Pest (8081)	—	—	—	None	No Comment
PCBs (8082)	—	—	—	None	No Comment
Metals (6010)	—	—	—	None	No Comment
Hg (7470)	—	—	—	None	No Comment
Cyanide (9012)	—	—	—	None	No Comment

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	—	No Comment
	—	—	X	All in #-5	Flag UJ or J
SVOC (8270)	—	—	—	—	No Comment
Pest (8081)	—	—	—	—	No Comment
	—	—	X	All in #-1, 2,3, & 5	Flag UJ or J
PCBs (8082)	—	—	—	—	No Comment
Metals (6010)	—	—	—	—	No Comment
Hg (7470)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	X	X	Batch	X	Flag UJ or J
SVOC (8270)	—	—	—	Batch	—	No Comment
2,4-Dimethyl-phenol, 3,3'-Dichlorobenzidin 3-Nitroaniline, 4-Chloroaniline, 4-Nitroaniline, Benzaldehyde, bis (2-chloroiso-propyl) ether, Bis (2-chloroethyl) ether,	—	—	X	Batch	X	Flag UJ or J

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
Hexachloro-benzene, Hexachlorocyclop entadiene, & Hexachloroethane						
Pest (8081)	—	—	—	Batch	—	No Comment
PCBs (8082)	—	—	—	Batch	—	No Comment
Metals (6010)	—	—	—	Batch	—	No Comment
Aluminum, Iron, Antimony, & Lead	—	X	X	Batch	X	Flag UJ or J
Hg (7470)	—	—	—	Batch	—	No Comment
Cyanide (9012)	—	—	X	Batch	—	Flag UJ or J

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
No Duplicate within SDG	Site	N/A	N/A	—	No Comment
		N/A	N/A	—	
		N/A	N/A	—	
LAB DUPLICATES					
All Methods	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #240-103112						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	All VOCs	ISTD & MS/MSD	X	—	—	Flag UJ or J
	Methyl tert-butyl ether	CCV	X	—	—	Flag UJ or J
	Methoxychlor	CCV	X	—	—	Flag UJ or J
	2,4-Dimethyl-phenol, 3,3'-Dichlorobenzidine 3-Nitroaniline, 4-Chloroaniline, 4-Nitroaniline, Benzaldehyde, bis (2-chloroiso-propyl) ether, Bis (2-chloroethyl) ether, Hexachlorobenzene, Hexachlorocyclo-pentadiene, & Hexachloroethane	MS/MSD	X	—	—	Flag UJ or J
	Beta-BHC	Column	<LCL	—	—	Flag UJ or J
	Aluminum, Iron, Antimony, & Lead	MS/MSD	>UCL	>UCL	—	Flag UJ or J
	Cyanide	MS	>UCL	X	Hi	Flag UJ or J
	pH	Holding Time	—	—	—	Flag J
#5	VOCs	Surrogates	>UCL	—	—	Flag UJ or J
#-1, 2,3, & 5	Pesticides	Surrogates	>UCL	—	—	Flag UJ or J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	480-143282		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☒ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for soil samples. reported in Sample Delivery Groups (SDGs) #480-143282 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☒ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☒ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☒ Method 8081B or ☐ 608 Pesticides
☒ Method 8082 or ☐ 608 PCBs
☐ Method 8151 Chlorinated Herbicides
☒ Method 8260C VOCs GC/MS
☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
☒ Method 9010/9012/9014 Cyanides (_____)

☐ Method TO-13A PAHs (air)
☐ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Method 537 PFCs via SPE & LC/MS-MS
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ Extractable Petroleum Hydrocarbons (EPH)
☒ Other Methods:
- ☑ Method Percent Moisture
- ☑ Method 3550C Ultrasonic Extraction
- ☑ Method 5035A_L Purge & Trap, closed
- ☑ Method 3005B Total Metals Prep.
- ☑ Method 9045D pH

Quality Control Requirements Summary

☒ Duplicate
☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☐ Trip Blanks
☒ Equipment, Method, &/or Rinsate Blank

☐ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) purpose was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals (including metalloids), pH, and Cyanides.

This DUSR addresses SDG #480-143282. The soil samples came from a collection event on October 10, 2018.

Significant Data Usability Issues In SDG: #480-143282

Of the twenty samples (including one Duplicate) discussed herein, RemVer rejected no results. The other results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #480-143282)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #480-143282–sample #	Matrix	Sampled	Received
SB-105-A	#–1	Soil	10/10/18	10/11/18
SB-105-B	#–2	Soil	10/10/18	10/11/18
SB-105-C	#–3	Soil	10/10/18	10/11/18
SB-105-D	#–4	Soil	10/10/18	10/11/18
SB-106-A	#–5	Soil	10/10/18	10/11/18
SB-106-B	#–6	Soil	10/10/18	10/11/18
SB-106-C	#–7	Soil	10/10/18	10/11/18
DUP-101018	#–8	Soil	10/10/18	10/11/18
SB-101-A	#–9	Soil	10/10/18	10/11/18
SB-101-B	#–10	Soil	10/10/18	10/11/18
SB-101-C	#–11	Soil	10/10/18	10/11/18
SB-102-A	#–12	Soil	10/10/18	10/11/18
SB-102-B	#–13	Soil	10/10/18	10/11/18
SB-102-C	#–14	Soil	10/10/18	10/11/18
SB-103-A	#–15	Soil	10/10/18	10/11/18
SB-103-B	#–16	Soil	10/10/18	10/11/18
SB-103-C	#–17	Soil	10/10/18	10/11/18
SB-104-A	#–18	Soil	10/10/18	10/11/18
SB-104-B	#–19	Soil	10/10/18	10/11/18
SB-104-C	#–20	Soil	10/10/18	10/11/18

The SDG included the following samples with their analyses:

143282	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	SB-105-A	X	X	X	X	X	X	X	X
#–2	SB-105-B	X	X	X	X	X	X	X	X
#-3	SB-105-C	X	X	X	X	X	X	X	X
#-4	SB-105-D	X	X	X	X	X	X	X	X
#–5	SB-106-A	X	X	X	X	X	X	X	X
#–6	SB-106-B	X	X	X	X	X	X	X	X
#–7	SB-106-C	X	X	X	X	X	X	X	X
#–8	DUP-101018	X	X	X	X	X	X	X	X
#–9	SB-101-A	X	X	X	X	X	X	X	X
#–10	SB-101-B	X	X	X	X	X	X	X	X
#–11	SB-101-C	X	X	X	X	X	X	X	X
#–12	SB-102-A	X	X	X	X	X	X	X	X
#–13	SB-102-B	X	X	X	X	X	X	X	X
#–14	SB-102-C	X	X	X	X	X	X	X	X
#–15	SB-103-A	X	X	X	X	X	X	X	X
#–16	SB-103-B	X	X	X	X	X	X	X	X
#–17	SB-103-C	X	X	X	X	X	X	X	X
#–18	SB-104-A	X	X	X	X	X	X	X	X
#–19	SB-104-B	X	X	X	X	X	X	X	X
#–20	SB-104-C	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
480-143282	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
480-143282	N (pH & temp) N (#-9 Cyanide) Y	Y	15-min holding time missed, qualified Re-analysis caused holding time miss, qualified None

Do the QC data fall within the protocol required limits and specifications?
(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data

SDG	1	2	3	4	5	6	7	8	9
480-143282	☐	☐	☒	☒	☒	☒	☐	☒	☒

The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
480-143282	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
480-143282	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
480-143282	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
480-143282	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The soil boring samples came from a collection event October 10, 2018. RemVer reviewed the field notes (soil boring logs) as part of this DUSR.

Laboratory Report Inspection

TA produced an SDG report #480-143282 (dated 31-Oct-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#739391): SDG: #480-143282—single, two-page COC; laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received two coolers with samples on 10/11/2018 @ 13:25 PM (designated as SDG-#480-143282). The temperatures of the coolers at receipt were 3.0 and 3.2ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with two exceptions:

- Analysis of pH (Method 9040 and includes temperature measurement) has a 15-minute holding time, which was violated; therefore, RemVer qualified these results with a J.
- The initial analysis for Cyanide (Method 9012) in Sample #-9 had quality issues requiring re-analysis. The re-analysis occurred outside of holding times. The laboratory reported the re-analysis only. RemVer qualified the initial and re-analysis results UJ / J, as appropriate.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues. If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as “UJ”.

Blank Evaluation

SDG #480-143282 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- VOC analysis (Method 8260) had Methylene Chloride and Chloroform in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag this analyte with B-flag.
- Metals analysis (Method 6010)
  - Several batches had Calcium, Iron, Manganese, and/or Sodium in the MB either greater than the MDL but less than the RL or less than 10X greater than the RL. Therefore, RemVer did not flag these analytes with a B-flag.
  - Several batches had Potassium in the MB greater than the RL but less than 10X the RL in Samples #-1 – #6. RemVer did not flag these analytes with a B-flag.

Laboratory Control Samples (LCS)

The various method LCS' (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 480-143282, with the following exceptions:

- Method 8270—Benzaldehyde was detected beyond the calibration range in the LCS (and the associated MS) due to a dropped upper calibration point; nevertheless, the analyte was within control limits. RemVer flagged this analyte in all samples as UJ or J.
- Method 8082—PCB 1260 result in the LCS exceeded calibration range. RemVer flagged all samples as UJ or J for this analyte.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #480-143282 there were no exceptions requiring flagging of the sample results.

- Method 8081—recovery of DCBP (both checks) in Samples #-1 and #-15 exceeded quality control limits due to the sample matrix. Recovery of the secondary surrogate was acceptable. RemVer flagged these samples as UJ or J.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG 480-143282 with the following exceptions:

- Method 8260—MS/MSD recoveries for Batch #439844/#439852 were outside control limits. Sample matrix interference is suspected because the associated LCS was within acceptance limits. Most reported analyte concentrations were below 200 ug/kg and may be biased low because sample collection was not for low-level specifications. RemVer flagged all analytes in all samples as UJ or J.
- Method 8270—Benzaldehyde was detected beyond the calibration range in the MS (and the associated LCS) due to a dropped upper calibration point; nevertheless, the analyte was within control limits. RemVer flagged this analyte in all samples as UJ or J.
- Method 8081—spike recoveries for Batch #440016/440174 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS recovery were acceptable. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS recovery acceptable. Therefore, RemVer flagged all samples as UJ or J for these analytes.

- Method 8082—MS/MSD precision of Batch 439932/440242 was outside control limits, likely due to sample matrix interference. Surrogate DCBP also was beyond limits in the MS/MSD runs. Therefore, RemVer flagged all results as UJ or J as appropriate.
- Method 6010—MS/MSD spike recoveries were beyond control limits and/or the RPDs were above criteria. RemVer flagged all results as UJ or J as appropriate.
- Method 9012—the Cyanide batch MS's were beyond control limits due to low sample homogeneity. As a result, RemVer flagged all results as UJ or J as appropriate.

Duplicates

GES collected a field replicate (sample #-8). RemVer did not evaluate the duplicate to judge sampling performance because the source of the replicate was unclear. This is not a significant quality issue as it can be handled by GES directly (*note: if the Relative Percent Difference [RPD] between the original sample and its associated replicate are less than 20%, then sampling performance precision is within acceptable limits*). Regardless, the analytical Method Duplicates met their RPD performance criteria, with the following exceptions:

- Method 9012—Batch 441220/441431 sample duplicate (#-1 [SB-105-A] and 480-143282-B-1-H DU) precision associated with preparation was outside control limits, likely due to sample non-homogeneity. RemVer flagged all samples as UJ or J for these analytes.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) were acceptable for all analytes with the following exceptions:

- Method 8260—Internal standard (ISTD) response for Sample #-7 was outside control limits. RemVer flagged results for this analyte as UJ or J as appropriate.

CCVs were acceptable in the SDG for all methods and analytes, with the following exceptions:

- Method 8260—CVVs were recovered outside acceptance criteria, low biased, for the following analytes in different samples. RemVer flagged the results as UJ- or J-.
  - Batch #439852 (Samples #-1, #-2, #-3, #-4, #-5, #-6, #-8, #-9, #-10, #-11, &#-12) Analytes: Vinyl chloride, Chloromethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, and Trichlorofluoromethane
  - Batch #440087 (Samples #-15, #-16, #-17, #-18, #-19, & #-20) Analytes: 1,1,2-Trichloro-1,2,2-trifluoroethane, Chloromethane, Trichlorofluoromethane and Vinyl chloride
- Method 6010—Samples #-3, 4, and 6 had recoveries greater than the UCL for Cadmium. RemVer flagged the results as UJ or J.
- Method 6010— Samples #-3 and 4 had recoveries greater than the UCL for Zinc. RemVer flagged the results as UJ or J.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

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USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

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2. DQA Non-Conformance Summary Workheet
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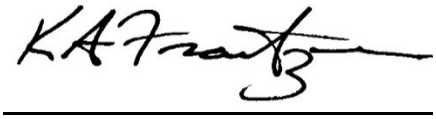


Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
Hg (7470)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
SVOC (8270)	—	—	— calibration	None Benzaldehyde	No Comment Flag UJ or J
Pest (8081)	—	—	—	None	No Comment
PCBs (8082)	—	—	— X	Others PCB 1260	No Comment Flag UJ or J
Metals (6010)	—	—	—	None	No Comment
Hg (7470)	—	—	—	None	No Comment
Cyanide (9012)	—	—	X	Cyanide	Flag UJ+ or J+

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	—	No Comment
SVOC (8270)	—	—	—	—	No Comment
Pest (8081)	—	—	—	—	No Comment
#-1 & 15	—	—	X	DCBP	Flag UJ or J
PCBs (8082)	—	—	—	—	No Comment
Metals (6010)	—	—	—	—	No Comment
Hg (7470)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	X	X	Batch	X	Flag UJ or J
SVOC (8270)	—	—	—	Batch	—	No Comment
Benzaldehyde	—	—	calibration	Batch	—	Flag UJ or J
Pest (8081)	—	X	X	Batch	X	Flag UJ or J
PCBs (8082)	—	—	X	Batch	—	Flag UJ or J
Metals (6010)	—	X	X	Batch	X	Flag UJ or J
Hg (7470)	—	—	—	Batch	—	No Comment
Cyanide (9012)	—	—	X	Batch	—	Flag UJ or J

Attachment 1 continued

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
#-8 (Dup 101018)	Site	—	N/A	—	No Comment
		—	N/A	—	
		—	N/A	—	
LAB DUPLICATES					
All Methods	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #480-143282						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	VOCs	MS/MSD	>UCL <LCL	X	—	Flag UJ or J
	Benzaldehyde	LCS & MS	Beyond calibration		—	Flag UJ or J
	All PCBs PCB 1260	MS/MSD LCS calibration	>UCL	—	—	Flag UJ or J
	Pesticides	MS/MSD	>UCL	—	—	Flag UJ or J
	Metals	MS/MSD	>UCL <LCL	X	—	Flag UJ or J
	Cyanide	Holding Time (#-9) Lab Duplicate (#-1) MS/MSD	>UCL	—	—	Flag UJ or J
	pH	Holding Time	—	—	—	Flag J
#1 & #-15	Pesticides	Surrogate DCBP	>UCL	—	—	Flag UJ or J
#-7	VOCs	Calibration ISTD	X	—	—	Flag UJ or J
#-1, #-2, #-3, #-4, #-5, #-6, #-8, #-9, #-10, #-11, &#-12	1,1,2-Trichloro-1,2,2-trifluoroethane, Chloromethane, Trichlorofluoromethane and Vinyl chloride	CCV	X	—	—	Flag UJ- or J-
#-15, #-16, #-17, #-18, #-19, & #-20	1,1,2-Trichloro-1,2,2-trifluoroethane, Chloromethane, Trichlorofluoromethane and Vinyl chloride	CCV	X	—	—	Flag UJ- or J-
#-3, 4, & 6	Cadmium	CCV	X	—	—	Flag UJ or J
#-3 & 4	Zinc	CCV	X	—	—	Flag UJ or J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	480-143525-1		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☒ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for soil samples. reported in Sample Delivery Groups (SDGs) #480-143525-1 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☒ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☒ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☒ Method 8081B or ☐ 608 Pesticides
☒ Method 8082 or ☐ 608 PCBs
☐ Method 8151 Chlorinated Herbicides
☒ Method 8260C VOCs GC/MS
☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
☒ Method 9010/9012/9014 Cyanides (_____)

☐ Method TO-13A PAHs (air)
☐ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Method 537 PFCs via SPE & LC/MS-MS
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ Extractable Petroleum Hydrocarbons (EPH)
☒ Other Methods:
- ☑ Method Percent Moisture
- ☑ Method 3550C Ultrasonic Extraction
- ☑ Method 5035A_L Purge & Trap, closed
- ☑ Method 3005B Total Metals Prep.
- ☑ Method 9045D pH

Quality Control Requirements Summary

☒ Duplicate
☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☐ Trip Blanks
☒ Equipment, Method, &/or Rinsate Blank

☐ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals (including metalloids), pH, and Cyanides.

This DUSR addresses SDG #480-143525-1. The analytical results in this SDG came from a collection event on October 11, 2018.

Significant Data Usability Issues In SDG: #480-143525-1

Of the twenty samples (including one Duplicate) discussed herein, RemVer rejected no results. The other results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #480-143525-1)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #480-143525-1–sample #	Matrix	Sampled	Received
SB-107-A	#–1	Soil	10/11/18	10/16/18
SB-107-B	#–2	Soil	10/11/18	10/16/18
SB-107-C	#–3	Soil	10/11/18	10/16/18
SB-108-A	#–4	Soil	10/11/18	10/16/18
SB-108-B	#–5	Soil	10/11/18	10/16/18
SB-108-C	#–6	Soil	10/11/18	10/16/18
SB-109-A	#–7	Soil	10/11/18	10/16/18
SB-109-B	#–8	Soil	10/11/18	10/16/18
SB-109-C	#–9	Soil	10/11/18	10/16/18
SB-110-A	#–10	Soil	10/11/18	10/16/18
SB-110-B	#–11	Soil	10/11/18	10/16/18
SB-110-C	#–12	Soil	10/11/18	10/16/18
SB-110-D	#–13	Soil	10/11/18	10/16/18
SB-120-A	#–14	Soil	10/11/18	10/16/18
SB-120-B	#–15	Soil	10/11/18	10/16/18
SB-120-C	#–16	Soil	10/11/18	10/16/18
SB-119-A	#–17	Soil	10/11/18	10/16/18
SB-119-B	#–18	Soil	10/11/18	10/16/18
SB-119-C	#–19	Soil	10/11/18	10/16/18
DUP-101118	#–20	Soil	10/11/18	10/16/18

The SDG included the following samples with their analyses:

143525-1	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	SB-107-A	X	X	X	X	X	X	X	X
#–2	SB-107-B	X	X	X	X	X	X	X	X
#-3	SB-107-C	X	X	X	X	X	X	X	X
#-4	SB-108-A	X	X	X	X	X	X	X	X
#–5	SB-108-B	X	X	X	X	X	X	X	X
#–6	SB-108-C	X	X	X	X	X	X	X	X
#–7	SB-109-A	X	X	X	X	X	X	X	X
#–8	SB-109-B	X	X	X	X	X	X	X	X
#–9	SB-109-C	X	X	X	X	X	X	X	X
#–10	SB-110-A	X	X	X	X	X	X	X	X
#–11	SB-110-B	X	X	X	X	X	X	X	X
#–12	SB-110-C	X	X	X	X	X	X	X	X
#–13	SB-110-D	X	X	X	X	X	X	X	X
#–14	SB-120-A	X	X	X	X	X	X	X	X
#–15	SB-120-B	X	X	X	X	X	X	X	X
#–16	SB-120-C	X	X	X	X	X	X	X	X
#–17	SB-119-A	X	X	X	X	X	X	X	X
#–18	SB-119-B	X	X	X	X	X	X	X	X
#–19	SB-119-C	X	X	X	X	X	X	X	X
#–20	DUP-101118	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
480-143525-1	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
480-143525-1	N (pH & temp) N (#-4 VOCs) Y	Y	15-min holding time missed, qualified Re-analysis caused holding time miss, qualified None

Do the QC data fall within the protocol required limits and specifications?
(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data

SDG	1	2	3	4	5	6	7	8	9
480-143525-1	☐	☐	☒	☒	☐	☒	☐	☒	☒

The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
480-143525-1	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
480-143525-1	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
480-143525-1	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
480-143525-1	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The soil boring samples came from a collection event October 11, 2018. RemVer reviewed the field notes (soil boring logs) as part of this DUSR.

Laboratory Report Inspection

TA produced an SDG report #480-143525-1 (dated 12-Nov-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#739391): SDG: #480-143525-1—single, four-page COC; laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received eight coolers with samples on 10/16/2018 @ 13:10 PM (designated as SDG-#480-143525-1). The temperatures of the coolers at receipt were 1.3,1.8, 2.2, 2.3, 2.6, 2.9, 3.1, and 3.1ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with one exception:

- Analysis of pH (Method 9040 and includes temperature measurement) has a 15-minute holding time, which was violated; therefore, RemVer qualified these results with a J.
- Method 8260 #-4
- The initial analysis for Cyanide (Method 9012) in Sample #-9 (SB-101-A) had significant quality issues requiring re-analysis. The re-analysis occurred outside of holding times. The laboratory reported both results. RemVer qualified both results UJ / J, as appropriate.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues. If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as "UJ".

The following analyses and samples required dilutions due to matrix effects resulting in elevation of the RLs:

- Method 8270D (SVOCs)—
  - In the LCS and MS/MSD runs, Benzaldehyde was beyond calibration due to the upper calibration point being removed. Benzaldehyde recovery was within control limits. RemVer set no qualification flag due to this issue.
  - Samples #-7, 10, 14, and 17 were diluted due to color and appearance resulting in elevated RLs. RemVer set no qualification flag due to this issue.
- Method 8081 (Pesticides)—the matrix in Sample #-1, which was used as the MS/MSD control, required dilution resulting in RL elevation and effecting the spike and surrogate recoveries. See the discussion in the following sections.
- Method 6010 (Metals)—the matrix in the samples required dilution resulting in RL elevation and effecting multiple analytes. RemVer set no qualification flag due to this issue.

Blank Evaluation

SDG #480-143525-1 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- VOC analysis (Method 8260) had Methylene Chloride in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag this analyte with B-flag.
- SVOC analysis (Method 8260) had Diethyl Phthalate and di-n-Butyl Phthalate in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag these analytes with B-flag.
- Metals analysis (Method 6010)
  - Several batches had Barium, Calcium, Iron, Magnesium, and/or Manganese in the MB either greater than the MDL but less than the RL or less than 10X greater than the RL. Therefore, RemVer did not flag these analytes with a B-flag.
  - Batch #441159 had Aluminum, Iron, and Manganese in the MB greater than 10X the RL. Therefore, RemVer flagged these analytes with a B-flag, only in Sample #-20.

Laboratory Control Samples (LCS)

The various method LCS' (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 480-143525-1, with the following exceptions:

- Method 8260—Batch 480-440216/480-440187 had 2-Butanone (MEK) recovery greater than the upper control level (UCL) and relative percent difference above criteria (high bias). RemVer flagged the results as UJ+ or J+ as appropriate in Samples #-5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20.

- Method 8082—the LCS had poor surrogate performance. See discussion below.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #480-143525-1 there were no exceptions requiring flagging of the sample results.

- Method 8260—Sample #-4 had poor calibration and poor surrogate recoveries requiring sample re-analyzed, which was beyond the holding time. The initial and re-analysis results required flagging UJ or J.
- Method 8270—Samples #-5, #-10, and #-14 had recoveries beyond control limits in two or more surrogates. RemVer flagged these samples UJ or J.
- Method 8081—the MS/MSD and sample runs had poor surrogate recoveries requiring sample re-analyzed. RemVer flagged the samples UJ or J.
- Method 8082—the samples, LCS, and MS/MSD had poor surrogate recoveries. RemVer flagged all results UJ or J.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG 480-143525-1 with the following exceptions:

- Method 8260—spike recoveries of multiple analytes were beyond control limits and/or had RPDs beyond criteria. RemVer flagged all samples as UJ or J.
- Method 8270—
    - 4,6-Dinitro-2-methylphenol was beyond the calibration curve (lab E-flag qualified) in the LCS and MS/MSD associated with preparation batch 445623, however, the spike recoveries were within control limits. The sample results were within their respective calibration curves. Therefore, no qualification was necessary.
    - Pyrene had spike recoveries less than the lower control limit (LCL) (while RPD was acceptable). RemVer flagged Pyrene in all samples as UJ or J.
- Method 8081—while the associated LCS met acceptance criteria, the MS/MSD runs had poor recovery for Aldrin. Therefore, RemVer flagged all samples as UJ or J.
- Method 8082—the MS/MSD had poor surrogate performance. See discussion above.
- Method 6010—analytical batches #441423 and #441868 had MS/MSD recoveries beyond control limits and RPDs above criteria requiring flagging (UJ or J) of the following analytes in all samples: Aluminum, Antimony, Barium, Calcium, Chromium, Iron, Lead, Magnesium, Manganese, Potassium, Selenium, and Zinc.
- Method 9012—the Cyanide batch MS's were beyond control limits due to low sample homogeneity. As a result, RemVer flagged all results as UJ or J as appropriate.

Duplicates

GES collected a field replicate (sample #-20). RemVer did not evaluate the duplicate to judge sampling performance because the source of the replicate was unclear. This is not a significant quality issue as it can be handled by GES directly (*note: if the Relative Percent Difference [RPD] between the original sample and its associated replicate are less than 20%, then sampling*

performance precision is within acceptable limits). Regardless, the analytical Method Duplicates met their RPD performance criteria.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) were acceptable for all analytes. CCVs were acceptable in the SDG for all methods and analytes, with the following exceptions:

- Method 8082—all sample had recoveries greater than the UCL for PCB-1260 and PCB-1268. RemVer flagged the results as UJ or J.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

1. DQA Detail Worksheet
2. DQA Non-Conformance Summary Workheet
3. 480-143525-1_EquaNysdec.xls (annotated EDD with validation separate EXCEL workbook, attached)

Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
	10X >	Aluminum, Iron, and Manganese	Flag B
Hg (7471)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
2-Butanone (MEK)	—	—	X	2-Butanone (MEK)	Flag UJ+ or J+
SVOC (8270)	—	—	—	None	No Comment
Pest (8081)	—	—	—	None	No Comment
PCBs (8082)	—	—	—	None	Surrogate See below
Metals (6010)	—	—	—	None	No Comment
Hg (7471)	—	—	—	None	No Comment
Cyanide (9012)	—	—	X	Cyanide	Flag UJ+ or J+

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	—	No Comment
SVOC (8270)	—	—	—	—	No Comment
#-5, 10, 14	—	—	X	TCX / DCBP	Flag UJ or J
Pest (8081)	—	—	X	TCX / DCBP	Flag UJ or J
PCBs (8082)	—	—	X	DCBP	Flag UJ or J
Metals (6010)	—	—	—	—	No Comment
Hg (7471)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

Attachment 1 continued

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	X	X	Batch	X	Flag UJ or J
SVOC (8270)	—	—	—	Batch	—	No Comment
4,6-Dinitro-2-methylphenol	—	—	—	Batch	—	MS calibration, no flag
Pyrene	—	X	—	Batch	—	Flag UJ or J
Pest (8081)	—	—	—	Batch	—	No Comment
Aldrin	—	—	X	Batch	X	Flag UJ or J
PCBs (8082)	—	—	—	Batch	—	Surrogate See below
Metals (6010)	—	—	—	Batch	—	No Comment
Al, Sb, Ba, Ca, Cr, Fe, Pb, Mg, Mn, K, Se, & Zn	—	X	X	Batch	X	Flag UJ or J
Hg (7471)	—	—	—	Batch	—	No Comment
Cyanide (9012)	—	—	X	Batch	—	Flag UJ or J

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
#-20 (Dup 101118)	Site	—	N/A	—	No Comment
		—	N/A	—	
		—	N/A	—	
LAB DUPLICATES					
All Methods	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #480-143525-1						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
		Calibration	Beyond method criteria		—	Flag UJ or J
	Pyrene	MS/MSD	<LCLC	—	—	Flag UJ or J
	All VOCs	MS/MSD	<LCL / >UCL	>UCL	—	Flag UJ or J
	PCB-1260 & 1268	CCV	X	—	—	Flag UJ or J
	All PCBs	Surrogates	X	—	—	Flag UJ or J
	All Pesticides	Surrogates	X	—	—	Flag UJ or J
	Aldrin	MS/MSD	>UCL	—	—	Flag UJ or J
	Al, Sb, Ba, Ca, Cr, Fe, Pb, Mg, Mn, K, Se, & Zn	MS/MSD	>UCL	>UCL	—	Flag UJ or J
	Cyanide	MS/MSD	>UCL	—	—	Flag UJ or J
	pH (temp.)	Holding Time	—	—	—	Flag J
#-20	Aluminum, Iron, and Manganese	Blank	—	—	—	Flag B
#-5 – #-20	2-Butanone (MEK)	LCS	>UCL	X	Hi	Flag UJ+ or J+
#-5, 10, & 14	SVOCs	Surrogates	>UCL	—	—	Flag UJ or J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	480-143525-2		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☒ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for soil samples. reported in Sample Delivery Groups (SDGs) #480-143525-2 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☒ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☒ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☒ Method 8081B or ☐ 608 Pesticides
☒ Method 8082 or ☐ 608 PCBs
☐ Method 8151 Chlorinated Herbicides
☒ Method 8260C VOCs GC/MS
☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
☒ Method 9010/9012/9014 Cyanides (_____)

☐ Method TO-13A PAHs (air)
☐ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Method 537 PFCs via SPE & LC/MS-MS
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ Extractable Petroleum Hydrocarbons (EPH)
☒ Other Methods:
- ☑ Method Percent Moisture
- ☑ Method 3550C Ultrasonic Extraction
- ☑ Method 5035A_L Purge & Trap, closed
- ☑ Method 3005B Total Metals Prep.
- ☑ Method 9045D pH

Quality Control Requirements Summary

☒ Duplicate
☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☐ Trip Blanks
☒ Equipment, Method, &/or Rinsate Blank

☐ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals (including metalloids), pH, and Cyanides.

This DUSR addresses SDG #480-143525-2. The soil samples came from a collection event on October 12, 2018.

Significant Data Usability Issues In SDG: #480-143525-2

Of the thirteen samples discussed herein, RemVer rejected no results. The other results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

The samples associated with this SDG contained no Field Duplicate. RemVer did not evaluate the duplicate to judge sampling performance in this instance. Regardless, the analytical Method Duplicates met their RPD performance criteria. This was a multi-day sampling event covered by multiple SDGs. RemVer did not find this is to be a significant quality issue as it can be handled by GES directly (*note: if the Relative Percent Difference [RPD] between the original sample and its associated replicate are less than 20%, then sampling performance precision is within acceptable limits*).

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #480-143525-2)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #480-143525-2–sample #	Matrix	Sampled	Received
SB-117-A	#–21	Soil	10/11/18	10/16/18
SB-117-B	#–22	Soil	10/11/18	10/16/18
SB-117-C	#–23	Soil	10/11/18	10/16/18
SB-117-D	#–24	Soil	10/11/18	10/16/18
SB-118-A	#–25	Soil	10/11/18	10/16/18
SB-118-B	#–26	Soil	10/11/18	10/16/18
SB-118-C	#–27	Soil	10/11/18	10/16/18
SB-116-A	#–28	Soil	10/11/18	10/16/18
SB-116-B	#–29	Soil	10/11/18	10/16/18
SB-116-C	#–30	Soil	10/11/18	10/16/18
SB-115-A	#–31	Soil	10/11/18	10/16/18
SB-115-B	#–32	Soil	10/11/18	10/16/18
SB-115-C	#–33	Soil	10/11/18	10/16/18

The SDG included the following samples with their analyses:

143525-2	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–21	SB-117-A	X	X	X	X	X	X	X	X
#–22	SB-117-B	X	X	X	X	X	X	X	X
#–23	SB-117-C	X	X	X	X	X	X	X	X
#–24	SB-117-D	X	X	X	X	X	X	X	X
#–25	SB-118-A	X	X	X	X	X	X	X	X
#–26	SB-118-B	X	X	X	X	X	X	X	X
#–27	SB-118-C	X	X	X	X	X	X	X	X
#–28	SB-116-A	X	X	X	X	X	X	X	X
#–29	SB-116-B	X	X	X	X	X	X	X	X
#–30	SB-116-C	X	X	X	X	X	X	X	X
#–31	SB-115-A	X	X	X	X	X	X	X	X
#–32	SB-115-B	X	X	X	X	X	X	X	X
#–33	SB-115-C	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
480-143525-2	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
480-143525-2	N (pH & temp) Y	Y	15-min holding time missed, qualified None

Do the QC data fall within the protocol required limits and specifications?
(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data

SDG	1	2	3	4	5	6	7	8	9
480-143525-2	☐	☐	☐	☒	☒	☒	☐	☒	☒

The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
480-143525-2	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
480-143525-2	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
480-143525-2	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?

Laboratory Report	QC Exceedances Documented (Y/N)	Comment
480-143525-2	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The soil boring samples came from a collection event October 12, 2018. RemVer reviewed the field notes (soil boring logs) as part of this DUSR.

Laboratory Report Inspection

TA produced an SDG report #480-143525-2 (dated 9-Nov-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#739391): SDG: #480-143525-2—single, four-page COC; laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received eight coolers with samples on 10/16/2018 @ 13:10 PM (designated as SDG-#480-143525-2). The temperatures of the coolers at receipt were 1.3,1.8, 2.2, 2.3, 2.6, 2.9, 3.1, and 3.1ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with one exception:

- Analysis of pH (Method 9040 and includes temperature measurement) has a 15-minute holding time, which was violated; therefore, RemVer qualified these results with a J.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues other than those noted below:

- If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as “UJ”.

Blank Evaluation

SDG #480-143525-2 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- VOC analysis (Method 8260) had Methylene Chloride in the MB greater than the MDL but less than the RL. Therefore, RemVer did not flag this analyte with B-flag.
- Metals analysis (Method 6010) had Aluminum, Barium, Calcium, Iron, Magnesium, and Manganese in the MB either greater than the MDL but less than the RL or less than 5-10X greater than the RL. Therefore, RemVer did not flag these analytes with a B-flag.

Laboratory Control Samples (LCS)

The various method LCS' (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 480-143525-2, with the following exceptions:

- Method 8260—Batch 440187 had spike recoveries of Methyl ethyl ketone (2-Butanone) beyond limits with high bias. This effected all samples, and RemVer flagged the results UJ+ or J+, as appropriate.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #480-143525-2 there were no exceptions requiring flagging of the sample results.

- Method 8260—performance of the surrogate DBFM was beyond criteria in Sample #-26. RemVer flagged the sample for all analytes as UJ or J as appropriate.
- Method 8270—had two surrogate performance issues:
  - Performance of the surrogates TBP and 2FP were beyond criteria in Sample #-26. RemVer flagged the sample for all analytes as UJ or J as appropriate.
  - Performance of the surrogate TBP was beyond criteria in Samples #-28, #-29, and #-32. RemVer flagged the sample for all analytes as UJ or J as appropriate.
- Method 8081—Samples 21, #-25 (including the MS/MSD runs), #-28, and #-31 had poor surrogate (DCBP and/or TCS) performance. RemVer flagged all samples and analytes due to the MS/MSD runs.
- Method 8082—one of the DCBP surrogates had recoveries (and CCVs) beyond limits in all samples, including the MS/MSD runs. RemVer flagged all sample for Aroclors as UJ or J as appropriate.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG 480-143525-2 with the following exceptions:

- Method 8260—MS/MSD runs were beyond control limits. RemVer flagged all samples as UJ or J for these analytes.
- Method 8270—the spike recoveries were beyond limits (and/or RPD beyond criteria) for Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Dibenz(a,h)anthracene, Fluoranthene, Indeno[1,2,3-cd]pyrene, and Phenanthrene. RemVer flagged all samples as UJ or J for these analytes.
- Method 8081—both MS/MSD runs had poor surrogate (DCBP) performance (see above) and poor spike recovery and/or RPDs beyond limits for Beta-BHC, Gamma-BHC, Heptachlor, and trans-Chlordane. Therefore, RemVer flagged all samples as UJ or J for these analytes.
- Method 8082—both MS/MSD runs had RPDs beyond criteria. RemVer flagged all samples as UJ or J for PCBs.
- Method 6010—MS performance was beyond limits for the following analytes: Aluminum, Antimony, Barium, Calcium, Chromium, Iron, Magnesium, Manganese, Potassium, and Zinc. RemVer flagged the results for these analytes UJ or J as appropriate in all samples.

- Method 9012—the Cyanide batch MS's were beyond control limits due to low sample homogeneity. As a result, RemVer flagged all results as UJ or J as appropriate.

Duplicates

The samples associated with this SDG did not have an accompanying field replicate. RemVer did not evaluate a field duplicate to judge sampling performance in this instance; however, as this was a multi-day sampling event covered by multiple SDGs. Therefore, this is not a significant quality issue. Regardless, the analytical Method Duplicates met their RPD performance criteria.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) were acceptable for all analytes with no exceptions.

CCVs were acceptable in the SDG for all methods and analytes, with the following exceptions:

- Method 8260—Batch #440187 had poor recoveries in Sample #-25:
  - Recovery was <LCL (low bias) for Chloromethane and Vinyl chloride. RemVer flagged the results as UJ- or J-.
  - Recovery was >UCL for 2-Butanone (MEK). RemVer flagged the results as UJ or J.
- Method 6010—had recoveries greater than the UCL for Potassium and effected all samples. RemVer flagged the results as UJ or J.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

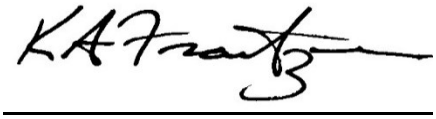
USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

1. DQA Detail Worksheet
2. DQA Non-Conformance Summary Workheet
3. 480-143525-2_EquaNysdec.xls (separate EXCEL annotated EDD with validation, attached)



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
Hg (7470)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
	—	—	X	MEK	Flag UJ+ or J+
SVOC (8270)	—	—	—	None	No Comment
Pest (8081)	—	—	—	None	No Comment
PCBs (8082)	—	—	—	None	No Comment
Metals (6010)	—	—	—	None	No Comment
Hg (7470)	—	—	—	None	No Comment
Cyanide (9012)	—	—	X	Cyanide	Flag UJ+ or J+

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	—	No Comment
SVOC (8270)	—	—	—	—	No Comment
	—	—	X (TBP/2FP)	All in #-26	Flag UJ or J
	—	—	X (TBP)	All in #-28, 29, & 32	Flag UJ or J
Pest (8081)	—	—	X	All (MS/MSD)	Flag UJ or J
PCBs (8082)	—	—	X	All Aroclors	Flag UJ or J
Metals (6010)	—	—	—	—	No Comment
Hg (7470)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	X	X	Batch	X	Flag UJ or J
SVOC (8270)	—	—	—	Batch	—	No Comment
BaP, BbF, BghiP, DahA, Fluoranthene, I123cdP, & Phenanthrene	—	X	X	Batch	X	Flag UJ or J
Pest (8081)	—	—	—	See Surrogate	—	Flag UJ or J
Beta-BHC, Gamma-BHC, Heptachlor, and trans-Chlordane	—	X	X	Batch	X	Flag UJ or J

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
PCBs (8082)	—	—	—	Batch	X	Flag UJ or J
Metals (6010)	—	—	—	Batch	—	No Comment
Aluminum, Antimony, Barium, Calcium, Chromium, Iron, Magnesium, Manganese, Potassium, & Zinc	—	X	X	Batch	X	Flag UJ or J
Hg (7470)	—	—	—	Batch	—	No Comment
Cyanide (9012)	—	X	X	Batch	>UCL	Flag UJ or J

Attachment 1 continued

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
See Other SDGs	Site	N/A	N/A	—	No Comment
		N/A	N/A	—	
		N/A	N/A	—	
LAB DUPLICATES					
All Methods	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #480-143525-2						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	Potassium	CCV	X	—	—	Flag UJ or J
	2-Butanone (MEK)	LCS	X	X	Hi	Flag UJ+ or J+
	All PCBs	Surrogates MS/MSD	X —	— X	—	Flag UJ or J
	All VOCs	MS/MSD	X	—	—	Flag UJ or J
	BaP, BbF, BghiP, DahA, Fluoranthene, I123cdP, & Phenanthrene	MS/MSD	>UCL <LCL	X	—	Flag UJ or J
	All Pesticides	Surrogates MS/MSD	X	X	—	Flag UJ or J
	Aluminum, Antimony, Barium, Calcium, Chromium, Iron, Magnesium, Manganese, Potassium, & Zinc	MS	>UCL <LCL	X	—	Flag UJ or J
	Cyanide	MS	>UCL	—	—	Flag UJ or J
	pH	Holding Time	—	—	—	Flag J
#-25	Chloromethane & Vinyl chloride	CCV	<LCL	X	Lo	Flag UJ- or J-
	2-Butanone (MEK)	CCV	X	—	—	Flag UJ or J
#-26	All VOCs	Surrogate DBFM	Beyond method criteria		—	Flag UJ or J
#26, 28, 29, & 32	SVOCs	Surrogates	>UCL	—	—	Flag UJ or J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	480-144091		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☒ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for soil samples. reported in Sample Delivery Groups (SDGs) #480-144091 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

- ☐ Method 1311 TCLP
- ☐ Method 1312 SPLP
- ☒ Method 6010A, B & C / 6020 Trace Metals
- ☐ Method 7000 Metals
- ☐ Method 7196 Hexavalent Chromium (other:_____)
- ☒ Method 7470A or 7471 Mercury
- ☐ Method 8021 Volatile Organic Compounds (VOCs) GC
- ☒ Method 8081B or ☐ 608 Pesticides
- ☒ Method 8082 or ☐ 608 PCBs
- ☐ Method 8151 Chlorinated Herbicides
- ☒ Method 8260C VOCs GC/MS
- ☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
- ☒ Method 9010/9012/9014 Cyanides (_____)
- ☐ Method TO-13A PAHs (air)
- ☐ Method TO-14A / -15 VOCs (air, summa) (_____)
- ☐ Method TO-17 VOCs (air, sorbent)
- ☐ Method 537 PFCs via SPE & LC/MS-MS
- ☐ Volatile Petroleum Hydrocarbons (VPH) Method
- ☐ Extractable Petroleum Hydrocarbons (EPH)
- ☒ Other Methods:
  - ☑ Method Percent Moisture
  - ☑ Method 3550C Ultrasonic Extraction
  - ☑ Method 5035A_L Purge & Trap, closed
  - ☑ Method 3005B Total Metals Prep.
  - ☑ Method 9045D pH

Quality Control Requirements Summary

- ☒ Duplicate
- ☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
- ☐ Trip Blanks
- ☒ Equipment, Method, &/or Rinsate Blank
- ☐ Other Field QC: Field notes regarding sampling
- ☐ Special QAPP Requirements: _____
  _____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) purpose was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals (including metalloids), pH, and Cyanides.

This DUSR addresses SDG #480-144091. The soil samples came from a collection event on October 23, 2018.

Significant Data Usability Issues In SDG: #480-144091

Of the fourteen samples (including one Duplicate) discussed herein, RemVer rejected no results. The other results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #480-144091)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #480-144091–sample #	Matrix	Sampled	Received
SB-129-A	#–1	Soil	10/23/18	10/24/18
SB-129-B	#–2	Soil	10/23/18	10/24/18
SB-129-C	#–3	Soil	10/23/18	10/24/18
SB-126-A	#–4	Soil	10/23/18	10/24/18
SB-126-B	#–5	Soil	10/23/18	10/24/18
SB-126-C	#–6	Soil	10/23/18	10/24/18
SB-127-A	#–7	Soil	10/23/18	10/24/18
SB-127-B	#–8	Soil	10/23/18	10/24/18
SB-127-C	#–9	Soil	10/23/18	10/24/18
SB-128-A	#–10	Soil	10/23/18	10/24/18
SB-128-B	#–11	Soil	10/23/18	10/24/18
SB-128-C	#–12	Soil	10/23/18	10/24/18
SB-128-D	#–13	Soil	10/23/18	10/24/18
DUP-102318	#–14	Soil	10/23/18	10/24/18

The SDG included the following samples with their analyses:

144091	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	SB-129-A	X	X	X	X	X	X	X	X
#–2	SB-129-B	X	X	X	X	X	X	X	X
#-3	SB-129-C	X	X	X	X	X	X	X	X
#-4	SB-126-A	X	X	X	X	X	X	X	X
#–5	SB-126-B	X	X	X	X	X	X	X	X
#–6	SB-126-C	X	X	X	X	X	X	X	X
#–7	SB-127-A	X	X	X	X	X	X	X	X
#–8	SB-127-B	X	X	X	X	X	X	X	X
#–9	SB-127-C	X	X	X	X	X	X	X	X
#–10	SB-128-A	X	X	X	X	X	X	X	X
#–11	SB-128-B	X	X	X	X	X	X	X	X
#–12	SB-128-C	X	X	X	X	X	X	X	X
#–13	SB-128-D	X	X	X	X	X	X	X	X
#–14	DUP-102318	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
480-144091	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
480-144091	N (pH & temp) N (#8&13 SVOC) Y	Y	15-min holding time missed, qualified Analysis hold time missed, qualified None

Do the QC data fall within the protocol required limits and specifications?
(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data

SDG	1	2	3	4	5	6	7	8	9
480-144091	☐	☐	☒	☒	☒	☒	☐	☒	☒

The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
480-144091	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
480-144091	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
480-144091	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
480-144091	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The soil boring samples came from a collection event October 23, 2018. RemVer reviewed the field notes (soil boring logs) as part of this DUSR.

Laboratory Report Inspection

TA produced an SDG report #480-144091 (dated 16-Nov-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#739393): SDG: #480-144091—single, two-page COC; laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received a cooler with samples on 10/24/2018 @ 13:15 PM (designated as SDG-#480-144091). The temperature of the cooler at receipt was 4.4ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with one exception:

- Analysis of pH (Method 9040 and includes temperature measurement) has a 15-minute holding time, which was violated; therefore, RemVer qualified these results with a J.
- Method 8270—Samples #-5 and #-8 had initial surrogate issues requiring re-analysis, which ended up beyond allowable holding times. The analytes in these samples were flagged UJ or J.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues other than those noted below:

- If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as “UJ”.
- Method 8260—the laboratory qualified some VOC results with low bias because the reported analyte concentrations were below 200 ug/kg. The qualifier arose due to sample collection inconsistent with low-level specifications.

Blank Evaluation

SDG #480-144091 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- Method 8081 (Pesticides) had DDE in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag these analytes with a B-flag.
- Metals analysis (Method 6010) had Calcium, Magnesium, Manganese, and Sodium in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag these analytes with a B-flag.

Laboratory Control Samples (LCS)

The various method LCS' (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 480-144091, with the following exceptions:

- Method 8082—surrogate (TCX & DCBP) performance was beyond limits in the LCS. See Surrogate discussion below.
- Method 9012B—the Cyanide LCS had a calibration curve exceedance while recovery was within limits. The associated MS/MSD had spike recovery excursions (see below). Therefore, RemVer flagged the results as UJ or J.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #480-144091 there were no exceptions requiring flagging of the sample results.

- Method 8270—surrogate performance was beyond limits in Samples #-5, 8, and 13 (TCX) and in Sample #-2 (DCBP and TCX). RemVer flagged these samples as UJ or J for this analysis.
- Method 8081—surrogate performance was beyond limits in Samples #-1, 3, 6, and 7 (DCBP) and in Sample #-2 (DCBP and TCX). RemVer flagged these samples as UJ or J for this analysis.
- Method 8082—surrogate performance was beyond limits in Sample #-3, the LCS, and MS/MSD runs. RemVer flagged all samples as UJ or J for these analytes.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG 480-144091 with the following exceptions:

- Method 8260—spike recoveries and RPDs were beyond control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS recovery acceptable. Therefore, RemVer flagged all samples as UJ or J for these analytes.
- Method 8270—spike recoveries and RPDs were beyond control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS recovery acceptable. Therefore, RemVer flagged all samples as UJ or J for these analytes.
- Method 8082—surrogate (DCBP) performance was beyond limits in the LCS. See Surrogate discussion above.
- Method 6010—the following analytes had spike recoveries beyond limits and/or RPDs beyond criteria: Aluminum, Antimony, Arsenic, Barium, Calcium, Chromium, Copper,

Potassium, Nickel, Selenium, Vanadium, & Zinc. As a result, RemVer flagged the results in all samples as UJ or J as appropriate.

- Method 7471—the Mercury batch MS's were beyond control limits, for Samples #-8, 9, 10, 11, 12, and13, due to low sample homogeneity. As a result, RemVer flagged all results as UJ or J as appropriate.
- Method 9012—the Cyanide batch MS's were beyond control limits due to low sample homogeneity. As a result, RemVer flagged all results as UJ or J as appropriate.

Duplicates

GES collected a field replicate (Sample #-9); however, RemVer was not informed as to the replicate source and did not evaluate the field duplicate to judge sampling performance. Therefore, this is not a significant quality issue. All other analytical Method Duplicates met their RPD performance criteria of <20%. The user of this report may perform the analysis (*note: if the Relative Percent Difference [RPD] between the original sample and its associated replicate are less than 20%, then sampling performance precision is within acceptable limits*).

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) were acceptable for all analytes with the following exceptions:

- Method 8260—internal standard (ISTD) response were outside control limits for samples #-3, #-6, and #-9. RemVer flagged results for these samples as UJ or J as appropriate.

CCVs were acceptable in the SDG for all methods and analytes, with the following exceptions:

- Method 8082—CCV for PCB-1268 had recoveries beyond criteria in all samples. RemVer flagged the results as UJ or J.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

RemVer rejected (R flag) one Cyanide analysis result (Sample #-1 [SB-101-A]); however, the laboratory also reported a re-analysis result, which was accepted (albeit qualified due to a holding time violation). Nevertheless, the reported result is usable.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

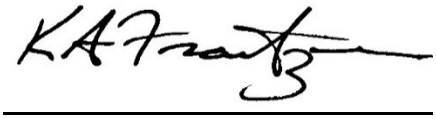
USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

1. DQA Detail Worksheet
2. DQA Non-Conformance Summary Workheet
3. 480-144091_EquaNysdec.xls (EXCEL annotated EDD with validation, attached)



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
Hg (7470)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
SVOC (8270)	—	—	—	None	No Comment
Pest (8081)	—	—	—	None	No Comment
PCBs (8082)	—	—	—	All	See Surrogates
Metals (6010)	—	—	—	None	No Comment
Hg (7470)	—	—	—	None	No Comment
Cyanide (9012)	—	—	Calibration	Cyanide	Flag UJ+ or J+

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	—	No Comment
SVOC (8270)	—	—	X	TCX & DCBP	Flag UJ or J Samples #5, 8, & 13
Pest (8081)	—	—	X	TCX & DCBP	Flag UJ or J Samples #-1, 2, 3, 6, & 7
PCBs (8082)	—	—	X	TCX & DCBP	Flag UJ or J
Metals (6010)	—	—	—	—	No Comment
Hg (7470)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	X	X	Batch	X	Flag UJ or J
SVOC (8270)	—	X	X	Batch	X	Flag UJ or J
Pest (8081)	—	—	—	Batch	—	No Comment
PCBs (8082)	—	—	—	Batch	—	See Surrogates
Metals (6010)	—	—	—	Batch	—	No Comment
Al, Sb, As, Ba, Ca, Cr, Cu, K, Ni, Se, V, & Zn	—	X	X	Batch	X	Flag UJ or J
Hg (7470)	—	—	—	Batch #444188	—	No Comment
#8, 9, 10, 11, 12, 13	—	X	X	Batch #4434777	X	Flag UJ or J
Cyanide (9012)	—	—	X	Batch	—	Flag UJ or J

Attachment 1 continued

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
#-14 (DUP-102318)	Site	—	N/A	—	No Comment
		—	N/A	—	
		—	N/A	—	
LAB DUPLICATES					
All Methods	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #480-144091						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	PCB-1268	CCV	X	—	—	Flag UJ or J
	All PCBs	Surrogates (LCS & MS/MSD)	>UCL	>criteria	—	Flag UJ or J
	All VOCs	MS	>UCL	>criteria	—	Flag UJ or J
	All SVOCs	MS/MSD	>UCL	>criteria	—	Flag UJ or J
	Al, Sb, As, Ba, Ca, Cr, Cu, K, Ni, Se, V, & Zn	MS	>UCL	>criteria	—	Flag UJ or J
	Cyanide	MS	>UCL	>criteria	—	Flag UJ or J
	pH	Holding Time	—	—	—	Flag J
#3, 6, & 9	All VOCs	ISTD	Beyond Method Criteria		—	Flag UJ or J
#-8 & 13	SVOCs	Holding Time	—	—	—	Flag UJ or J
#-5, 8 & 13	SVOCs	Surrogates	X	X	—	Flag UJ or J
#-1, 2, 3, 6, & 7	Pesticides	Surrogates	X	X	—	Flag UJ or J
#8, 9, 10, 11, 12, 13	Mercury	MS	X	X	—	Flag UJ or J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	480-144395		
Sample Matrix:	☐ Drinking water ☒ Groundwater ☐ Surface water ☐ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for groundwater samples. reported in Sample Delivery Groups (SDGs) #480-144395 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☒ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☒ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☒ Method 8081B or ☐ 608 Pesticides
☒ Method 8082 or ☐ 608 PCBs
☐ Method 8151 Chlorinated Herbicides
☒ Method 8260C VOCs GC/MS
☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
☒ Method 9010/9012/9014 Cyanides (_____)

☐ Method TO-13A PAHs (air)
☐ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Method 537 PFCs via SPE & LC/MS-MS
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ Extractable Petroleum Hydrocarbons (EPH)
☒ Other Methods:
- ☑ Method 3510C Liquid-Liquid Extraction
- ☑ Method 5030C Purge & Trap
- ☑ Method 3005A Total Metals Prep.

Quality Control Requirements Summary

☒ Duplicate
☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☐ Trip Blanks
☒ Equipment, Method, &/or Rinsate Blank

☐ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals/metalloids, pH, and Cyanides.

This DUSR addresses SDG #480-144395; the groundwater samples included in this report came from a collection event on October 29, 2018.

Significant Data Usability Issues In SDG: #480-144395

Of the four samples and Duplicate discussed herein, RemVer rejected no results. The results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #480-144395)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #480-144395 –Sample #	Matrix	Sampled	Received
MW-101	#-1	Water	10/29/18	10/30/18
MW-131	#-2	Water	10/29/18	10/30/18
DUP-102918	#-3	Water	10/29/18	10/30/18
MW-105	#-4	Water	10/29/18	10/30/18
MW-108	#-5	Water	10/29/18	10/30/18

The SDG included the following samples with their analyses:

145042	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	MW-101	X	X	X	X	X	X	X	X
#–2	MW-131	X	X	X	X	X	X	X	X
#-3	DUP-102918	X	X	X	X	X	X	X	X
#-4	MW-105	X	X	X	X	X	X	X	X
#-5	MW-108	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
480-144395	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
480-144395	N (pH & temp) Y	Y Y	15-min holding time missed, qualified None

Do the QC data fall within the protocol required limits and specifications? *(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data*									
SDG	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
480-144395	☐	☐	☐	☒	☐	☒	☐	☐	☒
The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.									

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
480-144395	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
480-144395	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
480-144395	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
480-144395	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The groundwater samples came from a single collection event October 29, 2018. RemVer reviewed the low-flow field notes.

Laboratory Report Inspection

TA produced an SDG report #480-144395 (dated 15-Nov-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#734683): SDG: #480-144395—single, one-page COC, laboratory noted no issues at the time of acceptance.

However, RemVer noticed that there were hand written notes on the COC indicating the samples were not on ice, whereas the Laboratory stated that they were.

Sample Preservation & Holding Time Evaluation

Laboratory received three coolers with samples on 10/30/2018 @ 12:35 PM (designated as SDG-#480-144395). The temperatures of the coolers at receipt were 7.9, 7.9, and 8.4ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with two exceptions:

- The sample pH was basic at the time of receipt, requiring acidification by the laboratory per the requirements of the organic preparation under Method 3510. The available Field Notes indicate that the nature of water samples from this Site have a highly basic (>10.0 s.u.) nature. Therefore, RemVer did not qualify these results.
- Analysis of pH (Method 9040, which includes a temperature measurement) has a holding time of 15 minutes, which was violated; therefore, RemVer qualified these results as appropriate (J).

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues, other than the following:

- If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as “UJ” per validation guidance. EDD interpretation under NYSDEC guidance recommends rendering this as a non-detect and returning a “U” flag.
- Method 8270D—Sample #-8 (MW-108, including the MS/MSD runs) required dilution due to the sample matrix resulting in elevated reporting limits (RLs).

Blank Evaluation

The SDG #480-144395 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- Metals analysis (Method 6010) had Iron, Manganese, and Zinc in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag these analytes with a B-flag.

The samples in this SDG included no field associated Blanks (either Equipment, Field, or Trip). This poses a limitation on these samples in that it provides no quality measure of operational performance of the sampling itself. Because this was a multi-day sampling event covered by multiple SDGs, this is not a significant quality issue.

Laboratory Control Samples (LCS)

The various method LCS’ (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 480-144395, with no exceptions.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #480-144395 there were no exceptions.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG #480-144395, with the following exceptions:

- Method 8081—while the associated LCS met acceptance criteria, the MS/MSD for preparation batch 480-443088 and analytical batch 480-443230 had poor recovery or RPDs beyond limits for Endosulfan I and II. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS recovery acceptable. Therefore, RemVer flagged all samples as UJ or J for these analytes.

Duplicates

GES collected a field replicate (compare samples #-2 and #-3). The VOC, SVOC, Metals, and pH analytes met the RPD performance criteria of <20%. All other analytical Method Duplicates met their RPD performance criteria as well.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) and CCVs were acceptable for all analytes with the following exceptions:

- Method 8270D—Batch # 445163 had recoveries greater than the upper control limit (UCL) for 3-Nitroaniline in all samples, which were non-detect or less than the RL. Therefore, RemVer did not flag the results.
- Method 8082—
    - Batch # 443284 had recoveries greater than the UCL for PCB-1262 in all samples, which were non-detect or less than the RL. Therefore, RemVer flagged the results as UJ, but should be interpreted as U.
    - Batch # 443284 had recoveries less than the LCL for PCB-1268 in all samples, which were non-detect or less than the RL. Therefore, RemVer flagged the results as UJ, but should be interpreted as U.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

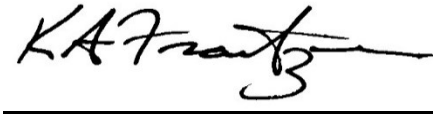
USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

1. DQA Detail Worksheet
2. DQA Non-Conformance Summary Workheet
3. 480-144395-1_EquNysdec.xls (separate EXCEL annotated EDD with validation, attached)



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	—	No Comment
SVOC (8270)	No	—	No Comment
Pest (8081)	No	—	No Comment
PCBs (8082)	No	—	No Comment
Metals (6010)	Yes & No, but < 5X RL	Iron, Manganese, & Zinc	No Flag
Hg (7470)	No	—	No Comment
Cyanide (9012)	No	—	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	All	No Comment
SVOC (8270)	—	—	—	All	No Comment
Pest (8081)	—	—	—	All	No Comment
PCBs (8082)	—	—	—	All	No Comment
Metals (6010)	—	—	—	All	No Comment
Hg (7470)	—	—	—	Mercury	No Comment
Cyanide (9012)	—	—	—	Cyanide	No Comment

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	All	No Comment
SVOC (8270)	—	—	—	All	No Comment
Pest (8081)	—	—	—	All	No Comment
PCBs (8082)	—	—	—	All	No Comment
Metals (6010)	—	—	—	All	No Comment
Hg (7470)	—	—	—	Mercury	No Comment
Cyanide (9012)	—	—	—	Cyanide	No Comment

Attachment 1 continued

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	—	—	Batch	—	No Comment
SVOC (8270)	—	—	—	Batch	—	No Comment
Pest (8081)	—	—	—	Batch	—	No Comment
Endosulfan I & II	—	X	X	Batch	X	Flag UJ or J
PCBs (8082)	—	—	—	Batch	—	No Comment
Metals (6010)	—	—	—	Batch	—	No Comment
Hg (7470)	—	—	—	Batch	—	No Comment
Cyanide (9012)	—	—	—	Batch	—	No Comment

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
#-3 (Dup-102918)	#-2 MW-131	N/A	—	VOCs	No Comment
		N/A	—	SVOCs	
		N/A	—	Metals	
		N/A	—	pH	
LAB DUPLICATES					
-------	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #480-144395						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	PCB-1232 PCB-1268	CCV	>UCL	—	—	Flag UJ or J
	Endosulfan I & II	MS/MSD	>UCL	>UCL	—	Flag UJ or J
	pH / Temperature	Holding Time	—	—	—	Flag J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	480-144471		
Sample Matrix:	☐ Drinking water ☒ Groundwater ☐ Surface water ☐ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for groundwater samples. reported in Sample Delivery Groups (SDGs) #480-144471 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☒ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☒ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☒ Method 8081B or ☐ 608 Pesticides
☒ Method 8082 or ☐ 608 PCBs
☐ Method 8151 Chlorinated Herbicides
☒ Method 8260C VOCs GC/MS
☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
☒ Method 9010/9012/9014 Cyanides (_____)

☐ Method TO-13A PAHs (air)
☐ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Method 537 PFCs via SPE & LC/MS-MS
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ Extractable Petroleum Hydrocarbons (EPH)
☒ Other Methods:
- ☑ Method 3510C Liquid-Liquid Extraction
- ☑ Method 5030C Purge & Trap
- ☑ Method 3005A Total Metals Prep.

Quality Control Requirements Summary

☐ Duplicate
☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☐ Trip Blanks
☒ Equipment, Method, &/or Rinsate Blank

☐ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals/metalloids, pH, and Cyanides.

This DUSR addresses SDG #480-144471; the groundwater samples included in this report came from a collection event on October 30, 2018.

Significant Data Usability Issues In SDG: #480-144471

Of the six samples and Equipment Blank discussed herein, RemVer rejected one result (Cyanide in Sample #-7 [MW-148]); however, the rejected result was re-analyzed by the laboratory, albeit outside holding times. The re-analysis result was acceptable. The results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

The samples associated with this SDG contained an Equipment Blank but no Field Duplicate sample or Trip/Field Blank(s). RemVer did not evaluate the duplicate or field-associated blanks to judge sampling performance in this instance. Regardless, the analytical Method Duplicates met their RPD performance criteria. This was a multi-day sampling event covered by multiple SDGs; herein the reader will find a cross-listing of the samples and their association with other SDGs. RemVer did not find this is to be a significant quality issue as it can be handled by GES directly (*note: if the Relative Percent Difference [RPD] between the original sample and its associated replicate are less than 20%, then sampling performance precision is within acceptable limits*).

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #480-144471)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #480-144471 –Sample #	Matrix	Sampled	Received
MW-120	#-1	Water	10/30/18	10/31/18
MW-128	#-2	Water	10/30/18	10/31/18
Equipment Blank-01	#-3	Water	10/30/18	10/31/18
MW-126	#-4	Water	10/30/18	10/31/18
MW-123	#-5	Water	10/30/18	10/31/18
MW-144	#-6	Water	10/30/18	10/31/18
MW-148	#-7	Water	10/30/18	10/31/18

The SDG included the following samples with their analyses:

145042	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	MW-120	X	X	X	X	X	X	X	X
#–2	MW-128	X	X	X	X	X	X	X	X
#-3	Equip. Blank-01	X	X	X	X	X	X	X	X
#-4	MW-126	X	X	X	X	X	X	X	X
#-5	MW-123	X	X	X	X	X	X	X	X
#-6	MW-144	X	X	X	X	X	X	X	X
#-7	MW-148	X	X	X	X	X	X	X	X

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
480-144471	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
480-144471	N (pH & temp) N #-8 Cyanide Y	Y Y Y	15-min holding time missed, qualified holding time missed for re-analysis, qualified None

Do the QC data fall within the protocol required limits and specifications? *(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data*									
SDG	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
480-144471	☐	☐	☐	☒	☐	☐	☐	☐	☒
The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.									

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
480-144471	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
480-144471	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
480-144471	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
480-144471	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The groundwater samples came from a single collection event October 30, 2018. RemVer reviewed the low-flow field notes and observed no issues.

Laboratory Report Inspection

TA produced an SDG report #480-144471 (dated 27-Nov-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#739395): SDG: #480-144471—single, one-page COC, laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received three coolers with samples on 10/31/2018 @ 13:20 PM (designated as SDG-#480-144471). The temperatures of the coolers at receipt were 3.1 and 3.3ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with two exceptions:

- The sample pH was basic at the time of receipt, requiring acidification by the laboratory per the requirements of the organic preparation under Method 3510. The available Field Notes indicate that the nature of water samples from this Site have a highly basic (>10.0 s.u.) nature. Therefore, RemVer did not qualify these results.
- Analysis of pH (Method 9040, which includes a temperature measurement) has a holding time of 15 minutes, which was violated; therefore, RemVer qualified these results as appropriate (J).
- The initial analysis for Cyanide (Method 9012) in Sample #-7 (MW-148) had significant quality issues requiring re-analysis. The re-analysis occurred outside of holding times. The laboratory reported both results. RemVer rejected the initial result but accepted and qualified the re-analysis result UJ / J, as appropriate.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues. If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as “UJ”.

Blank Evaluation

The SDG #480-144471 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- Metals analysis (Method 6010) had Iron, Manganese, and Zinc in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag these analytes with a B-flag.

The samples in this SDG included no field associated Trip Blank but did have an Equipment Blank. This poses a limitation on these samples in that it provides no quality measure of operational performance of the sampling itself. Because this was a multi-day sampling event covered by multiple SDGs, this is not a significant quality issue. The Equipment Blank had several detected analytes: Methylene Chloride, Chromium, and Cyanide. The Methylene Chloride (a common laboratory contaminant) Chromium, and Cyanide concentrations were less than 5X greater than the RL; therefore, RemVer did not flag them with B-flag.

Laboratory Control Samples (LCS)

The various method LCS’ (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 480-144471, with no exceptions.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #480-144471 there were no exceptions requiring flagging of the sample results.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG #480-144471 with the following exceptions:

Duplicates

The samples associated with this SDG did not have an accompanying field replicate. RemVer did not evaluate a field duplicate to judge sampling performance in this instance; however, as this was a multi-day sampling event covered by multiple SDGs. Therefore, this is not a significant quality issue. Regardless, the analytical Method Duplicates met their RPD performance criteria.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) and CCVs were acceptable for all analytes with the following exceptions:

- Method 8270D—Batch #443975 had recoveries less than the lower control limit (LCL), low biased, for bis(2-chloroisopropyl) ether, N-Nitroso-di-n-propylamine, and 3-Nitroaniline in all samples, which were non-detect or less than the RL. RemVer flagged the results as UJ- or J-.
- Method 8082—Batch # 443284 had recoveries greater than the UCL for PCB-1262, whereas recoveries were less than the lower criterion for PCB-1268, and these affected all samples. RemVer flagged the results as UJ or J.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable.

RemVer rejected (R flag) one Cyanide analysis result (Sample #-7 [MW-148]); however, the laboratory also reported a re-analysis result, which was accepted (albeit qualified due to a holding time violation). Nevertheless, this Cyanide result is usable.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

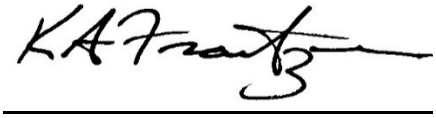
USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

1. DQA Detail Worksheet
2. DQA Non-Conformance Summary Workheet
3. 480-144471-1_EquNysdec.xls (separate EXCEL annotated EDD with Validation, attached)



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
Hg (7470)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
SVOC (8270)	—	—	—	None	No Comment
Pest (8081)	—	—	—	None	No Comment
PCBs (8082)	—	—	—	None	No Comment
	—	—	—	None	No Comment
Metals (6010)	—	—	—	None	No Comment
Hg (7470)	—	—	—	None	No Comment
Cyanide (9012)	—	—	—	None	No Comment

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	—	No Comment
SVOC (8270)	—	—	—	—	No Comment
Pest (8081)	—	—	—	—	No Comment
PCBs (8082)	—	—	—	—	No Comment
Metals (6010)	—	—	—	—	No Comment
Hg (7470)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

Attachment 1 continued

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	—	—	Batch	—	No Comment
SVOC (8270)	—	—	—	Batch	—	No Comment
Pest (8081)	—	—	—	Batch	—	No Comment
PCBs (8082)	—	—	—	Batch	—	No Comment
Metals (6010)	—	—	—	Batch	—	No Comment
Hg (7470)	—	—	—	Batch	—	No Comment
Cyanide (9012)	—	—	—	Batch	—	No Comment

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
None	Unknown	N/A	—	—	Did Not Evaluate
		N/A	—	—	
		N/A	—	—	
LAB DUPLICATES					
-------	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #480-144471						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	bis(2-chloroisopropyl) ether, N-Nitroso-di-n-propylamine, & 3-Nitroaniline	CCV	<LCL	—	Lo	Flag UJ- or J-
	PCB-1232 PCB-1268	CCV	>UCL <LCL	—	—	Flag UJ or J
	Endosulfan I & II trans-Chlordane	MS/MSD	>UCL	>UCL	—	Flag UJ or J
	pH & Temperature	Holding Time	—	—	—	Flag J
#7 MW-148	Cyanide	Initial analysis had various issues	—	—	—	Initial: Rejected (R)
		Holding Time	—	—	—	Flag UJ or J

Notes: † RPD—Relative Percent Difference
‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2018GE13 Client Project #0901752-02-840
Site:	Buffalo Lakeside Commercial Park, Parcel 5 Buffalo, NY	**Site #:**	915322
Client:	NYSDEC via GES, Inc.	**Site Owner:**	–N/A–
Sample Delivery Groups (SDGs)	480-145042		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☒ Surface water ☐ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data for groundwater samples. reported in Sample Delivery Groups (SDGs) #480-145042 from Test America (TA). A DQA is an evaluation of the performance of analytical procedures and quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Attached to the main report is a list describing the final reported qualification flags applied to the data by RemVer during this DQA process.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☒ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☒ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☒ Method 8081B or ☐ 608 Pesticides
☒ Method 8082 or ☐ 608 PCBs
☐ Method 8151 Chlorinated Herbicides
☒ Method 8260C VOCs GC/MS
☒ Method 8270D Semi-VOCs (sVOCs) GC/MS &/or SIM-ID
☒ Method 9010/9012/9014 Cyanides (_____)

☐ Method TO-13A PAHs (air)
☐ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Method 537 PFCs via SPE & LC/MS-MS
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ Extractable Petroleum Hydrocarbons (EPH)
☒ Other Methods:
- ☑ Method 3510C Liquid-Liquid Extraction
- ☑ Method 5030C Purge & Trap
- ☑ Method 3005A Total Metals Prep.

Quality Control Requirements Summary

☒ Duplicate
☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☒ Trip Blanks
☒ Equipment, Method, &/or Rinsate Blank

☐ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____

Intended Use of Data Under Review

NYSDEC contracted GES to perform a 2018 site-wide synoptic soil, groundwater, and surface water monitoring event at the referenced site. The monitoring event (10 October through 09 November) was to update the existing environmental dataset with current synoptic conditions. Sampling was to provide analyses of environmental conditions for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, polychlorinated biphenyls (PCBs), metals/metalloids, pH, and Cyanides.

This DUSR addresses SDG #480-145042. The surface water samples came from a collection event on November 9, 2018.

Significant Data Usability Issues In SDG: #480-145042

Of the two samples, Duplicate, and Trip Blank discussed herein, RemVer rejected no results. The results are acceptable for use although the results of some analytes are flagged due to sample handling, or laboratory accuracy or precision issues. Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☐	☒	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	Sample IDs
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☐	☒	☐	None
Sampling Report (by Field Team Leader)	☒	☐	☐	Field Notes

Lab Report Contents (Test America SDG Reports: #480-145042)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported the following samples:

Sample ID	SDG #480-145042 –Sample #	Matrix	Sampled	Received
SW-1	#-1	Water	11/09/18	11/09/18
SW-2	#-2	Water	11/09/18	11/09/18
DUP-11918	#-3	Water	11/09/18	11/09/18
TRIP BLANK (TB)	#-4	Water	11/09/18	11/09/18

The SDG included the following samples with their analyses:

145042	Sample	VOCs	SVOCs	Pest	PCBs	TAL & Hg	Cyanide	pH	Temp
#–1	SW-1	X	X	X	X	X	X	X	X
#–2	SW-2	X	X	X	X	X	X	X	X
#-3	DUP-11918	X	X	X	X	X	X	X	X
#-4	TB	X	—	—	—	—	—	—	—

VOC: Volatile Organic Compounds (8260) | SVOC: Semi-VOCs (8270) | Pest: Pesticides (8081) | PCBs (8082)
TAL: Total Analyte List (6010) | Hg: Mercury (7470) | Cyanide (9012) | pH (9040)
| * Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
480-145042	Y	No

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
480-145042	N (pH & temp) Y	Y Y	15-min holding time missed, qualified None

Do the QC data fall within the protocol required limits and specifications? *(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data*									
SDG	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
480-145042	☐	☐	☒	☒	☐	☒	☐	☒	☒
The narrative section, below, discusses these deficiencies in detail, see Attachment 1 as well.									

Have the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
480-145042	Y	No

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
480-145042	Y	No

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
480-145042	Y	The laboratory generally applied appropriate qualifiers.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
480-145042	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The surface water samples came from a single collection event November 9, 2018. A review of the field notes was not performed for this DUSR because GES did not provide them.

Laboratory Report Inspection

TA produced an SDG report #480-145042 (dated 4-Dec-18). The SDG report had the required data and information.

Chain of Custody (COC) Evaluation

NYSDEC/GES produced a COC for the referenced fieldwork (GES Project PSID#734683): SDG: #480-145042—single, one-page COC, laboratory noted no issues at the time of acceptance.

Sample Preservation & Holding Time Evaluation

Laboratory received two coolers with samples on 11/9/2018 @ 14:00 PM (designated as SDG-#480-145042) directly from the field. The temperatures of the coolers at receipt were 4.7 and 5.2ºC. The samples arrived in good condition, properly preserved, and where necessary under ice. Holding times and preservation requirements were met with two exceptions:

- The sample pH was basic at the time of receipt, requiring acidification by the laboratory per the requirements of the organic preparation under Method 3510. The available Field Notes indicate that the nature of water samples from this Site have a highly basic (>9.0 s.u.) nature and the samples were delivered within three hours of collection. Therefore, RemVer did not qualify these results.
- Analysis of pH (Method 9040 and includes temperature measurement) has a 15-minute holding time, which was violated; therefore, RemVer qualified these results with a J. RemVer also notes that the laboratory results were not distinctly different compared to the field low-flow results.

Detection Limits

Analytical detection limits (DLs) were acceptable for all analytes causing no QA issues. If an analyte was above the method detection limit (MDL) but below the reporting limit (RL), then it was flagged as “UJ”.

Blank Evaluation

SDG #480-145042 had Method Blanks (MBs) for each method. The MBs were acceptable (no detectable analytes), with the following exception(s):

- VOC analysis (Method 8260) had Carbon Disulfide in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag this analyte with B-flag.
- Metals analysis (Method 6010) had Iron and Zinc in the MB either greater than the MDL but less than the RL or less than 5X greater than the RL. Therefore, RemVer did not flag these analytes with a B-flag.

SDG #480-145042 had a Trip Blank (TB, #-4) to support analysis of VOCs (Method 8260). The TB had a single detected analyte: Methylene Chloride. The Methylene Chloride (a common laboratory contaminant) concentration was less than 5X greater than the RL; therefore, RemVer did not flag this analyte with B-flag.

Laboratory Control Samples (LCS)

The various method LCS’ (LCS & LCS duplicates [LCSD]) were within the acceptable control ranges and relative percent differences (RPDs) for their particular analyses in SDG 480-145042, with the following exceptions:

- Method 9012B Cyanide Analytical Batch #480- 447002 had LCS/LCSD recoveries beyond control limits (RPD acceptable) causing the results to be biased high. Therefore, RemVer flagged the results J+ in the samples and duplicate.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for the analytes. In SDG #480-145042 there were no exceptions requiring flagging of the sample results.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses met the QA criteria in SDG 480-145042 with the following exceptions:

- Method 8270—4,6-Dinitro-2-methylphenol was beyond the calibration curve (lab E-flag qualified) in the LCS and MS/MSD associated with preparation batch 445623, however, the spike recoveries were within control limits. The sample results were within their respective calibration curves. Therefore, no qualification was necessary.
- Method 8081—while the associated LCS met acceptance criteria, the MS/MSD for preparation batch 480-445224 and analytical batch 480-445452 had poor recovery or RPDs beyond limits for Endosulfan I & II and trans-Chlordane. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS recovery acceptable. Therefore, RemVer flagged all samples as UJ or J for these analytes.

Duplicates

GES collected a field replicate (compare samples #-2 and #-3). The VOC analytes met the RPD performance criteria of <20%. All other analytical Method Duplicates met their RPD performance criteria of <20%.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standards (external or internal) were acceptable for all analytes with the following exceptions:

- Method 8270D—Batch #445037 had an initial calibration curve beyond method criteria method criteria for Pentachlorophenol; therefore, RemVer flagged results for this analyte as UJ or J as appropriate.

CCVs were acceptable in the SDG for all methods and analytes, with the following exceptions:

- Method 8270D—Batch #446418 had recoveries greater than the upper control limit (UCL) for Di-n-butyl phthalate and Di-n-octyl phthalate in all samples, which were non-detect or less than the RL. Therefore, RemVer did not flag the results.
- Method 8081B—Batch #445452 had recoveries greater than the UCL for Aldrin, delta-BHC, Heptachlor, Heptachlor epoxide, and Toxaphene, and effect all samples. RemVer flagged the results as UJ or J.
- Method 8082—Batch #445797 had recoveries greater than the UCL for PCB-1232 and effect all samples. RemVer flagged the results as UJ or J.
- Method 6010—Batch #446805 had recoveries greater than the UCL for Manganese and effect all samples. RemVer flagged the results as UJ or J.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag.

References

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

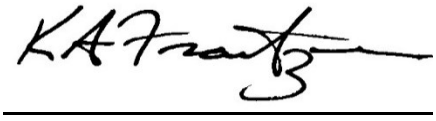
USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Attachments

1. DQA Detail Worksheet
2. DQA Non-Conformance Summary Workheet
3. 480-145042_EquaNysdec.xls (annotated EDD with validation separate EXCEL workbook, attached)



Prepared by: Kurt A. Frantzen, PhD
December 18, 2018

GES PO#751457-1109

Attachment 1
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
VOC (8260)	No	None	No Comment
SVOC (8270)	No	None	No Comment
Pest (8081)	No	None	No Comment
PCBs (8082)	No	None	No Comment
Metals (6010)	No	None	No Comment
Hg (7470)	No	None	No Comment
Cyanide (9012)	No	None	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOC (8260)	—	—	—	None	No Comment
SVOC (8270)	—	—	—	None	No Comment
Pest (8081)	—	—	—	None	No Comment
PCBs (8082)	—	—	—	None	No Comment
	—	—	—	None	No Comment
Metals (6010)	—	—	—	None	No Comment
Hg (7470)	—	—	—	None	No Comment
Cyanide (9012)	—	—	X	Cyanide	Flag UJ+ or J+

SURROGATES	SV <10%	> 10% & < LCL	>UCL	Compound(s)	Notes
VOC (8260)	—	—	—	—	No Comment
SVOC (8270)	—	—	—	—	No Comment
Pest (8081)	—	—	—	—	No Comment
PCBs (8082)	—	—	—	—	No Comment
Metals (6010)	—	—	—	—	No Comment
Hg (7470)	—	—	—	—	No Comment
Cyanide (9012)	—	—	—	—	No Comment

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOC (8260)	—	—	—	Batch	—	No Comment
SVOC (8270)	—	—	—	Batch	—	No Comment
4,6-Dinitro-2-methylphenol	—	—	—	Batch	—	MS calibration, no flag
Pest (8081)	—	—	—	Batch	—	No Comment
Endosulfan I & II & trans-Chlordane	—	X	X	Batch	X	Flag UJ or J
PCBs (8082)	—	—	—	Batch	—	No Comment
Metals (6010)	—	—	—	Batch	—	No Comment
Hg (7470)	—	—	—	Batch	—	No Comment
Cyanide (9012)	—	—	—	Batch	—	No Comment

Attachment 1 continued

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
#-3 (Dup 11918)	Site	N/A	—	—	No Comment
		N/A	—	—	
		N/A	—	—	
LAB DUPLICATES					
All Methods	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 2
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

SDG #480-145042						
Sample Number(s)	**Compound(s)**	**QC Non-Conformance**	**% Recovery**	**% RPD †**	**High or Low Bias ‡**	**Comments**
ALL	All	MDL>result<RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	Pentachlorophenol	Calibration	Beyond method criteria		—	Flag UJ or J
	Di-n-butyl phthalate Di-n-octyl phthalate	CCV	X	—	—	Flag UJ or J
	Aldrin, Δ-BHC Heptachlor Heptachlor epoxide Toxaphene	CCV	X	—	—	Flag UJ or J
	PCB-1232	CCV	X	—	—	Flag UJ or J
	Endosulfan I & II trans-Chlordane	MS/MSD	>UCL	>UCL	—	Flag UJ or J
	Cyanide	LCS	>UCL	X	Hi	Flag J+
	pH	Holding Time	—	—	—	Flag J

Notes: † RPD—Relative Percent Difference

‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.